

April 1, 2015

Sara Osborn
City of San Diego
202 C Street
San Diego, California 92101

RE: *San Ysidro Community Plan Update – Mobility Analysis Memo for the Preferred Land Use Alternative*

Dear Sara:

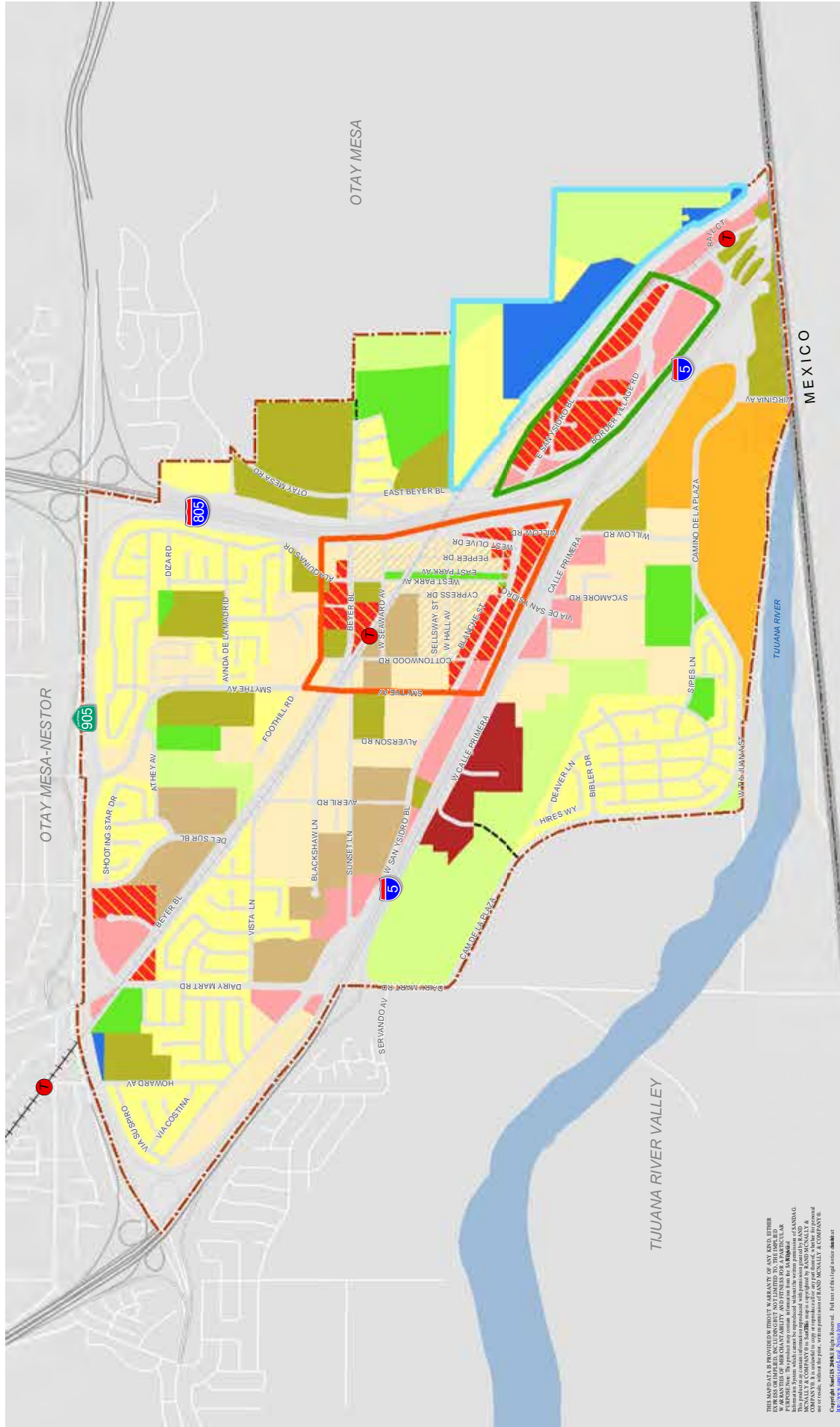
This technical memorandum summarizes the technical analysis and mobility recommendations for the San Ysidro Community Plan (SYCP) Update, Preferred Land Use Alternative. This technical report is being prepared to facilitate City staff review of the recommended mobility improvements for the San Ysidro Community Plan Update (SYCPU). The analysis includes an evaluation of the existing roadway network with the increase of traffic volumes anticipated with the building of the Community.

Land Use and Trip Generation

The projections of land use intensities were developed using GIS analysis techniques by the City of San Diego's Planning Department staff. Allowable uses, floor-to-area ratios, residential densities, allowable heights, and space for parking were all considered when determining the reasonably expected land use plan alternatives. **Figure 1** illustrates the future recommended land uses within the community map.

Land use was converted to trips (auto, transit, walk and bicycle) using trip generation rates calibrated for this community. The forecast model then assigned the total trip generation for each Trip Analysis Zone (TAZ) to the roadway network, taking into account the different transportation mode splits and the internal capture between and within each TAZ to generate the total auto trip output for the community. The total output trips generated by the community were 441,147. A more detailed breakdown of trip generation input by land use within each TAZ is included in **Appendix A**.

Traffic volumes for the Year 2035 from the traffic model are included in **Appendix B**.



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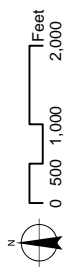
LEGEND

Residential	Commercial, Employment, Retail and Services	Industrial Employment	Park, Open Space, and Recreation
Low Density Residential (5-10 du/nra)	Community Commercial	Industrial	Park
Low-Medium Density Residential (10-15 du/nra)	Heavy Commercial	Institutional and Public and Semi-Public Facilities	Open Space
Low-Moderate Density Residential (10-22 du/nra)	Community Commercial/Residential Permitted	Institutional	Transportation
Medium Density Residential (15-30 du/nra)	Regional Commercial		Right-of-Way

Figure 1

Community Plan Boundary	Light Rail
Border Village	Trolley Stop
El Pueblo Vejo Neighborhood Village	
Future Hillides Neighborhood Village	

Recommended Land Use



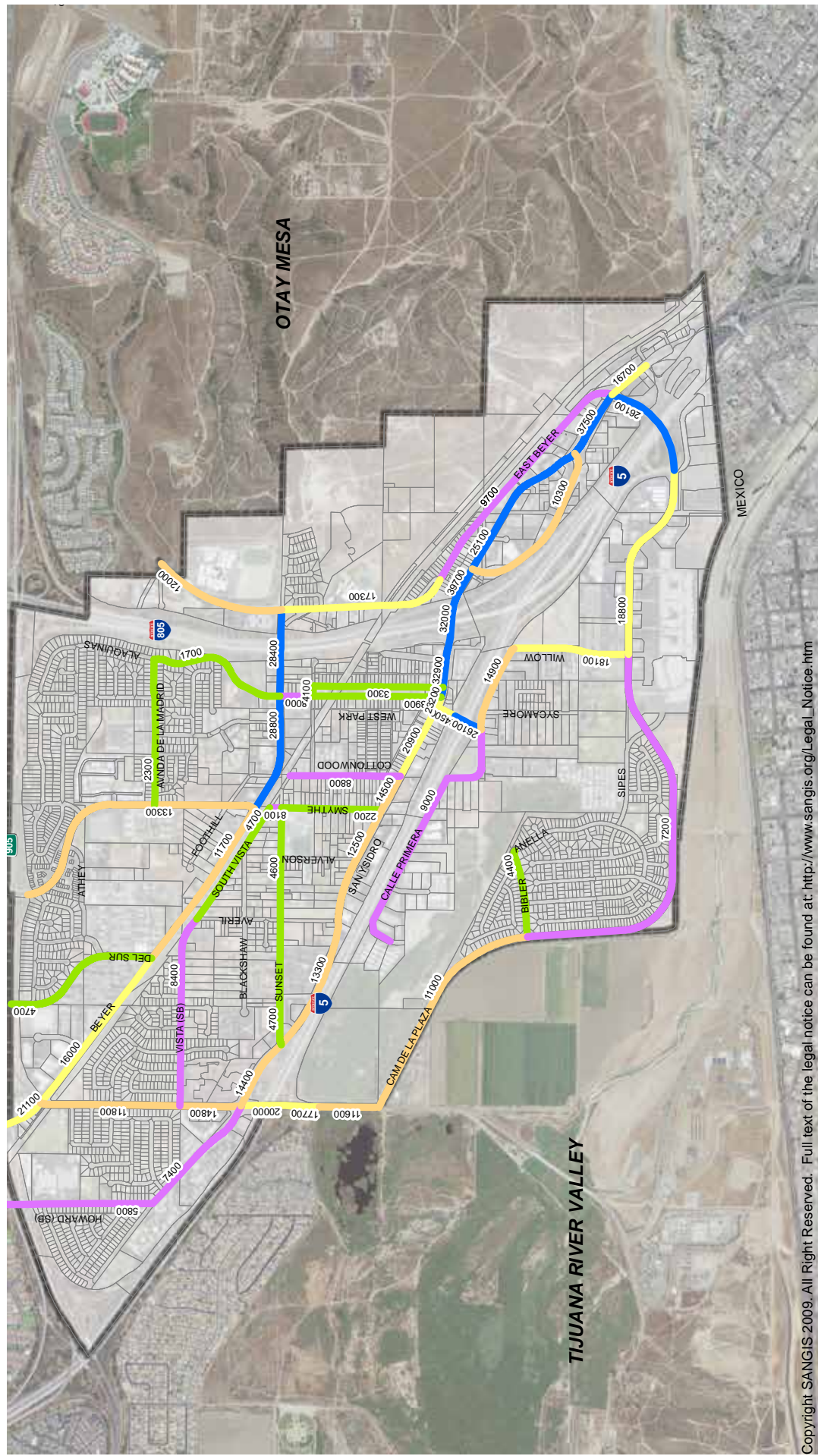
Future Daily Traffic Volumes

In the process of calibrating the existing model, it was concluded that several post model adjustments were needed for the forecasted 2035 traffic models volumes to make them consistent with existing vehicular counts and expected overall traffic patterns within the community. Below is a list of the post-model adjustments made:

- For all roadway segments where the difference between the calibrated existing 2008 model and the actual count exceeded 10%, the difference was subtracted or added to the 2035 forecast model to account for the difference between the calibrated model and the existing counts. This adjustment was completed along the following corridors:
 - Beyer Boulevard between Del Sur Boulevard and Smythe Avenue (-1,100 trips);
 - Otay Mesa Road North of Beyer Boulevard (-2,700 trips);
 - East Beyer Boulevard between Beyer Boulevard and San Ysidro Boulevard (-4,200 trips);
 - Del Sur Boulevard between SR-905 EB ramps and Beyer Boulevard (-1,100 trips);
 - Smythe Avenue between SR-905 EB ramps and Beyer Boulevard (-10,000 trips);
 - Smythe Avenue between Sunset Lane and West San Ysidro Boulevard (-600 trips);
 - Dairy Mart Road between I-5 SB ramp and Servando Avenue (+4,400 trips);
 - West San Ysidro Boulevard between Howard Avenue and Dairy Mart Road (-2,000 trips);
 - West San Ysidro Boulevard between Dairy Mart Road and Sunset Lane (-3,500 trips);
 - West San Ysidro Boulevard between Sunset Lane and Averil Road (+2,300 trips);
 - West San Ysidro Boulevard between Averil Road and Smythe Avenue (-3,300 trips);
 - West San Ysidro Boulevard between Smythe Avenue and Cottonwood Road (+3,600 trips);
 - East San Ysidro Boulevard between West Park and I-805 SB ramps (+3,300 trips);
 - East San Ysidro Boulevard between I-805 SB ramps and I-805 NB ramps (+5,600 trips);
 - East San Ysidro Boulevard between Border Village Road (west) and Border Village Road (east) (-3,300 trips);
 - East San Ysidro Boulevard between Border Villa Road (south) and Camino de la Plaza (+8,400 trips)
 - Border Village Road between San Ysidro Boulevard (-700 trips);
 - Willow Road between Calle Primera and Camino de la Plaza (-1,400 trips);
 - Camino de la Plaza between Willow Road and I-5 SB ramps (-11,200 trips);

- Camino de la Plaza between I-5 SB ramp to East San Ysidro Boulevard (-3,200 trips);
 - Vista Lane between Dairy Mart Road and Averil Road (+400 trips);
 - Sunset Lane between West San Ysidro Boulevard and Averil Road (-2,500 trips);
 - Sunset Lane between Averil Road and Smythe Avenue (-2,500 trips);
 - Cottonwood Road between Sunset Lane and West San Ysidro Boulevard (-3,500 trips);
 - West Park Avenue between Beyer Boulevard and Seward Avenue (+1,100 trips);
 - Howard Avenue north of West San Ysidro Boulevard (-400 trips); and
 - Avenida de la Madrid between Smythe Avenue and Alaquina Drive (-1,700 trips).
- For several additional segments, the forecasted volumes were manually adjusted as follow:
 - The forecasted volumes along West San Ysidro Boulevard between Via de San Ysidro and Park Avenue were reduced by 2,100 trips in order to balance and smooth volumes downstream and upstream of this segment;
 - The forecasted volumes along Bibler Street were increased by approximately 1,200 trips to 4,400 ADT since volumes along this street are not expected to change in the future. A nominal increase was assumed for this segment from the 4,332 existing count;
 - The forecasted volumes along Vista Lane between Averil Road and Smythe Avenue were kept as 4,600 trips as shown in the forecast plot. Reducing the trips per the calibration versus count volumes would have produced a negative value along this corridor. The 4,600 trips shown in the plot would represent a nominal increase of traffic that was found to be within the acceptable limits.
 - The forecasted volumes along West Park Avenue between Seward Avenue and West San Ysidro Boulevard were kept as 3,900 trips as shown in the forecast plot. Reducing the trips per the calibration versus count volumes would have produced a negative value along this corridor. The 3,900 trips shown in the plot would represent a nominal increase of traffic that was found to be within the acceptable limits.
 - The forecasted volume along Alaquinas Drive was changed to 1,700 to account for nominal growth expected by the year 2035. Reducing the trips per the calibration versus count volumes would have produced a negative value along this corridor.

Resulting daily traffic volumes for future land use alternative is depicted in **Figure 2. Appendix C** includes the worksheet used for the post-model adjustments for the ADT volumes.



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- LEGEND**
- 0 - 5,000
 - 5,001 - 10,000
 - 10,001 - 15,000
 - 15,000 - 25,000
 - 25,000 or more
 - ◆ Community Plan Boundary
 - ◇ Parcel Boundaries

**Year 2035 Proposed Land Use Alternative
Roadway Segments ADT Volumes**

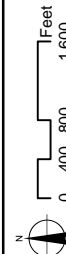


Figure 2

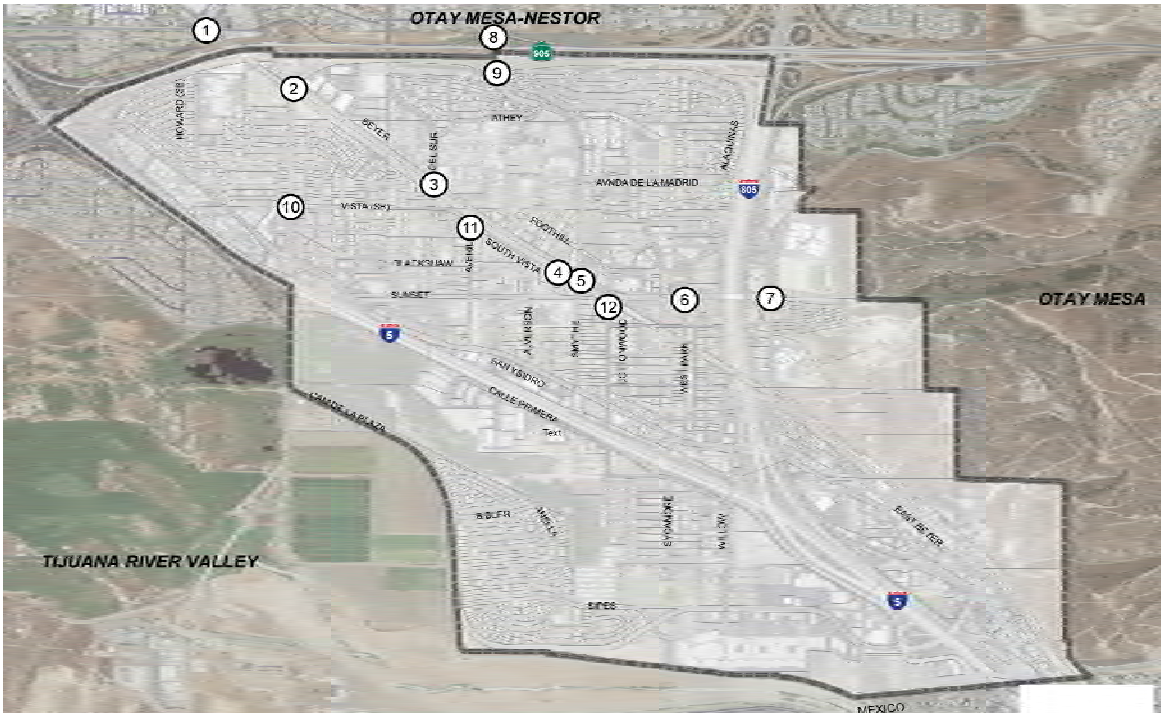
Peak Hour Traffic Volumes

Horizon Year peak hour turning movements at study area intersections were developed using methodologies from National Cooperative Highway Research Program (NCHRP) 255 – Highway Traffic Data for Urbanized Area Project Planning and Design, Chapter 8. NCHRP Report 255 is a compilation of the best techniques that are currently being used in urban areas to forecast future traffic volumes. These techniques were identified through a survey of state and local agencies with follow-up field visits to obtain detailed information on procedural steps and typical applications. The method used to forecast the future turning movement volumes for the San Ysidro Community Plan evaluation is the NCHRP’s “Directional Volume Forecast”. For this method, existing and Horizon Year daily traffic volumes, existing peak hour turning movements, and projected peak hour “K” and directional “D” factors, are used to calculate Horizon Year turning movements. Existing daily segment traffic volumes and peak hour intersection turning movements were counted in the field. Existing K and D factors were computed at each intersection approach based on these traffic counts. Horizon Year daily traffic volumes were obtained from the forecast models for each land use alternative as described earlier in this report.

Using the “Directional Volume Forecast” technique, the existing turning movements at each study area intersection were factored based on increases in daily approach traffic and existing K and D factors. Each respective movement was derived using an iterative approach that balances the inflows and outflows for each approach. Resulting peak hour intersection turning movements for the future proposed land use alternative is depicted in **Figure 3**. **Appendix D** includes the worksheet used for the calculations of the future peak-hour volumes.

San Ysidro CPU- Mobility Element

<p>1</p> <p>58 / 159 ↕ 219 / 597 ↕ 67 / 75 ↕ Beyer Blvd.</p> <p>123 / 179 ↕ 148 / 226 ↕ 108 / 259 ↕</p> <p>Iris Ave.</p> <p>49 / 100 ↕ 78 / 70 ↕ 171 / 302 ↕</p> <p>95 / 161 ↕ 218 / 402 ↕ 115 / 139 ↕</p>	<p>2</p> <p>169 / 568 ↕ 196 / 332 ↕ 164 / 263 ↕ Beyer Blvd.</p> <p>52 / 100 ↕ 6 / 127 ↕ 108 / 154 ↕</p> <p>Dairy Mart Rd.</p> <p>107 / 194 ↕ 205 / 240 ↕ 78 / 116 ↕</p> <p>65 / 116 ↕ 268 / 351 ↕ 112 / 128 ↕</p>	<p>3</p> <p>145 / 129 ↕ 168 / 247 ↕ Del Sur Blvd.</p> <p>212 / 170 ↕ 315 / 248 ↕</p> <p>Beyer Blvd.</p> <p>73 / 140 ↕ 252 / 293 ↕</p> <p>302 / 325 ↕ 50 / 106 ↕</p> <p>Smythe Crossing</p> <p>39 / 80 ↕ 150 / 145 ↕</p>	<p>4</p> <p>209 / 311 ↕ 113 / 232 ↕</p> <p>Beyer Blvd.</p>
<p>5</p> <p>189 / 127 ↕ 834 / 533 ↕ Smythe Ave.</p> <p>544 / 309 ↕ 786 / 598 ↕</p> <p>Beyer Blvd.</p> <p>161 / 86 ↕ 869 / 532 ↕</p>	<p>6</p> <p>33 / 34 ↕ 62 / 49 ↕ 209 / 70 ↕ Alaquinas Dr.</p> <p>152 / 72 ↕ 1117 / 667 ↕ 258 / 101 ↕</p> <p>Beyer Blvd.</p> <p>26 / 51 ↕ 1139 / 766 ↕ 57 / 112 ↕</p> <p>W. Park Ave.</p> <p>64 / 59 ↕ 84 / 37 ↕ 397 / 76 ↕</p>	<p>7</p> <p>508 / 116 ↕ 265 / 130 ↕ 133 / 222 ↕ Otay Mesa Rd.</p> <p>218 / 78 ↕ 920 / 657 ↕ 866 / 1030 ↕</p> <p>Beyer Blvd.</p> <p>564 / 79 ↕ 802 / 582 ↕ 340 / 212 ↕</p> <p>E. Beyer Blvd.</p> <p>466 / 130 ↕ 372 / 121 ↕ 808 / 591 ↕</p>	<p>8</p> <p>416 / 280 ↕ 348 / 419 ↕ Picador Blvd.</p> <p>89 / 297 ↕ 250 / 374 ↕</p> <p>I-905 WB On-ramp</p> <p>I-905 WB Off-ramp</p> <p>234 / 177 ↕ 236 / 724 ↕</p>
<p>9</p> <p>400 / 606 ↕ 221 / 160 ↕ Picador Blvd.</p> <p>I-905 EB On-ramp</p> <p>103 / 427 ↕ 161 / 399 ↕</p> <p>I-905 EB Off-ramp</p> <p>330 / 411 ↕ 371 / 373 ↕</p>	<p>10</p> <p>242 / 523 ↕ 98 / 193 ↕ Dairy Mart Rd.</p> <p>161 / 132 ↕ 146 / 112 ↕ Vista Ln.</p> <p>370 / 438 ↕ 118 / 140 ↕</p>	<p>11</p> <p>199 / 197 ↕ 6 / 16 ↕ Vista Ln.</p> <p>102 / 83 ↕ 45 / 82 ↕</p> <p>Averil Rd.</p> <p>100 / 130 ↕ 15 / 16 ↕</p>	<p>12</p> <p>104 / 78 ↕ 52 / 57 ↕ Vista Ln.</p> <p>81 / 142 ↕ 163 / 114 ↕</p> <p>Smythe Ave.</p> <p>160 / 124 ↕ 2 / 0 ↕</p>

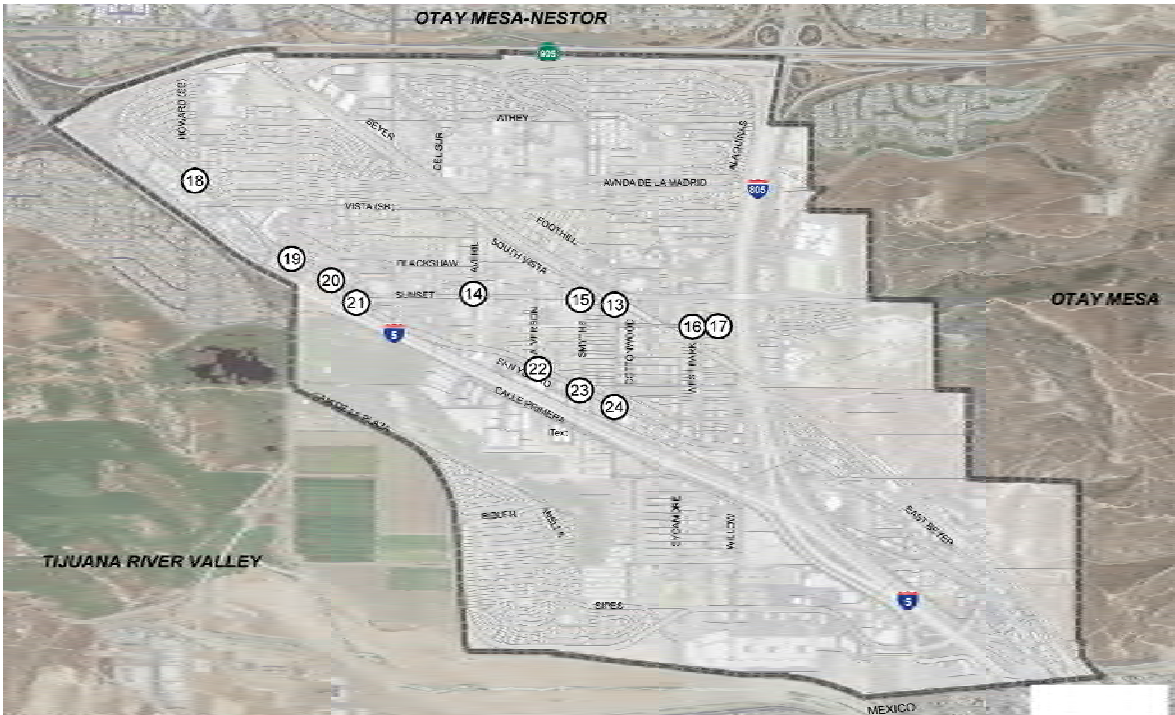


Legend
X / Y = AM / PM PEAK HOUR
TURNING VOLUMES



San Ysidro CPU- Mobility Element

<p>13</p> <p>Vista Ln. Cottonwood Rd.</p> <p>123 / 247 0 / 5</p> <p>Sunset Ln.</p> <p>1 / 0 132 / 57</p> <p>98 / 91 10 / 29</p>	<p>14</p> <p>Averil Rd.</p> <p>49 / 70 205 / 107 29 / 24</p> <p>97 / 95 99 / 138 128 / 31</p> <p>Sunset Ln.</p> <p>10 / 43 43 / 102 42 / 20</p> <p>68 / 29 146 / 102 37 / 24</p>	<p>15</p> <p>Smythe Ave.</p> <p>149 / 44 71 / 31 222 / 58</p> <p>80 / 107 122 / 73 16 / 16</p> <p>Sunset Ln.</p> <p>106 / 44 84 / 39 89 / 13</p> <p>19 / 0 44 / 19 34 / 0</p>	<p>16</p> <p>W. Park Ave.</p> <p>95 / 16 0 / 5 13 / 26</p> <p>45 / 40 223 / 193 15 / 20</p> <p>Seward Ave.</p> <p>367 / 179 7 / 26 10 / 24</p>
<p>17</p> <p>Seward Ave.</p> <p>13 / 24</p> <p>E. Park Ave.</p> <p>343 / 172 17 / 49</p> <p>60 / 50</p>	<p>18</p> <p>Howard Ave.</p> <p>69 / 32 44 / 57</p> <p>29 / 34 267 / 187</p> <p>W. San Ysidro Blvd.</p> <p>329 / 250 20 / 62</p>	<p>19</p> <p>Dairy Mart Rd.</p> <p>49 / 63 227 / 211 62 / 132</p> <p>73 / 23 145 / 238 241 / 354</p> <p>W. San Ysidro Blvd.</p> <p>213 / 259 140 / 167 64 / 190</p>	<p>20</p> <p>W San Ysidro Blvd.</p> <p>320 / 650 693 / 507</p> <p>I-5 NB Ramps</p> <p>253 / 398 469 / 428</p> <p>139 / 87 134 / 114</p>
<p>21</p> <p>W. San Ysidro Blvd.</p> <p>412 / 507 83 / 104</p> <p>319 / 494 104 / 167</p> <p>Sunset Ln.</p> <p>221 / 131 73 / 32</p>	<p>22</p> <p>Private Dwy.</p> <p>1 / 4 0 / 3</p> <p>84 / 60 0 / 5 91 / 133</p> <p>W. San Ysidro Blvd.</p> <p>53 / 93 302 / 419 3 / 3</p>	<p>23</p> <p>Private Dwy.</p> <p>2 / 1 10 / 0 6 / 4</p> <p>158 / 139 9 / 0 59 / 35</p> <p>Smythe Ave.</p> <p>38 / 55 345 / 528 4 / 6</p>	<p>24</p> <p>Private Dwy.</p> <p>48 / 62 228 / 587 3 / 8</p> <p>56 / 45 2 / 3 237 / 298</p> <p>Cottonwood Rd.</p> <p>220 / 217 269 / 525 4 / 14</p>



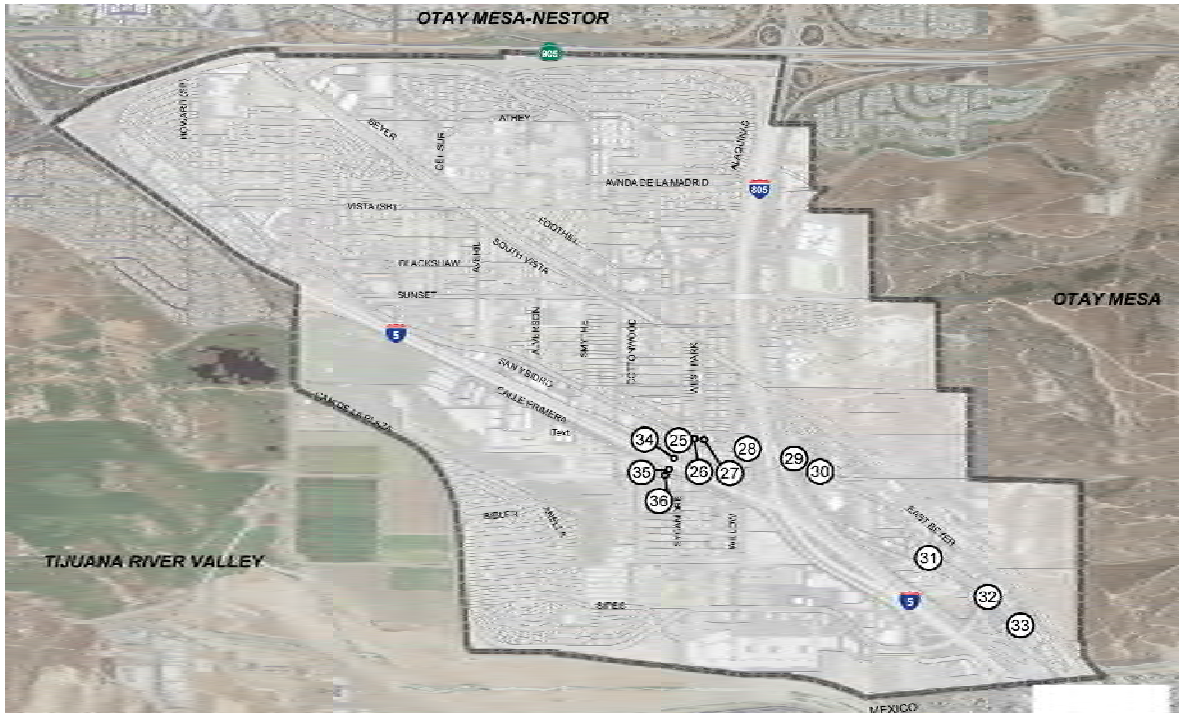
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 X / Y = AM / PM PEAK HOUR
 TURNING VOLUMES



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San Ysidro CPU- Mobility Element

<p>25</p> <p>↕ 232 / 444 ↕ 344 / 410 W. San Ysidro Blvd.</p> <p>↕ 270 / 642 ↕ 149 / 320 Via de San Ysidro</p> <p>↕ 254 / 294 ↕ 488 / 651</p>	<p>26</p> <p>↕ 146 / 108 W. Park Ave.</p> <p>↕ 588 / 1057 W. San Ysidro Blvd.</p> <p>↕ 848 / 1356</p>	<p>27</p> <p>E. Park Ave.</p> <p>↕ 46 / 41 ↕ 552 / 1000 ↕ 8 / 8 E. San Ysidro Blvd.</p> <p>↕ 191 / 98 ↕ 658 / 1200 ↕ 26 / 39</p> <p>↕ 4 / 1 ↕ 0 / 1 ↕ 23 / 33</p>	<p>28</p> <p>↕ 294 / 599 ↕ 2 / 15 ↕ 320 / 534 I-805 SB Off-ramp</p> <p>↕ 333 / 714 ↕ 56 / 247 E. San Ysidro Blvd.</p> <p>↕ 709 / 969 ↕ 153 / 539 I-805 SB On-ramp</p>
<p>29</p> <p>I-805 NB On-ramp</p> <p>↕ 433 / 778 ↕ 377 / 839 E. San Ysidro Blvd.</p> <p>↕ 223 / 250 ↕ 754 / 1330 I-805 NB Off-ramp</p> <p>↕ 70 / 120 ↕ 272 / 433</p>	<p>30</p> <p>↕ 385 / 963 E. San Ysidro Blvd.</p> <p>↕ 285 / 689 ↕ 615 / 1193 Border Village Rd. (west)</p> <p>↕ 159 / 725 ↕ 232 / 417</p>	<p>31</p> <p>↕ 4 / 12 ↕ 2 / 1 ↕ 2 / 26 Private Dwy.</p> <p>↕ 3 / 0 ↕ 360 / 887 ↕ 104 / 226 E. San Ysidro Blvd.</p> <p>↕ 4 / 16 ↕ 429 / 1022 ↕ 12 / 24 Border Village Rd. (east)</p> <p>↕ 9 / 23 ↕ 0 / 3 ↕ 93 / 377</p>	<p>32</p> <p>↕ 70 / 153 ↕ 83 / 82 ↕ 57 / 37 E. Beyer Blvd.</p> <p>↕ 16 / 31 ↕ 71 / 153 ↕ 48 / 92 E. San Ysidro Blvd.</p> <p>↕ 115 / 210 ↕ 248 / 319 ↕ 137 / 737 Camino de la Plaza</p> <p>↕ 242 / 600 ↕ 132 / 154 ↕ 277 / 567</p>
<p>33</p> <p>↕ 30 / 65 ↕ 129 / 248 Private Dwy.</p> <p>↕ 0 / 7 ↕ 72 / 37 ↕ 165 / 124 E. San Ysidro Blvd.</p> <p>↕ 200 / 125 ↕ 195 / 83 ↕ 479 / 670 I-5 NB Ramps</p> <p>↕ 0 / 183 ↕ 0 / 136 ↕ 0 / 40</p>	<p>34</p> <p>↕ 281 / 415 ↕ 276 / 411 Via de San Ysidro</p> <p>↕ 220 / 138 ↕ 77 / 88 I-5 NB On-ramp</p> <p>↕ 306 / 509 ↕ 523 / 826 I-5 NB Off-ramp</p>	<p>35</p> <p>↕ 401 / 536 Via de San Ysidro</p> <p>↕ 97 / 397 ↕ 352 / 999 I-5 SB Off-ramp</p> <p>↕ 762 / 982</p>	<p>36</p> <p>↕ 111 / 294 ↕ 13 / 25 ↕ 324 / 706 Via de San Ysidro</p> <p>↕ 575 / 664 ↕ 255 / 400 ↕ 14 / 0 Willow Rd.</p> <p>↕ 157 / 183 ↕ 288 / 621 ↕ 17 / 32 Calle Primera</p> <p>↕ 13 / 33 ↕ 25 / 43 ↕ 20 / 30</p>

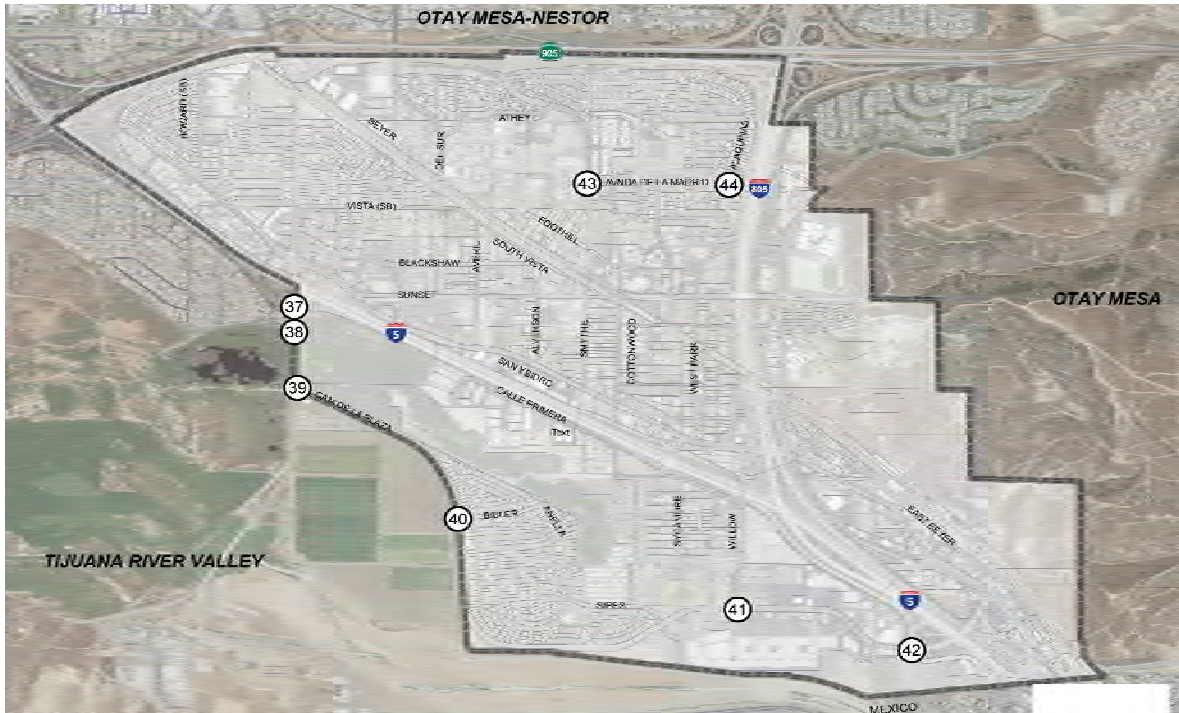


Legend
X / Y = AM / PM PEAK HOUR
TURNING VOLUMES



San Ysidro CPU- Mobility Element

<p>37</p> <p>124 / 253 ↕ 140 / 445 Dairy Mart Rd.</p> <p>I-5 SB Off-ramp</p> <p>443 / 993 ↕ 288 / 864 ↕</p>	<p>38</p> <p>151 / 271 ↕ 165 / 537 Dairy Mart Rd.</p> <p>Servando Ave.</p> <p>291 / 175 ↕ 27 / 49 ↕</p> <p>13 / 68 ↕ 317 / 385 ↕</p>	<p>39</p> <p>29 / 23 ↕ 158 / 558 Dairy Mart Rd.</p> <p>346 / 395 ↕ 6 / 6 Camino de la Plaza</p> <p>17 / 76 ↕ 1 / 12 ↕</p>	<p>40</p> <p>132 / 389 ↕ 77 / 203 Camino de la Plaza</p> <p>210 / 133 ↕ 4 / 10 Bibler Dr.</p> <p>109 / 273 ↕ 3 / 8 ↕</p>	
<p>41</p> <p>46 / 51 ↕ 46 / 243 ↕ 161 / 434 Willow Rd.</p> <p>177 / 454 ↕ 96 / 223 ↕ 17 / 73 Camino de la Plaza</p> <p>69 / 135 ↕ 122 / 223 ↕ 11 / 39 ↕</p> <p>5 / 34 ↕ 28 / 159 ↕ 15 / 105 ↕</p>	<p>42</p> <p>340 / 830 ↕ 30 / 170 ↕ 297 / 291 I-5 SB Ramps</p> <p>84 / 448 ↕ 176 / 432 ↕ 7 / 43 Camino de la Plaza</p> <p>64 / 474 ↕ 269 / 625 ↕ 4 / 25 ↕</p> <p>5 / 59 ↕ 2 / 23 ↕ 26 / 107 ↕</p>	<p>43</p> <p>66 / 29 ↕ 569 / 396 ↕ 171 / 200 Smythe Ave.</p> <p>209 / 122 ↕ 32 / 11 ↕ 121 / 77 Avenida de la Madrid</p> <p>45 / 24 ↕ 22 / 9 ↕ 77 / 27 ↕</p> <p>89 / 17 ↕ 332 / 369 ↕ 91 / 46 ↕</p>	<p>44</p> <p>43 / 25 ↕ 24 / 44 Alaquines Dr.</p> <p>14 / 43 ↕ 120 / 57 ↕</p> <p>193 / 41 ↕ 40 / 54 ↕</p>	
<p>45</p> <p>177 / 186 ↕ Center St</p> <p>93 / 157 ↕ 561 / 1410 E. San Ysidro Blvd.</p> <p>50 / 79 ↕ 1067 / 1624 ↕</p>	<p>46. Intersection does not exist under this condition</p>		<p>47</p> <p>96 / 181 ↕ 114 / 250 Smythe Crossing</p> <p>87 / 132 ↕ 108 / 92 Vista Ln</p> <p>59 / 49 ↕ 56 / 48 ↕</p>	<p>48</p> <p>0 / 2 ↕ 6 / 8 Virginia Ave</p> <p>5 / 5 ↕ 394 / 358 ↕ 287 / 273 Camino de la Plaza</p> <p>0 / 2 ↕ 392 / 1118 ↕ 66 / 66 ↕</p> <p>66 / 66 ↕ 287 / 273 ↕</p>



Legend
X / Y = AM / PM PEAK HOUR
TURNING VOLUMES



Impact Significance Criteria

Traffic impacts associated with this community plan update are determined by comparing Existing Traffic Conditions to Future Traffic Conditions assuming existing roadway and intersection configurations. The following criteria are used by the City of San Diego when determining if an impact is considered to be significant:

- Roadway segments operating at LOS E, with an increase in V/C ratio of more than 0.02 are considered to be a significant project impact. Also, roadway segments operating at LOS F conditions with an increase in V/C ratio of more than 0.01 are also considered to be significant project impacts.
- Roadway segments operating at acceptable LOS, where the project changes the LOS to E or F.
- Intersections operating at LOS E conditions with an increase in delay of 2 seconds or greater are considered to be a significant project impact. Intersections operating at LOS F conditions with an increase in delay of 1 second or greater are also considered to be significant project impacts.
- Intersections operating at acceptable LOS, where the project changes the LOS to E or F.

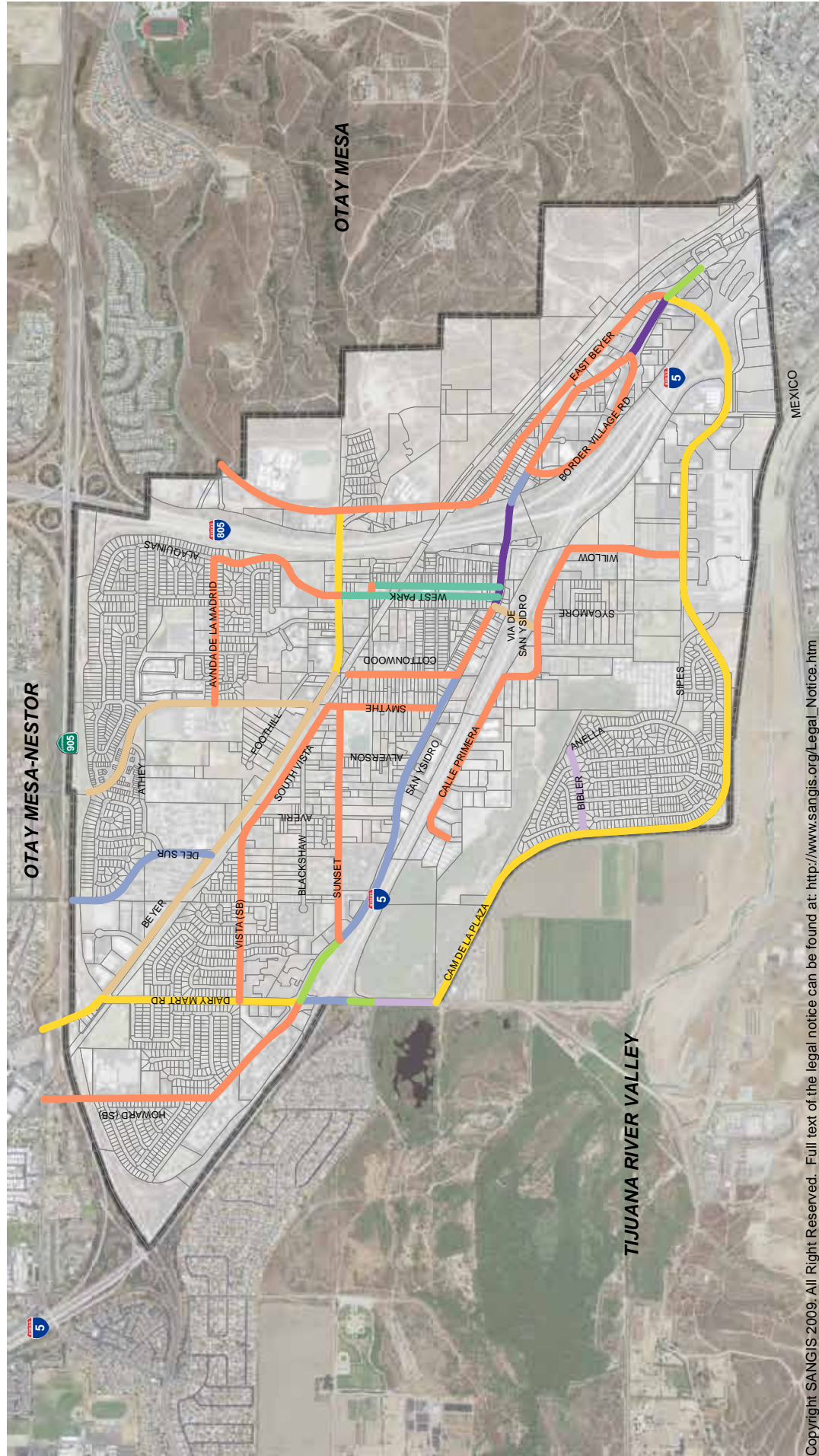
The significance criteria were used to determine roadway segment and intersection where improvements could be warranted.

Preferred Alternative Evaluation

Roadway Corridors

The San Ysidro Community roadway segments, assuming existing lanes and capacities, were evaluated using future traffic volumes from **Figure 2**. **Figure 4** depicts the existing roadway segment classifications for the study area used for the analysis. It should be noted that all circulation element roadways were included in the evaluation. The results of the analysis are depicted in **Table 1**. **Figure 5** illustrates the LOS results for each of the roadway segments analyzed. Significant roadway impacts occur on 31 of the 53 roadway segments evaluated, including one or more segments along the following streets:

- | | |
|-----------------------------|----------------------|
| ● Beyer Boulevard | ● Via de San Ysidro |
| ● Otay Mesa Road | ● Calle Primera |
| ● East Beyer Boulevard | ● Willow Road |
| ● Smythe Avenue | ● Camino de la Plaza |
| ● Dairy Mart Road | ● Vista Lane |
| ● West San Ysidro Boulevard | ● Cottonwood Road |
| ● East San Ysidro Boulevard | ● West Park Avenue |
| ● Border Village Road | ● East Park Avenue |



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LEGEND

- 1-Lane Collector
- 2-Lane Collector (multi-family, commercial/industrial fronting)
- 2-Lane Collector (continuous left-turn lane)
- 2-Lane Collector (no fronting property)
- 3-Lane Collector
- 4-Lane Collector
- 4-Lane Collector (no two-way left turn)
- 4-Lane Major Arterial

- ◆ Community Plan Boundary
- ◇ Parcel Boundaries

Existing Roadway Segments Functional Classification



Figure 4

**TABLE 1
HORIZON YEAR (2035) WITH PREFERRED ALTERNATIVE
ROADWAY SEGMENT ANALYSIS SUMMARY**

ROADWAY SEGMENT	ROADWAY FUNCTIONAL CLASSIFICATION (a)	EXISTING				PREFERRED LAND USE ALT.				SIGNIFICANT?		
		LOS E CAPACITY	ADT (b)	V/C RATIO (d)	LOS	ADT (c)	V/C RATIO (e)	LOS	Δ in V/C			
Beyer Blvd.												
SR-905 WB Off-Ramp to Dairy Mart Rd.	4-Lane Collector	30,000	16,371	0.546	C	21,100	0.703	D	4,729	0.224	NO	NO
Dairy Mart Rd. to Del Sur Blvd.	4-Lane Collector (no TWLT)	15,000	8,260	0.551	C	16,000	1.067	F	7,740	0.484	YES	YES
Del Sur Blvd. to Cottonwood Rd.	4-Lane Collector (no TWLT)	15,000	7,560	0.504	C	11,700	0.78	D	4,140	0.354	NO	NO
Cottonwood Rd. to W. Park Ave.	4-Lane Collector	30,000	10,046	0.335	B	28,800	0.96	E	18,754	0.651	YES	YES
W. Park Ave. to E. Beyer Blvd.	4-Lane Collector	30,000	7,511	0.25	A	28,400	0.947	E	20,889	0.736	YES	YES
Olay Mesa Rd.												
North of Beyer Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	5,440	0.68	D	12,000	1.5	F	6,560	0.547	YES	YES
E. Beyer Blvd.												
Beyer Blvd. to Center St.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,734	0.342	B	17,300	2.163	F	14,566	0.842	YES	YES
Center St. to E. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,734	0.342	B	9,700	1.213	F	6,966	0.718	YES	YES
Del Sur Blvd.												
SR-905 EB Ramps to Beyer Blvd.	2-Lane Collector (continuous left-turn lane)	15,000	1,441	0.096	A	4,700	0.313	A	3,259	0.693	NO	NO
Smythe Ave.												
SR-905 EB Ramps to Beyer Blvd.	4-Lane Collector (no TWLT)	15,000	7,256	0.484	C	13,300	0.887	E	6,044	0.454	YES	YES
S. Vista Ave. to Sunset Ln.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	4,345	0.543	C	8,100	1.013	F	3,755	0.464	YES	YES
Sunset Ln. to W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	840	0.105	A	2,200	0.275	A	1,360	0.618	NO	NO
Dairy Mart Rd.												
Beyer Blvd to S. Vista Ln	4-Lane Collector	30,000	8,630	0.288	A	11,800	0.393	B	3,170	0.269	NO	NO
S. Vista Ln. to W. San Ysidro Blvd.	4-Lane Collector	30,000	11,246	0.375	B	14,800	0.493	C	3,554	0.240	NO	NO
W. San Ysidro Blvd. to I-5 SB Ramps	2-Lane Collector (continuous left-turn lane)	15,000	17,283	1.152	F	20,000	1.333	F	2,717	0.136	YES	YES
I-5 SB Ramps to Servando Ave.	3-Lane Collector	11,250	14,609	1.299	F	17,700	1.573	F	3,091	0.175	YES	YES
Servando Ave. to Camino de la Plaza	2-Lane Collector (no fronting property)	10,000	8,771	0.877	D	11,600	1.16	F	2,829	0.244	YES	YES
W. San Ysidro Blvd.												
Howard Ave. to Dairy Mart Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	5,813	0.727	D	7,400	0.925	E	1,587	0.214	YES	YES
Dairy Mart Rd. to Sunset Ln.	4-Lane Collector	30,000	14,301	0.477	C	14,400	0.48	C	99	0.007	NO	NO
Sunset Ln. to Averil Rd.	2-Lane Collector (continuous left-turn lane)	15,000	12,674	0.845	D	13,300	0.887	E	626	0.047	YES	YES
Averil Rd. to Smythe Ave.	2-Lane Collector (continuous left-turn lane)	15,000	11,519	0.768	D	12,500	0.833	D	981	0.078	NO	NO
Smythe Ave. to Cottonwood Rd.	2-Lane Collector (continuous left-turn lane)	15,000	14,440	0.963	E	14,500	0.967	E	60	0.004	NO	NO
Cottonwood Rd. to Via de San Ysidro	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	14,440	1.805	F	20,900	2.613	F	6,460	0.309	YES	YES
Via de San Ysidro to W. Park Ave	4-Lane Major Arterial	40,000	16,756	0.419	B	23,200	0.58	C	6,444	0.278	NO	NO
E. San Ysidro Blvd.												
W. Park Ave. to I-805 SB Ramps	4-Lane Major Arterial	40,000	23,764	0.594	C	32,900	0.823	D	9,136	0.278	NO	NO
I-805 SB Ramps to I-805 NB Ramps	4-Lane Major Arterial	40,000	22,139	0.553	C	32,000	0.8	D	9,861	0.308	NO	NO
I-805 NB Ramps to Border Village Rd. (west)	2-Lane Collector (continuous left-turn lane)	15,000	22,509	1.501	F	39,700	2.647	F	17,191	0.433	YES	YES
Border Village Rd. (west) to Border Village Rd. (east)	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	12,615	1.577	F	25,100	3.138	F	12,485	0.497	YES	YES
Border Village Rd. (south) to E. Beyer Blvd./Camino de la Plaza	4-Lane Major Arterial	40,000	15,820	0.396	B	37,500	0.938	E	21,680	0.578	YES	YES
E. Beyer Blvd./Camino de la Plaza to I-5 SB Ramps	3-Lane Collector	11,250	10,740	0.955	E	16,700	1.484	F	5,960	0.357	YES	YES

Notes: **Bold** values indicate roadway segments operating at LOS E or F. **Bold** and shaded values indicate a project significant impact

(a) Roadway Functional Classification is based on field observations and anticipated funded roadway improvements to be completed by the Year 2035.

(b) Existing average daily traffic (ADT) volumes for the roadway segments were provided by National Data & Surveying Services and True Counts and measured in 2007, 2008, and 2010.

(c) 2035 Adopted Community Plan volumes were extracted from a SANDAG Series 12 Regional Transportation Model.

(d) The V/C Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

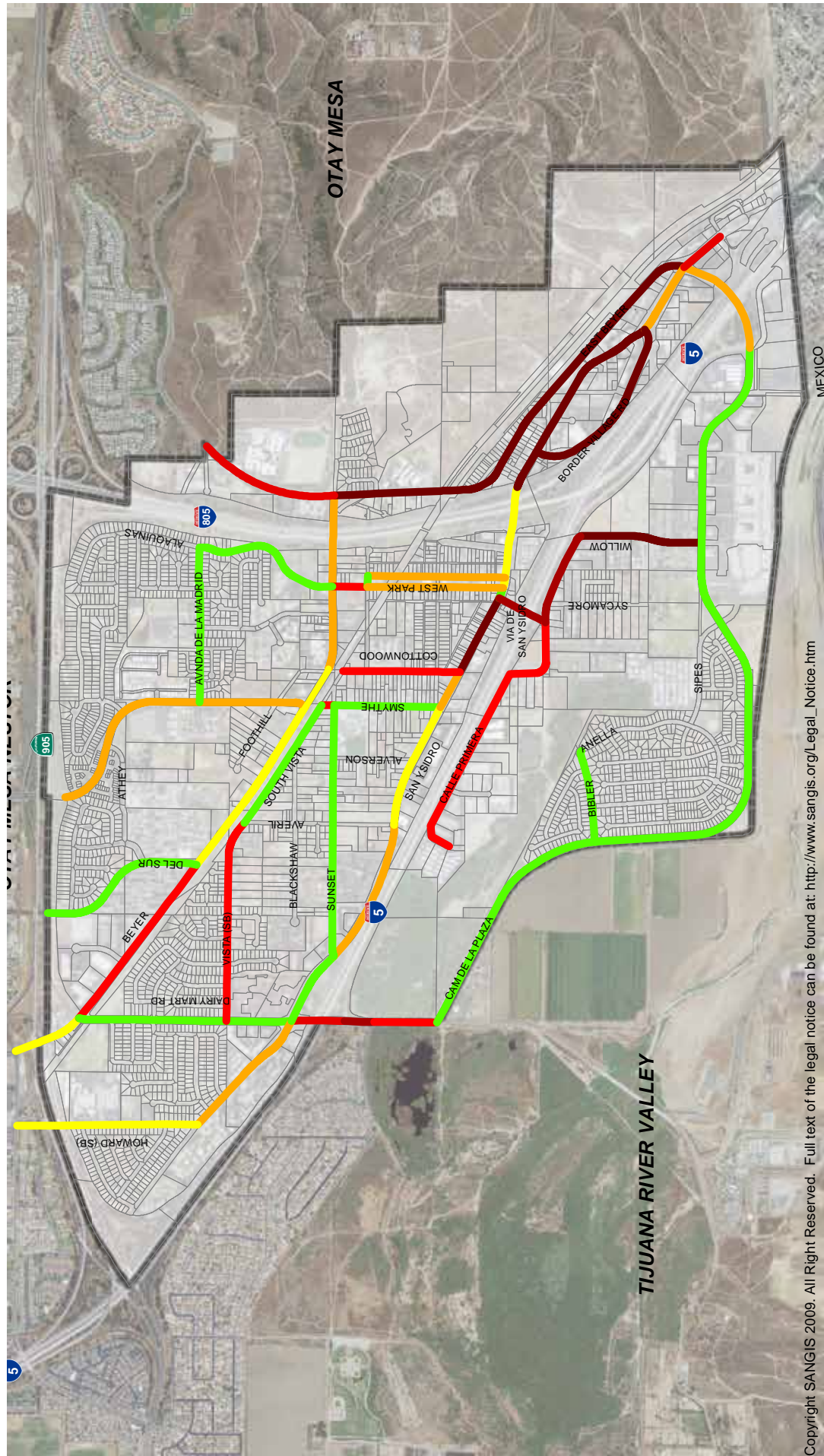
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**TABLE 1
HORIZON YEAR (2035) WITH PREFERRED ALTERNATIVE
ROADWAY SEGMENT ANALYSIS SUMMARY**

ROADWAY SEGMENT	ROADWAY FUNCTIONAL CLASSIFICATION (a)	EXISTING			PREFERRED LAND USE ALT.			SIGNIFICANT?			
		LOS E CAPACITY	ADT (b)	V/C RATIO (d)	LOS	ADT (c)	V/C RATIO (e)		LOS		
Border Village Rd. San Ysidro Blvd. to San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3,228	0.404	B	10,300	1.288	F	7,072	0.687	YES
Via de San Ysidro W. San Ysidro Blvd. to I-5 NB Ramps	4-Lane Collector (no TWLT)	15,000	17,064	1.138	F	24,500	1.633	F	7,436	0.304	YES
I-5 NB Ramps to Calle Primera	4-Lane Collector (no TWLT)	15,000	19,619	1.308	F	26,100	1.74	F	6,481	0.248	YES
Calle Primera West of Rancho del Rio Estates Rancho del Rio Estates to Via de San Ysidro	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3,224	0.403	B	9,000	1.125	F	5,776	0.642	YES
Via de San Ysidro to Willow Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3,224	0.403	B	9,000	1.125	F	5,776	0.642	YES
Willow Rd. Calle Primera to Camino De La Plaza	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	10,853	1.357	F	14,900	1.863	F	4,047	0.272	YES
Bibler Dr. East of Camino De La Plaza	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	10,053	1.257	F	18,100	2.263	F	8,047	0.445	YES
Camino De La Plaza. Dairy Mart Rd. to Bibler Dr.	2-Lane Collector (no fronting property)	10,000	4,332	0.433	B	4,400	0.44	B	68	0.015	NO
Bibler Dr. to Willow Rd.	4-Lane Collector	30,000	8,166	0.272	A	11,000	0.367	B	2,834	0.258	NO
Willow Rd. to I-5 SB Ramp	4-Lane Collector	30,000	4,431	0.148	A	7,200	0.24	A	2,769	0.385	NO
I-5 SB Ramp to E. San Ysidro Blvd.	4-Lane Collector	30,000	9,796	0.327	A	18,800	0.627	C	9,004	0.479	NO
Vista Ln. Dairy Mart Rd. to Averil Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,371	0.296	A	8,400	1.05	F	6,029	0.718	YES
Sunset Ln. Averil Rd. to Smythe Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3,660	0.458	C	4,700	0.588	C	1,040	0.221	NO
Averil Rd. to Smythe Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,695	0.337	B	4,700	0.588	C	2,005	0.427	NO
Cottonwood Rd. Sunset Ln. to W San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,410	0.301	A	4,600	0.575	C	2,190	0.476	NO
W. Park Ave. Beyer Blvd. to Seward Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3,787	0.473	C	8,800	1.1	F	5,013	0.570	YES
E. Park Ave. Seward Ave. to W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	5,301	0.663	D	8,000	1	F	2,699	0.337	YES
Seward Ave. Seward Ave. to W. San Ysidro Blvd.	1-Lane Collector	4,000	3,129	0.782	D	3,900	0.975	E	771	0.198	YES
Seward Ave. Seward Ave. to W. San Ysidro Blvd.	1-Lane Collector	4,000	2,172	0.543	C	3,300	0.825	E	1,128	0.342	YES
Howard Ave. W. Park Ave. to E. Park Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,469	0.309	A	4,100	0.513	C	1,631	0.398	NO
Avenida de la Madrid North of W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	4,113	0.514	C	5,800	0.725	D	1,687	0.291	NO
Alaquinas Dr. Smythe Ave. to Alaquinas Dr.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2,003	0.25	A	2,300	0.288	A	297	0.129	NO
Beyer Blvd. to Avenida de la Madrid.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1,495	0.19	A	1,700	0.21	A	205	0.121	NO

Notes:
Bold values indicate roadway segments operating at LOS E or F. **Bold** and shaded values indicate a project significant impact
(a) Existing roads street functional classification is based field observations.
(b) Existing average daily traffic (ADT) volumes for the roadway segments were provided by National Data & Surveying Services and True Counts and measured in 2007, 2008, and 2010.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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LEGEND

- LOS: A, B, C
- LOS: D
- LOS: E
- LOS: F (v/c < 1.25)
- LOS: F (v/c 1.25 - 1.5)
- LOS: F (v/c 1.5 - 2)
- LOS: F (v/c > 2)
- Community Plan Boundary
- Parcel Boundaries

Summary of Roadway Segment Analysis - Preferred Alternative

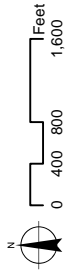


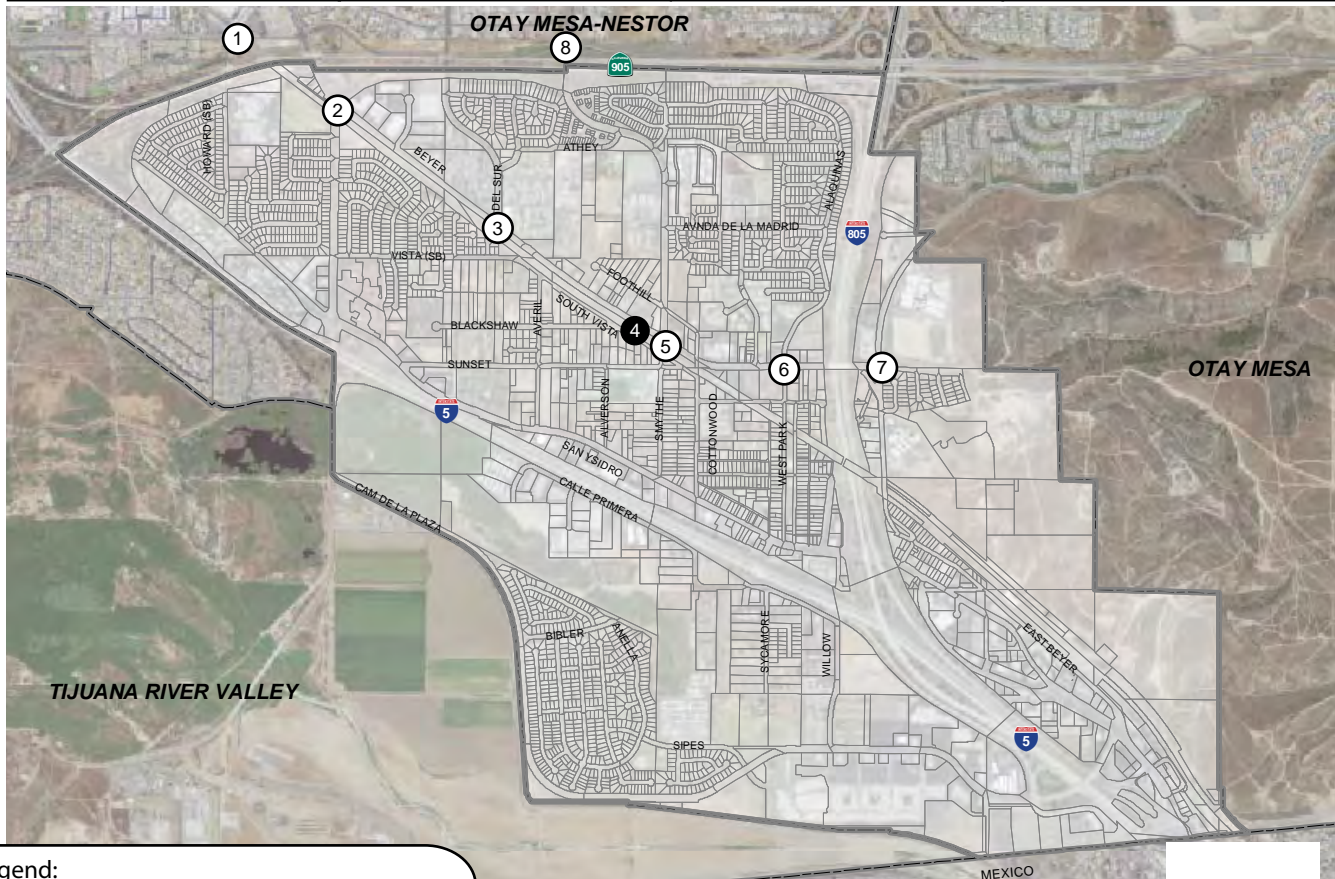
Figure 5

Intersections

The San Ysidro intersections were evaluated using future traffic volumes shown in **Figure 3**. Existing lane configurations were assumed for the analysis contained as shown in **Figure 6**. All major intersections within the community were included in the evaluation. Major intersections were defined as all locations where two circulation element roadways intercept. In addition, all existing or future traffic signals were included in the analysis. **Table 2** illustrates the results of the intersection analysis for the Horizon Year 2035 with the Preferred Land Use Alternative scenario. As shown in the table, the change in land use would have a significant intersection impact at 26 of the 44 intersections evaluated. **Figure 7** illustrates the LOS results for the intersection analysis. Synchro intersection peak-hour analysis worksheets are included in the **Appendix E**.

San Ysidro CPU - Mobility Element

Beyer Blvd/Iris Ave- SR-905 WB Ramps	Beyer Blvd/SR-905 EB Ramps-Dairy Mart Rd	Beyer Blvd/ Del Sur Blvd	Beyer Blvd/ Smythe Crossing
Beyer Blvd/ Smythe Ave	Beyer Blvd/ Alaquinas Dr-W. Park Ave	Beyer Blvd/E. Beyer Blvd- Otay Mesa Rd	SR-905 WB Ramps/ Picador Blvd

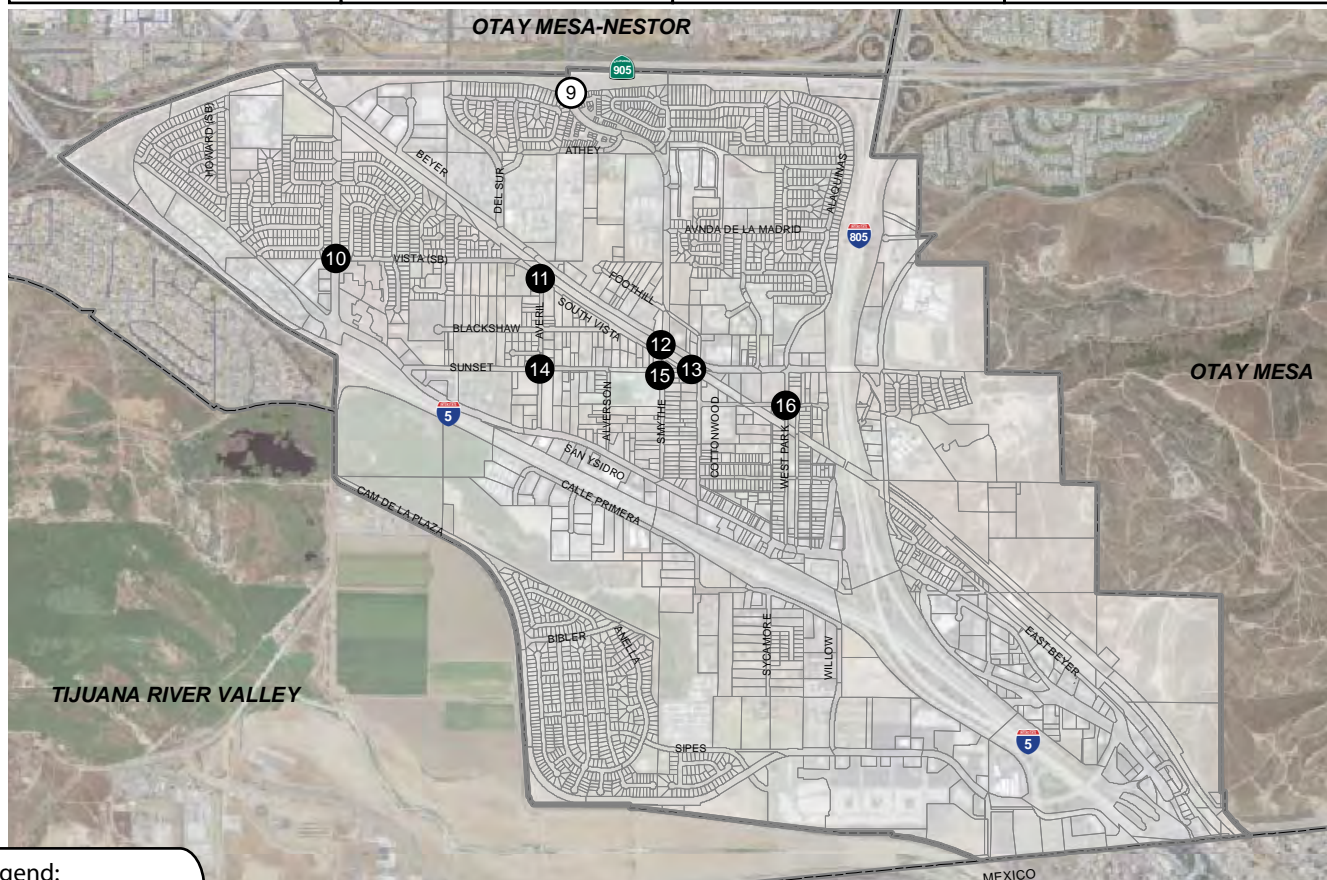


Legend:

- Signalized
- Right-turn overlap
- Unsignalized

San Ysidro CPU - Mobility Element

SR-905 EB Ramps/ Picador Blvd	Vista Ln/ Dairy Mart Rd	Vista Ln/ Averil Rd	Vista Ln/ Smythe Ave
Vista Ln/ Sunset Ln	Sunset Ln/ Averil Rd	Sunset Ln/ Smythe Ave	Seward Ave/ W. Park Ave

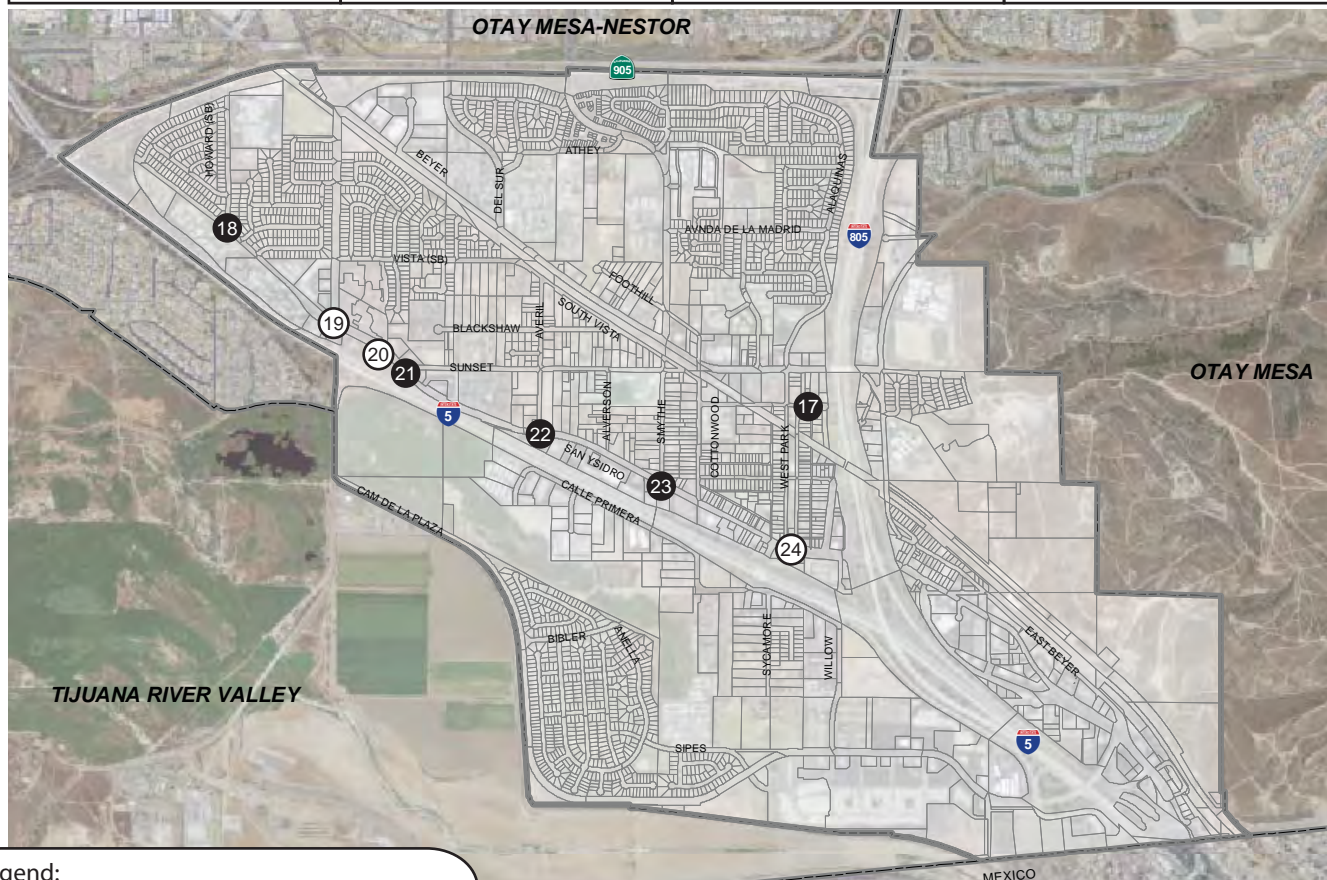


Legend:

- Signalized
- Unsignalized

San Ysidro CPU - Mobility Element

Seward Ave/ E. Park Ave	W. San Ysidro Blvd/ Howard Ave	W. San Ysidro Blvd/ Dairy Mart Rd	W. San Ysidro Blvd/ I-5 NB Ramps
W. San Ysidro Blvd/ Sunset Ln	W. San Ysidro Blvd/ Averil Rd	W. San Ysidro Blvd/ Smythe Ave	W. San Ysidro Blvd/ Cottonwood Rd

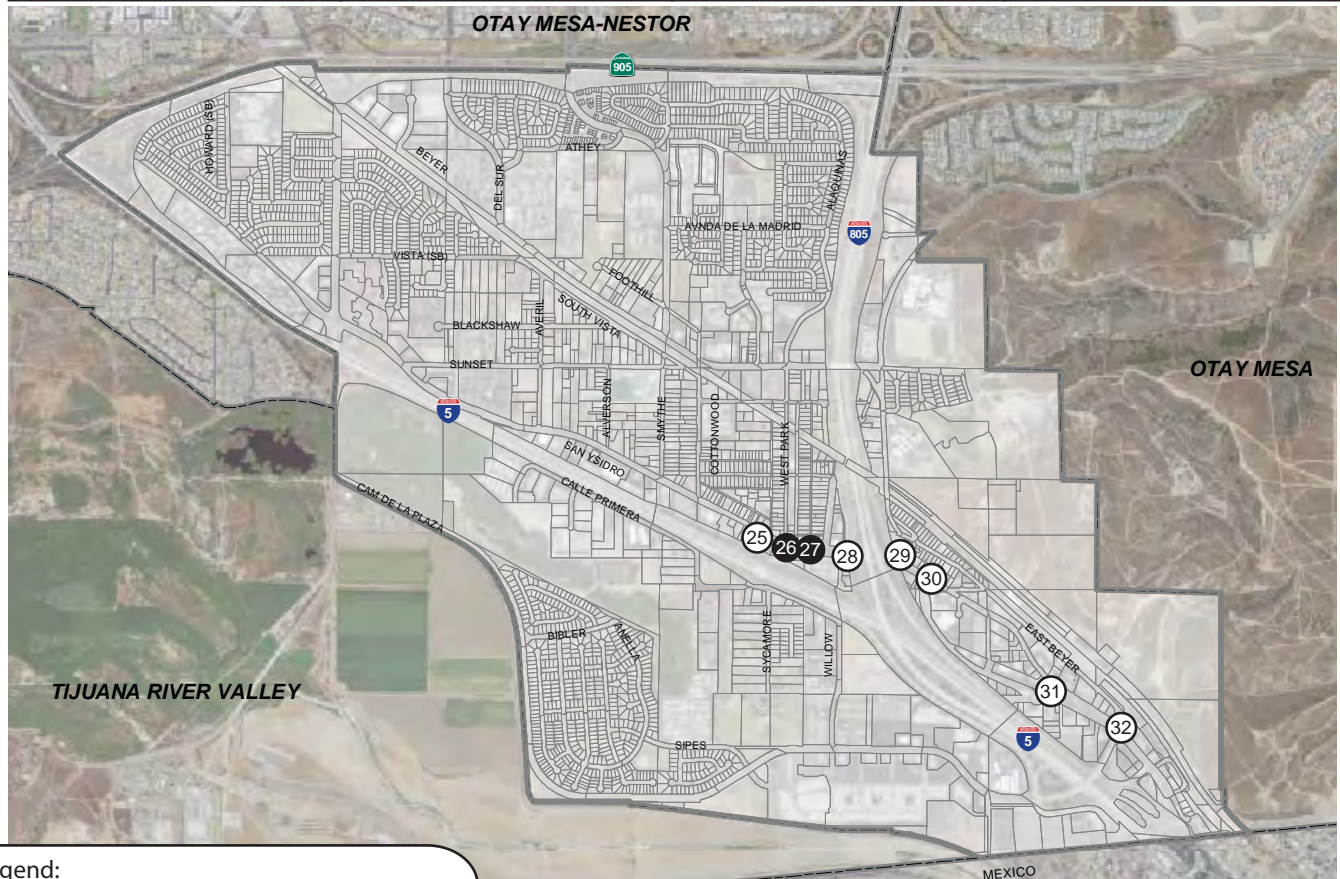


Legend:

- Signalized
- Unsignalized
- Free right-turn

San Ysidro CPU - Mobility Element

W. San Ysidro Blvd/ Via de San Ysidro	W. San Ysidro Blvd/ W. Park Ave	E. San Ysidro Blvd/ E. Park Ave	E. San Ysidro Blvd/ I-805 SB Ramps
E. San Ysidro Blvd/ I-805 NB Ramps	E. San Ysidro Blvd/ Border Village Rd (W)	E. San Ysidro Blvd/ Border Village Rd (E)	E. San Ysidro Blvd/Camino de la Plaza-E. Beyer Blvd

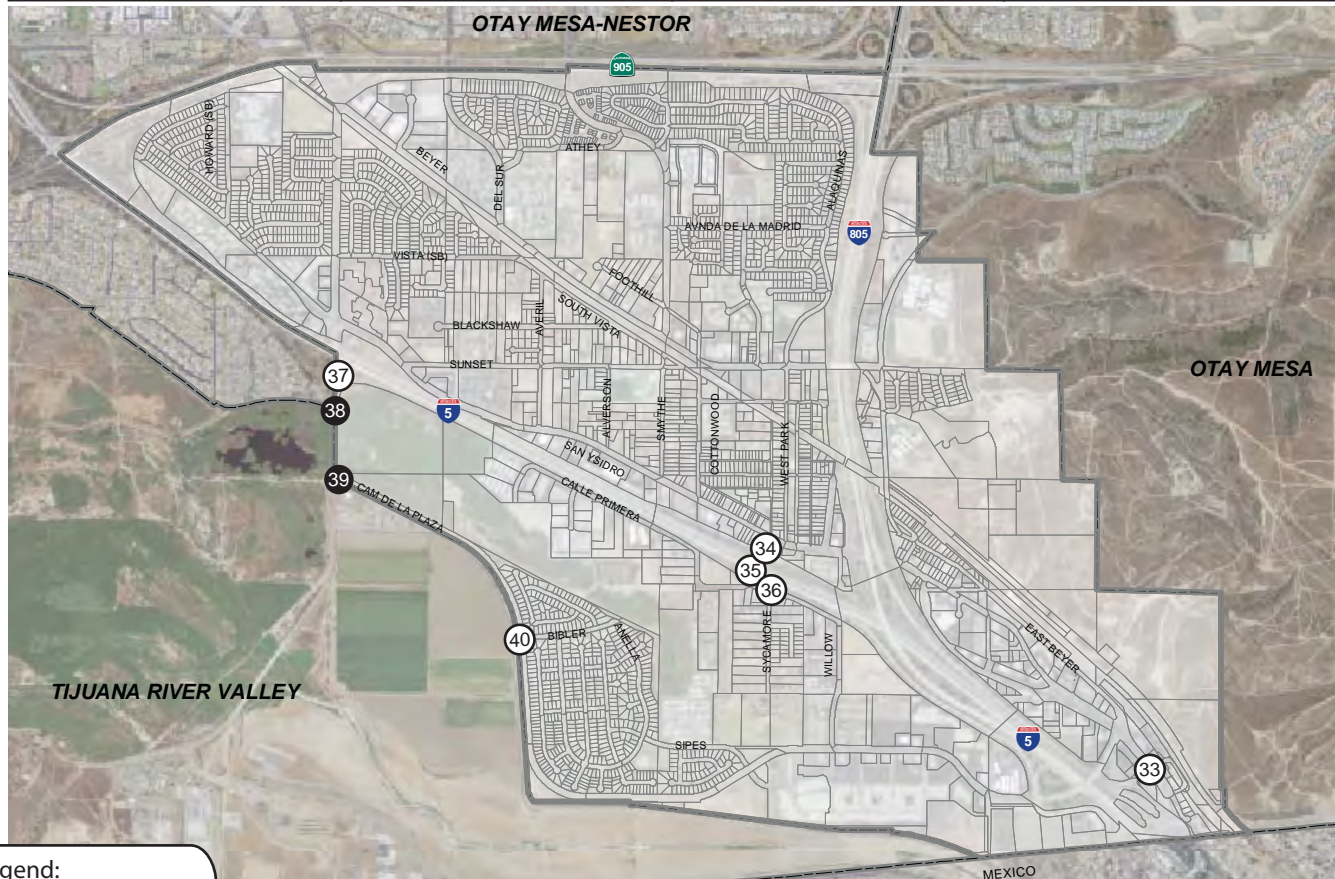


Legend:

- Signalized
- Unsignalized
- Right-turn overlap
- Free right-turn

San Ysidro CPU - Mobility Element

E. San Ysidro Blvd/ I-5 NB Ramps	Via de San Ysidro/ I-5 NB Ramps	Via de San Ysidro/ I-5 SB Ramps	Via de San Ysidro/ Calle Primera
I-5 SB Ramps/ Dairy Mart Rd	Servando Ave/ Dairy Mart Rd	Camino de la Plaza/ Dairy Mart Rd	Camino de la Plaza/ Bibler Dr

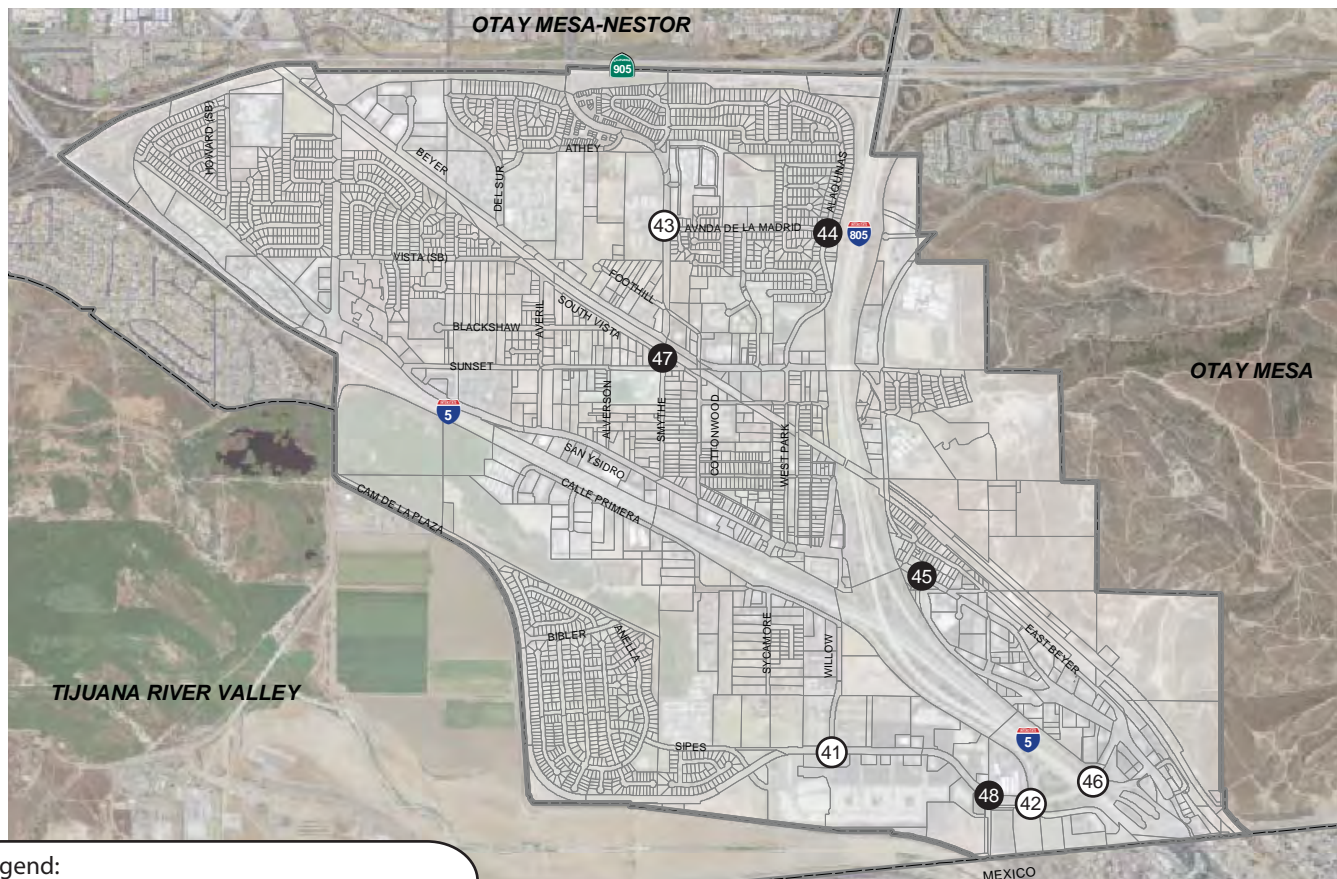


Legend:

- Signalized
- Unsignalized

San Ysidro CPU - Mobility Element

Camino de la Plaza/ Willow Rd	Camino de la Plaza/I-5 SB Ramps-Camiones Wy	Avenida de la Madrid/ Smythe Ave	Avenida de la Madrid/ Alaquinas Dr
Center St / E. San Ysidro Blvd	I-5 SB Ramps/ Camino de la Plaza	Vista Ln/ Smythe Crossing	Camino de la Plaza/ Virginia Ave



Legend:

- Signalized
- Right-turn overlap
- Unsignalized

TABLE 2
HORIZON YEAR (2035) WITH THE PREFERRED LAND USE ALTERNATIVE
PEAK-HOUR INTERSECTION LOS SUMMARY

INTERSECTION	PEAK-HOUR	EXISTING		PREFERRED LAND USE ALT.		Δ (c)	SIGNIFICANT?
		DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
1 Beyer Blvd & Iris Ave/SR-905 WB Ramps	AM	24.3	C	32.7	C	8.4	NO
	PM	54.9	D	117.0	F	62.1	YES
2 Beyer Blvd & Dairy Mart Rd/SR-905 Ramps	AM	30.8	C	79.7	E	48.9	YES
	PM	126.9	F	44.6	D	-82.3	NO
3 Beyer Blvd & Del Sur Blvd	AM	8.5	A	11.7	B	3.2	NO
	PM	13.2	B	18.0	B	4.8	NO
4 Smythe Crossing & Beyer Blvd	AM	11.4	B	13.9	B	2.5	NO
	PM	23.8	C	ECL	F	-	YES
5 Beyer Blvd & Smythe Ave	AM	18.7	B	ECL	F	-	YES
	PM	12.3	B	38.5	D	26.2	NO
6 W. Park Ave/Alaquinas Dr & Beyer Blvd	AM	19.3	B	160.6	F	141.3	YES
	PM	19.8	B	20.7	C	0.9	NO
7 East Beyer Blvd/Otay Mesa Rd & Beyer Blvd	AM	23.1	C	ECL	F	-	YES
	PM	16.5	B	ECL	F	-	YES
8 Picador Blvd & SR-905 WB On Ramp/SR-905	AM	15.9	B	20.4	C	4.5	NO
	PM	16.0	B	20.7	C	4.7	NO
9 Smythe Ave/Picador Blvd & SR-905 EB Off Rd	AM	12.9	B	15.3	B	2.4	NO
	PM	18.9	B	25.1	C	6.2	NO
10 Dairy Mart Rd & Vista Ln	AM	14.7	B	57.8	F	43.1	YES
	PM	17.0	C	102.0	F	85.0	YES
11 Averil Rd & Vista Ln	AM	7.8	A	11.1	B	3.3	NO
	PM	7.6	A	10.2	B	2.6	NO
12 Smythe Ave & Vista Ln	AM	ECL	F	ECL	F	-	YES
	PM	ECL	F	ECL	F	-	YES
13 Sunset Ln & Vista Ln	AM	8.7	A	10.0	B	1.3	NO
	PM	9.8	A	11.7	B	1.9	NO
14 Averil Rd & Sunset Ln	AM	10.4	B	17.0	C	6.6	NO
	PM	8.6	A	12.1	B	3.5	NO
15 Smythe Ave & Sunset Ln	AM	12.0	B	166.8	F	154.8	YES
	PM	7.6	A	8.8	A	1.2	NO
16 W. Park Ave & Seaward Ave	AM	11.3	B	29.3	D	18.0	NO
	PM	8.6	A	10.4	B	1.8	NO
17 E. Park Ave & Seaward Ave	AM	11.1	B	22.5	C	11.4	NO
	PM	8.1	A	9.0	A	0.9	NO
18 W. San Ysidro Blvd & Howard Ave	AM	15.1	C	43.4	E	28.3	YES
	PM	9.4	A	11.2	B	1.8	NO
19 Dairy Mart Rd & W. San Ysidro Blvd	AM	19.2	B	34.3	C	15.1	NO
	PM	28.3	C	53.6	D	25.3	NO
20 I-5 NB Ramps & W. San Ysidro Blvd	AM	15.6	B	27.8	C	12.2	NO
	PM	42.4	D	43.7	D	1.3	NO

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8

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TABLE 2
HORIZON YEAR (2035) WITH THE PREFERRED LAND USE ALTERNATIVE
PEAK-HOUR INTERSECTION LOS SUMMARY (cont.)

INTERSECTION	PEAK-HOUR	EXISTING		PREFERRED LAND USE ALT.		Δ (c)	SIGNIFICANT?
		DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
21 W. San Ysidro Blvd & Sunset Ln	AM	14.5	B	17.9	C	3.4	NO
	PM	17.8	C	21.4	C	3.6	NO
22 W. San Ysidro Blvd & Averil Rd	AM	12.0	B	14.2	B	2.2	NO
	PM	26.4	D	44.1	E	17.7	YES
23 W. San Ysidro Blvd & Smythe Ave	AM	12.3	B	15.8	C	3.5	NO
	PM	14.7	B	19.8	C	5.1	NO
24 Cottonwood Rd & W. San Ysidro Blvd	AM	6.5	A	11.8	B	5.3	NO
	PM	7.3	A	23.9	C	16.6	NO
25 Via de San Ysidro & W. San Ysidro Blvd	AM	13.4	B	15.1	B	1.7	NO
	PM	36.0	D	38.3	D	2.3	NO
26 W. San Ysidro Blvd/E. San Ysidro Blvd & W.	AM	11.1	B	13.4	B	2.3	NO
	PM	14.1	B	19.4	C	5.3	NO
27 E. San Ysidro Blvd/W. San Ysidro Blvd & E.	AM	9.0	B	10.6	B	1.6	NO
	PM	10.3	B	13.1	C	2.8	NO
28 I-805 SB Ramps & E. San Ysidro Blvd	AM	17.1	B	18.2	B	1.1	NO
	PM	23.6	C	35.4	D	11.8	NO
29 I-805 NB Ramps & E. San Ysidro Blvd	AM	13.8	B	16.5	B	2.7	NO
	PM	16.5	B	60.2	E	43.7	YES
30 Border Village Rd (W) & E. San Ysidro Blvd	AM	17.4	B	14.2	B	-3.2	NO
	PM	15.7	B	ECL	F	-	YES
31 Border Village Rd (E) & E. San Ysidro Blvd	AM	8.6	A	11.4	B	2.8	NO
	PM	15.6	B	ECL	F	-	YES
32 Camino de la Plaza/E. Beyer Blvd & E. San Ys	AM	18.8	B	24.2	C	5.4	NO
	PM	26.5	C	34.1	C	7.6	NO
33 I-5 NB Ramp & E. San Ysidro Blvd	AM	9.4	A	36.1	D	26.7	NO
	PM	12.6	B	ECL	F	-	YES
34 Via de San Ysidro & I-5 NB Ramps	AM	32.5	D	ECL	F	-	YES
	PM	ECL	F	ECL	F	-	YES
35 Via de San Ysidro & I-5 SB off-ramp	AM	23.6	C	49.1	D	25.5	NO
	PM	71.9	E	ECL	F	-	YES
36 Calle Primera/Willow Rd & Via de San Ysidro	AM	11.5	B	ECL	F	-	YES
	PM	63.1	E	ECL	F	-	YES
37 Dairy Mart Rd & I-5 SB Ramps	AM	16.2	B	29.9	C	13.7	NO
	PM	60.7	E	ECL	F	-	YES
38 Dairy Mart Rd & Servando Ave	AM	13.7	B	21.1	C	7.4	NO
	PM	36.8	E	108.4	F	71.6	YES
39 Dairy Mart Rd & Camino De La Plaza	AM	11.6	B	13.1	B	1.5	NO
	PM	37.6	E	78.1	F	40.5	YES
40 Camino de la Plaza & Bibler Dr	AM	11.5	B	9.3	A	-2.2	NO
	PM	12.6	B	11.1	B	-1.5	NO
41 Willow Rd & Camino de la Plaza	AM	15.4	B	27.1	C	11.7	NO
	PM	28.6	C	55.3	E	26.7	YES
42 Camiones Way/I-5 SB Ramps & Camino de la	AM	18.0	B	21.5	C	3.5	NO
	PM	91.8	F	99.6	F	7.8	YES
43 Smythe Ave & Avenida de la Madrid	AM	20.8	C	37.7	D	16.9	NO
	PM	24.8	C	23.6	C	-1.2	NO
44 Avenida de la Madrid & Alaquinas Dr	AM	12.7	B	15.2	C	2.5	NO
	PM	7.8	A	8.2	A	0.4	NO
45 E. San Ysidro Blvd & Center St	AM	11.1	B	22.4	C	11.3	NO
	PM	18.3	C	ECL	F	-	YES
47 Vista Ln & Smythe Crossing	AM	19.1	C	28.8	D	9.7	NO
	PM	47.2	E	ECL	F	-	YES
48 Camino de la Plaza & Virginia Ave	AM	12.0	B	ECL	F	-	YES
	PM	27.9	D	ECL	F	-	YES

Notes:

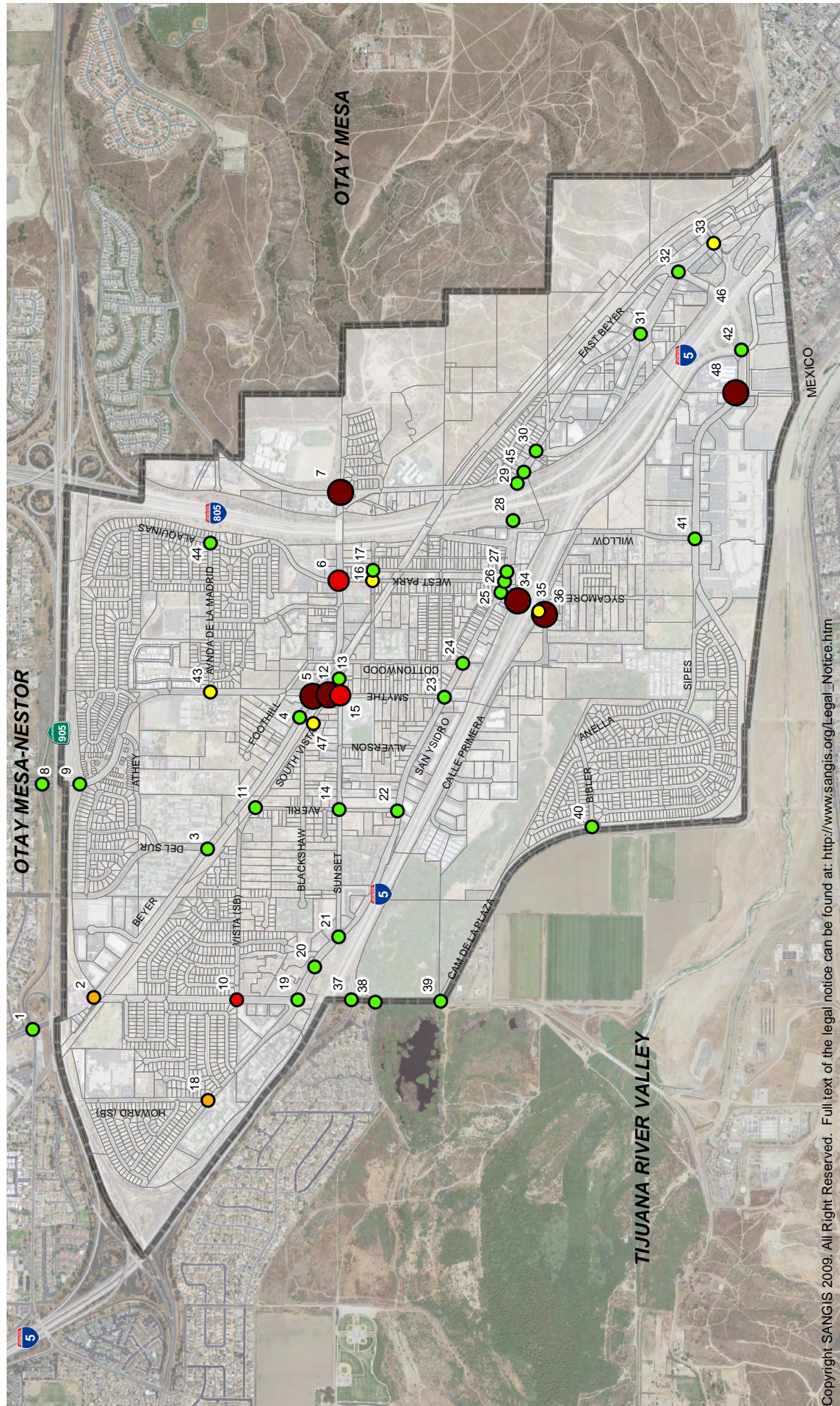
Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8

The saturation flow rate at the intersection of Camino de la Plaza and I-5 Southbound Ramps was adjusted to replicate existing conditions when the I-5 Southbound inspection lane is open entering Mexico.

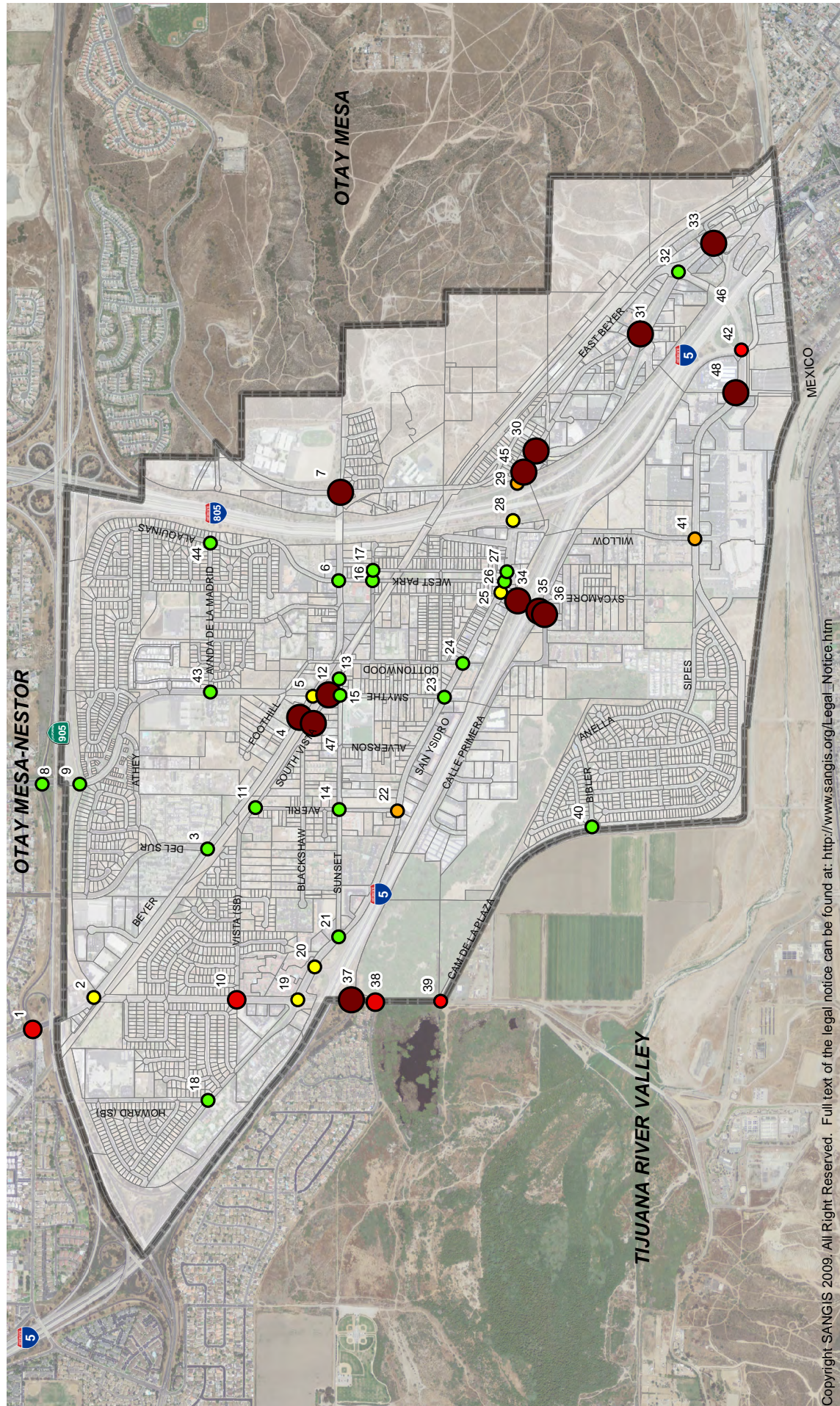
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LEGEND

- LOS: A, B, C
- LOS: D
- LOS: E
- LOS: F (<100 sec)
- LOS: F (150-250 sec)
- LOS: F (>500 sec)
- ◆ Community Plan Boundary
- ◇ Parcel Boundaries
- XX Intersection # (See Tables 3-8)

Figure 7.a



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LEGEND

- LOS: A, B, C
- LOS: D
- LOS: E
- ◆ LOS: F (<100 sec)
- ◆ LOS: F (100-150 sec)
- ◆ LOS: F (>500 sec)
- ◆ Community Plan Boundary
- ◇ Parcel Boundaries
- XX Intersection # (See Tables 3-8)



Figure 7.b

Summary of Intersection Analysis - Preferred Alternative (Weekday - PM)

Recommended Improvements

A number of improvements have been identified for inclusion in the Mobility Element. These improvements occur along corridors and at spot intersections and are recommended to mitigate roadway and intersection impacts as well as to enhance pedestrian, bicycle and transit connectivity through the community. **Figure 8** illustrates the location of all the recommended improvements within the vicinity of the study area. **Table 4** describes the roadway segment classification changes recommended. The following are the recommended improvements:

Roadway Corridors

Beyer Boulevard:

Between Dairy Mart and Precision Park Lane:

Under existing conditions, the segment of Beyer Boulevard between Dairy Mart Road and Precision Park Lane has a functional classification of a four-lane collector with a center left-turn lane. The existing curb-to-curb width along this segment of Beyer Boulevard is 68 feet, which allows for two travel lanes in each direction, parking on both sides of the roadway and a two-way left-turn lane. The roadway segment analysis shows that with the increase of traffic expected as a result of the preferred land use alternative, this segment of Beyer Boulevard would operate at LOS F. In order to increase the roadway capacity along Beyer Boulevard between Dairy Mart Road and Precision Park Lane and to improve the roadway segment operations to LOS D or better, the segment would need to be widened to provide an additional travel lane. Widening the roadway would require the City to obtain additional right-of-way for either the north side of the roadway (which is currently developed with multi-family residential) or to the south of the roadway, which is geometrically constrained by the MTS BlueLine Trolley line. For this reason, the widening of Beyer Boulevard is not recommended. The existing configuration does not allow for a dedicated bicycle lane. In order to provide a bicycle facility along this roadway segment, it is recommended that a six-foot cycle track be striped along both sides of the roadway with a three foot buffer between the parking and the bike lane. Then parking could be provided along both sides of the roadway. One travel lane in each direction would be removed to provide the needed room for the cycle track. Although the auto capacity of the roadway would remain the same, this configuration would improve the bicycle network and provide connectivity to the Beyer Transit Station. This reconfiguration could be implemented with a restriping of the roadway within the curb to curb width as shown in **Figure 9** (Cross Section A). The level of Service for this section of the roadway will remain the same with the implementation of the recommended improvements.

Between Precision Park Lane and Cottonwood Road:

Under existing conditions, the segment of Beyer Boulevard between Precision Park Lane and Smythe Avenue has a functional classification of a four-lane collector without a center left-turn lane. The existing curb-to-curb width along this segment of Beyer Boulevard is 58 feet, which allows for two travel lanes in each direction, and parking on both sides of the roadway. The roadway segment analysis shows that with the increase of traffic expected as a result of the preferred land use alternative, this segment of Beyer Boulevard would operate at LOS E. In order to increase the roadway capacity along Beyer Boulevard between Precision Park Lane and Smythe Avenue and to

improve the roadway segment operations to LOS D or better, the segment would need to be widened to provide an additional travel lane. Widening the roadway would require the City to obtain additional right-of-way for either the north of the roadway (which is currently developed with multi-family residential) or to the south of the roadway, which is geometrically constrained by the MTS Blueline Trolley line. For this reason, the widening of Beyer Boulevard is not recommended. The existing configuration does not allow for a dedicated bicycle lane. In order to provide a bicycle facility along this roadway segment, it is recommended that one travel lane in each direction be removed to provide the needed room for the bicycle lane. A six-foot bike lane could then be striped along both sides of the roadway, with parking along both sides of the roadway. Although the auto capacity of the roadway would not change, this configuration would improve the bicycle network and provide connectivity to the Beyer Transit Station. This reconfiguration could be implemented with a restriping of the roadway within the curb to curb width as shown in **Figure 9** (Cross Section B).

Between Cottonwood Road and E. Beyer Boulevard:

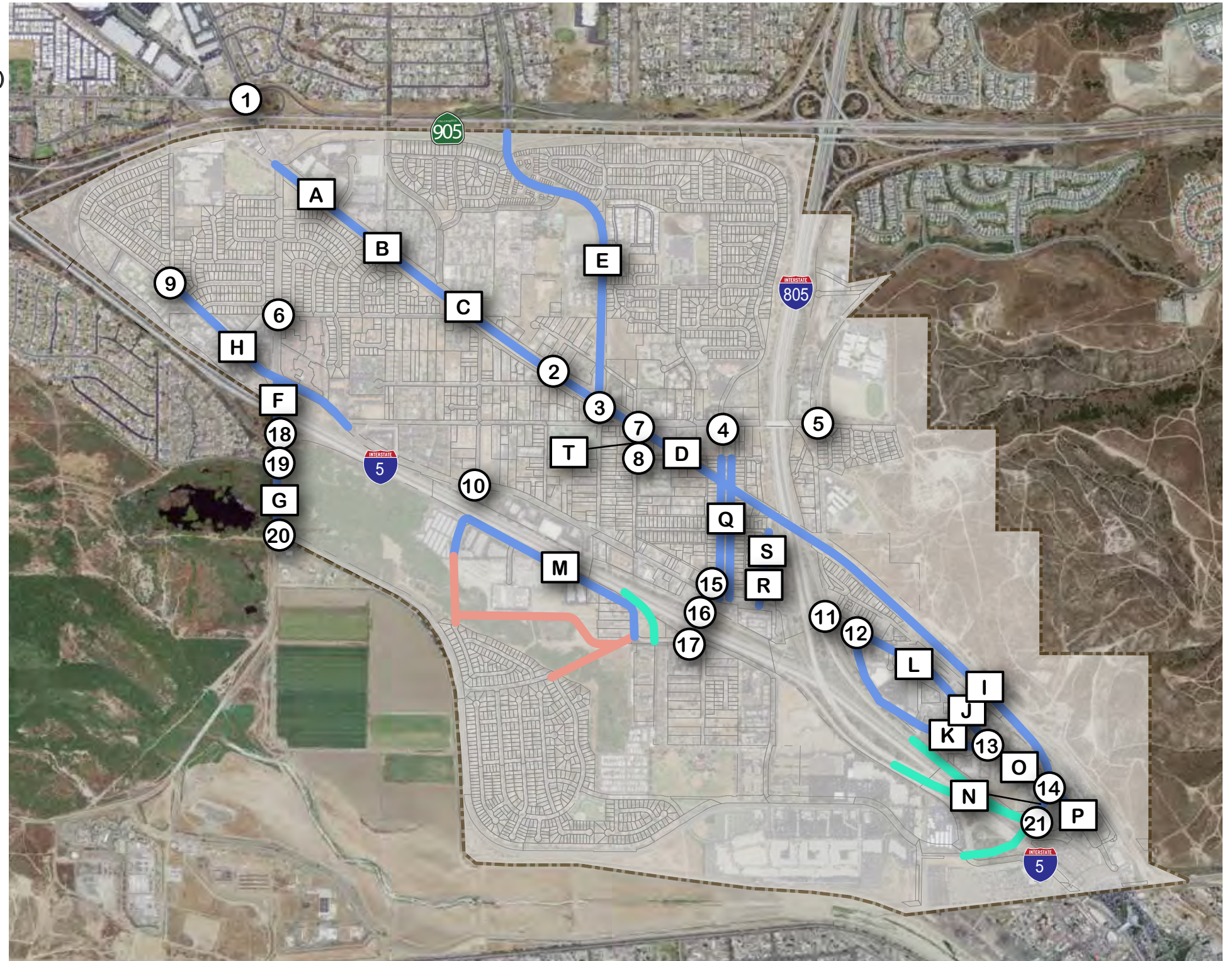
Under existing conditions, the segment of Beyer Boulevard between Smythe Avenue and East Beyer Boulevard has a functional classification of a four-lane collector with a center left-turn lane. The existing curb-to-curb width along this segment of Beyer Boulevard is 82 feet, which allows for two travel lanes in each direction, parking on both sides of the roadway and a center left-turn lane. The roadway segment analysis shows that with the increase of traffic expected as a result of the preferred land use alternative, this segment of Beyer Boulevard would operate at LOS E. This segment of the roadway has a functional classification of a four-lane collector with a two-way left-turn lane. In order to increase the capacity of the roadway segment and improve its level of service to D or better, a raised median should be installed to reclassify the segment from a four-lane collector street to a four-lane major. The reclassification of the roadway would increase its capacity and improve its LOS to D or better. The recommended raised median could be constructed without the need to increase or widen the road. For this reason, the construction of a raised media is recommended. The existing configuration does not allow for a dedicated bicycle lane. In order to provide a bicycle facility along this roadway segment, it is recommended that the existing travel lanes be restriped to provide 12 and 11 foot lanes, respectively. The restriping of the existing travel lanes would provide the necessary space to add the cycle track along Beyer Boulevard with a six-foot bike lane striped along both sides of the roadway. Then parking could be provided along both sides of the roadway. Although the auto capacity of the roadway would not change, this configuration would improve the bicycle network and provide connectivity to the Beyer Transit Station from the east side of the Community. This reconfiguration could be implemented with a restriping of the roadway within and construction of the raised median within the the curb to curb width as shown in **Figure 9** (Cross Section D).

Roadway Segments:

A - D Beyer Blvd (See Figure 9)	M Calle Primera (See Figure 12)
E Smythe Ave	N - P Camino de la Plaza (See Figure 13)
F - G Dairy Mart Rd (See Figure 10)	Q West and East Park Ave (See Figure 14)
H West San Ysidro Blvd	R - S Olive St (See Figure 15)
I - L Border Village (See Figure 11)	T Vista Ave (See Figure 16)

Intersections:

- 1 Iris Ave and Beyer Blvd (See Figure 17)
- 2 Beyer Blvd and Smythe Crossing (See Figure 17)
- 3 Beyer Blvd and Smythe Ave (See Figure 9 & 17)
- 4 Beyer Blvd and Alaguinas Dr (See Figure 17)
- 5 Beyer Blvd and Otay Mesa Rd (See Figure 17)
- 6 Dairy Mart Rd and Vista Ln (See Figure 17)
- 7 Vista Ln and Smythe Ave (See Figure 16 & 17)
- 8 Sunset Ln and Smythe Ave (See Figure 16 & 17)
- 9 West San Ysidro Blvd and Howard Ave (See Figure 17)
- 10 West San Ysidro Blvd and Averil Rd (See Figure 17)
- 11 East San Ysidro Blvd and I-805 NB Ramps (See Figure 17 & 20)
- 12 East San Ysidro Blvd and Border Village Rd (See Figure 11 & 17)
- 13 East San Ysidro Blvd and Camino de la Plaza (See Figure 13 & 17)
- 14 West San Ysidro Blvd and I-5 NB Ramps (See Figure 17)
- 15 West San Ysidro Blvd and Via de San Ysidro (See Figure 12 & 17)
- 16 I-5 NB Ramp and Via San Ysidro (See Figure 12 & 17)
- 17 Calle Primera and Via San Ysidro (See Figure 12 & 17)
- 18 Dairy Mart Rd and I-5 SB Ramps (See Figure 17)
- 19 Dairy Mart Rd and Selvando Ave (See Figure 17)
- 20 Dairy Mart Rd and Camino de la Plaza (See Figure 17)
- 21 I-5 Ramps and Camino de la Plaza (See Figure 13 & 17)



LEGEND

- San Ysidro Community Plan Boundary
- Roadway Improvement
- Freeway/ Ramp Improvement
- New Roadway

Figure 8

**TABLE 3
RECOMMENDED ROADWAY SEGMENT CLASSIFICATION CHANGES**

ROADWAY SEGMENT	ROADWAY FUNCTIONAL CLASSIFICATION (a)	LOSE CAPACITY	RECOMMENDED CLASSIFICATION	LOSE CAPACITY	REMARKS
Beyer Blvd.					
SR-905 WB Off-Ramp to Dairy Mart Rd.	4-Lane Collector	30,000	4-Lane Collector	30,000	
Dairy Mart Rd. to Del Sur Blvd.	4-Lane Collector (no TWL/T)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	Eliminate travel lane to provide bike lane
Del Sur Blvd. to Cottonwood Rd.	4-Lane Collector (no TWL/T)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	Eliminate travel lane to provide bike lane
Cottonwood Rd. to W. Park Ave.	4-Lane Collector	30,000	4-Lane Collector	30,000	
W. Park Ave. to E. Beyer Blvd.	4-Lane Collector	30,000	4-Lane Collector	30,000	
Otay Mesa Rd.					
North of Beyer Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
E. Beyer Blvd.					
Beyer Blvd. to Center St.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Center St. to E. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Del Sur Blvd.					
SR-905 EB Ramps to Beyer Blvd.	2-Lane Collector (continuous left-turn lane)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	
Smyle Ave.					
SR-905 EB Ramps to Beyer Blvd.	4-Lane Collector (no TWL/T)	15,000	4-Lane Collector	30,000	Provide left-turn lanes at missing sections
S. Vista Ave. to Sunset Ln.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Sunset Ln. to W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Dairy Mart Rd.					
Beyer Blvd to S. Vista Ln	4-Lane Collector	30,000	4-Lane Collector	30,000	
S. Vista Ln. to W. San Ysidro Blvd.	4-Lane Collector	30,000	4-Lane Collector	30,000	
W. San Ysidro Blvd. to I-5 SB Ramps	2-Lane Collector (continuous left-turn lane)	15,000	4-Lane Collector	30,000	Widen bridge
I-5 SB Ramps to Servando Ave.	3-Lane Collector	11,250	4-Lane Collector	30,000	Widen
Servando Ave. to Camino de la Plaza	2-Lane Collector (no fronting property)	10,000	2-Lane Collector (continuous left-turn lane)	15,000	Provide continuous left-turn lanes
W. San Ysidro Blvd.					
Howard Ave. to Dairy Mart Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Dairy Mart Rd. to Sunset Ln.	4-Lane Collector	30,000	4-Lane Collector	30,000	
Sunset Ln. to Averil Rd.	2-Lane Collector (continuous left-turn lane)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	
Averil Rd. to Smythe Ave.	2-Lane Collector (continuous left-turn lane)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	
Smythe Ave. to Cottonwood Rd.	2-Lane Collector (continuous left-turn lane)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	
Cottonwood Rd. to Via de San Ysidro	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Via de San Ysidro to W. Park Ave	4-Lane Major Arterial	40,000	4-Lane Major Arterial	40,000	
E. San Ysidro Blvd.					
W. Park Ave. to I-805 SB Ramps	4-Lane Major Arterial	40,000	4-Lane Major Arterial	40,000	
I-805 SB Ramps to I-805 NB Ramps	4-Lane Major Arterial	40,000	4-Lane Major Arterial	40,000	
I-805 NB Ramps to Border Village Rd. (west)	2-Lane Collector (continuous left-turn lane)	15,000	4-Lane Collector	30,000	Widen
Border Village Rd. (west) to Border Village Rd. (east)	2-Lane Collector (continuous left-turn lane)	15,000	2-Lane Collector (continuous left-turn lane)	15,000	
Border Village Rd. (south) to E. Beyer Blvd./Camino de la Plaza	4-Lane Major Arterial	40,000	5-Lane Major Arterial	50,000	Reconfigure
E. Beyer Blvd./Camino de la Plaza to I-5 SB Ramps	3-Lane Collector	11,250	4-Lane Major Arterial	40,000	Widen

Notes:

Bold values indicates proposed roadway segment improvements.

(a) Roadway Functional Classification is based on field observations and anticipated funded roadway improvements to be completed by the Year 2035.

(b) 2035 Adopted Community Plan volumes were extracted from a SANDAG Series 12 Regional Transportation Model.

(c) The V/C Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

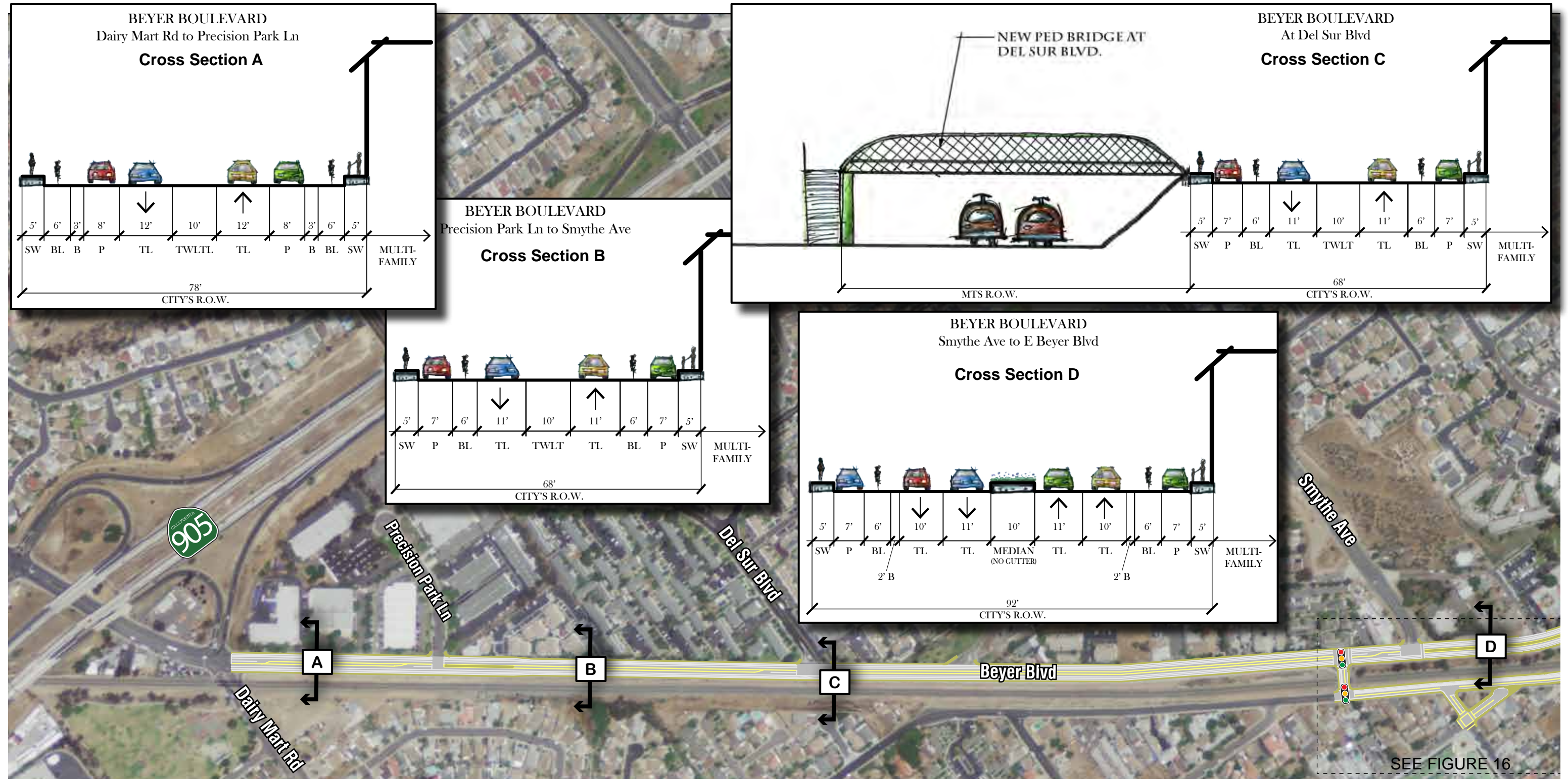
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**TABLE 3
RECOMMENDED ROADWAY SEGMENT CLASSIFICATION CHANGES**

ROADWAY SEGMENT	ROADWAY FUNCTIONAL CLASSIFICATION (a)	LOSE CAPACITY	RECOMMENDED CLASSIFICATION	LOSE CAPACITY	REMARKS
Border Village Rd.					
San Ysidro Blvd. to San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Via de San Ysidro					
W. San Ysidro Blvd. to E-5 NB Ramps	4-Lane Collector (no TWL/T)	15,000	4-Lane Collector	30,000	Widen
E-5 NB Ramps to Calle Primera	4-Lane Collector (no TWL/T)	15,000	4-Lane Collector	30,000	Widen
Calle Primera					
West of Rancho del Rio Estates	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3-Lane Collector	11,250	Widen to provide 2 WB and 1 EB lane
Rancho del Rio Estates to Via de San Ysidro	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	3-Lane Collector	11,250	Widen to provide 2 WB and 1 EB lane
Via de San Ysidro to Willow Rd	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Willow Rd.					
Calle Primera to Camino De La Plaza	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Bibler Dr.					
East of Camino De La Plaza	2-Lane Collector (no fronting property)	10,000	2-Lane Collector (no fronting property)	10,000	
Camino De La Plaza.					
Dairy Mart Rd. to Bibler Dr.	4-Lane Collector	30,000	4-Lane Collector	30,000	
Bibler Dr. to Willow Rd.	4-Lane Collector	30,000	4-Lane Collector	30,000	
Willow Rd. to I-5 SB Ramps	4-Lane Collector	30,000	4-Lane Collector	30,000	
I-5 SB Ramps to E. San Ysidro Blvd.	4-Lane Collector	30,000	4-Lane Major Arterial	40,000	Convert to 4-Lane Major
Vista Ln.					
Dairy Mart Rd. to Averil Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Averil Rd. to Smythe Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Sunset Ln.					
W. San Ysidro Blvd. to Averil Rd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Averil Rd. to Smythe Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Cottonwood Rd.					
Sunset Ln. to W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
W. Park Ave.					
Beyer Blvd. to Seward Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Seward Ave. to W. San Ysidro Blvd.	1-Lane Collector	4,000	1-Lane Collector	4,000	
E. Park Ave.					
Seward Ave. to W. San Ysidro Blvd.	1-Lane Collector	4,000	1-Lane Collector	4,000	
Seward Ave.					
W. Park Ave. to E. Park Ave.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Howard Ave.					
North of W. San Ysidro Blvd.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Avenida de la Madrid					
Smythe Ave. to Alaquinas Dr.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	
Alaquinas Dr.					
Beyer Blvd. to Avenida de la Madrid.	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	

Notes:
Bold values indicates proposed roadway segment improvements.
(a) Existing roads street functional classification is based field observations.
(b) 2035 Adopted Community Plan volumes were extracted from a SANDAG Series 12 Regional Transportation Model.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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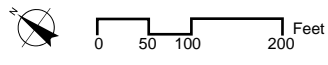


SEE FIGURE 16

LEGEND	BL	Bike Lane	TWLT	Two-way Left Turn	New Traffic Signal
	P	Parking	BP	Bike Path	
	SW	Sidewalk	B	Buffer	
	TL	Travel Lane			

Figure 9

Recommended Improvement: Beyer Blvd between Dairy Mart Rd and Trolley Station



Smythe Avenue:

The roadway segment analysis shows that Smythe Avenue between the SR-905 freeway ramps and Beyer Boulevard would operate at LOS E with the traffic associated with the preferred land use scenario. The LOS deficiency is caused by the fact that the unsignalized intersection of Smythe Avenue with Via de la Melodia, the Las Lomas Mobile Park driveway and Foothill Road do not provide for left-turn pockets. Restriping Smythe Avenue to provide left-turn pockets at these unsignalized intersections would increase capacity and improve the roadway segment operations to D or better. The addition of the left-turn pockets would provide an increase in the overall capacity along the corridor, as it would eliminate the conflict between through movements and left-turn movements at intersections.

It is recommended that all bike lanes along Smythe Avenue be restriped to provide a buffer space between the bike lane and the travel lanes. The buffer space can be provided by restriping and reducing the existing travel lanes.

Dairy Mart Road:*Between West San Ysidro Boulevard and the I-5 Southbound ramps:*

The roadway segment analysis shows that Dairy Mart Road would operate at LOS F between West San Ysidro Boulevard and the I-5 Southbound ramps, with the increase of traffic expected as a result of the preferred land use alternative. This segment is currently constructed as a bridge overpass with one lane in each direction and a painted median with left-turn pockets at the end points of the segment. In order to improve this segment to a LOS D or better, the widening of the bridge and the reconstruction of the interchange would be needed. The reconstruction of the bridge and the interchange will allow to provide the necessary lanes at the intersection with the I-5 Southbound ramps, in addition to provide the needed room to stripe a buffer bike lane along Dairy Mart Road. **Figure 10**, (Cross Section F), shows the recommended improvement including the needed cross section for the new bridge. With the proposed recommendation, Dairy Mart Road between West San Ysidro Boulevard and the I-5 Southbound ramps would operate at LOS D.

Between the I-5 Southbound ramps and Servando Avenue:

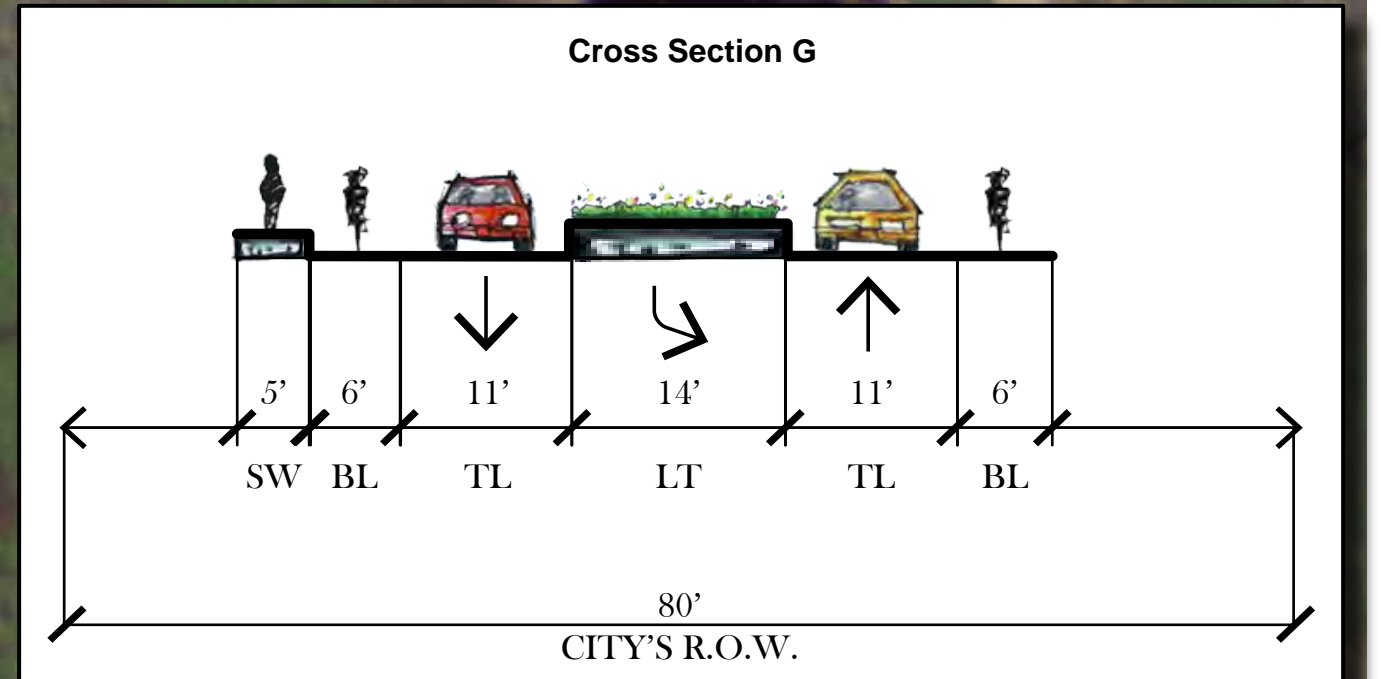
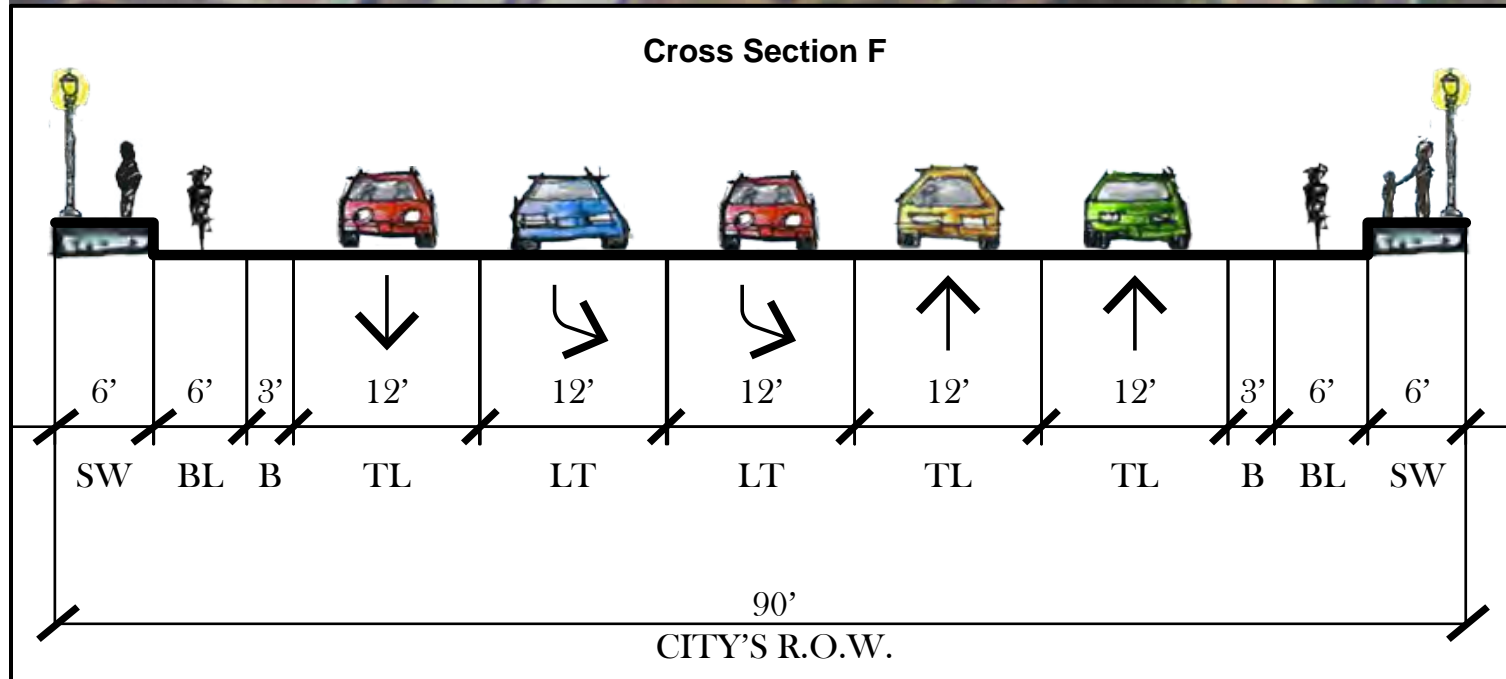
The roadway segment analysis shows that Dairy Mart Road would operate at LOS F between the I-5 Southbound ramps and Servando Avenue, with the increase of traffic expected as a result of the preferred land use alternative. For this segment, it is recommended that a raised median be constructed to separate the northbound and southbound traffic. Complemented by the intersection improvements at the I-5 Southbound ramp and Dairy Mart Road, the entire circulation and flow along Dairy Mart Road would improve significantly. **Figure 10** illustrates the recommended improvement. Buffered bike lanes are recommended along this segment. With the proposed recommendation, this segment of Dairy Mart Road would operate at LOS C.

Between Servando Avenue and Camino de la Plaza:

The roadway segment analysis shows that Dairy Mart Road between Servando Avenue and Camino de la Plaza would operate at LOS F, with the increase of traffic expected as a result of the preferred land use alternative. A raised median is also recommended to be constructed between Servando Avenue and Camino de la Plaza. This new raised median would separate the northbound and southbound traffic by providing a physical barrier that would increase capacity along the roadway segment. Buffered bike lanes are recommended along this segment. **Figure 10**, (Cross Section G), shows the recommended improvement including the needed cross section for this section of Dairy Mart Road. With the proposed recommendation, this segment of Dairy Mart Road would operate at LOS D.

West San Ysidro Boulevard:

The roadway segment analysis shows that with the exception of the segments between Dairy Mart Road and Sunset Lane and between Via de San Ysidro and West Park Avenue, the addition of the traffic associated with the preferred land use scenario, would cause West San Ysidro Boulevard to operate at LOS E or F. This roadway is a multi-modal corridor within the community, used by vehicular passengers along with bicyclists and pedestrians. In order to improve the roadway segment operations and LOS to D or better, the roadway would need to be widened to provide additional lanes of traffic in each direction. The widening of West San Ysidro Boulevard would require the City to obtain additional right-of-way from multiple private owners. The potential widening would force several residential and commercial units to be reconstructed including historical landmark buildings along the corridor. The widening of the roadway would compromise the community character. For all these reasons, the widening of the roadway to provide additional capacity it is not recommended. Instead, it is recommended that traffic calming measures be implemented along the corridor to increase and enhance pedestrian and bicycle mobility, improving the multi-modal character of the community. Where the existing roadway width allows, a bike lane should be striped along the segment. For the majority of the segment, the bike lane could be striped by removing the existing two-way left-turn lanes. For sections where the roadway width does not provide sufficient space for bike lanes, sharrow marking should be installed.



LEGEND	BL	Bike Lane	TWLT	Two-way Left Turn		New Traffic Signal or Roundabout
	P	Parking	BP	Bike Path		
	SW	Sidewalk	B	Buffer		
	TL	Travel Lane	LT	Left Turn Lane		

Figure 10

Recommended Improvement: Dairy Mart Road



East San Ysidro Boulevard: The roadway segment analysis shows that individual segments between the I-805 northbound ramp and Camino de la Plaza, East San Ysidro Boulevard would operate at LOS E or F with the addition of the preferred land use alternative traffic volumes.

Between I-805 and Center Street:

In order to improve the capacity of the segment between the I-805 northbound ramp and Border Village Road (north), it is recommended that the roadway be widened to the north to provide an additional westbound right-turn lane from westbound East San Ysidro Boulevard to northbound I-805. This improvement requires additional ROW that will be obtained from the fronting parcel. **Figure 19** illustrates the recommended improvement, including the reconfiguration of the I-805 northbound off-ramp at Center Street.

Between Border Village (north) and Border Village (south):

In order to increase the capacity of the roadway segments between Border Village Road (north and south), within the Border Village area, it is recommended that a one-way couplet configuration be implemented. Three different concepts were presented to the Community in March 2012, the three different concepts are described below:

- Option 1: This option would provide two eastbound travel lanes along Border Village Road with two westbound travel lanes along East San Ysidro Boulevard:
- Option 2: This option would provide one eastbound travel lane along Border Village Road (westbound lane would be removed), one travel lane in each direction along East San Ysidro Boulevard and an additional westbound travel lane along Beyer Boulevard.
- Option 3: This option would provide one eastbound travel lane along Border Village Road (westbound lane would be removed), one travel lane in each direction along East San Ysidro Boulevard and two westbound travel lanes along Beyer Boulevard (eastbound lane would be removed).

During the March 2012 Public meeting all options were discussed. As a result of the meeting, it was determined that Option 1 was the most popular option from the Community's perspective.

Further evaluation of all three alternatives also demonstrated that Option 1 would be the preferred option for the following reasons:

- This option matches with the current configuration of the street network;
- It allows for minimizing vehicular conflicts at intersections;
- Allows for additional parking spaces along the south side of East San Ysidro Boulevard, by removing existing two-way left-turn lane.

For these reasons, Option 1 is recommended as part of this study.

In March 16th, 2015, the recommendation was presented at the San Ysidro Planning Group Meeting. Due to concerns from business owners that the conversion of East San Ysidro Boulevard to a one way couplet would negatively impact businesses along East San Ysidro Boulevard, the recommendation for converting East San Ysidro Boulevard to a one-way couplet was rejected by the San Ysidro Planning Group.

Although the reconfiguration of East San Ysidro Boulevard, the existing curb to curb width allow for the addition of bicycle lanes and intersection improvements to accommodate bicycle lanes as shown in **Figure 11**. This roadway segment will continue to operate at LOS F with the implementation of the recommended improvements.

Between Border Village (south) and Camino de la Plaza:

The existing configuration of East Beyer Boulevard between Border Village (south) and Camino de la Plaza provides sufficient room to enhance the pedestrian/bicycle connectivity between the Border Village Area and the San Ysidro Border Crossing, including the San Ysidro Intermodal Transportation Center. For this section, it is recommended that sidewalks be widen to a minimum of 10 feet and that buffered bike lanes be added. **Figure 13** illustrates the recommended improvements along this section of East San Ysidro Boulevard. As shown in the exhibit, it is recommended that two westbound travel lanes be provided for the north side of the roadway, while three travel lanes are provided along the south side of the roadway. At the intersection of Camino de la Plaza and East San Ysidro Boulevard, a pedestrian scramble phase should be added to the existing traffic signal to enhance pedestrian and bicycle movements at this intersection by minimizing pedestrian delays. The proposed improvements to the pedestrian and bicycle connectivity is consistent with the recommendations of SANDAG's *San Ysidro Intermodal Transportation Center Study*, date June 2014.



Figure 11

Border Village Road:

As is East San Ysidro Boulevard, Border Village Road is expected to operate at LOS F during the Horizon Year conditions with the Preferred Land Use alternative. In order to increase the capacity of the roadway segments within the Border Village area, it is recommended that a one-way couplet configuration be implemented using Border Village Road for the eastbound traffic and East San Ysidro Boulevard for the westbound traffic. See previous section for a more completed description of the proposed improvements.

Calle Primera:

The roadways segment analysis shows that Calle Primera will operate at LOS F with the Preferred Land Use alternative under the Horizon Year scenario. Calle Primera is the only connection to the industrial/commercial area west of Via de San Ysidro south of the I-5 freeway. In order to decrease the traffic demand on Calle Primera and to enhance mobility and safety access to these parcels, it is recommended that a new connection between Calle Primera and Camino de la Plaza be constructed and implemented. **Figure 12** illustrates how a connection between Calle Primera and Camino de la Plaza could be implemented. The following are the 3 options evaluated:

- Option 1: Provides a connection to Camino de la Plaza by connecting Calle Primera to the Bible Street (existing roadway). This option is consistent with the San Ysidro Adopted Community Plan. Based on a preliminary environmental evaluation, this option would have the least environmental impact due to its overall footprint. In terms of transportation benefits, this alternative is not preferred since it will not provide a direct connection to the west from the existing commercial/industrial parcel just west of Via de San Ysidro.
- Option 2: Provides a connection to Camino de la Plaza by extending Calle Primera to the west along a proposed alignment just south of the existing commercial/industrial parcels just west of Via de San Ysidro. This option is not the preferred option from the preliminary environmental review. It is also not a preferred option with regards to the traffic connectivity for the similar reasons as Option 1.
- Option 3: Provides a connection to Camino de la Plaza by extending Via Tercero to the south and connecting with Camino de la Plaza just west of the existing residential development. This option is the preferred option in terms of traffic, since it provides a direction connection to the west for the commercial/industrial parcels just west of Via de San Ysidro. This is not the preferred option in terms of the preliminary environmental review; this has a larger footprint than Option 1.

A more detailed environmental evaluation of alternative alignments should be completed in order to minimize potential environmental impact to the existing sensitive habitat in the area. Based on Community input, Option 3 should be evaluated as the preferred alternative. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group.

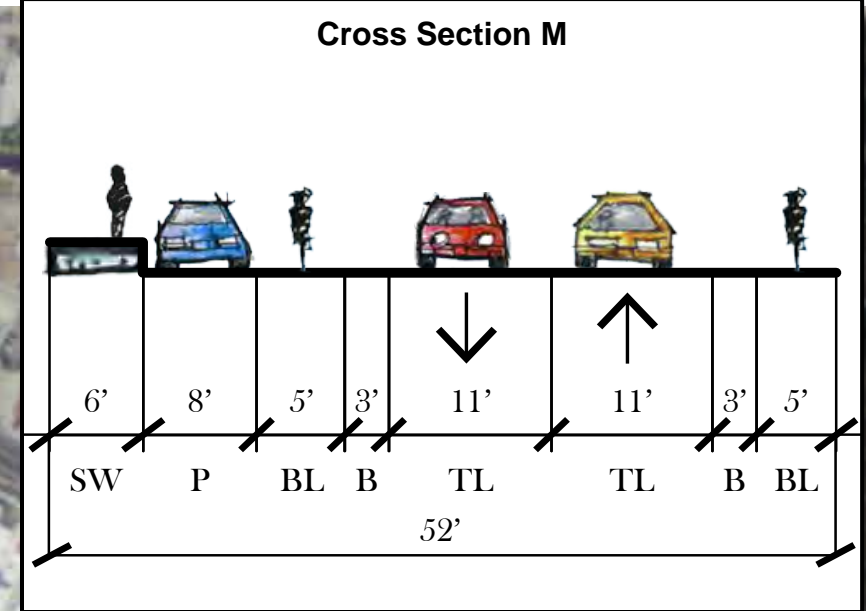
In addition to the new connections explained above, it is recommended that Calle Primera between Via Tercero and Via de San Ysidro be restriped to provide bike lanes along both sides of the roadway. **Figure 12** (Cross Section M) illustrates the recommended improvement.

Willow Road:

The roadway segment analysis shows that Willow Road will operate at LOS F with the Preferred Land Use alternative under the Horizon Year scenario. Willow Road is currently built as a two-lane collector with parking along both sides of the street. This roadway is a multi-modal corridor within the community, used by vehicular passengers along with bicyclists and pedestrians. In order to increase its capacity, Willow Road would need to be widened to provide additional travel lanes. The widening of Willow Road would require a significant number of property acquisitions since both sides of the road are currently built with institutional, multi-family, and commercial uses. In order to improve the operations of Willow Road and to increase the mobility of alternative modes, it is recommended that traffic calming measures such as speed tables and chicanes be installed along the roadway to decrease vehicular speeds, reduce cut-through traffic, and enhance bicycle and pedestrian mobility. The traffic calming measures should be complemented or coordinated with the construction of the new connection to Calle Primera from Camino de la Plaza, so traffic that would otherwise use Willow Road would have alternative options. In addition, the improvement at the Dairy Mart Road and the I-5 Southbound interchange should be completed to encourage vehicles destined to the commercial area south of Willow Road, to use Dairy Mart Road in connection with Camino de la Plaza, instead of the Via de San Ysidro exit, which would lead to vehicular traffic along Willow Road.

Camino de la Plaza:

The roadway segment analysis shows that Camino de la Plaza is expected to operate at LOS E with the Preferred Land Use alternative between the I-5 Southbound ramps and East San Ysidro Boulevard. In order to improve the operations of this segment, it is recommended that a new bridge deck be constructed connecting the I-5 SB ramps and East San Ysidro Boulevard. The new deck will provide additional lanes and width to reclassify the segment to a four-lane major classification with buffered bike lanes along each side of the roadway. The construction of the new deck would provide an enhanced pedestrian and bicycle connectivity between the west and east side of the I-5 interchange. The reconstruction of the Camino de la Plaza Bridge should incorporate the construction of a new entry ramp to the I-805 freeway. An expanded discussion regarding this improvement is included in the intersection improvement recommendations. **Figure 13** illustrates the recommended improvements along Camino de la Plaza. With the recommended improvement, Camino de la Plaza would operate at LOS D between the I-5 SB Ramp and East San Ysidro Boulevard. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group




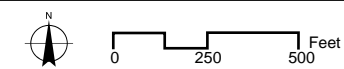
LEGEND	BL	Bike Lane	TWLT	Two-way Left Turn	 New Traffic Signal
	P	Parking	BP	Bike Path	
	SW	Sidewalk	B	Buffer	
	TL	Travel Lane			

Figure 12

Recommended Improvement: Via de San Ysidro and Calle Primera



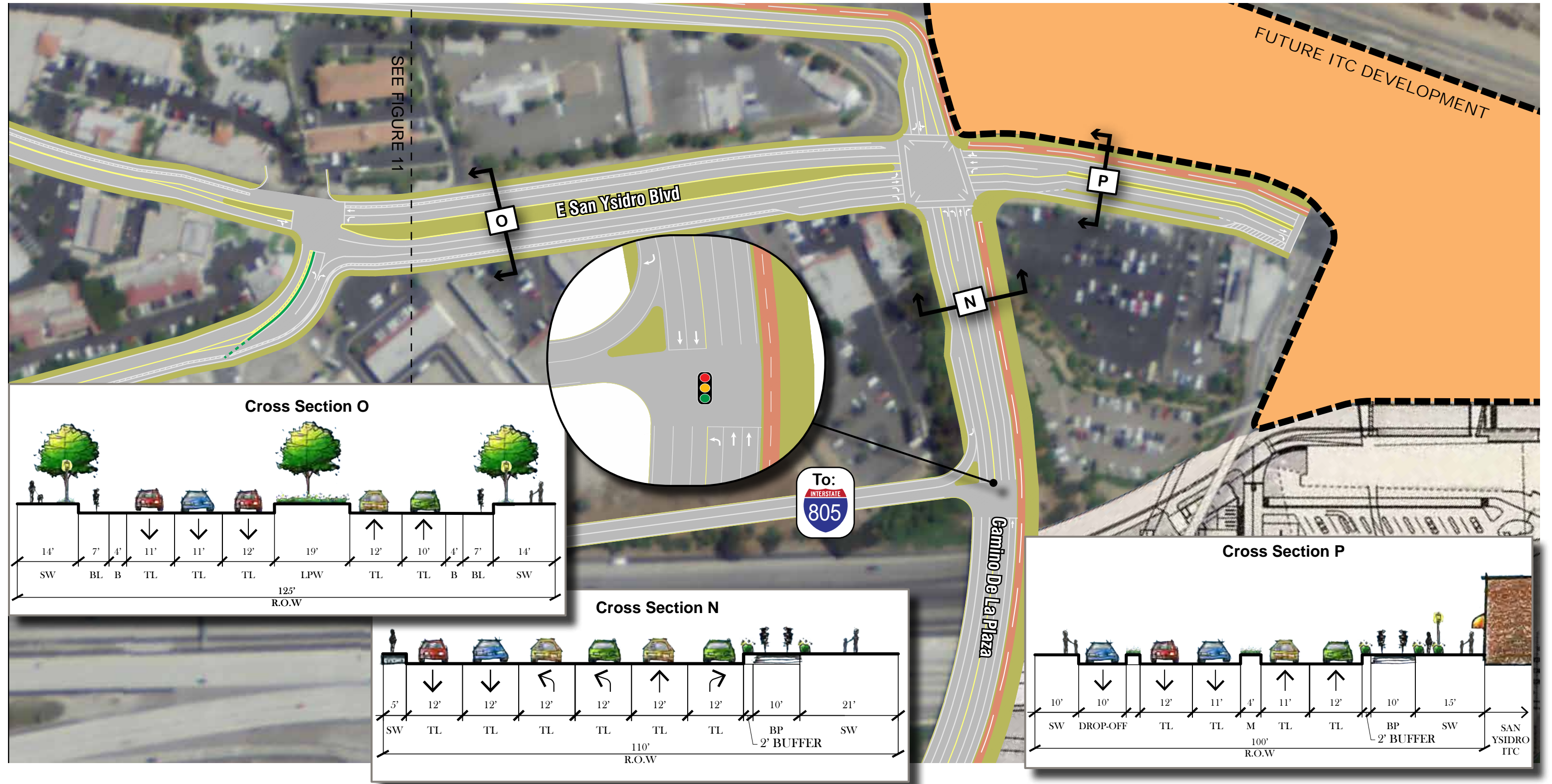


Figure 13

West and East Park Avenue:

The roadway segment analysis shows that West and East Park are expected to operate at LOS E or F with the Preferred Land Use alternative. In order to increase its capacity, West and East Park would need to be widened to provide additional travel lanes. The widening of West and East Park would require a significant number of property acquisitions since both sides of the road are currently built with institutional, multi-family and commercial uses. In order to improve the mobility and connectivity of alternative modes, it is recommended that traffic calming measures such as the striping of the parking lanes be installed along the roadway to decrease vehicular speeds and reduce cut-through traffic. **Figure 14** illustrates the recommended improvements along East and West Park. As shown in the exhibit, between Hall Avenue and the Trolley tracks, it is recommended that a Class I bicycle facility be installed within the footprint of the existing park and along the east side of the Civic Center. This new bicycle facility would connect the existing pedestrian bridge at the north end of Olive Street with the Beyer Transit Station.

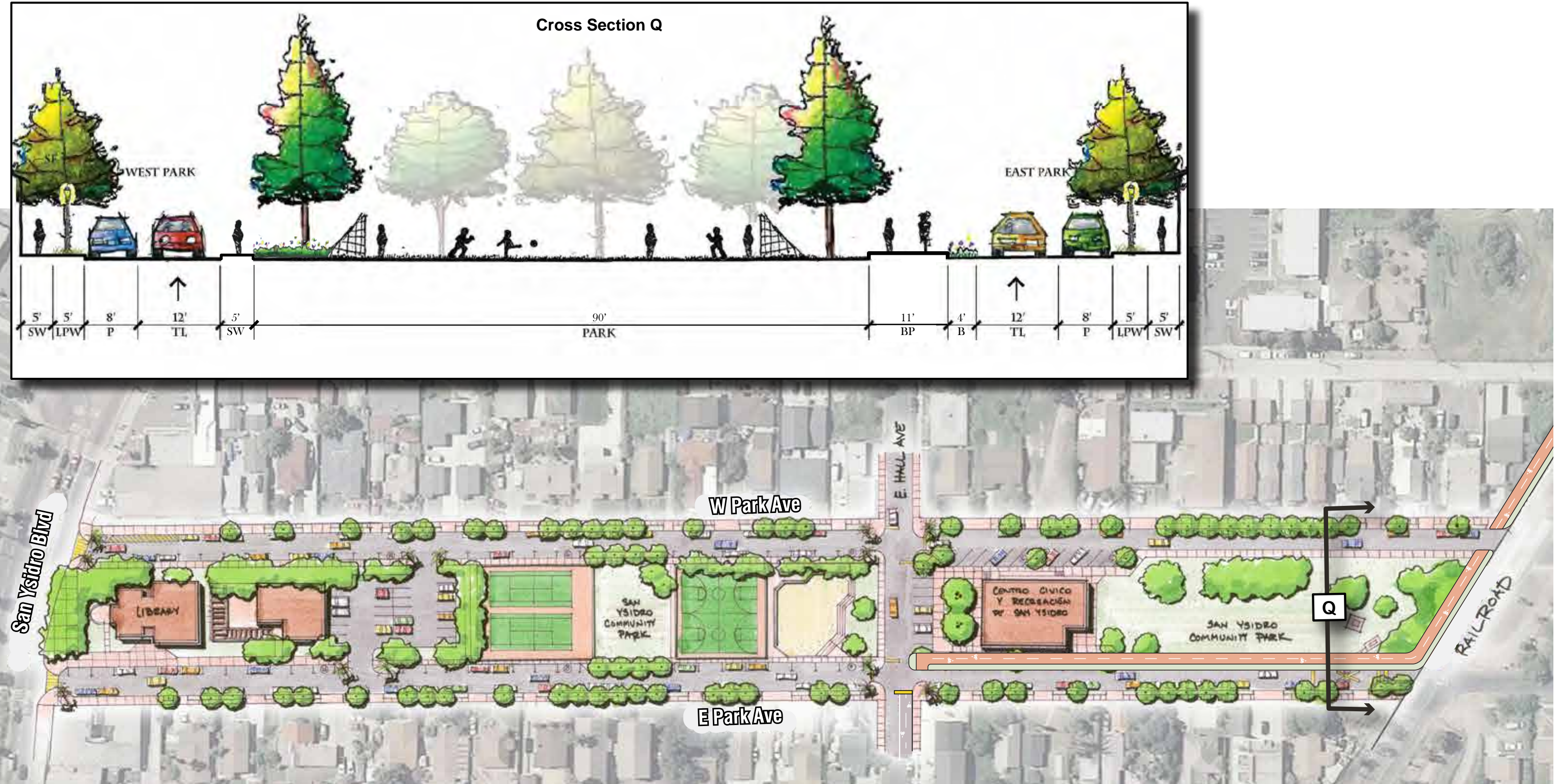
Olive Street:

North of East San Ysidro Boulevard, Olive Street functions as a two-lane collector street with the curb-to-curb width of 70 feet. In order to provide additional parking, enhanced pedestrian connectivity and provide a bicycle facility, it is recommended that Olive Street be reconfigured to provide a raised median near East San Ysidro Boulevard and painted medians with angled parking for the rest of the corridor. **Figure 15** illustrates the recommended improvements along Olive Street. As shown in Figure 15, a cycle track is recommended along the north side of Hall Avenue connecting the existing pedestrian bridge at the north side of Olive Street with the proposed Class I facility along East Park (previously shown in Figure 14)

Sunset Lane:

At the intersection of Sunset Lane with Smythe Avenue, and at the intersection of Sunset Lane with South Vista Avenue, a triangle is configured between South Vista Avenue, Smythe Avenue and Sunset Lane. This triangular configuration makes for these three closed spaced intersections to have several conflicting point between auto and pedestrian/bicycle traffic. In order to provide for a simpler configuration that would enhance the pedestrian/bicycle connectivity, it is recommended that Sunset Lane be closed at the intersection with South Vista Avenue. **Figure 16** illustrates this recommendation.

Figure 17 illustrates the recommended roadway segment classifications for the San Ysidro Community.

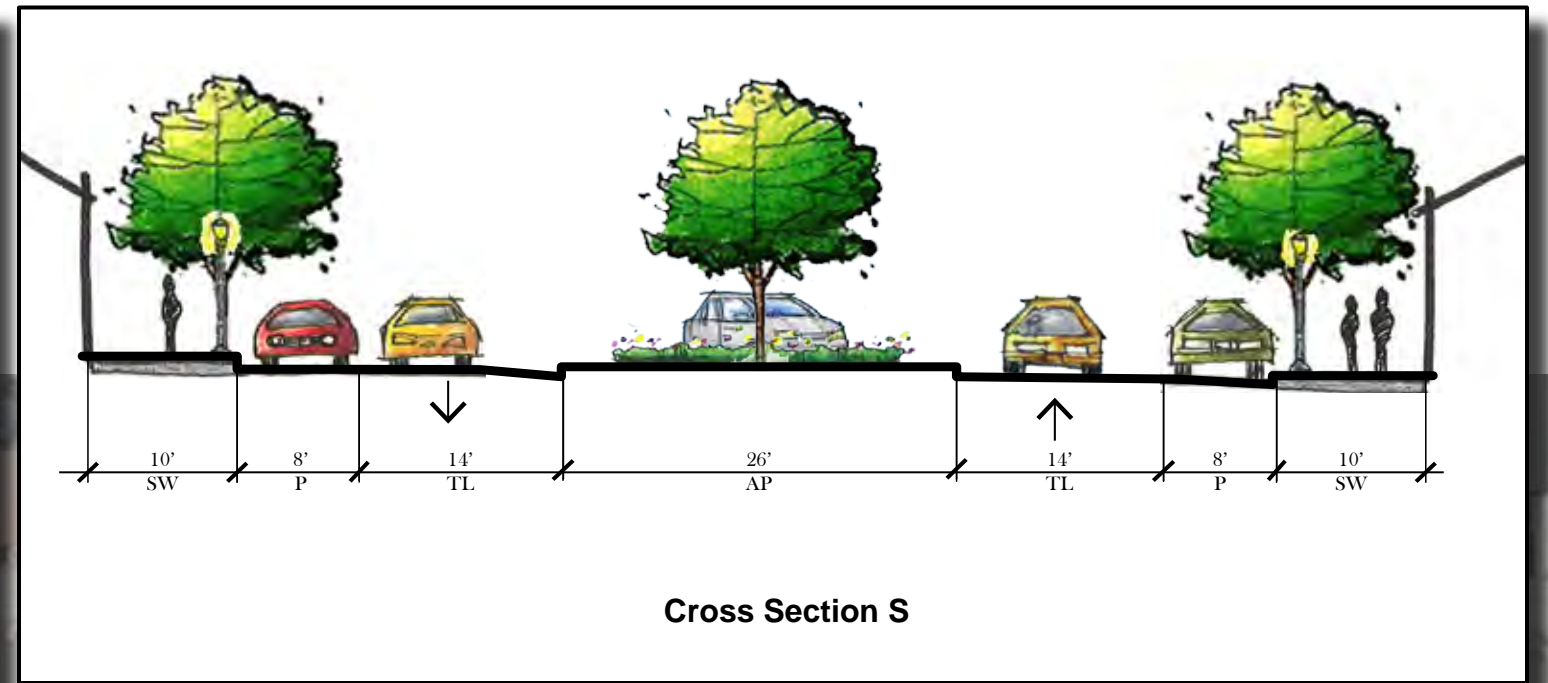
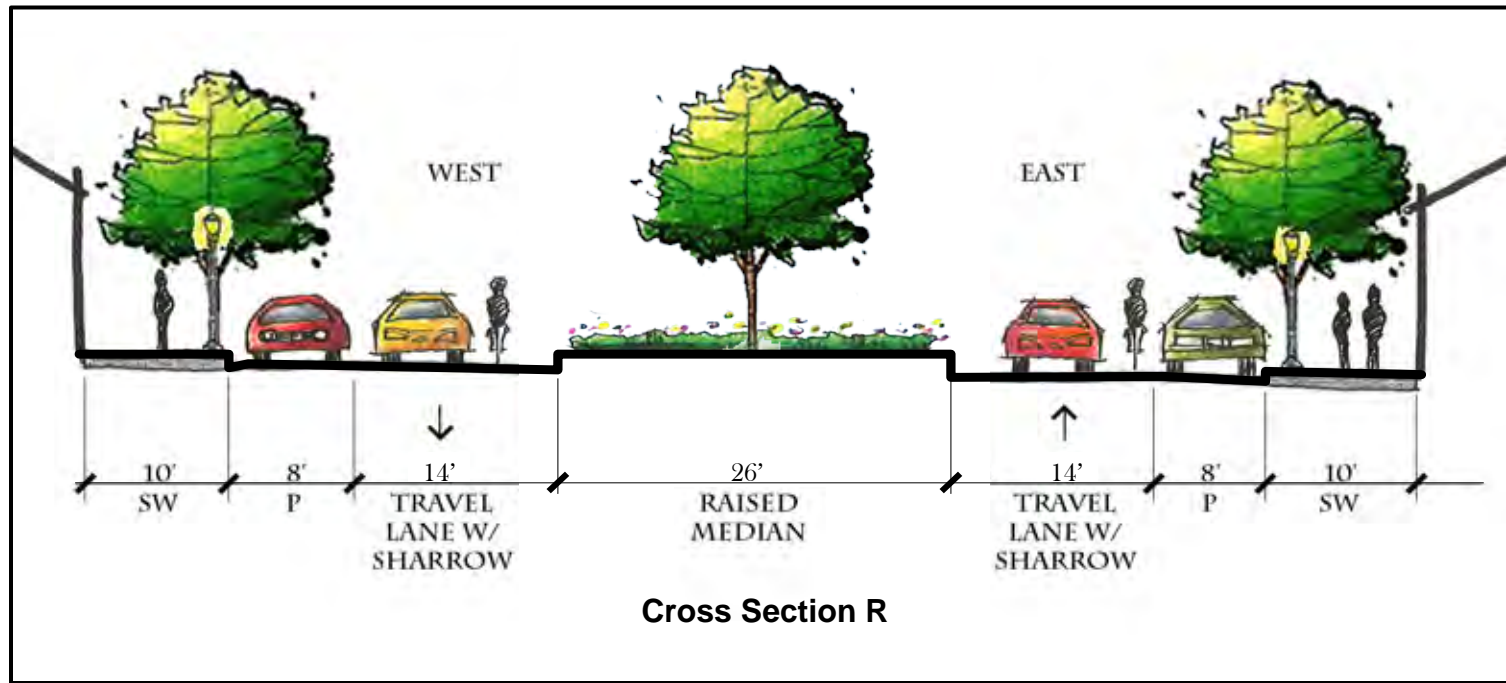


LEGEND	BL	Bike Lane	BP	Bike Path
	P	Parking	B	Buffer
	SW	Sidewalk		
	TL	Travel Lane		
	TWLT	Two-way Left Turn		

Figure 14

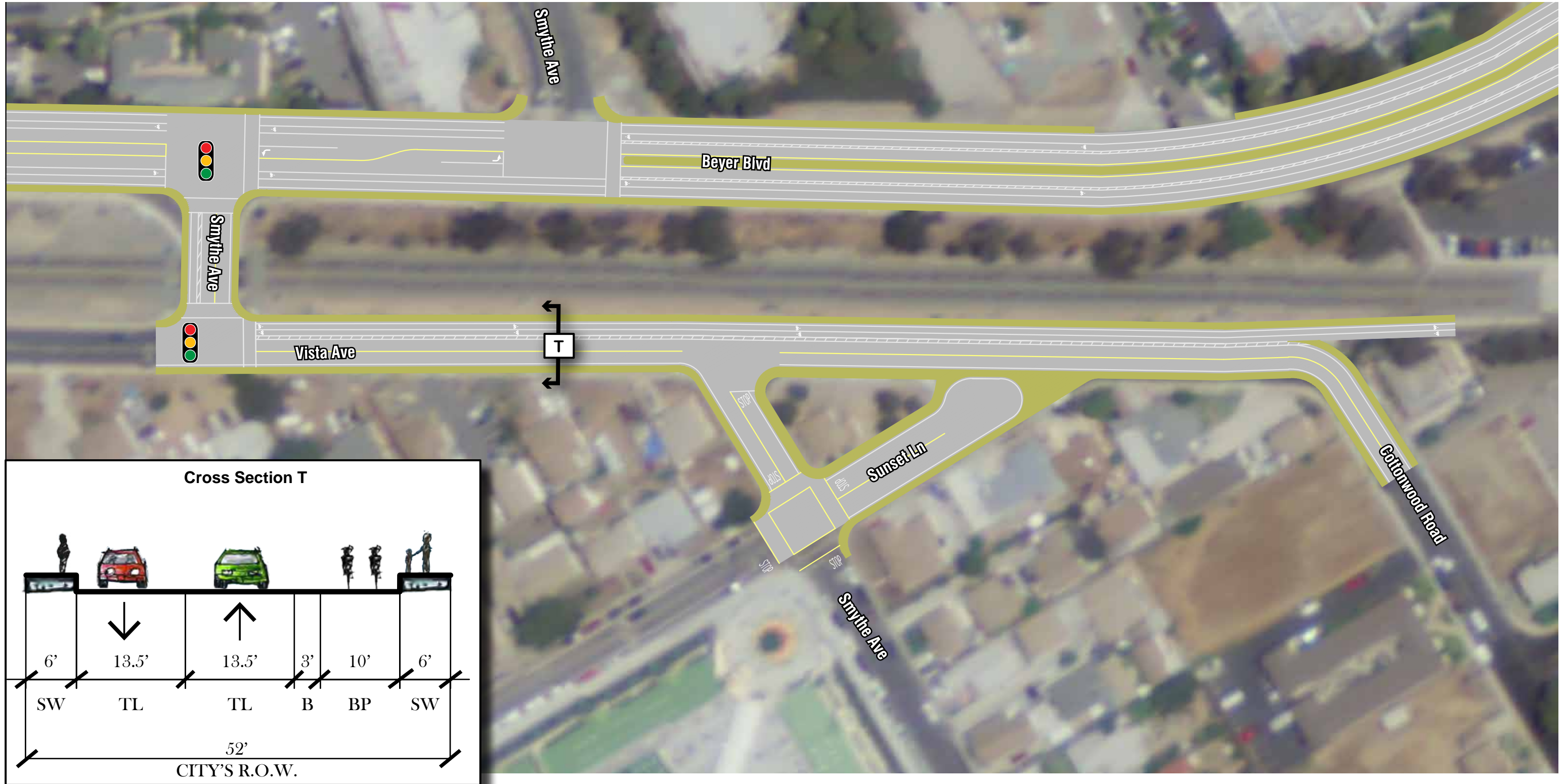
Recommended Improvement: East and West Park Ave

NOT TO SCALE



LEGEND	BL	Bike Lane	TWLT	Two-way Left Turn
	P	Parking	BP	Bike Path
	AP	Angled Parking	B	Buffer
	SW	Sidewalk		
	TL	Travel Lane		

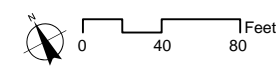
Figure 15

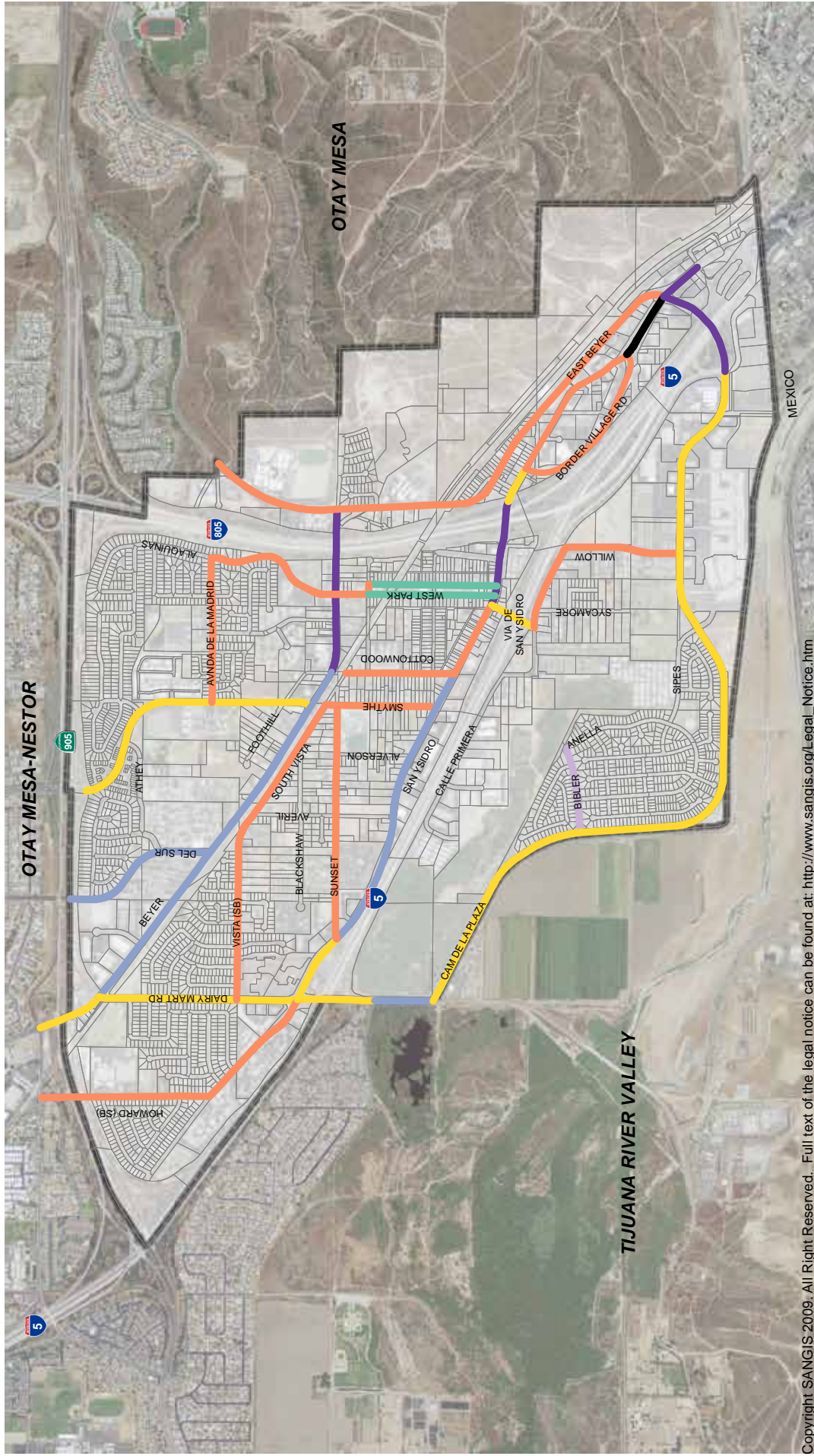


LEGEND	BL	Bike Lane	TWLT	Two-way Left Turn		New Traffic Signal
	P	Parking	BP	Bike Path		
	SW	Sidewalk	B	Buffer		
	TL	Travel Lane				

Figure 16

Recommended Improvement: Smythe Ave, Vista Ave, & Sunset Lane Triangle Improvement





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- LEGEND**
- 1-Lane Collector
 - 2-Lane Collector (Multi-family, commercial-industrial fronting)
 - 2-Lane Collector (One Way)
 - 2-Lane Collector (continuous left-turn lane)
 - 2-Lane Collector (no fronting property)
 - 4-Lane Collector
 - 4-Lane Collector (no TWLT)
 - 4-Lane Major Arterial
 - 6-Lane Major Arterial
 - Community Plan Boundary
 - Parcel Boundaries

Recommended Roadway Segment Classification

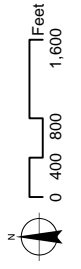


Figure 17

Evaluation of the Recommended Roadway Improvements

An evaluation of future operating conditions with recommended improvements previously described was conducted; **Table 5** depicts the results of the roadway segment analysis with the recommended classification changes. As shown in Table 5, 17 out of 33 roadway segments would be mitigated with the recommended improvements, however, the following roadways would still have deficient LOS based on daily roadway analysis:

- Beyer Boulevard between Dairy Mart Road and Del Sur Boulevard (LOS E);
- Otay Mesa Road north of Beyer Boulevard (LOS F);
- East Beyer Boulevard between Beyer Boulevard and East San Ysidro Boulevard (LOS F);
- West San Ysidro Boulevard between Howard Avenue and Dairy Mart Road (LOS E);
- West San Ysidro Boulevard between Sunset Lane and Averil Road (LOS E);
- West San Ysidro Boulevard between Averil Road and Smythe Avenue (LOS E);
- West San Ysidro Boulevard between Smythe Avenue and Cottonwood Road (LOS E);
- West San Ysidro Boulevard between Cottonwood Road and Via de San Ysidro (LOS F);
- East San Ysidro Boulevard between I-805 NB Ramps to Border Village Road (LOS F);
- East San Ysidro Boulevard between Border Village Road (north and south) (LOS F);
- Border Village Road between East San Ysidro Boulevard (LOS F);
- Via de San Ysidro between West San Ysidro Boulevard and Calle Primera (LOS E);
- Calle Primera between Willow Road and Via de San Ysidro (LOS F);
- Willow Road between Calle Primera and Camino de la Plaza (LOS F);
- Vista Lane between Dairy Mart Road and Averil Road (LOS F);
- Cottonwood Road between Sunset Lane and West San Ysidro Boulevard (LOS E);
- West Park Avenue between Beyer Boulevard and Seward Avenue (LOS F);
- West Park Avenue between Seward Avenue and West San Ysidro Boulevard (LOS E); and
- East Park Avenue between Seward Avenue and West San Ysidro Boulevard (LOS E)

Additional improvements to the failing roadway segments listed above are not recommended since the roadway segment analysis used in this study is based on theoretical capacities based on the number of travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment such as grades, number of traffic signals, number of driveways, parking availability, etc. In addition, the analysis does not take into account the different traffic peak periods experienced on these roadways due to the surrounding land uses. Therefore, the typical planning level capacity for these streets may understate the carrying capacity of these roadways. To better represent the conditions of a roadway segment within the San Ysidro community, the operations of the upstream and downstream intersections of each respective segment during the peak periods would indicate whether the roadway segment would have adequate capacity. The following section provides a summary of the intersection analysis. It should be noted that San Ysidro is a heavy transit oriented community, the increase of land use density associated with the preferred land use alternative shows that the increase would occur around transit oriented areas with direct access to regional transit routes. The roadway segment traffic volumes used for the roadway segment analysis are considered conservative in nature as they do not account for the expected

mode share shift between current vehicular traffic and future transit ridership. The anticipated shift to transit and other modes of transportation would decrease the forecasted roadway segment volumes otherwise shown increasing roadway segment operations through the community. **Figure 18** illustrates the roadway segment analysis results with the proposed classification changes.

**TABLE 4
HORIZON YEAR (2035) PREFERRED LAND USE ALTERNATIVE WITH IMPROVEMENTS
ROADWAY SEGMENT LOS SUMMARY**

ROADWAY SEGMENT	ADT (c)	PREFERRED LAND USE ALTERNATIVE				PREFERRED LAND USE ALTERNATIVE WITH IMPROVEMENTS			
		EXISTING ROADWAY FUNCTIONAL CLASSIFICATION (a)	LOS E CAPACITY	V/C RATIO (d)	LOS	PROPOSED ROADWAY FUNCTIONAL CLASSIFICATION	LOS E CAPACITY	V/C RATIO (c)	LOS
Beyer Blvd.									
SR-905 WB Off-Ramp to Dairy Mart Rd.	21,100	4-Lane Collector	30,000	0.703	D	4-Lane Collector	30,000	0.703	D
Dairy Mart Rd. to Del Sur Blvd.	16,000	4-Lane Collector (no TWLT)	15,000	1.067	F	2-Lane Collector (continuous left-turn lane)	15,000	1.067	F
Del Sur Blvd. to Cottonwood Rd.	11,700	4-Lane Collector (no TWLT)	15,000	0.78	D	2-Lane Collector (continuous left-turn lane)	15,000	0.78	D
Cottonwood Rd. to W. Park Ave.	28,800	4-Lane Collector	30,000	0.96	E	4-Lane Major Arterial	40,000	0.72	C
W. Park Ave. to E. Beyer Blvd.	28,400	4-Lane Collector	30,000	0.947	E	4-Lane Major Arterial	40,000	0.71	C
Otay Mesa Rd.									
North of Beyer Blvd.	12,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.5	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.5	F
E. Beyer Blvd.									
Beyer Blvd. to Center St.	17,300	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.163	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.163	F
Center St. to E. San Ysidro Blvd.	9,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.213	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.213	F
Del Sur Blvd.									
SR-905 EB Ramps to Beyer Blvd.	4,700	2-Lane Collector (continuous left-turn lane)	15,000	0.313	A	2-Lane Collector (continuous left-turn lane)	15,000	0.313	A
Smythe Ave.									
SR-905 EB Ramps to Beyer Blvd.	13,300	4-Lane Collector (no TWLT)	15,000	0.887	E	4-Lane Collector	30,000	0.443	B
S. Vista Ave. to Sunset Ln.	8,100	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.013	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.013	F
Sunset Ln. to W. San Ysidro Blvd.	2,200	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.275	A	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.275	A
Dairy Mart Rd.									
Beyer Blvd to S. Vista Ln	11,800	4-Lane Collector	30,000	0.393	B	4-Lane Collector	30,000	0.393	B
S. Vista Ln. to W. San Ysidro Blvd.	14,800	4-Lane Collector	30,000	0.493	C	4-Lane Collector	30,000	0.493	C
W. San Ysidro Blvd. to I-5 SB Ramps	20,000	2-Lane Collector (continuous left-turn lane)	15,000	1.333	F	4-Lane Collector	30,000	0.667	D
I-5 SB Ramps to Servando Ave.	17,700	3-Lane Collector	11,250	1.573	F	4-Lane Collector	30,000	0.59	C
Servando Ave. to Camino de la Plaza	11,600	2-Lane Collector (no fronting property)	10,000	1.16	F	2-Lane Collector (continuous left-turn lane)	15,000	0.773	D
W. San Ysidro Blvd.									
Howard Ave. to Dairy Mart Rd.	7,400	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.925	E	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.925	E
Dairy Mart Rd. to Sunset Ln.	14,400	4-Lane Collector	30,000	0.48	C	4-Lane Collector	30,000	0.48	C
Sunset Ln. to Averil Rd.	13,300	2-Lane Collector (continuous left-turn lane)	15,000	0.887	E	2-Lane Collector (continuous left-turn lane)	15,000	0.887	E
Averil Rd. to Smythe Ave.	12,500	2-Lane Collector (continuous left-turn lane)	15,000	0.833	D	2-Lane Collector (continuous left-turn lane)	15,000	0.833	D
Smythe Ave. to Cottonwood Rd.	14,500	2-Lane Collector (continuous left-turn lane)	15,000	0.967	E	2-Lane Collector (continuous left-turn lane)	15,000	0.967	E
Cottonwood Rd. to Via de San Ysidro	20,900	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.613	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.613	F
Via de San Ysidro to W. Park Ave	23,200	4-Lane Major Arterial	40,000	0.58	C	4-Lane Major Arterial	40,000	0.58	C
E. San Ysidro Blvd.									
W. Park Ave. to I-805 SB Ramps	32,900	4-Lane Major Arterial	40,000	0.823	D	4-Lane Major Arterial	40,000	0.823	D
I-805 SB Ramps to I-805 NB Ramps	32,000	4-Lane Major Arterial	40,000	0.8	D	4-Lane Major Arterial	40,000	0.8	D
I-805 NB Ramps to Border Village Rd. (west)	39,700	2-Lane Collector (continuous left-turn lane)	15,000	2.647	F	4-Lane Collector	30,000	1.323	F
Border Village Rd. (west) to Border Village Rd (east)	17,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.213	F	2-Lane Collector (continuous left-turn lane)	15,000	1.18	F
Border Village Rd. (south) to E. Beyer Blvd./Camino de la Plaza	37,500	4-Lane Major Arterial	40,000	0.938	E	5-Lane Major Arterial	50,000	0.75	D
E. Beyer Blvd./Camino de la Plaza to I-5 SB Ramps	16,700	3-Lane Collector	11,250	1.484	F	4-Lane Major Arterial	40,000	0.418	B

Notes:

Bold values indicate roadway segments operating at LOS E or F. Shaded values indicate roadway segments with proposed improvements.

(a) Roadway Functional Classification is based on field observations and anticipated funded roadway improvements to be completed by the Year 2035.

(b) Existing average daily traffic (ADT) volumes for the roadway segments were provided by National Data & Surveying Services and True Counts and measured in 2007, 2008, and 2010.

(c) 2035 Adopted Community Plan volumes were extracted from a SANDAG Series 12 Regional Transportation Model.

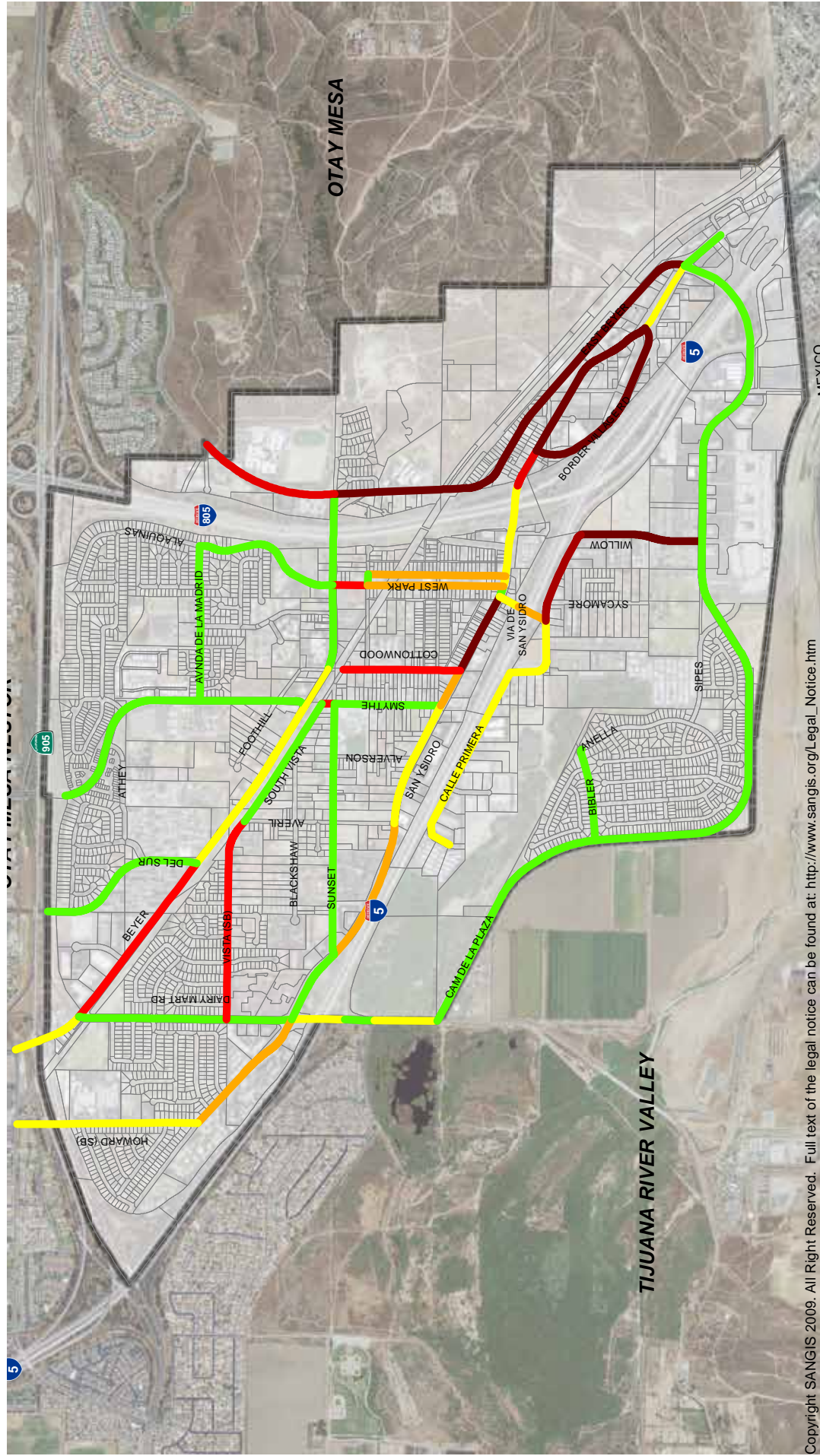
(d) The V/C Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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TABLE 4
HORIZON YEAR (2035) PREFERRED LAND USE ALTERNATIVE WITH IMPROVEMENTS
ROADWAY SEGMENT LOS SUMMARY

ROADWAY SEGMENT	ADT (c)	PREFERRED LAND USE ALTERNATIVE				PREFERRED LAND USE ALTERNATIVE WITH IMPROVEMENTS			
		EXISTING ROADWAY FUNCTIONAL CLASSIFICATION (a)	LOS E CAPACITY	V/C RATIO (d)	LOS	PROPOSED ROADWAY FUNCTIONAL CLASSIFICATION	LOS E CAPACITY	V/C RATIO (c)	LOS
Border Village Rd .									
San Ysidro Blvd. to San Ysidro Blvd.	17,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.213	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.213	F
Via de San Ysidro									
W. San Ysidro Blvd. to I-5 NB Ramps	24,500	4-Lane Collector (no TWLT)	15,000	1.633	F	4-Lane Collector	30,000	0.817	D
I-5 NB Ramps to Calle Primera	26,100	4-Lane Collector (no TWLT)	15,000	1.74	F	4-Lane Collector	30,000	0.87	E
Calle Primera									
West of Rancho del Rio Estates	9,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.125	F	3-Lane Collector	11,250	0.8	D
Rancho del Rio Estates to Via de San Ysidro	9,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.125	F	3-Lane Collector	11,250	0.8	D
Via de San Ysidro to Willow Rd	14,900	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.863	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.863	F
Willow Rd.									
Calle Primera to Camino De La Plaza	18,100	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.263	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	2.263	F
Bibler Dr.									
East of Camino De La Plaza	4,400	2-Lane Collector (no fronting property)	10,000	0.44	B	2-Lane Collector (no fronting property)	10,000	0.44	B
Camino De La Plaza.									
Dairy Mart Rd. to Bibler Dr.	11,000	4-Lane Collector	30,000	0.367	B	4-Lane Collector	30,000	0.367	B
Bibler Dr. to Willow Rd.	7,200	4-Lane Collector	30,000	0.24	A	4-Lane Collector	30,000	0.24	A
Willow Rd. to I-5 SB Ramp	18,800	4-Lane Collector	30,000	0.627	C	4-Lane Collector	30,000	0.627	C
I-5 SB Ramp to E. San Ysidro Blvd.	26,100	4-Lane Collector	30,000	0.87	E	4-Lane Major Arterial	40,000	0.653	C
Vista Ln.									
Dairy Mart Rd. to Averil Rd.	8,400	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.05	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.05	F
Averil Rd. to Smythe Ave.	4,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.588	C	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.588	C
Sunset Ln.									
W. San Ysidro Blvd. to Averil Rd.	4,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.588	C	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.588	C
Averil Rd. to Smythe Ave.	4,600	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.575	C	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.575	C
Cottonwood Rd.									
Sunset Ln. to W San Ysidro Blvd.	8,800	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.1	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1.1	F
W. Park Ave.									
Beyer Blvd. to Seward Ave.	8,000	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1	F	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	1	F
Seward Ave. to W. San Ysidro Blvd.	3,900	1-Lane Collector	4,000	0.975	E	1-Lane Collector	4,000	0.975	E
E. Park Ave.									
Seward Ave. to W. San Ysidro Blvd.	3,300	1-Lane Collector	4,000	0.825	E	1-Lane Collector	4,000	0.825	E
Seward Ave.									
W. Park Ave. to E. Park Ave.	4,100	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.513	C	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.513	C
Howard Ave.									
North of W. San Ysidro Blvd.	5,800	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.725	D	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.725	D
Avenida de la Madrid									
Smythe Ave. to Alaquinas Dr.	2,300	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.288	A	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.288	A
Alaquinas Dr.									
Beyer Blvd. to Avenida de la Madrid.	1,700	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.21	A	2-Lane Collector (Multi-family, commercial-industrial fronting)	8,000	0.21	A

Notes:
Bold values indicate roadway segments operating at LOS E or F. Shaded values indicate roadway segments with proposed improvements.
(a) Existing roads street functional classification is based field observations.
(b) Existing average daily traffic (ADT) volumes for the roadway segments were provided by National Data & Surveying Services and True Counts and measured in 2007, 2008, and 2010.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.



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LEGEND

- LOS: A, B, C
- LOS: D
- LOS: E
- LOS: F (v/c < 1.25)
- LOS: F (v/c 1.25 - 1.5)
- LOS: F (v/c 1.5 - 2)
- LOS: F (v/c > 2)
- Community Plan Boundary
- Parcel Boundaries

Summary of Roadway Segment Analysis - Preferred Alternative with Improvements

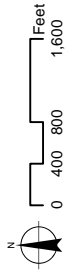


Figure 18

Intersections

Recommended Intersection improvements are displayed in **Figure 19**. These improvements, some of which are described in the roadway improvements sections, are summarized in the following discussion:

Beyer Boulevard and Iris Avenue/SR-905 WB Ramps (Intersection 1): Under the Horizon Year with the preferred land use alternative, this intersection is expected to operate at LOS F during the afternoon peak-hour period. To improve this intersection's level of service the addition of an exclusive eastbound left-turn lane, allowing for the protected left-turn phases for eastbound and westbound movements is recommended. For this improvement, the west leg of the intersection would need to be realigned to the north.

Smythe Crossing and Beyer Boulevard (Intersection 4): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the morning peak-hour period. The installation of a traffic signal is recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the intersection near a grade crossing warrant based on the Horizon Year 2035 volumes. It should be noted that this intersection is planned to be signalized as part of the Community's high priority CIP project's list.

Smythe Avenue and Beyer Boulevard (Intersection 5): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the morning peak-hour period. The installation of an exclusive westbound right-turn lane, a southbound left-turn lane and westbound right-turn overlap phase is recommended at this intersection to improve its operation to an acceptable level of service.

W.Park Avenue/Alaquinas Drive and Beyer Boulevard (Intersection 6): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the morning peak-hour period. The installation of an additional southbound left-turn lane and an exclusive northbound right-turn lane is recommended at this intersection to improve its operation to an acceptable level of service.

East Beyer Boulevard/Otay Mesa Road and Beyer Boulevard (Intersection 7): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during both peak-hour periods. The analysis assumes that this intersection will be reconfigured with the extension of Beyer Boulevard to the east, connecting to Caliente Avenue. In order to improve the operation of this intersection, an additional southbound travel lane would need to be added along Beyer Boulevard. The construction of the additional southbound lane is not feasible since it would require a substantial right-of-way acquisition and encroach onto an existing building. There are not feasible mitigation measures that would improve this intersection to an acceptable level of service.

Dairy Mart Road and Vista Lane (Intersection 10): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during both peak-hour periods. The installation of a traffic signal is recommended at this intersection. A signal warrant worksheet is included in

Appendix D. This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes.

Sunset Lane and Vista Lane (Intersection 13): As described in the recommended roadway segment improvements, the section of Sunset Lane between South Vista Avenue and Smythe Avenue should be removed. With this removal, this intersection would be eliminated from the network.

West San Ysidro Boulevard and Howard Avenue (Intersection 18): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the morning peak-hour period. A single lane roundabout is recommended at this intersection.

West San Ysidro Boulevard and Averil Road (Intersection 22): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the morning peak-hour period. A single lane roundabout is recommended at this intersection. If the installation of a roundabout is found not feasible, this intersection should be signalized. A signal warrant worksheet is included in **Appendix D.** This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes. It should be noted that this intersection is planned to be signalized as part of the Community's high priority CIP project's list.

East San Ysidro Boulevard and I-805 NB Ramps (Intersection 29): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS E during the afternoon peak-hour period. The installation of an additional westbound right-turn lane is recommended to improve its operations to an acceptable level of service. This improvement requires additional ROW that will be obtained from the fronting parcel. **Figure 19** illustrates this improvement.

Border Village (north) and East San Ysidro Boulevard (Intersection 30): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS E and LOS F during the morning and afternoon peak-hour periods, respectively. With the reconfiguration of East San Ysidro Boulevard and Border Village Road as a one-way couplet, this intersection would operate at acceptable LOS. However, as previously discussed, due to potential negative impacts to existing businesses along East San Ysidro Boulevard, the one-way couplet alternative was rejected. The intersection will remain as under existing conditions.

Border Village (south) and East San Ysidro Boulevard (Intersection 31): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. In order to improve its operation, it is recommended that a free northbound right-turn lane be added to this intersection. With this improvement, the intersection will operate at LOS C or better.

Camino de la Plaza/East Beyer Boulevard and East San Ysidro Boulevard (Intersection 32): Under the Horizon Year with preferred land use alternative, this intersection would operate at acceptable LOS C during both peak-hour periods. Although this intersection would operate at an acceptable level of service, in order to improve pedestrian and bicycle connectivity and reduce delay, it is recommended that a pedestrian scramble phase be added to the existing traffic signal. In addition, with the widening of Camino de la Plaza previously discussed, the northbound movement could be

configured to provide dual northbound left-turn lanes, a through northbound lane and an exclusive northbound right turn lane. With these improvements, the intersection would operate at LOS D or better. **Figure 13** illustrates the recommended improvements and proposed lane configurations.

East San Ysidro Boulevard and I-5 Northbound Ramp (Intersection 33): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. In order to improve the operations of this intersection, it is recommended that as part of the widening of the Camino de la Plaza Bridge, a new on-ramp to the I-805 freeway is constructed. The additional I-805 connection would reduce the traffic demand of the I-5 Northbound on-ramp intersection improving its LOS to C or better. **Figure 12** illustrates the recommended new I-805 ramp connection.

Via de San Ysidro and I-5 Northbound Ramps (Intersection 34): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during both peak-hour periods. The installation of a traffic signal is recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes.

Via de San Ysidro and I-5 Southbound Ramp/Calle Primera (Intersection 35): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. In order to improve the operations of this intersection, it is recommended that the existing I-5 southbound off-ramp be relocated west of Via de San Ysidro with the construction of a new intersection along Camino de la Plaza. For this intersection and the new intersection along Camino de la Plaza, the construction of two modern roundabouts is recommended. The construction of the roundabout, complemented by the new roadway connection between Calle Primera and Camino de la Plaza, and traffic calming measures along Willow Road, would decongest this area of the community improving its operations to an acceptable level of service. **Figure 12** illustrates these improvements. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group.

Dairy Mart Road and I-5 Southbound Ramps (Intersection 37): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. In order to improve this intersection to an acceptable LOS, it is recommended that this intersection be reconstructed to provide an additional eastbound left-turn lane. These intersection improvements would require the widening of the Dairy Mart Road over the I-5 Bridge as previously described in the roadway segment improvement section. **Figure 10** illustrates the recommended improvements for this location.

Dairy Mart Road and Servando Avenue (Intersection 38): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. The installation of a traffic signal is recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes. **Figure 10** illustrates the recommended improvements for this location.

Dairy Mart Road and Camino de la Plaza (Intersection 41): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. The installation of a traffic signal is recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes. **Figure 10** illustrates the recommended improvements for this location.

Willow Road and Camino de la Plaza (Intersection 39): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. Reconfiguration of the striping along Camino de la Plaza is recommended in order to provide an exclusive westbound right-turn lane from Camino de la Plaza to northbound Willow Road. The reconfiguration would convert the existing westbound outside lane to an exclusive westbound right-turn lane. It is also recommended that the northbound and southbound movements operate with split signal timing phasing. With these improvements the intersection would operate at LOS D or better.

Camino de la Plaza and I-5 Southbound ramps (Intersection 42): As part of the reconstruction of the Camino de la Plaza Bridge, this intersection will be improved to provide additional lanes for the southbound ramps as shown in **Figure 19**.

I-805 Northbound ramps/Center Street and East San Ysidro Boulevard (Intersection 45): Although Center Street is not considered a circulation element roadway, it is an important connection between East San Ysidro Boulevard and Beyer Boulevard. In order to improve the existing stacking area for the eastbound left-turn movement from eastbound East San Ysidro Boulevard to northbound Center Street, it is recommended that the I-805 southbound off-ramp be relocated so it aligns with Center Street. **Figure 20** illustrates the recommended improvement. An analysis of this reconfiguration is included as part of the overall intersection improvements analysis.

Camino de la Plaza and I-805 Northbound on-ramp (Intersection 46): As previously mentioned, to improve the operations of the intersection of East San Ysidro Boulevard and I-5 northbound ramps, it is recommended that a new connection for the I-805 be constructed as part of the Camino de la Plaza deck widening. This improvement would reduce the overall traffic demand and congestion within the eastern San Ysidro Border crossing area. This new intersection would be signalized and would provide a direct connection for vehicles to the I-805. **Figure 13** illustrates the recommended improvements and proposed intersection.

Vista Lane and Smythe Crossing (Intersection 47): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during the afternoon peak-hour period. The installation of a traffic signal is recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the intersection near a grade crossing evaluation based on the Horizon Year 2035 volumes. **Figure 16** illustrates the recommended improvements for this location.

Camino de la Plaza and Virginia Avenue (Intersection 48): Under the Horizon Year with preferred land use alternative, this intersection would operate at LOS F during both peak-hour periods. The installation of a traffic signal and the restriping of Camino de la Plaza to provide a second westbound

left-turn lane from Camino de la Plaza to Virginia Avenue are recommended at this intersection to improve its operation to an acceptable level of service. A signal warrant worksheet is included in **Appendix D**. This intersection meets the peak-hour warrant evaluation based on the Horizon Year 2035 volumes.

West San Ysidro Boulevard and Alverson Road: This intersection is planned to be signalized as part of the Community's high priority CIP project's list.

Table 6 illustrates the results of the peak-hour intersection analysis with the implementation of the above listed improvements. As shown in the table, several intersections are recommended to be improved with the construction of single-lane or multi-lane roundabouts. In order to analyze the operations of the intersections with roundabout configurations, a roundabout operation analysis was also performed using SIDRA Intersection 6.0. Sidra Intersection is a microscopic simulation tool commonly used for roundabout analysis. Sidra uses the gap theory analysis methodology and geometric parameters to determine the LOS for each movement of the roundabout.

As shown in the table, 23 of the 26 intersection with deficient level of service would be mitigated with the recommended improvements. The following three intersections would continue to have deficient LOS based on peak-hour intersection analysis:

- Beyer Boulevard and Otay Mesa Road (LOS F morning and afternoon peak-hour periods);
- Border Village Road (W) and E. San Ysidro Boulevard (LOS F afternoon peak-hour period); and
- Calle Primera and Via de San Ysidro (LOS F afternoon peak-hour period)

In order to improve the operation of the Beyer Boulevard and Otay Mesa Road intersection, an additional southbound travel lane would need to be added along Beyer Boulevard. The construction of the additional southbound lane is not feasible as it would require a substantial right-of-way acquisition and encroach onto existing buildings. There are no feasible mitigation measures that would improve this intersection to an acceptable level of service.

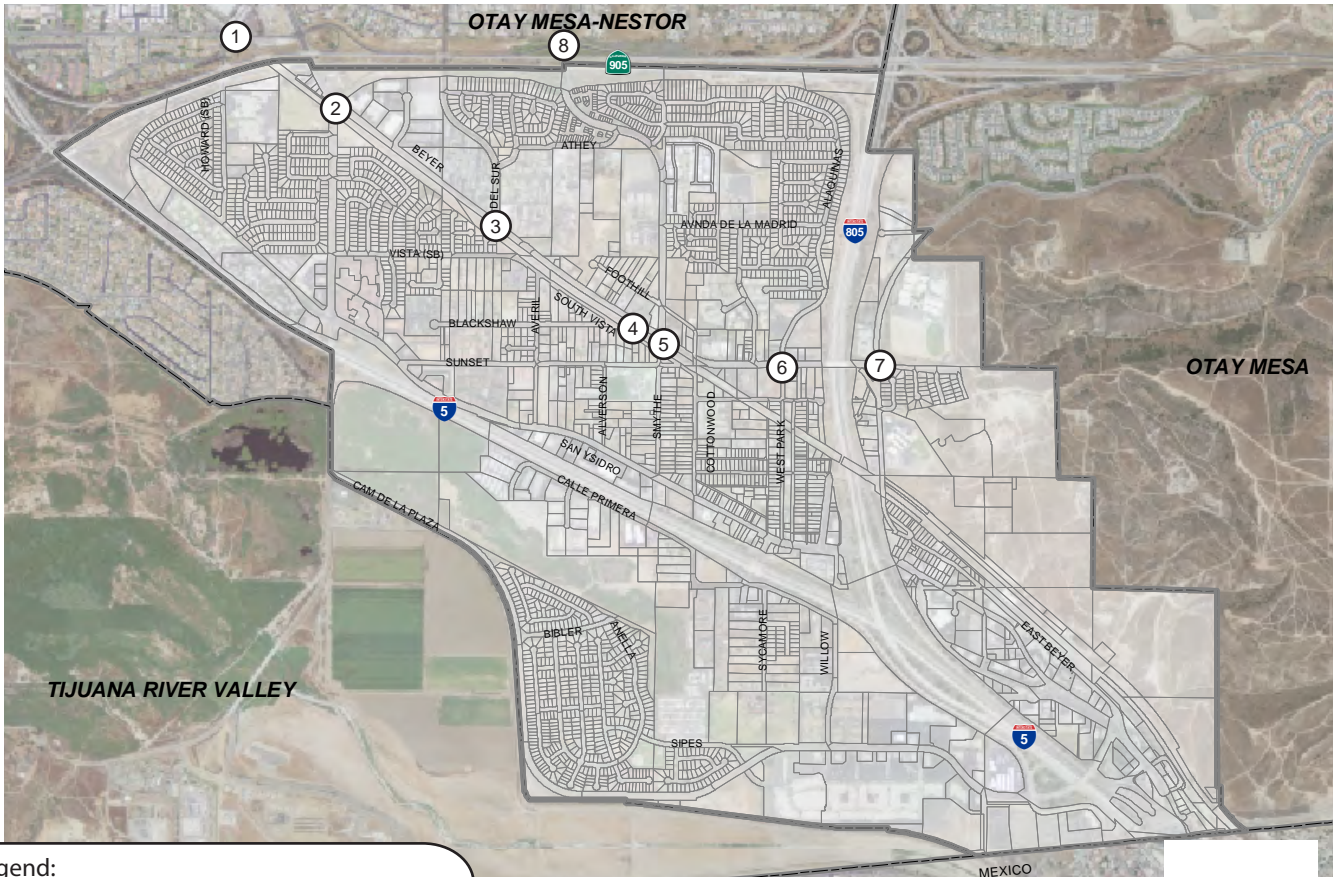
In order to improve the operation of the Border Village Road (W) and East San Ysidro Boulevard, the reconfiguration of East San Ysidro Boulevard and Border Village Road as one-way couplets is recommended. However, due to potential negative impacts to businesses along East San Ysidro Boulevard, this recommendation was not approved by the San Ysidro Planning Group. There are not feasible mitigation measures that would improve this intersection to an acceptable level of service.

In order to improve the operation of the Calle Primera and I-5 southbound ramp, traffic volumes along Calle Primera would need to be reduced. For this reason, it is recommended that the reconfiguration of the I-5 Southbound Ramp at Via de San Ysidro be completed after the connection of Calle Primera to Camino de la Plaza. This new connection would provide with a direct connection for the industrial/commercial businesses along Calle Primera to the Dairy Mart Road interchange reducing the vehicular load to the Via de San Ysidro interchange.

Synchro intersection peak-hour analysis worksheets are included in **Appendix E**. Sidra roundabout worksheets are included in **Appendix F**. **Figure 21** illustrates the intersection analysis results with the recommended improvements.

San Ysidro CPU - Mobility Element

Beyer Blvd/Iris Ave- SR-905 WB Ramps	Beyer Blvd/SR-905 EB Ramps-Dairy Mart Rd	Beyer Blvd/ Del Sur Blvd	Beyer Blvd/ Smythe Crossing NEW SIGNAL
Beyer Blvd/ Smythe Ave	Beyer Blvd/ Alaquinas Dr-W. Park Ave	Beyer Blvd/E. Beyer Blvd- Otay Mesa Rd	SR-905 WB Ramps/ Picador Blvd

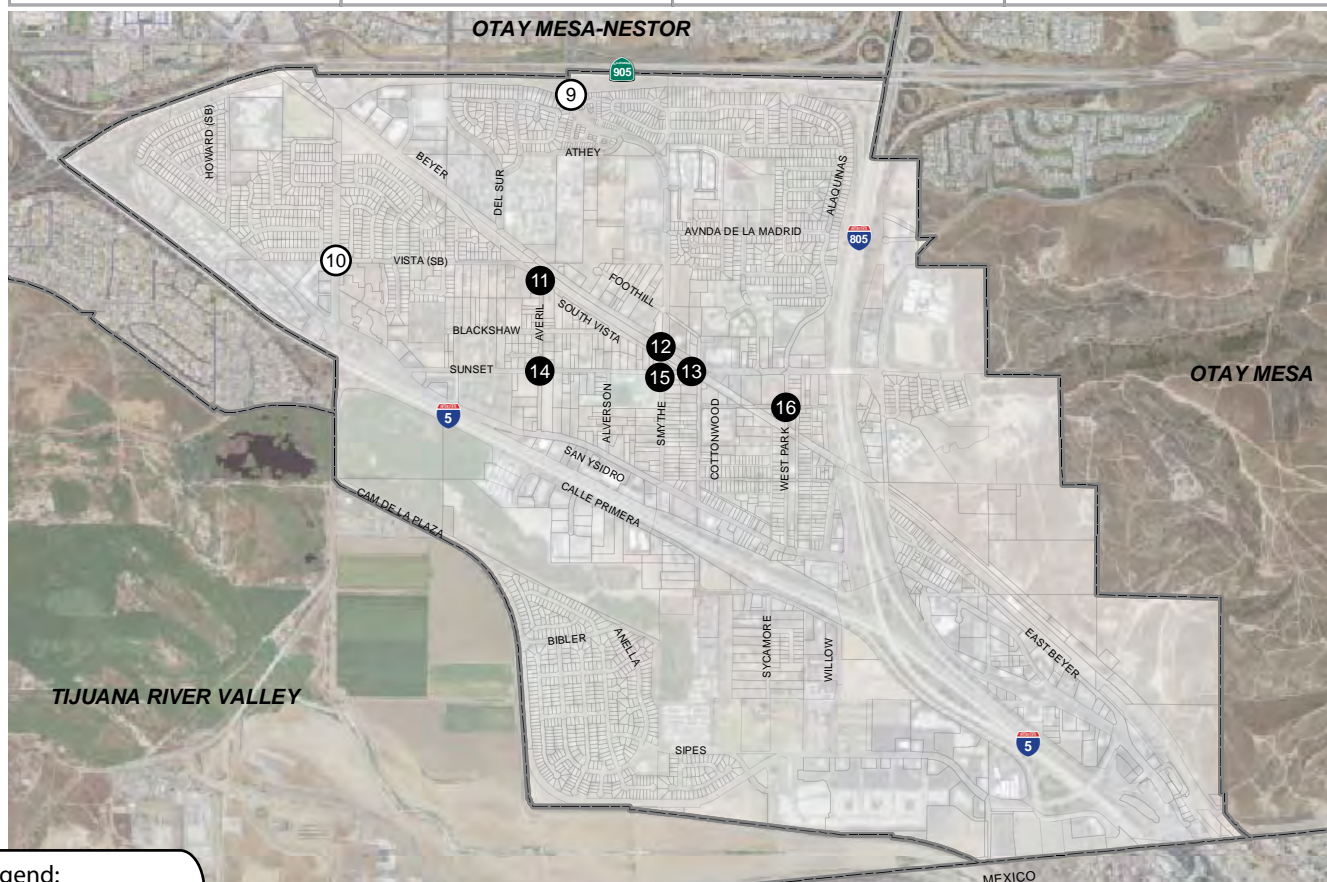


Legend:

- Signalized
- Right-turn overlap
- Unsignalized

San Ysidro CPU - Mobility Element

SR-905 EB Ramps/ Picador Blvd	Vista Ln/ Dairy Mart Rd	Vista Ln/ Averil Rd	Vista Ln/ Smythe Ave
	NEW SIGNAL 		
Vista Ln/ Sunset Ln	Sunset Ln/ Averil Rd	Sunset Ln/ Smythe Ave	Seward Ave/ W. Park Ave

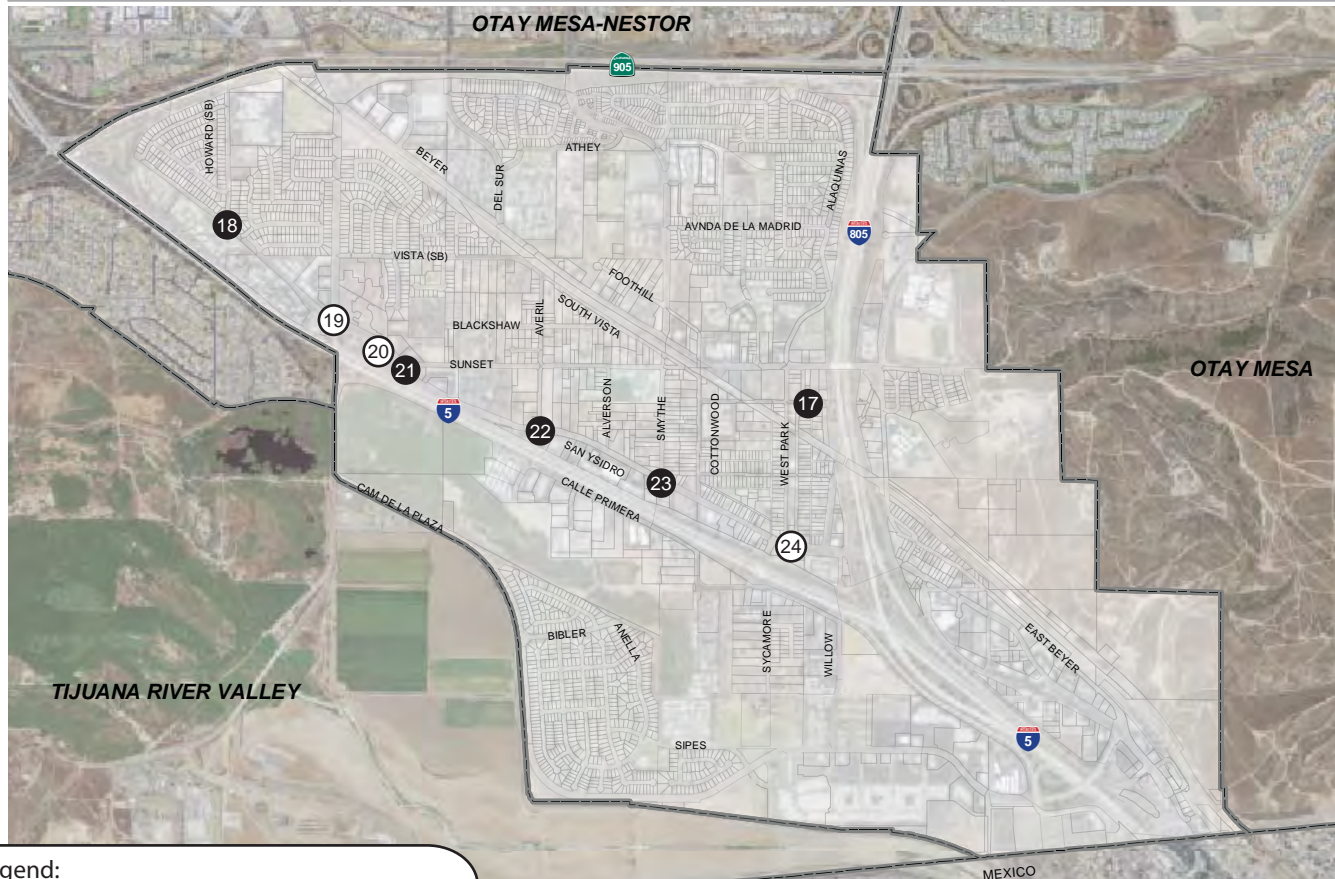


Legend:

- Signalized
- Unsignalized

San Ysidro CPU - Mobility Element

Seward Ave/ E. Park Ave	W. San Ysidro Blvd/ Howard Ave	W. San Ysidro Blvd/ Dairy Mart Rd	W. San Ysidro Blvd/ I-5 NB Ramps
	NEW ROUNDABOUT 		
W. San Ysidro Blvd/ Sunset Ln	W. San Ysidro Blvd/ Averil Rd	W. San Ysidro Blvd/ Smythe Ave	W. San Ysidro Blvd/ Cottonwood Rd
	NEW ROUNDABOUT 		

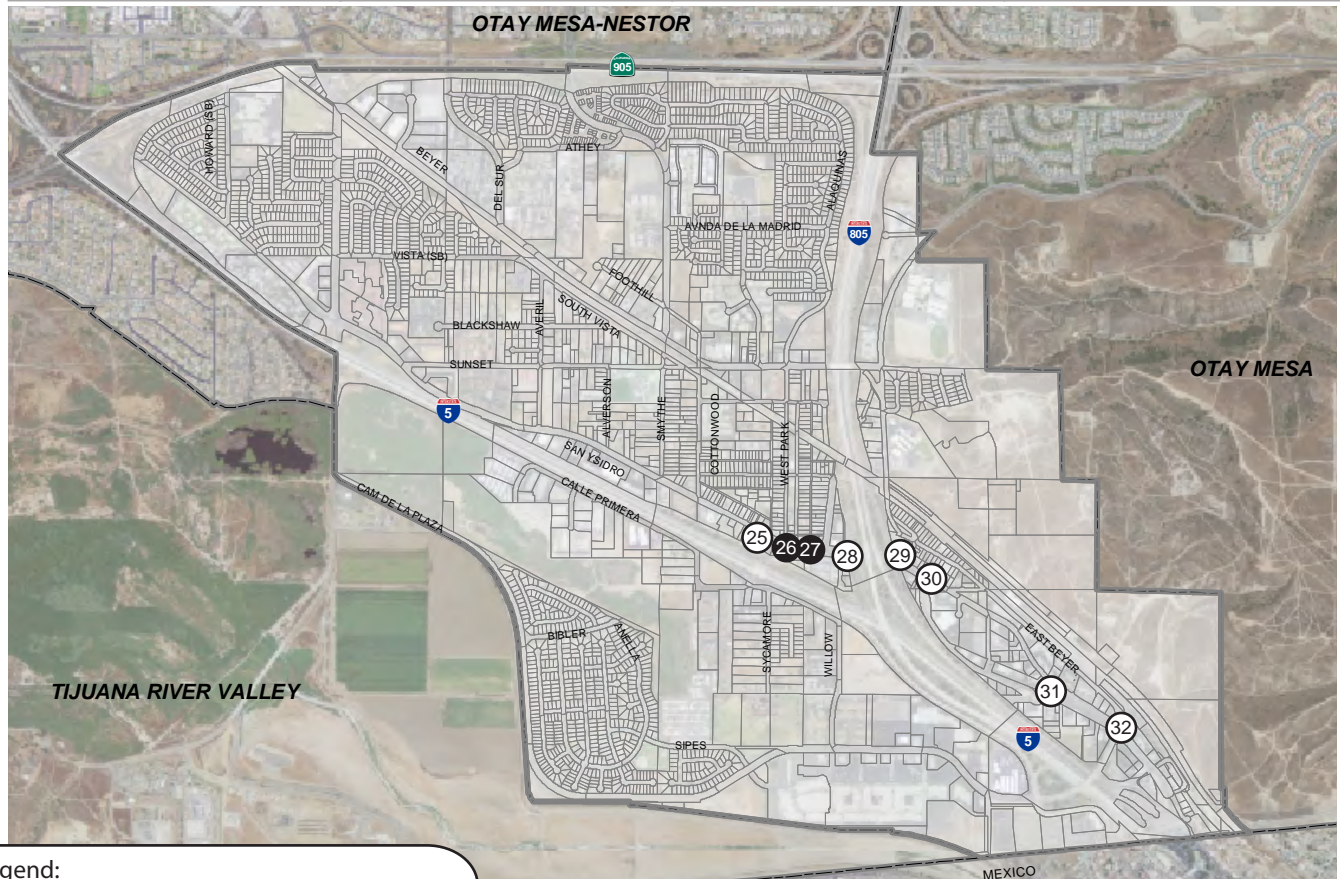


Legend:

- Signalized
- Unsignalized
- F Free right-turn

San Ysidro CPU - Mobility Element

W. San Ysidro Blvd/ Via de San Ysidro	W. San Ysidro Blvd/ W. Park Ave	E. San Ysidro Blvd/ E. Park Ave	E. San Ysidro Blvd/ I-805 SB Ramps
E. San Ysidro Blvd/ I-805 NB Ramps	E. San Ysidro Blvd/ Border Village Rd (W)	E. San Ysidro Blvd/ Border Village Rd (E)	E. San Ysidro Blvd/Camino de la Plaza-E. Beyer Blvd

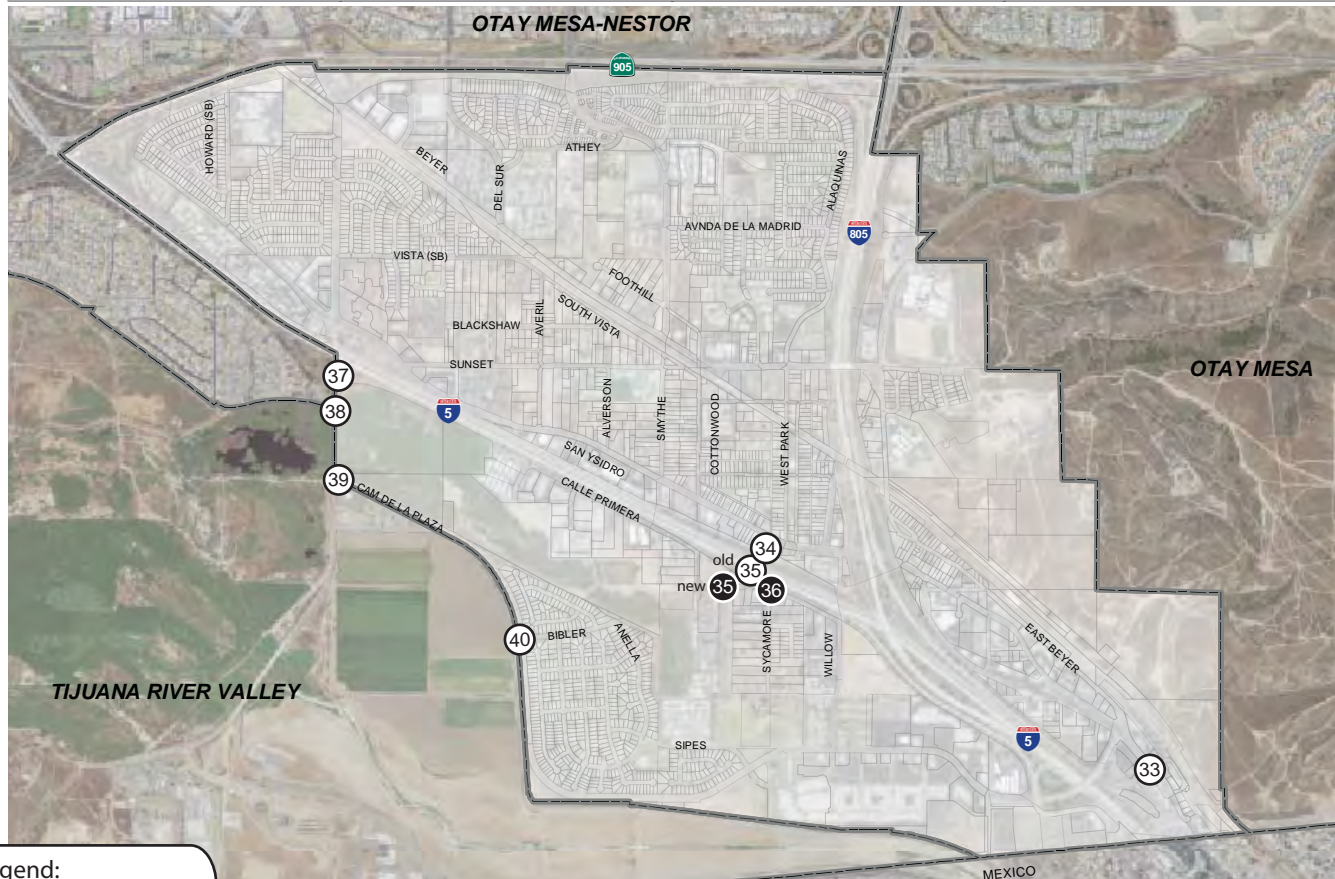


Legend:

- Signalized
- Unsignalized
- Right-turn overlap
- Free right-turn

San Ysidro CPU - Mobility Element

E. San Ysidro Blvd/ I-5 NB Ramps	Via de San Ysidro/ I-5 NB Ramps	Calle Primera / I-5 SB Ramps	Via de San Ysidro/ Calle Primera
		<p>NEW ROUNDABOUT</p> <p>*see note</p>	<p>NEW ROUNDABOUT</p>
I-5 SB Ramps/ Dairy Mart Rd	Servando Ave/ Dairy Mart Rd	Camino de la Plaza/ Dairy Mart Rd	Camino de la Plaza/ Bibler Dr
	<p>NEW SIGNAL</p>	<p>NEW SIGNAL</p>	



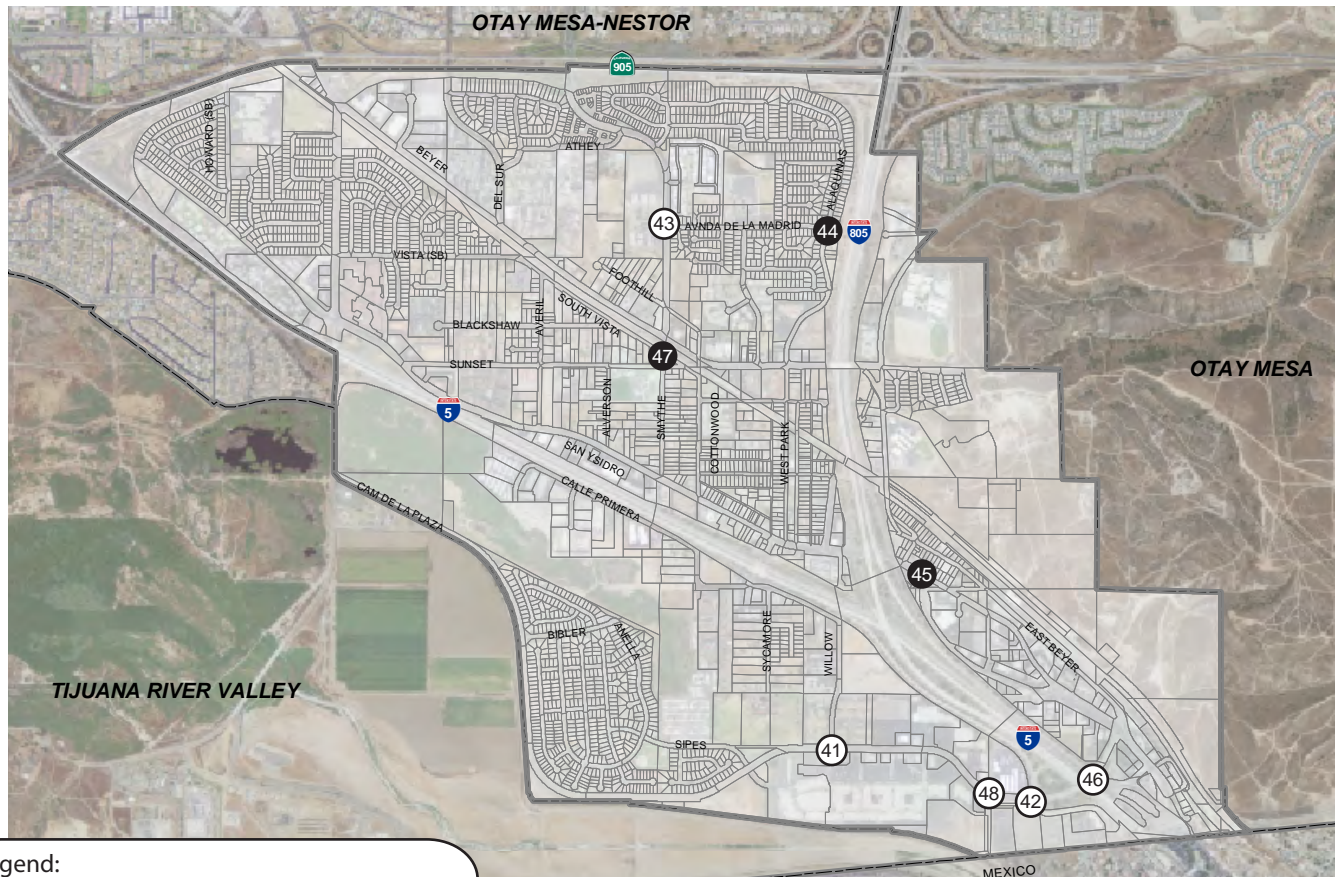
Legend:

- Signalized
- Unsignalized

* intersection relocated from the north side to the west side of Via de San Ysidro and Calle Primera

San Ysidro CPU - Mobility Element

Camino de la Plaza/ Willow Rd	Camino de la Plaza/I-5 SB Ramps-Camiones Wy	Avenida de la Madrid/ Smythe Ave	Avenida de la Madrid/ Alaquinas Dr
Center St / E. San Ysidro Blvd	I-5 SB Ramps/ Camino de la Plaza	Vista Ln/ Smythe Crossing	Camino de la Plaza/ Virginia Ave
NEW SIGNAL 			NEW SIGNAL



Legend:

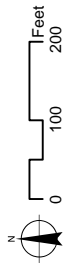
- Signalized
- Right-turn overlap
- Unsignalized



LEGEND
Traffic Signal

Figure 20

Center Street Improvement



Kimley»Horn

rrm design group

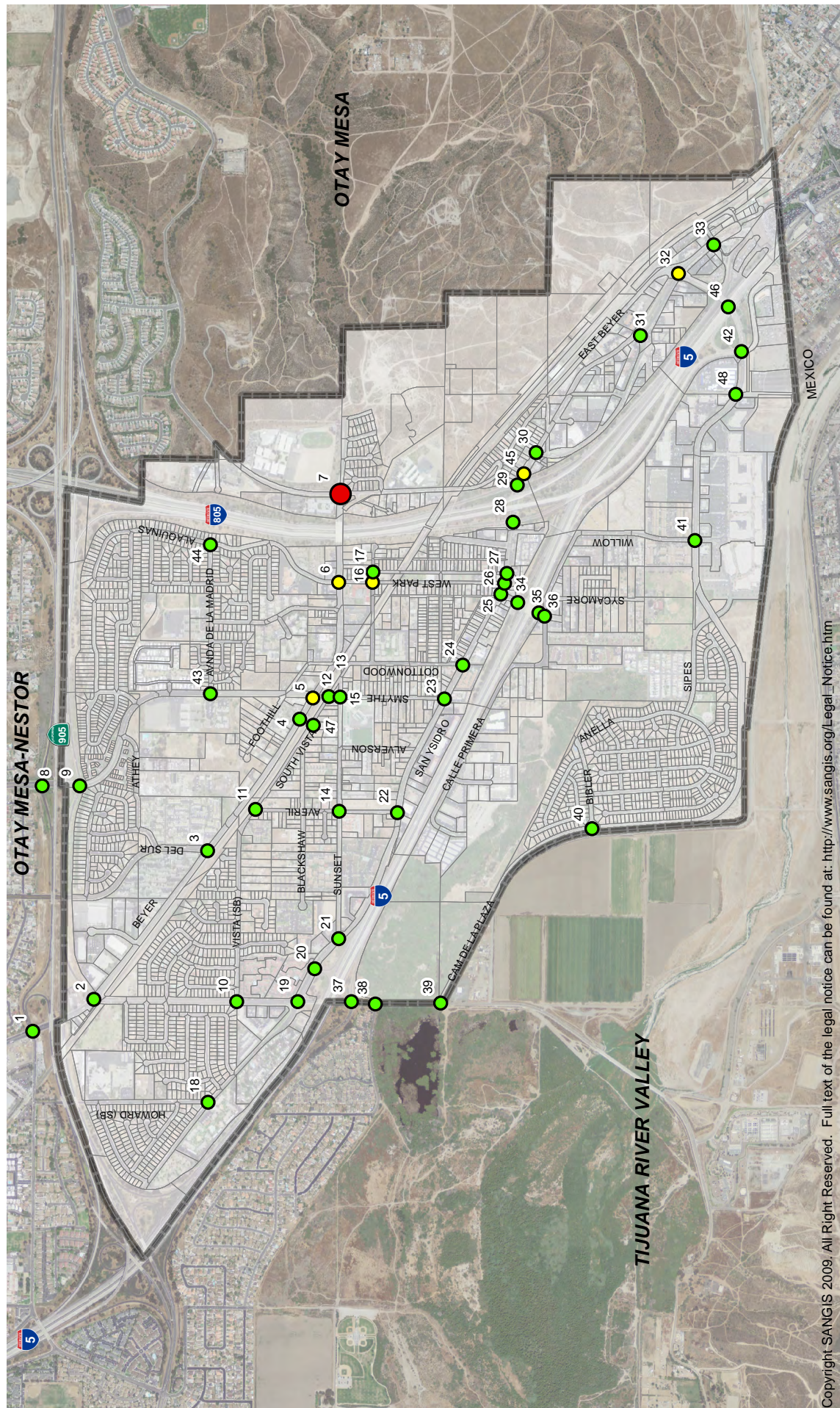
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TABLE 5
EXISTING VS. PREFERRED LAND USE ALTERNATIVE WITH IMPROVEMENTS (805 RAMPS) (WEEKDAY)
PEAK-HOUR INTERSECTION LOS SUMMARY

INTERSECTION	PEAK-HOUR	PREFERRED LAND USE ALTERNATIVE			WITH IMPROVEMENTS			Δ (c)	SIGNIFICANT?
		TRAFFIC CONTROL	DELAY (a)	LOS (b)	TRAFFIC CONTROL	DELAY (a)	LOS (b)		
1 Beyer Blvd & Iris Ave/SR-905 WB Ramps	AM	Signal	32.7	C	Signal	22.1	C	-10.6	NO
	PM		117.0	F		54.9	D	-62.1	NO
2 Beyer Blvd & Dairy Mart Rd/SR-905 Ramps	AM	Signal	79.7	E	Signal	25.9	C	-53.8	NO
	PM		44.6	D		41.3	D	-3.3	NO
4 Smythe Crossing & Beyer Blvd	AM	One-Way Stop	13.9	B	Signal	10.5	B	-3.4	NO
	PM		ECL	F		6.6	A	-	NO
5 Beyer Blvd & Smythe Ave	AM	Signal	ECL	F	Signal	54.9	D	-	NO
	PM		38.5	D		17.3	B	-21.2	NO
6 W. Park Ave/Alaquinas Dr & Beyer Blvd	AM	Signal	160.6	F	Signal	51.0	D	-109.6	NO
	PM		20.7	C		15.3	B	-5.4	NO
7 East Beyer Blvd/Otay Mesa Rd & Beyer Blvd	AM	Signal	ECL	F	Signal	195.2	F	-	NO
	PM		ECL	F		155.8	F	-	NO
10 Dairy Mart Rd & Vista Ln	AM	One-Way Stop	57.8	F	Signal	10.0	B	-47.8	NO
	PM		102.0	F		9.7	A	-92.3	NO
12 Smythe Ave & Vista Ln	AM	One-Way Stop	ECL	F	One-Way Stop	20.4	C	-	NO
	PM		ECL	F		21.5	C	-	NO
13 Sunset Ln & Vista Ln	AM	One-Way Stop	10.0	B	One-Way Stop	DOES NOT EXIST WITH IMPROVEMENTS			
	PM		11.7	B					
15 Smythe Ave & Sunset Ln	AM	All-Way Stop	166.8	F	All-Way Stop	8.8	A	-158.0	NO
	PM		8.8	A		8.6	A	-0.2	NO
18 W. San Ysidro Blvd & Howard Ave	AM	All-Way Stop	43.4	E	Roundabout	7.5	A	-35.9	NO
	PM		11.2	B		6.6	A	-4.6	NO
22 W. San Ysidro Blvd & Averil Rd	AM	All-Way Stop	14.2	B	Signal	12.7	B	-1.5	NO
	PM		44.1	E		8.6	A	-35.5	NO
	AM	All-Way Stop	14.2	B	Roundabout	7.2	A	-7.0	NO
	PM		44.1	E		10.8	B	-33.3	NO
29 I-805 NB Ramps & E. San Ysidro Blvd	AM	Signal	16.5	B	Signal	9.3	A	-7.2	NO
	PM		60.2	E		14.1	B	-46.1	NO
30 Border Village Rd (W) & E. San Ysidro Blvd	AM	Signal	14.2	B	Signal	14.2	B	0.0	NO
	PM		ECL	F		ECL	F	-	NO
31 Border Village Rd (E) & E. San Ysidro Blvd	AM	Signal	11.4	B	Signal	6.8	A	-4.6	NO
	PM		ECL	F		33.2	C	-	NO
32 Camino de la Plaza/E. Beyer Blvd & E. San Ysidro Blvd	AM	Signal	24.2	C	Signal	51.0	D	26.8	NO
	PM		34.1	C		54.9	D	20.8	NO
33 I-5 NB Ramp & E. San Ysidro Blvd	AM	Signal	36.1	D	Signal	18.2	B	-17.9	NO
	PM		ECL	F		34.3	C	-	NO
34 Via de San Ysidro & I-5 NB Ramps	AM	One-Way Stop	ECL	F	Signal	13.9	B	-	NO
	PM		ECL	F		30.2	C	-	NO
35 Calle Primera & I-5 SB off-ramp	AM	Signal	49.1	D	Roundabout	7.3	A	-41.8	NO
	PM		ECL	F		99.6	F	-	NO
36 Calle Primera & Via de San Ysidro	AM	Signal	ECL	F	Roundabout	5.3	A	-	NO
	PM		ECL	F		17.4	C	-	NO
37 Dairy Mart Rd & I-5 SB Ramps	AM	Signal	29.9	C	Signal	19.0	B	-10.9	NO
	PM		ECL	F		49.7	D	-	NO
38 Dairy Mart Rd & Servando Ave	AM	All-Way Stop	21.1	C	Signal	10.8	B	-10.3	NO
	PM		108.4	F		18.0	B	-90.4	NO
	AM	All-Way Stop	21.1	C	Roundabout	8.3	A	-12.8	NO
	PM		108.4	F		12.2	B	-96.2	NO
39 Dairy Mart Rd & Camino De La Plaza	AM	One-Way Stop	13.1	B	Signal	11.1	B	-2.0	NO
	PM		78.1	F		20.9	C	-57.2	NO
	AM	One-Way Stop	13.1	B	Roundabout	6.1	A	-7.0	NO
	PM		78.1	F		9.4	A	-68.7	NO
41 Willow Rd & Camino de la Plaza	AM	Signal	27.1	C	Signal	26.4	C	-0.7	NO
	PM		55.3	E		50.0	D	-5.3	NO
42 Camiones Way/I-5 SB Ramps & Camino de la Plaza	AM	Signal	21.5	C	Signal	21.2	C	-0.3	NO
	PM		99.6	F		34.7	C	-64.9	NO
43 Smythe Ave & Avenida de la Madrid	AM	Signal	37.7	D	Signal	32.9	C	-4.8	NO
	PM		23.6	C		19.3	B	-4.3	NO
44 Avenida de la Madrid & Alaquinas Dr	AM	One-Way Stop	15.2	C	One-Way Stop	15.2	C	0.0	NO
	PM		8.2	A		9.0	A	0.8	NO
45 I-805 NB Ramps/Center Street & E. San Ysidro Blvd	AM	One-Way Stop	22.4	C	Signal	40.8	D	18.4	NO
	PM		ECL	F		78.1	E	-	NO
46 Camino de la Plaza & I-805 NB Ramp	AM	INTERSECTION DOES NOT EXIST UNDER THIS SCENARIO			Signal	1.8	A	-	NO
	PM					4.0	A	-	NO
47 Vista Ln & Smythe Crossing	AM	Two-Way Stop	28.8	D	Signal	7.5	A	-21.3	NO
	PM		ECL	F		10.0	B	-	NO
48 Camino de la Plaza & Virginia Ave	AM	Two-Way Stop	ECL	F	Signal	13.9	B	-	NO
	PM		ECL	F		31.8	C	-	NO

Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 8
The saturation flow rate at the intersection of Camino de la Plaza and I-5 Southbound Ramps was adjusted to replicate existing conditions when the I-5 Southbound inspection lane is open entering Mexico.



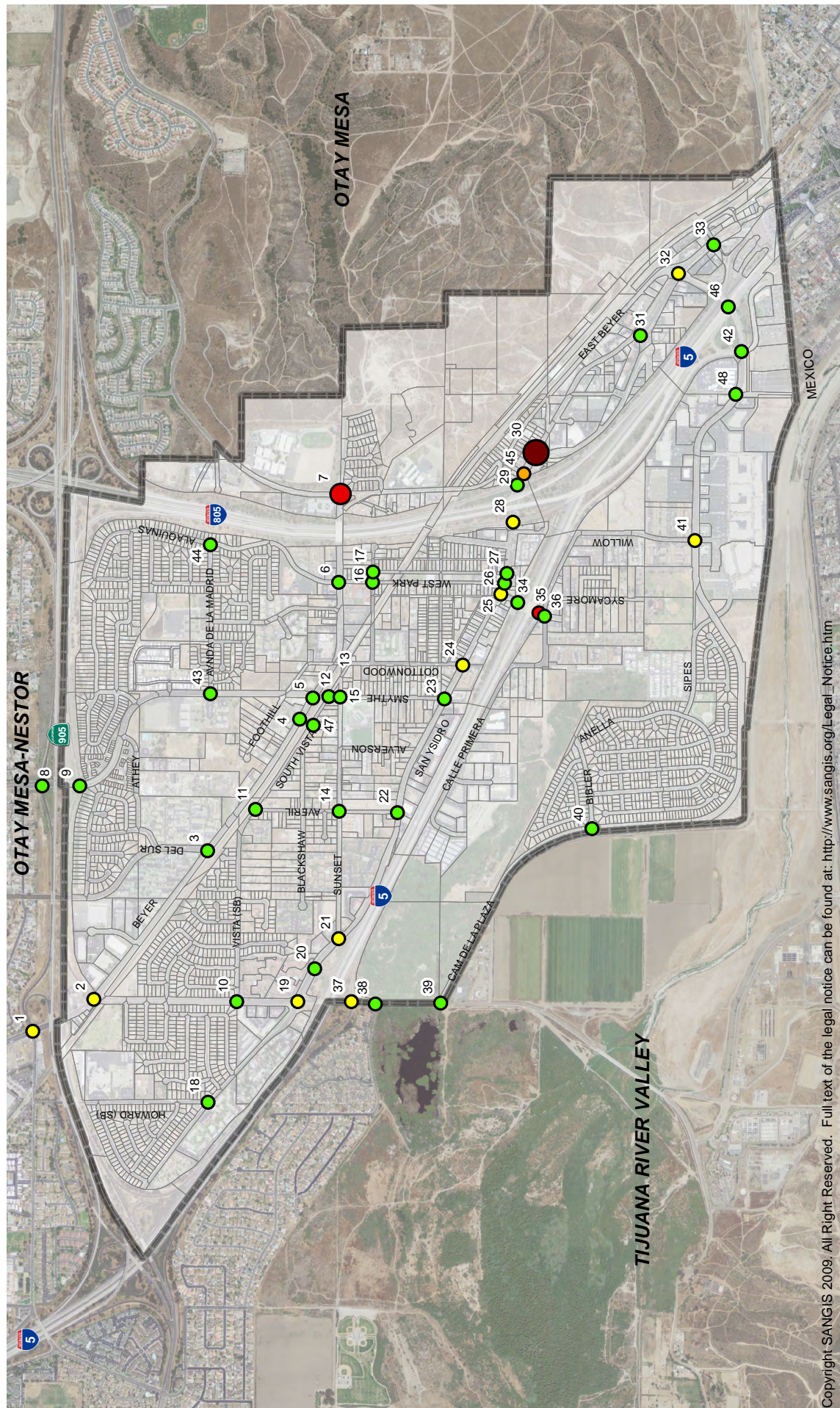
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LEGEND

- LOS: A, B, C
- LOS: D
- LOS: F (150 - 250 sec)
- ◻ Community Plan Boundary
- ◻ Parcel Boundaries
- XX Intersection #
(See Tables 3-8)

Figure 21.a





LEGEND

- LOS: A, B, C
- LOS: D
- LOS: E
- LOS: F (<100 sec)
- LOS: F (150 - 250 sec)
- LOS: F (>500 sec)
- ◆ Community Plan Boundary
- ◇ Parcel Boundaries
- XX Intersection # (See Tables 3-8)

Figure 21.b

Summary of Intersection Analysis - Preferred Alternative with Improvements (Weekday - PM)



Multi-Modal Recommended Improvements

Bicycling

The existing conditions evaluation report found the community of San Ysidro to have an incomplete bicycle network. The existing bicycle system lacks the connectivity and accessibility required to connect the major attractors within the community. The following is a list of facilities that are recommended to complement the existing bicycle network within the community. **Figure 22** illustrates the different types of bicycle facilities used in the City of San Diego.

Class I (Dedicated Bike Path)

- A new Class I (dedicated Bike Path) facility is recommended within MTS right-of way along the BlueLine Trolley line. This facility would connect the northwest end of the community to the Border Village area and the San Ysidro Intermodal Transportation Center. The following is a general description of the proposed alignment for this Class I facility:
 - Beyer Boulevard from Dairy Mart to East Park: For this section, the Class I facility will be constructed along the existing MTS right-of-way between the tracks and Beyer Boulevard.
 - East Park Avenue from MTS trolley lines to Hall Avenue: The Class I facility would then be constructed along the west side of East Park Avenue connecting the trolley tracks with Hall Avenue (See Figure 14)
 - Hall Avenue from E. Park Avenue to Olive Street: For this section of the roadway, the Class I would be converted to the Class IV cycle track to be installed along the north side of Hall Avenue connecting the Class I facility along East Park Avenue with the existing bridge over the I-805 freeway. Parking along the north side of Hall Avenue between East Park Avenue and Olive Street will need to be removed.
 - Olive Street Bridge to San Ysidro Border area: From the existing bridge over the I-805 Bridge, a new pedestrian/bicycle bridge would need to be constructed to connect with the south side of the existing MTS right-of-way. From this point forward, the Class I facility will be constructed along the MTS right-of-way between the trolley lines and the existing residential units along East Beyer Boulevard.

Class II (Bike Lanes)

- To complete a full bicycle network around the perimeter of the Community, two Class II (Bike Lane) connections are needed and recommended. These two locations would be completed with the widening of the Dairy Mart Road and the Camino de la Plaza bridges over the I-5 interchange. Below are the two segments:
 - Dairy Mart Road between West San Ysidro Boulevard and Camino de la Plaza (see **Figure 10**); and
 - Camino de la Plaza between the I-5 Southbound Ramps and East San Ysidro Boulevard (see **Figure 13**).
- Within the Border Village area, two new Class II sections are recommended (see **Figure 11**):
 - Border Village Road (eastbound only) between both ends of East San Ysidro Boulevard; and
 - East San Ysidro Boulevard between Border Village Road (W) and Camino de la Plaza, where sufficient width is available

- Along West and East San Ysidro Boulevard between Dairy Mart Road and the I-805 ramps, where sufficient width is available.
- Along Beyer Boulevard, between Precision Park Lane and East Beyer Boulevard (see **Figure 9** and **Figure 16**)
- Along Otay Mesa Road north of Beyer Boulevard; and
- Along Calle Primera between the I-5 SB Ramp and Via Tercero.

Class III (Bike Routes)

Several other corridors within the community shall be classified as Class III. These facilities will connect the different attractors within the community and provide a complete bicycle network. The focus on the Class III is to reduce vehicular speed by implementing traffic calming measures, such as intersection bulb-outs, speed tables, striped parking. The traffic calming measures would enhance the bicycle movement providing a more pleasurable experience for bicyclist. The facilities that should be designated as Class III are:

- East and West Park Avenue between Beyer Boulevard and West San Ysidro Boulevard;
- West and East San Ysidro Boulevard between Dairy Mart Road and East Beyer Boulevard/Camino de la Plaza, where sufficient width for providing a bike lane is not available;
- Via de San Ysidro between West San Ysidro Boulevard and Calle Primera;
- Willow Road between Calle Primera and Camino de la Plaza;
- Smythe Avenue between Vista Lane and West San Ysidro Boulevard;
- Vista Lane between Dairy Mart Road and Smythe Crossing; and
- Sunset Lane between West San Ysidro Boulevard and Vista Lane.

Class IV (Cycle Tracks)

At specific locations within the community, the installation of cycle tracks is recommended to increase connectivity and access to alternative modes of transportation. The following locations are recommended for the installation of cycle tracks:

- Beyer Boulevard between Dairy Mart Road and Precision Park Lane;
- Hall Avenue between Olive Street and East Park Avenue (see **Figure 14** and **Figure 15**); and
- Vista Lane between Cottonwood Road and Smythe Crossing (See **Figure 16**).

Figure 23 illustrates the locations of existing and future potential new bicycle facilities within the community.

Figure 24 provides a summary of all the recommended bicycle improvements and illustrates the consistency with other documents prepared for the Community. Table 7 also illustrates how these recommended bicycle facilities would increase one of the following measures of effectiveness:

- Extends of New/Enhanced Active Transportation Opportunity;
- Improves Bicycle Connectivity/Accessibility
- Easy to implement

The regional bike plan, Riding to 2050, prepared by SANDAG identifies three bike routes of regional importance within or near San Ysidro. One such route, the Border Access Corridor, is primarily within San Ysidro. This 6.4 mile route connects the international border crossing in San Ysidro with the Bayshore Bikeway route in Otay Mesa Nestor. Within San Ysidro, the route uses Beyer and East Beyer Boulevard which are currently Class III bike routes. This route is planned to be upgraded to a Class II facility (bike lanes) under the Riding to 2050 plan.

The City of San Diego's Bicycle Master Plan, approved in July 2013, identifies several new bicycle facilities for the Community of San Ysidro. Although the majority of the recommendations are consistent with the above listed recommendations, there are a few locations where the San Diego's Bicycle Master Plan may not be consistent with the recommendation of this study. Below are the locations where a discrepancy between the plan and our recommendations are found:

- The City's Bicycle Master Plan also recommends Willow Road as a new Class II bicycle facility. To accommodate the new Class II bicycle facility, parking along both sides of the street would need to be removed. It is recommended that instead of adding bike lanes, this corridor be classified as a Class III facility with traffic calming measures;
- The City's Bicycle Master Plan recommends Border Village Road as a Class III facility. With the one-way couplet configuration a buffered bike lane can be provided along this segment;
- The City's Bicycle Master Plan recommends Via de San Ysidro as a Class II facility. Due to the lack of space available to provide room for a Class II facility, a Class III facility is recommended instead.

The San Ysidro Mobility Strategy document, prepared in January 2009 is consistent with the recommendations included in the City's Bicycle Master Plan for all the Class II facilities. The San Ysidro Mobility Strategy recommended Willow Road as a Class III facility, while the City's Bicycle Master Plan describes Willow Road as a Class II or Bike Lane. The City's Bicycle Master Plan also included Class III facilities along Vista Lane, Cottonwood Road and Sunset Lane, which the San Ysidro Mobility Strategy did not include within its recommendations.

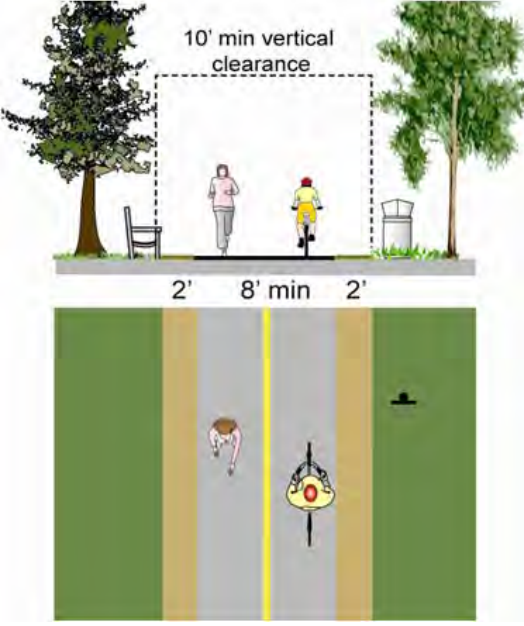

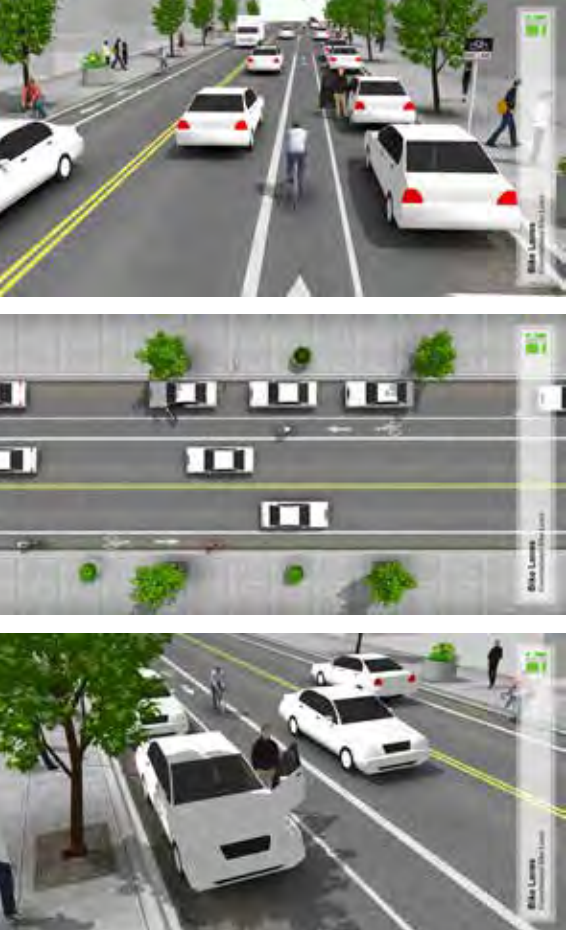
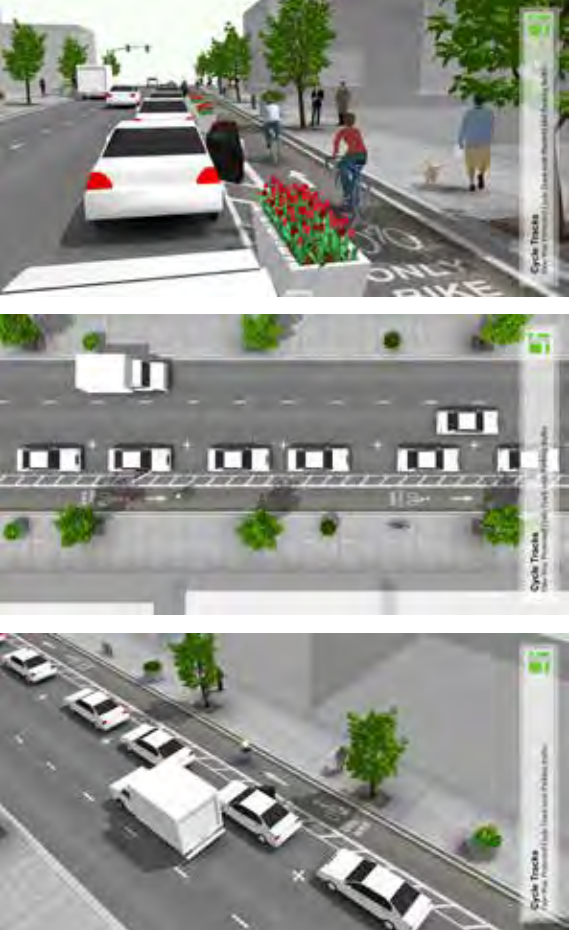
The San Ysidro International Transportation Center Study, prepared by SANDAG in July 2014, includes as its recommendations the construction of a bike center situated in the pedestrian plaza with direct access to and from dedicated bike lanes on East San Ysidro Boulevard. This recommendation is consistent with the recommendations in this study to provide a buffered bike lane along San Ysidro Boulevard in this area.

The Border Health Equity Transportation (BHET) Study, prepared in August 2014, provides a list of 14 recommendations for improving bicycling within the Community. From the list of 14 recommendations, the BHET study prioritized the following three facilities for early implementation which are all consistent with the recommendations within this Mobility Study:

- Create a landscape active transportation corridor traversing the community. This improvement is the Class I facility proposed along the existing MTS right-of-way;
- Install a Class II bicycle lane extending the length of Otay Mesa Road; and
- Establish a Class III bicycle route running the length of West Park Avenue.

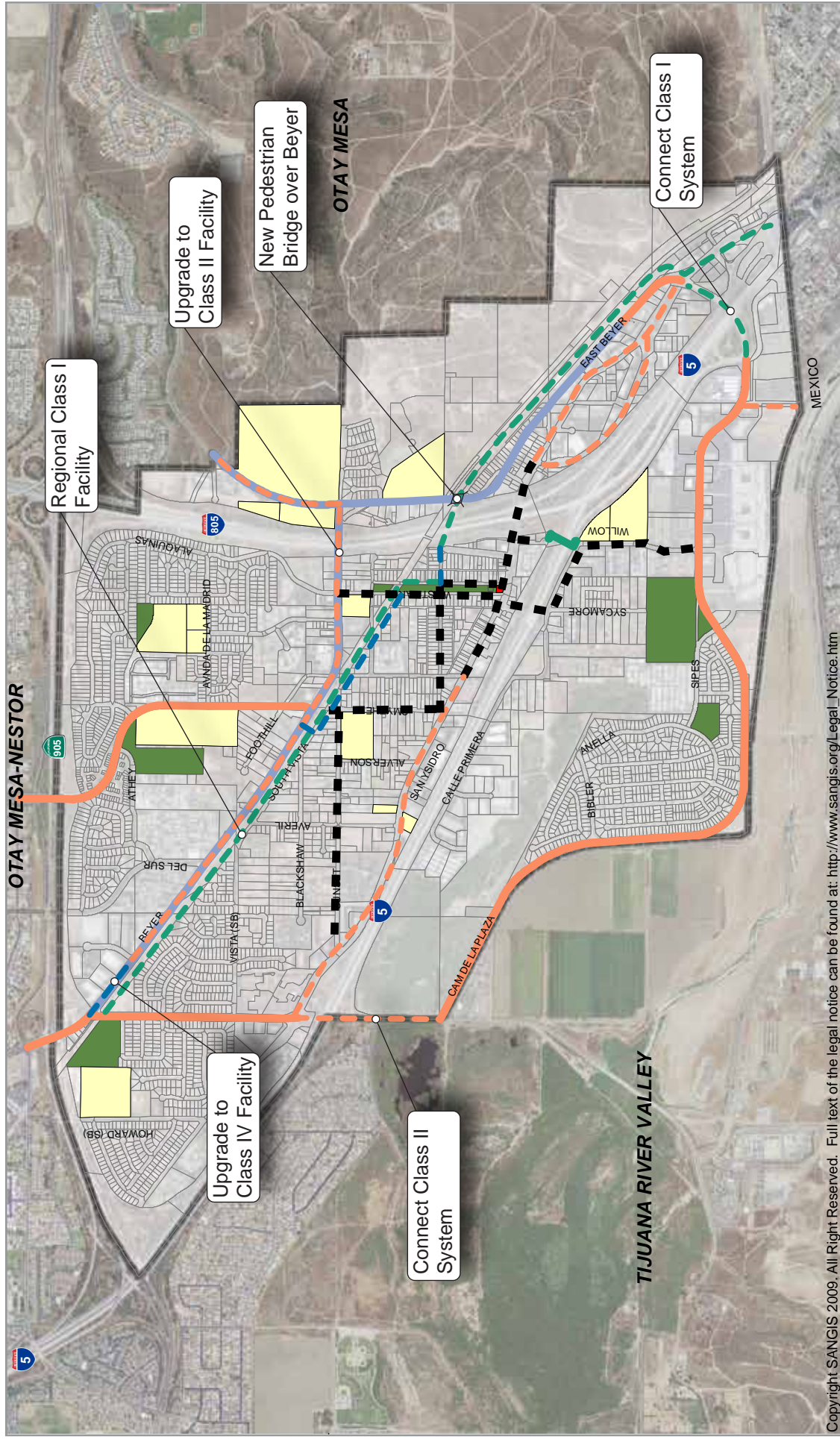
As shown In Table 7, all recommended bicycle improvements would extend new/enhance active transportation opportunities within the Community. All recommendations would also improve connectivity and accessibility. With the exception of the Class I facilities between Dairy Mart Road and the Border and the Class II facilities along Dairy Mart Road and Camino de la Plaza, the implementation of the other facilities would require striping and minor roadway improvements, which can be easily implementable.

In addition to the bicycle facilities listed above, it is recommended that bicycle parking facilities be installed at all major activity centers and at each of the Trolley Stations.

Class Description	Example Graphic	Class Description	Example Graphic
<p>Class I – Bike Path</p> <p>Bike paths, also termed shared-use or multi-use paths, are paved right-of-way for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way. Bike paths provide critical connections in the city where roadways are absent or are not conducive to bicycle travel.</p> <p>Display in Report</p> <p>— Existing - - - Recommended</p>		<p>Class III - Bike Route</p> <p>Bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by signs, Bike Routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand. Whenever possible, Bike Routes should be enhanced with treatments that improve safety and connectivity, such as the use of “Sharrows” or shared lane markings to delineate that the road is a shared-use facility.</p> <p>Display in Report</p> <p>— Existing - - - Recommended</p>	
<p>Class II – Bike Lane</p> <p>Bike lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Bike lanes are one-way facilities on either side of a roadway. Whenever possible, Bike Lanes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues, such as additional warning or wayfinding signage.</p> <p>Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions. Bike lanes also facilitate predictable behavior and movements between bicyclists and motorists.</p> <p>Display in Report</p> <p>— Existing - - - Recommended</p>		<p>Class IV – Cycle Track</p> <p>A Cycle Track is a hybrid type bicycle facility that combines the experience of a separated path with the on-street infrastructure of a conventional Bike Lane. Cycle tracks are bikeways located in roadway right-of-way but separated from vehicle lanes by physical barriers or buffers. Cycle tracks provide for one-way bicycle travel in each direction adjacent to vehicular travel lanes and are exclusively for bicycle use. Cycle tracks are not recognized by Caltrans Highway Design Manual as a bikeway facility. A Cycle track is proposed as a pilot project along a 7.6-mile segment of the San Diego bikeway network. To provide bicyclists with the option of riding outside of the Cycle Track to position themselves for a left or right turn, parallel bikeways should be added adjacent to Cycle Track facilities whenever feasible.</p> <p>Display in Report</p> <p>— Existing - - - Recommended</p>	

- Sources:
- City of San Diego Bicycle Master Plan Update 2011
 - NACTO Urban Bikeway Design Guide, 2014

Figure 22



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LEGEND

- Existing Class I
- Existing Class II
- Existing Class III
- - - Recommended Class I Facility
- - - Recommended Class II Facility
- - - Recommended Class II or III Facility
- - - Recommended Class IV Facility
- ◆ City Park
- ◆ Schools
- ◆ Libraries
- Community Plan Boundary
- Parcel Boundaries

New Bicycle Network

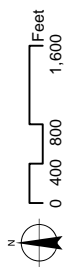


Figure 23



Riding to 2050 (SANDAG)
 Bicycle Master Plan (City of SD)
 San Ysidro Mobility Strategy
 San Ysidro Intermodal Transportation Center Study (SANDAG)
 Extend New/Enhanced Active Transportation Study (SANDAG)
 Health Equity Transportation Study (SANDAG)
 San Ysidro Intermodal Transportation Center Study (SANDAG)
 Improves Bicycle Connectivity/Accessibility
 Easy to Implement

Description		Class I or Bike Path						
A		X	X	X	X	X	X	X
A-1	Class I along MTS right-of-way between Dairy Mart and ITC							
B		Class II or Buffered Bike Lanes						
B-1	Dairy Mart Rd between W. San Ysidro Blvd and Camino de la Plaza			X				X
B-2	Camino de la Plaza between I-5 SB ramps and East San Ysidro Blvd			X				X
B-3	Beyer Boulevard between Dairy Mart Rd. and E. Beyer Blvd			X				X
B-4	Border Village Rd between E. San Ysidro Blvd							X
B-5	W. and E San Ysidro Blvd between Dairy Mart Road and San Ysidro ITC			X		X		X
B-5	Otay Mesa Road			X		X		X
C		Class III or Bike Routes						
C-1	E. and W. Park between Beyer Blvd and W. San Ysidro Blvd			X				X
C-2	W. and E. San Ysidro Blvd between Dairy Mart Rd to E. Beyer Blvd			X				X
C-3	Via de San Ysidro between W. San Ysidro Blvd and Calle Primera							X
C-4	Willow Rd between W. San Ysidro Blvd and Camino de la Plaza					X		X
C-5	Vista Ln between Dairy Mart Rd and Cottonwood Rd							X
C-6	Cottonwood Rd between Vista Ln and W. San Ysidro Blvd					X		X
C-7	Sunset Ln between W. San Ysidro Blvd and Vista Ln					X		X
D		Class IV or Cycle Tracks						
D-1	Hall Ave between Olive St and E. Park Ave							X
D-2	Vista Ln between Cottonwood Rd and Smythe Crossing							X

Figure 24

Summary of Bicycle Improvement Recommendations



Pedestrian

Walking is a popular mode of travel in San Ysidro. The Existing conditions evaluation identified several areas for improvements with regards to pedestrian accessibility and pedestrian connectivity. The following are the recommendations to improve the pedestrian network within San Ysidro:

New Pedestrian Bridge over MTS Blueline Trolley Line:

A new pedestrian bridge is recommended across the MTS Blueline Trolley Line at Del Sur Boulevard. This new bridge would provide transit access to a large residential area north of Vista Lane, south of the MTS tracks. Without this bridge, this residential area is outside of the normal maximum walking distance to transit. **Figure 9** (Cross Section C) illustrates this improvement. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group

Existing Pedestrian Bridge Improvements:

There are two existing pedestrian bridges in the Community that provide connection across the I-5 and I-805 freeways. The Willow Bridge provides a connection across the I-5 and the Beyer Bridge provides connection across the I-805. It is recommended that lighting improvements be implemented along each of these two bridges in addition to landscape improvements at both ends of the bridges. The recommended lighting and landscape improvements would enhance the pedestrian connectivity and encourage active transportation through the community by making these two important pedestrian connections more inviting to residents and tourist.

Creation of a Class I shared pedestrian/bike facility:

The creation of a “green spine”, which is described as a linear walkable, bikeable link that would be constructed with the MTS right of way along Beyer Boulevard, has been a priority of the Community for encouraging and facilitating active transportation throughout its limits. This recommendation is consistent with the Regional Bike Master Plan, the City’s Bicycle Master Plan, the San Ysidro Mobility Strategy and more recently with the Border Health Equity Transportation Study, which rated this project as high priority project for the Community. This facility would connect the northwest end of the community to the Border Village area and the San Ysidro Intermodal Transportation Center.

Construct or improve sidewalks:

Construct or improve sidewalks at several locations along the Community by providing wider and/or ADA compliant pedestrian travel path with pedestrian scale lighting at several locations:

- Dairy Mart Road (both sides) between West San Ysidro Boulevard and Camino de la Plaza;
- Smythe Crossing (west side) between Vista Lane and Beyer Boulevard;
- Old Otay Mesa Road (east side) between Beyer Boulevard and the north Community Border. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group;
- Seward Avenue (south side) between Smythe Crossing and West Park Boulevard;

- East and West Park Boulevard (both sides) between East San Ysidro Boulevard and Beyer Boulevard;
- Olive Street (both sides) between Hall Avenue and East San Ysidro Boulevard;
- East and West San Ysidro Boulevard (both sides) between Dairy Mart Road and San Ysidro Border Crossing. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group;
- Border Village Road (both sides) between East San Ysidro Boulevard;
- Camino de la Plaza (both sides) between the I-5 Southbound ramps and East San Ysidro Boulevard;
- Calle Primera (north side) between Via de San Ysidro and Willow Road This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group;
- Howard Avenue (East Side) between Village Pine Drive and Iris;
- Smythe Avenue (both sides) between Beyer Boulevard and SR-905. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group;
- Via de San Ysidro (both sides) between Calle Primera and West San Ysidro Boulevard; and
- Cottonwood Road (both sides) between West San Ysidro Boulevard and Vista Lane. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group.

Bulb-outs and crossing improvements:

At key intersections within the community the installation of bulb-outs and high visibility crosswalks is recommended to improve pedestrian connectivity and enhance access to Schools and Transit. Although other intersections should also be considered for evaluation and or implementation, the following intersection should be a priority for the Community:

- Cypress Drive and Sellsway Street;
- Seaward Avenue and West Park Boulevard;
- Olive Drive and Hall Avenue;
- Hall Avenue and East Park Avenue;
- Hall Avenue and West Park Avenue; and
- Beyer School crossing on East Beyer Boulevard. This project is included as one of the high priority projects for CIP improvements for the San Ysidro Community Planning Group.

Traffic Calming

In addition to the improvements listed above, the *City of San Diego’s Pedestrian Master Plan*, identified several corridors where pedestrian improvements are needed to enhance pedestrian visibility through better lighting, signage and traffic calming techniques. The following corridors were identified:

- Sunset Lane between West San Ysidro Boulevard and Vista Avenue; and

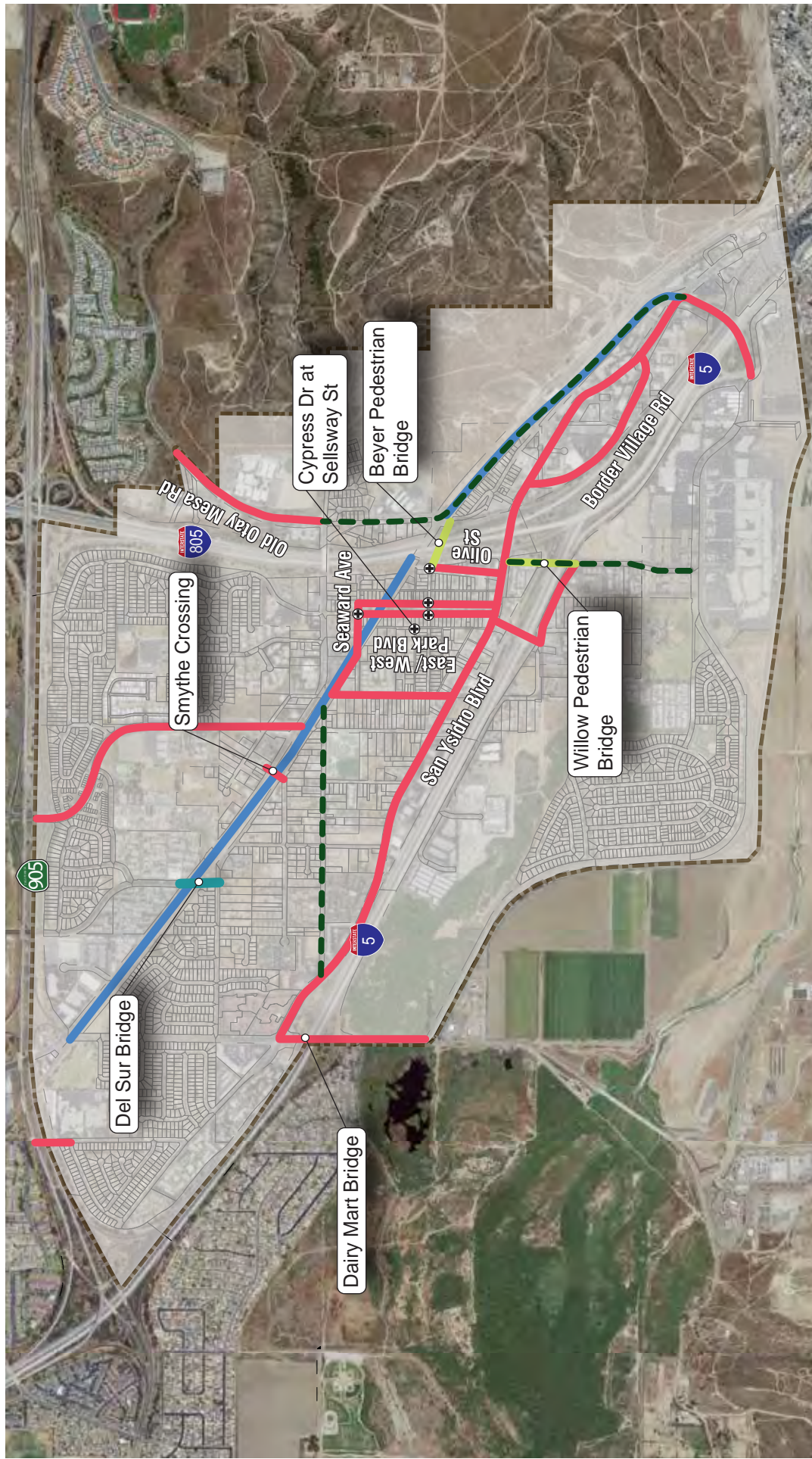
- East Beyer Boulevard between Beyer Boulevard and Camino de la Plaza.

Figure 25 illustrates the locations where pedestrian improvements are recommended within the San Ysidro Community.

Figure 26 provides a summary of all the recommended pedestrian improvements and illustrates the consistency with other documents prepared for the Community. Figure 24 also illustrates how these recommended pedestrian improvements would increase one of the following measures of effectiveness:

- Extends of New/Enhanced Active Transportation Opportunity;
- Improves Pedestrian Connectivity/Accessibility
- Easy to implement

As shown In Figure 24, all recommended pedestrian improvements would extend new/enhance active transportation opportunities within the Community. All recommendations would also improve connectivity and accessibility.



LEGEND

- New Pedestrian Bridge
- New/ Improved Sidewalks with Pedestrian Scale Lighting
- New Class I Pedestrian/ Bicycle Shared Facility
- Improved Existing Pedestrian Bridges

- ⊕ Intersection Improvements
- - - Traffic Calming

Figure 25

Pedestrian Network Improvements



City of San Diego's Pedestrian Master Plan
 Health Equity Transportation Study (SANDAG)
 San Ysidro Mobility Strategy
 San Ysidro Intermodal Transportation Center Study (SANDAG)
 Improves Walkability in San Ysidro (Walk-San Diego)
 Extend New/Enhanced Active Transportation Opportunity
 Improves Pedestrian Connectivity/Accessibility
 Easy to Implement

Description		New Pedestrian Bridge		Existing Pedestrian Bridge Improvements		Creation of Class I Share Bike/Ped Facility		Construct or Improve Sidewalks		Bulb-outs and Crossing Improvements		Traffic Calming	
A													
A-1	At Del Sur Boulevard across MTS tracks		X					X					X
B													
B-1	Willow Road												X
B-2	East Beyer Boulevard			X									X
C													
C-1	From Dairy Mart Road to ITC (MTS Right of way)		X										X
D													
D-1	Dairy Mart Road (both sides) between West San Ysidro Boulevard and Camino de la Plaza							X					X
D-2	Smythe Crossing (west side) between Vista Lane and Beyer Boulevard							X					X
D-3	Old Otay Mesa Road (east side) between Beyer Boulevard and the north Community Border			X									X
D-4	Seward Avenue (south side) between Smythe Crossing and West Park Boulevard			X				X					X
D-5	East and West Park Boulevard (both sides) between East San Ysidro Boulevard and Beyer Boulevard			X				X					X
D-6	Olive Street (both sides) between Hall Avenue and East San Ysidro Boulevard							X					X
D-7	East and West San Ysidro Boulevard (both sides) between Dairy Mart Road and San Ysidro Border Crossing							X					X
D-8	Border Village Road (both sides) between East San Ysidro Boulevard												X
D-9	Camino de la Plaza (both sides) between the I-5 Southbound ramps and East San Ysidro Boulevard							X					X
D-10	Calle Primera (north side) between Via de San Ysidro and Willow Road							X					X
D-11	Howard Avenue (East Side) between Village Pine Drive and Iris												X
D-12	Smythe Avenue (both sides) between Beyer Boulevard and SR-905							X					X
D-13	Via de San Ysidro (both sides) between Calle Primera and West San Ysidro Boulevard							X					X
D-14	Cottonwood Road (both sides) between West San Ysidro Boulevard and Vista Lane												X
E													
E-1	Cypress Drive and Sellsway Street											X	X
E-2	Seaward Avenue and West Park Boulevard										X		X
E-3	Olive Drive and Hall Avenue									X			X
E-4	Hall Avenue and East Park Avenue									X			X
E-5	Hall Avenue and West Park Avenue									X			X
F													
F-1	Sunset Lane between West San Ysidro Boulevard and Vista Avenue							X					X
F-2	East Beyer Boulevard between Beyer Boulevard and Camino de la Plaza							X					X

Figure 26



Transit

A key focus of the Regional Transportation Plan (RTP) prepared by the San Diego Association of Governments (SANDAG) is to develop an ambitious and far-reaching transit network that significantly expands the role that transit plays within our region. Vital to achieving this goal is the improvement of the current system to provide more convenient and timely bus and rail services, the implementation of new transit services to improve connections and access, the implementation of new service types to attract new riders to transit, and the enhancement of the transit customer's experience to make transit easier, safer, and more enjoyable to use. While this is a regional goal, the same focuses are applied to the local transit networks in the communities of San Ysidro.

The SANDAG 2050 Regional Transportation Plan (2050 RTP), which was adopted in October 2011, identified the following improvements under the Revenue Constrained scenario for or near the Community of San Ysidro:

- Implementation of a new Bus Rapid Transit (BRT) route connecting San Ysidro with Downtown and Kearny Mesa. This new route would use HOV lanes and shoulders along the I-5 freeway;
- Implementation of a new BRT route connecting San Ysidro with Sorrento Mesa. This new route would use HOV lanes and shoulders along the I-805 freeway;
- Implementation of a new Rapid bus route connecting San Ysidro with Otay Mesa. This new route would travel along the 905 corridor.
- Construction of an Intermodal Transportation Center at the San Ysidro Border Crossing.

SANDAG and the City of San Diego recently completed the San Ysidro Intermodal Transportation Center (ITC) Study. As part of this study, several transit oriented recommendations were provided as part of the implementation of the San Ysidro ITC. Below is a summary of the recommendations:

- Expand existing Trolley Platform;
- Combine MTS and Intercity Bus Center in an extended elevated new platform;
- Expand and relocate passenger automobile pick-up/drop-off area within the station;
- Create a bike center with bicycle parking;
- Implement a pedicab pick-up/drop-off area, adjacent to the bike center;
- Relocate the existing trolley tracks to the north of the SYITC;
- Expand the pedestrian plaza with landscaping, wayfinding information, public art and water features that ties all the SYITC elements together and links the facility to the surrounding San Ysidro Community; and
- Consider, at the design level, an elevated trolley platform at the Border.

SANDAG's *Developing Mobility/Built Environmental Recommendations Border Health Equity Transportation Study* also included transit related improvements that should be taken into consideration. The following is the summary of these recommended improvements:

- Create a distinctive gateway from the Beyer Boulevard Trolley Station entrance at Cypress Drive; and
- Assess proposed Class I shared bike/pedestrian facility from San Ysidro to the Imperial Beach Bikeway (with connections to the Bayshore Bikeway) and community access to this facility..

The expected growth for the San Ysidro Community would be located along Transit Oriented Development areas like the Border Village Area and the Beyer Trolley Station area. Having an increased density around established transit areas would allow for a sustainable growth of the community without relying in the automotive as a mode of transportation.

In order to complete the existing and proposed transit routes for the Community, an internal transit route is recommended to connect several points within the heart of the community. This new transit route could be served initially by private transit provider (Jitney route) and could expand or converted to the street car route. Such a route should connect with the Beyer Trolley Station, the commercial area along West San Ysidro Boulevard, the Border Village area, and the San Ysidro future Intermodal Transportation Center, and the soon to be constructed Virginia Avenue Transit Center. There are also several potential locations for parking structures that would be needed to accommodate parking demand for the commercial development along West and East San Ysidro Boulevard should be constructed along this new transit route. The new private transit route should also connect any future parking structures. Visitor and commercial shoppers would be able to park at one of these facilities and access the rest of the commercial areas using the new transit route, whether this route is a private jitney or a street car route.

INTELLIGENT TRANSPORTATION SYSTEM (ITS)

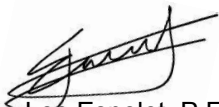
ITS uses advanced technology to better manage traffic flows. Under existing conditions, there are no major ITS applications implemented within the community of San Ysidro. The following are recommendations for the implementation of ITS technology as way to improve the following:

- Wayfinding signing to attractions within the community,
- Parking management strategies of directing visitors to available parking spaces,
- Transit service enhancements such as next bus identification and transit signal priority measures,
- Traffic congestion relief through better signal operations.

Due to the variability of traffic patterns in San Ysidro caused by conditions at the international border, advanced management of traffic would be beneficial. Intelligent Transportation System techniques could be applied to the surface streets to better manage traffic that changes based on conditions at the border check points. Along key arterials, such as San Ysidro Boulevard, Via San Ysidro Boulevard, and Camino De La Plaza, it is recommended that either responsive or adaptive traffic signal control be implemented so that traffic signal timing can automatically change with changes in traffic patterns. Adaptive systems change continuously based on traffic patterns. Responsive systems select from a set of pre-calculated traffic coordination plans, based on traffic patterns. Either system would be beneficial in dealing with the unpredictability of traffic conditions near the border.

Please contact me at (619) 744-0136 or Leo.Espelet@kimley-horn.com should you have any questions or comments to this letter report.

Sincerely,



Leo Espelet, P.E., T.E.
Project Manager
RCE 71532

APPENDIX A

PROPOSED FUTURE LAND USE ALTERNATIVE – TRIP GENERATION INPUT

Zone	----- Land Use -----				-----Tri ps-----	
	Code	Name	Type	Amount	Person	Vehicl e
4545	122	MULTI -FAMI LY O20	du	72.0	619.	435.
4545	4112	FREEWAY	acre	2.5	0.	0.
4545	5054	NEI GHBORHOOD COMMERCIAL	ksf	113.0	19152.	13555.
4545		TOTAL			19771.	13989.
4551	111	SF ESTATE	du	2.0	34.	24.
4551	112	SINGLE FAMI LY	du	6.0	77.	54.
4551	113	SINGLE FAMI LY U20	du	2.0	26.	18.
4551	2113	LIGHT INDUSTRY - GENERAL	ksf	765.4	14160.	11709.
4551	2311	SCRAP YARD/LANDFILL	acre	2.0	15.	12.
4551	4112	FREEWAY	acre	17.5	0.	0.
4551	4121	RAIL/TRANSIT STATI ON	acre	2.2	864.	660.
4551	5057	ARTERIAL COMMERCIAL	ksf	6.1	336.	244.
4551	6124	POST OFFICE	ksf	15.0	6468.	4495.
4551	7613	OPEN SPACE PRESERVE	acre	6.2	0.	0.
4551	9101	INACTIVE USE	acre	2.5	0.	0.
4551		TOTAL			21981.	17217.
4561	111	SF ESTATE	du	4.0	69.	48.
4561	112	SINGLE FAMI LY	du	103.0	1329.	927.
4561	113	SINGLE FAMI LY U20	du	2.0	26.	18.
4561	121	MULTI -FAMI LY U20	du	370.0	4218.	2961.
4561	122	MULTI -FAMI LY O20	du	136.0	1170.	821.
4561	131	MOBILE HOME PARK	du	223.0	1672.	1109.
4561	4112	FREEWAY	acre	12.4	0.	0.
4561	4121	RAIL/TRANSIT STATI ON	acre	0.6	236.	180.
4561	5013	SUPERMARKET	ksf	4.6	957.	695.
4561	6815	JUNIOR HIGH OR MIDDLE SCHOOL	other	1618.0	3721.	2286.
4561	7607	RESIDENTIAL RECREATI ON	acre	1.7	0.	0.
4561	9101	INACTIVE USE	acre	0.2	0.	0.
4561		TOTAL			13397.	9046.
4563	112	SINGLE FAMI LY	du	361.0	4657.	3251.
4563	4112	FREEWAY	acre	14.9	0.	0.
4563		TOTAL			4657.	3251.
4567	112	SINGLE FAMI LY	du	499.0	6437.	4493.
4567	4112	FREEWAY	acre	39.6	0.	0.
4567	6816	ELEMENTARY SCHOOL	other	394.0	2049.	1145.
4567	7611	ACTIVE PARK	acre	10.3	793.	522.
4567		TOTAL			9279.	6160.
4568	112	SINGLE FAMI LY	du	236.0	3044.	2125.
4568	4112	FREEWAY	acre	7.5	0.	0.
4568		TOTAL			3044.	2125.
4572	121	MULTI -FAMI LY U20	du	558.0	6361.	4466.
4572	122	MULTI -FAMI LY O20	du	336.0	2890.	2029.
4572	4112	FREEWAY	acre	15.0	0.	0.
4572	5025	GAS STATI ON FOOD MART	other	4.0	825.	601.
4572	7607	RESIDENTIAL RECREATI ON	acre	0.5	0.	0.
4572		TOTAL			10076.	7095.

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Zone	Code	Name	Land Use		Trips	
			Type	Amount	Person	Vehi cle
4577	112	SINGLE FAMILY	du	142.0	1832.	1279.
4577	4112	FREEWAY	acre	17.0	0.	0.
4577		TOTAL			1832.	1279.
4578	121	MULTI -FAMILY U20	du	36.0	410.	288.
4578	122	MULTI -FAMILY O20	du	525.0	4515.	3170.
4578	4112	FREEWAY	acre	26.3	0.	0.
4578	5057	ARTERIAL COMMERCIAL	ksf	248.6	13675.	9932.
4578		TOTAL			18600.	13390.
4580	112	SINGLE FAMILY	du	151.0	1948.	1360.
4580	121	MULTI -FAMILY U20	du	3.0	34.	24.
4580	4112	FREEWAY	acre	8.2	0.	0.
4580	9101	INACTIVE USE	acre	1.8	0.	0.
4580		TOTAL			1982.	1384.
4581	112	SINGLE FAMILY	du	402.0	5186.	3620.
4581	113	SINGLE FAMILY U20	du	2.0	26.	18.
4581	131	MOBILE HOME PARK	du	89.0	668.	443.
4581	4112	FREEWAY	acre	68.0	0.	0.
4581	6816	ELEMENTARY SCHOOL	other	670.0	3484.	1947.
4581	7611	ACTIVE PARK	acre	1.8	139.	91.
4581	9101	INACTIVE USE	du	2.0	0.	0.
4581		TOTAL			9502.	6118.
4587	112	SINGLE FAMILY	du	1.0	13.	9.
4587	2114	WAREHOUSING	ksf	34.3	209.	175.
4587	4112	FREEWAY	acre	0.9	0.	0.
4587	5057	ARTERIAL COMMERCIAL	ksf	8.5	469.	341.
4587	6122	CHURCH NO DAY CARE	ksf	8.0	52.	40.
4587	6816	ELEMENTARY SCHOOL	other	877.0	4560.	2548.
4587	7611	ACTIVE PARK	acre	6.8	524.	345.
4587		TOTAL			5827.	3458.
4596	112	SINGLE FAMILY	du	209.0	2696.	1882.
4596	121	MULTI -FAMILY U20	du	5.0	57.	40.
4596	122	MULTI -FAMILY O20	du	55.0	473.	332.
4596	4112	FREEWAY	acre	19.1	0.	0.
4596	5057	ARTERIAL COMMERCIAL	ksf	8.4	461.	335.
4596		TOTAL			3687.	2589.
4600	112	SINGLE FAMILY	du	2.0	26.	18.
4600	121	MULTI -FAMILY U20	du	80.0	912.	640.
4600	122	MULTI -FAMILY O20	du	398.0	3423.	2403.
4600	4112	FREEWAY	acre	5.1	0.	0.
4600	6126	OTHER PUBLIC SERVICES	ksf	114.0	1573.	1138.
4600	6816	ELEMENTARY SCHOOL	other	991.0	5153.	2880.
4600	7611	ACTIVE PARK	acre	8.0	616.	405.
4600		TOTAL			11703.	7484.
4601	112	SINGLE FAMILY	du	208.0	2683.	1873.
4601	4112	FREEWAY	acre	9.0	0.	0.
4601		TOTAL			2683.	1873.

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Zone	Code	Name	Land Use	Type	Amount	Person	Vehi cle
4602	4112	FREEWAY		acre	4.0	0.	0.
4602	6815	JUNIOR HIGH OR MIDDLE SCHOOL		other	1134.0	2608.	1602.
4602	6817	OTHER SCHOOL		ksf	134.3	2928.	2417.
4602	7613	OPEN SPACE PRESERVE		acre	0.2	0.	0.
4602		TOTAL				5536.	4019.
4603	112	SINGLE FAMILY		du	1020.0	13158.	9184.
4603	121	MULTI-FAMILY U20		du	18.0	205.	144.
4603	122	MULTI-FAMILY O20		du	144.0	1238.	869.
4603	4112	FREEWAY		acre	30.4	0.	0.
4603		TOTAL				14602.	10198.
4613	111	SF ESTATE		du	2.0	34.	24.
4613	112	SINGLE FAMILY		du	169.0	2180.	1522.
4613	121	MULTI-FAMILY U20		du	194.0	2212.	1553.
4613	122	MULTI-FAMILY O20		du	290.0	2494.	1751.
4613	4112	FREEWAY		acre	13.5	0.	0.
4613	4114	PARKING		acre	0.3	0.	0.
4613	5025	GAS STATION FOOD MART		other	4.0	825.	601.
4613	5057	ARTERIAL COMMERCIAL		ksf	44.4	2441.	1773.
4613	6122	CHURCH NO DAY CARE		ksf	27.6	180.	138.
4613	6519	OTHER HEALTH CARE		ksf	48.3	3250.	2413.
4613	9101	INACTIVE USE		acre	0.7	0.	0.
4613		TOTAL				13616.	9774.
4614	122	MULTI-FAMILY O20		du	332.0	2855.	2005.
4614	1511	LOW-RI SE HOTEL		room	120.0	1956.	1204.
4614	4112	FREEWAY		acre	17.7	0.	0.
4614	5053	COMMUNITY COMMERCIAL		ksf	10.8	1167.	826.
4614	5060	RESTAURANT FAST FOOD		ksf	6.6	6310.	4583.
4614		TOTAL				12288.	8617.
4615	112	SINGLE FAMILY		du	5.0	64.	45.
4615	113	SINGLE FAMILY U20		du	18.0	232.	162.
4615	121	MULTI-FAMILY U20		du	18.0	205.	144.
4615	122	MULTI-FAMILY O20		du	113.0	972.	682.
4615	1514	MOTEL		room	10.0	146.	90.
4615	4112	FREEWAY		acre	9.5	0.	0.
4615	6122	CHURCH NO DAY CARE		ksf	8.4	55.	42.
4615		TOTAL				1674.	1165.
4616	112	SINGLE FAMILY		du	78.0	1006.	702.
4616	113	SINGLE FAMILY U20		du	4.0	52.	36.
4616	121	MULTI-FAMILY U20		du	261.0	2975.	2089.
4616	122	MULTI-FAMILY O20		du	149.0	1281.	900.
4616	4112	FREEWAY		acre	3.9	0.	0.
4616	6122	CHURCH NO DAY CARE		ksf	5.9	38.	30.
4616		TOTAL				5353.	3756.
4620	112	SINGLE FAMILY		du	51.0	658.	459.
4620	113	SINGLE FAMILY U20		du	36.0	464.	324.
4620	121	MULTI-FAMILY U20		du	301.0	3431.	2409.

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Zone	Code	Name	Land Use	Type	Amount	Person	Vehi cle
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4620	122	MULTI -FAMILY O20	du	337.0	2898.	2035.
4620	131	MOBILE HOME PARK	du	23.0	172.	114.
4620	4112	FREEWAY	acre	12.4	0.	0.
4620	4114	PARKING	acre	1.0	0.	0.
4620	5057	ARTERIAL COMMERCIAL	ksf	10.9	598.	435.
4620	6114	CHURCH WITH DAY CARE	ksf	12.8	251.	193.
4620	6122	CHURCH NO DAY CARE	ksf	0.8	5.	4.
4620	6816	ELEMENTARY SCHOOL	other	910.0	4732.	2644.
4620		TOTAL			13211.	8617.
4636	112	SINGLE FAMILY	du	2.0	26.	18.
4636	113	SINGLE FAMILY U20	du	2.0	26.	18.
4636	121	MULTI -FAMILY U20	du	27.0	308.	216.
4636	122	MULTI -FAMILY O20	du	114.0	980.	688.
4636	4112	FREEWAY	acre	3.8	0.	0.
4636		TOTAL			1340.	940.
4637	121	MULTI -FAMILY U20	acre	90.0	1026.	720.
4637	122	MULTI -FAMILY O20	du	29.0	249.	175.
4637	2111	INDUSTRIAL PARK	ksf	46.9	915.	760.
4637	2113	LIGHT INDUSTRY - GENERAL	ksf	75.3	1394.	1153.
4637	2115	PUBLIC STORAGE	ksf	166.9	401.	336.
4637	4112	FREEWAY	acre	11.9	0.	0.
4637	4114	PARKING	acre	3.9	0.	0.
4637	5051	WHOLESALE TRADE	ksf	148.9	14876.	10550.
4637	7611	ACTIVE PARK	acre	0.5	38.	25.
4637	7613	OPEN SPACE PRESERVE	acre	86.0	0.	0.
4637		TOTAL			18900.	13719.
4638	112	SINGLE FAMILY	du	57.0	735.	513.
4638	113	SINGLE FAMILY U20	du	2.0	26.	18.
4638	121	MULTI -FAMILY U20	du	353.0	4024.	2825.
4638	122	MULTI -FAMILY O20	du	88.0	757.	531.
4638	4112	FREEWAY	acre	8.1	0.	0.
4638	6123	LIBRARY	ksf	15.0	1104.	748.
4638	6816	ELEMENTARY SCHOOL	other	493.0	2564.	1433.
4638	7611	ACTIVE PARK	acre	43.9	3380.	2224.
4638		TOTAL			12590.	8293.
4640	113	SINGLE FAMILY U20	du	28.0	361.	252.
4640	121	MULTI -FAMILY U20	du	72.0	821.	576.
4640	122	MULTI -FAMILY O20	du	357.0	3070.	2155.
4640	4112	FREEWAY	acre	6.2	0.	0.
4640	6012	LOW RISE OFFICE LOW	ksf	3.7	121.	93.
4640	6122	CHURCH NO DAY CARE	ksf	2.0	13.	10.
4640	7611	ACTIVE PARK	acre	1.6	123.	81.
4640		TOTAL			4509.	3168.
4642	4112	FREEWAY	acre	13.9	0.	0.
4642	4114	PARKING	acre	0.2	0.	0.
4642	5053	COMMUNITY COMMERCIAL	ksf	192.2	20742.	14677.
4642	5057	ARTERIAL COMMERCIAL	ksf	12.6	695.	505.

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Zone	Code	Name	Land Use	Type	Amount	Trips	
						Person	Vehi cle
4642	6112	COMMUNITY POST OFFICE		ksf	10.9	3012.	2094.
4642	6813	JUNIOR COLLEGE		other	2300.0	4830.	3820.
4642		TOTAL				29278.	21095.

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4645	112	SINGLE FAMILY	du	5.0	64.	45.
4645	113	SINGLE FAMILY U20	du	8.0	103.	72.
4645	121	MULTI -FAMILY U20	du	51.0	581.	408.
4645	122	MULTI -FAMILY O20	du	169.0	1453.	1020.
4645	4112	FREEWAY	acre	31.6	0.	0.
4645	5025	GAS STATION FOOD MART	other	8.0	1650.	1202.
4645	5057	ARTERIAL COMMERCIAL	ksf	62.8	3454.	2509.
4645		TOTAL			7307.	5256.
4646	112	SINGLE FAMILY	du	23.0	297.	207.
4646	113	SINGLE FAMILY U20	du	27.0	348.	243.
4646	121	MULTI -FAMILY U20	du	4.0	46.	32.
4646	122	MULTI -FAMILY O20	du	313.0	2692.	1890.
4646	1511	LOW-RISE HOTEL	room	20.0	326.	201.
4646	4112	FREEWAY	acre	55.5	0.	0.
4646	5025	GAS STATION FOOD MART	other	18.0	3713.	2704.
4646	5031	MONEY EXCHANGE	ksf	7.0	1436.	1043.
4646	5053	COMMUNITY COMMERCIAL	ksf	205.9	22212.	15718.
4646	5054	NEIGHBORHOOD COMMERCIAL	ksf	5.1	863.	611.
4646	5057	ARTERIAL COMMERCIAL	ksf	79.7	4381.	3182.
4646	5060	RESTAURANT FAST FOOD	ksf	12.6	12185.	8851.
4646	6012	LOW RISE OFFICE LOW	ksf	3.3	108.	83.
4646		TOTAL			48607.	34764.
4648	122	MULTI -FAMILY O20	du	184.0	1582.	1111.
4648	4112	FREEWAY	acre	20.6	0.	0.
4648	5025	GAS STATION FOOD MART	other	12.0	2476.	1803.
4648	5057	ARTERIAL COMMERCIAL	ksf	50.3	2769.	2011.
4648	6125	FIRE OR POLICE STATION	ksf	9.8	399.	294.
4648		TOTAL			7226.	5219.
4651	112	SINGLE FAMILY	du	19.0	245.	171.
4651	113	SINGLE FAMILY U20	du	10.0	129.	90.
4651	121	MULTI -FAMILY U20	du	190.0	2166.	1521.
4651	122	MULTI -FAMILY O20	du	508.0	4369.	3067.
4651	131	MOBILE HOME PARK	du	130.0	975.	647.
4651	1511	LOW-RISE HOTEL	room	301.0	4906.	3020.
4651	1514	MOTEL	room	25.0	365.	225.
4651	4112	FREEWAY	acre	10.2	0.	0.
4651	5011	RESTAURANT (HI TURNOVER)	ksf	4.6	814.	591.
4651	5025	GAS STATION FOOD MART	other	18.0	3713.	2704.
4651	5057	ARTERIAL COMMERCIAL	ksf	16.5	905.	657.
4651	7611	ACTIVE PARK	acre	17.5	1348.	887.
4651	7613	OPEN SPACE PRESERVE	acre	9.9	0.	0.
4651		TOTAL			19934.	13579.
4655	4112	FREEWAY	acre	7.1	0.	0.
4655	5053	COMMUNITY COMMERCIAL	ksf	110.9	11968.	8469.

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Zone	Code	Name	Land Use		Trips	
			Type	Amount	Person	Vehi cle
4655	7613	OPEN SPACE PRESERVE	acre	41.0	0.	0.
4655	9101	INACTIVE USE	ksf	0.0	0.	0.
4655		TOTAL			11968.	8469.
4656	122	MULTI -FAMILY O20	du	167.0	1436.	1008.
4656	4112	FREEWAY	acre	1.0	0.	0.

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4656	5025	GAS STATION FOOD MART	other	16.0	3301.	2403.
4656	5053	COMMUNITY COMMERCIAL	ksf	32.3	3482.	2464.
4656	5057	ARTERIAL COMMERCIAL	ksf	12.4	684.	497.
4656		TOTAL			8903.	6372.
4657	112	SINGLE FAMILY	du	498.0	6424.	4484.
4657	113	SINGLE FAMILY U20	du	2.0	26.	18.
4657	4112	FREEWAY	acre	33.5	0.	0.
4657	7607	RESIDENTIAL RECREATION	acre	3.0	0.	0.
4657	9101	INACTIVE USE	acre	5.9	0.	0.
4657		TOTAL			6450.	4502.
4660	112	SINGLE FAMILY	du	1.0	13.	9.
4660	122	MULTI-FAMILY O20	du	302.0	2597.	1823.
4660	1511	LOW-RISE HOTEL	room	69.0	1125.	692.
4660	4112	FREEWAY	acre	20.9	0.	0.
4660	4114	PARKING	acre	0.3	0.	0.
4660	5053	COMMUNITY COMMERCIAL	ksf	18.9	2037.	1441.
4660	5054	NEIGHBORHOOD COMMERCIAL	ksf	101.1	17128.	12122.
4660	5057	ARTERIAL COMMERCIAL	ksf	155.1	8533.	6198.
4660	5060	RESTAURANT FAST FOOD	ksf	4.9	4681.	3400.
4660		TOTAL			36114.	25686.
4661	122	MULTI-FAMILY O20	du	212.0	1823.	1280.
4661	4112	FREEWAY	acre	3.2	0.	0.
4661	4124	BORDER PARK-AND-RIDE	other	141.0	747.	572.
4661	5052	REGIONAL COMMERCIAL	ksf	291.9	16519.	11669.
4661	6816	ELEMENTARY SCHOOL	other	802.0	4170.	2330.
4661		TOTAL			23260.	15852.
4662	4112	FREEWAY	acre	0.9	0.	0.
4662	4114	PARKING	acre	3.2	0.	0.
4662	4121	RAIL/TRANSIT STATION	acre	0.1	39.	30.
4662	5057	ARTERIAL COMMERCIAL	ksf	41.2	2269.	1648.
4662	6126	OTHER PUBLIC SERVICES	ksf	137.7	1901.	1375.
4662		TOTAL			4209.	3053.
4663	1511	LOW-RISE HOTEL	room	30.0	489.	301.
4663	2115	PUBLIC STORAGE	ksf	13.4	32.	27.
4663	5053	COMMUNITY COMMERCIAL	ksf	0.7	73.	52.
4663	5054	NEIGHBORHOOD COMMERCIAL	ksf	162.9	27603.	19536.
4663		TOTAL			28198.	19916.
4664	4112	FREEWAY	acre	2.0	0.	0.
4664	4114	PARKING	acre	1.9	0.	0.
4664	4124	BORDER PARK-AND-RIDE	other	426.0	2258.	1729.

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San Ysidro CPU\2035 Scenario D - Proposed LU 2, Hybrid Network
trip generation and land use by zone

page 7

Zone	Code	Name	Land Use		Trips	
			Type	Amount	Person	Vehicle
4664	5011	RESTAURANT (HI TURNOVER)	ksf	9.8	1752.	1273.
4664	5022	FINANCIAL INST DRV THRU	ksf	11.5	3170.	2303.
4664	5032	MEX AUTO INSURANCE	ksf	9.3	509.	370.
4664	5052	REGIONAL COMMERCIAL	ksf	571.8	32365.	22863.
4664	5060	RESTAURANT FAST FOOD	ksf	4.8	4642.	3372.
4664		TOTAL			44697.	31909.
4665	4112	FREEWAY	acre	2.1	0.	0.
4665	4134	BORDER DROP/PICK UP	other	4989.0	13470.	10314.

		subtgmx. pr			
4665		TOTAL		13470.	10314.
4683	111	SF ESTATE	du	1.0	12.
4683	1511	LOW-RISE HOTEL	room	45.0	452.
4683	4112	FREEWAY	acre	7.9	0.
4683	4124	BORDER PARK-AND-RIDE	other	499.0	2025.
4683	4129	OTHER TRANSPORTATION	acre	4.4	27.
4683	4134	BORDER DROP/PICK UP	other	4989.0	10314.
4683	5057	ARTERIAL COMMERCIAL	ksf	122.6	4898.
4683	6126	OTHER PUBLIC SERVICES	ksf	78.8	786.
4683	7613	OPEN SPACE PRESERVE	acre	13.5	0.
4683	9101	INACTIVE USE	acre	0.2	0.
4683		TOTAL		24731.	18513.
4684	121	MULTI-FAMILY U20	du	219.0	1753.
4684	122	MULTI-FAMILY O20	du	74.0	447.
4684	131	MOBILE HOME PARK	du	177.0	880.
4684	1511	LOW-RISE HOTEL	room	71.0	712.
4684	4112	FREEWAY	acre	32.4	0.
4684	5053	COMMUNITY COMMERCIAL	ksf	50.9	3884.
4684	5057	ARTERIAL COMMERCIAL	ksf	0.6	26.
4684	5060	RESTAURANT FAST FOOD	ksf	9.7	6799.
4684		TOTAL		20503.	14501.
4685	112	SINGLE FAMILY	du	2.0	18.
4685	121	MULTI-FAMILY U20	du	37.0	296.
4685	122	MULTI-FAMILY O20	du	263.0	1588.
4685	1511	LOW-RISE HOTEL	room	100.0	1003.
4685	4112	FREEWAY	acre	6.2	0.
4685	5025	GAS STATION FOOD MART	other	8.0	1202.
4685	5060	RESTAURANT FAST FOOD	ksf	6.3	4390.
4685		TOTAL		12034.	8497.
4686	112	SINGLE FAMILY	du	4.0	36.
4686	113	SINGLE FAMILY U20	du	2.0	18.
4686	121	MULTI-FAMILY U20	du	67.0	536.
4686	122	MULTI-FAMILY O20	du	140.0	845.
4686	4112	FREEWAY	acre	4.6	0.
4686	5019	FURNITURE STORE	ksf	2.9	18.
4686	5055	SPECIALTY COMMERCIAL	ksf	4.6	184.
4686	5057	ARTERIAL COMMERCIAL	ksf	58.0	2318.
4686	6033	GOV'T OFFICE OR CENTER	ksf	6.0	179.
4686	6122	CHURCH NO DAY CARE	ksf	1.8	9.

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♀ San Ysidro CPU\2035 Scenario D - Proposed LU 2, Hybrid Network
trip generation and land use by zone page 8

Zone	Code	Name	Type	Amount	Person	Trips
					Vehi	cle
4686	7611	ACTIVE PARK	acre	1.8	139.	91.
4686		TOTAL			5910.	4235.
4687	122	MULTI-FAMILY O20	du	133.0	1144.	803.
4687	4112	FREEWAY	acre	6.1	0.	0.
4687	5054	NEIGHBORHOOD COMMERCIAL	ksf	16.0	2709.	1918.
4687	5057	ARTERIAL COMMERCIAL	ksf	10.9	599.	435.
4687	6114	CHURCH WITH DAY CARE	ksf	108.2	2122.	1631.
4687		TOTAL			6574.	4786.
4688	5011	RESTAURANT (HI TURNOVER)	ksf	8.0	1433.	1041.
4688	5052	REGIONAL COMMERCIAL	ksf	371.8	21043.	14865.

APPENDIX B

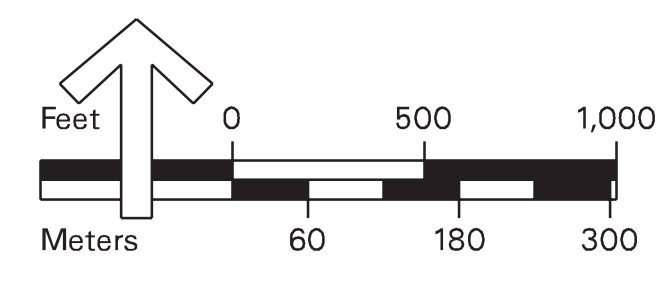
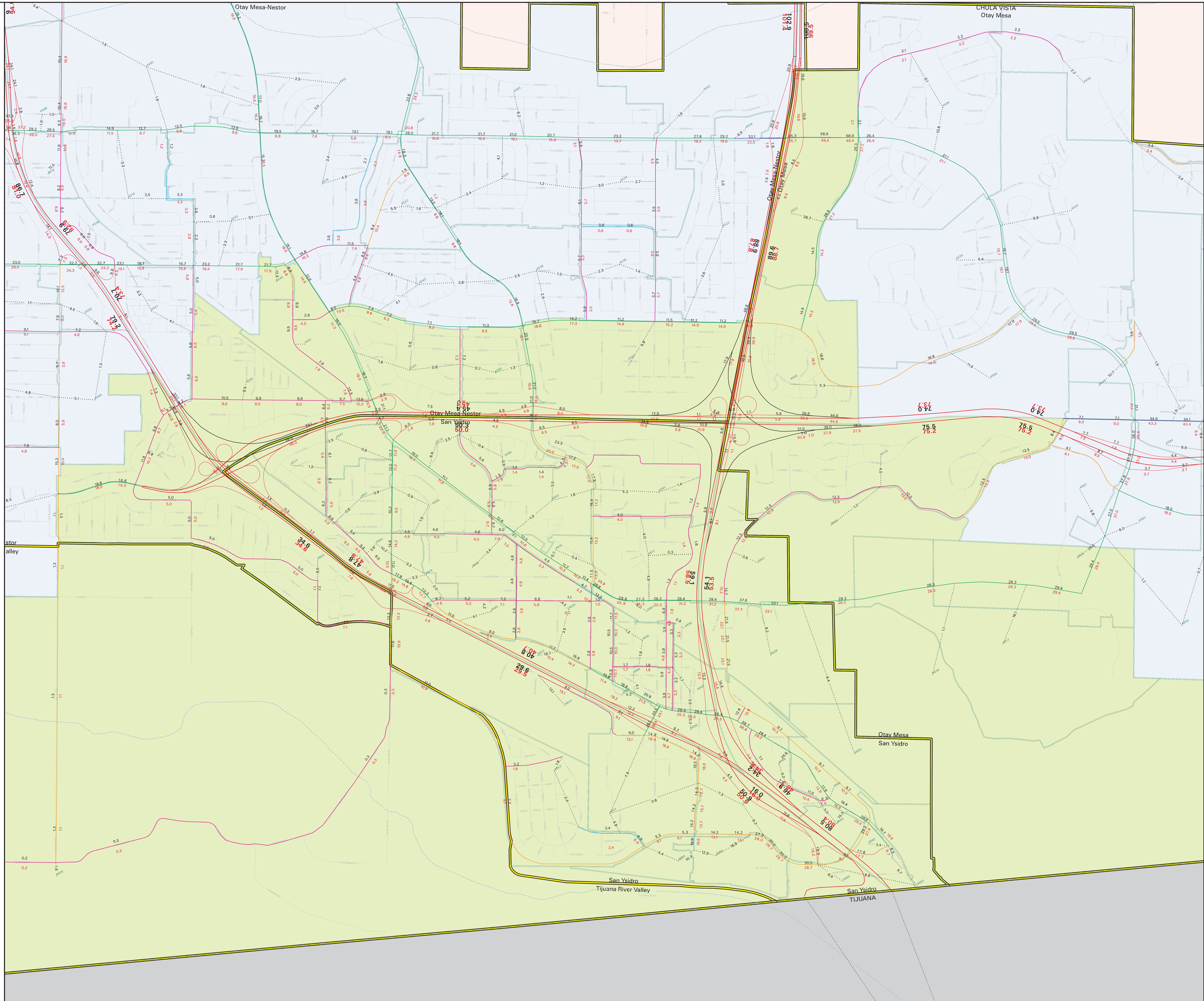
2035 TRAFFIC MODEL PLOT

**SANDAG Series 12 2035
Revenue Constrained
2011 RTP Highway Network
Forecasted Daily Volumes**

SAN YSIDRO

Model Run 03/11/15
San Ysidro CPU
2035 Scenario D - Proposed LU 2, Hybrid Network

- Forecasted Volumes:
- Adjusted Volume
 - Unadjusted Volume
 - Traffic Analysis Zone



APPENDIX C

POST MODEL ADJUSTMENT FOR 2035 ADT VOLUMES

APPENDIX C
ROADWAY SEGMENT VOLUME POST-MODELING ADJUSTMENTS

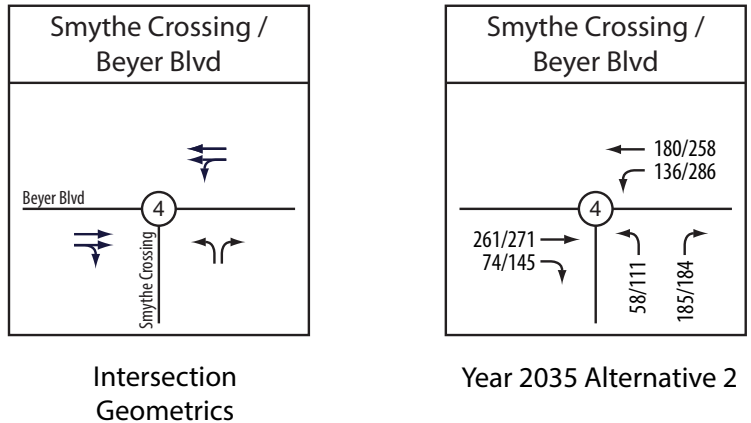
ROADWAY SEGMENT	EXISTING				2035 ALTERNATIVE B		NOTES
	Model	Counted	Model minus Count	Model vs Count	Model	Recommended Volume	
Beyer Blvd.							
SR-905 WB Off-Ramp to Dairy Mart Rd.	17,600	16,371	1,229	8%	21,100	21,100	Within acceptable margin - kept model volume
Dairy Mart Rd. to Del Sur Blvd.	8,300	8,260	40	0%	16,000	16,000	Within acceptable margin - kept model volume
Del Sur Blvd. to Cottonwood Rd.	8,700	7,560	1,140	15%	12,800	11,700	Reduced trips by -1,100 to account for difference between counts and calibrated model.
Cottonwood Rd. to W. Park Ave.	10,600	10,046	554	6%	28,800	28,800	Within acceptable margin - kept model volume
W. Park Ave. to E. Beyer Blvd.	7,100	7,511	-411	-5%	28,400	28,400	Within acceptable margin - kept model volume
Otay Mesa Rd.							
North of Beyer Blvd.	8,200	5,440	2,760	51%	14,700	12,000	Reduced trips by -2,700 to account for difference between Counts and Calibration
E. Beyer Blvd.							
Beyer Blvd. to E. San Ysidro Blvd.	7,000	2,734	4,266	156%	21,500	17,300	Reduced trips by -4,200 to account for difference between Counts and Calibration
Del Sur Blvd.							
SR-905 EB Ramps to Beyer Blvd.	2,600	1,441	1,159	80%	5,800	4,700	Reduced trips by -1,100 to account for difference between Counts and Calibration
Smythe Ave.							
SR-905 EB Ramps to Beyer Blvd.	17,300	7,256	10,044	138%	23,300	13,300	Reduced trips by -10,000 to account for difference between Counts and Calibration
S. Vista Ave. to Sunset Ln.		4,345		-100%	8,100	8,100	Within acceptable margin - kept model volume
Sunset Ln. to W. San Ysidro Blvd.	1,500	840	660	79%	2,800	2,200	Reduced trips by -600 to account difference between Counts and Calibration
Dairy Mart Rd.							
Beyer Blvd to S. Vista Ln	13,800	8,630	5,170	60%	12,000	11,800	Within acceptable margin - kept model volume
S. Vista Ln. to W. San Ysidro Blvd.	11,200	11,246	-46	0%	14,800	14,800	Within acceptable margin - kept model volume
W. San Ysidro Blvd. to I-5 SB Ramps	17,300	17,283	17	0%	20,000	20,000	Within acceptable margin - kept model volume
I-5 SB Ramps to Servando Ave.	10,300	14,609	-4,309	-29%	13,300	17,700	Increased trips by 4,400 to account for difference between Counts and Calibration
Servando Ave. to Camino de la Plaza	8,800	8,771	29	0%	11,600	11,600	Within acceptable margin - kept model volume
W. San Ysidro Blvd.							
Howard Ave. to Dairy Mart Rd.	7,900	5,813	2,087	36%	9,400	7,400	Reduced trips by -2,000 to account for difference between Counts and Calibration
Dairy Mart Rd. to Sunset Ln.	18,400	14,301	4,099	29%	17,900	14,400	Reduced trips by -3,500 to account for difference between Counts and Calibration
Sunset Ln. to Averil Rd.	10,400	12,674	-2,274	-18%	11,000	13,300	Increased trips by 2,300 to account for difference between Counts and Calibration
Averil Rd. to Smythe Ave.	14,400	11,519	2,881	25%	15,800	12,500	Reduced trips by -3,300 to account for difference between Counts and Calibration
Smythe Ave. to Cottonwood Rd.	10,900	14,440	-3,540	-25%	10,900	14,500	Increased trips by 3,600 to account for difference between Counts and Calibration
Cottonwood Rd. to Via de San Ysidro	13,400	14,440	-1,040	-7%	20,900	20,900	Within acceptable margin - kept model volume
Via de San Ysidro to W. Park Ave	--	16,756	--		25,300	23,200	Reduced trips by 2,100 to smooth volumes to other side of the roadway
E. San Ysidro Blvd.							
W. Park Ave. to I-805 SB Ramps	20,500	23,764	-3,264	-14%	29,600	32,900	Increased trips by 3,300 to account for difference between Counts and Calibration
I-805 SB Ramps to I-805 NB Ramps	16,600	22,139	-5,539	-25%	26,400	32,000	Increased trips by 5,600 to account for difference between Counts and Calibration
I-805 NB Ramps to Border Village Rd. (west)	22,600	22,509	91	0%	39,700	39,700	Within acceptable margin - kept model volume
Border Village Rd. (west) to Border Village Rd (east)	16,000	12,615	3,385	27%	28,400	25,100	Reduced trips by -3,300 to account for difference between Counts and Calibration
Border Village Rd. (south) to E. Beyer Blvd./Camino de la Plaza	7,300	15,820	-8,520	-54%	28,900	37,500	Increased trips by 8,400 to account for difference between Counts and Calibration
Border Village Rd .							
San Ysidro Blvd. to San Ysidro Blvd.	4,000	3,228	772	24%	11,000	10,300	Reduced trips by -700 to account for difference between Counts and Calibration
Via de San Ysidro							
W. San Ysidro Blvd. to I-5 NB Ramps	16,500	17,064	-564	-3%	24,500	24,500	Within acceptable margin - kept model volume
I-5 NB Ramps to Calle Primera	18,100	19,619	-1,519	-8%	26,100	26,100	Within acceptable margin - kept model volume
Calle Primera							
West of Via de San Ysidro	10,000	3,224	6,776	210%	9,000	9,000	Within acceptable margin - kept model volume

**APPENDIX C
ROADWAY SEGMENT VOLUME POST-MODELING ADJUSTMENTS**

ROADWAY SEGMENT	EXISTING				2035 ALTERNATIVE B		NOTES
	Model	Counted	Model minus Count	Model vs Count	Model	Recommended Volume	
Willow Rd.							
Calle Primera to Camino De La Plaza	10,100	8,690	1,410	16%	19,500	18,100	Reduced trips by -1,400 to account for difference between Counts and Calibration
Bibler Dr.							
East of Camino De La Plaza	3,400	4,332	-932	-22%	3,200	4,400	Changed to 4,400 (existing conditions should not change)
Camino De La Plaza.							
Dairy Mart Rd. to Bibler Dr.	8,200	8,166	34	0%	11,000	11,000	Within acceptable margin - kept model volume
Bibler Dr. to Willow Rd.	4,500	4,431	69	2%	7,200	7,200	Within acceptable margin - kept model volume
Willow Rd. to I-5 SB Ramp	21,000	9,796	11,204	114%	30,000	18,800	Reduced trips by -11,200 to account for difference between Counts and Calibration
I-5 SB Ramp to E. San Ysidro Blvd.	20,500	17,300	3,200	18%	29,300	26,100	Reduced trips by -3,200 to account for difference between Counts and Calibration
Vista Ln.							
Dairy Mart Rd. to Averil Rd.	2,000	2,371	-371	-16%	8,000	8,400	Increased trips by 400 to account for difference between Counts and Calibration.
Averil Rd. to Symthe Ave.	6,000	3,660	2,340	64%	4,700	4,700	Within acceptable margin - kept model volume
Sunset Ln.							
W. San Ysidro Blvd. to Averil Rd.	2,600	2,695	-95	-4%	7,200	4,700	Reduced trips by -2,500 to account for shift to W. San Ysidro.
Averil Rd. to Symthe Ave.	3,400	2,410	990	41%	7,100	4,600	Reduced trips by -2,500 to account for shift to W. San Ysidro.
Cottonwood Rd.							
Sunset Ln. to W San Ysidro Blvd.	5,500	3,787	1,713	45%	12,300	8,800	Reduced trips by -3,500 to account for shift to W. San Ysidro.
W. Park Ave.							
Beyer Blvd. to Seward Ave.	4,300	5,301	-1,001	-19%	6,900	8,000	Increased trips by 1,100 to account for difference between Counts and Calibration.
Seward Ave. to W. San Ysidro Blvd.	4,300	3,129	1,171	37%	3,900	3,900	Within acceptable margin - kept model volume
E. Park Ave.							
Seward Ave. to W. San Ysidro Blvd.	2,300	2,172	128	6%	3,300	3,300	Within acceptable margin - kept model volume
Seward Ave.							
W. Park Ave. to E. Park Ave.	2,300	2,469	-169	-7%	4,100	4,100	Within acceptable margin - kept model volume
Howard Ave.							
North of W. San Ysidro Blvd.	4,600	4,113	487	12%	6,200	5,800	Reduced trips by -400 to account for difference between Counts and Calibration.
Avenida de la Madrid							
Smythe Ave. to Alaquinas Dr.	3,800	2,003	1,797	90%	4,000	2,300	Reduced trips by -1,700 to account for difference between Counts and Calibration.
Alaquinas Dr.							
Beyer Blvd. to Avenida de la Madrid.	2,800	1,495	1,305	87%	1,600	1,700	Change to 1,700 (assumed small growth from existing conditions)
Notes:							
Volumes from the Model are acceptable and changes were not needed.							
Volumes from the Model were decreased to account for difference between Counts and Calibration.							
Volumes from the Model were increased to account for difference between Counts and Calibration.							
Volumes from the Model were modified, see notes for specific explanation							

APPENDIX D

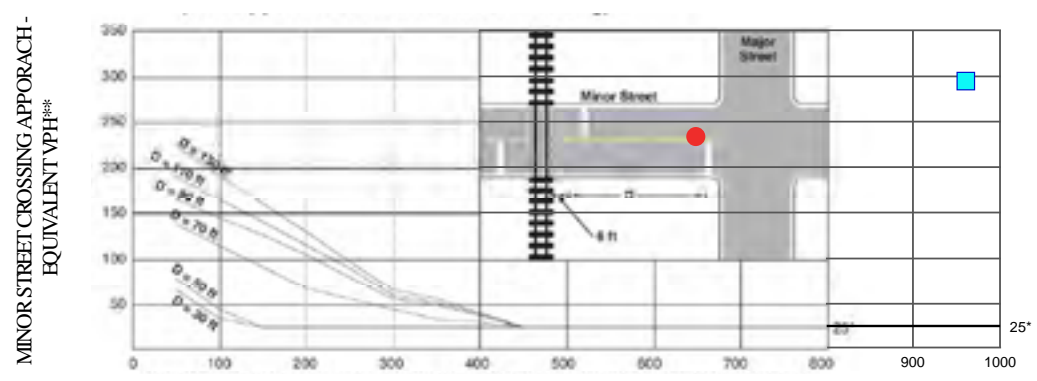
SIGNAL WARRANT ANALYSIS WORKSHEETS



Major Street: Beyer Blvd (35 MPH)
 Volume (both approaches): **651 / 960** VPH

Minor Street: Smythe Crossing
 Volume (one approach): **243 / 295** VPH

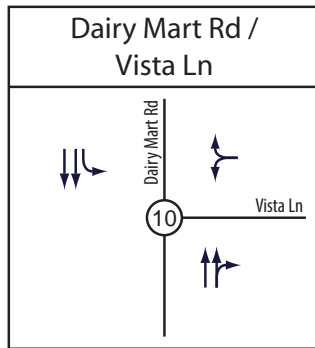
Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
 (One Approach Lane at the Track Crossing)



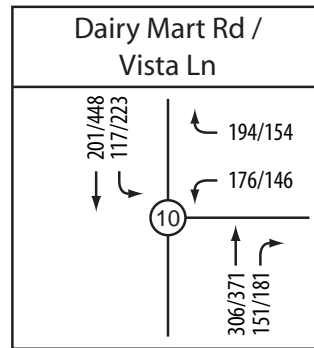
MAJOR STREET - TOTAL OF BOTH APPROACHES -
 VEHICLES PER HOUR (VPH)

● Weekday AM Peak
 ■ Weekday PM Peak

*25 vph applies as the lower threshold volume
 ** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate



Intersection Geometrics

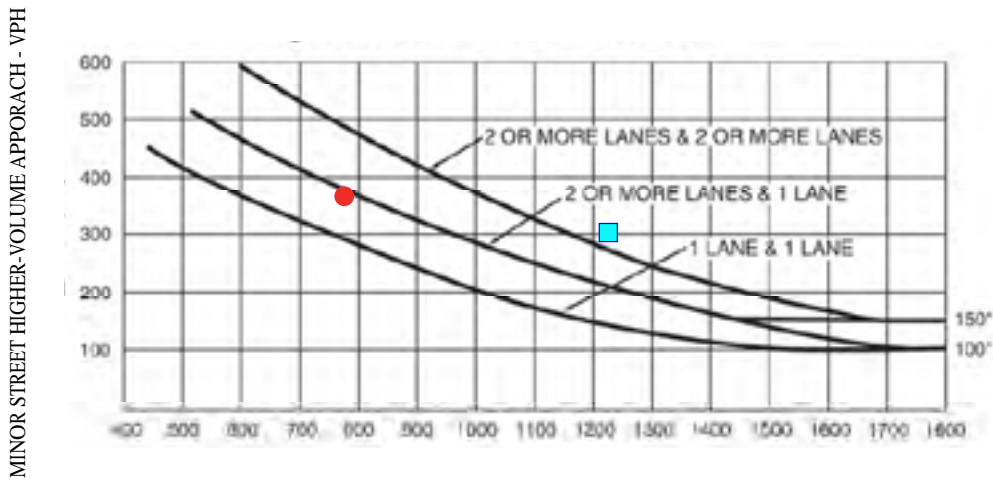


Year 2035 Alternative 2

Major Street: Dairy Mart Rd (30 MPH)
Volume (both approaches): **775 / 1223** VPH

Minor Street: Vista Ln
Volume (one approach): **370 / 300** VPH

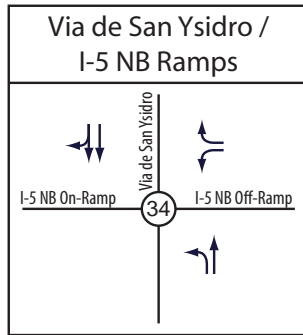
Figure 4C-3. Warrant 3, Peak Hour



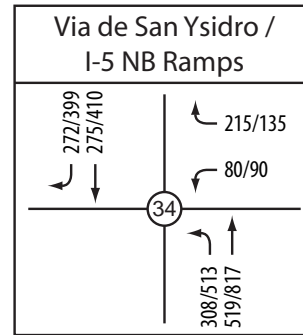
MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

● Weekday AM Peak
■ Weekday PM Peak

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



Intersection Geometrics

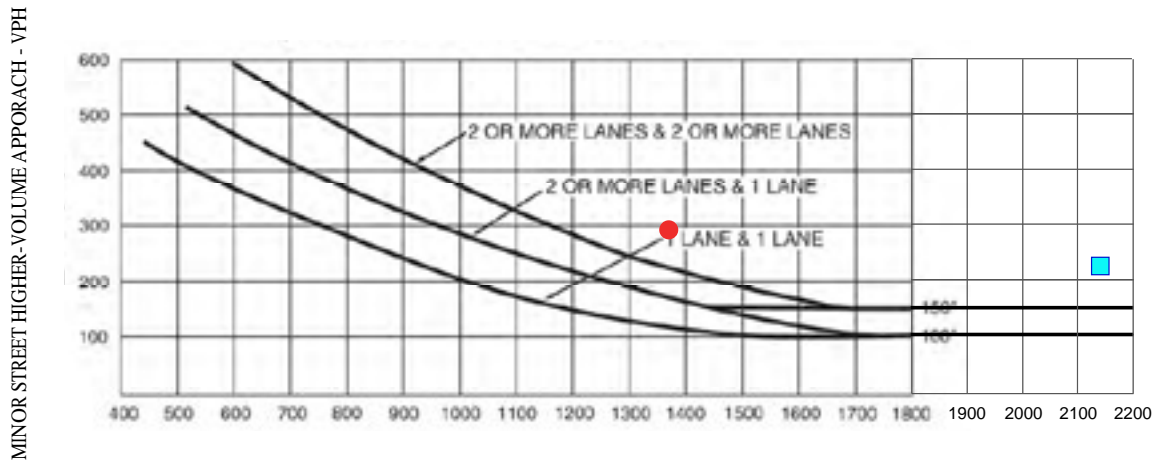


Year 2035 Alternative 2

Major Street: Via de San Ysidro (30 MPH)
Volume (both approaches): **1374 / 2139** VPH

Minor Street: I-5 NB Ramps
Volume (one approach): **295 / 225** VPH

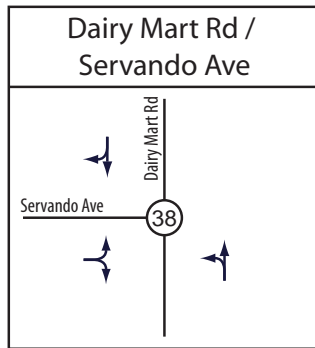
Figure 4C-3. Warrant 3, Peak Hour



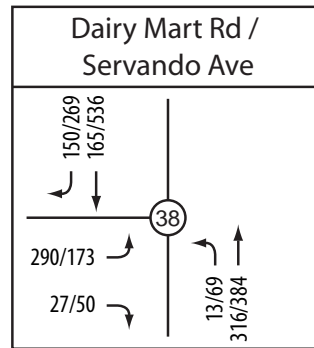
MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

● Weekday AM Peak
■ Weekday PM Peak

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



Intersection Geometrics

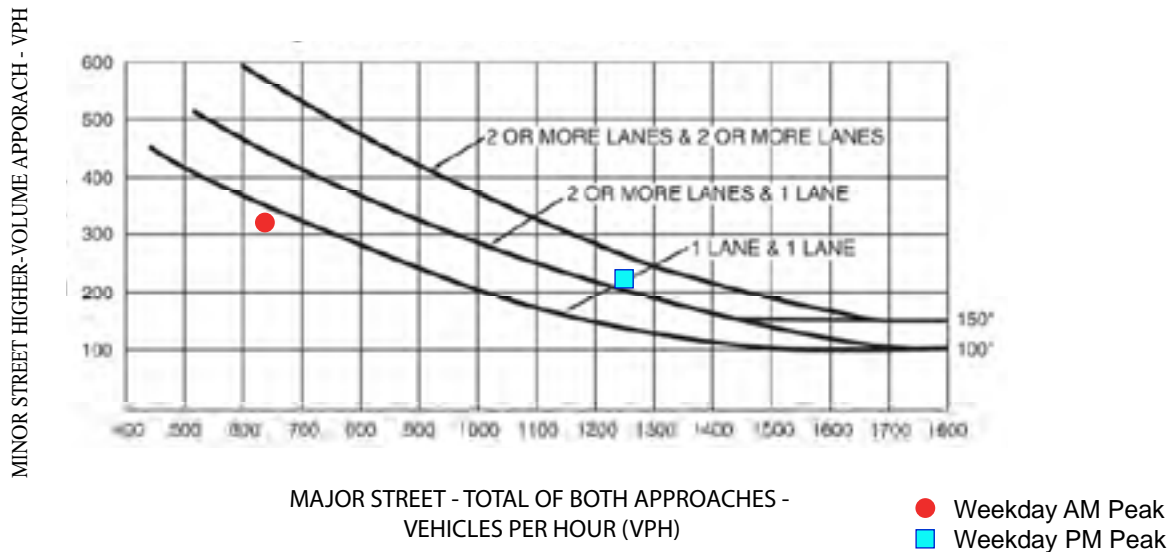


Year 2035 Alternative 2

Major Street: Dairy Mart Rd (40 MPH)
Volume (both approaches): **644 / 1258** VPH

Minor Street: Servando Ave
Volume (one approach): **317 / 223** VPH

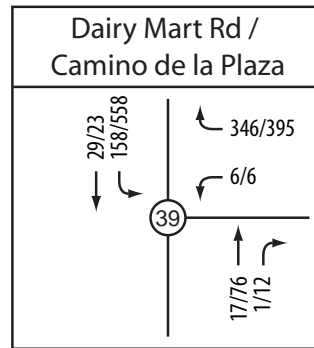
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



Intersection Geometrics

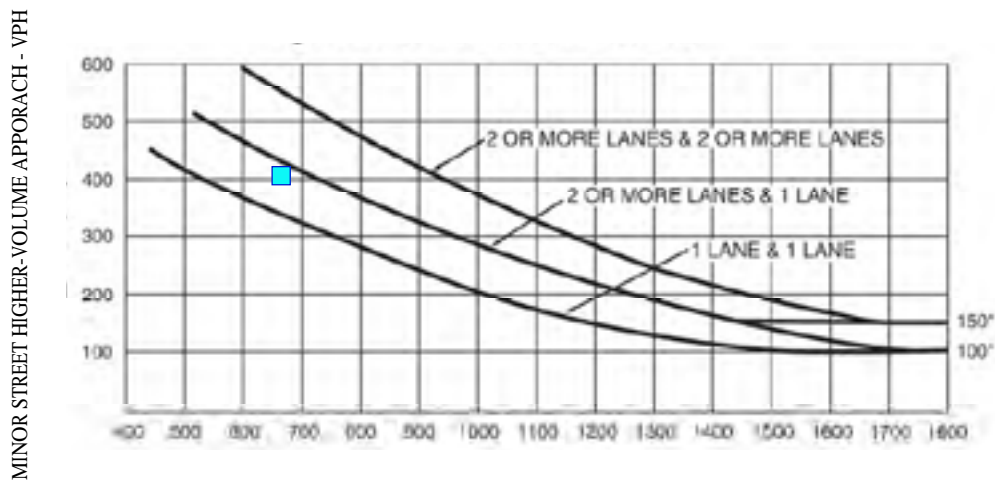


Year 2035 Alternative 2

Major Street: Dairy Mart Rd (40 MPH)
Volume (both approaches): **205 / 669** VPH

Minor Street: Camino de la Plaza
Volume (one approach): **352 / 401** VPH

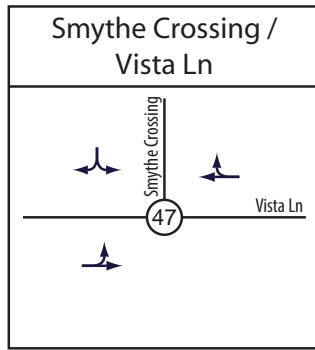
Figure 4C-3. Warrant 3, Peak Hour



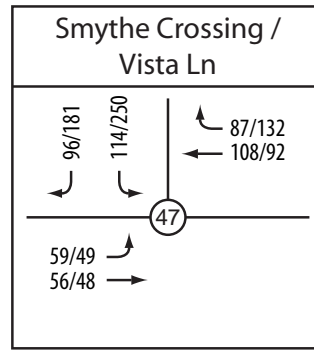
MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

● Weekday AM Peak
■ Weekday PM Peak

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



Intersection Geometrics



Year 2035 Alternative 2

Major Street: Vista Ln (25 MPH)
Volume (both approaches): **310 / 321** VPH

Minor Street: Smythe Crossing
Volume (one approach): **210 / 431** VPH

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)

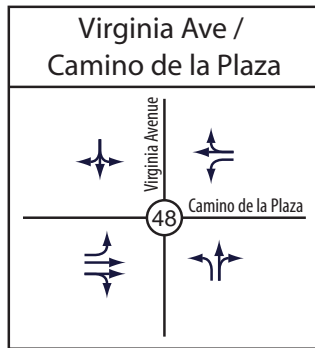


MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

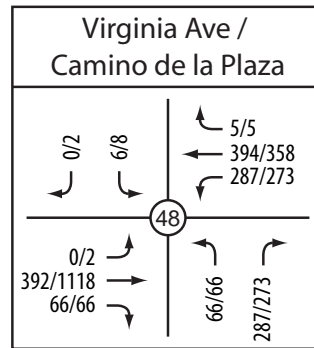
● Weekday AM Peak
■ Weekday PM Peak

*25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate



Intersection Geometrics

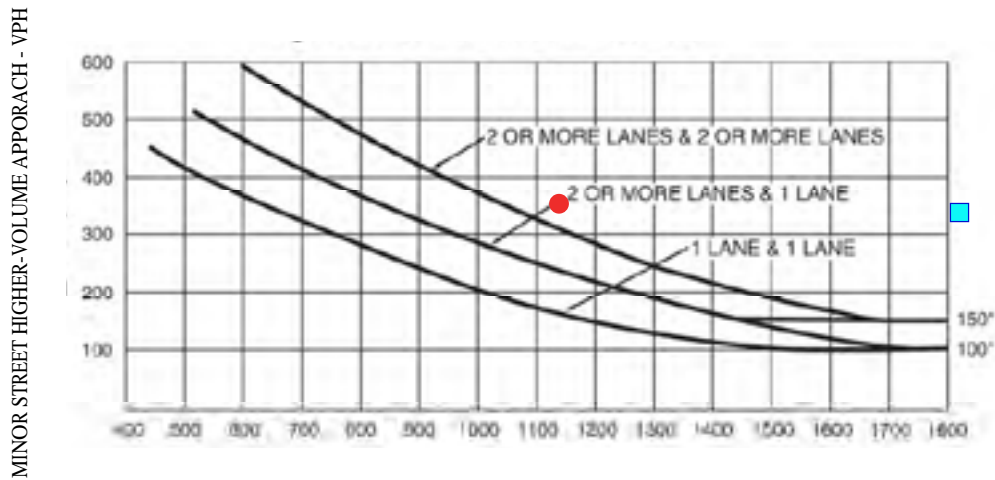


Year 2035 Alternative 2

Major Street: Camino de la Plaza (30 MPH)
Volume (both approaches): **1144 / 1820** VPH

Minor Street: Virginia Ave
Volume (one approach): **353 / 339** VPH

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

● Weekday AM Peak
■ Weekday PM Peak

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

APPENDIX E

PROPOSED FUTURE LAND USE ALTERNATIVE – PEAK-HOUR VOLUMES
SYNCHRO CALCULATION WORKSHEETS

San Ysidro CPU-Mobility Element
 1: Beyer Blvd & Iris Ave/SR-905 WB Ramps

San Ysidro CPU-Mobility Element
 2: Beyer Blvd & Dairy Mart Rd/SR-905 Ramps

Horizon Year Alternative B
 3/31/2015

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	49	78	171	108	148	123	95	218	115	67	219	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			5.0	5.0	3.5	4.5			3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frbp. ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FI Protected	0.99	0.99	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
FI Protected	0.99	0.99	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
FI Permitted	1681	1681	1824	1560	1770	3355	1770	3413	1770	3413	1770	3413
FI Permitted	1681	1681	1824	1560	1770	3355	1770	3413	1770	3413	1770	3413
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.90	0.90	0.90	0.87	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	61	98	214	138	189	157	116	266	141	85	277	73
RTOR Reduction (vph)	0	55	0	0	0	121	0	77	0	0	25	0
Lane Group Flow (vph)	0	318	0	0	327	36	116	330	0	85	325	0
Confl. Peds. (#/hr)	3	12	1	3	1	3	1	3	1	3	1	3
Turn Type	Split	NA	NA	Split	NA	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	3	3	3	4	4	4	4	6	6	5	2	2
Permitted Phases												
Actuated Green, G (s)	17.9	17.5	17.5	17.5	17.5	17.5	7.3	18.5	4.7	15.9	15.9	15.9
Effective Green, g (s)	17.9	17.5	17.5	17.5	17.5	17.5	7.3	18.5	4.7	15.9	15.9	15.9
Actuated g/C Ratio	0.24	0.23	0.23	0.23	0.23	0.23	0.10	0.24	0.06	0.21	0.21	0.21
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	3.5	4.5	3.5	4.5	4.5	4.5
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0
Lane Grp Cap (vph)	395	419	358	169	815	109	713	109	713	109	713	109
v/s Ratio Prot	c0.19			c0.18			c0.07	c0.10	0.05	0.10	0.10	0.10
v/s Ratio Perm												
v/c Ratio	0.80	0.78	0.78	0.78	0.78	0.78	0.69	0.40	0.78	0.46	0.46	0.46
Uniform Delay, d1	27.5	27.5	23.1	33.3	24.2	35.2	26.3	26.3	35.2	26.3	26.3	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.7	8.4	0.0	8.9	0.5	26.7	0.7	0.7	26.7	0.7	0.7	0.7
Delay (s)	38.2	38.2	35.9	23.1	42.2	24.7	61.9	27.0	61.9	27.0	27.0	27.0
Level of Service	D	D	C	D	C	D	E	C	E	C	C	C
Approach Delay (s)	38.2	31.8	31.8	28.6	28.6	28.6	33.9	33.9	28.6	33.9	33.9	33.9
Approach LOS	D	D	C	C	C	C	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	32.7											
HCM 2000 Volume to Capacity ratio	0.67											
Actuated Cycle Length (s)	17.5											
Intersection Capacity Utilization	65.0%											
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	107	205	78	108	6	52	65	268	112	164	196	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0	3.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
FI Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
FI Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
FI Permitted	1681	1765	1583	1778	1583	1770	3383	1770	3383	1770	3539	1583
FI Permitted	1681	1765	1583	1778	1583	1770	3383	1770	3383	1770	3539	1583
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.81	0.81	0.81	0.88	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	128	245	93	145	8	70	88	364	152	205	245	211
RTOR Reduction (vph)	0	0	74	0	0	51	0	38	0	0	0	103
Lane Group Flow (vph)	115	258	19	0	153	19	88	478	0	205	245	108
Turn Type	Split	NA	NA	Split	NA	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4	4	4	3	3	3	5	2	2	1	6	6
Permitted Phases												
Actuated Green, G (s)	19.9	19.9	19.9	26.7	26.7	26.7	6.0	21.7	15.5	31.2	51.1	51.1
Effective Green, g (s)	19.9	19.9	19.9	26.7	26.7	26.7	6.0	21.7	15.5	31.2	51.1	51.1
Actuated g/C Ratio	0.20	0.20	0.20	0.27	0.27	0.27	0.06	0.22	0.16	0.31	0.31	0.31
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0	3.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0
Lane Grp Cap (vph)	336	353	316	72	424	106	737	275	109	812	109	812
v/s Ratio Prot	0.07	c0.15					0.05	c0.14	0.12	0.07	0.03	0.03
v/s Ratio Perm												
v/c Ratio	0.34	0.73	0.06	2.12	0.04	0.83	0.65	0.75	0.75	0.22	0.13	0.13
Uniform Delay, d1	34.2	37.3	32.2	36.4	27.0	46.2	35.4	40.1	25.2	12.6	12.6	12.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	6.6	0.0	549.7	0.0	38.4	2.3	9.2	0.2	0.0	0.0	0.0
Delay (s)	34.4	43.9	32.2	586.1	27.0	84.6	37.8	49.3	25.3	12.7	12.7	12.7
Level of Service	C	D	C	F	C	C	F	D	D	C	C	B
Approach Delay (s)	39.2	39.2	39.2	410.6	44.6	44.6	28.7	28.7	44.6	28.7	28.7	28.7
Approach LOS	D	D	D	F	D	D	C	C	D	C	C	C
Intersection Summary												
HCM 2000 Control Delay	79.7											
HCM 2000 Volume to Capacity ratio	1.15											
Actuated Cycle Length (s)	99.5											
Intersection Capacity Utilization	55.6%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
3: Beyer Blvd & Del Sur Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑	↑
Volume (vph)	73	252	315	212	168	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Lane Util. Factor	1.00	0.96	0.95	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	3326	1770	1583	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	3326	1770	1583	1583
Peak-hour factor, PHF	0.97	0.97	0.90	0.90	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	83	286	385	259	210	181
RTOR Reduction (vph)	0	0	165	0	0	141
Lane Group Flow (vph)	83	286	479	0	210	40
Turn Type	Prot	NA	NA	NA	NA	Perm
Protected Phases	5	2	6		4	
Permitted Phases					4	
Actuated Green, G (s)	4.2	25.1	16.5	10.0	10.0	10.0
Effective Green, g (s)	4.2	25.1	16.5	10.0	10.0	10.0
Actuated g/C Ratio	0.09	0.35	0.36	0.22	0.22	0.22
Clearance Time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	2.0	2.0
Lane Grp Cap (vph)	163	1952	1206	389	347	347
v/s Ratio Prot	c0.05	0.08	c0.14	c0.12		0.03
v/s Ratio Perm						0.11
Uniform Delay, d1	19.7	5.0	10.8	15.7	14.2	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.5	0.7	0.1	0.1
Delay (s)	20.6	5.0	11.2	16.4	14.3	14.3
Level of Service	C	A	B	B	B	B
Approach Delay (s)	8.5	11.2	15.4			
Approach LOS	A	B	B			
Intersection Summary						
HCM 2000 Control Delay		11.7		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.46				
Actuated Cycle Length (s)		45.5		Sum of lost time (s)		14.8
Intersection Capacity Utilization		44.1%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

San Ysidro CPU-Mobility Element
4: Smythe Crossing & Beyer Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑	↑
Volume (veh/h)	302	50	113	209	39	150
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.83	0.83	0.86	0.86	0.76	0.76
Hourly flow rate (vph)	400	66	145	267	56	217
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	None	None	None	None	1	1
Median type						
Median storage (veh)						
Upstream signal (ft)					343	
pX, platoon unblocked						
vC, conflicting volume		467			856	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		467			856	233
IC, single (s)		4.1			6.8	6.9
IC, 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		87			78	72
cM capacity (veh/h)		1091			258	769
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	267	200	234	178	274	274
Volume Left	0	0	145	0	56	56
Volume Right	0	66	0	0	217	217
cSH	1700	1700	1091	1700	969	969
Volume to Capacity	0.16	0.12	0.13	0.10	0.28	0.28
Queue Length 95th (ft)	0	0	11	0	29	29
Control Delay (s)	0.0	0.0	5.9	0.0	13.9	13.9
Lane LOS			A		B	B
Approach Delay (s)	0.0	3.4			13.9	
Approach LOS						B
Intersection Summary						
Average Delay			4.5			
Intersection Capacity Utilization			34.2%		ICU Level of Service	A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 5: Beyer Blvd & Smythe Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑	↑
Volume (vph)	161	869	786	544	834	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	0.96	0.95	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	3322	1770	1583	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	3322	1770	1583	1583
Peak-hour factor, PHF	0.77	0.77	0.88	0.88	0.81	0.61
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	230	1241	982	680	1504	341
RTOR Reduction (vph)	0	0	96	0	0	69
Lane Group Flow (vph)	230	1241	1566	0	1504	272
Turn Type	Prot	NA	NA	NA	NA	Perm
Protected Phases	1	6	2		8	
Permitted Phases					8	
Actuated Green, G (s)	10.6	56.1	41.1		64.1	64.1
Effective Green, g (s)	10.6	56.1	41.1		64.1	64.1
Actuated g/C Ratio	0.08	0.43	0.32		0.49	0.49
Clearance Time (s)	4.4	4.9	4.9		4.9	4.9
Vehicle Extension (s)	2.0	3.6	4.0		2.0	2.0
Lane Grp Cap (vph)	144	1527	1050		872	780
v/s Ratio Prot	0.13	0.35	0.47		0.85	0.17
v/c Ratio	1.60	0.81	1.49		1.72	0.35
Uniform Delay, d1	59.7	32.4	44.5		33.0	20.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	299.8	3.5	226.3		331.0	0.1
Delay (s)	358.5	35.9	270.8		363.9	20.3
Level of Service	F	D	F		F	C
Approach Delay (s)		86.3	270.8		300.4	
Approach LOS		F	F		F	
Intersection Summary						
HCM 2000 Control Delay			227.3		HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.63			
Actuated Cycle Length (s)			130.0		Sum of lost time (s)	14.2
Intersection Capacity Utilization			115.6%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element
 6: W. Park Ave/Alaquinas Dr & Beyer Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↑	↑↑	↑↑	↑	↑↑	↑↑	↑	↑	↑	↑	↑
Volume (vph)	26	1139	57	258	1117	152	64	64	397	209	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	5.1	5.1					
Lane Util. Factor	1.00	0.96	1.00	0.95	1.00	0.95					
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.99					
Satd. Flow (prot)	1770	3514	1770	3476	1670	1670					
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.91					
Satd. Flow (perm)	1770	3514	1770	3476	1524	1524					
Peak-hour factor, PHF	0.88	0.88	0.88	0.93	0.93	0.73	0.73	0.73	0.73	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	32	1424	71	305	1321	180	96	127	598	258	77
RTOR Reduction (vph)	0	2	0	0	0	7	0	0	65	0	3
Lane Group Flow (vph)	32	1493	0	305	1494	0	0	756	0	0	373
Turn Type	Prot	NA	NA	Prot	NA	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2		1	6		4		4		4
Permitted Phases							4				
Actuated Green, G (s)	3.2	46.0		18.6	61.2		71.9		71.9		71.9
Effective Green, g (s)	3.2	46.0		18.6	61.2		71.9		71.9		71.9
Actuated g/C Ratio	0.02	0.30		0.12	0.41		0.48		0.48		0.48
Clearance Time (s)	4.4	4.9		4.4	5.1		5.1		5.1		5.1
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0		2.0		2.0
Lane Grp Cap (vph)	37	1071		218	1409		726		269		269
v/s Ratio Prot	0.02	0.42		0.17	0.43		0.50		0.66		0.66
v/c Ratio	0.86	1.39		1.40	1.06		1.04		1.39		1.39
Uniform Delay, d1	73.6	52.5		66.2	44.9		39.5		39.5		39.5
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00		1.00
Incremental Delay, d2	92.4	183.0		205.0	41.7		44.7		195.1		195.1
Delay (s)	166.1	235.5		271.1	86.6		84.2		234.6		234.6
Level of Service	F	F		F	F		F		F		F
Approach Delay (s)		234.0		117.7	84.2		234.6				
Approach LOS		F		F	F		F		F		F
Intersection Summary											
HCM 2000 Control Delay				160.6			HCM 2000 Level of Service		F		
HCM 2000 Volume to Capacity ratio				1.39							
Actuated Cycle Length (s)				150.9			Sum of lost time (s)		14.6		
Intersection Capacity Utilization				122.8%			ICU Level of Service		H		
Analysis Period (min)				15							
c Critical Lane Group											

San Ysidro CPU-Mobility Element
7: East Beyer Blvd/Otay Mesa Rd & Beyer Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	564	802	340	866	920	218	466	372	808	133	265	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2
Lane Util. Factor	0.95	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr	1.00	1.00	0.85	0.99	1.00	0.90	0.90	1.00	0.99	1.00	0.92	0.99
FI Protected	0.95	0.99	1.00	0.98	1.00	0.95	1.00	1.00	0.99	1.00	0.99	1.00
Satd. Flow (prot)	1681	1751	1583	1797	1770	1671	1770	1671	1709	1709	1709	1709
FI Permitted	0.21	0.13	1.00	0.16	0.17	1.00	0.17	1.00	0.08	0.08	0.08	0.08
Satd. Flow (perm)	373	226	1583	292	308	1671	308	1671	141	141	141	141
Peak-hour factor, PHF	0.87	0.87	0.87	0.62	0.62	0.62	0.86	0.86	0.86	0.84	0.84	0.84
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	713	1014	430	1536	1632	387	596	476	1033	174	347	665
RTOR Reduction (vph)	0	0	138	0	5	0	0	98	0	0	0	57
Lane Group Flow (vph)	435	1292	292	0	3550	0	596	1411	0	0	1129	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2	2	1	1	1	1	8	8	8	4	4	4
Permitted Phases	2	2	1	1	1	1	8	8	8	4	4	4
Actuated Green, G (s)	19.0	19.0	19.0	18.0	18.0	18.0	28.3	28.3	28.3	28.0	28.0	28.0
Effective Green, g (s)	19.0	19.0	19.0	18.0	18.0	18.0	28.3	28.3	28.3	28.0	28.0	28.0
Actuated g/C Ratio	0.24	0.24	0.24	0.22	0.22	0.22	0.35	0.35	0.35	0.35	0.35	0.35
Clearance Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	88	53	375	65	108	591	108	591	0.84	49	49	49
v/s Ratio Prot	1.17	65.71	0.18	612.15	1.93	0.84	1.93	0.84	0.84	68.00	68.00	68.00
v/s Ratio Perm	4.94	24.38	0.78	54.61	5.52	2.39	5.52	2.39	23.04	23.04	23.04	23.04
v/c Ratio	30.5	30.5	28.5	31.0	25.9	25.9	25.9	25.9	26.0	26.0	26.0	26.0
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1799.7	10565.1	9.8	24152.2	2063.5	629.9	9954.8	629.9	9954.8	9954.8	9954.8	9954.8
Incremental Delay, d2	1830.2	10585.6	38.3	24183.2	2079.3	655.7	9980.8	655.7	9980.8	9980.8	9980.8	9980.8
Delay (s)	F	F	D	F	F	F	F	F	F	F	F	F
Level of Service	F	F	D	F	F	F	F	F	F	F	F	F
Approach Delay (s)	6777.3			24183.2			1058.8					
Approach LOS	F	F	F	F	F	F	F	F	F	F	F	F
Intersection Summary												
HCM 2000 Control Delay	112720.9											
HCM 2000 Volume to Capacity ratio	31.85											
Actuated Cycle Length (s)	80.0											
Intersection Capacity Utilization	317.4%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
8: Picador Blvd & SR-905 WB On Ramp/SR-905 WB Off Ramp

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	250	0	89	234	236	0	0	348	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	5.0	4.6	4.2	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Fr	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Satd. Flow (prot)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Satd. Flow (perm)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
Peak-hour factor, PHF	0.25	0.25	0.25	0.77	0.77	0.77	0.90	0.90	0.90	0.90	0.91	0.91
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	357	0	127	286	288	0	0	421	503
RTOR Reduction (vph)	0	0	0	0	0	88	0	0	0	0	0	369
Lane Group Flow (vph)	0	0	0	0	357	39	286	288	0	0	421	134
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	8	8	8	8	8	8	5	2	2	6	6	6
Permitted Phases	8	8	8	8	8	8	5	2	2	6	6	6
Actuated Green, G (s)	17.2	17.2	17.2	17.2	17.2	17.2	10.1	29.2	29.2	14.9	14.9	14.9
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	10.1	29.2	29.2	14.9	14.9	14.9
Actuated g/C Ratio	0.31	0.31	0.31	0.18	0.18	0.18	0.52	0.27	0.27	0.27	0.27	0.27
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	543	486	486	319	1845	319	1845	1845	1845	941	941	421
v/s Ratio Prot	0.20	0.02	0.02	0.16	0.08	0.16	0.08	0.08	0.08	0.12	0.12	0.08
v/s Ratio Perm	0.66	0.08	0.08	0.90	0.16	0.16	0.16	0.16	0.16	0.45	0.45	0.32
v/c Ratio	16.8	13.8	13.8	22.4	7.0	7.0	17.1	16.5	16.5	17.1	16.5	16.5
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	2.9	0.1	0.1	25.9	0.0	0.3	0.4	0.4	0.4	0.3	0.4	0.4
Incremental Delay, d2	19.7	13.9	13.9	48.3	7.0	7.0	17.5	16.9	16.9	17.5	16.9	16.9
Delay (s)	B	B	B	D	A	A	B	B	B	B	B	B
Level of Service	B	B	B	D	A	A	B	B	B	B	B	B
Approach Delay (s)	0.0			27.6			27.6			17.2		
Approach LOS	A	A	A	C	C	C	C	C	C	B	B	B
Intersection Summary												
HCM 2000 Control Delay	20.4											
HCM 2000 Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	56.0											
Intersection Capacity Utilization	69.3%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 9: Smythe Ave/Picador Blvd & SR-905 EB Off Ramp/SR-905 EB On Ramp

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	0	161	0	0	0	330	371	221	400	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	5.0	5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	0.95	1.00	0.95	1.00
FLI Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
FLI Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.25	0.25	0.25	0.88	0.88	0.88	0.76	0.76	0.76
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	137	0	213	0	0	0	412	464	320	579	0	0
RTOR Reduction (vph)	0	0	175	0	0	0	235	0	0	0	0	0
Lane Group Flow (vph)	0	137	38	0	0	0	641	0	320	579	0	0
Turn Type	Perm	NA	Perm	NA	NA	NA	Prot	NA	Prot	NA	NA	NA
Protected Phases	4		4				2		1			6
Permitted Phases	4		4				16.7		15.2			36.1
Actuated Green, G (s)	9.9	9.9	9.9	16.7	16.7	16.7	15.2	15.2	36.1	36.1	36.1	36.1
Effective Green, g (s)	9.9	9.9	9.9	16.7	16.7	16.7	15.2	15.2	36.1	36.1	36.1	36.1
Actuated g/C Ratio	0.18	0.18	0.18	0.30	0.30	0.30	0.27	0.27	0.65	0.65	0.65	0.65
Clearance Time (s)	4.6	4.6	4.6	5.0	5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	315	281	315	978	978	978	483	2297	483	2297	483	2297
v/s Ratio Prot	0.08	0.02	0.08	0.20	0.20	0.20	0.18	0.16	0.18	0.16	0.18	0.16
v/s Ratio Perm	0.43	0.13	0.43	0.66	0.66	0.66	0.66	0.25	0.66	0.25	0.66	0.25
v/c Ratio	20.4	19.2	20.4	16.9	16.9	16.9	17.9	4.1	17.9	4.1	17.9	4.1
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.00	1.00	1.00	1.6	1.6	1.6	3.4	0.1	3.4	0.1	3.4	0.1
Incremental Delay, d2	21.3	19.5	21.3	18.5	18.5	18.5	21.3	4.1	21.3	4.1	21.3	4.1
Delay (s)	C	B	C	B	B	B	C	C	C	A	A	A
Level of Service	C	B	C	B	B	B	C	C	C	A	A	A
Approach Delay (s)	20.2		20.2	0.0	0.0	0.0	18.5		18.5		10.3	
Approach LOS	C		C	A	A	A	B		B		B	
Intersection Summary												
HCM 2000 Control Delay	15.3 HCM 2000 Level of Service B											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	55.6 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	69.3% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 10: Dairy Mart Rd & Vista Ln

Horizon Year Alternative B
 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	146	161	370	118	98	242
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.68	0.68	0.81	0.81	0.86	0.86
Hourly flow rate (vph)	236	260	502	160	125	310
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn lane (veh)			TWLT	TWLT	TWLT	TWLT
Median type			2	2	2	2
Median storage (veh)			877	406	406	406
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	988	331			663	
vC1, stage 1 conf vol	583					
vC2, stage 2 conf vol	405					
vCu, unblocked vol	988	331			663	
IC, 1 stage (s)	6.8	6.9			4.1	
IC, 2 stage (s)	5.8					
IF (s)	3.5	3.3			2.2	
p0 queue free %	43	61			86	
cM capacity (veh/h)	418	664			922	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	487	335	328	125	155	155
Volume Left	236	0	0	125	0	0
Volume Right	260	0	160	0	0	0
cSH	519	1700	1700	922	1700	1700
Volume to Capacity	0.96	0.20	0.19	0.14	0.09	0.09
Queue Length 95th (ft)	308	0	0	12	0	0
Control Delay (s)	F	57.8	0.0	9.5	0.0	0.0
Lane LOS	F	A	A	A	A	A
Approach Delay (s)	57.8	0.0	0.0	2.7		
Approach LOS	F					
Intersection Summary						
Average Delay	18.7					
Intersection Capacity Utilization	51.1% ICU Level of Service A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 1.1: Averil Rd & Vista Ln
 Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EBT	EBR	WBL	WBT	NBL	NBR
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	102	45	6	199	100	15
Peak Hour Factor	0.80	0.80	0.60	0.60	0.68	0.68
Hourly flow rate (vph)	140	62	11	365	162	24
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total (vph)	202	376	186			
Volume Left (vph)	0	11	162			
Volume Right (vph)	62	0	24			
Head (s)	-0.15	0.04	0.13			
Departure Headway (s)	4.8	4.7	5.4			
Degree Utilization, x	0.27	0.49	0.28			
Capacity (veh/h)	711	732	606			
Control Delay (s)	9.5	12.3	10.5			
Approach Delay (s)	9.5	12.3	10.5			
Approach LOS	A	B	B			
Intersection Summary						
Delay	11.1					
Level of Service	B					
Intersection Capacity Utilization	30.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 1.2: Smythe Ave & Vista Ln
 Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	81	163	52	104	160	2
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	356	717	229	458	704	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume		1074			1630	715
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		1074			1630	715
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)		2.2			3.5	3.3
IF (s)		65			0	98
p0 queue free %		649			72	431
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	1074	686	713			
Volume Left	0	229	704			
Volume Right	717	0	9			
cSH	1700	649	73			
Volume to Capacity	0.63	0.35	9.74			
Queue Length 95th (ft)	0	40	Err			
Control Delay (s)	0.0	8.9	Err			
Lane LOS	A	F	F			
Approach Delay (s)	0.0	8.9	Err			
Approach LOS			F			
Intersection Summary						
Average Delay	2884.7					
Intersection Capacity Utilization	44.8%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 13: Sunset Ln & Vista Ln
 Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	123	0	10	98	1	132
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.96	0.96	0.70	0.70	0.80	0.80
Hourly flow rate (vph)	141	0	16	154	1	182
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume	141			326		141
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	141			326		141
vCU, unblocked vol	4.1			6.4		6.2
IC, 1 stage (s)						
IC, 2 stage (s)	2.2			3.5		3.3
IF (s)	99			100		80
pQ queue free %	1442			661		907
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	141	170	183			
Volume Left	0	16	1			
Volume Right	0	0	182			
cSH	1700	1442	904			
Volume to Capacity	0.08	0.01	0.20			
Queue Length 95th (ft)	0	1	19			
Control Delay (s)	0.0	0.8	10.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.8	10.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utilization			30.5%			A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 14: Averil Rd & Sunset Ln
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	49	205	29	37	146	68	10	43	42	128	99	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	59	245	35	44	175	81	12	51	50	153	118	116
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	338	300	114	387								
Volume Left (vph)	59	44	12	153								
Volume Right (vph)	35	81	50	116								
Head (s)	0.01	-0.10	-0.21	-0.07								
Departure Headway (s)	6.2	6.1	6.6	6.1								
Degree Utilization, x	0.58	0.51	0.21	0.65								
Capacity (veh/h)	538	533	436	559								
Control Delay (s)	17.3	15.4	11.4	19.8								
Approach Delay (s)	17.3	15.4	11.4	19.8								
Approach LOS	C	C	B	C								
Intersection Summary												
Delay			17.0									
Level of Service			C									
Intersection Capacity Utilization			57.1%									B
Analysis Period (min)			15									

San Ysidro CPU-Mobility Element
15: Smythe Ave & Sunset Ln

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	149	71	222	34	44	19	106	84	89	16	122	80
Peak Hour Factor	0.59	0.59	0.59	0.55	0.55	0.55	0.69	0.69	0.69	0.85	0.85	0.85
Hourly flow rate (vph)	278	132	414	68	88	38	169	134	142	21	158	104
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	824	194	445	282								
Volume Left (vph)	278	68	169	21								
Volume Right (vph)	414	38	142	104								
Head (s)	-0.20	-0.01	-0.08	-0.17								
Departure Headway (s)	7.2	8.3	7.3	7.8								
Degree Utilization, x	1.64	0.45	0.91	0.61								
Capacity (veh/h)	510	399	479	436								
Control Delay (s)	315.4	17.9	47.9	22.2								
Approach Delay (s)	F	C	E	C								
Approach LOS	F	C	E	C								
Intersection Summary												
Delay	166.8											
Level of Service	F											
Intersection Capacity Utilization	75.5%											
ICU Level of Service	D											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
16: W. Park Ave & Seaward Ave

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	95	0	13	10	10	7	367	0	0	15	223	45
Peak Hour Factor	0.97	0.97	0.97	0.64	0.64	0.64	0.38	0.38	0.38	0.72	0.72	0.72
Hourly flow rate (vph)	108	0	15	17	12	631	0	0	0	23	341	69
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total (vph)	122	660	432									
Volume Left (vph)	108	17	23									
Volume Right (vph)	15	631	69									
Head (s)	0.14	-0.53	-0.05									
Departure Headway (s)	6.4	5.0	5.9									
Degree Utilization, x	0.22	0.91	0.71									
Capacity (veh/h)	527	714	591									
Control Delay (s)	11.2	37.6	21.7									
Approach Delay (s)	B	E	C									
Approach LOS	B	E	C									
Intersection Summary												
Delay	29.3											
Level of Service	D											
Intersection Capacity Utilization	59.5%											
ICU Level of Service	B											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 17: E. Park Ave & Seaward Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	13	0	0	60	343	17
Peak Hour Factor	0.70	0.70	0.53	0.53	0.60	0.60
Hourly flow rate (vph)	20	0	0	125	629	31
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total (vph)	20	125	660			
Volume Left (vph)	0	0	629			
Volume Right (vph)	0	0	31			
Head (s)	0.03	0.03	0.20			
Departure Headway (s)	5.8	5.6	4.5			
Degree Utilization, x	0.03	0.19	0.83			
Capacity (veh/h)	581	612	785			
Control Delay (s)	9.0	9.9	25.3			
Approach Delay (s)	9.0	9.9	25.3			
Approach LOS	A	A	D			
Intersection Summary						
Delay			22.5			
Level of Service			C			
Intersection Capacity Utilization			32.2%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 18: W. San Ysidro Blvd & Howard Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	69	44	20	329	267	29
Peak Hour Factor	0.72	0.72	0.62	0.62	0.56	0.56
Hourly flow rate (vph)	105	67	35	584	524	57
Direction, Lane #	EB 1	WB 1	SB 1	SB 1	SB 2	
Volume Total (vph)	173	619	524		57	
Volume Left (vph)	105	0	524		0	
Volume Right (vph)	0	584	0		57	
Head (s)	0.16	-0.53	0.23		-0.57	
Departure Headway (s)	7.1	5.6	6.4		3.2	
Degree Utilization, x	0.34	0.96	0.94		0.05	
Capacity (veh/h)	489	630	551		1121	
Control Delay (s)	13.7	50.4	48.9		6.4	
Approach Delay (s)	13.7	50.4	44.8			
Approach LOS	B	F	E			
Intersection Summary						
Delay			43.4			
Level of Service			E			
Intersection Capacity Utilization			56.6%			ICU Level of Service B
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 19: Dairy Mart Rd & W. San Ysidro Blvd
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	49	227	62	64	140	213	158	245	585	241	145	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.79	0.79	0.79	0.80	0.80	0.80
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	60	280	77	76	167	254	200	310	741	301	181	91
RTOR Reduction (vph)	0	0	58	0	0	178	0	0	211	0	0	0
Lane Group Flow (vph)	60	280	19	76	167	76	200	310	530	301	181	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm-prot	NA	pm-ov	pm-prot	NA	Free
Protected Phases	5	2	2	1	6	3	8	1	7	1	7	4
Permitted Phases												
Actuated Green, G (s)	3.8	17.2	17.2	7.5	20.9	20.9	19.7	15.7	23.2	30.6	22.2	70.0
Effective Green, g (s)	3.8	17.2	17.2	7.5	20.9	20.9	19.7	15.7	23.2	30.6	22.2	70.0
Actuated g/C Ratio	0.05	0.25	0.25	0.11	0.30	0.30	0.28	0.22	0.33	0.44	0.32	1.00
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	4.0
Vehicle Extension (s)	2.0	2.9	2.9	2.0	2.9	2.9	2.0	3.9	2.0	2.0	3.9	3.0
Lane Grp Cap (vph)	96	457	388	189	556	472	369	417	524	415	590	1583
v/s Ratio Prot	0.03	c0.15	0.01	0.04	c0.09	0.03	0.17	c0.11	c0.11	c0.11	0.10	0.06
v/s Ratio Perm												
v/c Ratio	0.62	0.61	0.05	0.40	0.30	0.16	0.54	0.74	1.01	0.73	0.31	0.06
Uniform Delay, d1	32.4	23.4	20.2	29.2	18.9	18.1	20.6	25.3	23.4	14.4	18.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.8	2.4	0.0	0.5	0.3	0.2	0.9	7.4	42.4	5.3	0.4	0.1
Delay (s)	41.2	25.8	20.2	29.7	19.2	18.2	21.4	32.7	65.8	19.7	18.5	0.1
Level of Service	D	C	C	C	B	B	C	C	E	B	B	A
Approach Delay (s)	27.0			20.3			50.5				16.2	
Approach LOS	C			C			D				B	
Intersection Summary												
HCM 2000 Control Delay												C
HCM 2000 Volume to Capacity ratio	34.3											C
Actuated Cycle Length (s)	70.0											19.2
Intersection Capacity Utilization	72.9%											C
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 20: I-5 NB Ramps & W. San Ysidro Blvd
 Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR
Volume (vph)	320	693	469	253	139	134	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	4.6	4.6	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	1.00
FI Protected	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583	1583
FI Permitted	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583	1583
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.96	0.81	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	383	829	537	290	189	182	182
RTOR Reduction (vph)	0	69	0	0	0	0	130
Lane Group Flow (vph)	383	760	537	290	189	182	52
Turn Type	NA	pm-ov	Prot	NA	NA	NA	Perm
Protected Phases	6	4	5	2	2	4	
Permitted Phases							
Actuated Green, G (s)	8.0	23.8	17.8	30.0	15.8	15.8	4
Effective Green, g (s)	8.0	23.8	17.8	30.0	15.8	15.8	4
Actuated g/C Ratio	0.15	0.43	0.32	0.55	0.29	0.29	0.29
Clearance Time (s)	4.6	4.6	4.2	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514	817	572	1930	508	454	454
v/s Ratio Prot	0.11	c0.27	c0.30	0.08	0.11	0.03	0.03
v/s Ratio Perm							
v/c Ratio	0.75	0.93	0.94	0.15	0.37	0.12	0.12
Uniform Delay, d1	22.5	14.8	18.1	6.2	15.6	14.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	17.0	23.2	0.0	0.5	0.1	0.1
Delay (s)	28.3	31.8	41.3	6.2	16.1	14.6	0.1
Level of Service	C	C	D	A	B	B	B
Approach Delay (s)	30.7			29.0	15.3		
Approach LOS	C			C	B		
Intersection Summary							
HCM 2000 Control Delay							27.8
HCM 2000 Volume to Capacity ratio							1.04
Actuated Cycle Length (s)							55.0
Intersection Capacity Utilization							83.1%
Analysis Period (min)							15
c Critical Lane Group							

San Ysidro CPU-Mobility Element
 21: W. San Ysidro Blvd & Sunset Ln
 Horizon Year Alternative B
 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	73	221	412	83	104	319
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	15%	15%	0%	0%	0%
Peak Hour Factor	0.80	0.80	0.86	0.86	0.82	0.82
Hourly flow rate (vph)	91	276	479	97	127	389
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TW/TL			None
Median storage (veh)			2			
Upstream signal (ft)						525
pX, platoon unblocked	0.88					
vC, conflicting volume	1170	527			576	
vC1, stage 1 conf vol	527					
vC2, stage 2 conf vol	643					
vCU, unblocked vol	1125	527			576	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	76	50			87	
cM capacity (veh/h)	386	551			998	
Direction, Lane #	WB1	WB2	NB1	SB1	SB2	
Volume Total	91	276	576	127	389	
Volume Left	91	0	0	127	0	
Volume Right	0	276	97	0	0	
cSH	386	551	1700	998	1700	
Volume to Capacity	0.24	0.50	0.34	0.13	0.23	
Queue Length 95th (ft)	23	70	0	11	0	
Control Delay (s)	17.2	17.9	0.0	9.1	0.0	
Lane LOS	C	C	A	A	A	
Approach Delay (s)	17.7		0.0	2.2		
Approach LOS	C		A	B		
Intersection Summary						
Average Delay	5.3					
Intersection Capacity Utilization	47.1%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element
 22: W. San Ysidro Blvd & Averil Rd
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	30	259	5	3	302	53	1	0	0	91	0	84
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.25	0.25	0.25	0.71	0.71	0.71
Hourly flow rate (vph)	37	320	6	4	369	65	4	0	0	141	0	130
Direction, Lane #	EB1	EB2	WB1	WB2	NB1	SB1						
Volume Total (vph)	37	326	373	65	4	271						
Volume Left (vph)	37	0	4	0	4	141						
Volume Right (vph)	0	6	0	65	0	130						
Head (s)	0.53	0.02	0.04	-0.67	0.23	-0.15						
Departure Headway (s)	6.5	6.0	5.9	5.2	6.9	5.8						
Degree Utilization, x	0.07	0.54	0.61	0.09	0.01	0.43						
Capacity (veh/h)	526	582	591	663	425	578						
Control Delay (s)	8.7	14.6	16.5	7.5	9.9	13.1						
Approach Delay (s)	14.0		15.2		9.9	13.1						
Approach LOS	B		C		A	B						
Intersection Summary												
Delay	14.2											
Level of Service	B											
Intersection Capacity Utilization	44.1%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 23: W. San Ysidro Blvd & Smythe Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	39	199	5	4	345	38	2	10	6	59	9	158
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.38	0.38	0.38	0.86	0.86	0.86
Hourly flow rate (vph)	45	231	6	5	401	44	5	26	16	69	10	184
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TW/TL			TW/TL								
Median storage (veh)	2			2								
Upstream signal (ft)				579								
pX platoon unblocked	0.92			0.92				0.92		0.92		0.92
vC, conflicting volume	445	237		924	780	234	784	760	423			423
vC1, stage 1 conf vol				325	325			433		433		433
vC2, stage 2 conf vol				599	455			351		328		328
vCu, unblocked vol	356	237		876	719	234	723	698	332			332
IC, single (s)	4.1	4.1		7.1	6.5	6.2	7.1	6.5	6.2			6.2
IC, 2 stage (s)				6.1	5.5		6.1	5.5				5.5
IF (s)	2.2	2.2		3.5	4.0	3.3	3.5	4.0	3.3			3.3
p0 queue free %	96	100		98	94	98	86	98	72			72
cM capacity (veh/h)	1109	1330		289	463	805	487	495	654			654
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	45	237	5	445	47	263						
Volume Left	45	0	5	0	5	69						
Volume Right	0	6	0	44	16	184						
cSH	1109	1700	1330	1700	504	594						
Volume to Capacity	0.04	0.14	0.00	0.26	0.09	0.44						
Queue Length 95th (ft)	3	0	0	0	8	57						
Control Delay (s)	8.4	0.0	7.7	0.0	12.9	15.8						
Lane LOS	A	A	A	B	B	C						
Approach Delay (s)	1.3	0.1	12.9	15.8								
Approach LOS	B	C	B	C								
Intersection Summary												
Average Delay	5.0											
Intersection Capacity Utilization	53.9%											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 24: Cottonwood Rd & W. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	48	228	3	4	269	220	5	4	7	237	2	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.9	4.9	4.9	4.9		4.9			4.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00		1.00			1.00
FL Protected	0.95	1.00		1.00	1.00	0.85	0.94		0.94			0.97
FL Permitted	0.52	1.00		0.99	1.00	0.88	0.75		0.88			0.96
Said. Flow (perm)	968	1859		1850	1583	1361			1361			1745
Peak-hour factor, PHF	0.83	0.83	0.83	0.91	0.91	0.91	0.65	0.65	0.65	0.73	0.73	0.73
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	64	302	4	5	325	266	8	7	12	357	3	84
RTOR Reduction (vph)	0	1	0	0	0	177	0	7	0	0	18	0
Lane Group Flow (vph)	64	305	0	0	330	89	0	20	0	0	426	0
Turn Type	Perm	NA	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	Perm	NA
Protected Phases	2			6			8					4
Permitted Phases	2			6			8					4
Actuated Green, G (s)	13.2	13.2		13.2	13.2	13.2	16.4		16.4			16.4
Effective Green, g (s)	13.2	13.2		13.2	13.2	13.2	16.4		16.4			16.4
Actuated g/C Ratio	0.34	0.34		0.34	0.34	0.34	0.42		0.42			0.42
Clearance Time (s)	4.9	4.9		4.9	4.9	4.9	4.9		4.9			4.9
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.0		2.0			2.0
Lane Grp Cap (vph)	324	622		619	500		640					566
v/s Ratio Prot		0.16					c0.18		0.06			c0.31
v/s Ratio Perm	0.07			0.53	0.17		0.03		0.03			0.75
Uniform Delay, d1	9.3	10.4		10.6	9.2		6.8		6.8			9.8
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00			1.00
Incremental Delay, d2	0.2	0.4		0.7	0.1		0.0		0.0			5.0
Delay (s)	9.5	10.9		11.3	9.3		6.8		6.8			14.8
Level of Service	A	B		B	A		A		A			B
Approach Delay (s)	10.6			10.4			6.8		6.8			14.8
Approach LOS	B			B			A		A			B
Intersection Summary												
HCM 2000 Control Delay	11.8											
HCM 2000 Volume to Capacity ratio	0.65											
Actuated Cycle Length (s)	39.4											
Intersection Capacity Utilization	66.4%											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 25: Via de San Ysidro & W. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	0	270	149	344	0	232	0	254	0	488	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	0.85	1.00	1.00	1.00	0.85	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	1583	1770	1583	1770	1583	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	1583	1770	1583	1770	1583	1770	1583
Peak-hour factor, PHF	0.70	0.70	0.70	0.92	0.92	0.92	0.87	0.87	0.87	0.87	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	424	234	411	277	0	321	0	617	0	0	0
RTOR Reduction (vph)	0	0	167	0	0	0	0	0	86	0	0	0
Lane Group Flow (vph)	0	424	67	411	277	0	0	321	531	0	0	0
Turn Type	NA	Perm	Prot	NA	Split	NA	pm+ov	NA	pm+ov	custom	NA	custom
Protected Phases	2	2	2	1	6	8	8	8	1	8	2	6
Permitted Phases	14.8	14.8	9.3	28.5	13.9	23.2	13.9	23.2	13.9	23.2	13.9	23.2
Effective Green, G (s)	14.8	14.8	9.3	28.5	13.9	23.2	13.9	23.2	13.9	23.2	13.9	23.2
Effective Green, g (s)	0.29	0.29	0.18	0.35	0.27	0.45	0.27	0.45	0.27	0.45	0.27	0.45
Actuated g/C Ratio	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Clearance Time (s)	4.8	4.8	2.0	4.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Vehicle Extension (s)	1013	453	617	1026	475	845	475	845	475	845	475	845
Lane Grp Cap (vph)	cd.12	0.12	0.12	0.15	0.18	cd.11	0.22	0.22	0.22	0.22	0.22	0.22
v/s Ratio Prot	0.42	0.15	0.67	0.27	0.68	0.63	0.63	0.63	0.63	0.63	0.63	0.63
v/s Ratio Perm	15.0	13.8	19.8	6.1	16.9	10.9	16.9	10.9	16.9	10.9	16.9	10.9
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.5	0.3	2.1	0.3	3.0	1.1	3.0	1.1	3.0	1.1	3.0	1.1
Incremental Delay, d2	15.5	14.0	21.9	6.4	19.9	12.0	19.9	12.0	19.9	12.0	19.9	12.0
Delay (s)	B	B	C	A	B	B	B	B	B	B	B	B
Level of Service	B	B	C	A	B	B	B	B	B	B	B	B
Approach Delay (s)	15.0	15.6	14.7	15.6	14.7	15.6	14.7	15.6	14.7	15.6	14.7	15.6
Approach LOS	B	B	B	B	B	B	B	B	B	B	B	B
Intersection Summary												
HCM 2000 Control Delay	15.1 HCM 2000 Level of Service B											
HCM 2000 Volume to Capacity ratio	0.62											
Actuated Cycle Length (s)	51.7 Sum of lost time (s)											
Intersection Capacity Utilization	49.3% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 26: W. San Ysidro Blvd/E. San Ysidro Blvd & W. Park Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	0	848	588	0	0	0	0	0	0	146	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.96	0.96	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	0	1060	674	0	0	0	0	0	0	229	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn lane (veh)	None	None	None	None	None	None	None	None	None	None	None	None
Median type												
Median storage (veh)												
Upstream signal (ft)	233	383										
pX platoon unblocked										0.91		
vC, conflicting volume	674									1204		337
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	674									1031		337
IC, single (s)	4.1									6.8		6.9
IC, 2 stage (s)												
IF (s)	2.2									3.5		3.3
pQ queue free %	100									100		65
cM capacity (veh/h)	913									209		659
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1							
Volume Total	530	530	337	337	229							
Volume Left	0	0	0	0	0							
Volume Right	0	0	0	0	229							
cSH	1700	1700	1700	1700	659							
Volume to Capacity	0.31	0.31	0.20	0.20	0.35							
Queue Length 95th (ft)	0	0	0	0	0					39		
Control Delay (s)	0.0	0.0	0.0	0.0	13.4							
Lane LOS					B							
Approach Delay (s)	0.0	0.0	0.0	0.0	13.4							
Approach LOS					B							
Intersection Summary												
Average Delay	1.6											
Intersection Capacity Utilization	36.7% ICU Level of Service A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 27: E. San Ysidro Blvd/W. San Ysidro Blvd & E. Park Ave

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑		
Volume (veh/h)	191	658	552	46	0	0
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.90	0.90	0.92	0.92	0.42	0.42
Hourly flow rate (vph)	233	804	660	55	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn lane (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)	382	234				
pX platoon unblocked					0.97	
vC, conflicting volume	715				1556	358
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	715				1518	358
vCu, unblocked vol	4.1				6.8	6.9
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	74				100	100
cM capacity (veh/h)	881				79	639
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	
Volume Total	233	402	402	440	275	
Volume Left	233	0	0	0	0	
Volume Right	0	0	0	0	55	
cSH	881	1700	1700	1700	1700	
Volume to Capacity	0.26	0.24	0.24	0.26	0.16	
Queue Length 95th (ft)	27	0	0	0	0	
Control Delay (s)	10.6	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	2.4			0.0		
Approach LOS				A		
Intersection Summary						
Average Delay	1.4					
Intersection Capacity Utilization	36.7%					
Analysis Period (min)	15					
	ICU Level of Service A					

San Ysidro CPU-Mobility Element
 28: I-805 SB Ramps & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑						
Volume (veh)	0	709	153	56	333	0	0	0	0	320	2	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.2	4.6					4.6	4.6	4.6
Lane Util. Factor	0.96	1.00	0.97	0.95	1.00					0.95	0.91	0.95
Flt Protected	1.00	1.00	0.95	1.00	1.00					0.95	0.98	1.00
Satd. Flow (prot)	3539	1583	3433	3539						1681	1534	1504
Flt Permitted	1.00	1.00	0.95	1.00	1.00					0.95	0.98	1.00
Satd. Flow (perm)	3539	1583	3433	3539						1681	1534	1504
Peak-hour factor, PHF	0.94	0.94	0.94	0.81	0.81	0.81	0.25	0.25	0.25	0.78	0.78	0.78
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	830	179	76	452	0	0	0	0	451	3	415
RTOR Reduction (vph)	0	0	51	0	0	0	0	0	0	0	0	47
Lane Group Flow (vph)	0	830	128	76	452	0	0	0	0	302	246	71
Turn Type	NA	Perm	Prot	NA	NA	NA	Split	Split	Split	NA	Perm	Perm
Protected Phases	2		2	1	6		4	4	4			
Permitted Phases												
Actuated Green, G (s)	44.9	44.9	44.9	4.6	53.7		22.1	22.1	22.1	22.1	22.1	22.1
Effective Green, g (s)	44.9	44.9	44.9	4.6	53.7		22.1	22.1	22.1	22.1	22.1	22.1
Actuated g/C Ratio	0.53	0.53	0.05	0.63			0.26	0.26	0.26	0.26	0.26	0.26
Clearance Time (s)	4.6	4.6	4.2	4.6			4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1869	836	185	2235			437	398	391			
v/s Ratio Prot	cd.23		0.08	cd.02	0.13		cd.18	0.16				
v/c Ratio	0.44	0.15	0.41	0.20			0.69	0.62	0.18			
Uniform Delay, d1	12.4	10.3	38.9	6.6			28.4	27.7	24.4			
Progression Factor	1.00	1.00	1.00	0.88			1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.4	1.3	0.2			4.7	2.9	0.2			
Delay (s)	13.1	10.7	40.2	4.7			33.0	30.6	24.7			
Level of Service	B	B	D	A			C	C	C			
Approach Delay (s)	12.7			9.8			29.6					
Approach LOS	B			A			C					
Intersection Summary												
HCM 2000 Control Delay	18.2											
HCM 2000 Volume to Capacity ratio	0.52											
Actuated Cycle Length (s)	85.0											
Intersection Capacity Utilization	50.0%											
Analysis Period (min)	15											
	ICU Level of Service A											
	Sum of lost time (s) 13.4											
	ICU Level of Service A											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 29: I-805 NB Ramps & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	223	754	0	0	377	433	70	0	272	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.6			4.6	4.6	4.6	4.6	4.6			
Lane Util. Factor	0.97	0.96			0.95	0.95	1.00	1.00	1.00			
Flt Protected	1.00	1.00			0.92	0.92	1.00	0.95	1.00			
Satd. Flow (prot)	3433	3539			3255	3255	1770	1583				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	3433	3539			3255	3255	1770	1583				
Peak-hour factor, PHF	0.95	0.95	0.95	0.82	0.82	0.82	0.85	0.85	0.85	0.25	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	258	873	0	0	506	581	91	0	352	0	0	0
RTOR Reduction (vph)	0	0	0	0	190	0	0	0	100	0	0	0
Lane Group Flow (vph)	258	873	0	0	897	0	0	91	252	0	0	0
Turn Type	Prot	NA	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2			6			4				
Permitted Phases								4				
Actuated Green, G (s)	9.6	57.3			43.5	43.5	18.5	18.5	18.5			
Effective Green, g (s)	9.6	57.3			43.5	43.5	18.5	18.5	18.5			
Actuated g/C Ratio	0.11	0.67			0.51	0.51	0.22	0.22	0.22			
Clearance Time (s)	4.2	4.6			4.6	4.6	4.6	4.6	4.6			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	387	2385			1665		385	344				
v/s Ratio Prot	c0.08	0.25			c0.28		0.05	c0.16				
v/c Ratio	0.67	0.37			0.54	0.54	0.24	0.73	0.24			
Uniform Delay, d1	36.2	6.0			14.0	14.0	27.4	30.9	27.4			
Progression Factor	0.80	0.45			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.9	0.4			1.3	1.3	0.3	7.8	0.3			
Delay (s)	32.7	3.1			15.2	15.2	27.7	38.8	27.7			
Level of Service	C	A			B	B	C	D	D			
Approach Delay (s)	9.8				15.2		36.5					0.0
Approach LOS	A				B		D					A
Intersection Summary												
HCM 2000 Control Delay	16.5											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	85.0											
Intersection Capacity Utilization	50.0%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 30: Border Village Rd (W) & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	285	615	0	385	159	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.9	4.9	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Flt Protected	1.00	0.85		1.00	0.98	
Satd. Flow (prot)	1863	1683		1863	1679	
Flt Permitted	1.00	1.00		1.00	0.98	
Satd. Flow (perm)	1863	1683		1863	1679	
Peak-hour factor, PHF	0.89	0.89	0.81	0.81	0.81	0.67
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	352	760	0	523	261	381
RTOR Reduction (vph)	0	472	0	0	99	0
Lane Group Flow (vph)	352	238	0	523	543	0
Turn Type	NA	Perm	NA	NA	NA	NA
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	16.8	16.8		16.8	17.8	
Effective Green, g (s)	16.8	16.8		16.8	17.8	
Actuated g/C Ratio	0.38	0.38		0.38	0.40	
Clearance Time (s)	4.9	4.9		4.9	4.9	
Vehicle Extension (s)	2.5	2.5		2.5	2.0	
Lane Grp Cap (vph)	704	598		704	673	
v/s Ratio Prot	0.19			c0.28	c0.32	
v/c Ratio	0.50	0.48		0.74	0.81	
Uniform Delay, d1	10.6	10.5		11.9	11.8	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.4		4.0	6.6	
Delay (s)	11.0	10.9		16.0	18.4	
Level of Service	B	B		B	B	
Approach Delay (s)	10.9			16.0	18.4	
Approach LOS	B			B	B	
Intersection Summary						
HCM 2000 Control Delay	14.2					
HCM 2000 Volume to Capacity ratio	0.77					
Actuated Cycle Length (s)	44.4					
Intersection Capacity Utilization	55.8%					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element
 31: Border Village Rd (E) & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Volume (vph)	4	429	12	104	360	3	9	0	93	2	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.4	4.9	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.85	1.00	1.00	0.93
Fr	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.93
FI Protected	1770	1855	1770	1770	3535	1770	1770	1770	1583	1716	1716	1716
Satd. Flow (prot)	0.95	1.00	0.95	1.00	0.87	1.00	0.91	0.91	0.87	1.00	0.91	0.91
FI Permitted	1770	1855	1770	1770	3535	1770	1620	1583	1581	1581	1581	1581
Satd. Flow (perm)	0.84	0.84	0.84	0.74	0.74	0.74	0.73	0.73	0.73	0.75	0.75	0.75
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	5	562	16	155	535	4	14	0	140	3	3	6
Adj. Flow (vph)	0	1	0	0	0	0	0	0	129	0	0	6
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	129	0	0	6
Lane Group Flow (vph)	5	577	0	155	539	0	0	14	11	0	0	6
Turn Type	Prot	NA	NA	Prot	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2		1	6		8					4
Permitted Phases							8		8	4		4
Actuated Green, G (s)	0.7	31.2		9.5	40.0		4.6		4.6	4.6		4.6
Effective Green, g (s)	0.7	31.2		9.5	40.0		4.6		4.6	4.6		4.6
Actuated g/C Ratio	0.01	0.52		0.16	0.87		0.08		0.08	0.08		0.08
Clearance Time (s)	4.4	4.9		4.4	4.9		4.9		4.9	4.9		4.9
Vehicle Extension (s)	2.0	3.2		2.0	2.1		2.0		2.0	2.0		2.0
Lane Grp Cap (vph)	20	972		282	2376		125		122	122		122
v/s Ratio Prot	0.00	c0.31		c0.09	0.15		c0.01		0.01	0.00		0.00
v/s Ratio Perm									0.11	0.09		0.05
v/c Ratio	0.25	0.59		0.55	0.23		0.11		0.09	0.05		0.05
Uniform Delay, d1	23.1	9.8		23.0	3.8		25.5		25.5	25.5		25.4
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	2.4	1.0		1.2	0.0		0.1		0.1	0.1		0.1
Delay (s)	31.5	10.8		24.2	3.8		25.7		25.6	25.5		25.5
Level of Service	C	B		C	A		C		C	C		C
Approach Delay (s)		11.0			8.4		25.6			25.5		
Approach LOS		B			A		C			C		C
Intersection Summary												
HCM 2000 Control Delay	11.4											
HCM 2000 Volume to Capacity ratio	0.53											
Actuated Cycle Length (s)	59.5											
Intersection Capacity Utilization	47.6%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 32: Camino de la Plaza/E. Beyer Blvd & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Volume (vph)	115	248	137	48	71	16	242	132	277	57	83	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.0
Lane Util. Factor	1.00	0.95	0.88	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.85
Fr	1.00	1.00	1.00	0.85	1.00	0.97	1.00	1.00	0.85	1.00	1.00	0.85
FI Protected	1770	3539	2787	1770	3442	1681	1743	1583	1583	1826	1583	1583
Satd. Flow (prot)	0.95	1.00	1.00	0.95	1.00	0.95	0.99	1.00	0.98	1.00	0.98	1.00
FI Permitted	1770	3539	2787	1770	3442	1681	1743	1583	1583	1826	1583	1583
Satd. Flow (perm)	0.90	0.90	0.90	0.83	0.83	0.83	0.86	0.86	0.86	0.86	0.86	0.85
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	141	303	167	64	94	21	310	169	354	96	140	118
Adj. Flow (vph)	0	0	0	0	0	0	0	0	275	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	275	0	0	0
Lane Group Flow (vph)	141	303	77	64	99	0	236	243	79	0	236	118
Turn Type	Prot	NA	pm-tov	Prot	NA	Split	NA	Perm	Split	NA	Split	NA
Protected Phases	5	2	3	1	6		3		3		4	4
Permitted Phases			2				3		3		4	4
Actuated Green, G (s)	10.7	17.4	33.9	5.2	11.9		16.5		16.5		16.5	14.6
Effective Green, g (s)	10.7	17.4	33.9	5.2	11.9		16.5		16.5		16.5	14.6
Actuated g/C Ratio	0.15	0.24	0.46	0.07	0.16		0.22		0.22		0.22	0.20
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9		4.9		4.9		4.9	5.8
Vehicle Extension (s)	2.0	6.0	2.0	2.0	3.1		2.0		2.0		2.0	2.0
Lane Grp Cap (vph)	256	835	1467	124	555		376		390		354	361
v/s Ratio Prot	c0.08	c0.09	0.01	0.04	0.03		c0.14		0.14		0.05	c0.13
v/s Ratio Perm												
v/c Ratio	0.55	0.36	0.05	0.52	0.18		0.63		0.62		0.22	0.65
Uniform Delay, d1	29.3	23.5	11.0	33.0	26.7		25.8		25.8		23.4	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00
Incremental Delay, d2	1.5	0.8	0.0	1.5	0.2		2.4		2.2		0.1	3.2
Delay (s)	30.7	24.3	11.0	34.5	26.8		28.2		28.0		23.5	30.4
Level of Service	C	C	B	C	C		C		C		C	C
Approach Delay (s)		22.1			29.6		26.1				20.3	
Approach LOS		C			C		C		C		C	
Intersection Summary												
HCM 2000 Control Delay	24.2											
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	73.7											
Intersection Capacity Utilization	49.0%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 33: I-5 NB Ramp & E. San Ysidro Blvd

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	200	195	479	165	72	0	0	0	0	0	129	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	0	0	0	0	4.0	4.0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0	0	0	0	1.00	0.97	1.00
FI Protected	0.95	1.00	0.89	1.00	0.97	0	0	0	0	1.00	0.97	1.00
Satd. Flow (prot)	1770	1864	1770	1864	1800	0	0	0	0	1816	1816	1816
FI Permitted	0.95	1.00	0.97	1.00	0.97	0	0	0	0	1.00	0.97	1.00
Satd. Flow (perm)	1770	1864	1770	1864	1800	0	0	0	0	1816	1816	1816
Peak-hour factor, PHF	0.90	0.90	0.90	0.79	0.79	0.79	0.25	0.25	0.25	0.78	0.78	0.78
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	244	238	585	230	100	0	0	0	0	0	182	42
RTOR Reduction (vph)	0	99	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	244	724	0	0	330	0	0	0	0	0	215	0
Turn Type	Split	NA	Split	NA	Split	NA	Perm	NA	Perm	NA	NA	NA
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Permitted Phases	39.0	39.0	17.5	17.5	17.5	17.5	6	6	6	14.1	14.1	14.1
Effective Green, G (s)	39.0	39.0	17.5	17.5	17.5	17.5	6	6	6	14.1	14.1	14.1
Effective Green, g (s)	0.47	0.47	0.21	0.21	0.21	0.21	0.17	0.17	0.17	0.17	0.17	0.17
Actualized g/C Ratio	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	835	785	381	381	381	381	309	309	309	309	309	309
Lane Grp Cap (vph)	0.14	c0.43	c0.18	c0.18	c0.18	c0.18	c0.12	c0.12	c0.12	c0.12	c0.12	c0.12
v/s Ratio Prot	0.29	0.92	0.87	0.87	0.87	0.87	0.70	0.70	0.70	0.70	0.70	0.70
v/c Ratio	13.3	20.4	31.4	31.4	31.4	31.4	32.2	32.2	32.2	32.2	32.2	32.2
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.2	16.2	18.2	18.2	18.2	18.2	6.6	6.6	6.6	6.6	6.6	6.6
Incremental Delay, d2	13.5	36.6	49.6	49.6	49.6	49.6	38.9	38.9	38.9	38.9	38.9	38.9
Delay (s)	B	D	D	D	D	D	D	D	D	D	D	D
Level of Service	B	D	D	D	D	D	D	D	D	D	D	D
Approach Delay (s)	31.3	C	49.6	49.6	49.6	49.6	38.9	38.9	38.9	38.9	38.9	38.9
Approach LOS	C	C	D	D	D	D	A	A	A	D	D	D
Intersection Summary												
HCM 2000 Control Delay	36.1 HCM 2000 Level of Service D											
HCM 2000 Volume to Capacity ratio	0.86											
Actuated Cycle Length (s)	82.6 Sum of lost time (s)											
Intersection Capacity Utilization	77.4% ICU Level of Service D											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 34: Via de San Ysidro & I-5 NB Ramps

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	0	0	0	77	0	220	306	523	0	0	276	281
Sign Control	Stop	0%	Stop	0%	Stop	0%	Free	Free	0%	Free	Free	Free
Grade	0.80	0.80	0.80	0.88	0.88	0.88	0.82	0.82	0.82	0.78	0.78	0.78
Peak Hour Factor	0	0	0	96	0	275	410	702	0	0	389	396
Hourly flow rate (vph)	0	0	0	96	0	275	410	702	0	0	389	396
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage						2						
Right turn lane (veh)							None					None
Median type												
Median storage (veh)												
Upstream signal (ft)	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
pX platoon unblocked	2110	2110	393	1717	2308	702	786	786	702	702	702	702
vC, conflicting volume												
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2790	2790	393	1959	3210	0	786	786	0	786	786	786
IC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1	4.1	4.1	4.1	4.1	4.1
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2	2.2	2.2	2.2	2.2
pQ queue free %	100	100	100	100	100	100	46	50	100	100	100	100
cM capacity (veh/h)	1	4	606	11	2	513	829	829	766	766	766	766
Direction, Lane #	WB1	NB1	NB2	SB1	SB2							
Volume Total	371	410	702	259	526							
Volume Left	96	410	0	0	0							
Volume Right	275	0	0	0	396							
cSH	40	829	1700	1700	1700							
Volume to Capacity	9.32	0.50	0.41	0.15	0.31							
Queue Length 95th (ft)	Err	70	0	0	0							
Control Delay (s)	F	B	B	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	B	F	B							
Approach Delay (s)	F	B	B	5.0	0.0							
Approach LOS	F	B	B	F	B							
Intersection Summary												
Average Delay	1638.6											
Intersection Capacity Utilization	57.7% ICU Level of Service B											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 35: Via de San Ysidro & I-5 SB off-ramp
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBR	SBT	SBR
Volume (vph)	97	352	0	762	401	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1863	3539	3539	1863	3539
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1863	3539	3539	1863	3539
Peak-hour factor, PHF	0.79	0.79	0.70	0.70	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	135	490	0	1197	588	0	0
RTOR Reduction (vph)	0	217	0	0	0	0	0
Lane Group Flow (vph)	135	273	0	1197	588	0	0
Turn Type	NA	custom	NA	NA	NA	NA	NA
Protected Phases	4	4			3		
Permitted Phases	3.4			7			3
Actuated Green, G (s)	20.8	65.3		69.9	44.5		44.5
Effective Green, g (s)	20.8	65.3		69.9	44.5		44.5
Actuated g/C Ratio	0.18	0.36		0.60	0.38		0.38
Clearance Time (s)	4.6	4.6		4.6	4.6		4.6
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	314	944		1111	1343		1343
v/s Ratio Prot	0.08	0.05		0.12	0.17		0.17
v/s Ratio Perm		0.12		c0.64			
v/c Ratio	0.43	0.29		1.08	0.44		0.44
Uniform Delay, d1	42.9	13.7		23.6	27.0		27.0
Progression Factor	1.00	1.00		1.10	1.00		1.00
Incremental Delay, d2	0.9	0.2		48.7	0.2		0.2
Delay (s)	43.9	13.9		74.9	27.3		27.3
Level of Service	D	B		E	C		C
Approach Delay (s)	20.3			74.9	27.3		27.3
Approach LOS	C			E	C		C
Intersection Summary							
HCM 2000 Control Delay			49.1			HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.76				
Actuated Cycle Length (s)			117.2			Sum of lost time (s)	18.0
Intersection Capacity Utilization			57.7%			ICU Level of Service	B
Analysis Period (min)			15				
c Critical Lane Group							

San Ysidro CPU-Mobility Element
 36: Calle Primera/Wilow Rd & Via de San Ysidro
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	157	288	17	14	255	575	13	25	20	324	13	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.87
Satd. Flow (prot)	1770	1847	1858	1583	1770	1739	1770	1739	1770	1770	1813	1613
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00	0.65	1.00	0.72	1.00	1.00	0.81
Satd. Flow (perm)	1770	1847	1858	1583	1770	1739	1770	1739	1770	1770	1813	1613
Peak-hour factor, PHF	0.81	0.81	0.85	0.85	0.85	0.79	0.79	0.79	0.79	0.81	0.81	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	213	391	23	18	330	744	18	35	28	440	18	151
RTOR Reduction (vph)	0	2	0	0	0	278	0	11	0	0	0	61
Lane Group Flow (vph)	213	412	0	0	348	466	18	52	0	440	108	0
Turn Type	Prot	NA	NA	Perm	NA	custom	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2			6			7				3.4
Permitted Phases	3.4				6			7				3.4
Actuated Green, G (s)	17.9	38.1			16.0	65.1	69.9	69.9	69.9	69.9	69.9	69.9
Effective Green, g (s)	17.9	38.1			16.0	65.1	69.9	69.9	69.9	69.9	69.9	69.9
Actuated g/C Ratio	0.15	0.33			0.14	0.56	0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	4.2	4.6			4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	270	600			64	879	719	1037		795	962	662
v/s Ratio Prot	c0.12	0.22			c0.74	0.29	0.01	0.03		c0.33	0.07	0.07
v/s Ratio Perm					5.44	0.53	0.03	0.05		0.55	0.11	0.11
v/c Ratio	0.79	0.69			50.6	16.4	9.7	9.8		14.2	10.2	10.2
Uniform Delay, d1	47.8	34.4			1.00	1.00	1.00	1.00		0.43	0.01	0.01
Progression Factor	1.00	1.00			2030.8	0.6	0.0	0.0		0.8	0.0	0.0
Incremental Delay, d2	14.1	3.3			2081.4	17.0	9.7	9.9		6.9	0.1	0.1
Delay (s)	62.0	37.6			F	B	A	A		A	A	A
Level of Service	E	D			F	B	A	A		A	A	A
Approach Delay (s)		45.9			674.9		9.8				5.0	
Approach LOS		D			F		A				A	
Intersection Summary												
HCM 2000 Control Delay					319.5				HCM 2000 Level of Service		F	
HCM 2000 Volume to Capacity ratio					1.40							
Actuated Cycle Length (s)					117.2				Sum of lost time (s)		18.0	
Intersection Capacity Utilization					71.8%				ICU Level of Service		C	
Analysis Period (min)					15							
c Critical Lane Group												

San Ysidro CPU-Mobility Element
37: Dairy Mart Rd & I-5 SB Ramps

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	443	0	288	0	0	0	0	469	149	140	124	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.6	4.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1583	1583	1770	1583	1770	1583	1770	1583	1770
Flt Permitted	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	1583	1583	1770	1583	1770	1583	1770	1583	1770
Peak-hour factor, PHF	0.80	0.80	0.80	0.50	0.50	0.50	0.88	0.88	0.88	0.81	0.81	0.81
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	554	0	360	0	0	0	533	169	173	153	0	0
RTOR Reduction (vph)	0	0	231	0	0	0	0	64	0	0	0	0
Lane Group Flow (vph)	0	554	129	0	0	0	533	105	173	153	0	0
Turn Type	Split	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	NA
Protected Phases	4	4	4	2	2	2	2	2	2	1	1	6
Permitted Phases												
Actuated Green, G (s)	29.1	29.1	29.1	27.2	27.2	27.2	11.2	11.2	42.6	42.6	42.6	42.6
Effective Green, g (s)	29.1	29.1	29.1	27.2	27.2	27.2	11.2	11.2	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.36	0.36	0.36	0.34	0.34	0.34	0.14	0.14	0.53	0.53	0.53	0.53
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	636	569	636	532	532	532	245	245	681	681	681	681
v/s Ratio Prot	cd.31	0.08	cd.29	cd.10	cd.10	cd.10	0.08	0.08	0.07	0.07	0.08	0.08
v/c Ratio	0.87	0.23	0.85	0.20	0.20	0.20	0.71	0.71	0.16	0.16	0.16	0.16
Uniform Delay, d1	24.2	18.1	24.2	19.1	19.1	19.1	33.3	33.3	9.9	9.9	9.9	9.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.5	0.2	12.5	0.2	0.2	0.2	8.9	8.9	0.1	0.1	0.1	0.1
Delay (s)	36.6	18.3	36.6	19.3	19.3	19.3	42.2	42.2	10.0	10.0	10.0	10.0
Level of Service	D	B	D	B	B	B	D	D	D	D	D	A
Approach Delay (s)	29.4		29.4	0.0	0.0	0.0	31.8	31.8	27.1	27.1	27.1	27.1
Approach LOS	C		C	A	A	A	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	29.9											
HCM 2000 Volume to Capacity ratio	0.84											
Actuated Cycle Length (s)	80.9											
Intersection Capacity Utilization	68.2%											
Analysis Period (min)	15											
c Critical Lane Group	C											

San Ysidro CPU-Mobility Element
38: Dairy Mart Rd & Servando Ave

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations							
Volume (vph)	291	27	13	317	165	151	151
Peak Hour Factor	0.77	0.77	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	378	35	16	387	206	189	189
Direction, Lane #	EB 1	NB 1	SB 1	SB 1			
Volume Total (vph)	413	402	395				
Volume Left (vph)	378	16	0				
Volume Right (vph)	35	0	189				
Head (s)	0.17	0.04	-0.25				
Departure Headway (s)	6.3	6.1	5.8				
Degree Utilization, x	0.72	0.68	0.64				
Capacity (veh/h)	542	568	582				
Control Delay (s)	23.9	20.8	18.4				
Approach Delay (s)	23.9	20.8	18.4				
Approach LOS	C	C	C				
Intersection Summary							
Delay	21.1						
Level of Service	C						
Intersection Capacity Utilization	51.7%						
Analysis Period (min)	15						
ICU Level of Service	A						

San Ysidro CPU-Mobility Element
 39: Dairy Mart Rd & Camino De La Plaza
 Horizon Year Alternative B
 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	4	210	109	3	77	132
Volume (veh)	1900	1900	1900	1900	1900	1900
Sign Control	Stop	Free	0%	0%	Free	0%
Grade	0.89	0.89	0.75	0.75	0.79	0.79
Peak Hour Factor	7	428	25	1	220	40
Hourly flow rate (vph)						
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn lane (veh)						
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	506	26				26
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCU, unblocked vol	506	26				26
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	98	59				86
cM capacity (veh/h)	453	1050				1588
Direction, Lane #	WB1	WB2	NB1	NB2	SB1	SB2
Volume Total	7	428	26	260		
Volume Left	7	0	0	220		
Volume Right	0	428	1	0		
cSH	453	1050	1700	1588		
Volume to Capacity	0.02	0.41	0.02	0.14		
Queue Length 95th (ft)	1	50	0	12		
Control Delay (s)	13.1	10.8	0.0	6.6		
Lane LOS	B	B	A	A		
Approach Delay (s)	10.8	0.0	0.0	6.6		
Approach LOS	B					
Intersection Summary						
Average Delay	8.9					
Intersection Capacity Utilization	33.6%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

San Ysidro CPU-Mobility Element
 40: Camino de la Plaza & Bibler Dr
 Horizon Year Alternative B
 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	4	210	109	3	77	132
Volume (veh)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	5.3	4.0	5.3	4.0
Total Lost time (s)	1.00	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	0.95
Flt Protected	1770	1583	3525	1770	1583	3525
Satd. Flow (prot)	0.95	1.00	1.00	0.95	1.00	0.95
Flt Permitted	1770	1583	3525	1770	1583	3525
Satd. Flow (perm)	0.71	0.71	0.80	0.80	0.87	0.87
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	6	325	150	4	97	167
Adj. Flow (vph)	0	265	3	0	0	0
RTOR Reduction (vph)	6	60	151	0	97	167
Lane Group Flow (vph)						
Turn Type	NA	Perm	NA	Prot	NA	Prot
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	5.9	5.9	9.0	3.6	16.6	16.6
Effective Green, g (s)	5.9	5.9	9.0	3.6	16.6	16.6
Actuated g/C Ratio	0.19	0.19	0.28	0.11	0.52	0.52
Clearance Time (s)	4.0	4.0	5.3	4.0	5.3	4.0
Vehicle Extension (s)	2.0	2.0	3.6	2.0	3.6	2.0
Lane Grp Cap (vph)	328	293	997	200	1847	1847
v/s Ratio Prot	0.00		c0.04		c0.05	0.05
v/c Ratio	0.02	0.21	0.15	0.48	0.09	0.09
Uniform Delay, d1	10.6	11.0	8.5	13.2	3.8	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	0.1	0.7	0.0	0.0
Delay (s)	10.6	11.1	8.6	13.9	3.8	3.8
Level of Service	B	B	A	B	A	A
Approach Delay (s)	11.1		8.6		7.5	
Approach LOS	B		A		A	
Intersection Summary						
HCM 2000 Control Delay	9.3					
HCM 2000 Volume to Capacity ratio	0.23					
Actuated Cycle Length (s)	31.8					
Intersection Capacity Utilization	27.9%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					
	Sum of lost time (s)					
	13.3					
	ICU Level of Service					
	A					
c Critical Lane Group						

San Ysidro CPU-Mobility Element
41: Willow Rd & Camino de la Plaza

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	69	122	11	17	96	177	5	28	15	161	46	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	4.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
FI Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3497		1770	3195		1770	1763		1770	1723	
FI Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3497		1770	3195		1770	1763		1770	1723	
Peak-hour factor, PHF	0.90	0.90		0.71	0.71		0.80	0.80		0.89	0.89	
Growth Factor (vph)	110%	110%		110%	110%		110%	110%		110%	110%	
Adj. Flow (vph)	84	149		13	26		149	274		199	57	
RTOR Reduction (vph)	0	9		0	218		0	17		0	36	
Lane Group Flow (vph)	84	153		0	26		205	0		7	42	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.4	13.4		0.6	10.6		0.6	9.9		9.8	19.1	
Effective Green, g (s)	3.4	13.4		0.6	10.6		0.6	9.9		9.8	19.1	
Actuated g/C Ratio	0.07	0.26		0.01	0.20		0.01	0.19		0.19	0.37	
Clearance Time (s)	4.4	4.9		4.4	4.9		4.4	4.9		4.4	4.9	
Vehicle Extension (s)	2.0	3.3		2.0	3.3		2.0	2.0		2.0	2.7	
Lane Grp Cap (vph)	115	895		20	647		20	333		331	629	
v/s Ratio Prot	c0.05	c0.04		0.01	c0.06		0.00	0.02		c0.11	c0.05	
v/c Ratio	0.73	0.17		1.30	0.32		0.35	0.13		0.60	0.12	
Uniform Delay, d1	24.0	15.1		25.8	17.8		25.7	17.6		19.5	11.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.4	0.1		306.7	0.3		3.8	0.1		2.1	0.1	
Delay (s)	42.4	15.2		332.5	18.1		29.5	17.7		21.6	11.1	
Level of Service	D	B		F	B		C	B		C	B	
Approach Delay (s)	24.5			36.3			18.9			17.8		
Approach LOS	C			D			B			B		

Intersection Summary	Value	Level of Service
HCM 2000 Control Delay	27.1	C
HCM 2000 Volume to Capacity ratio	0.38	
Actuated Cycle Length (s)	52.3	18.6
Intersection Capacity Utilization	41.7%	A
Analysis Period (min)	15	

c Critical Lane Group

San Ysidro CPU-Mobility Element
42: Camiones Way/I-5 SB Ramps & Camino de la Plaza

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	64	269	4	7	176	84	5	2	26	297	30	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.6		4.2	4.6		4.2	4.6		4.2	4.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
FI Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3631		1770	1863		1770	1863		1770	1863	
FI Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3631		1770	1863		1770	1863		1770	1863	
Peak-hour factor, PHF	0.67	0.67		0.86	0.86		0.81	0.81		0.81	0.84	
Growth Factor (vph)	110%	110%		110%	110%		110%	110%		110%	110%	
Adj. Flow (vph)	105	442		7	9		225	107		7	3	
RTOR Reduction (vph)	0	1		0	0		56	0		0	29	
Lane Group Flow (vph)	105	448		0	9		225	51		7	3	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	3		8	1	
Permitted Phases												
Actuated Green, G (s)	8.8	20.1		3.5	14.8		33.3	0.9		9.2	12.7	
Effective Green, g (s)	8.8	20.1		3.5	14.8		33.3	0.9		9.2	12.7	
Actuated g/C Ratio	0.13	0.29		0.05	0.21		0.48	0.01		0.13	0.18	
Clearance Time (s)	4.2	4.6		4.2	4.6		4.2	4.6		4.2	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	1024		89	397		865	22		247	290	
v/s Ratio Prot	c0.06	0.13		0.01	c0.12		0.02	0.00		0.00	c0.22	
v/c Ratio	0.47	0.44		0.10	0.57		0.06	0.32		0.01	0.02	
Uniform Delay, d1	28.1	20.0		31.4	24.4		9.6	33.9		26.1	23.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.3		0.5	1.9		0.0	8.2		0.0	0.0	
Delay (s)	29.6	20.3		31.9	26.2		9.7	42.1		23.2	35.0	
Level of Service	C	C		C	C		A	D		C	D	
Approach Delay (s)	22.1			21.2			26.4			21.1		
Approach LOS	C			C			C			C		

Intersection Summary	Value	Level of Service
HCM 2000 Control Delay	21.5	C
HCM 2000 Volume to Capacity ratio	0.60	
Actuated Cycle Length (s)	69.3	18.0
Intersection Capacity Utilization	50.3%	A
Analysis Period (min)	15	

c Critical Lane Group

San Ysidro CPU-Mobility Element
 43: Smythe Ave & Avenida de la Madrid
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	45	22	77	121	32	209	89	332	91	171	569	66
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.8	4.0	4.0	4.8	4.8
Total Lost time (s)	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95
Frt	0.93	0.92	0.92	1.00	0.97	1.00	0.98	1.00	0.98	1.00	0.98	0.98
Flt Protected	0.98	0.98	0.98	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1702	1689	1689	1770	3425	1770	3425	1770	3484	1770	3484	1770
Flt Permitted	0.73	0.76	0.76	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)	1267	1313	1313	1770	3425	1770	3425	1770	3484	1770	3484	1770
Peak-hour factor, PHF	0.54	0.54	0.54	0.68	0.68	0.68	0.89	0.89	0.89	0.94	0.94	0.94
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	92	45	157	196	52	338	110	410	112	200	666	77
RTOR Reduction (vph)	0	62	0	0	74	0	0	39	0	0	14	0
Lane Group Flow (vph)	0	232	0	0	512	0	110	483	0	200	729	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4			8			5	2		1		6
Permitted Phases	4			8			5	2		1		6
Actuated Green, G (s)	26.0			26.0			5.0	18.3		6.0		19.3
Effective Green, g (s)	26.0			26.0			5.0	18.3		6.0		19.3
Actuated g/C Ratio	0.41			0.41			0.08	0.29		0.10		0.31
Clearance Time (s)	4.0			4.0			4.0	4.8		4.0		4.8
Vehicle Extension (s)	2.0			2.0			2.0	4.1		2.0		4.1
Lane Grp Cap (vph)	522			541			140	993		168		1065
v/s Ratio Prot	0.18			c0.39			c0.06	0.14		c0.11		c0.21
v/c Ratio Perm	0.44			0.95			0.79	0.49		1.19		0.68
v/c Ratio	13.3			17.9			28.5	18.5		28.6		19.2
Uniform Delay, d1	1.00			1.00			1.00	1.00		1.00		1.00
Progression Factor	0.2			25.5			22.9	0.5		129.9		2.0
Incremental Delay, d2	13.6			43.3			51.4	19.1		158.5		21.3
Delay (s)	B			D			D	B		F		C
Level of Service	B			D			D	B		F		C
Approach Delay (s)	13.6			43.3			24.7	50.4		50.4		50.4
Approach LOS	B			D			C	D		D		D
Intersection Summary												
HCM 2000 Control Delay	37.7 HCM 2000 Level of Service D											
HCM 2000 Volume to Capacity ratio	0.87											
Actuated Cycle Length (s)	63.1 Sum of lost time (s) 12.8											
Intersection Capacity Utilization	65.7% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 44: Avenida de la Madrid & Alaquinas Dr
 Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	W						
Sign Control	Yield				Sloped	Sloped	
Volume (vph)	14	120	193	40	24	43	43
Peak Hour Factor	0.65	0.65	0.56	0.56	0.64	0.64	0.64
Hourly flow rate (vph)	24	203	379	79	41	74	74
Direction, Lane #	EB 1	NB 1	SB 1				
Volume Total (vph)	227	458	115				
Volume Left (vph)	24	379	0				
Volume Right (vph)	203	0	74				
Head (s)	-0.48	0.20	-0.35				
Departure Headway (s)	4.8	4.8	4.7				
Degree Utilization, x	0.30	0.61	0.15				
Capacity (veh/h)	682	717	708				
Control Delay (s)	9.9	15.2	8.6				
Approach Delay (s)	9.9	15.2	8.6				
Approach LOS	A	C	A				
Intersection Summary							
Delay	12.7						
Level of Service	B						
Intersection Capacity Utilization	36.4% ICU Level of Service A						
Analysis Period (min)	15						

San Ysidro CPU-Mobility Element
45: E. San Ysidro Blvd & Center St

San Ysidro CPU-Mobility Element
46: Cottonwood Rd & Seaward Ave

Horizon Year Alternative B
3/31/2015

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	130	1084	709	16	0	0	199
Sign Control	Free	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	191	1590	1040	23	0	0	292
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None	None	None				
Median storage (veh)		119	310				
Upstream signal (ft)				0.90			
pX, platoon unblocked	1063			2228			532
vC, conflicting volume							
vC1, stage 1 conf vol							
vC2, stage 2 conf vol	1063						
vCu, unblocked vol	4.1			2141			532
IC, single (s)				6.8			6.9
IC, 2 stage (s)							
IF (s)	2.2			3.5			3.3
p0 queue free %	71			100			41
cM capacity (veh/h)	651			27			492
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 1	SB 1
Volume Total	191	795	795	693	370	370	292
Volume Left	191	0	0	0	0	0	0
Volume Right	0	0	0	0	23	292	0
cSH	651	1700	1700	1700	1700	1700	492
Volume to Capacity	0.29	0.47	0.47	0.41	0.22	0.59	0.59
Queue Length 95th (ft)	30	0	0	0	0	0	95
Control Delay (s)	12.8	0.0	0.0	0.0	0.0	22.4	22.4
Lane LOS	B						C
Approach Delay (s)	1.4			0.0	0.0	22.4	C
Approach LOS							
Intersection Summary							
Average Delay				2.9			
Intersection Capacity Utilization				42.3%		ICU Level of Service A	
Analysis Period (min)				15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			1080			
pX, platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	0
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay				0.0		
Intersection Capacity Utilization				0.0%		ICU Level of Service A
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element
47: Vista Ln & Smythe Crossing

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	59	56	103	87	114	96
Sign Control	Stop	Stop	Stop	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	87	82	158	128	167	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	612	405	475	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	612	405	475	0	0	0
vCu, unblocked vol	7.1	6.5	6.5	6.2	4.1	
IC, 1 stage (s)						
IC, 2 stage (s)						
IF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	64	83	64	88	90	
cM capacity (veh/h)	238	480	438	1085	1623	
Direction, Lane #						
	EB1	WB1	SB1			
Volume Total	169	286	308			
Volume Left	87	0	167			
Volume Right	0	128	141			
cSH	316	597	1623			
Volume to Capacity	0.53	0.48	0.10			
Queue Length 95th (ft)	74	65	9			
Control Delay (s)	28.8	16.5	4.4			
Lane LOS	D	C	A			
Approach Delay (s)	28.8	16.5	4.4			
Approach LOS	D	C	C			
Intersection Summary						
Average Delay	14.3					
Intersection Capacity Utilization	42.3%			ICU Level of Service A		
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
48: Camino de la Plaza & Virginia Ave

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (veh/h)	0	392	66	287	394	5	66	0	287	6	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	575	97	421	578	7	97	0	421	9	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	None										
Median storage (veh)											
Upstream signal (ft)	570										
pX, platoon unblocked											
vC, conflicting volume	585	672	1754	2050	336	2132	2095	293			
vC1, stage 1 conf vol											
vC2, stage 2 conf vol	1131	1427	708	672	1754	2050	336	2132	2095	293	
vCu, unblocked vol	585	672	1754	2050	336	2132	2095	293			
IC, 1 stage (s)	4.1	4.1	7.5	6.5	6.9	7.5	6.5	6.9			
IC, 2 stage (s)											
IF (s)	2.2	2.2	3.5	4.0	3.3	3.5	4.0	3.3			
p0 queue free %	100	54	13	100	36	0	100	100			
cM capacity (veh/h)	986	915	112	103	660	6	31	704			
Direction, Lane #											
	EB1	EB2	EB3	WB1	WB2	WB3	WB4	NB1	NB2	SB1	SB2
Volume Total	0	383	288	210	210	385	200	97	421	9	
Volume Left	0	0	0	210	210	0	0	97	0	9	
Volume Right	0	0	97	0	0	0	7	0	421	0	
cSH	1700	1700	1700	915	915	1700	112	660	6		
Volume to Capacity	0.00	0.23	0.17	0.46	0.46	0.23	0.12	0.87	0.64	1.36	
Queue Length 95th (ft)	0	0	0	61	61	0	0	129	115	49	
Control Delay (s)	0.0	0.0	0.0	12.2	12.2	0.0	0.0	123.7	19.6	1228.3	
Lane LOS				B	B			F	C	F	
Approach Delay (s)	0.0	5.1	5.1	39.0	39.0			1228.3			
Approach LOS				E	E			F			
Intersection Summary											
Average Delay	16.4										
Intersection Capacity Utilization	52.8%										
Analysis Period (min)	15										
	ICU Level of Service A										

San Ysidro CPU-Mobility Element
66: Sycamore Rd & Willow Rd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	122	24	24	323	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	537	106	106	1421	158	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	252					
pX, platoon unblocked	0.72			0.72		0.72
vC, conflicting volume	642			2222		590
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	303			2508		229
vCu, unblocked vol	4.1			6.4		6.2
IC, 1 stage (s)						
IC, 2 stage (s)	2.2			3.5		3.3
p0 queue free %	88			0		73
cM capacity (veh/h)	901			20		580
Direction, Lane #						
	EB 1	WB 1	NB 1	EB 1	WB 1	NB 1
Volume Total	642	1627	317	642	1627	317
Volume Left	0	106	158	0	106	158
Volume Right	106	0	158	106	0	158
cSH	1700	901	38	1700	901	38
Volume to Capacity	0.38	0.12	8.27	0.38	0.12	8.27
Queue Length 95th (ft)	0	10	Err	0	10	Err
Control Delay (s)	0.0	7.0	Err	0.0	7.0	Err
Lane LOS	A	A	F	A	A	F
Approach Delay (s)	0.0	7.0	Err	0.0	7.0	Err
Approach LOS	F	F	F	F	F	F
Intersection Summary						
Average Delay	1276.5			1276.5		
Intersection Capacity Utilization	43.4%			43.4%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element
81: Hall Rd & E. San Ysidro Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	806	139	139	769	139	139
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1182	204	204	1128	204	204
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage (veh)	1			1		
Upstream signal (ft)	212					
pX, platoon unblocked	0.86			0.86		0.86
vC, conflicting volume	1386			1386		2820
vC1, stage 1 conf vol						1284
vC2, stage 2 conf vol	1367			1367		1536
vCu, unblocked vol	4.1			4.1		6.4
IC, 1 stage (s)						6.2
IC, 2 stage (s)	2.2			2.2		3.5
p0 queue free %	53			53		0
cM capacity (veh/h)	430			430		181
Direction, Lane #						
	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1386	204	1128	408	408	
Volume Left	0	204	0	204	0	
Volume Right	204	0	0	204	0	
cSH	1700	430	1700	98	98	
Volume to Capacity	0.82	0.47	0.66	4.15	4.15	
Queue Length 95th (ft)	0	62	0	Err	Err	
Control Delay (s)	0.0	20.7	0.0	Err	Err	
Lane LOS	C	C	F	F	F	
Approach Delay (s)	0.0	3.2	0.0	Err	Err	
Approach LOS	F	F	F	F	F	
Intersection Summary						
Average Delay	1305.8			1305.8		
Intersection Capacity Utilization	92.3%			92.3%		
Analysis Period (min)	15			15		
ICU Level of Service	F			F		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	270	32	32	172	32	32
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1188	141	141	757	141	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLT		
Median storage (veh)				2		
Upstream signal (ft)	486					
pX, platoon unblocked	0.94			0.94	0.94	0.94
vC, conflicting volume	1329			2297	1258	1258
vC1, stage 1 conf vol				1038		
vC2, stage 2 conf vol	1317			2351	1242	1242
vCu, unblocked vol	4.1			6.4	6.2	6.2
IC, single (s)	4.1			5.4		
IC, 2 stage (s)	2.2			3.5	3.3	3.3
IF (s)	71			17	29	
p0 queue free %						
cM capacity (veh/h)	491			171	199	
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	141	757	282		
Volume Left	0	141	0	141		
Volume Right	141	0	0	141		
cSH	1700	491	1700	184		
Volume to Capacity	0.78	0.29	0.45	1.53		
Queue Length 95th (ft)	0	29	0	451		
Control Delay (s)	0.0	15.2	0.0	310.7		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	2.4		310.7		
Approach LOS				F		
Intersection Summary						
Average Delay				35.7		
Intersection Capacity Utilization				35.2%	ICU Level of Service A	
Analysis Period (min)				15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT			None		
Median storage (veh)	2					
Upstream signal (ft)	918					
pX, platoon unblocked						
vC, conflicting volume				1329	2339	1217
vC1, stage 1 conf vol					1217	
vC2, stage 2 conf vol				1329	2339	1217
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)				2.2	3.5	3.3
IC, 2 stage (s)				5.7	0	0
IF (s)				520	145	221
p0 queue free %						
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	520	1700	175		
Volume to Capacity	0.78	0.43	0.40	2.56		
Queue Length 95th (ft)	0	54	0	965		
Control Delay (s)	0.0	17.1	0.0	761.8		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	4.3		761.8		
Approach LOS				F		
Intersection Summary						
Average Delay				129.2		
Intersection Capacity Utilization				37.8%	ICU Level of Service A	
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element
90: Border Village Rd (W)/Border Village Rd (E) & Virginia Av

San Ysidro CPU-Mobility Element
92: Border Village Rd (W) & Hall Rd

Horizon Year Alternative B
3/31/2015

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		←	←	←	←	←
Volume (veh/h)	80	120	134	80	80	80
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	528	590	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)				925		
pX, platoon unblocked						
vC, conflicting volume	942			1998	766	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	942			1998	766	
vCu, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	52			0	13	
cM capacity (veh/h)	728			34	403	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	880	942	704			
Volume Left	352	0	352			
Volume Right	0	352	352			
cSH	728	1700	63			
Volume to Capacity	0.48	0.55	11.19			
Queue Length 95th (ft)	66	0	Err			
Control Delay (s)	11.9	0.0	Err			
Lane LOS	B	F	F			
Approach Delay (s)	11.9	0.0	Err			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay	2791.3		8.0			
Intersection Capacity Utilization	45.2%		13.3%			
Analysis Period (min)	15		15			
			ICU Level of Service			
			A			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	←	←	←	←	←
Volume (veh/h)	0	20	0	0	20	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	88	0	0	88	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)					203	
pX, platoon unblocked						
vC, conflicting volume	176	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	176	0			0	
vCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			95	
cM capacity (veh/h)	770	1085			1623	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	88	0	88			
Volume Left	0	0	88			
Volume Right	88	0	0			
cSH	1085	1700	1623			
Volume to Capacity	0.08	0.00	0.05			
Queue Length 95th (ft)	7	0	4			
Control Delay (s)	8.6	0.0	7.3			
Lane LOS	A	A	A			
Approach Delay (s)	8.6	0.0	7.3			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	8.0		8.0			
Intersection Capacity Utilization	13.3%		13.3%			
Analysis Period (min)	15		15			
			ICU Level of Service			
			A			

San Ysidro CPU-Mobility Element
95: E. San Ysidro Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Stop	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TW/TL		
Median storage (veh)				2		
Upstream signal (ft)	685					
pX, platoon unblocked						
vC, conflicting volume	1329			2339	1217	
vC1, stage 1 conf vol	1217					
vC2, stage 2 conf vol	1122					
vCu, unblocked vol	1329			2339	1217	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)	5.4					
IF (s)	2.2			3.5	3.3	
p0 queue free %	57			0	0	
cM capacity (veh/h)	520			145	221	
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	520	1700	175		
Volume to Capacity	0.78	0.43	0.40	2.56		
Queue Length 95th (ft)	0	54	0	965		
Control Delay (s)	0.0	17.1	0.0	761.8		
Lane LOS	C	C	F	F		
Approach Delay (s)	0.0	4.3		761.8		
Approach LOS	F	F		F		
Intersection Summary						
Average Delay	129.2			148.1		
Intersection Capacity Utilization	37.8%			27.0%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element
98: Virginia Av

Horizon Year Alternative B
3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (veh/h)	80	80	80	80	0	80
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	0	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	880	528			704	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	880	528			704	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	0	36			100	
cM capacity (veh/h)	318	550			894	
Direction, Lane #	WB 1	NB 1	SB 1	SB 1		
Volume Total	704	704	352			
Volume Left	352	0	0			
Volume Right	352	352	0			
cSH	403	1700	894			
Volume to Capacity	1.75	0.41	0.00			
Queue Length 95th (ft)	1082	0	0			
Control Delay (s)	370.2	0.0	0.0			
Lane LOS	F	F	F			
Approach Delay (s)	370.2	0.0	0.0			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay	148.1			148.1		
Intersection Capacity Utilization	27.0%			27.0%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element
100: E. San Ysidro Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	178	20	20	164	20	20
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	783	88	88	722	88	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				323		
pX platoon unblocked				0.90		
vC, conflicting volume	871			1725	827	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	871			1749	827	
vCU, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	89			0	76	
cM capacity (veh/h)	774			75	371	
Direction, Lane #	EB 1	WB 2	NB 1			
Volume Total	871	88	722	176		
Volume Left	0	88	0	88		
Volume Right	88	0	0	88		
cSH	1700	774	1700	125		
Volume to Capacity	0.51	0.11	0.42	1.40		
Queue Length 95th (ft)	0	10	0	297		
Control Delay (s)	0.0	10.2	0.0	286.5		
Lane LOS	B	F	F	F		
Approach Delay (s)	0.0	1.1		286.5		
Approach LOS						
Intersection Summary						
Average Delay	271.6					
Intersection Capacity Utilization	28.3%					
Analysis Period (min)	15					
	ICU Level of Service A					

San Ysidro CPU-Mobility Element
103: W. San Ysidro Blvd/E. San Ysidro Blvd & West Olive Dr

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
FI Protected												
Satd. Flow (prot)												
FI Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases		4			8			2				6
Permitted Phases		4			8			2				6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)	0.0		0.0		0.0		0.0		0.0		0.0	
Approach LOS	A		A		A		A		A		A	
Intersection Summary												
HCM 2000 Control Delay	0.0											
HCM 2000 Volume to Capacity ratio	0.00											
Actuated Cycle Length (s)	24.5											
Intersection Capacity Utilization	0.0%											
Analysis Period (min)	15											
	ICU Level of Service A											
	Sum of lost time (s) 8.0											
	ICU Level of Service A											
	Critical Lane Group											

San Ysidro CPU-Mobility Element
104: Border Village Rd (E)

San Ysidro CPU-Mobility Element
107: Virginia Av

Horizon Year Alternative B
3/31/2015

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (veh/h)	6	41	53	6	6	6
Sign Control	Free	Free	Free	Stop	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	26	180	233	26	26	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)			453			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	260				480	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	260				480	246
vCu, unblocked vol	4.1				6.4	6.2
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	98				95	97
cM capacity (veh/h)	1305				534	792
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	207	260	53			
Volume Left	26	0	26			
Volume Right	0	26	26			
cSH	1305	1700	638			
Volume to Capacity	0.02	0.15	0.08			
Queue Length 95th (ft)	2	0	7			
Control Delay (s)	1.2	0.0	11.2			
Lane LOS	A		B			
Approach Delay (s)	1.2	0.0	11.2			
Approach LOS			B			
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			17.9%			ICU Level of Service A
Analysis Period (min)			15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Volume (veh/h)	80	80	80	80	80	80
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1584	528	704			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	1584	528	704			
vCu, unblocked vol	6.4	6.2	4.1			
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	0	36	81			
cM capacity (veh/h)	72	550	894			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	704	704	704			
Volume Left	352	352	0			
Volume Right	0	352	352			
cSH	128	894	1700			
Volume to Capacity	5.51	0.39	0.41			
Queue Length 95th (ft)	Err	47	0			
Control Delay (s)	Err	8.7	0.0			
Lane LOS	F	A	A			
Approach Delay (s)	Err	8.7	0.0			
Approach LOS	F		F			
Intersection Summary						
Average Delay			3335.9			
Intersection Capacity Utilization			39.8%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
1.11: E. San Ysidro Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	178	164	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	783	722	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)	1174					
pX, platoon unblocked						
vC, conflicting volume	722			1505	722	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	722			1505	722	
vCu, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
cM capacity (veh/h)	880			133	427	
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 1	SB 1	
Volume Total	0	783	722	0	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.00	0.46	0.42	0.00	0.00	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.0			0.0		
Intersection Capacity Utilization	13.6%			13.6%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element
1.15: E. San Ysidro Blvd

Horizon Year Alternative B
3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR
Lane Configurations						
Volume (veh/h)	178	20	20	164	20	20
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	783	88	88	722	88	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None		
Median storage (veh)						
Upstream signal (ft)	684					
pX, platoon unblocked						
vC, conflicting volume	871			1725	827	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	871			1740	827	
vCu, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	89			0	76	
cM capacity (veh/h)	774			79	371	
Direction, Lane #						
	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	871	88	722	176	176	
Volume Left	0	88	0	88	0	
Volume Right	88	0	0	88	0	
cSH	1700	774	1700	131	131	
Volume to Capacity	0.51	0.11	0.42	1.35	1.35	
Queue Length 95th (ft)	0	10	0	286	0	
Control Delay (s)	0.0	10.2	0.0	261.0	0.0	
Lane LOS	B	B	F	F	F	
Approach Delay (s)	0.0	1.1	0.0	261.0	0.0	
Approach LOS	F	F	F	F	F	
Intersection Summary						
Average Delay	25.2			25.2		
Intersection Capacity Utilization	28.3%			28.3%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element
 128: Dairy Mart Rd & Tequila Way

San Ysidro CPU-Mobility Element
 135: Border Village Rd (W)

Horizon Year Alternative B
 3/31/2015

Horizon Year Alternative B
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Fr												
Fr1 Protected												
Satd. Flow (prot)												
Fr1 Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	4			8			2			2		6
Permitted Phases	4			8			2			2		6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service	0.0			0.0			0.0			0.0		0.0
Approach Delay (s)	A			A			A			A		A
Approach LOS	A			A			A			A		A
Intersection Summary												
HCM 2000 Control Delay	0.0 HCM 2000 Level of Service A											
HCM 2000 Volume to Capacity ratio	0.00											
Actuated Cycle Length (s)	24.5 Sum of lost time (s) 8.0											
Intersection Capacity Utilization	0.0% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	10	190	204	10	10	10	10	10	10	10	10	10
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	44	836	898	44	44	44	44	44	44	44	44	44
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)		740										
pX, platoon unblocked												
vC, conflicting volume		942								1844		920
vC1, stage 1 conf vol												
vC2, stage 2 conf vol		942								1844		920
vCu, unblocked vol		4.1								6.4		6.2
IC, single (s)												
IC, 2 stage (s)												
IF (s)		2.2								3.5		3.3
p0 queue free %		94								43		87
cM capacity (veh/h)		728								77		328
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total	880	942	88									
Volume Left	44	0	44									
Volume Right	0	44	44									
cSH	728	1700	125									
Volume to Capacity	0.06	0.55	0.70									
Queue Length 95th (ft)	5	0	97									
Control Delay (s)	1.7	0.0	83.1									
Lane LOS	A	F	F									
Approach Delay (s)	1.7	0.0	83.1									
Approach LOS	F	F	F									
Intersection Summary												
Average Delay	4.6											
Intersection Capacity Utilization	30.0% ICU Level of Service A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
500: Beyer Blvd & Cottonwood Rd

Horizon Year Alternative B
3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4A	4A		W	
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn lane (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	810	816				
pX platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCU, unblocked vol	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1622				1023	1084
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 1
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A	A	A	A
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Approach LOS	A	A	A	A	A	A
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	0.0%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

San Ysidro CPU-Mobility Element
1: Beyer Blvd & Iris Ave/SR-905 WB Ramps

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4B	4B	4	4	4	4B	4B	4B	4B	4B	4B
Volume (veh)	100	70	302	259	179	161	402	139	75	597	159	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			5.0	5.0	3.5	4.5			3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.91			1.00	0.85	1.00	0.96	1.00	0.97	1.00	0.97	1.00
Flt Protected	0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Sald. Flow (prot)	1684			1814	1583	1770	3403	1770	3428	1770	3428	1770
Flt Permitted	0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Sald. Flow (perm)	1684			1814	1583	1770	3403	1770	3428	1770	3428	1770
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	129	91	391	306	267	212	188	470	163	92	730	194
RTOR Reduction (vph)	0	43	0	0	0	115	0	23	0	0	16	0
Lane Group Flow (vph)	0	568	0	0	573	97	188	610	0	92	908	0
Confl. Peds. (#/hr)												
Turn Type	Split	NA	NA	Split	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	3	3	3	4	4	4	1	6	5	2	5	2
Permitted Phases							4					
Actuated Green, G (s)	42.5			40.0	40.0	40.0	12.5	39.2	10.8	37.5	10.8	37.5
Effective Green, g (s)	42.5			40.0	40.0	40.0	12.5	39.2	10.8	37.5	10.8	37.5
Actuated g/C Ratio	0.28			0.27	0.27	0.27	0.08	0.26	0.07	0.25	0.07	0.25
Clearance Time (s)	4.5			5.0	5.0	3.5	4.5	4.5	3.5	4.5	3.5	4.5
Vehicle Extension (s)	2.0			2.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0
Lane Grp Cap (vph)	477			483	422	147	889	127	857	127	857	127
v/s Ratio Prot	c0.34			c0.32			c0.11	0.18	0.05	c0.26		
v/s Ratio Perm						0.06						
v/c Ratio	1.19			1.19	0.23	1.28	0.69	0.72	1.06	0.72	1.06	0.72
Uniform Delay, d1	53.8			55.0	43.0	68.8	49.9	68.1	56.2	68.1	56.2	68.1
Progression Factor	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	105.1			103.1	0.1	167.6	2.5	15.9	47.8	15.9	47.8	15.9
Delay (s)	158.8			158.1	43.1	236.3	52.4	84.0	104.1	84.0	104.1	84.0
Level of Service	F			F	D	F	D	F	F	F	F	F
Approach Delay (s)	158.8			127.1			94.5		102.3			
Approach LOS	F			F			F		F			F
Intersection Summary												
HCM 2000 Control Delay	117.0											
HCM 2000 Volume to Capacity ratio	1.15											
Actuated Cycle Length (s)	150.0											
Sum of lost time (s)	17.5											
Intersection Capacity Utilization	107.9%											
ICU Level of Service	G											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU+Mobility Element
 2: Beyer Blvd & Dairy Mart Rd/SR-905 Ramps

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	194	240	116	154	127	100	116	351	128	263	332	568
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	5.5	4.2	5.5	3.0	3.0
Total Lost time (s)	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	0.85	1.00	0.85	1.00	0.96	1.00	1.00	1.00	0.85	1.00
Frt	0.95	1.00	1.00	0.97	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Flt Protected	1681	1763	1502	1813	1498	1770	3321	1770	3539	1549	1549	1549
Flt Permitted	0.95	1.00	1.00	0.97	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Flt Permitted	1681	1763	1502	1813	1498	1770	3321	1770	3539	1549	1549	1549
Statd. Flow (perm)	1681	1763	1502	1813	1498	1770	3321	1770	3539	1549	1549	1549
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.85	0.85	0.85	0.85	0.90	0.90	0.90
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	229	284	137	184	152	120	150	454	166	321	406	684
RTOR Reduction (vph)	0	0	86	0	0	88	0	27	0	0	0	87
Lane Group Flow (vph)	206	307	51	0	336	32	150	593	0	321	406	607
Confl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Split	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	4	4	4	3	3	3	5	2	2	1	6	4
Permitted Phases												
Actuated Green, G (s)	27.1	27.1	27.1	25.4	25.4	13.4	26.9	25.6	39.3	66.4	66.4	66.4
Effective Green, g (s)	27.1	27.1	27.1	25.4	25.4	13.4	26.9	25.6	39.3	66.4	66.4	66.4
Actuated g/C Ratio	0.22	0.22	0.22	0.21	0.21	0.11	0.22	0.21	0.33	0.55	0.55	0.55
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.5	4.2	5.5	3.0	3.0	3.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0
Lane Grp Cap (vph)	377	395	337	381	315	196	740	375	1152	852	852	852
v/s Ratio Prot	0.12	0.17	0.03	0.19	0.08	0.18	0.18	0.18	0.11	0.16	0.23	0.23
v/s Ratio Perm												
v/c Ratio	0.55	0.78	0.15	0.88	0.10	0.77	0.80	0.86	0.35	0.71	0.71	0.71
Uniform Delay, d1	41.4	44.0	37.6	46.2	38.5	52.1	44.4	45.8	31.0	20.1	20.1	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	8.5	0.1	20.1	0.1	16.2	6.8	16.6	0.3	2.4	2.4	2.4
Delay (s)	42.2	52.5	37.6	66.3	38.5	68.3	51.1	62.4	31.3	22.4	22.4	22.4
Level of Service	D	D	D	E	D	E	D	E	C	C	C	C
Approach Delay (s)	46.1			59.0			54.5		34.0			
Approach LOS	D			E			D		C			
Intersection Summary												
HCM 2000 Control Delay	44.6											
HCM 2000 Level of Service	D											
HCM 2000 Volume to Capacity ratio	0.83											
Actuated Cycle Length (s)	120.7											
Sum of lost time (s)	15.7											
Intersection Capacity Utilization	82.0%											
ICU Level of Service	D											
Analysis Period (min)	15											
Critical Lane Group	c											

San Ysidro CPU+Mobility Element
 3: Beyer Blvd & Del Sur Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations	140	293	248	170	247	129						
Volume (vph)	1900	1900	1900	1900	1900	1900						
Ideal Flow (vphpl)	4.4	5.5	5.5	4.9	4.9	4.9						
Total Lost time (s)	1.00	1.00	0.95	1.00	1.00	1.00						
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00						
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00						
Frt	0.95	1.00	1.00	0.94	1.00	0.85						
Flt Protected	1770	3539	3245	1770	1508	1508						
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95						
Flt Permitted	1770	3539	3245	1770	1508	1508						
Statd. Flow (perm)	1770	3539	3245	1770	1508	1508						
Peak-hour factor, PHF	0.91	0.91	0.85	0.85	0.85	0.95						
Growth Factor (vph)	110%	110%	110%	110%	110%	110%						
Adj. Flow (vph)	169	354	321	220	286	149						
RTOR Reduction (vph)	0	0	114	0	0	118						
Lane Group Flow (vph)	169	354	427	0	286	31						
Confl. Peds. (#/hr)	30	30	30	30	30	30						
Turn Type	Prot	NA	NA	NA	NA	Perm						
Protected Phases	5	2	6	4	4	4						
Permitted Phases												
Actuated Green, G (s)	12.0	57.2	40.8	17.4	17.4	17.4						
Effective Green, g (s)	12.0	57.2	40.8	17.4	17.4	17.4						
Actuated g/C Ratio	0.14	0.67	0.48	0.20	0.20	0.20						
Clearance Time (s)	4.4	5.5	5.5	4.9	4.9	4.9						
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0						
Lane Grp Cap (vph)	249	2381	1557	362	308	308						
v/s Ratio Prot	0.10	0.10	0.13	0.16	0.16	0.16						
v/s Ratio Perm												
v/c Ratio	0.68	0.15	0.27	0.79	0.10	0.10						
Uniform Delay, d1	34.7	5.1	13.2	32.1	27.4	27.4						
Progression Factor	1.00	1.00	0.26	1.00	1.00	1.00						
Incremental Delay, d2	5.7	0.1	0.3	10.4	0.1	0.1						
Delay (s)	40.3	5.2	3.7	42.5	27.5	27.5						
Level of Service	D	A	A	D	D	C						
Approach Delay (s)	16.5	3.7	37.4									
Approach LOS	B	A	D									
Intersection Summary												
HCM 2000 Control Delay	18.0											
HCM 2000 Level of Service	B											
HCM 2000 Volume to Capacity ratio	0.47											
Actuated Cycle Length (s)	85.0											
Sum of lost time (s)	14.8											
Intersection Capacity Utilization	65.0%											
ICU Level of Service	C											
Analysis Period (min)	15											
Critical Lane Group	c											

San Ysidro CPU-Mobility Element
4: S Vista Ave & Beyer Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑↑		↑↑	↑↑
Volume (veh/h)	325	106	232	311	80	145
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.90	0.90	0.80	0.80	0.89	0.89
Hourly flow rate (vph)	397	130	319	428	99	179
Pedestrians	30		30		30	
Lane Width (ft)	12.0		12.0		12.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	3		3		3	
Right turn flare (veh)						1
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)			343			
pX platoon unblocked						
vC, conflicting volume		567			1374	323
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCU, unblocked vol		557			1374	323
IC, 2 stage (s)		4.1			6.8	6.9
IF (s)		2.2			3.5	3.3
p0 queue free %		68			0	72
cM capacity (veh/h)		985			88	639
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 1
Volume Total	265	262	462	285	278	278
Volume Left	0	0	319	0	99	0
Volume Right	0	130	0	0	179	0
cSH	1700	1700	985	1700	205	205
Volume to Capacity	0.16	0.15	0.32	0.17	1.36	1.36
Queue Length 95th (ft)	0	0	35	0	394	0
Control Delay (s)	0.0	0.0	8.3	0.0	234.3	0.0
Lane LOS	A	A	F	F	F	F
Approach Delay (s)	0.0	5.1		234.3		
Approach LOS						
Intersection Summary						
Average Delay	44.5					
Intersection Capacity Utilization	51.4%					
Analysis Period (min)	15					
	ICU Level of Service					A

San Ysidro CPU-Mobility Element
5: Beyer Blvd & Smythe Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBL	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Volume (vph)	86	532	598	309	533	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.95	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00
Sald. Flow (prot)	1770	3539	3307	1770	1510	1510
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Sald. Flow (perm)	1770	3539	3307	1770	1510	1510
Peak-hour factor, PHF	0.80	0.80	0.84	0.84	0.84	0.84
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	118	732	783	405	698	166
RTOR Reduction (vph)	0	0	78	0	0	99
Lane Group Flow (vph)	118	732	1110	0	698	67
Confl. Peds. (#/hr)	30		30		30	30
Turn Type	Prot	NA	NA	NA	NA	Perm
Protected Phases	1	6	2		8	
Permitted Phases						8
Actuated Green, G (s)	6.8	41.1	29.9		34.1	34.1
Effective Green, g (s)	6.8	41.1	29.9		34.1	34.1
Actuated g/C Ratio	0.08	0.48	0.35		0.40	0.40
Clearance Time (s)	4.4	4.9	4.9		4.9	4.9
Vehicle Extension (s)	2.0	3.6	4.0		2.0	2.0
Lane Grp Cap (vph)	141	1711	1163		710	605
v/s Ratio Prot	0.07	0.21	0.34		0.39	0.04
v/s Ratio Perm						
v/c Ratio	0.84	0.43	0.95		0.98	0.11
Uniform Delay, d1	38.6	14.3	26.9		25.2	15.9
Progression Factor	1.01	0.90	1.00		1.00	1.00
Incremental Delay, d2	31.6	0.8	17.5		29.3	0.0
Delay (s)	70.3	13.6	44.4		54.5	16.0
Level of Service	E	B	D		D	B
Approach Delay (s)		21.5	44.4		47.1	
Approach LOS		C	D		D	
Intersection Summary						
HCM 2000 Control Delay	38.5					
HCM 2000 Volume to Capacity ratio	0.96					
Actuated Cycle Length (s)	85.0					
Intersection Capacity Utilization	79.5%					
Analysis Period (min)	15					
	HCM 2000 Level of Service					D
	Sum of lost time (s)					14.2
	ICU Level of Service					D
	c Critical Lane Group					

San Ysidro CPU-Mobility Element
6: W Park Ave/Alaquinas Dr & Beyer Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	4	4	4	4	4	4	4	4	4	4
Volume (vph)	79	562	212	1030	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	1.00
Frt	1.00	0.98	1.00	0.99	1.00	0.99	1.00	0.98	1.00	0.97	0.97
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.97	1.00	0.95	1.00	0.98	0.98
Flt Permitted	1770	3438	1770	3461	1770	3461	1688	1741	1688	1741	1742
Satd. Flow (perm)	1770	3438	1770	3461	1770	3461	1688	1741	1688	1741	1742
Peak-hour factor, PHF	0.74	0.74	0.74	0.91	0.91	0.91	0.89	0.89	0.89	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	76	1139	166	122	806	87	73	46	94	103	72
RTOR Reduction (vph)	0	12	0	0	8	0	0	39	0	0	14
Lane Group Flow (vph)	76	1293	0	122	885	0	0	174	0	0	211
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot
Permitted Phases	5	2	2	1	6	4	4	4	4	4	4
Actuated Green, G (s)	5.3	38.0	7.5	40.0	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Effective Green, g (s)	5.3	38.0	7.5	40.0	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Actuated g/C Ratio	0.06	0.45	0.09	0.47	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Clearance Time (s)	4.4	4.9	4.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Vehicle Extension (s)	2.0	5.3	2.0	5.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	110	1536	156	1628	415	415	415	415	415	415	415
v/s Ratio Prot	0.04	c0.38	c0.07	0.26	0.12	0.12	0.12	0.12	0.12	0.16	0.16
v/s Ratio Perm	0.69	0.84	0.78	0.54	0.42	0.42	0.42	0.42	0.42	0.55	0.55
Uniform Delay, d1	39.0	20.8	37.9	16.0	24.1	24.1	24.1	24.1	24.1	25.2	25.2
Progression Factor	1.00	1.00	0.63	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.0	5.8	2.2	0.1	0.2	0.2	0.2	0.2	0.2	0.9	0.9
Delay (s)	D	C	C	A	C	C	C	C	C	C	C
Level of Service	D	C	C	A	C	C	C	C	C	C	C
Approach Delay (s)	28.1	C	8.8	A	24.3	24.3	24.3	24.3	24.3	26.0	26.0
Approach LOS	C	C	C	A	C	C	C	C	C	C	C
Intersection Summary	Intersection Summary										
HCM 2000 Control Delay	20.7										
HCM 2000 Volume to Capacity ratio	0.73										
Actuated Cycle Length (s)	85.0										
Intersection Capacity Utilization	69.0%										
Analysis Period (min)	15										
c Critical Lane Group	15										

San Ysidro CPU-Mobility Element
7: East Beyer Blvd/Otay Mesa Rd & Beyer Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	4	4	4	4	4	4	4	4	4	4
Volume (vph)	79	562	212	1030	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	1.00
Frt	1.00	0.98	1.00	0.99	1.00	0.99	1.00	0.98	1.00	0.97	0.97
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.97	1.00	0.95	1.00	0.98	0.98
Flt Permitted	1681	1768	1448	1769	1681	1769	1755	1504	1742	1742	1742
Satd. Flow (perm)	1681	1768	1448	1769	1681	1769	1755	1504	1742	1742	1742
Peak-hour factor, PHF	0.90	0.90	0.90	0.45	0.45	0.45	0.84	0.84	0.84	0.90	0.90
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	97	711	259	2518	1606	191	170	158	774	271	159
RTOR Reduction (vph)	0	0	198	0	2	0	0	207	0	0	14
Lane Group Flow (vph)	87	721	61	0	4313	0	170	725	0	0	558
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot
Permitted Phases	2	2	2	1	1	8	8	8	8	8	8
Actuated Green, G (s)	20.1	20.1	20.1	20.1	20.1	30.1	30.1	30.1	30.1	30.1	29.8
Effective Green, g (s)	20.1	20.1	20.1	20.1	20.1	30.1	30.1	30.1	30.1	30.1	29.8
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24	0.35	0.35	0.35	0.35	0.35	0.35
Clearance Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	5.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	244	416	342	200	200	303	532	532	532	61	61
v/s Ratio Prot	0.08	c0.41	0.04	c5.08	0.20	0.20	0.48	0.48	0.48	c3.16	c3.16
v/s Ratio Perm	0.36	1.73	0.18	21.56	0.56	1.36	1.36	1.36	1.36	9.14	9.14
Uniform Delay, d1	27.1	32.5	25.9	32.5	22.1	27.4	27.4	27.4	27.4	27.6	27.6
Progression Factor	0.39	0.58	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	336.2	0.7	9263.0	2.4	174.8	174.8	174.8	174.8	3697.1	3697.1
Delay (s)	B	F	B	F	F	C	F	F	F	F	F
Level of Service	B	F	B	F	F	C	F	F	F	F	F
Approach Delay (s)	245.3	F	180	9285.5	24.5	202.3	202.3	202.3	202.3	3724.7	3724.7
Approach LOS	F	F	F	F	F	F	F	F	F	F	F
Intersection Summary	Intersection Summary										
HCM 2000 Control Delay	6060.9										
HCM 2000 Volume to Capacity ratio	10.51										
Actuated Cycle Length (s)	85.0										
Intersection Capacity Utilization	235.2%										
Analysis Period (min)	15										
c Critical Lane Group	15										

San Ysidro CPU-Mobility Element
 8: Picador Blvd & I-905 WB On Ramp/I-905 WB Off Ramp

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	374	0	297	177	724	0	0	419	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6	4.6	4.2	5.0	5.0			5.0	5.0
Lane Util. Factor				1.00	1.00	1.00	0.95	0.95			1.00	1.00
Frbp. ped/bikes				0.98	1.00	1.00	1.00	1.00			1.00	1.00
Frbp. ped/bikes				1.00	0.85	1.00	1.00	1.00			1.00	0.85
Frt Protected				0.95	1.00	0.95	1.00	1.00			1.00	1.00
Satd. Flow (prot)				1730	1529	1770	3539	3539			3539	1462
Flt Permitted				0.95	1.00	0.95	1.00	1.00			1.00	1.00
Satd. Flow (perm)				1730	1529	1770	3539	3539			3539	1462
Peak-hour factor, PHF	0.25	0.25	0.25	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	442	0	351	209	856	0	0	501	335
RTOR Reduction (vph)	0	0	0	0	0	60	0	0	0	0	0	219
Lane Group Flow (vph)	0	0	0	442	291	209	856	0	0	0	501	116
Confl. Peds. (#/hr)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	NA	Prot	NA	Perm	NA
Protected Phases												
Permitted Phases	8			8			5	2			6	6
Actuated Green, G (s)	28.2	28.2	28.2	13.6	47.2		29.4	29.4			29.4	29.4
Effective Green, g (s)	28.2	28.2	28.2	13.6	47.2		29.4	29.4			29.4	29.4
Actuated g/C Ratio	0.33	0.33	0.33	0.16	0.56		0.35	0.35			0.35	0.35
Clearance Time (s)	4.6	4.6	4.6	4.2	5.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	573	507	283	1965			1224	505			1224	505
v/s Ratio Prot	0.26	0.19		c0.12	c0.24		0.14	0.14			0.14	0.14
v/c Ratio	0.77	0.57	0.74	0.44			0.41	0.23			0.41	0.23
Uniform Delay, d1	25.5	23.4	34.0	11.1			21.2	19.8			21.2	19.8
Progression Factor	1.00	1.00	1.10	0.53			1.00	1.00			1.00	1.00
Incremental Delay, d2	6.4	1.6	6.8	0.5			1.0	1.1			1.0	1.1
Delay (s)	C	C	C	D	A		22.2	20.8			C	C
Level of Service	A	A	A	D	A		13.8	B			13.8	B
Approach Delay (s)	0.0											
Approach LOS	A											
Intersection Summary	Intersection Summary											
HCM 2000 Control Delay	20.7 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	85.0 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	74.2% ICU Level of Service D											
Analysis Period (min)	15											
c Critical Lane Group	c Critical Lane Group											

San Ysidro CPU-Mobility Element
 9: Smythe Ave/Picador Blvd & I-905 EB Off Ramp/I-905 EB On Ramp

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	427	0	399	0	0	0	0	411	373	160	606	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6				5.0	5.0			4.2	5.0
Lane Util. Factor	1.00	1.00	1.00				0.95	0.95			1.00	0.95
Frbp. ped/bikes	0.98	1.00	1.00				1.00	1.00			1.00	1.00
Frbp. ped/bikes	1.00	0.85	1.00				0.93	0.93			1.00	1.00
Frt Protected	0.95	1.00	1.00				1.00	1.00			0.95	1.00
Satd. Flow (prot)	1726	1526	1770				3140	3140			1770	3539
Flt Permitted	0.95	1.00	1.00				1.00	1.00			0.95	1.00
Satd. Flow (perm)	1726	1526	1770				3140	3140			1770	3539
Peak-hour factor, PHF	0.91	0.91	0.91	0.33	0.33	0.33	0.92	0.92	0.92	0.93	0.93	0.93
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	516	0	482	0	0	0	491	446	189	171	0	0
RTOR Reduction (vph)	0	0	93	0	0	0	184	0	0	0	0	0
Lane Group Flow (vph)	0	516	389	0	0	0	753	0	189	171	0	0
Confl. Peds. (#/hr)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	NA	Prot	NA	Perm	NA
Protected Phases												
Permitted Phases	4			4			2	2			1	6
Actuated Green, G (s)	30.0	30.0	30.0				29.6	29.6			11.6	45.4
Effective Green, g (s)	30.0	30.0	30.0				29.6	29.6			11.6	45.4
Actuated g/C Ratio	0.35	0.35	0.35				0.35	0.35			0.14	0.53
Clearance Time (s)	4.6	4.6	4.6				5.0	5.0			4.2	5.0
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	609	538					1083	241	1890		60.11	0.20
v/s Ratio Prot	0.30	0.25					c0.24	c0.24			0.11	0.20
v/c Ratio	0.85	0.72					0.69	0.69			0.78	0.38
Uniform Delay, d1	25.4	23.9					23.8	23.8			35.5	11.6
Progression Factor	1.00	1.00					1.00	1.00			0.88	0.56
Incremental Delay, d2	10.6	4.8					3.6	3.6			13.5	0.5
Delay (s)	D	C					27.3	27.3			D	A
Level of Service	D	C					A	A			D	B
Approach Delay (s)	32.4						27.3	27.3			14.8	B
Approach LOS	C						C	C			B	B
Intersection Summary	Intersection Summary											
HCM 2000 Control Delay	25.1 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.77											
Actuated Cycle Length (s)	85.0 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	74.2% ICU Level of Service D											
Analysis Period (min)	15											
c Critical Lane Group	c Critical Lane Group											

San Ysidro CPU-Mobility Element
 10: Dairy Mart Rd & Vista Ln

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	W	W	↑↑	↑↑	↑	↑↑
Volume (veh/h)	112	132	438	140	193	523
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.77	0.77	0.78	0.78	0.92	0.92
Hourly flow rate (vph)	160	189	618	197	231	625
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn lane (veh)						
Median type		TWBLTL	TWBLTL	TWBLTL	TWBLTL	TWBLTL
Median storage (veh)		2	2	2	2	2
Upstream signal (ft)		877	877	877	877	877
pX platoon unblocked						
vC, conflicting volume	1551	468		845		
vC1, stage 1 conf vol	746					
vC2, stage 2 conf vol	804					
vCU, unblocked vol	1551	468		845		
IC, single (s)	6.8	6.9		4.1		
IC, 2 stage (s)	5.8					
IF (s)	3.5	3.3		2.2		
p0 queue free %	31	63		70		
cM capacity (veh/h)	232	515		768		
Direction, Lane #	WB1	NB1	NB2	SB1	SB2	SB3
Volume Total	349	412	403	231	313	313
Volume Left	160	0	0	231	0	0
Volume Right	189	0	197	0	0	0
cSH	330	1700	1700	768	1700	1700
Volume to Capacity	1.06	0.24	0.24	0.30	0.18	0.18
Queue Length 95th (ft)	317	0	0	32	0	0
Control Delay (s)	102.0	0.0	0.0	11.7	0.0	0.0
Lane LOS	F	B	B	B	B	B
Approach Delay (s)	102.0	0.0	0.0	3.2		
Approach LOS	F	B	B	B		
Intersection Summary						
Average Delay	18.9					
Intersection Capacity Utilization	57.9%					
Analysis Period (min)	15					
	ICU Level of Service					
	B					

San Ysidro CPU-Mobility Element
 11: Averil Rd & Vista Ln

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	W	W	W	W
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	83	82	16	197	130	16
Peak Hour Factor	0.93	0.93	0.74	0.74	0.86	0.86
Hourly flow rate (vph)	98	97	24	293	166	20
Direction, Lane #	EB1	WB1	NB1			
Volume Total (vph)	195	317	187			
Volume Left (vph)	0	24	166			
Volume Right (vph)	97	0	20			
Head (s)	-0.26	0.05	0.15			
Departure Headway (s)	4.5	4.7	5.2			
Degree Utilization, x	0.25	0.41	0.27			
Capacity (veh/h)	743	732	637			
Control Delay (s)	9.0	11.0	10.2			
Approach Delay (s)	9.0	11.0	10.2			
Approach LOS	A	B	B			
Intersection Summary						
Delay	10.2					
Level of Service	B					
Intersection Capacity Utilization	44.4%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

San Ysidro CPU-Mobility Element
12: Smythe Ave & Vista Ln

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	142	114	57	78	124	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	625	502	251	343	546	0
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	None	None	None	None	None	None
Median storage (veh)	None	None	None	None	None	None
Upstream signal (ft)	None	None	None	None	None	None
pX platoon unblocked	None	None	None	None	None	None
vC, conflicting volume	1156	1156	1156	1780	936	936
vC1, stage 1 conf vol	None	None	None	None	None	None
vC2, stage 2 conf vol	1156	1156	1156	1780	936	936
vCU, unblocked vol	4.1	4.1	4.1	6.4	6.2	6.2
IC, single (s)	2.2	2.2	2.2	3.5	3.3	3.3
IC, 2 stage (s)	57	57	57	0	100	100
IF (s)	589	589	589	49	306	306
p0 queue free %	589	589	589	49	306	306
cM capacity (veh/h)	589	589	589	49	306	306
Direction, Lane #	EB 1	WB 1	NB 1	NB 1	NB 1	NB 1
Volume Total	1126	594	546	546	546	546
Volume Left	0	251	546	0	0	0
Volume Right	502	0	0	0	0	0
cSH	1700	589	49	49	49	49
Volume to Capacity	0.66	0.43	11.07	11.07	11.07	11.07
Queue Length 95th (ft)	0	53	Err	Err	Err	Err
Control Delay (s)	0.0	11.4	Err	Err	Err	Err
Lane LOS	B	B	F	F	F	F
Approach Delay (s)	0.0	11.4	Err	Err	Err	Err
Approach LOS	F	F	F	F	F	F
Intersection Summary						
Average Delay	2410.5					
Intersection Capacity Utilization	46.3%		ICU Level of Service		A	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
13: Sunset Ln & Vista Ln

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	247	5	29	91	0	57
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.80	0.80	0.77	0.80	0.80	0.80
Hourly flow rate (vph)	340	7	41	130	0	78
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	None	None	None	None	None	None
Median storage (veh)	None	None	None	None	None	None
Upstream signal (ft)	None	None	None	None	None	None
pX platoon unblocked	None	None	None	None	None	None
vC, conflicting volume	376	376	376	616	616	403
vC1, stage 1 conf vol	None	None	None	None	None	None
vC2, stage 2 conf vol	376	376	376	616	616	403
vCU, unblocked vol	4.1	4.1	4.1	6.4	6.2	6.2
IC, single (s)	2.2	2.2	2.2	3.5	3.3	3.3
IC, 2 stage (s)	96	96	96	100	87	87
IF (s)	1152	1152	1152	416	615	615
p0 queue free %	1152	1152	1152	416	615	615
cM capacity (veh/h)	1152	1152	1152	416	615	615
Direction, Lane #	EB 1	WB 1	NB 1	NB 1	NB 1	NB 1
Volume Total	346	171	78	78	78	78
Volume Left	0	41	0	0	0	0
Volume Right	7	0	78	78	78	78
cSH	1700	1152	615	615	615	615
Volume to Capacity	0.20	0.04	0.13	0.13	0.13	0.13
Queue Length 95th (ft)	0	3	11	11	11	11
Control Delay (s)	0.0	2.2	11.7	11.7	11.7	11.7
Lane LOS	A	A	B	B	B	B
Approach Delay (s)	0.0	2.2	11.7	11.7	11.7	11.7
Approach LOS	B	B	B	B	B	B
Intersection Summary						
Average Delay	2.2					
Intersection Capacity Utilization	42.6%		ICU Level of Service		A	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 14: Averil Rd & Sunset Ln

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	70	107	24	24	102	29	43	102	20	31	138	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	128	29	29	122	35	51	122	24	37	165	114
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	EB 1	WB 1	NB 1	SB 1	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	240	185	197	316	240	185	197	316	240	185	197	316
Volume Left (vph)	84	29	51	37	84	29	51	37	84	29	51	37
Volume Right (vph)	29	35	24	114	29	35	24	114	29	35	24	114
Head (s)	0.03	-0.05	0.01	-0.16	0.03	-0.05	0.01	-0.16	0.03	-0.05	0.01	-0.16
Departure Headway (s)	5.7	5.8	5.7	5.3	5.7	5.8	5.7	5.3	5.7	5.8	5.7	5.3
Degree Utilization, x	0.38	0.30	0.31	0.47	0.38	0.30	0.31	0.47	0.38	0.30	0.31	0.47
Capacity (veh/h)	573	558	564	627	573	558	564	627	573	558	564	627
Control Delay (s)	12.2	11.2	11.3	13.0	12.2	11.2	11.3	13.0	12.2	11.2	11.3	13.0
Approach Delay (s)	12.2	11.2	11.3	13.0	12.2	11.2	11.3	13.0	12.2	11.2	11.3	13.0
Approach LOS	B	B	B	B	B	B	B	B	B	B	B	B
Intersection Summary												
Delay	12.1											
Level of Service	B											
Intersection Capacity Utilization	49.5%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 15: Smythe Ave & Sunset Ln

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	44	31	58	0	19	0	44	39	13	6	73	107
Peak Hour Factor	0.89	0.89	0.89	0.83	0.83	0.83	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	54	38	72	0	25	0	58	51	17	8	96	140
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	EB 1	WB 1	NB 1	SB 1	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	164	25	126	244	164	25	126	244	164	25	126	244
Volume Left (vph)	54	0	58	8	54	0	58	8	54	0	58	8
Volume Right (vph)	72	0	17	140	72	0	17	140	72	0	17	140
Head (s)	-0.16	0.03	0.04	-0.30	-0.16	0.03	0.04	-0.30	-0.16	0.03	0.04	-0.30
Departure Headway (s)	4.6	5.0	4.7	4.2	4.6	5.0	4.7	4.2	4.6	5.0	4.7	4.2
Degree Utilization, x	0.21	0.03	0.16	0.29	0.21	0.03	0.16	0.29	0.21	0.03	0.16	0.29
Capacity (veh/h)	723	649	727	810	723	649	727	810	723	649	727	810
Control Delay (s)	8.8	8.2	8.6	8.9	8.8	8.2	8.6	8.9	8.8	8.2	8.6	8.9
Approach Delay (s)	8.8	8.2	8.6	8.9	8.8	8.2	8.6	8.9	8.8	8.2	8.6	8.9
Approach LOS	A	A	A	A	A	A	A	A	A	A	A	A
Intersection Summary												
Delay	8.8											
Level of Service	A											
Intersection Capacity Utilization	50.3%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
16: W Park Ave & Seaward Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop		Stop		Stop		Stop				
Volume (vph)	16	5	26	24	26	179	0	0	0	20	193	40
Peak Hour Factor	0.49	0.49	0.49	0.85	0.85	0.85	0.25	0.25	0.25	0.87	0.87	0.87
Hourly flow rate (vph)	36	11	58	31	34	232	0	0	0	25	244	51
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total (vph)	106	296	320									
Volume Left (vph)	36	31	25									
Volume Right (vph)	58	232	51									
Head (s)	-0.23	-0.41	-0.05									
Departure Headway (s)	4.9	4.5	4.8									
Degree Utilization, x	0.14	0.37	0.43									
Capacity (veh/h)	678	760	713									
Control Delay (s)	8.7	10.0	11.3									
Approach Delay (s)	8.7	10.0	11.3									
Approach LOS	A	B	B									
Intersection Summary												
Delay	10.4											
Level of Service	B											
Intersection Capacity Utilization	48.9%											
ICU Level of Service	A											
Analyst Period (min)	15											

San Ysidro CPU-Mobility Element
17: E Park Ave & Seaward Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop		Stop		Stop	
Volume (vph)	24	0	0	50	172	49
Peak Hour Factor	0.62	0.62	0.75	0.75	0.86	0.86
Hourly flow rate (vph)	43	0	0	73	220	63
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total (vph)	43	73	283			
Volume Left (vph)	0	0	220			
Volume Right (vph)	0	0	63			
Head (s)	0.03	0.03	0.06			
Departure Headway (s)	4.7	4.6	4.2			
Degree Utilization, x	0.06	0.09	0.33			
Capacity (veh/h)	712	722	827			
Control Delay (s)	8.0	8.1	9.3			
Approach Delay (s)	8.0	8.1	9.3			
Approach LOS	A	A	A			
Intersection Summary						
Delay	9.0					
Level of Service	A					
Intersection Capacity Utilization	30.7%					
ICU Level of Service	A					
Analyst Period (min)	15					

San Ysidro CPU-Mobility Element
 18: W San Ysidro Blvd & Howard Ave

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4	4	4	4
Sign Control		Stop	Stop	Stop	Stop	Stop
Volume (vph)	32	57	62	250	187	34
Peak Hour Factor	0.70	0.70	0.81	0.81	0.83	0.83
Hourly flow rate (vph)	50	90	84	340	248	45
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total (vph)	140	424	248	45		
Volume Left (vph)	50	0	248	0		
Volume Right (vph)	0	340	0	45		
Head (s)	0.11	-0.45	0.23	-0.57		
Departure Headway (s)	5.2	4.4	5.4	3.2		
Degree Utilization, x	0.20	0.51	0.37	0.04		
Capacity (veh/h)	643	787	610	1121		
Control Delay (s)	9.6	11.9	11.6	6.3		
Approach Delay (s)	A	B	B			
Approach LOS	A	B	B			
Intersection Summary	112					
Delay	B					
Level of Service	50.6%					
Intersection Capacity Utilization	ICU Level of Service					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 19: Dairy Mart Rd & W San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations	63	211	132	190	167	259	144	289	735	354	238	
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	4.4	4.9	4.9	4.4	4.9	4.9	4.4	5.5	4.4	4.4	5.4	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1473	1770	1863	1505	1731	1863	1551	1765	1528	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.60	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	1770	1863	1473	1770	1863	1505	1098	1863	1551	385	1528	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.94	0.94	0.94	0.94	0.94	
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Adj. Flow (vph)	68	229	143	216	190	294	153	307	782	377	253	
RTOR Reduction (vph)	0	0	101	0	0	184	0	0	157	0	0	
Lane Group Flow (vph)	68	229	42	216	190	110	153	307	625	377	253	
Confl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pl	NA	pm+ov	pm+pl	NA	
Protected Phases	5	2		1	6	3	8	1	7	4		
Permitted Phases			2			6	8			4		
Actuated Green, G (s)	6.3	24.7	24.7	13.5	31.9	31.9	20.0	16.0	29.5	32.1	23.7	
Effective Green, g (s)	6.3	24.7	24.7	13.5	31.9	31.9	20.0	16.0	29.5	32.1	23.7	
Actuated g/C Ratio	0.07	0.29	0.29	0.16	0.38	0.38	0.24	0.19	0.35	0.38	0.28	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.4	5.5	4.4	4.4	5.4	
Vehicle Extension (s)	2.0	2.9	2.9	2.0	2.9	2.9	2.0	3.9	2.0	2.0	3.9	
Lane Grp Cap (vph)	131	541	428	281	699	564	288	350	538	333	519	
v/s Ratio Prot	0.04	c0.12	0.03	0.12	0.10	0.07	0.02	0.16	c0.18	c0.15	0.14	
v/s Ratio Perm												
w/c Ratio	0.52	0.42	0.10	0.77	0.27	0.20	0.53	0.88	1.16	1.13	0.49	
Uniform Delay, d1	37.9	24.4	22.0	34.3	18.5	17.9	27.5	33.5	27.8	22.4	25.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.81	0.57	1.00	1.00	
Incremental Delay, d2	1.4	2.4	0.5	10.8	1.0	0.8	0.1	2.6	74.6	90.0	1.0	
Delay (s)	39.3	26.8	22.5	45.1	19.4	18.7	20.1	29.7	90.3	112.5	26.5	
Level of Service	D	C	C	D	B	B	C	C	F	F	C	
Approach Delay (s)	27.3			27.0			66.7			75.1		
Approach LOS	C			C			E			E		
Intersection Summary	D											
HCM 2000 Control Delay	53.6											
HCM 2000 Volume to Capacity ratio	0.92											
Actuated Cycle Length (s)	85.0											
Intersection Capacity Utilization	100.1%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 20: I-5 NB Ramps & W San Ysidro Blvd
 Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←←	←	←	←	←	←
Volume (vph)	650	507	428	398	87	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	4.6	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.96	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1545	1770	3539	1770	1505
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1545	1770	3539	1770	1505
Peak-hour factor, PHF	0.97	0.97	0.95	0.95	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	737	575	496	461	108	141
RTOR Reduction (vph)	0	53	0	0	0	108
Lane Group Flow (vph)	737	522	496	461	108	33
Confl. Peds. (#/hr)	30	30	30	30	30	30
Turn Type	NA	pm+ov	Prot	NA	NA	Perm
Permitted Phases	6	4	5	2	4	4
Actuated Green, G (s)	8.7	20.0	14.8	27.7	11.3	11.3
Effective Green, g (s)	8.7	20.0	14.8	27.7	11.3	11.3
Actuated g/C Ratio	0.18	0.41	0.31	0.57	0.23	0.23
Clearance Time (s)	4.6	4.6	4.2	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	638	788	543	2033	414	352
v/s Ratio Prot	0.21	0.16	0.28	0.13	0.06	0.02
v/s Ratio Perm	0.18	0.18	0.18	0.18	0.18	0.18
Uniform Delay, d1	1.16	0.66	0.91	0.23	0.26	0.09
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	86.7	2.1	19.8	0.1	0.3	0.1
Delay (s)	106.5	13.5	35.9	5.1	15.4	14.6
Level of Service	F	B	D	A	B	B
Approach Delay (s)	65.7			21.1	14.9	
Approach LOS	E			C	B	
Intersection Summary						
HCM 2000 Control Delay	43.7		HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.94		Sum of lost time (s)		13.4	
Actuated Cycle Length (s)	48.2		ICU Level of Service		C	
Intersection Capacity Utilization	70.7%		Analysis Period (min)		15	
c Critical Lane Group						

San Ysidro CPU-Mobility Element
 21: W San Ysidro Blvd & Sunset Ln
 Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	←	←	←	←	←
Volume (veh/h)	32	131	507	104	167	494
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	15%	0%	0%	0%
Peak Hour Factor	0.87	0.87	0.93	0.93	0.95	0.95
Hourly flow rate (vph)	37	151	545	112	176	520
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn lane (veh)			TWLT			None
Median type			TWLT			None
Median storage (veh)			2			525
Upstream signal (ft)						
pX, platoon unblocked	0.80					
vC, conflicting volume	1533	661				687
vC1, stage 1 conf vol	631					
vC2, stage 2 conf vol	902					
vCu, unblocked vol	1541	661				687
IC, 1 stage (s)	6.4	6.2				4.1
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3				2.2
p0 queue free %	86	66				80
cM capacity (veh/h)	256	440				884
Direction, Lane #						
Volume Total	37	151	657	176	520	
Volume Left	37	0	0	176	0	
Volume Right	0	151	112	0	0	
cSH	256	440	1700	884	1700	
Volume to Capacity	0.14	0.34	0.39	0.20	0.31	
Queue Length 95th (ft)	12	38	0	18	0	
Control Delay (s)	21.4	17.4	0.0	10.1	0.0	
Lane LOS	C	C	C	B	B	
Approach Delay (s)	18.2		0.0	2.5		
Approach LOS	C			B		
Intersection Summary						
Average Delay	3.4		ICU Level of Service		B	
Intersection Capacity Utilization	62.4%		Analysis Period (min)		15	

San Ysidro CPU-Mobility Element
 22: W San Ysidro Blvd & Averil Rd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	47	431	6	3	419	93	4	0	3	133	5	60
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.77	0.77	0.77	0.75	0.75	0.75
Hourly flow rate (vph)	57	521	7	4	518	115	6	0	4	195	7	88
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total (vph)	57	528	522	115	10	290						
Volume Left (vph)	57	0	4	0	6	195						
Volume Right (vph)	0	7	0	115	4	88						
Head (s)	0.53	0.02	0.04	-0.67	-0.11	-0.01						
Departure Headway (s)	7.2	6.7	6.7	6.0	8.2	7.0						
Degree Utilization, x	0.11	0.98	0.97	0.19	0.02	0.56						
Capacity (veh/h)	492	528	531	602	408	505						
Control Delay (s)	9.9	59.0	55.3	9.1	11.4	18.5						
Approach Delay (s)	54.2	47.0	E	E	B	C						
Approach LOS	F	E	E	E	B	C						
Intersection Summary												
Delay	44.1											
Level of Service	E											
Intersection Capacity Utilization	68.5%											
Analysis Period (min)	15											
ICU Level of Service	C											

San Ysidro CPU-Mobility Element
 23: W San Ysidro Blvd & Smythe Ave

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	15%	15%	15%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.67	0.67	0.67	0.96	0.96	0.96
Hourly flow rate (vph)	104	536	2	6	550	57	1	0	6	36	0	145
Pedestrians	30	30	30	30	30	30	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3	3	3	3	3	3	3
Right turn flare (veh)	TWLTL											
Median type	TWLTL											
Median storage (veh)	2											
Upstream signal (ft)	579											
pX, platoon unblocked	0.77											
vC, conflicting volume	637			568			1513	1425	597	1402	1398	639
vC1, stage 1 conf vol							776	776	621	621	621	
vC2, stage 2 conf vol							737	650	781	777		
vCu, unblocked vol	374			568			1517	1403	597	1372	1367	376
IC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
IC, 2 stage (s)							6.1	5.5	4.0	3.3	4.0	3.3
IF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			99			99	100	99	87	100	70
cM capacity (veh/h)	885			979			160	256	478	272	284	488
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	104	538	6	607	7	181						
Volume Left	104	0	6	0	1	36						
Volume Right	0	2	0	57	6	145						
cSH	885	1700	979	1700	342	421						
Volume to Capacity	0.12	0.32	0.01	0.36	0.02	0.43						
Queue Length 95th (ft)	10	0	0	0	0	2						
Control Delay (s)	9.6	0.0	8.7	0.0	15.7	19.8						
Lane LOS	A	A	A	A	C	C						
Approach Delay (s)	1.6	0.1	0.1	15.7	19.8							
Approach LOS	C	C	C	C	C							
Intersection Summary												
Average Delay	3.3											
Intersection Capacity Utilization	63.0%											
Analysis Period (min)	15											
ICU Level of Service	B											

San Ysidro CPU-Mobility Element
 24: Cottonwood Rd & W San Ysidro Blvd

San Ysidro CPU-Mobility Element
 25: Via de San Ysidro & W San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	62	587	8	14	525	217	2	2	5	298	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.97	0.99
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.97	0.99
Frt	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	1.00	0.98	0.98
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.99	0.99	1.00	0.96	0.96
Sald. Flow (prot)	1770	1856	1860	1860	1420	1657	1657	1657	1682	1682	1682
Flt Permitted	0.27	1.00	0.98	1.00	1.00	0.93	0.93	0.93	0.74	0.74	0.74
Sald. Flow (perm)	505	1856	1822	1420	1556	1305	1305	1305	1305	1305	1305
Peak-hour factor, PHF	0.90	0.90	0.90	0.94	0.94	0.58	0.58	0.58	0.58	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	76	717	10	16	614	254	4	4	9	368	4
RTOR Reduction (vph)	0	0	0	0	0	57	0	6	0	0	6
Lane Group Flow (vph)	76	727	0	0	630	197	0	11	0	0	422
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2	2	6	6	6	8	8	8	8	4	4
Permitted Phases	45.3	45.3	45.3	45.3	45.3	29.9	29.9	29.9	29.9	29.9	29.9
Actuated Green, G (s)	45.3	45.3	45.3	45.3	45.3	29.9	29.9	29.9	29.9	29.9	29.9
Effective Green, g (s)	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Actuated g/C Ratio	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Clearance Time (s)	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Vehicle Extension (s)	269	989	971	756	547	459	459	459	459	459	459
Lane Grp Cap (vph)	c0.39	0.15	0.35	0.14	0.01	0.01	0.01	0.01	0.01	0.01	0.01
v/s Ratio Prot	0.28	0.73	0.65	0.26	0.02	0.02	0.02	0.02	0.02	0.02	0.02
v/c Ratio	10.9	15.2	14.2	10.8	18.0	26.4	26.4	26.4	26.4	26.4	26.4
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	2.6	4.8	3.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incremental Delay, d2	13.5	20.1	17.5	11.6	18.0	49.2	49.2	49.2	49.2	49.2	49.2
Delay (s)	B	C	B	B	B	D	D	D	D	D	D
Level of Service	B	C	B	B	B	D	D	D	D	D	D
Approach Delay (s)	19.5	15.8	15.8	18.0	18.0	49.2	49.2	49.2	49.2	49.2	49.2
Approach LOS	B	B	B	B	B	D	D	D	D	D	D
Intersection Summary	HCM 2000 Control Delay: 23.9 HCM 2000 Level of Service: C HCM 2000 Volume to Capacity ratio: 0.81 Actuated Cycle Length (s): 85.0 Sum of lost time (s): 9.8 Intersection Capacity Utilization: 93.2% ICU Level of Service: F Analysis Period (min): 15 Critical Lane Group: c										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	0	642	320	410	444	0	294	0	651	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.95	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Sald. Flow (prot)	3539	1521	3433	1863	1770	1548	1770	1548	1770	1548	1770
Flt Permitted	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Sald. Flow (perm)	3539	1521	3433	1863	1770	1548	1770	1548	1770	1548	1770
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	768	383	490	531	0	352	0	778	0	0
RTOR Reduction (vph)	0	0	193	0	0	0	0	0	29	0	0
Lane Group Flow (vph)	0	768	190	490	531	0	352	0	749	0	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	NA	Perm	Prot	NA	Prot	NA	Spill	NA	pm+ov	NA	custom
Protected Phases	2	2	2	1	6	8	8	8	1	8	1
Permitted Phases	22.7	22.7	7.8	34.9	17.9	25.7	25.7	25.7	25.7	25.7	25.7
Actuated Green, G (s)	22.7	22.7	7.8	34.9	17.9	25.7	25.7	25.7	25.7	25.7	25.7
Effective Green, g (s)	0.37	0.37	0.13	0.56	0.29	0.41	0.41	0.41	0.41	0.41	0.41
Actuated g/C Ratio	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Clearance Time (s)	4.8	4.8	2.0	4.8	2.0	4.8	2.0	4.8	2.0	4.8	2.0
Vehicle Extension (s)	1293	555	431	1047	510	750	510	750	510	750	510
Lane Grp Cap (vph)	c0.22	0.13	0.14	0.29	0.20	0.13	0.20	0.13	0.13	0.13	0.13
v/s Ratio Prot	0.59	0.34	1.14	0.51	0.36	0.36	0.36	0.36	0.36	0.36	0.36
v/c Ratio	16.0	14.3	27.2	8.3	19.6	18.2	18.2	18.2	18.2	18.2	18.2
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.1	0.7	86.3	0.8	3.2	32.3	32.3	32.3	32.3	32.3	32.3
Incremental Delay, d2	17.0	15.0	113.5	9.1	22.9	50.5	50.5	50.5	50.5	50.5	50.5
Delay (s)	B	B	F	A	C	D	D	D	D	D	D
Level of Service	B	B	F	A	C	D	D	D	D	D	D
Approach Delay (s)	16.4	16.4	59.2	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
Approach LOS	B	B	E	E	D	D	D	D	D	D	D
Intersection Summary	HCM 2000 Control Delay: 38.3 HCM 2000 Level of Service: D HCM 2000 Volume to Capacity ratio: 0.90 Actuated Cycle Length (s): 82.1 Sum of lost time (s): 13.7 Intersection Capacity Utilization: 74.3% ICU Level of Service: D Analysis Period (min): 15 Critical Lane Group: c										

San Ysidro CPU-Mobility Element
 26: W San Ysidro Blvd/E San Ysidro Blvd & W Park Ave

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	1356	1057	0	0	108
Sign Control		Free	Free	Stop		
Grade		0%	0%	0%		
Peak Hour Factor	0.96	0.96	0.95	0.95	0.91	0.91
Hourly flow rate (vph)	0	1554	1224	0	0	131
Pedestrians		30	30		30	
Lane Width (ft)		12.0	12.0	12.0		
Walking Speed (ft/s)		4.0	4.0	4.0		
Percent Blockage		3	3	3		
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		233	383			
pX, platoon unblocked				0.83		
vC, conflicting volume	1254			2061	672	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1254			1862	672	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	66	
cM capacity (veh/h)	537			51	379	
Direction, Lane #	EB1	EB2	WB1	WB2	SB1	
Volume Total	777	777	612	612	131	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	131	
cSH	1700	1700	1700	1700	379	
Volume to Capacity	0.46	0.46	0.36	0.36	0.34	
Queue Length 95th (ft)	0	0	0	0	38	
Control Delay (s)	0.0	0.0	0.0	0.0	19.4	
Lane LOS					C	
Approach Delay (s)	0.0	0.0	0.0	0.0	19.4	
Approach LOS					C	
Intersection Summary						
Average Delay				0.9		
Intersection Capacity Utilization				50.9%	ICU Level of Service A	
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element
 27: E San Ysidro Blvd/W San Ysidro Blvd & E Park Ave

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	98	1200	1000	41	0	0
Sign Control		Free	Free	Stop		
Grade		0%	0%	0%		
Peak Hour Factor	0.94	0.94	0.95	0.95	0.69	0.69
Hourly flow rate (vph)	115	1404	1158	47	0	0
Pedestrians		30	30		30	
Lane Width (ft)		12.0	12.0	12.0	0.0	0.0
Walking Speed (ft/s)		4.0	4.0	4.0	4.0	4.0
Percent Blockage		3	3	3		
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		382	234			
pX, platoon unblocked				0.84		
vC, conflicting volume	1235			2173	663	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1235			2017	663	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	80			100	100	
cM capacity (veh/h)	560			33	394	
Direction, Lane #	EB1	EB2	EB3	WB1	WB2	
Volume Total	115	702	702	772	433	
Volume Left	115	0	0	0	0	
Volume Right	0	0	0	0	47	
cSH	560	1700	1700	1700	1700	
Volume to Capacity	0.20	0.41	0.41	0.45	0.25	
Queue Length 95th (ft)	19	0	0	0	0	
Control Delay (s)	13.1	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	1.0			0.0		
Approach LOS						
Intersection Summary						
Average Delay				0.6		
Intersection Capacity Utilization				50.9%	ICU Level of Service A	
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element
 28: I-805 SB Ramps & E San Ysidro Blvd

San Ysidro CPU-Mobility Element
 29: I-805 NB Ramps & E San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	0	969	539	247	714	0	0	0	0	534	15	599
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	0.95	1.00	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.96
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sald. Flow (prot)	3539	1507	3433	3539	1681	1478	1446	1446	1446	1478	1446	1446
Flt Permitted	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sald. Flow (perm)	3539	1507	3433	3539	1681	1478	1446	1446	1446	1478	1446	1446
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.25	0.25	0.25	0.72	0.72	0.72
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1088	605	323	935	0	0	0	0	816	23	915
RTOR Reduction (vph)	0	0	159	0	0	0	0	0	0	0	0	48
Lane Group Flow (vph)	0	1088	446	323	935	0	0	0	0	612	536	510
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2	1	6	6	6	6	4	4	4	4	4	4
Permitted Phases												
Actuated Green, G (s)	319	319	9.8	45.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
Effective Green, g (s)	319	319	9.8	45.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
Actuated g/C Ratio	0.35	0.35	0.11	0.51	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Clearance Time (s)	4.6	4.6	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1254	534	373	1804	651	573	560	560	560	573	560	560
v/s Ratio Prot	0.31	0.30	0.09	0.26	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
v/s Ratio Perm	0.87	0.84	0.87	0.52	0.94	0.93	0.91	0.91	0.91	0.93	0.91	0.91
Uniform Delay, d1	27.1	26.6	39.5	14.7	26.5	26.5	26.1	26.1	26.1	26.5	26.1	26.1
Progression Factor	1.00	1.00	0.72	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	14.3	9.3	0.5	21.7	22.6	19.0	19.0	19.0	22.6	19.0	19.0
Delay (s)	D	D	D	A	D	D	D	D	D	D	D	D
Level of Service	D	D	D	A	D	D	D	D	D	D	D	D
Approach Delay (s)	37.4	15.8	15.8	B	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
Approach LOS	D	B	B	B	D	D	D	D	D	D	D	D
Intersection Summary												
HCM 2000 Control Delay	35.4											
HCM 2000 Volume to Capacity ratio	0.90											
Actuated Cycle Length (s)	90.0											
Intersection Capacity Utilization	91.8%											
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	250	1330	0	839	778	120	0	433	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	0.97	0.96	1.00	0.95	0.98	1.00	1.00	0.97	1.00	1.00	1.00	0.96
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Sald. Flow (prot)	3433	3539	3222	3433	3222	1722	1522	1522	1522	1522	1522	1522
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Sald. Flow (perm)	3433	3539	3222	3433	3222	1722	1522	1522	1522	1522	1522	1522
Peak-hour factor, PHF	0.91	0.91	0.91	0.97	0.97	0.97	0.89	0.89	0.89	0.25	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	302	1608	0	951	882	148	0	535	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	184	0	0	0	0	0	0	0
Lane Group Flow (vph)	302	1608	0	1649	0	0	148	485	0	0	0	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	NA	NA	NA	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	2	6	6	6	4	4	4	4	4	4
Permitted Phases												
Actuated Green, G (s)	6.8	51.2	40.2	40.2	40.2	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Effective Green, g (s)	6.8	51.2	40.2	40.2	40.2	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Actuated g/C Ratio	0.08	0.57	0.45	0.45	0.45	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Clearance Time (s)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	259	2013	1439	1439	1439	566	500	500	500	566	500	500
v/s Ratio Prot	0.09	0.45	0.51	0.51	0.51	0.09	0.32	0.32	0.32	0.09	0.32	0.32
v/s Ratio Perm	1.17	0.80	1.15	1.15	1.15	0.28	0.97	0.97	0.97	0.28	0.97	0.97
Uniform Delay, d1	41.6	15.3	24.9	24.9	24.9	22.2	29.8	29.8	29.8	22.2	29.8	29.8
Progression Factor	0.73	0.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	91.8	1.5	74.3	74.3	74.3	0.2	32.1	32.1	32.1	0.2	32.1	32.1
Delay (s)	122.1	7.1	99.2	99.2	99.2	22.4	61.8	61.8	61.8	22.4	61.8	61.8
Level of Service	F	A	F	F	F	C	E	E	E	C	E	E
Approach Delay (s)	25.3	25.3	99.2	99.2	99.2	53.3	0.0	0.0	0.0	53.3	0.0	0.0
Approach LOS	C	C	F	F	F	D	A	A	A	D	A	A
Intersection Summary												
HCM 2000 Control Delay	60.2											
HCM 2000 Volume to Capacity ratio	1.08											
Actuated Cycle Length (s)	90.0											
Intersection Capacity Utilization	91.8%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 30: Border Village Rd (W) & E San Ysidro Blvd

San Ysidro CPU-Mobility Element
 31: Border Village Rd (E) & E San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	689	1193	0	963	725	417
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.95	1.00	0.95
Flt Protected	1.00	1.00	1.00	0.97	1.00	0.97
Satd. Flow (prot)	1863	1422	1863	1660	1863	1660
Flt Permitted	1.00	1.00	1.00	0.97	1.00	0.97
Satd. Flow (perm)	1863	1422	1863	1660	1863	1660
Peak-hour factor, PHF	0.95	0.95	0.93	0.93	0.84	0.84
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	798	1381	0	1139	949	546
RTOR Reduction (vph)	0	685	0	0	16	0
Lane Group Flow (vph)	798	896	0	1139	1479	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30
Turn Type	NA	Perm	NA	NA	NA	NA
Protected Phases	2	2	6	6	8	8
Permitted Phases						
Actuated Green, G (s)	34.1	34.1	34.1	56.1	56.1	56.1
Effective Green, g (s)	34.1	34.1	34.1	56.1	56.1	56.1
Actuated g/C Ratio	0.34	0.34	0.34	0.56	0.56	0.56
Clearance Time (s)	4.9	4.9	4.9	4.9	4.9	4.9
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0	2.0
Lane Grp Cap (vph)	635	484	635	931	931	931
v/s Ratio Prot	0.43	0.49	0.61	0.89	0.89	0.89
v/s Ratio Perm						
w/c Ratio	1.26	1.44	1.79	1.59	1.59	1.59
Uniform Delay, d1	33.0	33.0	33.0	21.9	21.9	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	128.0	208.3	363.5	269.9	269.9	269.9
Delay (s)	161.0	241.3	396.4	291.8	291.8	291.8
Level of Service	F	F	F	F	F	F
Approach Delay (s)	211.9	396.4	291.8	291.8	291.8	291.8
Approach LOS	F	F	F	F	F	F
Intersection Summary						
HCM 2000 Control Delay	280.4					
HCM 2000 Volume to Capacity ratio	1.67					
Actuated Cycle Length (s)	100.0					
Intersection Capacity Utilization	137.1%					
Analysis Period (min)	15					
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Volume (vph)	16	1022	24	226	887	0	23	377	26	1	12	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00	0.98
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00	0.98
Frt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00	0.85	1.00	0.96
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00	0.96	1.00	0.96	1.00	0.97	0.97
Satd. Flow (prot)	1770	1853	1770	3539	1744	1526	1682	1682	1682	1682	1682	1682
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00	0.79	1.00	0.82	1.00	0.82	0.82
Satd. Flow (perm)	1770	1853	1770	3539	1441	1526	1433	1433	1433	1433	1433	1433
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	20	1263	30	276	1084	0	29	4	477	42	2	19
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	202	0	14	0
Lane Group Flow (vph)	20	1292	0	276	1084	0	33	275	0	49	0	49
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	NA	Prot	NA	NA	Prot	NA	Perm	Perm	Perm	NA
Protected Phases	5	2	2	1	6	6	8	8	8	4	4	4
Permitted Phases												
Actuated Green, G (s)	1.9	31.3	17.1	46.5	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4
Effective Green, g (s)	1.9	31.3	17.1	46.5	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4
Actuated g/C Ratio	0.02	0.37	0.20	0.55	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Clearance Time (s)	4.4	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Vehicle Extension (s)	2.0	3.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	39	882	356	1936	379	402	377	377	377	377	377	377
v/s Ratio Prot	0.01	0.70	0.16	0.31	0.02	0.18	0.03	0.03	0.03	0.03	0.03	0.03
v/s Ratio Perm												
w/c Ratio	0.51	1.89	0.78	0.56	0.09	0.68	0.13	0.13	0.13	0.13	0.13	0.13
Uniform Delay, d1	41.1	26.8	32.1	12.6	23.6	28.1	23.9	23.9	23.9	23.9	23.9	23.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	407.8	9.3	1.2	0.0	3.8	0.1	0.1	0.1	0.1	0.1	0.1
Delay (s)	45.8	434.7	41.4	13.7	23.6	31.9	23.9	23.9	23.9	23.9	23.9	23.9
Level of Service	D	F	D	B	C	C	C	C	C	C	C	C
Approach Delay (s)	428.8	19.4	19.4	19.4	31.4	23.9	23.9	23.9	23.9	23.9	23.9	23.9
Approach LOS	F	F	B	B	C	C	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	166.9											
HCM 2000 Volume to Capacity ratio	1.24											
Actuated Cycle Length (s)	85.0											
Intersection Capacity Utilization	116.9%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 32: Camino de la Plaza/E Beyer Blvd & E San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Volume (vph)	210	319	737	92	153	31	600	154	567	37	82	153	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.9	4.9	4.9	5.8	4.0	4.0	
Lane Util. Factor	1.00	0.95	0.88	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.98	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frfl	1.00	1.00	0.85	1.00	0.97	1.00	1.00	1.00	0.85	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.98	1.00	1.00	
Satd. Flow (prot)	1770	3539	2708	1770	3366	1681	1718	1514	1834	1550	1550	1550	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.98	1.00	1.00	
Satd. Flow (perm)	1770	3539	2708	1770	3366	1681	1718	1514	1834	1550	1550	1550	
Peak-hour factor, PHF	0.86	0.86	0.86	0.79	0.79	0.79	0.96	0.96	0.96	0.94	0.94	0.94	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	269	408	943	128	213	43	688	176	650	43	96	179	
RTOR Reduction (vph)	0	0	222	0	11	0	0	0	320	0	0	0	
Lane Group Flow (vph)	269	408	721	128	245	0	427	437	330	0	139	179	
Canlt. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30	
Turn Type	Prot	NA	pm+ov	Prot	NA	Split	NA	Perm	Split	NA	NA	Free	
Protected Phases	5	2	3	1	6	3	3	3	3	4	4	4	
Permitted Phases	2	2	2	2	2	2	2	2	2	3	3	3	
Actuated Green, G (s)	22.8	25.8	66.7	13.1	16.1	40.9	40.9	40.9	40.9	19.7	19.5	19.5	
Effective Green, g (s)	22.8	25.8	66.7	13.1	16.1	40.9	40.9	40.9	40.9	19.7	19.5	19.5	
Actuated g/C Ratio	0.19	0.22	0.56	0.11	0.13	0.34	0.34	0.34	0.34	0.16	0.16	0.16	
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.9	4.9	4.9	5.8	4.0	4.0	
Vehicle Extension (s)	2.0	6.0	2.0	2.0	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	337	764	1622	194	453	575	588	518	302	1550	1550	1550	
v/s Ratio Prot	c0.15	c0.12	0.15	0.07	0.07	0.25	c0.25	0.22	0.22	c0.08	0.12	0.12	
v/s Ratio Perm	0.80	0.53	0.44	0.66	0.54	0.74	0.74	0.64	0.64	0.46	0.46	0.46	
Uniform Delay, d1	46.2	41.5	15.5	51.1	48.2	34.7	33.1	33.1	45.1	45.1	0.0	0.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.6	1.7	0.1	6.1	1.3	4.5	4.4	1.9	0.4	0.2	0.2	0.2	
Delay (s)	57.8	43.2	15.6	57.1	49.6	39.2	39.1	35.0	45.5	0.2	0.2	0.2	
Level of Service	E	D	B	E	D	D	D	C	C	D	D	A	
Approach Delay (s)	29.6	C	C	52.1	D	D	D	37.3	D	20.0	B	B	
Approach LOS	C	C	C	D	D	D	D	D	D	B	B	B	
Intersection Summary													
HCM 2000 Control Delay	34.1											HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68												
Actuated Cycle Length (s)	119.5											Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.1%											ICU Level of Service	F
Analysis Period (min)	15												
c Critical Lane Group													

San Ysidro CPU-Mobility Element
 33: I-5 NB Ramp & E San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Volume (vph)	125	83	670	124	37	7	183	136	40	0	248	65	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00	0.98	
Frfl	1.00	1.00	0.87	1.00	0.99	1.00	0.98	1.00	0.98	1.00	0.97	1.00	
Flt Protected	0.95	1.00	1.00	0.96	1.00	1.00	0.98	1.00	0.98	1.00	1.00	1.00	
Satd. Flow (prot)	1770	1476	1476	1770	1779	1779	1742	1775	1775	1775	1775	1775	
Flt Permitted	0.95	1.00	1.00	0.96	1.00	1.00	0.47	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1770	1476	1476	1779	1779	1779	835	835	835	1775	1775	1775	
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.79	0.79	0.79	0.86	0.86	0.86	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	148	98	792	153	46	9	255	189	56	0	317	83	
RTOR Reduction (vph)	0	225	0	0	2	0	0	0	0	0	0	0	
Lane Group Flow (vph)	148	665	0	0	206	0	0	495	0	0	389	0	
Canlt. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30	
Turn Type	Split	NA	NA	Split	NA	NA	Perm	NA	Perm	NA	NA	NA	
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6	
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2	2	
Actuated Green, G (s)	22.0	22.0	22.0	13.6	13.6	13.6	35.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	22.0	22.0	22.0	13.6	13.6	13.6	35.0	35.0	35.0	35.0	35.0	35.0	
Actuated g/C Ratio	0.27	0.27	0.27	0.16	0.16	0.16	0.42	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	471	393	292	292	292	353	353	353	353	752	752	752	
v/s Ratio Prot	0.08	c0.45	c0.12	c0.12	c0.12	c0.12	c0.59	c0.59	c0.59	0.22	0.22	0.22	
v/s Ratio Perm	0.31	1.69	0.71	0.71	0.71	1.40	1.40	1.40	1.40	0.52	0.52	0.52	
Uniform Delay, d1	24.3	30.3	32.6	32.6	32.6	23.8	23.8	23.8	23.8	17.6	17.6	17.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	322.0	7.6	7.6	7.6	197.1	197.1	197.1	197.1	0.6	0.6	0.6	
Delay (s)	24.6	352.3	40.2	40.2	40.2	220.9	220.9	220.9	220.9	18.2	18.2	18.2	
Level of Service	C	F	D	D	D	F	F	F	F	B	B	B	
Approach Delay (s)	305.6	F	40.2	40.2	40.2	220.9	220.9	220.9	220.9	18.2	18.2	18.2	
Approach LOS	F	F	D	D	D	F	F	F	F	B	B	B	
Intersection Summary													
HCM 2000 Control Delay	206.6											HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36												
Actuated Cycle Length (s)	82.6											Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.5%											ICU Level of Service	H
Analysis Period (min)	15												
c Critical Lane Group													

San Ysidro CPU-Mobility Element
 34.: Via de San Ysidro & I-5 NB Ramps

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	88	0	138	509	826	0	0	411	415
Sign Control		Stop		Stop			Free	Free			Free	Free
Grade		0%		0%			0%	0%			0%	0%
Peak Hour Factor	0.62	0.62	0.62	0.88	0.88	0.88	0.98	0.98	0.98	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	110	0	172	571	927	0	0	514	519
Pedestrians		30		30			30	30			30	30
Lane Width (ft)		0.0		12.0			12.0	12.0			12.0	12.0
Walking Speed (ft/s)		4.0		4.0			4.0	4.0			4.0	4.0
Percent Blockage		0		3			3	3			3	3
Right turn lane (veh)						2						
Median type							None	None			None	None
Median storage (veh)												
Upstream signal (ft)		0.49		0.49		0.49	0.49	0.49			0.49	0.49
pX platoon unblocked	2903	2903	576	2387	3162	987	1062	1062			957	957
vC, conflicting volume												
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	4367	4367	576	3312	4897	452	1062	1062			391	391
IC, 1 stage (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1	4.1			4.1	4.1
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2			2.2	2.2
p0 queue free %	100	100	100	0	100	33	12	100			100	100
cM capacity (veh/h)	0	0	449	0	0	258	651	651			556	556
Direction, Lane #	WB1	NB1	NB2	SB1	SB2							
Volume Total	282	571	927	342	690							
Volume Left	110	571	0	0	519							
Volume Right	172	0	0	0	0							
cSH	1	651	1700	1700	1700							
Volume to Capacity	286.18	0.88	0.55	0.20	0.41							
Queue Length 95th (ft)	Err	282	0	0	0							
Control Delay (s)	Err	37.2	0.0	0.0	0.0							
Lane LOS	F	E	E	F	F							
Approach Delay (s)	Err	14.2	0.0	0.0	0.0							
Approach LOS	F	F	F	F	F							
Intersection Summary												
Average Delay	1011.5											
Intersection Capacity Utilization	232.7%											
Analysis Period (min)	15											
	ICU Level of Service H											

San Ysidro CPU-Mobility Element
 35.: Via de San Ysidro & I-5 SB off-ramp

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	397	999	0	982	536	0
Ideal Flow (vphpl)	1000	1000	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6		4.6	4.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	0.95	1.00		1.00	1.00	
Sald. Flow (prot)	931	798		1863	3539	
Flt Permitted	0.95	1.00		1.00	1.00	
Sald. Flow (perm)	931	798		1863	3539	
Peak-hour factor, PHF	0.96	0.96	0.93	0.93	0.85	0.85
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	455	1145	0	1162	694	0
RTOR Reduction (vph)	0	307	0	0	0	0
Lane Group Flow (vph)	455	838	0	1162	694	0
Confl. Peds. (#/hr)	30	30	30		30	
Turn Type	NA	custom		NA	NA	30
Protected Phases	4	4			3	
Permitted Phases	3 4			7		
Actuated Green, G (s)	37.4	94.8		99.4	57.4	
Effective Green, g (s)	37.4	94.8		99.4	57.4	
Actuated g/C Ratio	0.25	0.63		0.66	0.38	
Clearance Time (s)	4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	528		1234	1354	
v/s Ratio Prot	0.49	0.40		0.62	0.20	
v/s Ratio Perm		0.66				
v/c Ratio	1.96	1.59		0.94	0.51	
Uniform Delay, d1	56.3	27.6		22.7	35.6	
Progression Factor	1.00	1.00		1.23	1.00	
Incremental Delay, d2	447.8	273.5		6.9	0.3	
Delay (s)	504.1	301.1		34.8	35.9	
Level of Service	F	F		C	D	
Approach Delay (s)		358.8		34.8	35.9	
Approach LOS		F		C	D	
Intersection Summary						
HCM 2000 Control Delay	185.0					
HCM 2000 Volume to Capacity ratio	1.27					
Actuated Cycle Length (s)	150.0					
Intersection Capacity Utilization	157.8%					
Analysis Period (min)	15					
	ICU Level of Service H					
	Sum of lost time (s) 18.0					
	ICU Level of Service H					
	c Critical Lane Group					

San Ysidro CPU-Mobility Element
 36: Calle Primera/Wilow Rd & Via de San Ysidro

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	183	621	32	0	400	664	33	43	30	706	25
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1200	1200
Ideal Flow (vphpl)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1770	1840	1863	1400	1688	1679	1042	905			
Sald. Flow (prot)	1770	1840	1863	1400	1688	1679	1042	905			
Flt Permitted	1770	1840	1863	1400	1688	1679	1042	905			
Sald. Flow (perm)	1770	1840	1863	1400	1688	1679	1042	905			
Peak-hour factor, PHF	0.80	0.80	0.80	0.88	0.88	0.88	0.85	0.85	0.85	0.91	0.91
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	252	854	44	0	500	830	43	56	39	853	30
RTOR Reduction (vph)	0	1	0	0	199	0	4	0	0	120	0
Lane Group Flow (vph)	252	897	0	0	500	631	43	91	0	853	265
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	NA	Perm	NA	custom	Perm	NA	Perm	NA	NA
Protected Phases	5	2		6	6	7	7	7	7	3	4
Permitted Phases				6	6	7	7	7	7	3	4
Actuated Green, G (s)	18.8	41.4		18.4	75.8	99.4	99.4	99.4	99.4	99.4	99.4
Effective Green, g (s)	18.8	41.4		18.4	75.8	99.4	99.4	99.4	99.4	99.4	99.4
Actuated g/C Ratio	0.13	0.28		0.12	0.51	0.66	0.66	0.66	0.66	0.66	0.66
Clearance Time (s)	4.2	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	221	507		228	707	570	1112	505	599		
v/s Ratio Prot	0.14	0.49		0.27	0.45	0.05	0.05	0.12	0.29		
v/s Ratio Perm											
v/c Ratio	1.14	1.77		2.19	0.89	0.08	0.08	1.69	0.44		
Uniform Delay, d1	65.6	54.3		65.8	33.4	9.0	9.0	25.3	12.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.75	0.50		
Incremental Delay, d2	103.5	353.7		551.0	13.6	0.1	0.0	310.9	0.0		
Delay (s)	169.1	408.0		616.8	47.0	9.0	9.1	329.7	6.1		
Level of Service	F	F		F	D	A	A	F	A		
Approach Delay (s)											
Approach LOS											
Intersection Summary											
HCM 2000 Control Delay											
HCM 2000 Volume to Capacity ratio											
Actuated Cycle Length (s)											
Intersection Capacity Utilization											
Analysis Period (min)											
c Critical Lane Group											

San Ysidro CPU-Mobility Element
 37: Dairy Mart Rd & I-5 SB Ramps

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	993	0	864	0	0	0	0	479	260	445	253
Volume (vph)	1200	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1118	1000	1118	1000	1863	1453	1770	1863			
Sald. Flow (prot)	1118	1000	1118	1000	1863	1453	1770	1863			
Flt Permitted	1118	1000	1118	1000	1863	1453	1770	1863			
Sald. Flow (perm)	1118	1000	1118	1000	1863	1453	1770	1863			
Peak-hour factor, PHF	0.93	0.93	0.93	0.50	0.50	0.50	0.91	0.91	0.91	0.92	0.92
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	1068	0	929	0	0	0	526	296	484	275	0
RTOR Reduction (vph)	0	0	192	0	0	0	0	115	0	0	0
Lane Group Flow (vph)	0	1068	737	0	0	0	526	171	484	275	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Split	NA	Prot	NA	NA	Perm	Prot	NA	Prot	NA	NA
Protected Phases	4	4	4	4	4	4	2	2	1	6	
Permitted Phases											
Actuated Green, G (s)	41.4	41.4	41.4	41.4	41.4	41.4	21.4	21.4	8.8	34.4	
Effective Green, g (s)	41.4	41.4	41.4	41.4	41.4	41.4	21.4	21.4	8.8	34.4	
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49	0.49	0.25	0.25	0.10	0.40	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.6	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	544	487		544	487	365	183	753			
v/s Ratio Prot	0.96	0.74		0.96	0.74	0.28	0.12	0.15			
v/s Ratio Perm											
v/c Ratio	1.96	1.51		1.96	1.51	0.47	2.64	0.37			
Uniform Delay, d1	21.8	21.8		21.8	21.8	31.8	27.0	38.1			
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.74			
Incremental Delay, d2	440.1	241.6		440.1	241.6	79.2	4.3	754.3			
Delay (s)	461.9	263.4		461.9	263.4	111.0	31.2	782.6			
Level of Service	F	F		F	F	C	F	B			
Approach Delay (s)											
Approach LOS											
Intersection Summary											
HCM 2000 Control Delay											
HCM 2000 Volume to Capacity ratio											
Actuated Cycle Length (s)											
Intersection Capacity Utilization											
Analysis Period (min)											
c Critical Lane Group											

San Ysidro CPU-Mobility Element
 38: Dairy Mart Rd & Servando Ave

San Ysidro CPU-Mobility Element
 39: Dairy Mart Rd & Camino De La Plaza

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBR	NBL	NBT	SBR
Lane Configurations	W			4	P
Sign Control	Stop	Stop	Stop	Stop	Stop
Volume (vph)	175	49	68	385	537
Peak Hour Factor	0.80	0.80	0.88	0.88	0.95
Hourly flow rate (vph)	219	61	77	438	565
Direction, Lane #	EB 1	NB 1	SB 1		
Volume Total (vph)	280	515	851		
Volume Left (vph)	219	77	0		
Volume Right (vph)	61	0	285		
Head (s)	0.06	0.06	-0.17		
Departure Headway (s)	6.9	6.0	5.7		
Degree Utilization, x	0.53	0.86	1.34		
Capacity (veh/h)	489	594	632		
Control Delay (s)	17.5	34.6	182.9		
Approach Delay (s)	C	D	F		
Approach LOS	C	D	F		
Intersection Summary					
Delay			108.4		
Level of Service			F		
Intersection Capacity Utilization			93.0%		ICU Level of Service
Analysis Period (min)			15		F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	6	395	76	12	558	23
Volume (veh/h)	6	395	76	12	558	23
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.93	0.93	0.73	0.73	0.89	0.89
Hourly flow rate (vph)	7	467	115	18	690	28
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	4.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1591	184			163	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1591	184			163	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	87	43			50	
cM capacity (veh/h)	56	816			1381	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	7	467	133	718		
Volume Left	7	0	0	690		
Volume Right	0	467	18	0		
cSH	56	816	1700	1381		
Volume to Capacity	0.13	0.57	0.08	0.50		
Queue Length 95th (ft)	10	92	0	72		
Control Delay (s)	F	C	A	A		
Lane LOS	F	C	A	A		
Approach Delay (s)	16.1	0.0	0.0	10.0		
Approach LOS	C					
Intersection Summary						
Average Delay			11.2			
Intersection Capacity Utilization			58.3%		ICU Level of Service	B
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
40: Camino de la Plaza & Bibler Dr

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	10	133	273	8	203	389
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	5.3	4.0	5.3	5.3
Total Lost time (s)	1.00	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	1.00	0.97	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	0.85	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1537	3518	1770	3539	3539
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1537	3518	1770	3539	3539
Peak-hour factor, PHF	0.88	0.88	0.90	0.90	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	12	166	334	10	254	486
RTOR Reduction (vph)	0	135	2	0	0	0
Lane Group Flow (vph)	12	31	342	0	254	486
Canfl. Peds. (#/hr)	30	30	30	30	30	30
Turn Type	NA	Perm	NA	Prot	NA	NA
Protected Phases	8		2	1	6	
Permitted Phases		8				6
Actuated Green, G (s)	9.1	9.1	13.9	12.8	30.7	30.7
Effective Green, g (s)	9.1	9.1	13.9	12.8	30.7	30.7
Actuated g/C Ratio	0.19	0.19	0.28	0.26	0.63	0.63
Clearance Time (s)	4.0	4.0	5.3	4.0	5.3	5.3
Vehicle Extension (s)	2.0	2.0	3.6	2.0	3.6	3.6
Lane Grp Cap (vph)	328	284	995	461	2212	2212
v/s Ratio Prot	0.01	c0.10	c0.10	c0.14	0.14	0.14
v/s Ratio Perm						
v/c Ratio	0.04	0.11	0.34	0.55	0.22	0.22
Uniform Delay, d1	16.4	16.6	14.0	15.7	4.0	4.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	0.3	0.8	0.1	0.1
Delay (s)	16.4	16.7	14.2	16.5	4.1	4.1
Level of Service	B	B	B	B	A	A
Approach Delay (s)	16.7	14.2	14.2	16.5	8.3	8.3
Approach LOS	B	B	B	B	A	A
Intersection Summary						
HCM 2000 Control Delay	11.1					
HCM 2000 Volume to Capacity ratio	0.36					
Actuated Cycle Length (s)	49.1					
Intersection Capacity Utilization	50.5%					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element
41: Willow Rd & Camino de la Plaza

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	135	223	39	73	223	454	34	159	105	434	243	51
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.4	4.9	4.4	4.4	4.9	4.4	4.4	4.9	4.4	4.9	4.4	4.9
Total Lost time (s)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00	0.99
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	0.98	1.00	1.00	0.90	1.00	1.00	0.94	1.00	1.00	1.00	0.97
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	3420	1770	3002	1770	3002	1770	1716	1770	1802	1770	1802
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1770	3420	1770	3002	1770	3002	1770	1716	1770	1802	1770	1802
Peak-hour factor, PHF	0.84	0.84	0.84	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	177	292	51	93	285	581	40	186	123	562	314	66
RTOR Reduction (vph)	0	18	0	0	462	0	0	29	0	0	0	8
Lane Group Flow (vph)	177	325	0	93	404	0	40	280	0	562	372	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	2	Prot	NA	6	Prot	NA	3	8	Prot	NA
Protected Phases	5			1			3				7	
Permitted Phases												4
Actuated Green, G (s)	7.7	18.5	4.7	15.5	4.7	15.5	3.4	15.4	21.9	33.9	21.9	33.9
Effective Green, g (s)	7.7	18.5	4.7	15.5	4.7	15.5	3.4	15.4	21.9	33.9	21.9	33.9
Actuated g/C Ratio	0.10	0.23	0.06	0.20	0.06	0.20	0.04	0.19	0.28	0.43	0.28	0.43
Clearance Time (s)	4.4	4.9	4.4	4.9	4.4	4.9	4.4	4.9	4.4	4.9	4.4	4.9
Vehicle Extension (s)	2.0	3.3	2.0	3.3	2.0	3.3	2.0	2.0	2.0	2.0	2.0	2.7
Lane Grp Cap (vph)	172	799	105	588	105	588	76	334	490	772	490	772
v/s Ratio Prot	c0.10	c0.10	0.05	c0.13	0.05	c0.16	0.02	c0.16	0.02	c0.32	0.21	0.21
v/s Ratio Perm												
v/c Ratio	1.03	0.41	0.89	0.69	0.89	0.69	0.53	0.84	1.15	0.48	1.15	0.48
Uniform Delay, d1	35.7	25.7	36.9	29.5	36.9	29.5	37.1	30.7	28.6	16.3	28.6	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	76.5	0.4	51.9	3.4	51.9	3.4	3.0	15.9	87.7	0.4	87.7	0.4
Delay (s)	112.2	26.0	88.8	32.9	88.8	32.9	40.1	46.6	116.3	16.7	116.3	16.7
Level of Service	F	C	F	C	F	C	D	D	F	B	F	B
Approach Delay (s)	55.4	E	38.4	D	38.4	D	45.8	D	76.1	E	76.1	E
Approach LOS	E		D		D		D		E		E	
Intersection Summary												
HCM 2000 Control Delay	55.3											
HCM 2000 Volume to Capacity ratio	0.92											
Actuated Cycle Length (s)	79.1											
Intersection Capacity Utilization	92.2%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
42: Camiones Way/I-5 SB Ramps & Camino de la Plaza

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	474	625	25	43	432	448	59	23	107	291	170	830
Volume (vph)	1400	1900	1900	1400	1400	1400	1900	1400	1900	1900	1900	1900
Ideal Flow (vphpl)	4.2	4.6	4.2	4.6	4.6	4.6	4.2	4.6	4.2	4.6	4.6	4.2
Total Lost time (s)	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	0.99	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	0.85
Frt	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00
Frt Protected	1304	3507	1770	1863	1108	1770	1373	1519	1770	1863	1553	1553
Sald. Flow (prot)	0.84	0.84	0.84	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Frt Permitted	125%	100%	100%	100%	125%	100%	125%	100%	100%	100%	100%	100%
Sald. Flow (perm)	1304	3507	1770	1863	1108	1770	1373	1519	1770	1863	1553	1553
Peak-hour factor, PHF	0.84	0.84	0.84	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94
Growth Factor (vph)	125%	100%	100%	100%	125%	100%	125%	100%	100%	100%	100%	100%
Adj. Flow (vph)	705	744	30	47	475	615	63	31	115	310	181	883
RTOR Reduction (vph)	0	1	0	0	0	111	0	0	90	0	0	25
Lane Group Flow (vph)	705	773	0	47	475	504	63	31	25	310	181	888
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot
Protected Phases	5	2		1	6	7	3	8	1	7	4	4
Permitted Phases												
Actuated Green, G (s)	52.9	80.2	9.1	36.4	57.8	7.0	12.9	22.0	21.4	27.7	80.6	80.6
Effective Green, g (s)	52.9	80.2	9.1	36.4	57.8	7.0	12.9	22.0	21.4	27.7	80.6	80.6
Actuated g/C Ratio	0.37	0.57	0.06	0.26	0.41	0.05	0.09	0.16	0.15	0.20	0.57	0.57
Clearance Time (s)	4.2	4.6	4.2	4.6	4.6	4.2	4.6	4.2	4.6	4.6	4.2	4.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	487	1986	113	478	488	87	125	236	267	364	883	883
v/s Ratio Prot	0.54	0.22	0.03	0.26	0.16	0.04	0.02	0.01	0.18	0.10	0.36	0.36
v/s Ratio Perm												
v/c Ratio	1.45	0.39	0.42	0.99	1.03	0.72	0.25	0.11	1.16	0.50	0.97	0.97
Uniform Delay, d1	44.3	17.1	63.7	52.5	41.9	66.3	59.8	51.4	60.1	50.7	29.4	29.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	212.8	0.1	2.5	39.3	49.3	25.6	1.0	0.2	105.8	1.1	23.4	23.4
Delay (s)	257.1	17.2	66.2	91.8	91.2	91.9	60.9	51.6	165.9	51.8	52.7	52.7
Level of Service	F	B	E	F	F	F	F	E	D	F	D	D
Approach Delay (s)												
Approach LOS												
Intersection Summary												
HCM 2000 Control Delay												
HCM 2000 Volume to Capacity ratio												
Actuated Cycle Length (s)												
Intersection Capacity Utilization												
Analysis Period (min)												
c Critical Lane Group												

San Ysidro CPU-Mobility Element
43: Smythe Ave & Avenida de la Madrid

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	24	9	27	77	11	122	17	369	46	200	396	29
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.8	4.0	4.8	4.0	4.8
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	0.95
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	0.94	1.00	0.92	1.00	0.98	1.00	0.98	1.00	1.00	1.00	0.99
Frt	0.98	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frt Protected	1685	3507	1770	1646	1646	1770	1770	3458	1770	3488	1770	3488
Sald. Flow (prot)	0.86	0.86	0.86	0.85	0.85	0.85	0.85	0.95	1.00	0.95	1.00	1.00
Frt Permitted	1470	3507	1770	1426	1426	1770	3458	1770	3458	1770	3488	3488
Peak-hour factor, PHF	0.70	0.70	0.70	0.94	0.94	0.94	0.94	0.75	0.75	0.75	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	38	14	42	90	13	143	25	541	67	253	501	37
RTOR Reduction (vph)	0	31	0	0	85	0	0	13	0	0	7	0
Lane Group Flow (vph)	0	63	0	0	161	0	25	595	0	253	531	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Perm	NA	Prot	NA	Perm	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4											
Permitted Phases												
Actuated Green, G (s)	13.7	13.7	13.7	13.7	13.7	13.7	13.7	19.6	19.6	19.6	25.9	25.9
Effective Green, g (s)	13.7	13.7	13.7	13.7	13.7	13.7	13.7	19.6	19.6	19.6	25.9	25.9
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.37	0.37	0.37	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.8	4.0	4.8	4.0	4.8
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.1	2.0	4.1	2.0	4.1
Lane Grp Cap (vph)	375	375	375	364	364	364	39	1264	247	1885	364	1885
v/s Ratio Prot	0.04	0.17	0.17	0.17	0.17	0.17	0.01	0.17	0.17	0.17	0.15	0.15
v/s Ratio Perm												
v/c Ratio	0.17	0.44	0.44	0.44	0.44	0.44	0.64	0.47	1.02	0.32	0.32	0.32
Uniform Delay, d1	15.5	16.7	16.7	16.7	16.7	16.7	26.0	13.0	23.1	8.4	8.4	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	0.1	0.3	0.3	0.3	23.8	0.4	63.7	0.2	0.2	0.2
Delay (s)	15.6	17.1	17.1	17.1	17.1	17.1	49.8	13.4	86.7	8.6	8.6	8.6
Level of Service	B	B	B	B	B	B	D	B	F	A	A	A
Approach Delay (s)												
Approach LOS												
Intersection Summary												
HCM 2000 Control Delay												
HCM 2000 Volume to Capacity ratio												
Actuated Cycle Length (s)												
Intersection Capacity Utilization												
Analysis Period (min)												
c Critical Lane Group												

San Ysidro CPU-Mobility Element
44: Avenida de la Madras & Alaquinas Dr

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	Slop	
Sign Control				4	Slop	
Volume (vph)	43	57	41	54	44	25
Peak Hour Factor	0.88	0.88	0.89	0.89	0.71	0.71
Hourly flow rate (vph)	54	71	51	67	68	39
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	125	117	107			
Volume Left (vph)	54	51	0			
Volume Right (vph)	71	0	39			
Head (s)	-0.22	0.12	-0.18			
Departure Headway (s)	4.2	4.4	4.1			
Degree Utilization, x	0.15	0.14	0.12			
Capacity (veh/h)	819	785	842			
Control Delay (s)	7.9	8.2	7.7			
Approach Delay (s)	7.9	8.2	7.7			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			30.3%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
45: E San Ysidro Blvd & Center St

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	W	W	W	W	W
Volume (veh/h)	210	1623	1726	26	0	208
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	308	2380	2531	38	0	305
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None	None		
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)		169	260			0.64
pX, platoon unblocked						4357
vC, conflicting volume	2570					1285
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	2570					1285
vCu, unblocked vol	4.1					6.8
IC, 1 stage (s)	2.2					3.5
IC, 2 stage (s)	2.2					3.3
p0 queue free %	0					0
cM capacity (veh/h)	168					155
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	308	1190	1190	1688	882	305
Volume Left	308	0	0	0	0	0
Volume Right	0	0	0	0	38	305
cSH	168	1700	1700	1700	1700	155
Volume to Capacity	1.83	0.70	0.70	0.99	0.52	1.96
Queue Length 95th (ft)	564	0	0	0	0	589
Control Delay (s)	442.1	0.0	0.0	0.0	0.0	504.0
Lane LOS	F					F
Approach Delay (s)	50.7			0.0		504.0
Approach LOS						F
Intersection Summary						
Average Delay				92.1		
Intersection Capacity Utilization				74.2%		ICU Level of Service D
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element
46: Cottonwood Rd & Seaward Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			1080			
pX platoon unblocked						
vC, conflicting volume	60	60				30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	60				30
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	100	100				100
cM capacity (veh/h)	900	956				1543
Direction, Lane #	WB 1	NB 1	SB 1	SB 1		
Volume Total	0	0	0	0		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	26.0%		ICU Level of Service		A	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
47: Vista Ln & S Vista Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (veh/h)	49	48	92	132	250	181
Sign Control	Stop	Stop	Stop	Stop	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	72	70	135	194	367	265
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume	1187	926	1059	60	30	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1187	926	1059	60	30	30
IC, single (s)	7.1	6.5	6.5	6.2	4.1	4.1
IC, 2 stage (s)						
IF (s)	3.5	4.0	4.0	3.3	2.2	2.2
p0 queue free %	0	64	17	80	76	76
cM capacity (veh/h)	32	195	163	956	1543	1543
Direction, Lane #	EB 1	WB 1	SB 1	SB 1		
Volume Total	142	329	632			
Volume Left	72	0	367			
Volume Right	0	194	265			
cSH	54	318	1543			
Volume to Capacity	2.64	1.03	0.24			
Queue Length 95th (ft)	367	294	23			
Control Delay (s)	905.4	96.3	5.6			
Lane LOS	F	F	A			
Approach Delay (s)	905.4	96.3	5.6			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay	148.7					
Intersection Capacity Utilization	60.1%		ICU Level of Service		B	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
48: Camino de la Plaza & Virginia Ave

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	2	1118	66	273	358	5	66	0	273	8	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	3	1640	97	400	525	7	97	0	400	12	0	3
Pedestrians	30	30	30	30	30	30	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3	3	3	3	3	3	3
Right turn flare (veh)												
Median type	TW/TL	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)	2											
Upstream signal (ft)												
pX platoon unblocked	562	1767	2820	3087	928	2616	3132	326				
vC, conflicting volume												
vC1, stage 1 conf vol	1724	1724	1724	1724	1724	1724	1724	1724	1724	1724	1724	1724
vC2, stage 2 conf vol	1096	1363	1256	1772								
vCu, unblocked vol	562	1767	2820	3087	928	2616	3132	326				
IC, single (s)	4.1	4.1	7.5	6.5	6.9	7.5	6.5	6.9	6.9			
IC, 2 stage (s)			6.5	5.5	6.5	5.5	5.5	5.5	5.5			
IF (s)	2.2	2.2	3.5	4.0	3.3	3.5	4.0	3.3				
p0 queue free %	100	0	0	0	0	0	0	0	100			
cM capacity (veh/h)	980	340	0	0	256	0	0	636				
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	3	1093	643	200	200	350	182	97	400	15		
Volume Left	3	0	0	200	200	0	0	97	0	12		
Volume Right	0	0	97	0	0	0	7	0	400	3		
cSH	980	1700	1700	340	1700	1700	0	256	0			
Volume to Capacity	0.00	0.64	0.38	1.18	1.18	0.21	0.11	Err	1.56	Err		
Queue Length 95th (ft)	0	0	0	414	414	0	0	Err	605	Err		
Control Delay (s)	8.7	0.0	0.0	139.9	139.9	0.0	0.0	Err	306.5	Err		
Lane LOS	A	F	F	F	F	F	F	F	F	F		
Approach Delay (s)	0.0	60.1	Err	Err	Err	Err	Err	Err	Err	Err		
Approach LOS			F	F	F	F	F	F	F	F		
Intersection Summary												
Average Delay	Err											
Intersection Capacity Utilization	76.3%											
ICU Level of Service	D											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
66: Sycamore Rd & Willow Rd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	122	24	24	323	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	537	106	106	1421	158	158
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	252				0.76	0.76
pX platoon unblocked					672	2282
vC, conflicting volume						
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	406	2533	376			
IC, single (s)	4.1	4.1	6.4	6.2		
IC, 2 stage (s)			2.2	3.5	3.3	
IF (s)			88	0	67	
p0 queue free %			850	19	482	
cM capacity (veh/h)	642	1527	317			
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	642	1527	317			
Volume Left	0	106	158			
Volume Right	106	0	158			
cSH	1700	850	37			
Volume to Capacity	0.38	0.12	8.66			
Queue Length 95th (ft)	0	11	Err			
Control Delay (s)	0.0	7.6	Err			
Lane LOS	A	F	F			
Approach Delay (s)	0.0	7.6	Err			
Approach LOS			F			
Intersection Summary						
Average Delay	1278.9					
Intersection Capacity Utilization	52.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
81: Hall Rd & E San Ysidro Blvd/E: San Ysidro Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	806	139	139	769	139	139
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1182	204	204	1128	204	204
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	Raised	Raised	Raised	Raised	Raised	Raised
Median storage (veh)	1	1	1	1	1	1
Upstream signal (ft)	212	0.66	0.66	0.66	0.66	0.66
pX, platoon unblocked	1416	2880	2880	1344	1344	1344
vC, conflicting volume	1373	1586	1586	1314	1314	1314
vC1, stage 1 conf vol	1373	3583	3583	1265	1265	1265
vC2, stage 2 conf vol	4.1	6.4	6.2	5.4	5.4	5.4
vCu, unblocked vol	2.2	3.5	3.3	3.3	3.3	3.3
IC, 2 stage (s)	37	0	0	0	0	0
IF (s)	323	46	130			
p0 queue free %						
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1386	204	1128	408	408	
Volume Left	0	204	0	204	204	
Volume Right	204	0	0	204	204	
cSH	1700	323	1700	67	67	
Volume to Capacity	0.82	0.63	0.66	6.04	6.04	
Queue Length 95th (ft)	0	101	0	Err	Err	
Control Delay (s)	0.0	33.5	0.0	Err	Err	
Lane LOS	D	F	F	F	F	
Approach Delay (s)	0.0	5.1	Err	Err	F	
Approach LOS						
Intersection Summary						
Average Delay	1306.6					
Intersection Capacity Utilization	94.0%					ICU Level of Service
Analysis Period (min)	15					F

San Ysidro CPU-Mobility Element
83: E: San Ysidro Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	270	32	32	172	32	32
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1188	141	141	757	141	141
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	None	None	None	None	None	None
Median storage (veh)	486	0.67	0.67	0.67	0.67	0.67
Upstream signal (ft)	1359	2357	2357	1318	1318	1318
pX, conflicting volume	1288	1068	1068	1288	1288	1288
vC1, stage 1 conf vol	1288	2788	2788	1068	1068	1068
vC2, stage 2 conf vol	4.1	6.4	6.2	5.4	5.4	5.4
vCu, unblocked vol	2.2	3.5	3.3	3.3	3.3	3.3
IC, 2 stage (s)	60	0	0	0	0	0
IF (s)	349	127	138			
p0 queue free %						
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	141	757	282	282	
Volume Left	0	141	0	141	141	
Volume Right	141	0	0	141	141	
cSH	1700	349	1700	132	132	
Volume to Capacity	0.78	0.40	0.45	2.14	2.14	
Queue Length 95th (ft)	0	47	0	582	582	
Control Delay (s)	0.0	22.1	0.0	590.9	590.9	
Lane LOS	C	F	F	F	F	
Approach Delay (s)	0.0	3.5	590.9	F	F	
Approach LOS						
Intersection Summary						
Average Delay	67.6					
Intersection Capacity Utilization	41.8%					ICU Level of Service
Analysis Period (min)	15					A

San Ysidro CPU-Mobility Element
 87: Virginia Av & E: San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	TW/TL			None		
Median storage (veh)	2					
Upstream signal (ft)	918					
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73	0.73
vC, conflicting volume	1359			2399	1277	1277
vC1, stage 1 conf vol				1152		
vC2, stage 2 conf vol	1306			2737	1192	1192
vCU, unblocked vol	4.1	6.4	6.2	6.4	6.2	6.2
IC, single (s)	4.1	5.4	5.4	5.4	5.4	5.4
IC, 2 stage (s)	2.2	3.5	3.3	3.5	3.3	3.3
p0 queue free %	40	0	0	0	0	0
cM capacity (veh/h)	375	375	98	98	157	157
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	375	1700	121		
Volume to Capacity	0.78	0.60	0.40	3.72		
Queue Length 95th (ft)	0	93	0	Err		
Control Delay (s)	0.0	27.9	0.0	Err		
Lane LOS	D	F	F	F		
Approach Delay (s)	0.0	7.0	Err	Err		
Approach LOS				F		
Intersection Summary						
Average Delay	1679.8					
Intersection Capacity Utilization	43.1%			ICU Level of Service A		
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
 90: Border Village Rd (W)/Border Village Rd (E) & Virginia Av

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	80	120	134	80	80	80
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	528	590	352	352	352
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None		
Median storage (veh)						
Upstream signal (ft)			925			
pX, platoon unblocked						
vC, conflicting volume	972				2058	826
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	972				2058	826
vCU, unblocked vol	4.1	6.4	6.2	6.4	6.2	6.2
IC, single (s)	4.1	5.4	5.4	5.4	5.4	5.4
IC, 2 stage (s)	2.2	3.5	3.3	3.5	3.3	3.3
p0 queue free %	49	0	0	0	0	0
cM capacity (veh/h)	692	692	28	28	354	354
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	880	942	704			
Volume Left	352	0	352			
Volume Right	0	352	352			
cSH	692	1700	52			
Volume to Capacity	0.51	0.55	13.44			
Queue Length 95th (ft)	73	0	Err			
Control Delay (s)	13.0	0.0	Err			
Lane LOS	B	F	F			
Approach Delay (s)	13.0	0.0	Err			
Approach LOS			F			
Intersection Summary						
Average Delay	2791.7					
Intersection Capacity Utilization	48.7%			ICU Level of Service A		
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element
92: Border Village Rd (W) & Hall Rd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (veh/h)	0	20	0	0	20	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	88	0	0	88	0
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)					203	
pX, platoon unblocked						
vC, conflicting volume	236	60			30	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCU, unblocked vol	236	60			30	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	91			94	
cM capacity (veh/h)	674	956			1543	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	88	0	88			
Volume Left	0	0	88			
Volume Right	88	0	0			
cSH	956	1700	1543			
Volume to Capacity	0.09	0.00	0.06			
Queue Length 95th (ft)	8	0	5			
Control Delay (s)	9.1	0.0	7.5			
Lane LOS	A	A	A			
Approach Delay (s)	9.1	0.0	7.5			
Approach LOS	A		A			
Intersection Summary						
Average Delay			8.3			
Intersection Capacity Utilization			26.2%	ICU Level of Service A		
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
95: E. San Ysidro Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	TW/TL	TW/TL	TW/TL	TW/TL	TW/TL	TW/TL
Median storage (veh)	2			2		
Upstream signal (ft)	685			0.68	0.68	0.68
pX, platoon unblocked				1359	2399	1277
vC, conflicting volume					1247	
vC1, stage 1 conf vol					1152	
vC2, stage 2 conf vol					2823	1171
vCU, unblocked vol				1292	6.4	6.2
IC, single (s)				4.1	5.4	5.4
IC, 2 stage (s)					3.5	3.3
IF (s)				2.2	3.7	0
p0 queue free %				37	0	0
cM capacity (veh/h)				355	90	151
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	355	1700	113		
Volume to Capacity	0.78	0.63	0.40	3.96		
Queue Length 95th (ft)	0	103	0	Err		
Control Delay (s)	0.0	31.0	0.0	Err		
Lane LOS	D	D	D	F		
Approach Delay (s)	0.0	7.7	Err	F		
Approach LOS				F		
Intersection Summary						
Average Delay			1680.1			
Intersection Capacity Utilization			43.1%	ICU Level of Service A		
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
98: Virginia Av

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Volume (veh/h)	80	80	80	80	0	80
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	0	352
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	940	588			734	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	940	588			734	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	0	27			100	
cM capacity (veh/h)	278	484			849	
Direction, Lane #	WB1	NB1	SB1			
Volume Total	704	704	362			
Volume Left	362	0	0			
Volume Right	352	352	0			
cSH	353	1700	849			
Volume to Capacity	1.99	0.41	0.00			
Queue Length 95th (ft)	1230	0	0			
Control Delay (s)	481.7	0.0	0.0			
Lane LOS	F	F	F			
Approach Delay (s)	481.7	0.0	0.0			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay			192.7			
Intersection Capacity Utilization			32.0%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
100: E. San Ysidro Blvd/E. San Ysidro Blvd

Horizon Year Alternative B
Timing Plan: PM PEAK HOUR

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	178	20	20	164	20	20
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	783	88	88	722	88	88
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)	None	None	None	None	None	None
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			901		1785	887
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			901		1871	887
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			88		0	73
cM capacity (veh/h)			735		51	326
Direction, Lane #	EB1	WB1	WB2	NB1		
Volume Total	871	88	722	176		
Volume Left	0	88	0	88		
Volume Right	88	0	0	88		
cSH	1700	735	1700	88		
Volume to Capacity	0.51	0.12	0.42	2.00		
Queue Length 95th (ft)	0	10	0	383		
Control Delay (s)	0.0	10.6	0.0	566.8		
Lane LOS	F	B	F	F		
Approach Delay (s)	0.0	1.1	566.8			
Approach LOS	F	F	F	F		
Intersection Summary						
Average Delay			54.2			
Intersection Capacity Utilization			34.8%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 103: W San Ysidro Blvd/E San Ysidro Blvd & West Olive Dr

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frbp, ped/bikes												
Frbp, ped/bikes												
Frt												
Flt Protected												
Sald. Flow (prot)												
Flt Permitted												
Sald. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Canfl. Peds. (#/hr)	30	30	30	30	30	30	30	30	30	30	30	30
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases		4				8		2				6
Permitted Phases	4		8	8			2					6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service	0.0			0.0			0.0		0.0			0.0
Approach Delay (s)	A			A			A		A			A
Approach LOS												
Intersection Summary												
HCM 2000 Control Delay	0.0 HCM 2000 Level of Service A											
HCM 2000 Volume to Capacity ratio	0.00											
Actuated Cycle Length (s)	85.0 Sum of lost time (s) 8.0											
Intersection Capacity Utilization	29.7% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element
 104: Border Village Rd (E)

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	6	4	1	1	1	1	1	1	1	1	1	1
Volume (veh/h)	41	53	6	6	6	6	6	6	6	6	6	6
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	26	180	233	26	26	26	26	26	26	26	26	26
Pedestrians	30	30	30	30	30	30	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3	3	3	3	3	3	3
Right turn lane (veh)	None	None	None	None	None	None	None	None	None	None	None	None
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)		453										
pX, platoon unblocked												
vC, conflicting volume	290									540		306
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCU, unblocked vol	290									540		306
IC, 1 stage (s)	4.1									6.4		6.2
IC, 2 stage (s)												
pQ queue free %	2.2									3.5		3.3
IF (s)	98									94		96
cM capacity (veh/h)	1240									468		697
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total	207	260	53									
Volume Left	26	0	26									
Volume Right	0	26	26									
cSH	1240	1700	560									
Volume to Capacity	0.02	0.15	0.09									
Queue Length 95th (ft)	2	0	8									
Control Delay (s)	1.2	0.0	12.1									
Lane LOS	A		B									
Approach Delay (s)	1.2	0.0	12.1									
Approach LOS			B									
Intersection Summary												
Average Delay	1.7											
Intersection Capacity Utilization	26.1% ICU Level of Service A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element
 107: Virginia Av

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBR	NBL	NBT	SBR	SBT	SBR
Lane Configurations	W			4		P	
Volume (veh/h)	80	80	80	80	80	80	80
Sign Control	Stop	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	352	352	352
Pedestrians	30	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3	3
Right turn flare (veh)							
Median type	None	None	None	None	None	None	None
Median storage (veh)							
Upstream signal (ft)							1174
pX, platoon unblocked							
vC, conflicting volume	1644	588	734				1565
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1644	588	734				1565
IC, single (s)	6.4	6.2	4.1				6.4
IC, 2 stage (s)							
IF (s)	3.5	3.3	2.2				3.5
p0 queue free %	0	27	59				100
cM capacity (veh/h)	61	484	849				117
Direction, Lane #	EB 1	NB 1	SB 1				SB 1
Volume Total	704	704	704				722
Volume Left	352	352	0				0
Volume Right	352	0	352				0
cSH	108	849	1700				1700
Volume to Capacity	6.50	0.41	0.41				0.42
Queue Length 95th (ft)	Err	51	0				0
Control Delay (s)	F	A	9.3				0.0
Lane LOS	F	A					A
Approach Delay (s)	Err	9.3	0.0				0.0
Approach LOS	F						A
Intersection Summary							
Average Delay	3336.1			0.0			
Intersection Capacity Utilization	44.8%			28.2%			ICU Level of Service
Analysis Period (min)	15			15			A

San Ysidro CPU-Mobility Element
 111: E. San Ysidro Blvd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	4	P		W	
Volume (veh/h)	0	178	164	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	783	722	0	0	0
Pedestrians	30	30	30	30	30	30
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	3	3	3	3	3	3
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						1174
pX, platoon unblocked						
vC, conflicting volume	752					1565
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	752					1565
IC, single (s)	4.1					6.4
IC, 2 stage (s)						
IF (s)	2.2					3.5
p0 queue free %	100					100
cM capacity (veh/h)	836					375
Direction, Lane #	EB 1	EB 2	WB 1	WB 1	SB 1	
Volume Total	0	783	722	0	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.00	0.46	0.42	0.00	0.00	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.0			0.0		
Intersection Capacity Utilization	28.2%			28.2%		
Analysis Period (min)	15			15		
ICU Level of Service						
A						

San Ysidro CPU-Mobility Element
 135: Border Village Rd (W)

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations					W	
Volume (veh/h)	10	190	204	10	10	10
Sign Control		Free	Free	Free	Stop	
Grade		0%	0%	0%	0%	
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	44	836	898	44	44	44
Pedestrians		30	30		30	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		3	3		3	
Right turn flare (veh)						
Median type		None	None		None	
Median storage (veh)						
Upstream signal (ft)		740				
pX, platoon unblocked						
vC, conflicting volume		972			1904	980
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		972			1904	980
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		94			35	85
cM capacity (veh/h)		692			67	288
Direction, Lane #	EB1	WB1	SB1			
Volume Total	880	942	88			
Volume Left	44	0	44			
Volume Right	0	44	44			
cSH	692	1700	109			
Volume to Capacity	0.06	0.55	0.81			
Queue Length 95th (ft)	5	0	114			
Control Delay (s)	1.8	0.0	112.1			
Lane LOS	A	F	F			
Approach Delay (s)	1.8	0.0	112.1			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilization			36.3%	ICU Level of Service A		
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element
 500: Beyer Blvd & Cottonwood Rd

Horizon Year Alternative B
 Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations					W	
Volume (veh/h)	0	0	0	0	0	0
Sign Control		Free	Free	Free	Stop	
Grade		0%	0%	0%	0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians		30	30		30	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		3	3		3	
Right turn flare (veh)						
Median type		None	None		None	
Median storage (veh)						
Upstream signal (ft)		810	816			
pX, platoon unblocked						
vC, conflicting volume		30			60	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		30			60	60
IC, single (s)		4.1			6.8	6.9
IC, 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		100			100	100
cM capacity (veh/h)		1542			893	944
Direction, Lane #	EB1	EB2	WB1	WB2	SB1	SB2
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A	A	A	A
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Approach LOS	A	A	A	A	A	A
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			26.0%	ICU Level of Service A		
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 1: Beyer Blvd & Iris Ave/SR-905 WB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	49	78	171	108	148	123	95	218	115	67	219	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.0	4.0	4.0	5.0	4.0	3.5	4.5	3.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.90	1.00	0.93	1.00	0.93	1.00	0.95	1.00	0.95	1.00	0.97
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Sald. Flow (prot)	1770	1642	1770	1725	1770	1725	1770	3355	1770	3413	1770	3413
Sald. Flow (perm)	1770	1642	1770	1725	1770	1725	1770	3355	1770	3413	1770	3413
Peak-hour factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.90	0.90	0.90	0.87	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	61	98	214	138	189	157	116	266	141	85	277	73
RTOR Reduction (vph)	0	108	0	0	32	0	0	73	0	0	24	0
Lane Group Flow (vph)	61	204	0	138	314	0	116	334	0	85	326	0
Canfl. Peds. (#/hr)	3	12	1	3	1	3	1	3	1	3	1	3
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	8			4			6		5		2	
Permitted Phases												
Actuated Green, G (s)	4.1	14.9	8.1	17.4	6.8	17.7	4.9	15.8	4.9	15.8	4.9	15.8
Effective Green, g (s)	4.1	14.9	8.1	17.4	6.8	17.7	4.9	15.8	4.9	15.8	4.9	15.8
Actuated g/C Ratio	0.07	0.24	0.13	0.28	0.11	0.29	0.08	0.26	0.08	0.26	0.08	0.26
Clearance Time (s)	4.5	4.0	4.0	5.0	3.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0	4.3
Lane Grp Cap (vph)	117	397	232	487	195	964	140	875	140	875	140	875
v/s Ratio Prot	0.03		c0.08		c0.18		c0.07	c0.10	0.05	0.10		
v/s Ratio Perm												
Uniform Delay, d1	0.52	0.51	0.59	0.64	0.59	0.64	0.61	0.37	0.61	0.37	0.61	0.37
Progression Factor	27.8	20.2	25.2	19.4	26.1	17.4	27.4	18.8	27.4	18.8	27.4	18.8
Incremental Delay, d2	1.9	1.1	4.1	2.2	3.2	0.3	5.0	0.4	5.0	0.4	5.0	0.4
Delay (s)	29.7	21.3	29.3	21.6	29.3	17.7	32.4	19.3	32.4	19.3	32.4	19.3
Level of Service	C	C	C	C	C	C	B	C	B	C	B	C
Approach Delay (s)	22.7		23.8		23.8		20.3		20.3		21.8	
Approach LOS	C		C		C		C		C		C	
Intersection Summary												
HCM 2000 Control Delay	22.1 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.55											
Actuated Cycle Length (s)	61.6 Sum of lost time (s) 17.5											
Intersection Capacity Utilization	52.0% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 2: Beyer Blvd & Dairy Mart Rd/SR-905 Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	107	205	78	108	6	52	65	268	112	164	196	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0	3.0
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.97	0.95	1.00	0.95	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.97	1.00	0.97	0.95	1.00	0.95	1.00	1.00	1.00
Sald. Flow (prot)	1681	1765	1583	3266	1770	3383	1770	3383	1770	3383	1770	3383
Sald. Flow (perm)	1681	1765	1583	3266	1770	3383	1770	3383	1770	3383	1770	3383
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.81	0.81	0.81	0.88	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	128	245	93	145	8	70	88	364	152	205	245	211
RTOR Reduction (vph)	0	0	72	0	46	0	0	37	0	0	0	88
Lane Group Flow (vph)	115	258	21	0	177	0	88	479	0	205	245	123
Turn Type	Split	NA	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4	4		3		3	5	2	2	1	6	4
Permitted Phases												
Actuated Green, G (s)	17.9	17.9	17.9	11.4	11.4	11.4	6.2	19.8	14.6	28.2	46.1	6
Effective Green, g (s)	17.9	17.9	17.9	11.4	11.4	11.4	6.2	19.8	14.6	28.2	46.1	6
Actuated g/C Ratio	0.23	0.23	0.23	0.14	0.14	0.14	0.08	0.25	0.18	0.36	0.38	0.03
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0	3.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.3	2.0	4.3	2.0	2.0
Lane Grp Cap (vph)	378	397	356	364	138	843	138	843	325	1256	919	919
v/s Ratio Prot	0.07	c0.15			c0.07		0.05	c0.14	c0.12	0.07	0.05	0.03
v/s Ratio Perm												
Uniform Delay, d1	25.6	27.9	24.1	31.3	31.3	31.3	35.5	26.1	29.9	17.7	7.6	0.13
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	2.7	0.0	0.4	0.4	0.4	6.9	1.2	2.9	0.1	0.0	0.0
Delay (s)	25.7	30.7	24.2	31.7	31.7	31.7	42.4	27.3	32.8	17.9	7.6	0.0
Level of Service	C	C	C	C	C	C	D	C	C	C	B	A
Approach Delay (s)	28.1		28.1		31.7		29.5		29.5		19.2	
Approach LOS	C		C		C		C		C		B	
Intersection Summary												
HCM 2000 Control Delay	25.9 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.59											
Actuated Cycle Length (s)	79.4 Sum of lost time (s) 15.7											
Intersection Capacity Utilization	55.3% ICU Level of Service B											
Analysis Period (min)	15											
d1 Defacto Left Lane. Record with 1 through lane as a left lane.												
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 3: Beyer Blvd & Del Sur Blvd

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	73	252	315	212	168	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Lane Util. Factor	1.00	0.96	0.95	1.00	1.00	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	3326	1770	1583	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	3326	1770	1583	1583
Peak-hour factor, PHF	0.97	0.97	0.90	0.90	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	83	286	385	259	210	181
RTOR Reduction (vph)	0	0	165	0	0	141
Lane Group Flow (vph)	83	286	479	0	210	40
Turn Type	Prot	NA	NA	NA	NA	Perm
Protected Phases	5	2	6		4	
Permitted Phases				4		
Actuated Green, G (s)	4.2	25.1	16.5	10.0	10.0	10.0
Effective Green, g (s)	4.2	25.1	16.5	10.0	10.0	10.0
Actuated g/C Ratio	0.09	0.35	0.36	0.22	0.22	0.22
Clearance Time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	2.0	2.0
Lane Grp Cap (vph)	163	1952	1206	389	347	347
v/s Ratio Prot	c0.05	0.08	c0.14	c0.12		0.03
v/c Ratio	0.51	0.15	0.40	0.54	0.11	0.11
Uniform Delay, d1	19.7	5.0	10.8	15.7	14.2	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.5	0.7	0.1	0.1
Delay (s)	20.6	5.0	11.2	16.4	14.3	14.3
Level of Service	C	A	B	B	B	B
Approach Delay (s)	8.5	11.2	15.4			
Approach LOS	A	B	B			
Intersection Summary						
HCM 2000 Control Delay		11.7				B
HCM 2000 Volume to Capacity ratio		0.46				
Actuated Cycle Length (s)		45.5				14.8
Intersection Capacity Utilization		44.1%				A
Analysis Period (min)		15				
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 4: Smythe Crossing & Beyer Blvd

3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR
Volume (vph)	302	50	113	209	39	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.85	1.00	1.00
FI Protected	1.00	0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3464	3478	1770	1583	1583	1583
FI Permitted	1.00	0.69	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3464	2452	1770	1583	1583	1583
Peak-hour factor, PHF	0.83	0.83	0.86	0.86	0.76	0.76
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	400	66	145	267	56	217
RTOR Reduction (vph)	39	0	0	0	0	109
Lane Group Flow (vph)	428	0	0	412	56	109
Turn Type	NA	Perm	NA	NA	NA	Perm
Protected Phases	4		8	2		2
Permitted Phases				8		2
Actuated Green, G (s)	12.0		12.0	20.0	20.0	20.0
Effective Green, g (s)	12.0		12.0	20.0	20.0	20.0
Actuated g/C Ratio	0.30		0.30	0.50	0.50	0.50
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1039		735	885	791	791
v/s Ratio Prot	0.12		c0.17			c0.07
v/c Ratio	0.41		0.56	0.06	0.14	0.14
Uniform Delay, d1	11.2		11.8	5.2	5.4	5.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		1.0	0.1	0.4	0.4
Delay (s)	11.4		12.8	5.3	5.7	5.7
Level of Service	B		B	A	A	A
Approach Delay (s)	11.4		12.8	5.6		
Approach LOS	B		B	A		
Intersection Summary						
HCM 2000 Control Delay			10.5			B
HCM 2000 Volume to Capacity ratio			0.30			
Actuated Cycle Length (s)			40.0			8.0
Intersection Capacity Utilization			34.2%			A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 5: Beyer Blvd & Smythe Ave 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Volume (vph)	161	869	786	544	834	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
F/I Protected	0.95	1.00	0.98	0.85	1.00	0.85
Satd. Flow (prot)	1770	3539	3313	1441	3433	1583
F/I Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3313	1441	3433	1583
Peak-hour factor, PHF	0.77	0.77	0.88	0.88	0.81	0.61
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	230	1241	982	680	1504	341
RTOR Reduction (vph)	0	0	13	30	0	158
Lane Group Flow (vph)	230	1241	1146	473	1504	183
Turn Type	Prot	NA	NA	pm+ov	NA	Perm
Protected Phases	1	6	2	2	8	8
Permitted Phases						
Actuated Green, G (s)	14.9	55.1	35.8	80.9	45.1	45.1
Effective Green, g (s)	14.9	55.1	35.8	80.9	45.1	45.1
Actuated g/C Ratio	0.14	0.50	0.33	0.74	0.41	0.41
Clearance Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Vehicle Extension (s)	2.0	3.6	4.0	2.0	2.0	2.0
Lane Grp Cap (vph)	239	1772	1078	1123	1407	649
v/s Ratio Prot	c0.13	0.35	c0.35	0.17	c0.44	
v/s Ratio Perm						0.12
v/c Ratio	0.96	0.70	1.06	0.42	1.07	0.28
Uniform Delay, d1	47.3	21.1	37.1	5.6	32.5	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	47.2	2.3	45.9	0.1	44.8	0.1
Delay (s)	94.5	23.4	83.0	5.7	77.2	21.7
Level of Service	F	C	F	A	E	C
Approach Delay (s)		34.5	59.6		67.0	
Approach LOS		C	E		E	
Intersection Summary						
HCM 2000 Control Delay			54.9		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			1.05			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	14.2
Intersection Capacity Utilization			78.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 6: W. Park Ave/Alaquinas Dr & Beyer Blvd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Volume (vph)	26	1139	57	258	1117	152	64	64	397	209	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.4	4.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
F/I Protected	0.95	1.00	0.95	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1770	3514	1770	3476	1823	1583	1770	1766	1770	1766	1766
F/I Permitted	0.95	1.00	0.95	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.95
Satd. Flow (perm)	1770	3514	1770	3476	1823	1583	1770	1766	1770	1766	1766
Peak-hour factor, PHF	0.88	0.88	0.88	0.93	0.93	0.73	0.73	0.73	0.73	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	32	1424	71	305	1321	180	96	127	598	258	77
RTOR Reduction (vph)	0	3	0	0	9	0	0	0	235	0	16
Lane Group Flow (vph)	32	1492	0	305	1492	0	0	223	363	268	102
Turn Type	Prot	NA	NA	Prot	NA	Perm	NA	Perm	Perm	Perm	NA
Protected Phases	5	2		1	1	6		4			4
Permitted Phases											
Actuated Green, G (s)	3.0	49.1		22.6	68.5		34.1	34.1	34.1	34.1	34.1
Effective Green, g (s)	3.0	49.1		22.6	68.5		34.1	34.1	34.1	34.1	34.1
Actuated g/C Ratio	0.02	0.41		0.19	0.57		0.28	0.28	0.28	0.28	0.28
Clearance Time (s)	4.4	4.9		4.4	5.1		5.1	5.1	5.1	5.1	5.1
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	44	1435		332	1980		423	449	259	501	
v/s Ratio Prot	0.02	c0.42		c0.17	0.43		0.15	0.23	c0.28		0.06
v/s Ratio Perm											
v/c Ratio	0.73	1.04		0.92	0.75		0.53	0.81	1.00	0.20	
Uniform Delay, d1	58.2	35.6		47.9	19.5		36.3	40.0	43.0	32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	39.6	34.8		28.7	2.1		0.5	9.7	54.4	0.1	
Delay (s)	97.8	70.3		76.6	21.6		36.8	49.8	97.4	32.8	
Level of Service	F	E		E	C		D	D	F	C	
Approach Delay (s)		70.9		30.9			46.2		77.2		
Approach LOS		E		C			D		E		
Intersection Summary											
HCM 2000 Control Delay				51.0			HCM 2000 Level of Service		D		
HCM 2000 Volume to Capacity ratio				1.00							
Actuated Cycle Length (s)				120.2			Sum of lost time (s)		14.6		
Intersection Capacity Utilization				89.0%			ICU Level of Service		E		
Analysis Period (min)				15							
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 7: East Beyer Blvd/Otay Mesa Rd & Beyer Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	564	802	340	866	920	218	466	372	808	133	265	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.0	4.9	4.9	4.0	4.9	4.0	4.0	4.0	5.2	4.9
Lane Util. Factor	0.97	0.96	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.85
FI Protected	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1832	1583	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.71	1.00	0.85
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1326	1583	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	674	959	407	1035	1100	281	557	445	966	159	317	607
RTOR Reduction (vph)	0	0	68	0	0	55	0	0	0	0	0	45
Lane Group Flow (vph)	674	959	339	1035	1100	206	557	445	966	0	476	562
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Free	Perm	NA	pm+ov
Protected Phases	5	2	3	1	6	3	8	3	8	4	4	5
Permitted Phases	2	2	2	6	6	6	6	6	Free	4	4	4
Actuated Green, G (s)	26.9	30.1	50.1	44.1	47.3	47.3	20.0	61.1	150.0	36.8	63.7	63.7
Effective Green, g (s)	26.9	30.1	50.1	44.1	47.3	47.3	20.0	61.1	150.0	36.8	63.7	63.7
Actuated g/C Ratio	0.18	0.20	0.33	0.29	0.32	0.32	0.13	0.41	1.00	0.25	0.42	0.42
Clearance Time (s)	4.9	4.9	4.0	4.9	4.9	4.0	4.9	4.0	4.9	5.2	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	615	710	528	520	1115	499	236	758	1583	325	672	672
v/s Ratio Prot	0.20	c0.27	0.09	c0.58	0.31	0.13	c0.31	0.24	0.61	c0.36	0.15	0.15
v/s Ratio Perm	1.10	1.35	0.64	1.99	0.99	0.41	2.36	0.59	0.61	1.46	0.84	0.84
v/c Ratio	61.5	59.9	42.4	53.0	51.0	40.4	65.0	34.6	0.0	56.6	38.5	38.5
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	65.3	167.0	2.7	452.5	23.5	0.6	625.0	1.2	1.8	225.3	8.9	8.9
Incremental Delay, d2	125.8	227.0	45.0	505.5	74.5	41.0	690.0	35.8	1.8	281.9	47.3	47.3
Delay (s)	F	F	D	F	E	D	F	D	A	F	D	D
Level of Service	F	F	D	F	E	D	F	D	A	F	D	D
Approach Delay (s)	157.6	F	F	257.0	F	F	204.3	F	F	150.4	F	F
Approach LOS	F	F	F	F	F	F	F	F	F	F	F	F

Intersection Summary	200.6	HCM 2000 Level of Service	F
HCM 2000 Control Delay	1.75		
HCM 2000 Volume to Capacity ratio	150.0	Sum of lost time (s)	19.0
Actuated Cycle Length (s)	145.6%	ICU Level of Service	H
Intersection Capacity Utilization	15		
Analysis Period (min)			

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 8: Picador Blvd & SR-905 WB On Ramp/SR-905 WB Off Ramp

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	250	0	89	234	236	0	0	348	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	5.0	4.6	4.2	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.85
FI Protected	0.95	1.00	1.00	0.85	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583	1770	1583
Peak-hour factor, PHF	0.25	0.25	0.25	0.77	0.77	0.77	0.90	0.90	0.90	0.90	0.91	0.91
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	357	0	127	286	288	0	0	421	503
RTOR Reduction (vph)	0	0	0	0	0	88	0	0	0	0	0	369
Lane Group Flow (vph)	0	0	0	357	39	286	288	0	0	0	421	134
Turn Type	Perm	NA	Perm	Prot	NA	Prot	NA	2	2	6	6	6
Protected Phases	8	8	8	8	8	8	8	8	8	8	8	8
Permitted Phases	8	8	8	8	8	8	8	8	8	8	8	8
Actuated Green, G (s)	17.2	17.2	17.2	17.2	17.2	17.2	10.1	29.2	10.1	29.2	14.9	14.9
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	17.2	10.1	29.2	10.1	29.2	14.9	14.9
Actuated g/C Ratio	0.31	0.31	0.31	0.18	0.18	0.18	0.52	0.27	0.27	0.27	0.27	0.27
Clearance Time (s)	4.6	4.6	4.2	5.0	4.6	4.2	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	543	486	319	1845	486	319	1845	486	319	1845	941	421
v/s Ratio Prot	0.20	0.20	0.02	c0.16	0.08	c0.12	0.08	0.08	0.08	0.08	0.08	0.08
v/s Ratio Perm	0.66	0.66	0.08	0.90	0.16	0.45	0.32	0.32	0.32	0.32	0.32	0.32
v/c Ratio	16.8	13.8	22.4	7.0	17.1	16.5	17.1	16.5	17.1	16.5	17.1	16.5
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	2.9	0.1	25.9	0.0	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4
Incremental Delay, d2	19.7	13.9	48.3	7.0	17.5	16.9	17.5	16.9	17.5	16.9	17.5	16.9
Delay (s)	B	B	D	A	B	B	D	A	B	B	D	B
Level of Service	B	B	D	A	B	B	D	A	B	B	D	B
Approach Delay (s)	0.0	A	27.6	C	0.0	17.2	B	B	0.0	17.2	B	B
Approach LOS	A	A	C	C	A	B	B	B	A	B	B	B

Intersection Summary	20.4	HCM 2000 Level of Service	C
HCM 2000 Control Delay	0.64		
HCM 2000 Volume to Capacity ratio	56.0	Sum of lost time (s)	13.8
Actuated Cycle Length (s)	69.3%	ICU Level of Service	C
Intersection Capacity Utilization	15		
Analysis Period (min)			

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 9: Smythe Ave/Picador Blvd & SR-905 EB Off Ramp/SR-905 EB On Ramp 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	103	0	161	0	0	0	330	371	221	400	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	5.0	5.0	4.2	5.0	4.2	5.0	4.2	5.0	4.2
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
FI Protected	1.00	0.85	1.00	0.92	0.92	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1770	3258	3258	1770	3539	1770	3539	1770	3539	1770
FI Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (perm)	1770	1583	1770	3258	3258	1770	3539	1770	3539	1770	3539	1770
Peak-hour factor, PHF	0.83	0.83	0.83	0.25	0.25	0.25	0.88	0.88	0.88	0.76	0.76	0.76
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	137	0	213	0	0	0	412	464	320	579	0	0
RTOR Reduction (vph)	0	0	151	0	0	0	199	0	0	0	0	0
Lane Group Flow (vph)	0	137	62	0	0	0	677	0	320	579	0	0
Turn Type	Perm	NA	Perm	NA	NA	NA	NA	Prot	NA	NA	NA	NA
Protected Phases	4						2		1			6
Permitted Phases	4		4				4		4			6
Actuated Green, G (s)	11.0	11.0	11.0				34.7		10.5			49.4
Effective Green, g (s)	11.0	11.0	11.0				34.7		10.5			49.4
Actuated g/C Ratio	0.16	0.16	0.16				0.50		0.15			0.71
Clearance Time (s)	4.6	4.6	4.6				5.0		4.2			5.0
Vehicle Extension (s)	3.0	3.0	3.0				3.0		3.0			3.0
Lane Grp Cap (vph)	278	248	248				1615		265			2497
v/s Ratio Prot	0.08	0.04	0.04				0.21		0.18			0.16
v/s Ratio Perm	0.49	0.25	0.25				0.42		1.21			0.23
v/c Ratio	27.0	25.9	25.9				11.2		29.8			3.6
Progression Factor	1.00	1.00	1.00				0.58		1.00			1.00
Incremental Delay, d1	1.4	0.5	0.5				0.6		123.3			0.2
Delay (s)	28.3	26.4	26.4				7.2		153.1			3.8
Level of Service	C	C	C				A		F			A
Approach Delay (s)	27.2			0.0	0.0	0.0	7.2		7.2			57.0
Approach LOS	C			A	A	A	A		A			E
Intersection Summary												
HCM 2000 Control Delay	31.5 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	70.0 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	69.3% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 10: Dairy Mart Rd & Vista Ln 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	146	161	370	118	98	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95
FI Protected	0.98	0.95	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1691	1691	3411	1770	3539	1691
FI Permitted	0.98	0.95	1.00	0.95	1.00	0.95
Satd. Flow (perm)	1691	1691	3411	1770	3539	1691
Peak-hour factor, PHF	0.68	0.68	0.81	0.81	0.86	0.86
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	236	260	502	160	125	310
RTOR Reduction (vph)	113	0	66	0	0	0
Lane Group Flow (vph)	383	0	596	0	125	310
Turn Type	NA	NA	NA	Perm	NA	NA
Protected Phases	8		2		6	
Permitted Phases	8		2		6	
Actuated Green, G (s)	12.7	12.7	19.3	19.3	19.3	19.3
Effective Green, g (s)	12.7	12.7	19.3	19.3	19.3	19.3
Actuated g/C Ratio	0.32	0.32	0.48	0.48	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	536	1645	1645	341	1707	536
v/s Ratio Prot	0.23		0.17		0.18	0.09
v/s Ratio Perm	0.72		0.36		0.37	0.18
v/c Ratio	12.1	6.5	6.5	6.5	5.9	5.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.5	0.6	0.6	3.0	0.2	0.2
Delay (s)	16.6	7.1	7.1	9.5	6.1	6.1
Level of Service	B	A	A	A	A	A
Approach Delay (s)	16.6	7.1	7.1	7.1	7.1	7.1
Approach LOS	B	A	A	A	A	A
Intersection Summary						
HCM 2000 Control Delay	10.0 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.50					
Actuated Cycle Length (s)	40.0 Sum of lost time (s) 8.0					
Intersection Capacity Utilization	51.1% ICU Level of Service A					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 11: Averil Rd & Vista Ln
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Stop	Stop	Stop	Stop	Stop	Stop
Sign Control	102	45	6	199	100	15
Volume (vph)	0.80	0.80	0.60	0.60	0.68	0.68
Peak Hour Factor	140	62	11	365	162	24
Hourly flow rate (vph)	EB 1	WB 1	NB 1			
Direction, Lane #	202	376	186			
Volume Total (vph)	0	11	162			
Volume Left (vph)	62	0	24			
Volume Right (vph)	-0.15	0.04	0.13			
Head (s)	4.8	4.7	5.4			
Departure Headway (s)	0.27	0.49	0.28			
Degree Utilization, x	711	732	606			
Capacity (veh/h)	9.5	12.3	10.5			
Control Delay (s)	9.5	12.3	10.5			
Approach Delay (s)	A	B	B			
Approach LOS						
Intersection Summary						
Delay				11.1		
Level of Service				B		
Intersection Capacity Utilization				30.6%	ICU Level of Service	A
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 12: Smythe Ave & Vista Ln
 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Free	Free	Free	Free	Stop	Stop
Volume (veh/h)	191	105	114	91	122	56
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	228	126	136	109	146	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	451					
pX, platoon unblocked						
vC, conflicting volume		354			673	291
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		354			673	291
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)		2.2			3.5	3.3
IF (s)		89			61	91
p0 queue free %		1205			373	748
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	354	245	213			
Volume Left	0	136	146			
Volume Right	126	0	67			
cSH	1700	1205	443			
Volume to Capacity	0.21	0.11	0.48			
Queue Length 95th (ft)	0	10	64			
Control Delay (s)	0.0	5.1	20.4			
Lane LOS	A	C	C			
Approach Delay (s)	0.0	5.1	20.4			
Approach LOS						
Intersection Summary						
Average Delay				6.9		
Intersection Capacity Utilization				51.5%	ICU Level of Service	A
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
13: Sunset Ln & Vista Ln

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	0	0	0	0	0	0
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	843					
pX platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4.1	6.4	6.2			
IC, 1 stage (s)						
IC, 2 stage (s)						
IF (s)	2.2	3.5	3.3			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1623	1023	1085			
Direction, Lane #	EB 1	WB 1				
Volume Total	0	0				
Volume Left	0	0				
Volume Right	0	0				
cSH	1700	1700				
Volume to Capacity	0.00	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		0.0%			ICU Level of Service	A
Analysis Period (min)		15				


San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
14: Averil Rd & Sunset Ln

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop	Stop	Stop	Stop	Stop		Stop		Stop	Stop	Stop
Volume (vph)	49	205	29	37	146	68	10	43	42	128	99	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	59	245	35	44	175	81	12	51	50	153	118	116
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	338	300	114	387								
Volume Left (vph)	59	44	12	153								
Volume Right (vph)	35	81	50	116								
Headj (s)	0.01	-0.10	-0.21	-0.07								
Departure Headway (s)	6.2	6.1	6.6	6.1								
Degree Utilization, x	0.58	0.51	0.21	0.65								
Capacity (veh/h)	538	533	436	559								
Control Delay (s)	17.3	13.4	11.4	19.8								
Approach Delay (s)	17.3	15.4	11.4	19.8								
Approach LOS	C	C	B	C								
Intersection Summary												
Delay			17.0									
Level of Service			C									
Intersection Capacity Utilization			57.1%									B
Analysis Period (min)			15									

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
15: Smythe Ave & Sunset Ln


3/31/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	0	0	51	0	0	0	32	84	0	0	115	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	61	0	0	0	38	100	0	0	138	213
Direction, Lane #	EB 1	NB 1	SB 1									
Volume Total (vph)	61	139	350									
Volume Left (vph)	0	38	0									
Volume Right (vph)	61	0	213									
Head (s)	-0.57	0.09	-0.33									
Departure Headway (s)	4.3	4.5	3.9									
Degree Utilization, x	0.07	0.17	0.38									
Capacity (veh/h)	743	781	916									
Control Delay (s)	7.7	8.4	9.2									
Approach Delay (s)	7.7	8.4	9.2									
Approach LOS	A	A	A									
Intersection Summary												
Delay	8.8											
Level of Service	A											
Intersection Capacity Utilization	38.9%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
16: W. Park Ave & Seaward Ave

3/31/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	95	0	13	10	10	7	367	0	0	15	223	45
Peak Hour Factor	0.97	0.97	0.97	0.64	0.64	0.64	0.38	0.38	0.38	0.72	0.72	0.72
Hourly flow rate (vph)	108	0	15	17	12	631	0	0	0	23	341	69
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total (vph)	122	660	432									
Volume Left (vph)	108	17	23									
Volume Right (vph)	15	631	69									
Head (s)	0.14	-0.53	-0.05									
Departure Headway (s)	6.4	5.0	5.9									
Degree Utilization, x	0.22	0.91	0.71									
Capacity (veh/h)	527	714	591									
Control Delay (s)	11.2	37.6	21.7									
Approach Delay (s)	11.2	37.6	21.7									
Approach LOS	B	E	C									
Intersection Summary												
Delay	29.3											
Level of Service	D											
Intersection Capacity Utilization	59.5%											
ICU Level of Service	B											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 17: E. Park Ave & Seaward Ave

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	13	0	0	60	343	17
Peak Hour Factor	0.70	0.70	0.53	0.53	0.60	0.60
Hourly flow rate (vph)	20	0	0	125	629	31
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total (vph)	20	125	660			
Volume Left (vph)	0	0	629			
Volume Right (vph)	0	0	31			
Head (s)	0.03	0.03	0.20			
Departure Headway (s)	5.8	5.6	4.5			
Degree Utilization, x	0.03	0.19	0.83			
Capacity (veh/h)	581	612	785			
Control Delay (s)	9.0	9.9	25.3			
Approach Delay (s)	9.0	9.9	25.3			
Approach LOS	A	A	D			
Intersection Summary						
Delay			22.5			
Level of Service			C			
Intersection Capacity Utilization			32.2%			ICU Level of Service A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 18: W. San Ysidro Blvd & Howard Ave

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	69	44	20	329	267	29
Peak Hour Factor	0.72	0.72	0.62	0.62	0.56	0.56
Hourly flow rate (vph)	105	67	35	584	524	57
Direction, Lane #	EB 1	WB 1	SB 1	SB 2		
Volume Total (vph)	173	619	524	57		
Volume Left (vph)	105	0	524	0		
Volume Right (vph)	0	584	0	57		
Head (s)	0.16	-0.53	0.23	-0.57		
Departure Headway (s)	7.1	5.6	6.4	3.2		
Degree Utilization, x	0.34	0.96	0.94	0.05		
Capacity (veh/h)	489	630	551	1121		
Control Delay (s)	13.7	50.4	48.9	6.4		
Approach Delay (s)	13.7	50.4	44.8			
Approach LOS	B	F	E			
Intersection Summary						
Delay			43.4			
Level of Service			E			
Intersection Capacity Utilization			56.6%			ICU Level of Service B
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 19: Dairy Mart Rd & W. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	2	2	4	2	2	4	2	2	4	2	2
Volume (vph)	49	227	62	64	140	213	158	245	585	241	145	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.85	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.85	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.79	0.79	0.79	0.80	0.80	0.80
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	60	280	77	76	167	254	200	310	741	301	181	91
RTOR Reduction (vph)	0	0	58	0	0	178	0	0	211	0	0	0
Lane Group Flow (vph)	60	280	29	29	76	167	200	310	530	301	181	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm-prot	NA	pm-prot	pm-prot	NA	Free
Protected Phases	5	2	2	1	6	3	8	1	7	1	4	4
Permitted Phases												
Actuated Green, G (s)	3.8	17.2	17.2	7.5	20.9	20.9	19.7	15.7	23.2	30.6	22.2	70.0
Effective Green, g (s)	3.8	17.2	17.2	7.5	20.9	20.9	19.7	15.7	23.2	30.6	22.2	70.0
Actuated g/C Ratio	0.05	0.25	0.25	0.11	0.30	0.30	0.28	0.22	0.33	0.44	0.32	1.00
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	4.0
Vehicle Extension (s)	2.0	2.9	2.9	2.0	2.9	2.9	2.0	3.9	2.0	2.0	3.9	3.9
Lane Grp Cap (vph)	96	457	388	189	556	472	369	417	524	415	590	1583
v/s Ratio Prot	0.03	c0.15	0.01	0.04	c0.09	0.03	0.17	c0.11	c0.11	c0.11	0.10	0.06
v/s Ratio Perm												
v/c Ratio	0.62	0.61	0.05	0.40	0.30	0.16	0.54	0.74	1.01	0.73	0.31	0.06
Uniform Delay, d1	32.4	23.4	20.2	29.2	18.9	18.1	20.6	25.3	23.4	14.4	18.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.8	2.4	0.0	0.5	0.3	0.2	0.9	7.4	42.4	5.3	0.4	0.1
Delay (s)	41.2	25.8	20.2	29.7	19.2	18.2	21.4	32.7	65.8	19.7	18.5	0.1
Level of Service	D	C	C	C	B	B	C	C	E	B	B	A
Approach Delay (s)	27.0			20.3			50.5				16.2	
Approach LOS	C			C			D				B	

Intersection Summary	
HCM 2000 Control Delay	34.3
HCM 2000 Volume to Capacity ratio	0.80
Actuated Cycle Length (s)	70.0
Intersection Capacity Utilization	72.9%
Analysis Period (min)	15

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 20: I-5 NB Ramps & W. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR
Lane Configurations	4	4	4	4	4	4	4
Volume (vph)	320	693	469	253	139	134	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	4.6	4.6	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	1.00
Flt Protected	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583	1583
Flt Permitted	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583	1583
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.96	0.81	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	383	829	537	290	189	182	182
RTOR Reduction (vph)	0	71	0	0	0	0	125
Lane Group Flow (vph)	383	758	537	290	189	189	57
Turn Type	NA	pm-ov	Prot	NA	NA	NA	Perm
Protected Phases	6	4	5	2	2	4	4
Permitted Phases							
Actuated Green, G (s)	11.7	33.5	23.1	39.0	21.8	21.8	21.8
Effective Green, g (s)	11.7	33.5	23.1	39.0	21.8	21.8	21.8
Actuated g/C Ratio	0.17	0.48	0.33	0.56	0.31	0.31	0.31
Clearance Time (s)	4.6	4.6	4.2	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	591	861	584	1971	551	492	492
v/s Ratio Prot	0.11	c0.27	c0.30	0.08	0.11	0.11	0.04
v/s Ratio Perm							
v/c Ratio	0.65	0.88	0.92	0.15	0.34	0.12	0.12
Uniform Delay, d1	27.2	16.4	22.6	7.5	18.6	17.2	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	10.4	19.6	0.2	0.4	0.1	0.1
Delay (s)	29.7	26.9	42.1	7.6	19.0	17.3	17.3
Level of Service	C	C	D	A	B	B	B
Approach Delay (s)	27.8		30.0	18.2			
Approach LOS	C		C	B			

Intersection Summary	
HCM 2000 Control Delay	27.1
HCM 2000 Volume to Capacity ratio	0.97
Actuated Cycle Length (s)	70.0
Intersection Capacity Utilization	83.1%
Analysis Period (min)	15

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 21: W. San Ysidro Blvd & Sunset Ln

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	73	221	412	83	104	319
Volume (veh/h)	Stop	Free	Free	15%	Free	Free
Sign Control	0%	0%	0%	0%	0%	0%
Grade (%)	0.80	0.80	0.86	0.86	0.82	0.82
Peak Hour Factor	0.80	0.80	0.86	0.86	0.82	0.82
Hourly flow rate (vph)	91	276	479	97	127	389
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TW/TL			None
Median storage (veh)			2			
Upstream signal (ft)	0.88					525
pX, platoon unblocked						
vC, conflicting volume	1170	527				576
vC1, stage 1 conf vol	527					
vC2, stage 2 conf vol	643					
vCU, unblocked vol	1125	527				576
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3				2.2
p0 queue free %	76	50				87
cM capacity (veh/h)	386	551				998
Direction, Lane #	WB1	WB2	NB1	NB2	SB1	SB2
Volume Total	91	276	576	127	389	389
Volume Left	91	0	0	127	0	0
Volume Right	0	276	97	0	0	0
cSH	386	551	1700	998	1700	1700
Volume to Capacity	0.24	0.50	0.34	0.13	0.23	0.23
Queue Length 95th (ft)	23	70	0	11	0	0
Control Delay (s)	17.2	17.9	0.0	9.1	0.0	0.0
Lane LOS	C	C	A	A	A	A
Approach Delay (s)	17.7		0.0	2.2		
Approach LOS	C		C	B		
Intersection Summary						
Average Delay	5.3					
Intersection Capacity Utilization	47.1%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 22: W. San Ysidro Blvd & Averil Rd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	30	259	5	3	302	53	1	0	0	91	0	84
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%
Grade (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.95	1.00	1.00	1.00	0.85	1.00	1.00	0.95	1.00	0.94	0.97	0.97
Flt Protected	1770	1858	1722	1465	1770	1770	1770	1770	1770	1698	1698	1698
Said. Flow (prot)	0.34	1.00	1.00	1.00	0.52	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Said. Flow (perm)	640	1858	1717	1465	971	1898	1898	1898	1898	1898	1898	1898
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.25	0.25	0.25	0.71	0.71	0.71
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	37	320	6	4	369	65	4	0	0	141	0	130
RTOR Reduction (vph)	0	1	0	0	45	0	0	0	0	0	0	73
Lane Group Flow (vph)	37	325	0	0	373	20	0	4	0	0	198	0
Parking, (#/hr)												
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	NA	NA	Split	NA	NA
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Permitted Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	18.7	18.7	18.7	18.7	18.7	17.4	17.4	17.4	17.4	11.9	11.9	11.9
Effective Green, g (s)	18.7	18.7	18.7	18.7	18.7	17.4	17.4	17.4	17.4	11.9	11.9	11.9
Actuated c/c Ratio	0.31	0.31	0.31	0.31	0.31	0.29	0.29	0.29	0.29	0.20	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	579	535	456	281	336	336	336	336	336	336	336
v/s Ratio Prot	0.17											
v/s Ratio Perm	0.06											
v/c Ratio	0.19	0.56	0.22	0.01	0.01	0.00	0.00	0.00	0.00	0.12	0.12	0.12
Uniform Delay, d1	15.1	17.2	18.2	14.4	15.2	21.8	21.8	21.8	21.8	11.9	11.9	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.2	3.9	0.0	0.1	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Delay (s)	15.5	18.5	22.1	14.5	15.3	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Level of Service	B	B	C	B	B	C	C	C	C	B	B	B
Approach Delay (s)	18.2		21.0		15.3	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Approach LOS	B		C		B	C	C	C	C	B	B	B
Intersection Summary												
HCM 2000 Control Delay	20.9											
HCM 2000 Volume to Capacity ratio	0.42											
Actuated Cycle Length (s)	60.0											
Intersection Capacity Utilization	44.1%											
Analysis Period (min)	15											
ICU Level of Service	A											
Sum of lost time (s)	12.0											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 23: W. San Ysidro Blvd & Smythe Ave

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	199	5	4	345	38	2	10	6	59	9	158
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.38	0.38	0.38	0.86	0.86	0.86
Hourly flow rate (vph)	45	231	6	5	401	44	5	26	16	69	10	184
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)	0.91							0.91		0.91		0.91
pX platoon unblocked	445							924	780	234	784	760
vC, conflicting volume								325	325	433	433	423
vC1, stage 1 cont vol								599	455	351	328	
vC2, stage 2 cont vol								867	708	234	712	687
vCu, unblocked vol	340							7.1	6.5	6.2	7.1	6.5
IC, single (s)	4.1							6.1	5.5	6.1	6.1	5.5
IC, 2 stage (s)								3.5	4.0	3.3	3.5	4.0
IF (s)	2.2							98	94	98	86	98
p0 queue free %	1108							291	469	805	489	496
cM capacity (veh/h)												
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	45	237	5	445	47	263						
Volume Left	45	0	5	0	5	69						
Volume Right	0	6	0	44	16	184						
cSH	1108	1700	1330	1700	505	597						
Volume to Capacity	0.04	0.14	0.00	0.26	0.09	0.44						
Queue Length 95th (ft)	3	0	0	0	8	56						
Control Delay (s)	8.4	0.0	7.7	0.0	12.9	15.7						
Lane LOS	A	A	A	B	B	C						
Approach Delay (s)	1.3	0.1	12.9	15.7								
Approach LOS	B	B	C	C								
Intersection Summary												
Average Delay	4.9											
Intersection Capacity Utilization	53.9%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 24: Cottonwood Rd & W. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh)	48	228	3	4	269	220	5	4	7	237	2	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fill Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.94	0.99	0.96	0.97	0.96	0.97
Satd. Flow (prot)	1770	1859	1861	1861	1853	1725	1745	1745	1745	1745	1745	1745
Fill Permitted	0.51	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.75	0.81	0.81	0.81
Satd. Flow (perm)	943	1859	1855	1855	1562	1361	1361	1361	1361	1361	1361	1361
Peak-hour factor, PHF	0.83	0.83	0.83	0.91	0.91	0.91	0.65	0.65	0.65	0.73	0.73	0.73
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	64	302	4	5	325	266	8	7	12	357	3	84
RTOR Reduction (vph)	0	1	0	0	0	117	0	7	0	0	14	0
Lane Group Flow (vph)	64	305	0	0	330	149	0	20	0	0	430	0
Turn Type	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	2			6		6	8			8		4
Permitted Phases	2			6		6	8			8		4
Actuated Green, G (s)	33.5	33.5	33.5	33.5	33.5	33.5	26.7	26.7	26.7	26.7	26.7	26.7
Effective Green, g (s)	33.5	33.5	33.5	33.5	33.5	33.5	26.7	26.7	26.7	26.7	26.7	26.7
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
Clearance Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	451	889		887	757	595						519
v/s Ratio Prot	0.07			c0.18	0.09	0.01						c0.32
v/s Ratio Perm	0.14	0.34		0.37	0.20	0.03						0.83
Uniform Delay, d1	10.2	11.4		11.6	10.5	13.6						19.6
Progression Factor	1.00	1.00		0.96	0.40	1.00						1.00
Incremental Delay, d2	0.7	1.1		1.1	0.6	0.0						10.0
Delay (s)	10.9	12.4		12.7	11.1	13.6						29.6
Level of Service	B	B		A	A	B						C
Approach Delay (s)	12.2			6.4		13.6						29.6
Approach LOS	B	B		A		B						C
Intersection Summary												
HCM 2000 Control Delay	15.2											
HCM 2000 Volume to Capacity ratio	0.57											
Actuated Cycle Length (s)	70.0											
Sum of lost time (s)	66.4%											
ICU Level of Service	C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 25: Via de San Ysidro & W. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	270	149	344	232	0	254	0	488	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	4.4	4.9		4.4	4.4	4.4			
Lane Util. Factor		0.95	1.00	0.97	1.00		1.00	1.00	1.00			
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3539	1583	3433	1863		1770	1583	1583			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3539	1583	3433	1863		1770	1583	1583			
Peak-hour factor, PHF	0.70	0.70	0.70	0.92	0.92	0.92	0.87	0.87	0.87	0.25	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	424	234	411	277	0	321	0	617	0	0	0
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	89	0	0	0
Lane Group Flow (vph)	0	424	87	411	277	0	0	321	528	0	0	0
Turn Type	NA	Perm	Prot	NA	Split	NA	pm+ov	NA	pm+ov	custom		
Protected Phases	2		2	1	6		8	8	8	1		
Permitted Phases												8 2 6
Actuated Green, G (s)		26.1	26.1	13.0	43.5		17.2	30.2	30.2			
Effective Green, g (s)		26.1	26.1	13.0	43.5		17.2	30.2	30.2			
Actuated g/C Ratio		0.37	0.37	0.19	0.62		0.25	0.43	0.43			
Clearance Time (s)		4.9	4.9	4.4	4.9		4.4	4.4	4.4			
Vehicle Extension (s)		4.8	4.8	2.0	4.8		2.0	2.0	2.0			
Lane Grp Cap (vph)		1319	590	637	1157		434	782	782			
v/s Ratio Prot		cd.12	0.12	0.15	0.15		0.18	cd.13	0.21			
v/s Ratio Perm		0.06	0.15	0.65	0.24		0.74	0.68	0.68			
Uniform Delay, d1		0.32	14.6	26.4	5.9		24.3	16.0	16.0			
Progression Factor		0.89	1.57	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.6	0.5	1.7	0.2		5.6	1.8	1.8			
Delay (s)		14.4	23.4	28.1	6.1		30.0	17.8	17.8			
Level of Service		B	C	C	A		C	B	B			0.0
Approach Delay (s)		17.6			19.2		22.0					A
Approach LOS		B			B		C					A
Intersection Summary												
HCM 2000 Control Delay		19.9			HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		70.0			Sum of lost time (s)		13.7					
Intersection Capacity Utilization		49.3%			ICU Level of Service		A					
Analysis Period (min)		15										
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 26: W. San Ysidro Blvd/E. San Ysidro Blvd & W. Park Ave

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	0	848	588	0	0	0	0	0	146	0	0	146
Sign Control		Free	Free	Free	Free	Free	Stop	Stop	0%	0%	0%	0%
Grade		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.96	0.96	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	0	1060	674	0	0	0	0	0	229	0	0	229
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn lane (veh)		None	None	None	None	None	None	None	None	None	None	None
Median type												
Median storage (veh)												
Upstream signal (ft)		233	383									
pX, platoon unblocked									0.92			
vC, conflicting volume		674							1204			337
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol		674							1048			337
IC, single (s)		4.1							6.8			6.9
IC, 2 stage (s)												
IF (s)		2.2							3.5			3.3
pQ queue free %		100							100			65
cM capacity (veh/h)		913							205			659
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1							
Volume Total	530	530	337	337	229							
Volume Left	0	0	0	0	0							
Volume Right	0	0	0	0	229							
cSH	1700	1700	1700	1700	659							
Volume to Capacity	0.31	0.31	0.20	0.20	0.35							
Queue Length 95th (ft)	0	0	0	0	0				39			
Control Delay (s)	0.0	0.0	0.0	0.0	13.4							
Lane LOS					B							
Approach Delay (s)	0.0	0.0	0.0	0.0	13.4							
Approach LOS					B							
Intersection Summary												
Average Delay					1.6							
Intersection Capacity Utilization					36.7%							A
Analysis Period (min)					15							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 27: E. San Ysidro Blvd/W. San Ysidro Blvd & E. Park Ave

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	191	658	552	46	0	0
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0.90	0.90	0.92	0.92	0.42	0.42
Peak Hour Factor	233	804	660	55	0	0
Hourly flow rate (vph)						
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)	382	234				
pX platoon unblocked					0.96	
vC, conflicting volume	715				1556	358
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	715				1503	358
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	74				100	100
cM capacity (veh/h)	881				80	639
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	
Volume Total	233	402	402	440	275	
Volume Left	233	0	0	0	0	
Volume Right	0	0	0	0	55	
cSH	881	1700	1700	1700	1700	
Volume to Capacity	0.26	0.24	0.24	0.26	0.16	
Queue Length 95th (ft)	27	0	0	0	0	
Control Delay (s)	10.6	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	2.4			0.0		
Approach LOS						

Intersection Summary		
Average Delay	1.4	
Intersection Capacity Utilization	36.7%	ICU Level of Service A
Analysis Period (min)	15	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 28: I-805 SB Ramps & E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh)	0	1314	174	42	917	0	0	0	0	243	411
Ideal Flow (vphpt)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.2	4.6					4.6	4.6
Lane Util. Factor	0.95	1.00	0.97	0.95	0.95					0.95	0.91
FI Protected	1.00	1.00	1.00	1.00	1.00					1.00	0.87
Satd. Flow (prot)	3539	1583	3433	3539	3539					1681	1463
FI Permitted	1.00	1.00	0.95	1.00	1.00					0.95	0.99
Satd. Flow (perm)	3539	1583	3433	3539	3539					1681	1463
Peak-hour factor, PHF	0.94	0.94	0.94	0.81	0.81	0.81	0.25	0.25	0.25	0.78	0.78
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1538	204	57	1245	0	0	0	0	343	580
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	1538	154	57	1245	0	0	0	0	309	288
Turn Type	NA	Perm	Prot	NA	NA	NA	Split	NA	Perm	Split	Perm
Protected Phases	2		1	6						4	
Permitted Phases		2									4
Actuated Green, G (s)	27.2	27.2	2.6	34.0						18.3	18.3
Effective Green, g (s)	27.2	27.2	2.6	34.0						18.3	18.3
Actuated g/C Ratio	0.44	0.44	0.04	0.35						0.30	0.30
Clearance Time (s)	4.6	4.6	4.2	4.6						4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)	1565	700	145	1956						500	435
v/s Ratio Prot	cd.43		0.02	cd.35						0.18	cd.20
v/c Ratio	0.98	0.22	0.39	0.64						0.62	0.55
Uniform Delay, d1	16.9	10.6	28.7	9.5						18.6	18.9
Progression Factor	1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2	18.6	0.2	1.8	0.7						2.3	3.8
Delay (s)	35.6	10.8	30.4	10.2						20.9	22.7
Level of Service	D	B	C	B						C	C
Approach Delay (s)	32.7			11.1							21.0
Approach LOS		C		B						A	C

Intersection Summary		
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.87	
Actuated Cycle Length (s)	61.5	Sum of lost time (s)
Intersection Capacity Utilization	67.4%	ICU Level of Service C
Analysis Period (min)	15	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 29: E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	223	1476	909	594	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.6	4.6	4.0		
Lane Util. Factor	0.97	0.96	0.95	1.00		
Fr	1.00	1.00	1.00	0.85		
FLI Protected						
Satd. Flow (prot)	3433	3539	3539	1583		
FLI Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	3539	3539	1583		
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	327	2165	1333	871	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	327	2165	1333	871	0	0
Turn Type	Prot	NA	NA	Free		
Protected Phases	5	2	4	6	8	
Permitted Phases				Free		
Actuated Green, G (s)	9.0	100.0	83.0	100.0		
Effective Green, g (s)	9.0	96.0	83.0	100.0		
Actuated g/C Ratio	0.09	0.96	0.83	1.00		
Clearance Time (s)	4.0					
Vehicle Extension (s)	3.0					
Lane Grp Cap (vph)	308	3397	2937	1583		
v/s Ratio Prot	c0.10	c0.61	0.38			
v/c Ratio	1.06	0.64	0.45	0.55		
Uniform Delay, d1	45.5	0.2	2.3	0.0		
Progression Factor	1.00	1.00	1.29	1.00		
Incremental Delay, d2	68.5	0.4	0.1	1.0		
Delay (s)	114.0	0.6	3.1	1.0		
Level of Service	F	A	A	A		
Approach Delay (s)	15.5	2.2		0.0		
Approach LOS	B	A		A		
Intersection Summary						
HCM 2000 Control Delay			9.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.73			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	12.6
Intersection Capacity Utilization			48.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 30: Border Village Rd (W) & E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR	
Volume (vph)	285	615	0	385	159	232	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.9	4.9		4.9	4.9		
Lane Util. Factor	1.00	1.00		1.00	1.00		
Fr	1.00	0.85		1.00	0.98		
FLI Protected							
Satd. Flow (prot)	1863	1583		1863	1679		
FLI Permitted	1.00	1.00		1.00	0.98		
Satd. Flow (perm)	1863	1583		1863	1679		
Peak-hour factor, PHF	0.89	0.89	0.81	0.81	0.81	0.67	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	352	760	0	523	261	381	
RTOR Reduction (vph)	0	472	0	0	99	0	
Lane Group Flow (vph)	352	238	0	523	543	0	
Turn Type	NA	Perm	NA	NA	NA		
Protected Phases	2			6	8		
Permitted Phases		2					
Actuated Green, G (s)	16.8	16.8		16.8	17.8		
Effective Green, g (s)	16.8	16.8		16.8	17.8		
Actuated g/C Ratio	0.38	0.38		0.38	0.40		
Clearance Time (s)	4.9	4.9		4.9	4.9		
Vehicle Extension (s)	2.5	2.5		2.5	2.0		
Lane Grp Cap (vph)	704	598		704	673		
v/s Ratio Prot	0.19			c0.28	c0.32		
v/c Ratio	0.50	0.48		0.74	0.81		
Uniform Delay, d1	10.6	10.5		11.9	11.8		
Progression Factor	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.4	0.4		4.0	6.6		
Delay (s)	11.0	10.9		16.0	18.4		
Level of Service	B	B		B	B		
Approach Delay (s)	10.9			16.0	18.4		
Approach LOS	B			B	B		
Intersection Summary							
HCM 2000 Control Delay				14.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio				0.77			
Actuated Cycle Length (s)				44.4		Sum of lost time (s)	9.8
Intersection Capacity Utilization				55.8%		ICU Level of Service	B
Analysis Period (min)				15			
c Critical Lane Group							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 31: Border Village Rd (E) & E. San Ysidro Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	429	12	104	360	3	9	0	93	2	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.9	4.0	4.9	4.0	4.0	4.0	4.9	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.85	1.00	0.93	1.00
Fr	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.99	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.99	1.00
Satd. Flow (prot)	1770	1855	1770	3535	1770	3535	1770	1583	1716	1716	1716	1716
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.99	1.00
Satd. Flow (perm)	1770	1855	1770	3535	1770	3535	1770	1583	1716	1716	1716	1716
Peak-hour factor, PHF	0.84	0.84	0.84	0.77	0.74	0.74	0.73	0.73	0.73	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	5	562	16	149	535	4	14	0	140	3	3	6
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	5	577	0	149	539	0	0	14	140	0	6	0
Turn Type	Prot	NA	NA	Prot	NA	Perm	NA	Free	Perm	NA	NA	Free
Protected Phases	5	2		1	6			8				4
Permitted Phases							8			Free		4
Actuated Green, G (s)	0.6	27.2	7.2	32.9	48.2	0.9	48.2	0.9	48.2	0.9	0.9	0.9
Effective Green, g (s)	0.6	27.2	7.2	32.9	48.2	0.9	48.2	0.9	48.2	0.9	0.9	0.9
Actuated g/C Ratio	0.01	0.56	0.15	0.88	0.02	1.00	0.02	1.00	0.02	0.02	0.02	0.02
Clearance Time (s)	4.0	4.0	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	22	1046	264	2412	34	1583	32					32
v/s Ratio Prot	0.00	c0.31	c0.08	0.15								
v/c Ratio	0.23	0.55	0.56	0.22	0.41	0.09	0.19					
Uniform Delay, d1	23.6	6.6	19.0	2.9	23.4	0.0	23.3					
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Incremental Delay, d2	5.2	0.6	2.8	0.0	2.9	0.1	2.4					
Delay (s)	28.8	7.3	21.8	2.9	26.3	0.1	24.4					
Level of Service	C	A	C	A	A	C	A					
Approach Delay (s)	7.5	A	7.0	A	2.5	A	24.4					
Approach LOS	A	A	A	A	A	A	C					
Intersection Summary												
HCM 2000 Control Delay	6.8 HCM 2000 Level of Service A											
HCM 2000 Volume to Capacity ratio	0.57											
Actuated Cycle Length (s)	48.2 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	46.1% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 32: Camino de la Plaza/E. Beyer Blvd & E. San Ysidro Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	115	128	265	212	71	16	242	132	139	29	83	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9	5.8	4.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Fr	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00	0.85	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.99	1.00
Satd. Flow (prot)	1770	1863	2787	1770	3442	3433	1863	1583	1839	1583	1839	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.99	1.00
Satd. Flow (perm)	1770	1863	2787	1770	3442	3433	1863	1583	1839	1583	1839	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	138	153	317	253	85	19	289	158	166	35	99	84
RTOR Reduction (vph)	0	0	217	0	10	0	0	0	142	0	0	0
Lane Group Flow (vph)	138	153	100	253	94	0	289	158	24	0	134	84
Turn Type	Prot	NA	pm-tov	Prot	NA	Split	NA	Perm	Split	NA	Split	Free
Protected Phases	5	2	3	1	6			3				4
Permitted Phases			2					3				4
Actuated Green, G (s)	14.6	19.3	35.6	15.2	19.9	16.3	16.3	16.3	16.3	14.0	112.3	14.0
Effective Green, g (s)	14.6	19.3	35.6	15.2	19.9	16.3	16.3	16.3	16.3	14.0	112.3	14.0
Actuated g/C Ratio	0.13	0.17	0.32	0.14	0.18	0.15	0.15	0.15	0.15	0.12	1.00	0.12
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9	5.8	4.0
Vehicle Extension (s)	2.0	6.0	2.0	2.0	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	230	320	1005	239	609	498	270	229	229	229	1583	229
v/s Ratio Prot	0.08	c0.08	0.01	c0.14	0.03	0.08	c0.08					c0.07
v/c Ratio	0.80	0.48	0.10	1.06	0.15	0.58	0.59	0.11	0.59	0.11	0.59	0.05
Uniform Delay, d1	46.1	42.0	27.1	48.5	39.1	44.8	44.8	41.7	46.4	41.7	46.4	46.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	3.2	0.0	74.5	0.1	2.1	2.1	0.1	2.5	0.1	2.5	0.1
Delay (s)	48.9	45.1	27.1	123.1	39.2	45.9	46.9	41.7	48.9	41.7	48.9	48.9
Level of Service	D	D	C	F	D	D	D	D	D	D	D	A
Approach Delay (s)	36.6	D	D	98.6	F	45.0	D	D	30.1	D	D	C
Approach LOS	D	D	D	F	F	D	D	D	C	D	D	C
Intersection Summary												
HCM 2000 Control Delay	51.0 HCM 2000 Level of Service D											
HCM 2000 Volume to Capacity ratio	0.50											
Actuated Cycle Length (s)	112.3 Sum of lost time (s) 24.0											
Intersection Capacity Utilization	51.2% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 33: I-5 NB Ramp & E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	200	195	218	75	165	0	0	0	0	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00					1.00	1.00
Flt Protected	0.95	1.00	0.92	1.00	0.98					1.00	0.91
Satd. Flow (prot)	1770	1715	1834	1834	1834					1704	1704
Flt Permitted	0.95	1.00	0.98	1.00	0.98					1.00	1.00
Satd. Flow (perm)	1770	1715	1834	1834	1834					1704	1704
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	239	233	281	90	197	0	0	0	0	0	71
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	102
Lane Group Flow (vph)	239	432	0	0	287	0	0	0	0	0	91
Turn Type	Split	NA	Split	NA	Split	NA	Perm	NA	Perm	NA	NA
Protected Phases	4	4		8	8		2	2		6	6
Permitted Phases	Protected Phases										
Actuated Green, G (s)	15.7	15.7	12.2	12.2	12.2		2	2		6	6
Effective Green, g (s)	15.7	15.7	12.2	12.2	12.2		2	2		6	6
Actuated g/C Ratio	0.33	0.33	0.25	0.25	0.25		0.25	0.25		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	580	562	467	467	467		284	284		284	284
v/s Ratio Prot	0.14	c0.25		c0.16			c0.05			c0.05	
v/c Ratio	0.41	0.77	0.61	0.61	0.61		0.32	0.32		0.32	0.32
Uniform Delay, d1	12.5	14.5	15.8	15.8	15.8		17.6	17.6		17.6	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	6.3	2.4	2.4	2.4		0.7	0.7		0.7	0.7
Delay (s)	13.0	20.7	18.2	18.2	18.2		18.2	18.2		18.2	18.2
Level of Service	B	C	B	B	B		B	B		B	B
Approach Delay (s)	18.2	B	18.2	B	18.2		0.0	0.0		18.2	18.2
Approach LOS	B	B	B	B	B		A	A		B	B
Intersection Summary											
HCM 2000 Control Delay	18.2										
HCM 2000 Volume to Capacity ratio	0.62										
Actuated Cycle Length (s)	47.9										
Intersection Capacity Utilization	60.4%										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 34: Via de San Ysidro & I-5 NB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	0	0	0	77	0	220	306	523	0	0	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.95	1.00	0.85	1.00	0.92					1.00	1.00
Satd. Flow (prot)	1770	1770	1583	1770	1863					3271	3271
Flt Permitted	0.95	1.00	0.95	1.00	0.95					1.00	1.00
Satd. Flow (perm)	1770	1770	1583	1770	1863					3271	3271
Peak-hour factor, PHF	0.80	0.80	0.80	0.88	0.88	0.82	0.82	0.82	0.82	0.78	0.78
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	96	0	275	410	702	0	0	389
RTOR Reduction (vph)	0	0	0	0	0	194	0	0	0	0	296
Lane Group Flow (vph)	0	0	0	96	0	81	410	702	0	0	489
Turn Type	custom	custom	custom	Prot	NA	Prot	NA	NA	NA	NA	NA
Protected Phases	Protected Phases										
Actuated Green, G (s)	8.7	8.7	8.7	15.0	31.1					12.1	12.1
Effective Green, g (s)	8.7	8.7	8.7	15.0	31.1					12.1	12.1
Actuated g/C Ratio	0.18	0.18	0.18	0.31	0.65					0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0					4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0					3.0	3.0
Lane Grp Cap (vph)	322	322	288	555	1212					828	828
v/s Ratio Prot	c0.05	c0.05	c0.05	c0.23	c0.38					0.15	0.15
v/c Ratio	0.30	0.28	0.28	0.74	0.58					0.59	0.59
Uniform Delay, d1	16.9	16.9	16.9	14.6	4.7					15.7	15.7
Progression Factor	1.00	1.00	1.00	1.00	1.00					1.00	1.00
Incremental Delay, d2	0.5	0.5	0.5	5.1	0.7					1.1	1.1
Delay (s)	17.4	17.4	17.4	19.8	5.4					16.8	16.8
Level of Service	B	B	B	B	A					B	B
Approach Delay (s)	0.0	A	17.4	B	10.7					16.8	16.8
Approach LOS	A	A	B	B	B					B	B
Intersection Summary											
HCM 2000 Control Delay	13.9										
HCM 2000 Volume to Capacity ratio	0.62										
Actuated Cycle Length (s)	47.8										
Intersection Capacity Utilization	57.7%										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 35: Via de San Ysidro & I-5 SB off-ramp
 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBR	SBT	SBR
Lane Configurations	97	352	0	762	401	0	
Volume (vph)	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	4.6	4.6	4.6	4.6	4.6	4.6	
Total Lost time (s)	1.00	1.00	1.00	1.00	0.95	1.00	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1770	1583	1863	3539			
Satd. Flow (prot)	0.95	1.00	1.00	1.00	1.00	1.00	
Flt Permitted	1770	1583	1863	3539			
Satd. Flow (perm)	0.79	0.79	0.70	0.70	0.75	0.75	
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%	
Growth Factor (vph)	135	490	0	1197	588	0	
Adj. Flow (vph)	0	220	0	0	0	0	
RTOR Reduction (vph)	135	270	0	1197	588	0	
Lane Group Flow (vph)	NA	custom	NA	NA	NA	NA	
Turn Type	4	4			3		
Protected Phases	3.4				7		
Permitted Phases	24.0	75.9	80.5	51.9	80.5	51.9	
Actuated Green, G (s)	24.0	75.9	80.5	51.9	80.5	51.9	
Effective Green, g (s)	0.17	0.35	0.59	0.38	0.59	0.38	
Actuated g/C Ratio	4.6	4.6	4.6	4.6	4.6	4.6	
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)	308	926	1090	1335			
Lane Grp Cap (vph)	0.08	0.05	0.12	0.17			
v/s Ratio Prot	0.44	0.29	1.10	0.44			
v/s Ratio Perm	50.7	16.5	28.5	32.0			
Uniform Delay, d1	1.00	1.00	1.09	1.00			
Progression Factor	1.0	0.2	56.6	0.2			
Incremental Delay, d2	51.7	16.6	87.8	32.2			
Delay (s)	D	B	F	C			
Level of Service	24.2		87.8	32.2			
Approach Delay (s)	C		F	C			
Approach LOS							
Intersection Summary							
HCM 2000 Control Delay	57.7		HCM 2000 Level of Service	E			
HCM 2000 Volume to Capacity ratio	0.74						
Actuated Cycle Length (s)	137.5		Sum of lost time (s)	18.0			
Intersection Capacity Utilization	57.7%		ICU Level of Service	B			
Analysis Period (min)	15						
c Critical Lane Group							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 36: Calle Primera/Willow Rd & Via de San Ysidro
 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	157	238	17	14	255	575	13	25	20	324	13	111
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1770	1847	1858	1583	1770	1739						
Satd. Flow (prot)	0.95	1.00	1.00	0.36	1.00	0.64	1.00	1.00	1.00	0.72	1.00	1.00
Flt Permitted	1770	1847	1858	1583	1770	1739						
Satd. Flow (perm)	0.81	0.81	0.85	0.85	0.85	0.79	0.79	0.79	0.79	0.81	0.81	0.81
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	213	391	23	18	330	744	18	35	28	440	18	151
Adj. Flow (vph)	0	1	0	0	0	261	0	12	0	0	63	0
RTOR Reduction (vph)	213	413	0	0	348	483	18	51	0	440	106	0
Lane Group Flow (vph)	Prot	NA	NA	Perm	NA	custom	Perm	NA	NA	Perm	NA	NA
Turn Type	5	2		6			7					
Protected Phases	20.2	47.8		23.4	79.9	80.5	80.5	80.5	80.5	80.5	80.5	
Permitted Phases	20.2	47.8		23.4	79.9	80.5	80.5	80.5	80.5	80.5	80.5	
Actuated Green, G (s)	0.15	0.35		0.17	0.58	0.59	0.59	0.59	0.59	0.59	0.59	
Effective Green, g (s)	4.2	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	
Actuated g/C Ratio	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Clearance Time (s)	260	642		113	919	697	1018	780	944			
Vehicle Extension (s)	c0.12	0.22		c0.52	0.31	0.02	0.03	c0.33	0.07			
Lane Grp Cap (vph)	0.82	0.64		3.08	0.53	0.03	0.05	0.56	0.11			
v/s Ratio Prot	56.9	37.7		57.0	17.4	12.0	12.2	17.6	12.6			
v/s Ratio Perm	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay, d1	17.9	2.2		968.9	0.5	0.0	0.0	0.9	0.0			
Progression Factor	74.8	39.9		1015.9	17.9	12.0	12.2	8.4	0.1			
Incremental Delay, d2	E	D		F	B	B	B	A	A			
Delay (s)	51.7			336.0				12.2	6.1			
Level of Service	D			F				B	A			
Approach Delay (s)	D							B	A			
Approach LOS												
Intersection Summary												
HCM 2000 Control Delay	167.7			HCM 2000 Level of Service	F							
HCM 2000 Volume to Capacity ratio	1.12											
Actuated Cycle Length (s)	137.5			Sum of lost time (s)	18.0							
Intersection Capacity Utilization	71.8%			ICU Level of Service	C							
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
38: Dairy Mart Rd & I-5 SB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	443	0	288	0	0	0	0	469	149	140	124	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.6	4.6
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00
Fr	1.00	1.00	0.85	1.00	1.00	1.00	0.85	1.00	0.95	1.00	1.00	1.00
FI Protected	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1681	1681	1583	1681	1681	1681	1583	1681	1583	1681	1681	1681
FI Permitted	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1681	1681	1583	1681	1681	1681	1583	1681	1583	1681	1681	1681
Peak-hour factor, PHF	0.80	0.80	0.80	0.50	0.50	0.50	0.88	0.88	0.88	0.81	0.81	0.81
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	554	0	360	0	0	0	533	169	173	153	0	0
RTOR Reduction (vph)	0	0	264	0	0	0	0	97	0	0	0	0
Lane Group Flow (vph)	277	277	96	0	0	0	533	72	173	153	0	0
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	NA	NA
Protected Phases	4	4	4	4	4	4	2	2	2	1	6	6
Permitted Phases	4	4	4	4	4	4	2	2	2	1	6	6
Actuated Green, G (s)	18.7	18.7	18.7	30.0	30.0	30.0	30.0	30.0	30.0	7.9	42.1	42.1
Effective Green, g (s)	18.7	18.7	18.7	30.0	30.0	30.0	30.0	30.0	30.0	7.9	42.1	42.1
Actuated g/C Ratio	0.27	0.27	0.27	0.43	0.43	0.43	0.11	0.60	0.11	0.60	0.60	0.60
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	449	449	422	1516	678	387	1120	1120	1120	1120	1120	1120
v/s Ratio Prot	0.16	0.16	0.16	0.15	0.15	0.05	0.08	0.08	0.05	0.08	0.08	0.08
v/s Ratio Perm	0.62	0.62	0.23	0.35	0.11	0.45	0.14	0.14	0.45	0.14	0.14	0.14
Uniform Delay, d1	22.5	22.5	20.0	13.5	12.0	29.0	6.1	6.1	6.1	6.1	6.1	6.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	2.5	0.3	0.6	0.3	0.8	0.3	0.3	0.8	0.3	0.3	0.3
Delay (s)	25.0	25.0	20.3	14.1	12.3	29.8	6.3	6.3	6.3	6.3	6.3	6.3
Level of Service	C	C	C	A	A	B	C	C	B	C	A	A
Approach Delay (s)	23.2	23.2	20.3	13.7	12.3	29.8	6.3	6.3	6.3	6.3	6.3	6.3
Approach LOS	C	C	C	A	A	B	C	C	B	C	A	A
Intersection Summary												
HCM 2000 Control Delay	19.0											
HCM 2000 Volume to Capacity ratio	0.45											
Actuated Cycle Length (s)	70.0											
Intersection Capacity Utilization	40.6%											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
38: Dairy Mart Rd & Servando Ave

3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBT	SBR
Volume (vph)	291	27	13	317	165	151	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.99	1.00	1.00	1.00	1.00	1.00
Fr	1.00	0.99	1.00	1.00	1.00	1.00	1.00
FI Protected	0.96	0.96	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1761	1761	1859	1742	1742	1742	1742
FI Permitted	0.96	0.96	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1761	1761	1827	1742	1742	1742	1742
Peak-hour factor, PHF	0.77	0.77	0.82	0.82	0.80	0.80	0.80
Adj. Flow (vph)	378	35	16	387	206	189	189
RTOR Reduction (vph)	9	0	0	0	73	0	0
Lane Group Flow (vph)	404	0	0	403	322	0	0
Turn Type	NA	Perm	NA	NA	NA	NA	NA
Protected Phases	4	4	2	2	6	6	6
Permitted Phases	4	4	2	2	6	6	6
Actuated Green, G (s)	13.3	13.3	18.7	18.7	18.7	18.7	18.7
Effective Green, g (s)	13.3	13.3	18.7	18.7	18.7	18.7	18.7
Actuated g/C Ratio	0.33	0.33	0.47	0.47	0.47	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	585	585	854	814	814	814	814
v/s Ratio Prot	0.23	0.23	0.22	0.22	0.18	0.18	0.18
v/s Ratio Perm	0.69	0.69	0.47	0.39	0.39	0.39	0.39
Uniform Delay, d1	11.6	11.6	7.3	7.0	7.0	7.0	7.0
Progression Factor	1.00	1.00	0.98	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	3.5	1.7	1.4	1.4	1.4	1.4
Delay (s)	15.1	15.1	8.8	8.4	8.4	8.4	8.4
Level of Service	B	B	A	A	A	A	A
Approach Delay (s)	15.1	15.1	8.8	8.4	8.4	8.4	8.4
Approach LOS	B	B	A	A	A	A	A
Intersection Summary							
HCM 2000 Control Delay	10.8						
HCM 2000 Volume to Capacity ratio	0.56						
Actuated Cycle Length (s)	40.0						
Intersection Capacity Utilization	51.7%						
Analysis Period (min)	15						
c Critical Lane Group							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
39: Dairy Mart Rd & Camino De La Plaza

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	6	346	17	1	153	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.96	0.96	0.96
Satd. Flow (prot)	1770	1583	1853	1787	1787	1787
Flt Permitted	0.95	1.00	1.00	0.75	0.75	0.75
Satd. Flow (perm)	1770	1583	1853	1406	1406	1406
Peak-hour factor, PHF	0.89	0.89	0.75	0.75	0.79	0.79
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	7	428	25	1	220	40
RTOR Reduction (vph)	0	342	0	0	0	0
Lane Group Flow (vph)	7	86	26	0	0	260
Turn Type	NA	Perm	NA	Perm	NA	NA
Protected Phases	8		2		6	
Permitted Phases	8		6		6	
Actuated Green, G (s)	8.0	8.0	24.0		24.0	
Effective Green, g (s)	8.0	8.0	24.0		24.0	
Actuated g/C Ratio	0.20	0.20	0.80		0.80	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	354	316	1111		843	
v/s Ratio Prot	0.00		0.01		c0.18	
v/c Ratio	0.02	0.27	0.02		0.31	
Uniform Delay, d1	12.9	13.5	3.2		3.9	
Progression Factor	1.00	1.00	1.00		1.35	
Incremental Delay, d2	0.0	0.5	0.0		0.9	
Delay (s)	12.9	14.0	3.3		7.0	
Level of Service	B	B	A		A	
Approach Delay (s)	14.0		3.3		7.0	
Approach LOS	B		A		A	
Intersection Summary						
HCM 2000 Control Delay			11.1			HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.30			
Actuated Cycle Length (s)			40.0			Sum of lost time (s) 8.0
Intersection Capacity Utilization			33.6%			ICU Level of Service A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
40: Camino de la Plaza & Bibler Dr

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	4	210	109	3	77	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	5.3		4.0	5.3
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3525		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3525		1770	3539
Peak-hour factor, PHF	0.71	0.71	0.80		0.80	0.87
Growth Factor (vph)	110%	110%	110%		110%	110%
Adj. Flow (vph)	6	325	150		4	97
RTOR Reduction (vph)	0	292	2		0	0
Lane Group Flow (vph)	6	33	152		0	97
Turn Type	NA	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases	8		6		6	
Actuated Green, G (s)	7.1	7.1	42.4		7.2	53.6
Effective Green, g (s)	7.1	7.1	42.4		7.2	53.6
Actuated g/C Ratio	0.10	0.10	0.81		0.10	0.77
Clearance Time (s)	4.0	4.0	5.3		4.0	5.3
Vehicle Extension (s)	2.0	2.0	3.6		2.0	3.6
Lane Grp Cap (vph)	179	160	2135		182	2709
v/s Ratio Prot	0.00		c0.04		c0.05	0.05
v/c Ratio	0.03	0.21	0.07		0.53	0.06
Uniform Delay, d1	28.4	28.9	5.7		29.8	2.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.2	0.1		1.5	0.0
Delay (s)	28.4	29.1	5.8		31.3	2.1
Level of Service	C	C	A		C	A
Approach Delay (s)	29.1		5.8		12.8	
Approach LOS	C		A		B	
Intersection Summary						
HCM 2000 Control Delay			18.5			HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.15			
Actuated Cycle Length (s)			70.0			Sum of lost time (s) 13.3
Intersection Capacity Utilization			27.9%			ICU Level of Service A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
41: Willow Rd & Camino de la Plaza

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	69	122	11	17	96	177	5	28	15	161	46	46
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.4	4.9	4.4	4.9	4.4	4.4	4.4	4.9	4.4	4.4	4.9	4.9
Total Lost time (s)	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.93
FLI Protected	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1770	3497	1770	1863	1583	1770	1763	1770	1763	1770	1723	1723
FLI Permitted	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)	1770	3497	1770	1863	1583	1770	1763	1770	1763	1770	1723	1723
Peak-hour factor, PHF	0.90	0.90	0.90	0.71	0.71	0.71	0.80	0.80	0.80	0.89	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	84	149	13	26	149	274	7	38	21	199	57	57
RTOR Reduction (vph)	0	9	0	0	0	164	0	17	0	0	36	0
Lane Group Flow (vph)	84	153	0	26	149	110	7	42	0	199	78	0
Turn Type	Prot	NA	NA	Prot	NA	pm+ov	Prot	NA	NA	Prot	NA	NA
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	3.4	14.3	0.6	11.5	21.5	0.6	9.9	0.6	9.9	10.0	19.3	
Effective Green, g (s)	3.4	14.3	0.6	11.5	21.5	0.6	9.9	0.6	9.9	10.0	19.3	
Actuated g/C Ratio	0.06	0.27	0.01	0.22	0.40	0.01	0.19	0.19	0.19	0.19	0.36	
Clearance Time (s)	4.4	4.9	4.4	4.9	4.4	4.4	4.9	4.4	4.9	4.4	4.9	
Vehicle Extension (s)	2.0	3.3	2.0	3.3	2.0	2.0	2.0	2.0	2.0	2.0	2.7	
Lane Grp Cap (vph)	112	936	19	401	637	19	326	19	326	331	622	
v/s Ratio Prot	c0.05	c0.04	0.01	c0.08	0.03	0.00	0.02	0.00	0.02	c0.11	c0.05	
v/s Ratio Perm					0.04							
v/c Ratio	0.75	0.16	1.37	0.37	0.17	0.37	0.13	0.37	0.13	0.60	0.12	
Uniform Delay, d1	24.6	15.0	26.4	17.9	10.2	26.2	18.2	18.2	18.2	19.9	11.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.8	0.1	338.3	0.6	0.0	4.4	0.1	4.4	0.1	2.1	0.1	
Delay (s)	46.4	15.1	364.7	18.5	10.3	30.6	18.2	18.2	18.2	22.0	11.5	
Level of Service	D	B	F	B	B	C	B	C	B	C	B	
Approach Delay (s)	25.8			33.5			19.5				18.2	
Approach LOS	C			C			B				B	
Intersection Summary												
HCM 2000 Control Delay	26.4 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.39											
Actuated Cycle Length (s)	53.4 Sum of lost time (s) 18.6											
Intersection Capacity Utilization	38.3% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
42: Camiones Way/I-5 SB Ramps & Camino de la Plaza

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	64	269	4	7	176	84	5	2	26	297	30	340
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.2	4.6	4.2	4.6	4.6	4.6	4.2	4.6	4.2	4.6	4.6	4.2
Total Lost time (s)	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FLI Protected	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.85
Satd. Flow (prot)	1770	3631	1770	1863	1583	1770	1863	1583	1770	1863	1770	1863
FLI Permitted	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)	1770	3631	1770	1863	1583	1770	1863	1583	1770	1863	1770	1863
Peak-hour factor, PHF	0.67	0.67	0.67	0.86	0.86	0.86	0.81	0.81	0.81	0.84	0.84	0.84
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	105	442	7	9	225	107	7	3	35	389	39	445
RTOR Reduction (vph)	0	1	0	0	0	55	0	0	29	0	0	215
Lane Group Flow (vph)	105	448	0	9	225	52	7	3	6	389	39	230
Turn Type	Prot	NA	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	8.3	19.3	3.6	14.6	33.1	0.9	9.0	12.6	18.5	27.0	35.3	
Effective Green, g (s)	8.3	19.3	3.6	14.6	33.1	0.9	9.0	12.6	18.5	27.0	35.3	
Actuated g/C Ratio	0.12	0.28	0.05	0.21	0.48	0.01	0.13	0.18	0.27	0.39	0.52	
Clearance Time (s)	4.2	4.6	4.2	4.6	4.6	4.2	4.6	4.2	4.6	4.6	4.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	214	996	93	397	872	23	245	291	478	735	816	
v/s Ratio Prot	c0.06	0.13	0.01	c0.12	0.02	0.00	0.00	0.00	c0.22	0.02	c0.03	
v/s Ratio Perm					0.02						0.11	
v/c Ratio	0.49	0.45	0.10	0.57	0.06	0.30	0.01	0.02	0.81	0.05	0.28	
Uniform Delay, d1	28.1	20.2	30.9	24.1	9.4	33.4	25.8	22.9	23.3	12.8	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.8	0.3	0.5	1.9	0.0	7.4	0.0	0.0	10.2	0.0	0.2	
Delay (s)	29.8	20.5	31.3	25.9	9.4	40.8	25.9	22.9	33.5	12.8	9.6	
Level of Service	C	C	C	C	A	D	C	C	C	C	B	
Approach Delay (s)	22.3			20.9			25.9				20.4	
Approach LOS	C			C			C				C	
Intersection Summary												
HCM 2000 Control Delay	21.2 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	68.4 Sum of lost time (s) 18.0											
Intersection Capacity Utilization	50.3% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
43: Smythe Ave & Avenida de la Madrid 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	22	77	121	32	209	89	332	91	171	569	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0			4.0	4.8		4.0	4.8	
Lane Util. Factor	1.00			1.00			1.00	0.95		1.00	0.95	
Flt Protected	0.93			0.92			1.00	0.97		1.00	0.98	
Flt Permitted	0.98			0.98			0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1702			1689			1770	3425		1770	3484	
Satd. Flow (perm)	1246			1287			1770	3425		1770	3484	
Peak-hour factor, PHF	0.54	0.54	0.54	0.68	0.68	0.68	0.89	0.89	0.89	0.94	0.94	0.94
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	92	45	157	196	52	338	110	410	112	200	666	77
RTOR Reduction (vph)	0	56	0	0	67	0	0	37	0	0	14	0
Lane Group Flow (vph)	0	238	0	0	519	0	110	486	0	200	729	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4			8			5	2		1	6	
Permitted Phases	4			8			5	2		1	6	
Actuated Green, G (s)	28.0			28.0			7.0	18.9		10.3	22.2	
Effective Green, g (s)	28.0			28.0			7.0	18.9		10.3	22.2	
Actuated g/C Ratio	0.40			0.40			0.10	0.27		0.15	0.32	
Clearance Time (s)	4.0			4.0			4.0	4.8		4.0	4.8	
Vehicle Extension (s)	2.0			2.0			2.0	4.1		2.0	4.1	
Lane Grp Cap (vph)	498			518			177	924		260	1104	
v/s Ratio Prot	0.19			c0.40			0.06	c0.14		c0.11	c0.21	
v/s Ratio Perm	0.48			1.00			0.62	0.53		0.77	0.66	
Uniform Delay, d1	15.6			21.0			30.2	21.7		28.7	20.6	
Progression Factor	1.00			1.00			1.00	1.00		0.93	0.93	
Incremental Delay, d2	0.3			39.9			4.8	2.1		11.5	3.1	
Delay (s)	15.8			60.9			35.0	23.9		38.1	22.3	
Level of Service	B			E			D	C		D	C	
Approach Delay (s)	15.8			60.9			25.8	C		25.6	C	
Approach LOS	B			E			C	C		C	C	
Intersection Summary												
HCM 2000 Control Delay	32.9 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.83											
Actuated Cycle Length (s)	70.0 Sum of lost time (s) 12.8											
Intersection Capacity Utilization	65.7% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
44: Avenida de la Madrid & Alaquinas Dr 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations						
Sign Control	Yield			Stop	Stop	
Volume (vph)	14	120	193	40	24	43
Peak Hour Factor	0.65	0.65	0.56	0.56	0.64	0.64
Hourly flow rate (vph)	24	203	379	79	41	74
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	227	458	115			
Volume Left (vph)	24	379	0			
Volume Right (vph)	203	0	74			
Head (s)	-0.48	0.20	-0.35			
Departure Headway (s)	4.8	4.8	4.7			
Degree Utilization, x	0.30	0.61	0.15			
Capacity (veh/h)	682	717	708			
Control Delay (s)	9.9	15.2	8.6			
Approach Delay (s)	9.9	15.2	8.6			
Approach LOS	A	C	A			
Intersection Summary						
Delay	12.7					
Level of Service	B					
Intersection Capacity Utilization	36.4% ICU Level of Service A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 45: I-805 NB Ramps/Center Street & E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	2	1084	0	0	709	16	70	26	242	0	0	199	
Volume (vph)	133	454	158	293	0	0	0	0	0	1900	1900	1900	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.6	4.6	4.6	4.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fr	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fr Protected	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1770	3539	3528	1797	1583	1611	1611	1611	1611	1611	1611	1611	
Fr Permitted	0.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	303	3539	3528	1797	1583	1611	1611	1611	1611	1611	1611	1611	
Peak-hour factor, PHF	0.95	0.95	0.82	0.82	0.82	0.85	0.85	0.85	0.85	0.25	0.25	0.25	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	30	1255	0	0	951	21	91	34	313	0	0	876	
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	32	0	0	32	
Lane Group Flow (vph)	30	1255	0	0	970	0	0	125	281	0	0	844	
Turn Type	Perm	NA	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	custom	
Protected Phases	2	6	5	8	8	8	8	8	8	8	8	4	
Permitted Phases	2	43.4	43.4	43.4	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	
Actuated Green, G (s)	43.4	43.4	43.4	39.4	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	
Effective Green, g (s)	43.4	43.4	43.4	39.4	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	
Actuated g/C Ratio	0.43	0.43	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	131	1555	1390	862	759	773	773	773	773	773	773	773	
v/s Ratio Prot	0.10	0.35	0.28	0.28	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
v/s Ratio Perm	0.10	0.70	0.70	0.70	0.15	0.37	0.37	0.37	0.37	0.37	0.37	0.37	
v/c Ratio	0.23	0.82	0.70	0.70	0.15	0.37	0.37	0.37	0.37	0.37	0.37	0.37	
Uniform Delay, d1	17.8	24.8	25.3	17.8	14.5	16.4	16.4	16.4	16.4	16.4	16.4	16.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.2	4.0	1.6	3.2	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Delay (s)	21.0	28.8	26.9	21.0	14.6	16.8	16.8	16.8	16.8	16.8	16.8	16.8	
Level of Service	C	C	C	C	B	B	B	B	B	B	B	F	
Approach Delay (s)	28.6	28.6	26.9	28.6	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	
Approach LOS	C	C	C	C	B	B	B	B	B	B	B	F	
Intersection Summary													
HCM 2000 Control Delay	40.8											HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01												
Actuated Cycle Length (s)	100.0											Sum of lost time (s)	12.6
Intersection Capacity Utilization	56.6%											ICU Level of Service	B
Analysis Period (min)	15												
c Critical Lane Group													

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 46: Camino de la Plaza & I-805 NB Ramp

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1	
Volume (vph)	133	454	158	293	0	0	0	0	0	1900	1900	1900	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fr	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fr Protected	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1770	1863	1863	1863	1583	1583	1583	1583	1583	1583	1583	1583	
Fr Permitted	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1770	1863	1863	1863	1583	1583	1583	1583	1583	1583	1583	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	165	543	189	350	0	0	0	0	0	1900	1900	1900	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	165	543	189	350	0	0	0	0	0	1900	1900	1900	
Turn Type	Prot	NA	NA	NA	Free	Free	Free	Free	Free	Free	Free	Free	
Protected Phases	7	4	8	8	8	8	8	8	8	8	8	8	
Permitted Phases	4.0	18.7	6.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	
Actuated Green, G (s)	4.0	18.7	6.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	
Effective Green, g (s)	4.0	18.7	6.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	
Actuated g/C Ratio	0.21	1.00	0.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	378	1863	667	1583	1583	1583	1583	1583	1583	1583	1583	1583	
v/s Ratio Prot	0.09	0.29	0.10	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	
v/s Ratio Perm	0.44	0.29	0.28	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	
v/c Ratio	0.44	0.29	0.28	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	
Uniform Delay, d1	6.4	0.0	4.3	0.0	4.3	0.0	4.3	0.0	4.3	0.0	4.3	0.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Delay (s)	7.2	0.1	4.5	0.3	4.6	0.3	4.6	0.3	4.6	0.3	4.6	0.3	
Level of Service	A	A	A	A	A	A	A	A	A	A	A	A	
Approach Delay (s)	1.7	1.8	0.0	1.7	1.8	0.0	1.7	1.8	0.0	1.7	1.8	0.0	
Approach LOS	A	A	A	A	A	A	A	A	A	A	A	A	
Intersection Summary													
HCM 2000 Control Delay	1.8											HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51												
Actuated Cycle Length (s)	18.7											Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.6%											ICU Level of Service	A
Analysis Period (min)	15												
c Critical Lane Group													

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
47: Vista Ln & Smythe Crossing

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	59	56	103	87	114	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr	1.00	0.94	0.94	0.97	1.00	0.97
FI Protected	0.97	1.00	1.00	0.97	1.00	0.97
Satd. Flow (prot)	1816	1750	1701	1701	1701	1701
FI Permitted	0.69	1.00	0.97	1.00	1.00	0.97
Satd. Flow (perm)	1293	1750	1701	1701	1701	1701
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	87	82	158	128	167	141
RTOR Reduction (vph)	0	0	89	0	72	0
Lane Group Flow (vph)	0	169	197	0	236	0
Turn Type	Perm	NA	NA	NA	NA	NA
Protected Phases	4	8	8	8	6	6
Permitted Phases	4					
Actuated Green, G (s)	7.4	7.4	7.4	7.4	11.8	11.8
Effective Green, g (s)	7.4	7.4	7.4	7.4	11.8	11.8
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.43	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	476	476	476	737	737
v/s Ratio Prot	c0.13	0.11	0.11	0.11	c0.14	c0.14
v/s Ratio Perm	0.48	0.41	0.41	0.41	0.32	0.32
Uniform Delay, d1	8.3	8.1	8.1	8.1	5.1	5.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.6	0.6	0.6	0.3	0.3
Delay (s)	9.3	8.7	8.7	8.7	5.3	5.3
Level of Service	A	A	A	A	A	A
Approach Delay (s)	9.3	8.7	8.7	8.7	5.3	5.3
Approach LOS	A	A	A	A	A	A
Intersection Summary						
HCM 2000 Control Delay			7.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38			
Actuated Cycle Length (s)			27.2		Sum of lost time (s)	8.0
Intersection Capacity Utilization			42.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
48: Camino de la Plaza & Virginia Ave

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	392	287	66	394	5	66	0	287	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.96	0.97	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.85	1.00	1.00	0.95	1.00
FI Protected	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.85	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3463	3433	3533	1770	1583	1770	1583	1770	1583	1770	1583	1770
FI Permitted	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.85	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3463	3433	3533	1400	1583	1400	1583	1400	1583	1400	1583	1723
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	575	97	421	578	7	97	0	421	9	0	0
RTOR Reduction (vph)	0	27	0	0	1	0	0	225	0	0	0	0
Lane Group Flow (vph)	0	645	0	421	584	0	97	196	0	0	9	0
Turn Type	Prot	NA	NA	Prot	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2		2		6	
Permitted Phases												
Actuated Green, G (s)	13.2	6.2	23.4	6.2	23.4	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Effective Green, g (s)	13.2	6.2	23.4	6.2	23.4	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Actuated g/C Ratio	0.32	0.15	0.36	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1096	510	1982	510	1982	345	391	391	345	391	178	178
v/s Ratio Prot	c0.19	c0.12	0.17	c0.12	0.17	0.07	c0.12		0.07		0.01	0.01
v/s Ratio Perm	0.59	0.83	0.29	0.28	0.50	0.28	0.50	0.50	0.28	0.50	0.05	0.05
Uniform Delay, d1	12.0	17.2	4.8	12.7	13.5	12.7	13.5	12.0	12.7	13.5	12.0	12.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	10.5	0.1	0.4	1.0	0.4	1.0	0.1	0.4	1.0	0.1	0.1
Delay (s)	12.8	27.7	4.9	13.2	14.5	13.2	14.5	12.1	13.2	14.5	12.1	12.1
Level of Service	B	C	A	C	A	B	B	B	C	A	B	B
Approach Delay (s)	12.8	27.7	4.9	13.2	14.4	13.2	14.4	12.1	13.2	14.4	12.1	12.1
Approach LOS	B	B	B	B	B	B	B	B	B	B	B	B
Intersection Summary												
HCM 2000 Control Delay			13.9		HCM 2000 Level of Service	B						
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			41.7		Sum of lost time (s)	12.0						
Intersection Capacity Utilization			52.8%		ICU Level of Service	A						
Analysis Period (min)			15									
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
66: Sycamore Rd & Willow Rd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	122	24	24	323	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	537	106	106	1421	158	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	252					
pX, platoon unblocked	0.71	0.71	0.71	0.71	0.71	0.71
vC, conflicting volume	642			2222	590	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	296	2513	222			
vCu, unblocked vol	4.1	6.4	6.2			
IC, 2 stage (s)						
IF (s)	2.2	3.5	3.3			
p0 queue free %	88	0	73			
cM capacity (veh/h)	901	20	582			
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	642	1627	317			
Volume Left	0	106	158			
Volume Right	106	0	158			
cSH	1700	901	38			
Volume to Capacity	0.38	0.12	8.37			
Queue Length 95th (ft)	0	10	Err			
Control Delay (s)	0.0	7.0	Err			
Lane LOS	A	F	F			
Approach Delay (s)	0.0	7.0	Err			
Approach LOS			F			
Intersection Summary						
Average Delay	1276.5					
Intersection Capacity Utilization	43.4%			ICU Level of Service	A	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
81: Hall Rd & E. San Ysidro Blvd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	806	139	139	769	139	139
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1182	204	204	1128	204	204
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage (veh)	1			1		
Upstream signal (ft)	212					
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85	0.85
vC, conflicting volume	1386			2256	1284	
vC1, stage 1 conf vol					1284	
vC2, stage 2 conf vol	1367	2384	1247			
vCu, unblocked vol	4.1	6.8	6.9			
IC, 2 stage (s)						
IF (s)	2.2	3.5	3.3			
p0 queue free %	52	0	0			
cM capacity (veh/h)	426	90	141			
Direction, Lane #	WB 1	WB 2	NB 1			
Volume Total	580	752	408			
Volume Left	204	0	204			
Volume Right	0	0	204			
cSH	426	1700	110			
Volume to Capacity	0.48	0.44	3.72			
Queue Length 95th (ft)	63	0	Err			
Control Delay (s)	15.7	0.0	Err			
Lane LOS	C	F	F			
Approach Delay (s)	6.8	Err	F			
Approach LOS			F			
Intersection Summary						
Average Delay	Err					
Intersection Capacity Utilization	Err%			ICU Level of Service	H	
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
83: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	270	32	32	172	32	32
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1188	141	141	757	141	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLT		
Median storage (veh)				2		
Upstream signal (ft)	486					
pX, platoon unblocked	0.94			0.94	0.94	0.94
vC, conflicting volume	1329			2297	1258	1258
vC1, stage 1 conf vol				1038		
vC2, stage 2 conf vol	1317			2351	1242	1242
vCu, unblocked vol	4.1			6.4	6.2	6.2
IC, single (s)				5.4		
IC, 2 stage (s)				2.2	3.5	3.3
IF (s)				71	17	29
p0 queue free %				491	171	199
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	141	757	282		
Volume Left	0	141	0	141		
Volume Right	141	0	0	141		
cSH	1700	491	1700	184		
Volume to Capacity	0.78	0.29	0.45	1.53		
Queue Length 95th (ft)	0	29	0	451		
Control Delay (s)	0.0	15.2	0.0	310.7		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	2.4		310.7		
Approach LOS				F		
Intersection Summary						
Average Delay	35.7					
Intersection Capacity Utilization	35.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
87: Virginia Av & E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT			None		
Median storage (veh)	2					
Upstream signal (ft)	918					
pX, platoon unblocked						
vC, conflicting volume				1329	2339	1217
vC1, stage 1 conf vol					1217	
vC2, stage 2 conf vol				1329	2339	1217
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)				5.4		
IC, 2 stage (s)				2.2	3.5	3.3
IF (s)				57	0	0
p0 queue free %				520	145	221
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	520	1700	175		
Volume to Capacity	0.78	0.43	0.40	2.56		
Queue Length 95th (ft)	0	54	0	965		
Control Delay (s)	0.0	17.1	0.0	761.8		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	4.3		761.8		
Approach LOS				F		
Intersection Summary						
Average Delay	129.2					
Intersection Capacity Utilization	37.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
90: Border Village Rd (W)/Border Village Rd (E) & Virginia Av

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	80	120	134	80	80	80
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	528	590	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)				925		
pX, platoon unblocked						
vC, conflicting volume	942			1734	766	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	942			1734	766	
vCu, unblocked vol	4.1			6.8	6.9	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	51			0	0	
cM capacity (veh/h)	724			40	346	
Direction, Lane #	EB 1	EB 2	SB 1	SB 2		
Volume Total	528	352	704			
Volume Left	352	0	352			
Volume Right	0	0	352			
cSH	724	1700	72			
Volume to Capacity	0.49	0.21	9.71			
Queue Length 95th (ft)	67	0	Err			
Control Delay (s)	12.4	0.0	Err			
Lane LOS	B		F			
Approach Delay (s)	7.4		Err			
Approach LOS			F			
Intersection Summary						
Average Delay	Err		Err			
Intersection Capacity Utilization			Err%		ICU Level of Service	H
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
92: Border Village Rd (W) & Hall Rd

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	20	0	0	20	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	88	0	0	88	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)					203	
pX, platoon unblocked						
vC, conflicting volume	176	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	176	0			0	
vCu, unblocked vol	6.8	6.9			4.1	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			95	
cM capacity (veh/h)	754	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2			
Volume Total	88	88	0			
Volume Left	0	88	0			
Volume Right	88	0	0			
cSH	1084	1622	1700			
Volume to Capacity	0.08	0.05	0.00			
Queue Length 95th (ft)	7	4	0			
Control Delay (s)	8.6	7.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	7.3				
Approach LOS	A					
Intersection Summary						
Average Delay			8.0			
Intersection Capacity Utilization			13.3%		ICU Level of Service	A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
95: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Stop	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TW/TL		
Median storage (veh)				2		
Upstream signal (ft)				685		
pX, platoon unblocked						
vC, conflicting volume			1329		2339	1217
vC1, stage 1 conf vol					1217	
vC2, stage 2 conf vol					1122	
vCu, unblocked vol			1329		2339	1217
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)			5.4		5.4	
IF (s)			2.2		3.5	3.3
p0 queue free %			57		0	0
cM capacity (veh/h)			520		145	221
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	520	1700	175		
Volume to Capacity	0.78	0.43	0.40	2.56		
Queue Length 95th (ft)	0	54	0	965		
Control Delay (s)	0.0	17.1	0.0	761.8		
Lane LOS	C	C	F	F		
Approach Delay (s)	0.0	4.3		761.8		
Approach LOS				F		

Intersection Summary		
Average Delay	129.2	
Intersection Capacity Utilization	37.8%	ICU Level of Service A
Analysis Period (min)	15	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
98: Virginia Av

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (veh/h)	80	80	80	80	0	80
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	0	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			880	528		704
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			880	528		704
IC, single (s)			6.4	6.2		4.1
IC, 2 stage (s)			3.5	3.3		2.2
IF (s)			0	36		100
p0 queue free %			318	550		894
cM capacity (veh/h)			704	352		352
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	704	352	0	0		
Volume Left	352	0	0	0		
Volume Right	352	352	0	0		
cSH	403	1700	894			
Volume to Capacity	1.75	0.41	0.00			
Queue Length 95th (ft)	1082	0	0			
Control Delay (s)	370.2	0.0	0.0			
Lane LOS	F	F	F			
Approach Delay (s)	370.2	0.0	0.0			
Approach LOS	F					

Intersection Summary		
Average Delay	148.1	
Intersection Capacity Utilization	27.0%	ICU Level of Service A
Analysis Period (min)	15	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
100: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	178	20	20	164	20	20
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	783	88	88	722	88	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				323		
pX platoon unblocked				0.90		
vC, conflicting volume	871			1725	827	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	871			1748	827	
vCU, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	89			0	76	
cM capacity (veh/h)	774			76	371	
Direction, Lane #	EB 1	WB 2	NB 1			
Volume Total	871	88	722	176		
Volume Left	0	88	0	88		
Volume Right	88	0	0	88		
cSH	1700	774	1700	126		
Volume to Capacity	0.51	0.11	0.42	1.40		
Queue Length 95th (ft)	0	10	0	296		
Control Delay (s)	0.0	10.2	0.0	284.8		
Lane LOS	B	B	F	F		
Approach Delay (s)	0.0	1.1		284.8		
Approach LOS				F		
Intersection Summary						
Average Delay				27.5		
Intersection Capacity Utilization				28.3%	ICU Level of Service	A
Analysis Period (min)				15		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
103: W. San Ysidro Blvd/E. San Ysidro Blvd & West Olive Dr

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)											
Lane Util. Factor											
FI Protected											
Satd. Flow (prot)											
FI Permitted											
Satd. Flow (perm)											
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases		4		8		8		2			6
Permitted Phases		4		8		8		2			6
Actuated Green, G (s)											
Effective Green, g (s)											
Actuated g/C Ratio											
Clearance Time (s)											
Vehicle Extension (s)											
Lane Grp Cap (vph)											
v/s Ratio Prot											
v/s Ratio Perm											
v/c Ratio											
Uniform Delay, d1											
Progression Factor											
Incremental Delay, d2											
Delay (s)											
Level of Service											
Approach Delay (s)	0.0		0.0		0.0		0.0		0.0		0.0
Approach LOS	A		A		A		A		A		A
Intersection Summary											
HCM 2000 Control Delay				0.0			HCM 2000 Level of Service		A		
HCM 2000 Volume to Capacity ratio				0.00							
Actuated Cycle Length (s)				70.0			Sum of lost time (s)		8.0		
Intersection Capacity Utilization				0.0%			ICU Level of Service		A		
Analysis Period (min)				15							
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
104: Border Village Rd (E) 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4				
Volume (veh/h)	6	41	53	6	6	6
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	26	180	233	26	26	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			453			
pX, platoon unblocked						
vC, conflicting volume	260				389	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	260				389	246
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	98				95	96
cM capacity (veh/h)	1302				575	754
Direction, Lane #	EB 1	EB 2	SB 1	SB 1		
Volume Total	87	120	53			
Volume Left	26	0	26			
Volume Right	0	0	26			
cSH	1302	1700	652			
Volume to Capacity	0.02	0.07	0.08			
Queue Length 95th (ft)	2	0	7			
Control Delay (s)	2.3	0.0	11.0			
Lane LOS	A	B	B			
Approach Delay (s)	1.0	11.0				
Approach LOS	B	B				
Intersection Summary						
Average Delay	Err		Err			
Intersection Capacity Utilization	Err%		ICU Level of Service			
Analysis Period (min)	15		H			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
107: Virginia Av 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations	W					
Volume (veh/h)	80	80	80	80	80	80
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1584	528	704			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1584	528	704			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	0	36	81			
cM capacity (veh/h)	72	550	894			
Direction, Lane #	EB 1	NB 1	SB 1	SB 1		
Volume Total	704	704	704			
Volume Left	352	352	0			
Volume Right	0	0	352			
cSH	128	894	1700			
Volume to Capacity	5.51	0.39	0.41			
Queue Length 95th (ft)	Err	47	0			
Control Delay (s)	Err	8.7	0.0			
Lane LOS	F	A	A			
Approach Delay (s)	Err	8.7	0.0			
Approach LOS	F	F	A			
Intersection Summary						
Average Delay	3335.9		3335.9			
Intersection Capacity Utilization	39.8%		ICU Level of Service			
Analysis Period (min)	15		A			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
115: E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR	Diagram
Lane Configurations	0	178	164	0	0	0	
Volume (veh/h)	0	178	164	0	0	0	
Sign Control	Free	Free	Free	Stop	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	
Hourly flow rate (vph)	0	783	722	0	0	0	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None	None	None				
Median storage (veh)							
Upstream signal (ft)	1174						
pX, platoon unblocked							
vC, conflicting volume	722			1505	722		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol	722			1505	722		
vCU, unblocked vol	4.1			6.4	6.2		
IC, single (s)							
IC, 2 stage (s)							
IF (s)	2.2			3.5	3.3		
p0 queue free %	100			100	100		
cM capacity (veh/h)	880			133	427		
Direction, Lane #	EB 1	EB 2	WB 1	WB 1	SB 1		
Volume Total	0	783	722	0	0		
Volume Left	0	0	0	0	0		
Volume Right	0	0	0	0	0		
cSH	1700	1700	1700	1700	1700		
Volume to Capacity	0.00	0.46	0.42	0.00	0.00		
Queue Length 95th (ft)	0	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0	0.0		
Lane LOS	A	A	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A	A		
Intersection Summary							
Average Delay	0.0						
Intersection Capacity Utilization	13.6%						ICU Level of Service A
Analysis Period (min)	15						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
115: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR	Diagram
Lane Configurations	178	20	20	164	20	20	
Volume (veh/h)	178	20	20	164	20	20	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	
Hourly flow rate (vph)	783	88	88	722	88	88	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None	None	None	None			
Median storage (veh)							
Upstream signal (ft)	684						
pX, platoon unblocked							
vC, conflicting volume	871			1725	827		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol	871			1733	827		
vCU, unblocked vol	4.1			6.4	6.2		
IC, single (s)							
IC, 2 stage (s)							
IF (s)	2.2			3.5	3.3		
p0 queue free %	89			0	76		
cM capacity (veh/h)	774			83	371		
Direction, Lane #	EB 1	WB 1	WB 2	NB 1			
Volume Total	871	88	722	176			
Volume Left	0	88	0	88			
Volume Right	88	0	0	88			
cSH	1700	774	1700	135			
Volume to Capacity	0.51	0.11	0.42	1.30			
Queue Length 95th (ft)	0	10	0	276			
Control Delay (s)	0.0	10.2	0.0	241.0			
Lane LOS	F	B	F	F			
Approach Delay (s)	0.0	1.1	241.0				
Approach LOS	F	F	F	F			
Intersection Summary							
Average Delay	23.3						
Intersection Capacity Utilization	28.3%						ICU Level of Service A
Analysis Period (min)	15						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 128: Dairy Mart Rd & Tecuilla Way

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Fr												
Full Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	4			8			2			2		6
Permitted Phases	4			8			2			2		6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service	0.0			0.0			0.0			0.0		0.0
Approach Delay (s)	A			A			A			A		A
Approach LOS	A			A			A			A		A
Intersection Summary												
HCM 2000 Control Delay	0.0 HCM 2000 Level of Service A											
HCM 2000 Volume to Capacity ratio	0.00											
Actuated Cycle Length (s)	70.0 Sum of lost time (s) 8.0											
Intersection Capacity Utilization	0.0% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 135: Border Village Rd (W)

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	10	190	204	10	10	10	10	10	10	10	10	10
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	44	836	898	44	44	44	44	44	44	44	44	44
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn lane (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)	740											
pX, platoon unblocked												
vC, conflicting volume	942									1426		920
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	942									1426		920
IC, single (s)	4.1									6.8		6.9
IC, 2 stage (s)												
IF (s)	2.2									3.5		3.3
p0 queue free %	94									63		84
cM capacity (veh/h)	724									119		273
Direction, Lane #	EB 1	EB 2	WB 1	WB 1	SB 1							
Volume Total	323	557	942	88								
Volume Left	44	0	0	44	44							
Volume Right	0	0	44	44								
cSH	724	1700	1700	165								
Volume to Capacity	0.06	0.33	0.55	0.53								
Queue Length 95th (ft)	5	0	0	0	67							
Control Delay (s)	2.1	0.0	0.0	49.1								
Lane LOS	A			E								
Approach Delay (s)	0.8	0.0	0.0	49.1								
Approach LOS	E			E								
Intersection Summary												
Average Delay	2.6											
Intersection Capacity Utilization	23.9%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 142: Cottonwood Rd & Seaward Ave 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		P			4
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			1080			
pX, platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	0	0	0	0	0	0
vCu, unblocked vol	6.4	6.2	4.1			
IC, single (s)						
IC, 2 stage (s)	3.5	3.3	2.2			
IF (s)	100	100	100			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1023	1085	1623			
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0		0.0		0.0	
Intersection Capacity Utilization	0.0%		0.0%		0.0%	
Analysis Period (min)	15		15		15	
ICU Level of Service	A		A		A	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 500: Beyer Blvd & Cottonwood Rd 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4	4	W	
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)		810	816			
pX, platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	0	0	0	0	0	0
vCu, unblocked vol	4.1		6.8	6.9		
IC, single (s)						
IC, 2 stage (s)	2.2		3.5	3.3		
IF (s)	100		100	100		
p0 queue free %	100		100	100		
cM capacity (veh/h)	1622		1023	1084		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A	A	A	A
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Approach LOS	A	A	A	A	A	A
Intersection Summary						
Average Delay	0.0		0.0		0.0	
Intersection Capacity Utilization	0.0%		0.0%		0.0%	
Analysis Period (min)	15		15		15	
ICU Level of Service	A		A		A	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 1: Beyer Blvd & Iris Ave/SR-905 WB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	100	70	302	259	226	179	161	402	139	75	597
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.5	4.0	4.0	4.0	5.0	4.0	3.5	4.5	4.5	3.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Lane Util. Factor	1.00	0.97	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.88	1.00	0.93	1.00	0.96	1.00	0.96	1.00	0.97	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Flt Permitted	1770	1587	1770	1727	1770	1727	1770	3403	1770	3412	1770
Satd. Flow (perm)	1770	1587	1770	1727	1770	1727	1770	3403	1770	3412	1770
Peak-hour factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.90	0.90	0.90	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	125	88	378	331	289	229	197	491	170	95	755
RTOR Reduction (vph)	0	132	0	0	22	0	0	27	0	0	20
Lane Group Flow (vph)	125	334	0	331	496	0	197	634	0	95	936
Canfl. Peds. (#/hr)	3	12	1	3	1	3	1	3	1	3	1
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Prot
Protected Phases	8		7		4		6		5		2
Permitted Phases											
Actuated Green, G (s)	12.5	28.3	24.1	38.4	12.9	36.4	10.2	33.7			
Effective Green, g (s)	12.5	28.3	24.1	38.4	12.9	36.4	10.2	33.7			
Actuated g/C Ratio	0.11	0.25	0.21	0.33	0.11	0.32	0.09	0.29			
Clearance Time (s)	4.5	4.0	4.0	5.0	4.5	4.5	3.5	4.5			
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0	4.3	2.0	4.3			
Lane Grp Cap (vph)	192	390	370	576	198	1077	156	999			
v/s Ratio Prot	0.07		c0.19		c0.11	c0.19	0.05	c0.27			
v/s Ratio Perm											
v/c Ratio	0.65	0.86	0.89	0.86	0.99	0.59	0.61	0.94			
Uniform Delay, d1	49.2	41.4	44.2	35.8	51.0	33.0	50.5	39.6			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.9	16.7	22.9	12.1	62.1	1.1	4.6	15.7			
Delay (s)	55.1	58.1	67.1	47.9	113.1	34.1	55.0	55.3			
Level of Service	E	E	E	D	F	C	E	E			
Approach Delay (s)	57.4		55.4		52.2		55.3				
Approach LOS	E		E		D		E				
Intersection Summary											
HCM 2000 Control Delay	54.9										
HCM 2000 Volume to Capacity ratio	0.92										
Actuated Cycle Length (s)	115.0										
Intersection Capacity Utilization	88.6%										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 2: Beyer Blvd & Dairy Mart Rd/SR-905 Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	194	240	116	154	127	100	116	351	128	263	568
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.0	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0
Total Lost time (s)	0.95	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	1.00	1.00	1.00	0.85	1.00	0.96	1.00	0.96	1.00	1.00	0.85
Frt Protected	0.95	1.00	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.95	1.00
Frt Permitted	1681	1763	1583	3333	1770	3397	1770	3397	1770	3359	1583
Satd. Flow (perm)	1681	1763	1583	3333	1770	3397	1770	3397	1770	3359	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.81	0.81	0.81	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	232	287	139	207	170	134	158	477	174	329	415
RTOR Reduction (vph)	0	0	86	0	27	0	0	27	0	0	119
Lane Group Flow (vph)	209	310	53	0	484	0	158	624	0	329	415
Turn Type	Split	NA	Perm	Split	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4	4		4		3	3	5	2	2	6
Permitted Phases											
Actuated Green, G (s)	26.8	26.8	26.8	21.2	13.3	27.2	25.7	39.6	25.7	39.6	66.4
Effective Green, g (s)	26.8	26.8	26.8	21.2	13.3	27.2	25.7	39.6	25.7	39.6	66.4
Actuated g/C Ratio	0.23	0.23	0.23	0.18	0.11	0.23	0.22	0.34	0.22	0.34	0.37
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	4.2	5.5	4.2	5.5	3.0	2.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	4.3	2.0	4.3	2.0	4.3	2.0
Lane Grp Cap (vph)	386	405	363	606	201	792	390	1201	390	1201	901
v/s Ratio Prot	0.12	c0.18	0.03		c0.15	0.09	c0.18	0.12	0.15	0.12	0.15
v/s Ratio Perm											
v/c Ratio	0.54	0.77	0.15	0.80	0.79	0.79	0.84	0.35	0.66	0.66	0.66
Uniform Delay, d1	39.5	42.0	35.8	45.7	50.3	42.0	43.5	28.8	43.5	28.8	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	7.6	0.1	6.8	16.8	5.7	14.7	0.3	14.7	0.3	1.3
Delay (s)	40.3	49.5	35.8	52.5	67.1	47.7	58.2	29.1	58.2	29.1	18.6
Level of Service	D	D	D	D	D	D	E	C	E	C	B
Approach Delay (s)	43.7		52.5		51.5		51.5		30.5		
Approach LOS	D		D		D		C		C		
Intersection Summary											
HCM 2000 Control Delay	41.3										
HCM 2000 Volume to Capacity ratio	0.80										
Actuated Cycle Length (s)	116.6										
Intersection Capacity Utilization	72.2%										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 3: Beyer Blvd & Del Sur Blvd 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	140	293	248	170	247	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Lane Util. Factor	1.00	0.96	0.95	1.00	1.00	0.85
FI Protected	0.95	1.00	1.00	0.95	1.00	0.85
Satd. Flow (prot)	1770	3539	3323	1770	1583	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	3323	1770	1583	1583
Peak-hour factor, PHF	0.97	0.97	0.90	0.90	0.88	0.88
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	159	332	303	208	309	161
RTOR Reduction (vph)	0	0	146	0	0	118
Lane Group Flow (vph)	159	332	365	0	309	43
Turn Type	Prot	NA	NA	NA	NA	Perm
Protected Phases	5	2	6		4	
Permitted Phases				4		
Actuated Green, G (s)	5.7	24.3	14.2	12.6	12.6	12.6
Effective Green, g (s)	5.7	24.3	14.2	12.6	12.6	12.6
Actuated g/C Ratio	0.12	0.51	0.30	0.27	0.27	0.27
Clearance Time (s)	4.4	5.5	5.5	4.9	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	2.0	2.0
Lane Grp Cap (vph)	213	1818	997	471	421	421
v/s Ratio Prot	c0.09	0.09	c0.11	c0.17		0.03
v/c Ratio	0.75	0.18	0.37	0.66	0.10	0.10
Uniform Delay, d1	20.1	6.2	13.0	15.4	13.1	13.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.7	0.1	0.5	2.5	0.0	0.0
Delay (s)	31.8	6.3	13.5	17.9	13.1	13.1
Level of Service	C	A	B	B	B	B
Approach Delay (s)	14.6	13.5	16.3			
Approach LOS	B	B	B			
Intersection Summary						
HCM 2000 Control Delay		14.7				B
HCM 2000 Volume to Capacity ratio		0.54				
Actuated Cycle Length (s)		47.3				14.8
Intersection Capacity Utilization		49.5%				A
Analysis Period (min)		15				
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 4: Smythe Crossing & Beyer Blvd 3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR
Volume (vph)	325	106	232	311	80	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.96	1.00	1.00	0.85	1.00
FI Protected	1.00	0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3409	3465	1770	1583	1583	1583
FI Permitted	1.00	0.64	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3409	2282	1770	1583	1583	1583
Peak-hour factor, PHF	0.83	0.83	0.86	0.86	0.76	0.76
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	431	140	297	398	116	210
RTOR Reduction (vph)	66	0	0	0	0	158
Lane Group Flow (vph)	505	0	0	695	116	53
Turn Type	NA	Perm	NA	NA	NA	Perm
Protected Phases	4			8	2	
Permitted Phases				8	2	
Actuated Green, G (s)	15.1			15.1	7.7	7.7
Effective Green, g (s)	15.1			15.1	7.7	7.7
Actuated g/C Ratio	0.49			0.49	0.25	0.25
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1671			1118	442	395
v/s Ratio Prot	0.15			c0.30	c0.07	0.03
v/c Ratio	0.30			0.62	0.26	0.13
Uniform Delay, d1	4.7			5.8	9.3	9.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			1.1	0.3	0.2
Delay (s)	4.8			6.8	9.6	9.1
Level of Service	A			A	A	A
Approach Delay (s)	4.8			6.8	9.3	
Approach LOS	A			A	A	
Intersection Summary						
HCM 2000 Control Delay				6.6		A
HCM 2000 Volume to Capacity ratio				0.50		
Actuated Cycle Length (s)				30.8		8.0
Intersection Capacity Utilization				45.4%		A
Analysis Period (min)				15		
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 5: Beyer Blvd & Smythe Ave 3/31/2015

Movement	EBL	EBT	WBL	WBT	WBR	SBL	SBR	Diagram
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↔
Volume (vph)	86	532	598	309	533	127	127	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.4	4.9	4.9	4.9	4.9	4.9	4.9	
Lane Util. Factor	1.00	0.96	0.91	0.91	0.97	1.00	1.00	
F/I Protected	0.95	1.00	0.99	0.85	1.00	0.85	1.00	
Satd. Flow (prot)	1770	3539	3361	1441	3433	1583	1583	
F/I Permitted	0.95	1.00	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	3539	3361	1441	3433	1583	1583	
Peak-hour factor, PHF	0.77	0.77	0.88	0.88	0.88	0.61	0.61	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	123	760	748	386	961	229	229	
RTOR Reduction (vph)	0	0	7	55	0	152	0	
Lane Group Flow (vph)	123	760	787	285	961	77	77	
Turn Type	Prot	NA	NA	pm-ov	NA	Perm	Perm	
Protected Phases	1	6	2	2	8	8	8	
Permitted Phases								
Actuated Green, G (s)	5.7	30.5	20.4	40.7	20.3	20.3	8	
Effective Green, g (s)	5.7	30.5	20.4	40.7	20.3	20.3	20.3	
Actuated g/C Ratio	0.09	0.50	0.34	0.67	0.33	0.33	0.33	
Clearance Time (s)	4.4	4.9	4.9	4.9	4.9	4.9	4.9	
Vehicle Extension (s)	2.0	3.6	4.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	166	1781	1131	1084	1149	500	500	
v/s Ratio Prot	c0.07	0.21	c0.23	0.09	c0.28			
v/s Ratio Perm				0.11		0.05		
v/c Ratio	0.74	0.43	0.70	0.26	0.84	0.14	0.14	
Uniform Delay, d1	26.7	9.5	17.4	4.0	18.6	14.1	14.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.4	0.2	2.0	0.0	5.2	0.0	0.0	
Delay (s)	41.1	9.7	19.4	4.0	23.8	14.1	14.1	
Level of Service	D	A	B	A	C	B	B	
Approach Delay (s)		14.1	14.8		21.9			
Approach LOS		B	B		C			
Intersection Summary								
HCM 2000 Control Delay			17.3		HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio			0.76					
Actuated Cycle Length (s)			60.6		Sum of lost time (s)		14.2	
Intersection Capacity Utilization			55.6%		ICU Level of Service		B	
Analysis Period (min)			15					
c Critical Lane Group								

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 6: W. Park Ave/Alaquinas Dr & Beyer Blvd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	Diagram
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↔
Volume (vph)	51	766	112	101	667	72	59	37	76	70	49	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.4	4.9	4.4	4.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1	
Lane Util. Factor	1.00	0.96	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
F/I Protected	0.95	1.00	0.99	0.95	1.00	0.99	1.00	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3472	1770	1770	3488	1807	1583	1770	1749	1749	1749	
F/I Permitted	0.95	1.00	0.95	0.95	1.00	0.75	1.00	0.66	1.00	0.66	1.00	
Satd. Flow (perm)	1770	3472	1770	1770	3488	1402	1583	1238	1749	1749	1749	
Peak-hour factor, PHF	0.88	0.88	0.88	0.93	0.93	0.93	0.73	0.73	0.73	0.89	0.89	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	64	958	140	119	789	85	89	56	115	87	61	
RTOR Reduction (vph)	0	10	0	7	0	0	0	0	95	0	35	
Lane Group Flow (vph)	64	1088	0	119	867	0	0	145	20	87	68	
Turn Type	Prot	NA	NA	Prot	NA	Perm	NA	Perm	Perm	Perm	NA	
Protected Phases	5	2		1	6		4				4	
Permitted Phases												
Actuated Green, G (s)	4.2	32.3		6.6	34.5		11.4		11.4	11.4	11.4	
Effective Green, g (s)	4.2	32.3		6.6	34.5		11.4		11.4	11.4	11.4	
Actuated g/C Ratio	0.06	0.50		0.10	0.53		0.18		0.18	0.18	0.18	
Clearance Time (s)	4.4	4.9		4.4	5.1		5.1		5.1	5.1	5.1	
Vehicle Extension (s)	2.0	5.3		2.0	5.4		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	114	1733		180	1859		247		278	218	308	
v/s Ratio Prot	0.04	c0.31		c0.07	0.25		c0.10		0.01	0.07	0.04	
v/s Ratio Perm												
v/c Ratio	0.56	0.63		0.66	0.47		0.59		0.07	0.40	0.22	
Uniform Delay, d1	29.4	11.8		28.0	9.4		24.5		22.2	23.6	22.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.7	1.1		6.9	0.4		2.3		0.0	0.4	0.1	
Delay (s)	33.1	12.9		34.8	9.8		26.8		22.3	24.1	23.0	
Level of Service	C	B		C	A		C		C	C	C	
Approach Delay (s)		14.0			12.8		24.8				23.5	
Approach LOS		B			B		C				C	
Intersection Summary												
HCM 2000 Control Delay			15.3		HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			64.7		Sum of lost time (s)		14.6					
Intersection Capacity Utilization			57.8%		ICU Level of Service		B					
Analysis Period (min)			15									
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 7: East Beyer Blvd/Otay Mesa Rd & Beyer Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	79	582	212	1030	657	78	130	121	591	222	130	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.0	4.9	4.9	4.0	4.9	4.0	4.0	4.0	5.2	4.9
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.97	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1863	1583	1863
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.72	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1863	1349	1583
Peak-hour factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	94	696	253	1232	786	93	155	145	707	265	155	139
RTOR Reduction (vph)	0	0	138	0	0	39	0	0	0	0	0	55
Lane Group Flow (vph)	94	696	115	1232	786	54	155	145	707	0	420	84
Turn Type	Prot	NA	pm-tov	Prot	NA	Perm	Prot	NA	Free	Perm	NA	pm-tov
Protected Phases	5	2	3	1	6		3	8			4	5
Permitted Phases		2			6				Free	4		4
Actuated Green, G (s)	9.5	26.1	34.1	61.1	77.7	77.7	8.0	48.1	150.0	35.8	45.3	45.3
Effective Green, g (s)	9.5	26.1	34.1	61.1	77.7	77.7	8.0	48.1	150.0	35.8	45.3	45.3
Actuated g/C Ratio	0.06	0.17	0.23	0.41	0.52	0.52	0.05	0.32	1.00	0.24	0.30	0.30
Clearance Time (s)	4.9	4.9	4.0	4.9	4.9	4.0	4.9	4.0	4.9	4.0	5.2	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	217	615	359	720	1833	819	94	597	1583	321	478	478
v/s Ratio Prot	0.03	c0.20	0.02	c0.70	0.22		c0.09	0.08			0.01	
v/s Ratio Perm		0.06		0.03			0.45		0.45	c0.31		0.04
v/c Ratio	0.43	1.13	0.32	1.71	0.43	0.07	1.65	0.24	0.45	1.31	0.18	0.18
Uniform Delay, d1	67.7	62.0	48.3	44.5	22.4	18.0	71.0	37.5	0.0	57.1	38.6	38.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	78.3	0.5	325.9	0.2	0.0	334.5	0.2	0.9	159.5	0.2	0.2
Delay (s)	69.0	140.3	48.8	370.4	22.6	18.1	405.5	37.7	0.9	216.6	38.8	38.8
Level of Service	E	F	D	F	C	B	F	D	A	F	F	D
Approach Delay (s)		111.7		225.3		F	68.5		E		172.4	
Approach LOS		F		F		F	E		F		F	

Intersection Summary	160.5	HCM 2000 Level of Service	F
HCM 2000 Control Delay	1.48		
HCM 2000 Volume to Capacity ratio	150.0	Sum of lost time (s)	19.0
Actuated Cycle Length (s)	125.0%	ICU Level of Service	H
Intersection Capacity Utilization	15		
Analysis Period (min)			

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 8: Picador Blvd & SR-905 WB On Ramp/SR-905 WB Off Ramp

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	374	0	297	177	724	0	0	419	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6	4.6	4.2	5.0	5.0			5.0	5.0
Lane Util. Factor				1.00	1.00	1.00	0.95	1.00			0.95	1.00
FI Protected				0.95	1.00	1.00	1.00	1.00			1.00	1.00
Satd. Flow (prot)				1770	1583	1770	1583	1770			3539	1583
FI Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1770	1583	1770	1583	1770			3539	1583
Peak-hour factor	0.25	0.25	0.25	0.77	0.77	0.77	0.90	0.90	0.90	0.90	0.91	0.91
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	534	0	424	216	885	0	0	506	338
RTOR Reduction (vph)	0	0	0	0	0	0	52	0	0	0	0	253
Lane Group Flow (vph)	0	0	0	534	372	216	885	0	0	0	506	85
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8		8	5	2			6	6
Permitted Phases				8		8					6	6
Actuated Green, G (s)				26.5	26.5	26.5	10.5	31.7			17.0	17.0
Effective Green, g (s)				26.5	26.5	26.5	10.5	31.7			17.0	17.0
Actuated g/C Ratio				0.39	0.39	0.15	0.47				0.25	0.25
Clearance Time (s)				4.6	4.6	4.2	5.0	5.0			5.0	5.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				691	618	274	1654				887	396
v/s Ratio Prot				0.30	0.24		c0.12	c0.25			0.14	
v/s Ratio Perm				0.77	0.60	0.79	0.54				0.57	0.21
v/c Ratio				18.0	16.5	27.6	12.8				22.2	20.1
Uniform Delay, d1				1.00	1.00	1.00	1.00				1.00	1.00
Progression Factor				5.4	1.7	13.9	0.3				0.9	0.3
Incremental Delay, d2				23.4	18.1	41.5	13.2				23.1	20.4
Delay (s)				C	B	D	B				C	C
Level of Service				0.0	21.1		18.7				22.0	
Approach Delay (s)				A		C					C	
Approach LOS				A		C					C	

Intersection Summary	20.4	HCM 2000 Level of Service	C
HCM 2000 Control Delay	0.73		
HCM 2000 Volume to Capacity ratio	67.8	Sum of lost time (s)	13.8
Actuated Cycle Length (s)	72.9%	ICU Level of Service	C
Intersection Capacity Utilization	15		
Analysis Period (min)			

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 9: Smythe Ave/Picador Blvd & SR-905 EB Off Ramp/SR-905 EB On Ramp 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	427	0	399	0	0	0	0	411	373	160	606	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	5.0	5.0	4.2	5.0					
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95					
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00					
Satd. Flow (prot)	1770	1583	3287	3287	1770	3539						
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00					
Satd. Flow (perm)	1770	1583	3287	3287	1770	3539						
Peak-hour factor, PHF	0.83	0.83	0.83	0.25	0.25	0.88	0.88	0.88	0.76	0.76	0.76	0.76
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	566	0	529	0	0	0	514	466	232	877	0	0
RTOR Reduction (vph)	0	0	64	0	0	0	206	0	0	0	0	0
Lane Group Flow (vph)	0	566	465	0	0	0	774	0	232	877	0	0
Turn Type	Perm	NA	Perm	NA	NA	Prot	NA	Prot	NA	NA	NA	NA
Protected Phases	4		4			1		2		1		6
Permitted Phases	4		4			1		2		1		6
Actuated Green, G (s)	28.6	28.6	28.6	21.1	21.1	12.3	37.6					
Effective Green, g (s)	28.6	28.6	28.6	21.1	21.1	12.3	37.6					
Actuated g/C Ratio	0.38	0.38	0.38	0.28	0.28	0.16	0.50					
Clearance Time (s)	4.6	4.6	4.6	5.0	5.0	4.2	5.0					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0					
Lane Grp Cap (vph)	667	597		914		287	1755					
v/s Ratio Prot	0.32	0.29		c0.24		c0.13	0.25					
v/s Ratio Perm	0.85	0.78		0.85		0.81	0.50					
Uniform Delay, d1	21.6	20.8		25.8		30.6	12.8					
Progression Factor	1.00	1.00		1.00		1.00	1.00					
Incremental Delay, d2	9.8	6.4		7.3		15.3	0.2					
Delay (s)	31.4	27.2		33.2		45.9	13.0					
Level of Service	C	C		C		D	B					
Approach Delay (s)	29.4			0.0		33.2	19.9					
Approach LOS	C			A		C	B					
Intersection Summary												
HCM 2000 Control Delay	27.3		HCM 2000 Level of Service		C							
HCM 2000 Volume to Capacity ratio	0.84											
Actuated Cycle Length (s)	75.8		Sum of lost time (s)		13.8							
Intersection Capacity Utilization	72.9%		ICU Level of Service		C							
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 10: Dairy Mart Rd & Vista Ln 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	112	132	438	140	193	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	1.00
Flt Protected	0.98	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1688	3411	1770	3539		
Flt Permitted	0.98	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1688	3411	1770	3539		
Peak-hour factor, PHF	0.68	0.68	0.81	0.81	0.86	0.86
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	181	214	595	190	247	669
RTOR Reduction (vph)	79	0	58	0	0	0
Lane Group Flow (vph)	316	0	727	0	247	669
Turn Type	NA	NA	Perm	NA	Perm	NA
Protected Phases	8		2		6	
Permitted Phases	8		2		6	
Actuated Green, G (s)	12.7	25.0	25.0	25.0	25.0	25.0
Effective Green, g (s)	12.7	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.28	0.35	0.35	0.35	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	469	1865	329	1935		
v/s Ratio Prot	c0.19		0.21		c0.41	
v/s Ratio Perm	0.67	0.39	0.75	0.35		
Uniform Delay, d1	14.7	6.0	8.0	5.8		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.8	0.1	9.3	0.1		
Delay (s)	18.5	6.1	17.2	5.9		
Level of Service	B	A	B	A		
Approach Delay (s)	18.5	6.1	17.2	5.9		
Approach LOS	B	A	B	A		
Intersection Summary						
HCM 2000 Control Delay	9.7		HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.72					
Actuated Cycle Length (s)	45.7		Sum of lost time (s)		8.0	
Intersection Capacity Utilization	55.7%		ICU Level of Service		B	
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 11: Averil Rd & Vista Ln 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	83	82	16	197	130	16
Peak Hour Factor	0.80	0.80	0.60	0.60	0.68	0.68
Hourly flow rate (vph)	114	113	29	361	210	26
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total (vph)	227	391	236			
Volume Left (vph)	0	29	210			
Volume Right (vph)	113	0	26			
Head (s)	-0.26	0.05	0.15			
Departure Headway (s)	4.9	5.0	5.6			
Degree Utilization, x	0.31	0.54	0.37			
Capacity (veh/h)	683	699	583			
Control Delay (s)	10.0	13.6	11.7			
Approach Delay (s)	10.0	13.6	11.7			
Approach LOS	B	B	B			
Intersection Summary						
Delay	12.1					
Level of Service	B					
Intersection Capacity Utilization	41.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 12: Smythe Ave & Vista Ln 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Free	Free	Free	Free	Free	Free
Volume (veh/h)	191	97	133	78	121	45
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	228	116	159	93	145	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	451					
pX, platoon unblocked						
vC, conflicting volume		344			698	286
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol		344			698	286
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		87			59	93
cM capacity (veh/h)		1215			354	753
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total	344	252	198			
Volume Left	0	159	145			
Volume Right	116	0	54			
cSH	1700	1215	413			
Volume to Capacity	0.20	0.13	0.48			
Queue Length 95th (ft)	0	11	63			
Control Delay (s)	0.0	5.7	21.5			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	5.7	21.5			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay	7.2					
Intersection Capacity Utilization	50.6%					
ICU Level of Service	A					
Analysis Period (min)	15					


San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
13: Sunset Ln & Vista Ln 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	0	0	0	0	0	0
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	843					
pX platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4.1	6.4	6.2			
IC, 1 stage (s)						
IC, 2 stage (s)	2.2	3.5	3.3			
IF (s)	100	100	100			
p0 queue free %	1623	1023	1085			
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1				
Volume Total	0	0				
Volume Left	0	0				
Volume Right	0	0				
cSH	1700	1700				
Volume to Capacity	0.00	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			0.0%		ICU Level of Service	A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
14: Averil Rd & Sunset Ln 3/31/2015

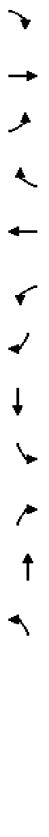
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop	Stop	Stop	Stop	Stop					Stop	Stop
Volume (vph)	70	107	24	24	102	29	43	102	20	31	138	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	128	29	29	122	35	51	122	24	37	165	114
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	240	185	197	316								
Volume Left (vph)	84	29	51	37								
Volume Right (vph)	29	35	24	114								
Head (s)	0.03	-0.05	0.01	-0.16								
Departure Headway (s)	5.7	5.8	5.7	5.3								
Degree Utilization, x	0.38	0.30	0.31	0.47								
Capacity (veh/h)	573	558	564	627								
Control Delay (s)	12.2	11.2	11.3	13.0								
Approach Delay (s)	12.2	11.2	11.3	13.0								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay			12.1									
Level of Service			B									
Intersection Capacity Utilization			48.5%									A
Analysis Period (min)			15									

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
15: Smythe Ave & Sunset Ln 3/31/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	81	0	46	0	0	0	32	50	0	0	0	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	97	0	55	0	0	0	38	60	0	0	0	87
Direction, Lane #	EB 1	NB 1	SB 1									
Volume Total (vph)	152	98	249									
Volume Left (vph)	97	38	0									
Volume Right (vph)	55	0	161									
Head (s)	-0.06	0.11	-0.36									
Departure Headway (s)	4.6	4.6	4.0									
Degree Utilization, x	0.19	0.13	0.28									
Capacity (veh/h)	728	737	851									
Control Delay (s)	8.7	8.3	8.6									
Approach Delay (s)	8.7	8.3	8.6									
Approach LOS	A	A	A									
Intersection Summary												
Delay	8.6											
Level of Service	A											
Intersection Capacity Utilization	36.2%											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
16: W. Park Ave & Seaward Ave 3/31/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	16	5	26	24	26	179	0	0	0	20	193	40
Peak Hour Factor	0.97	0.97	0.97	0.64	0.64	0.64	0.38	0.38	0.38	0.72	0.72	0.72
Hourly flow rate (vph)	18	6	29	41	45	308	0	0	0	31	295	61
Direction, Lane #	EB 1	WB 1	SB 1									
Volume Total (vph)	53	394	387									
Volume Left (vph)	18	41	31									
Volume Right (vph)	29	308	61									
Head (s)	-0.23	-0.41	-0.05									
Departure Headway (s)	5.2	4.6	4.9									
Degree Utilization, x	0.08	0.50	0.53									
Capacity (veh/h)	617	742	689									
Control Delay (s)	8.7	12.1	13.3									
Approach Delay (s)	8.7	12.1	13.3									
Approach LOS	A	B	B									
Intersection Summary												
Delay	12.4											
Level of Service	B											
Intersection Capacity Utilization	37.7%											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 17: E. Park Ave & Seaward Ave 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	24	0	0	50	172	49
Peak Hour Factor	0.70	0.70	0.53	0.53	0.60	0.60
Hourly flow rate (vph)	38	0	0	104	315	90
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total (vph)	38	104	405			
Volume Left (vph)	0	0	315			
Volume Right (vph)	0	0	90			
Head (s)	0.03	0.03	0.06			
Departure Headway (s)	5.0	4.9	4.3			
Degree Utilization, x	0.05	0.14	0.49			
Capacity (veh/h)	651	670	814			
Control Delay (s)	8.3	8.8	11.4			
Approach Delay (s)	8.3	8.8	11.4			
Approach LOS	A	A	B			
Intersection Summary						
Delay	10.7					
Level of Service	B					
Intersection Capacity Utilization	23.8%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 18: W. San Ysidro Blvd & Howard Ave 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Volume (vph)	32	57	62	250	187	34
Peak Hour Factor	0.72	0.72	0.62	0.62	0.56	0.56
Hourly flow rate (vph)	49	87	110	444	367	67
Direction, Lane #	EB 1	WB 1	SB 1	SB 1	SB 2	
Volume Total (vph)	136	554	367		67	
Volume Left (vph)	49	0	367		0	
Volume Right (vph)	0	444	0		67	
Head (s)	0.11	-0.45	0.23		-0.57	
Departure Headway (s)	6.0	4.9	5.9		3.2	
Degree Utilization, x	0.23	0.75	0.60		0.06	
Capacity (veh/h)	542	720	577		1121	
Control Delay (s)	10.7	20.8	17.3		6.4	
Approach Delay (s)	10.7	20.8	15.7			
Approach LOS	B	C	C			
Intersection Summary						
Delay	17.6					
Level of Service	C					
Intersection Capacity Utilization	47.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 19: Dairy Mart Rd & W. San Ysidro Blvd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	63	211	132	190	167	259	144	289	735	354	238	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FI Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.85
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
FI Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	68	229	143	216	190	294	153	307	782	377	253	24
RTOR Reduction (vph)	0	0	101	0	0	184	0	0	210	0	0	0
Lane Group Flow (vph)	68	229	42	216	190	110	153	307	572	377	253	24
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Free
Protected Phases	5	2	2	1	6	3	8	1	7	4	4	4
Permitted Phases												
Actuated Green, G (s)	6.3	24.7	24.7	13.5	31.9	31.9	20.0	16.0	29.5	32.1	23.7	85.0
Effective Green, g (s)	6.3	24.7	24.7	13.5	31.9	31.9	20.0	16.0	29.5	32.1	23.7	85.0
Actuated g/C Ratio	0.07	0.29	0.29	0.16	0.38	0.38	0.24	0.19	0.35	0.38	0.28	1.00
Clearance Time (s)	4.4	4.9	4.9	4.4	4.9	4.4	5.5	4.4	4.4	4.4	5.4	5.4
Vehicle Extension (s)	2.0	2.9	2.9	2.0	2.9	2.9	2.0	3.9	2.0	2.0	3.9	3.9
Lane Grp Cap (vph)	131	541	460	281	699	594	294	350	549	334	519	1583
v/s Ratio Prot	0.04	c0.12	0.03	0.12	0.10	0.02	0.16	c0.17	c0.15	c0.15	0.14	0.14
v/s Ratio Perm												
v/c Ratio	0.52	0.42	0.09	0.77	0.27	0.19	0.52	0.88	1.04	1.13	0.49	0.02
Uniform Delay, d1	37.9	24.4	22.0	34.3	18.5	17.8	27.4	33.5	27.8	22.5	25.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	2.4	0.4	10.8	1.0	0.7	0.8	21.6	50.0	88.8	1.0	0.0
Delay (s)	39.3	26.8	22.4	45.1	19.4	18.5	28.2	55.1	77.7	111.2	26.5	0.0
Level of Service	D	C	C	D	B	B	C	E	E	F	C	A
Approach Delay (s)	27.3			27.0			66.0				74.4	
Approach LOS	C			C			E				E	
Intersection Summary												
HCM 2000 Control Delay	53.2 HCM 2000 Level of Service D											
HCM 2000 Volume to Capacity ratio	0.90											
Actuated Cycle Length (s)	85.0 Sum of lost time (s) 19.2											
Intersection Capacity Utilization	87.6% ICU Level of Service E											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 20: I-5 NB Ramps & W. San Ysidro Blvd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	650	507	428	398	87	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.2	4.6	4.6	4.6
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
FI Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
FI Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.96	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	777	606	490	458	118	155
RTOR Reduction (vph)	0	85	0	0	0	134
Lane Group Flow (vph)	777	521	490	458	118	21
Turn Type	NA	pm+ov	Prot	NA	NA	Perm
Protected Phases	6	4	5	2	4	4
Permitted Phases						
Actuated Green, G (s)	15.2	22.5	16.8	36.2	7.3	7.3
Effective Green, g (s)	15.2	22.5	16.8	36.2	7.3	7.3
Actuated g/C Ratio	0.29	0.43	0.32	0.69	0.14	0.14
Clearance Time (s)	4.6	4.6	4.2	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1020	814	564	2430	245	219
v/s Ratio Prot	c0.22	c0.09	c0.28	0.13	0.07	0.01
v/s Ratio Perm						
v/c Ratio	0.76	0.64	0.87	0.19	0.48	0.10
Uniform Delay, d1	17.1	11.9	16.9	3.0	21.0	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	1.7	13.4	0.0	1.5	0.2
Delay (s)	20.5	13.6	30.3	3.0	22.4	20.0
Level of Service	C	B	C	A	C	C
Approach Delay (s)	17.5			17.1	21.1	
Approach LOS	B			B	C	
Intersection Summary						
HCM 2000 Control Delay	17.7 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.83					
Actuated Cycle Length (s)	52.7 Sum of lost time (s) 13.4					
Intersection Capacity Utilization	67.9% ICU Level of Service C					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 21: W. San Ysidro Blvd & Sunset Ln 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	32	131	507	104	167	494
Volume (veh/h)	Stop	Free	Free	15%	Free	Free
Sign Control	0%	0.80	0.86	0.86	0.82	0.82
Grade (%)	40	164	590	121	204	602
Peak Hour Factor						
Hourly flow rate (vph)						
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TW/TL			None
Median storage (veh)			2			
Upstream signal (ft)	0.76					525
pX, platoon unblocked	1660	650				710
vC, conflicting volume	650					
vC1, stage 1 conf vol	1010					
vC2, stage 2 conf vol	1711	650				710
vCU, unblocked vol	6.4	6.2				4.1
IC, 1 stage (s)	5.4					
IC, 2 stage (s)	3.5	3.3				2.2
IF (s)	82	65				77
p0 queue free %	219	469				889
cM capacity (veh/h)						
Direction_Lane #	WB1	WB2	NB1	NB2	SB1	SB2
Volume Total	40	164	710	204	602	602
Volume Left	40	0	0	204	0	0
Volume Right	0	164	121	0	0	0
cSH	219	469	1700	889	1700	1700
Volume to Capacity	0.18	0.35	0.42	0.23	0.35	0.35
Queue Length 95th (ft)	16	39	0	22	0	0
Control Delay (s)	25.0	16.7	0.0	10.3	0.0	0.0
Lane LOS	D	C	B	B	B	B
Approach Delay (s)	18.4		0.0	2.6		
Approach LOS	C					

Intersection Summary	
Average Delay	3.4
Intersection Capacity Utilization	55.6%
ICU Level of Service	B
Analysis Period (min)	15

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 22: W. San Ysidro Blvd & Averil Rd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	47	431	6	3	419	93	4	0	3	133	5	60
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%
Grade (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.96	0.96	0.97	0.97
Flt Protected	1770	1859	1722	1465	1708	1729	1729	1729	1729	1729	1729	1729
Said. Flow (prot)	0.28	1.00	1.00	1.00	1.00	0.80	0.97	0.97	0.97	0.97	0.97	0.97
Flt Permitted	530	1859	1717	1465	1408	1729	1729	1729	1729	1729	1729	1729
Said. Flow (perm)	0.89	0.89	0.89	0.90	0.90	0.25	0.25	0.25	0.25	0.71	0.71	0.71
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	58	533	7	4	512	114	18	0	13	206	8	93
Adj. Flow (vph)	0	1	0	0	0	46	0	28	0	0	22	0
RTOR Reduction (vph)	58	539	0	0	516	68	0	3	0	0	285	0
Lane Group Flow (vph)												
Parking (#/hr)												
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	NA	Split	NA	NA	NA
Protected Phases	4	4	8	8	8	2	2	2	6	6	6	6
Permitted Phases	21.4	21.4	21.4	21.4	21.4	21.4	5.7	5.7	13.5	13.5	13.5	13.5
Actuated Green, G (s)	21.4	21.4	21.4	21.4	21.4	21.4	5.7	5.7	13.5	13.5	13.5	13.5
Effective Green, g (s)	0.41	0.41	0.41	0.41	0.41	0.41	0.11	0.11	0.26	0.26	0.26	0.26
Actual c/c Ratio	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	215	756	698	596	152	443	443	443	443	443	443	443
Lane Grp Cap (vph)	0.11	0.29	0.30	0.05	0.00	0.17	0.17	0.17	0.17	0.17	0.17	0.17
v/s Ratio Prot	0.27	0.71	0.74	0.11	0.02	0.64	0.64	0.64	0.64	0.64	0.64	0.64
v/s Ratio Perm	10.4	13.0	13.2	9.7	21.0	17.4	17.4	17.4	17.4	17.4	17.4	17.4
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.7	3.2	4.1	0.1	0.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Incremental Delay, d2	11.1	16.2	17.3	9.8	21.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Delay (s)	B	B	B	A	C	C	C	C	C	C	C	C
Level of Service	B	B	B	A	C	C	C	C	C	C	C	C
Approach Delay (s)	15.7		16.0		21.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6
Approach LOS	B		B		C	C	C	C	C	C	C	C

Intersection Summary	
HCM 2000 Control Delay	16.9
HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61
Actuated Cycle Length (s)	52.6
Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 25: Via de San Ysidro & W. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	642	320	410	444	0	294	0	651	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.9	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.95	1.00	0.85	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FLI Protected	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3539	1583	3433	1863	1770	1583	1770	1583	1770	1583	1770	1583
FLI Permitted	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3539	1583	3433	1863	1770	1583	1770	1583	1770	1583	1770	1583
Peak-hour factor, PHF	0.70	0.70	0.70	0.92	0.92	0.92	0.87	0.87	0.87	0.87	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	1009	503	490	531	0	372	0	823	0	0	0
RTOR Reduction (vph)	0	0	181	0	0	0	0	0	17	0	0	0
Lane Group Flow (vph)	0	1009	322	490	531	0	0	372	806	0	0	0
Turn Type	NA	Perm	Prot	NA	Split	NA	pm+ov	NA	pm+ov	custom	custom	custom
Protected Phases	2	2	2	1	6	8	8	1	8	1	8	2 6
Permitted Phases	20.8	20.8	20.8	8.7	33.9	16.7	25.4	8	25.4	8	25.4	8 2 6
Actuated Green, G (s)	20.8	20.8	20.8	8.7	33.9	16.7	25.4	8	25.4	8	25.4	8 2 6
Effective Green, g (s)	0.35	0.35	0.35	0.15	0.57	0.28	0.42	0.28	0.42	0.28	0.42	0.28
Actuated g/C Ratio	4.9	4.9	4.9	4.4	4.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Clearance Time (s)	4.8	4.8	4.8	2.0	4.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Vehicle Extension (s)	1228	549	498	1054	493	787	493	787	493	787	493	787
Lane Grp Cap (vph)	cd 29	cd 29	cd 29	0.14	0.29	0.21	cd 15	cd 15	cd 15	cd 15	cd 15	cd 15
v/s Ratio Prot	0.82	0.59	0.98	0.50	0.75	1.02	0.36	0.36	0.36	0.36	0.36	0.36
v/s Ratio Perm	17.9	16.0	25.5	7.9	19.7	17.2	17.2	17.2	17.2	17.2	17.2	17.2
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	5.1	2.4	35.8	0.7	5.8	38.3	5.8	38.3	5.8	38.3	5.8	38.3
Incremental Delay, d2	22.9	18.4	61.4	8.6	25.5	55.5	25.5	55.5	25.5	55.5	25.5	55.5
Delay (s)	C	B	E	A	A	E	C	E	C	E	C	E
Level of Service	C	B	E	A	A	E	C	E	C	E	C	E
Approach Delay (s)	21.4	33.9	46.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
Approach LOS	C	C	C	C	C	C	D	D	D	D	D	A
Intersection Summary												
HCM 2000 Control Delay	32.8 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	1.03											
Actuated Cycle Length (s)	59.9 Sum of lost time (s) 13.7											
Intersection Capacity Utilization	71.6% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 26: W. San Ysidro Blvd/E. San Ysidro Blvd & W. Park Ave

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	0	1356	1057	0	0	0	0	0	108	0	0	108
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.96	0.96	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	0	1695	1211	0	0	0	0	0	170	0	0	170
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn lane (veh)	None	None	None	None	None	None	None	None	None	None	None	None
Median type												
Median storage (veh)												
Upstream signal (ft)	233	383										
pX platoon unblocked									0.74			
vC, conflicting volume	1211								2059			606
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1211								1736			606
IC, single (s)	4.1								6.8			6.9
IC, 2 stage (s)												
IF (s)	2.2								3.5			3.3
p0 queue free %	100								100			61
cM capacity (veh/h)	572								58			440
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2						
Volume Total	848	848	606	606	170	170						
Volume Left	0	0	0	0	0	0						
Volume Right	0	0	0	0	170	170						
cSH	1700	1700	1700	1700	440	440						
Volume to Capacity	0.50	0.50	0.36	0.36	0.39	0.39						
Queue Length 95th (ft)	0	0	0	0	0	45						
Control Delay (s)	0.0	0.0	0.0	0.0	18.2	18.2						
Lane LOS	C	C	C	C	C	C						
Approach Delay (s)	0.0	0.0	0.0	0.0	18.2	18.2						
Approach LOS	C	C	C	C	C	C						
Intersection Summary												
Average Delay	1.0											
Intersection Capacity Utilization	46.2% ICU Level of Service A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
 29: E. San Ysidro Blvd & I-805 NB Ramps

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	250	1476	909	594	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.6	4.6	4.0		
Lane Util. Factor	0.97	0.96	0.95	1.00		
Flt Protected	1.00	1.00	1.00	1.00		
Satd. Flow (prot)	3433	3539	3539	1583		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	3539	3539	1583		
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	367	2165	1333	871	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	367	2165	1333	871	0	0
Turn Type	Prot	NA	NA	Free		
Protected Phases	5	2	4	6	8	
Permitted Phases				Free		
Actuated Green, G (s)	8.8	100.0	82.4	100.0		
Effective Green, g (s)	8.8	100.0	82.4	100.0		
Actuated g/C Ratio	0.09	1.00	0.82	1.00		
Clearance Time (s)	4.2					
Vehicle Extension (s)	3.0					
Lane Grp Cap (vph)	302	3539	2916	1583		
v/s Ratio Prot	c0.11	c0.61	0.38			
v/c Ratio	1.22	0.61	0.46	0.55		
Uniform Delay, d1	45.6	0.0	2.5	0.0		
Progression Factor	1.00	1.00	1.22	1.00		
Incremental Delay, d2	123.3	0.3	0.0	0.1		
Delay (s)	168.9	0.3	3.0	0.1		
Level of Service	F	A	A	A		
Approach Delay (s)	24.8	1.9		0.0		
Approach LOS	C	A		A		
Intersection Summary						
HCM 2000 Control Delay			14.1		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	13.4
Intersection Capacity Utilization			48.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 30: Border Village Rd (W) & E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR	
Lane Configurations							
Volume (vph)	689	1193	0	963	725	417	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.9	4.9		4.9	4.9		
Lane Util. Factor	1.00	1.00		1.00	1.00		
Flt Protected	1.00	1.00		1.00	0.97		
Satd. Flow (prot)	1863	1583		1863	1716		
Flt Permitted	1.00	1.00		1.00	0.97		
Satd. Flow (perm)	1863	1583		1863	1716		
Peak-hour factor, PHF	0.95	0.95	0.93	0.93	0.84	0.84	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	798	1381	0	1139	949	546	
RTOR Reduction (vph)	0	685	0	0	21	0	
Lane Group Flow (vph)	798	696	0	1139	1474	0	
Turn Type	NA	Perm	NA	NA	NA		
Protected Phases	2			6	8		
Permitted Phases		2					
Actuated Green, G (s)	34.1	34.1		34.1	56.1		
Effective Green, g (s)	34.1	34.1		34.1	56.1		
Actuated g/C Ratio	0.34	0.34		0.34	0.36		
Clearance Time (s)	4.9	4.9		4.9	4.9		
Vehicle Extension (s)	2.5	2.5		2.5	2.0		
Lane Grp Cap (vph)	635	539		635	962		
v/s Ratio Prot	0.43			c0.61	c0.86		
v/c Ratio	1.26	1.29		1.79	1.53		
Uniform Delay, d1	33.0	33.0		33.0	21.9		
Progression Factor	1.00	1.00		1.00	1.00		
Incremental Delay, d2	128.0	144.2		363.5	244.9		
Delay (s)	161.0	177.2		396.4	266.9		
Level of Service	F	F		F	F		
Approach Delay (s)	171.2			396.4	266.9		
Approach LOS	F			F	F		
Intersection Summary							
HCM 2000 Control Delay				25.4		HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio				1.63			
Actuated Cycle Length (s)				100.0		Sum of lost time (s)	9.8
Intersection Capacity Utilization				136.2%		ICU Level of Service	H
Analysis Period (min)				15			
c Critical Lane Group							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 31: Border Village Rd (E) & E. San Ysidro Blvd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	16	1022	24	226	887	0	23	3	377	26	1	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.96	1.00	0.97	1.00	0.97	1.00
Satd. Flow (prot)	1770	1856	1770	3539	1770	3539	1784	1583	1729	1770	1856	1770
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.75	1.00	0.78	1.00	0.78	1.00
Satd. Flow (perm)	1770	1856	1770	3539	1770	3539	1388	1583	1393	1770	1856	1770
Peak-hour factor, PHF	0.89	0.89	0.89	0.90	0.90	0.90	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	20	1263	30	276	1084	0	29	4	477	42	2	19
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	20	1293	0	276	1084	0	0	33	477	0	51	0
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	NA	Free	Perm	NA	Free
Protected Phases	5	2		1	6			8				4
Permitted Phases							8		Free			4
Actuated Green, G (s)	1.9	89.4	20.0	106.6	20.0	106.6	7.8	130.1	7.8	130.1	7.8	7.8
Effective Green, g (s)	1.9	89.4	20.0	106.6	20.0	106.6	7.8	130.1	7.8	130.1	7.8	7.8
Actuated g/C Ratio	0.01	0.69	0.15	0.82	0.15	0.82	0.06	1.00	0.06	1.00	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.1	3.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	25	1275	272	2899	272	2899	83	1583	83	1583	83	83
v/s Ratio Prot	0.01	c0.70	c0.16	0.31			0.02	0.30			c0.04	
v/c Ratio	0.80	1.01	1.01	0.37	0.40	0.30	0.40	0.30	0.61	0.61	0.61	0.61
Uniform Delay, d1	63.9	20.3	55.0	3.1	58.9	0.0	1.00	1.00	59.7	1.00	1.00	1.00
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	95.2	28.7	58.4	0.0	95.2	0.0	1.1	0.5	9.0	1.1	0.5	9.0
Delay (s)	159.1	49.0	113.4	3.1	158.4	3.1	60.0	0.5	68.7	60.0	0.5	68.7
Level of Service	F	D	F	A	F	A	E	A	E	A	E	A
Approach Delay (s)		50.7		25.5		4.3			68.7			
Approach LOS		D		C		A			E			E
Intersection Summary												
HCM 2000 Control Delay	33.2 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.99											
Actuated Cycle Length (s)	130.1 Sum of lost time (s) 13.8											
Intersection Capacity Utilization	94.4% ICU Level of Service F											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 32: Camino de la Plaza/E. Beyer Blvd & E. San Ysidro Blvd 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	210	153	931	297	153	31	600	154	336	22	82	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9	4.9	4.9	4.0	4.0	4.9	4.9	4.9	4.9	5.8	4.0
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.99	1.00
Satd. Flow (prot)	1770	1863	2787	1770	3450	3433	1863	1583	1843	1583	1843	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.99	1.00
Satd. Flow (perm)	1770	1863	2787	1770	3450	3433	1863	1583	1843	1583	1843	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	251	183	1113	355	183	37	717	184	402	26	98	183
RTOR Reduction (vph)	0	0	714	0	8	0	0	0	305	0	0	0
Lane Group Flow (vph)	251	183	399	355	212	0	717	184	97	0	124	183
Turn Type	Prot	NA	Prot	NA	Prot	NA	Split	NA	Perm	Split	NA	Free
Protected Phases	5	2	3	1	6		3	3		3		4
Permitted Phases			2				3		3			4
Actuated Green, G (s)	27.6	18.0	54.9	32.7	24.0	36.9	36.9	36.9	36.9	36.9	14.8	153.0
Effective Green, g (s)	27.6	18.0	54.9	32.7	24.0	36.9	36.9	36.9	36.9	36.9	14.8	153.0
Actuated g/C Ratio	0.18	0.12	0.36	0.21	0.16	0.24	0.24	0.24	0.24	0.24	0.10	1.00
Clearance Time (s)	4.9	4.9	4.9	4.9	4.0	4.9	4.9	4.9	4.9	4.9	5.8	4.0
Vehicle Extension (s)	6.0	6.0	2.0	3.1	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	319	219	1089	378	541	827	449	381	178	1583	178	1583
v/s Ratio Prot	0.14	c0.10	0.09	c0.20	0.06		c0.21	0.10			c0.07	
v/c Ratio	0.79	0.84	0.37	0.94	0.39	0.87	0.41	0.25	0.70	0.70	0.12	0.12
Uniform Delay, d1	59.9	66.1	36.2	59.2	57.9	55.7	48.9	46.9	66.9	0.0	66.9	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.7	26.4	0.1	30.8	0.5	9.2	0.2	0.1	9.2	0.1	9.2	0.1
Delay (s)	74.6	92.4	36.3	90.0	58.4	64.9	49.1	47.1	76.1	0.1	76.1	0.1
Level of Service	E	F	D	F	E	E	D	D	E	D	E	A
Approach Delay (s)		49.2		77.9		57.2			30.8			
Approach LOS		D		E		E			C			C
Intersection Summary												
HCM 2000 Control Delay	54.9 HCM 2000 Level of Service D											
HCM 2000 Volume to Capacity ratio	0.71											
Actuated Cycle Length (s)	153.0 Sum of lost time (s) 24.5											
Intersection Capacity Utilization	72.3% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 33: I-5 NB Ramp & E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Volume (vph)	125	83	532	40	131	7	183	136	40	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.99	0.99	0.99	0.98	0.98	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1621	1833	1833	1789	1789	1703	1703	1703	1703	1703
Flt Permitted	0.95	1.00	0.99	0.99	0.98	0.78	0.78	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1621	1833	1833	1423	1423	1703	1703	1703	1703	1703
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	149	99	636	48	157	8	219	163	48	0	45
RTOR Reduction (vph)	0	295	0	0	2	0	0	5	0	0	51
Lane Group Flow (vph)	149	440	0	0	211	0	0	425	0	0	72
Turn Type	Split	NA	Split	NA	Split	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4		8	8		2	2		6	6
Permitted Phases							2	2		6	6
Actuated Green, G (s)	22.2	22.2	12.9	12.9	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Effective Green, g (s)	22.2	22.2	12.9	12.9	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Actuated g/C Ratio	0.31	0.31	0.18	0.18	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	548	502	330	330	466	466	562	562	562	562	562
v/s Ratio Prot	0.08	c0.27		c0.12			c0.30	c0.30		0.04	
v/c Ratio	0.27	0.88	0.64	0.64	0.87	0.87	0.12	0.12	0.12	0.12	0.12
Uniform Delay, d1	18.6	23.4	27.2	27.2	22.1	22.1	16.2	16.2	16.2	16.2	16.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	15.7	4.2	4.2	15.9	15.9	0.1	0.1	0.1	0.1	0.1
Delay (s)	18.9	39.1	31.4	31.4	38.0	38.0	16.3	16.3	16.3	16.3	16.3
Level of Service	B	D	C	C	D	D	B	B	B	B	B
Approach Delay (s)	35.7	D	31.4	C	38.0	D	16.3	16.3	16.3	16.3	16.3
Approach LOS	D	D	C	C	D	D	B	B	B	B	B
Intersection Summary											
HCM 2000 Control Delay	34.3 HCM 2000 Level of Service C										
HCM 2000 Volume to Capacity ratio	0.82										
Actuated Cycle Length (s)	71.6 Sum of lost time (s) 12.0										
Intersection Capacity Utilization	81.5% ICU Level of Service D										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 34: Via de San Ysidro & I-5 NB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Volume (vph)	0	0	0	88	0	138	509	826	0	0	415
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.85	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1770	1583	1770	1863	3273	3273	3273	3273	3273	3273
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1770	1583	1770	1863	3273	3273	3273	3273	3273	3273
Peak-hour factor, PHF	0.80	0.80	0.80	0.88	0.88	0.82	0.82	0.82	0.82	0.78	0.78
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	110	0	172	663	1108	0	0	580
RTOR Reduction (vph)	0	0	0	0	0	130	0	0	0	0	195
Lane Group Flow (vph)	0	0	0	110	0	42	663	1108	0	0	970
Turn Type	custom	custom	custom	Prot	NA	NA	NA	NA	NA	NA	NA
Protected Phases	8	8	8	5	2	2	6	6	6	6	6
Permitted Phases							6	6	6	6	6
Actuated Green, G (s)	10.5	10.5	10.5	10.5	34.9	65.0	26.1	26.1	26.1	26.1	26.1
Effective Green, g (s)	10.5	10.5	10.5	10.5	34.9	65.0	26.1	26.1	26.1	26.1	26.1
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.42	0.78	0.31	0.31	0.31	0.31	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	222	222	199	739	1450	1023	1023	1023	1023	1023	1023
v/s Ratio Prot	c0.06	c0.06	0.03	0.03	0.21	0.92	0.76	0.95	0.95	0.95	0.95
v/c Ratio	0.50	0.50	0.21	0.21	0.32	23.0	5.1	28.0	28.0	28.0	28.0
Uniform Delay, d1	34.0	34.0	32.8	23.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	1.7	0.5	17.2	2.5	16.9	16.9	16.9	16.9	16.9	16.9
Delay (s)	35.8	35.8	33.3	40.3	7.5	44.9	44.9	44.9	44.9	44.9	44.9
Level of Service	D	D	C	D	A	D	D	D	D	D	D
Approach Delay (s)	0.0	A	34.3	C	20.0	44.9	44.9	44.9	44.9	44.9	44.9
Approach LOS	A	A	C	C	C	D	D	D	D	D	D
Intersection Summary											
HCM 2000 Control Delay	30.2 HCM 2000 Level of Service C										
HCM 2000 Volume to Capacity ratio	0.87										
Actuated Cycle Length (s)	83.5 Sum of lost time (s) 12.0										
Intersection Capacity Utilization	164.0% ICU Level of Service H										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
35: Via de San Ysidro & I-5 SB off-ramp 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBR	SBT	SBR
Lane Configurations	37	999	0	982	536	0	
Volume (vph)	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	4.6	4.6	4.6	4.6	4.6	4.6	
Total Lost time (s)	1.00	1.00	1.00	1.00	0.95		
Lane Util. Factor	1.00	0.85	1.00	1.00	1.00		
Flt Protected	0.95	1.00	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1583	1863	3539			
Flt Permitted	0.95	1.00	1.00	1.00	1.00		
Satd. Flow (perm)	1770	1583	1863	3539			
Peak-hour factor, PHF	0.79	0.79	0.70	0.70	0.75	0.75	
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	
Adj. Flow (vph)	553	1391	0	1543	786	0	
RTOR Reduction (vph)	0	461	0	0	0	0	
Lane Group Flow (vph)	553	930	0	1543	786	0	
Turn Type	NA	custom	NA	NA	NA	NA	
Protected Phases	4	4			3		
Permitted Phases	3.4		7		3		
Actuated Green, G (s)	31.4	80.8	85.4	49.4			
Effective Green, g (s)	31.4	80.8	85.4	49.4			
Actuated g/C Ratio	0.22	0.58	0.61	0.35			
Clearance Time (s)	4.6	4.6	4.6	4.6			
Vehicle Extension (s)	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	396	965	1136	1248			
v/s Ratio Prot	0.31	0.22		0.22			
v/s Ratio Perm		0.37	c0.83				
v/c Ratio	1.40	0.96	1.36	0.63			
Uniform Delay, d1	54.3	28.2	27.3	37.7			
Progression Factor	1.00	1.00	1.17	1.00			
Incremental Delay, d2	193.2	20.5	165.7	1.0			
Delay (s)	247.5	48.7	197.7	38.7			
Level of Service	F	D	F	D			
Approach Delay (s)	105.2		197.7	38.7			
Approach LOS	F		F	D			
Intersection Summary							
HCM 2000 Control Delay			126.4				F
HCM 2000 Volume to Capacity ratio			0.95				
Actuated Cycle Length (s)			140.0				18.0
Intersection Capacity Utilization			92.0%				F
Analysis Period (min)			15				
c Critical Lane Group							

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
36: Calle Primera/Willow Rd & Via de San Ysidro 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	183	621	32	0	400	664	33	43	30	706	25	294
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	0.99	1.00	0.85	1.00	0.94	1.00	0.95	1.00	1.00	0.86	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1849	1863	1583	1770	1748	1770	1748	1770	1863	1805	1805
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00	1.00
Satd. Flow (perm)	1770	1849	1863	1583	1770	1748	1770	1748	1770	1805	1805	1805
Peak-hour factor, PHF	0.81	0.81	0.85	0.85	0.85	0.79	0.79	0.79	0.79	0.81	0.81	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	249	843	43	0	518	859	46	60	42	959	34	399
RTOR Reduction (vph)	0	1	0	0	0	213	0	12	0	0	156	0
Lane Group Flow (vph)	249	885	0	0	518	646	46	90	0	959	277	0
Turn Type	Prot	NA	NA	Perm	NA	custom	Perm	NA	NA	Perm	NA	NA
Protected Phases	5	2			6			7				3.4
Permitted Phases	18.8	45.4			22.4	71.8	85.4	85.4		85.4		85.4
Actuated Green, G (s)	18.8	45.4			22.4	71.8	85.4	85.4		85.4		85.4
Effective Green, g (s)	0.13	0.32			0.16	0.51	0.61	0.61		0.61		0.61
Actuated g/C Ratio	4.2	4.6			4.6	4.6	4.6	4.6		4.6		4.6
Clearance Time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0		3.0
Vehicle Extension (s)	237	599			298	811	494	1066		785		979
Lane Grp Cap (vph)	0.14	c0.48			c0.28	0.41	0.06	0.05		c0.74		0.17
v/s Ratio Prot	1.05	1.48			1.74	0.80	0.09	0.08		1.22		0.28
v/c Ratio	60.6	47.3			58.8	28.1	11.3	11.2		27.3		12.9
Uniform Delay, d1	1.00	1.00			1.00	1.00	1.00	1.00		1.00		0.99
Progression Factor	133.0	270.8			404.7	33.5	11.4	11.3		121.5		0.2
Incremental Delay, d2	F	F			F	C	B	B		F		A
Delay (s)	240.6				173.1			11.3		83.7		F
Level of Service	F				F			B		F		F
Approach Delay (s)												
Approach LOS												
Intersection Summary												
HCM 2000 Control Delay										155.4		F
HCM 2000 Volume to Capacity ratio										1.42		
Actuated Cycle Length (s)										140.0		18.0
Intersection Capacity Utilization										122.4%		H
Analysis Period (min)										15		
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramps
37: Dairy Mart Rd & I-5 SB Ramps

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Volume (vph)	993	0	864	0	0	0	479	260	445	253	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.6	4.6
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00
Fr	1.00	1.00	0.85	1.00	1.00	1.00	0.85	1.00	0.95	1.00	1.00
FI Protected	1681	1681	1583	3539	1583	3433	1863	1863	1863	1863	1863
Satd. Flow (prot)	1681	1681	1583	3539	1583	3433	1863	1863	1863	1863	1863
FI Permitted	0.95	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1681	1681	1583	3539	1583	3433	1863	1863	1863	1863	1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.50	0.50	0.50	0.88	0.88	0.88	0.81	0.81
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	1241	0	1080	0	0	0	544	295	549	312	0
RTOR Reduction (vph)	0	0	181	0	0	0	0	170	0	0	0
Lane Group Flow (vph)	620	621	899	0	0	0	544	125	549	312	0
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA	Prot	NA	NA	NA
Protected Phases	4	4	4	2	2	1	6	6	6	6	6
Permitted Phases	4	4	4	2	2	1	6	6	6	6	6
Actuated Green, G (s)	58.1	58.1	58.1	19.7	19.7	18.0	41.9	41.9	41.9	41.9	41.9
Effective Green, g (s)	58.1	58.1	58.1	19.7	19.7	18.0	41.9	41.9	41.9	41.9	41.9
Actuated g/C Ratio	0.53	0.53	0.53	0.18	0.18	0.16	0.38	0.38	0.38	0.38	0.38
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.2	4.6	4.6	4.2	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	894	894	842	638	285	565	714	714	714	714	714
v/s Ratio Prot	0.37	0.37	0.57	0.15	0.15	0.16	0.17	0.17	0.17	0.17	0.17
v/s Ratio Perm	0.69	0.69	1.07	0.85	0.44	0.97	0.44	0.44	0.44	0.44	0.44
Uniform Delay, d1	18.9	19.0	25.6	43.3	39.8	45.3	24.9	24.9	24.9	24.9	24.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	2.4	50.9	10.7	1.1	30.6	0.4	0.4	0.4	0.4	0.4
Delay (s)	21.3	21.3	76.4	54.0	40.9	75.9	25.3	25.3	25.3	25.3	25.3
Level of Service	C	C	E	D	D	E	C	C	C	C	C
Approach Delay (s)	47.0	47.0	49.4	49.4	49.4	57.6	57.6	57.6	57.6	57.6	57.6
Approach LOS	D	D	A	D	D	E	E	E	E	E	E
Intersection Summary											
HCM 2000 Control Delay	49.7 HCM 2000 Level of Service D										
HCM 2000 Volume to Capacity ratio	1.01										
Actuated Cycle Length (s)	109.2 Sum of lost time (s) 13.4										
Intersection Capacity Utilization	74.5% ICU Level of Service D										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
38: Dairy Mart Rd & Servando Ave

3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBR
Volume (vph)	175	49	68	385	537	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr	0.97	0.96	1.00	0.99	1.00	1.00
FI Protected	1740	1740	1849	1778	1778	1778
Satd. Flow (prot)	1740	1740	1849	1778	1778	1778
FI Permitted	0.96	0.96	1.00	0.99	1.00	1.00
Satd. Flow (perm)	1740	1740	1849	1778	1778	1778
Peak-hour factor, PHF	0.77	0.77	0.82	0.82	0.80	0.80
Adj. Flow (vph)	227	64	83	470	671	339
RTOR Reduction (vph)	15	0	0	0	24	0
Lane Group Flow (vph)	276	0	0	553	986	0
Turn Type	NA	Perm	NA	NA	NA	NA
Protected Phases	4	2	2	6	6	6
Permitted Phases	4	2	2	6	6	6
Actuated Green, G (s)	14.5	47.5	47.5	47.5	47.5	47.5
Effective Green, g (s)	14.5	47.5	47.5	47.5	47.5	47.5
Actuated g/C Ratio	0.21	0.68	0.68	0.68	0.68	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	360	716	1206	1206	1206	1206
v/s Ratio Prot	0.16	0.52	0.52	0.52	0.52	0.52
v/s Ratio Perm	0.77	0.77	0.77	0.82	0.82	0.82
Uniform Delay, d1	26.2	7.6	8.1	8.1	8.1	8.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.4	7.9	6.2	6.2	6.2	6.2
Delay (s)	35.6	15.5	14.3	14.3	14.3	14.3
Level of Service	D	B	B	B	B	B
Approach Delay (s)	35.6	15.5	14.3	14.3	14.3	14.3
Approach LOS	D	B	B	B	B	B
Intersection Summary						
HCM 2000 Control Delay	18.0 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.80					
Actuated Cycle Length (s)	70.0 Sum of lost time (s) 8.0					
Intersection Capacity Utilization	91.5% ICU Level of Service F					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 39: Dairy Mart Rd & Camino De La Plaza

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	6	395	76	12	558	23
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.95	1.00	0.98	1.00	0.95	0.95
Flt Protected	1770	1583	1828	1777	1777	1777
Satd. Flow (prot)	0.95	1.00	1.00	0.64	0.64	0.64
Flt Permitted	1770	1583	1828	1198	1198	1198
Satd. Flow (perm)	0.89	0.89	0.75	0.75	0.79	0.79
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	7	488	111	18	777	32
Adj. Flow (vph)	0	440	3	0	0	0
RTOR Reduction (vph)	7	48	126	0	0	809
Lane Group Flow (vph)	NA	Perm	NA	Perm	NA	NA
Turn Type	8	2	2	6	6	6
Protected Phases	8	8	8	8	8	8
Permitted Phases	8.8	8.8	73.2	73.2	73.2	73.2
Actuated Green, G (s)	8.8	8.8	73.2	73.2	73.2	73.2
Effective Green, g (s)	0.10	0.10	0.81	0.81	0.81	0.81
Actuated g/C Ratio	4.0	4.0	4.0	4.0	4.0	4.0
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	173	154	1486	974	974	974
Lane Grp Cap (vph)	0.00	c0.03	0.07	c0.68	c0.68	c0.68
v/s Ratio Prot	0.04	0.31	0.08	0.83	0.83	0.83
v/c Ratio	36.8	37.8	1.7	4.8	4.8	4.8
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.1	1.2	0.1	8.2	8.2	8.2
Incremental Delay, d2	36.9	38.9	1.8	13.0	13.0	13.0
Delay (s)	D	D	A	B	B	B
Level of Service	38.9	1.8	1.3	13.0	13.0	13.0
Approach Delay (s)	D	A	A	B	B	B
Approach LOS	D	A	A	B	B	B
Intersection Summary						
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service		C		
HCM 2000 Volume to Capacity ratio	0.77					
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		8.0		
Intersection Capacity Utilization	52.0%	ICU Level of Service		A		
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 40: Camino de la Plaza & Bibler Dr

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	10	133	273	8	203	389
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	5.3	4.0	5.3	5.3
Total Lost time (s)	1.00	1.00	0.95	1.00	0.95	1.00
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Flt Protected	1770	1583	3524	1770	3539	3539
Satd. Flow (prot)	0.95	1.00	1.00	0.95	1.00	1.00
Flt Permitted	1770	1583	3524	1770	3539	3539
Satd. Flow (perm)	0.71	0.71	0.80	0.80	0.87	0.87
Peak-hour factor, PHF	110%	110%	110%	110%	110%	110%
Growth Factor (vph)	15	206	375	11	257	492
Adj. Flow (vph)	0	187	2	0	0	0
RTOR Reduction (vph)	15	19	384	0	257	492
Lane Group Flow (vph)	NA	Perm	NA	Prot	NA	NA
Turn Type	8	2	2	1	6	6
Protected Phases	8	8	8	8	8	8
Permitted Phases	6.4	6.4	35.5	14.8	54.3	54.3
Actuated Green, G (s)	6.4	6.4	35.5	14.8	54.3	54.3
Effective Green, g (s)	0.09	0.09	0.51	0.21	0.78	0.78
Actuated g/C Ratio	4.0	4.0	5.3	4.0	5.3	5.3
Clearance Time (s)	2.0	2.0	3.6	2.0	3.6	3.6
Vehicle Extension (s)	161	144	1787	374	2745	2745
Lane Grp Cap (vph)	0.01	c0.11	c0.15	0.14	0.14	0.14
v/s Ratio Prot	0.09	0.13	0.21	0.69	0.18	0.18
v/c Ratio	29.1	29.2	9.5	25.5	2.0	2.0
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.1	0.2	0.3	4.1	0.1	0.1
Incremental Delay, d2	29.2	29.4	9.8	29.6	2.2	2.2
Delay (s)	C	C	A	C	A	A
Level of Service	29.4	9.8	9.8	11.6	11.6	11.6
Approach Delay (s)	C	A	A	B	B	B
Approach LOS	C	A	A	B	B	B
Intersection Summary						
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service		B		
HCM 2000 Volume to Capacity ratio	0.33					
Actuated Cycle Length (s)	70.0	Sum of lost time (s)		13.3		
Intersection Capacity Utilization	35.4%	ICU Level of Service		A		
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
41: Willow Rd & Camino de la Plaza

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	135	223	39	73	223	454	34	159	105	434	243	51
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.4	4.9	4.4	4.9	4.4	4.4	4.4	4.9	4.4	4.4	4.9	4.4
Total Lost time (s)	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Fr	1.00	0.98	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
FI Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	3460	1770	1863	1583	1770	1752	1752	1770	1814	1770	1814
FI Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1770	3460	1770	1863	1583	1770	1752	1752	1770	1814	1770	1814
Peak-hour factor, PHF	0.90	0.90	0.90	0.71	0.71	0.71	0.80	0.80	0.80	0.89	0.89	0.89
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	165	273	48	113	345	703	47	219	144	536	300	63
RTOR Reduction (vph)	0	15	0	0	0	104	0	23	0	0	7	0
Lane Group Flow (vph)	165	306	0	113	345	599	47	340	0	536	356	0
Turn Type	Prot	NA	NA	Prot	NA	pm+ov	Prot	NA	NA	Prot	NA	NA
Protected Phases	5	2		1	6	7	3			7		4
Permitted Phases						6		8				4
Actuated Green, G (s)	10.0	23.1		7.6	20.7	51.3	4.1	21.1		30.6	47.6	
Effective Green, g (s)	10.0	23.1		7.6	20.7	51.3	4.1	21.1		30.6	47.6	
Actuated g/C Ratio	0.10	0.23		0.08	0.20	0.51	0.04	0.21		0.30	0.47	
Clearance Time (s)	4.4	4.9		4.4	4.9	4.4	4.4	4.9		4.4	4.9	
Vehicle Extension (s)	2.0	3.3		2.0	3.3	2.0	2.0	2.0		2.0	2.7	
Lane Grp Cap (vph)	175	791		133	381	804	71	366		536	854	
v/s Ratio Prot	c0.09	0.09		0.06	c0.19	0.23	0.03			c0.30	0.20	
v/s Ratio Perm						0.15		c0.19				
v/c Ratio	0.94	0.39		0.85	0.91	0.74	0.66	0.93		1.00	0.42	
Uniform Delay, d1	45.2	33.0		46.1	39.2	19.7	47.8	39.2		35.2	17.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	50.8	0.4		35.7	24.5	3.3	16.5	28.9		38.9	0.3	
Delay (s)	96.1	33.3		81.8	63.7	23.0	64.3	68.2		74.1	17.8	
Level of Service	F	C		F	E	C	E	E		E	B	
Approach Delay (s)		54.6			40.8			67.7			51.4	
Approach LOS		D			D			E			D	

Intersection Summary	
HCM 2000 Control Delay	50.0
HCM 2000 Volume to Capacity ratio	0.94
Actuated Cycle Length (s)	101.0
Intersection Capacity Utilization	79.3%
Analysis Period (min)	15

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
42: Camiones Way/I-5 SB Ramps & Camino de la Plaza

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	474	625	25	43	432	448	59	23	107	291	170	830
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.2	4.6	4.2	4.6	4.2	4.6	4.2	4.6	4.2	4.6	4.6	4.2
Total Lost time (s)	0.97	1.00	0.95	0.88	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.88
Fr	1.00	0.99	1.00	1.00	0.85	1.00	0.95	1.00	1.00	0.85	1.00	0.85
FI Protected	0.95	1.00	0.95	1.00	0.85	1.00	0.95	1.00	1.00	0.85	1.00	0.85
Satd. Flow (prot)	3433	1852	1770	3539	2787	1770	1863	1583	1770	1863	1770	1863
FI Permitted	0.95	1.00	0.95	1.00	0.85	1.00	0.95	1.00	1.00	0.85	1.00	0.85
Satd. Flow (perm)	3433	1852	1770	3539	2787	1770	1863	1583	1770	1863	1770	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	567	747	30	51	517	536	71	28	128	348	203	992
RTOR Reduction (vph)	0	1	0	0	0	256	0	0	108	0	0	133
Lane Group Flow (vph)	567	776	0	51	517	280	71	28	20	348	203	859
Turn Type	Prot	NA	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7		4
Permitted Phases						6		8				4
Actuated Green, G (s)	24.2	49.5		8.4	33.7	55.1	5.7	8.0	16.4	21.4	24.1	48.3
Effective Green, g (s)	24.2	49.5		8.4	33.7	55.1	5.7	8.0	16.4	21.4	24.1	48.3
Actuated g/C Ratio	0.23	0.47		0.08	0.32	0.52	0.05	0.08	0.16	0.20	0.23	0.46
Clearance Time (s)	4.2	4.6		4.2	4.6	4.6	4.2	4.6	4.2	4.6	4.6	4.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	788	870		141	1132	1580	95	141	246	359	426	1278
v/s Ratio Prot	c0.17	c0.42		0.03	0.15	0.04	0.04	0.02	0.01	c0.20	0.11	c0.15
v/s Ratio Perm						0.06						0.15
v/c Ratio	0.72	0.89		0.36	0.46	0.18	0.75	0.20	0.08	0.97	0.48	0.67
Uniform Delay, d1	37.4	25.5		45.9	28.5	13.2	49.1	45.6	38.0	41.6	35.1	22.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	11.4		1.6	0.3	0.1	27.0	0.7	0.1	38.9	0.8	1.4
Delay (s)	40.6	36.9		47.5	28.8	13.2	76.1	46.3	38.1	80.5	36.0	23.7
Level of Service	D	D		D	C	B	E	D	D	F	D	C
Approach Delay (s)		38.4			22.1			51.0			38.1	
Approach LOS		D			D			D			D	

Intersection Summary	
HCM 2000 Control Delay	34.7
HCM 2000 Volume to Capacity ratio	0.91
Actuated Cycle Length (s)	105.3
Intersection Capacity Utilization	78.9%
Analysis Period (min)	15

c Critical Lane Group

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
43: Smythe Ave & Avenida de la Madrid 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	24	9	27	77	11	122	17	369	46	200	396	29
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.8	4.0	4.0	4.8	4.8
Total Lost time (s)	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95
Flt Protected	0.94	0.92	0.92	0.98	0.95	1.00	0.95	1.00	0.95	1.00	0.99	0.99
Satd. Flow (prot)	1715	1686	1686	1770	1770	3480	1770	3480	1770	3503	3503	3503
Flt Permitted	0.77	0.85	0.85	0.85	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	1341	1466	1466	1770	1770	3480	1770	3480	1770	3503	3503	3503
Peak-hour factor, PHF	0.54	0.54	0.54	0.68	0.68	0.68	0.89	0.89	0.89	0.94	0.94	0.94
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	49	18	55	125	18	197	21	456	57	234	463	34
RTOR Reduction (vph)	0	41	0	0	85	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	81	0	0	255	0	21	499	0	234	491	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4			8			5	2		1		6
Permitted Phases	4			8			5	2		1		6
Actuated Green, G (s)	13.7			13.7			0.6	14.8		14.0		28.2
Effective Green, g (s)	13.7			13.7			0.6	14.8		14.0		28.2
Actuated g/C Ratio	0.25			0.25			0.01	0.27		0.25		0.51
Clearance Time (s)	4.0			4.0			4.0	4.8		4.0		4.8
Vehicle Extension (s)	2.0			2.0			2.0	4.1		2.0		4.1
Lane Grp Cap (vph)	332			363			19	931		448		1786
v/s Ratio Prot	0.06			c0.17			0.01	c0.14		c0.13		0.14
v/s Ratio Perm	0.24			0.70			1.11	0.54		0.52		0.27
Uniform Delay, d1	16.6			18.9			27.3	17.3		17.8		7.7
Progression Factor	1.00			1.00			1.00	1.00		1.00		1.00
Incremental Delay, d2	0.1			5.0			242.0	0.8		0.5		0.1
Delay (s)	16.8			23.9			269.4	18.1		18.3		7.8
Level of Service	B			C			F	B		B		A
Approach Delay (s)	16.8			23.9			26.0	11.2		11.2		11.2
Approach LOS	B			C			C	B		B		B
Intersection Summary												
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.58	B										
Actuated Cycle Length (s)	55.3	Sum of lost time (s)										
Intersection Capacity Utilization	52.7%	12.8										
Analysis Period (min)	15	A										
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
44: Avenida de la Madrid & Alaquinas Dr 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations	W					
Sign Control	Yield			Sloped		
Volume (vph)	43	57	41	54	44	25
Peak Hour Factor	0.65	0.65	0.56	0.56	0.64	0.64
Hourly flow rate (vph)	73	96	81	106	76	43
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	169	187	119			
Volume Left (vph)	73	81	0			
Volume Right (vph)	96	0	43			
Head (s)	-0.22	0.12	-0.18			
Departure Headway (s)	4.4	4.6	4.3			
Degree Utilization, x	0.21	0.24	0.14			
Capacity (veh/h)	766	758	784			
Control Delay (s)	8.5	9.0	8.1			
Approach Delay (s)	8.5	9.0	8.1			
Approach LOS	A	A	A			
Intersection Summary						
Delay	8.6					
Level of Service	A					
Intersection Capacity Utilization	25.4%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 45: I-805 NB Ramps/Center Street & E. San Ysidro Blvd

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	40	1624	0	0	1410	157	120	40	387	0	0	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.98	1.00	0.96	1.00	0.96	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	3539	3486	1796	1583	1611						
Flt Permitted	0.08	1.00	1.00	0.96	1.00	0.96	1.00	0.96	1.00	1.00	1.00	1.00
Satd. Flow (perm)	142	3539	3486	1796	1583	1611						
Peak-hour factor, PHF	0.95	0.95	0.82	0.82	0.82	0.85	0.85	0.85	0.85	0.25	0.25	0.25
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	46	1880	0	0	1891	211	155	52	501	0	0	818
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	42	0	0	42
Lane Group Flow (vph)	46	1880	0	0	2094	0	0	207	459	0	0	776
Turn Type	Perm	NA	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	custom
Protected Phases	2			6	5		8					
Permitted Phases	2			8			8					4
Actuated Green, G (s)	52.4	52.4	52.8	52.8	52.8	38.4	38.4	38.4	38.4	38.4	38.4	38.4
Effective Green, g (s)	52.4	52.4	52.8	52.8	52.8	38.4	38.4	38.4	38.4	38.4	38.4	38.4
Actuated g/C Ratio	0.52	0.52	0.53	0.53	0.53	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	74	1854		1840		689	607					618
v/s Ratio Prot	0.53			c0.60		0.12	0.29					c0.48
v/c Ratio Perm	0.32			1.14		0.30	0.76					1.26
v/c Ratio	16.8	23.8		23.6		21.4	26.7					30.8
Uniform Delay, d1	1.00	1.00		1.00		1.00	1.00					1.00
Progression Factor	27.3	22.1		69.2		0.2	5.4					128.0
Incremental Delay, d2	44.1	45.9		92.8		21.7	32.1					158.8
Delay (s)	D	D		F		C	C					F
Level of Service	D	D		F		C	C					F
Approach Delay (s)	45.9			92.8		29.1						158.8
Approach LOS	D			F		C						F
Intersection Summary												
HCM 2000 Control Delay												E
HCM 2000 Volume to Capacity ratio	78.1											HCM 2000 Level of Service
Actuated Cycle Length (s)	1.25											
Intersection Capacity Utilization	100.0											Sum of lost time (s)
Analysis Period (min)	83.4%											ICU Level of Service
	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 46: Camino de la Plaza & I-805 NB Ramp

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	242	781	815	332	0	0						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0						
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.85						
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00						
Satd. Flow (prot)	1770	1863	3539	1583								
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00						
Satd. Flow (perm)	1770	1863	3539	1583								
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	289	934	974	397	0	0						
RTOR Reduction (vph)	0	0	0	0	0	0						
Lane Group Flow (vph)	289	934	974	397	0	0						
Turn Type	Prot	NA	NA	Free								
Protected Phases	7	4		8								
Permitted Phases				Free								
Actuated Green, G (s)	8.0	32.8	16.8	32.8								
Effective Green, g (s)	8.0	32.8	16.8	32.8								
Actuated g/C Ratio	0.24	1.00	0.51	1.00								
Clearance Time (s)	4.0	4.0	4.0	4.0								
Vehicle Extension (s)	3.0	3.0	3.0	3.0								
Lane Grp Cap (vph)	431	1863	1812	1583								
v/s Ratio Prot	0.16	c0.50	0.28									
v/c Ratio Perm	0.67	0.50	0.54	0.25								
v/c Ratio	11.2	0.0	5.4	0.0								
Uniform Delay, d1	1.00	1.00	1.00	1.00								
Progression Factor	4.1	0.2	0.3	0.4								
Incremental Delay, d2	15.3	0.2	5.7	0.4								
Delay (s)	B	A	A	A								
Level of Service	B	A	A	A								
Approach Delay (s)	3.8	4.2	0.0									
Approach LOS	A	A	A									
Intersection Summary												
HCM 2000 Control Delay	4.0											HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.66											
Actuated Cycle Length (s)	32.8											Sum of lost time (s)
Intersection Capacity Utilization	48.5%											ICU Level of Service
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
47: Vista Ln & Smythe Crossing 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	49	48	92	132	250	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr	1.00	0.92	0.94			
Fr Protected	0.98	1.00	0.97			
Satd. Flow (prot)	1817	1714	1708			
Flt Permitted	0.64	1.00	0.97			
Satd. Flow (perm)	1196	1714	1708			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	72	70	135	194	367	265
RTOR Reduction (vph)	0	0	110	0	54	0
Lane Group Flow (vph)	0	142	219	0	578	0
Turn Type	Perm	NA	NA	NA	NA	NA
Protected Phases	4	8	8	8	6	6
Permitted Phases	4					
Actuated Green, G (s)	9.8	9.8	9.8	9.8	18.0	18.0
Effective Green, g (s)	9.8	9.8	9.8	9.8	18.0	18.0
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.50	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	327	469			858	
v/s Ratio Prot	0.12		c0.13		c0.34	
v/s Ratio Perm	0.43	0.47			0.67	
Uniform Delay, d1	10.7	10.8			6.7	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	0.9	0.7			2.1	
Delay (s)	11.6	11.6			8.8	
Level of Service	B	B			A	
Approach Delay (s)	11.6	11.6			8.8	
Approach LOS	B	B			A	
Intersection Summary						
HCM 2000 Control Delay	10.0 HCM 2000 Level of Service A					
HCM 2000 Volume to Capacity ratio	0.60					
Actuated Cycle Length (s)	35.8 Sum of lost time (s) 8.0					
Intersection Capacity Utilization	57.4% ICU Level of Service B					
Analysis Period (min)	15					
c Critical Lane Group						

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
48: Camino de la Plaza & Virginia Ave 3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Volume (vph)	2	1118	66	273	358	5	66	0	273	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.96	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr	1.00	0.99	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.96
Fr Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.96
Satd. Flow (prot)	1770	3510	3433	3532	1770	1583	1770	1583	1770	1583	1743
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.49
Satd. Flow (perm)	1770	3510	3433	3532	1770	1583	1770	1583	1770	1583	886
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	3	1640	97	400	525	7	97	0	400	12	0
RTOR Reduction (vph)	0	5	0	0	1	0	0	123	0	0	12
Lane Group Flow (vph)	3	1732	0	400	531	0	97	277	0	0	3
Turn Type	Prot	NA	NA	Prot	NA	NA	Perm	NA	NA	Perm	NA
Protected Phases	7	4		3	8		2			6	
Permitted Phases	7						2			6	
Actuated Green, G (s)	0.8	43.3		10.0	52.5		16.2		16.2	16.2	
Effective Green, g (s)	0.8	43.3		10.0	52.5		16.2		16.2	16.2	
Actuated g/C Ratio	0.01	0.53		0.12	0.64		0.20		0.20	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	17	1864		421	2275		276		314	176	
v/s Ratio Prot	0.00	c0.49		c0.12	0.15		0.07		0.18	0.00	
v/s Ratio Perm	0.18	0.93		0.95	0.23		0.35		0.88	0.02	
Uniform Delay, d1	40.0	17.7		35.5	6.1		28.1		31.7	26.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	4.9	8.7		31.3	0.1		0.8		24.1	0.0	
Delay (s)	44.9	26.4		66.8	6.1		28.9		55.8	26.3	
Level of Service	D	C		E	A		C		E	C	
Approach Delay (s)	26.4			32.2			50.6			26.3	
Approach LOS	C			C			D			C	
Intersection Summary											
HCM 2000 Control Delay	31.8 HCM 2000 Level of Service C										
HCM 2000 Volume to Capacity ratio	0.92										
Actuated Cycle Length (s)	81.5 Sum of lost time (s) 12.0										
Intersection Capacity Utilization	73.5% ICU Level of Service D										
Analysis Period (min)	15										
c Critical Lane Group											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
66: Sycamore Rd & Willow Rd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	122	24	24	323	36	36
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	537	106	106	1421	158	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	252					
pX, platoon unblocked						
vC, conflicting volume		642		2222		590
vC1, stage 1 conf vol						
vC2, stage 2 conf vol		642		2222		590
vCu, unblocked vol		4.1		6.4		6.2
IC, single (s)						
IC, 2 stage (s)		2.2		3.5		3.3
p0 queue free %		89		0		69
cM capacity (veh/h)		942		42		508
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	642	1627	317			
Volume Left	0	106	158			
Volume Right	106	0	158			
cSH	1700	942	78			
Volume to Capacity	0.38	0.11	4.05			
Queue Length 95th (ft)	0	9	Err			
Control Delay (s)	0.0	6.6	Err			
Lane LOS	A	F	F			
Approach Delay (s)	0.0	6.6	Err			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay	1276.2					
Intersection Capacity Utilization	43.4%					
ICU Level of Service	A					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
81: Hall Rd & E. San Ysidro Blvd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	806	139	139	769	139	139
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1182	204	204	1128	204	204
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage (veh)	1			1		
Upstream signal (ft)	212					
pX, platoon unblocked						
vC, conflicting volume		1386		1386		2256
vC1, stage 1 conf vol						1284
vC2, stage 2 conf vol		1328		1328		2641
vCu, unblocked vol		4.1		4.1		6.8
IC, single (s)						6.9
IC, 2 stage (s)		2.2		2.2		3.5
p0 queue free %		40		40		0
cM capacity (veh/h)		342		70		122
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	1386	580	752	408		
Volume Left	0	204	0	204		
Volume Right	204	0	0	204		
cSH	1700	342	1700	89		
Volume to Capacity	0.82	0.60	0.44	4.58		
Queue Length 95th (ft)	0	92	0	Err		
Control Delay (s)	0.0	25.5	0.0	Err		
Lane LOS	D	F	D	F		
Approach Delay (s)	0.0	11.1	0.0	Err		
Approach LOS	F	F	F	F		
Intersection Summary						
Average Delay	1309.1					
Intersection Capacity Utilization	111.6%					
ICU Level of Service	H					
Analysis Period (min)	15					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
83: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	270	32	32	172	32	32
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1188	141	141	757	141	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TW/TL		
Median storage (veh)				2		
Upstream signal (ft)	486					
pX, platoon unblocked	0.67			0.67	0.67	0.67
vC, conflicting volume	1329			2297	1258	1258
vC1, stage 1 conf vol				1038		
vC2, stage 2 conf vol	1243			2698	1137	1137
vCu, unblocked vol	4.1			6.4	6.2	6.2
IC, single (s)				5.4		
IC, 2 stage (s)				3.5	3.3	3.3
IF (s)				62	0	14
p0 queue free %				373	138	163
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	141	757	282		
Volume Left	0	141	0	141		
Volume Right	141	0	0	141		
cSH	1700	373	1700	150		
Volume to Capacity	0.78	0.38	0.45	1.88		
Queue Length 95th (ft)	0	43	0	535		
Control Delay (s)	0.0	20.4	0.0	470.5		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	3.2		470.5		
Approach LOS				F		
Intersection Summary						
Average Delay	54.0					
Intersection Capacity Utilization	35.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
87: Virginia Av & E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TW/TL			None		
Median storage (veh)	2					
Upstream signal (ft)	918					
pX, platoon unblocked	0.73			0.73	0.73	0.73
vC, conflicting volume	1329			2339	1217	1217
vC1, stage 1 conf vol				1122		
vC2, stage 2 conf vol	1264			2655	1110	1110
vCu, unblocked vol	4.1			6.4	6.2	6.2
IC, single (s)				5.4		
IC, 2 stage (s)				3.5	3.3	3.3
IF (s)				44	0	0
p0 queue free %				399	111	185
cM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	399	1700	139		
Volume to Capacity	0.78	0.56	0.40	3.23		
Queue Length 95th (ft)	0	84	0	Err		
Control Delay (s)	0.0	25.0	0.0	Err		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	6.2		Err		
Approach LOS				F		
Intersection Summary						
Average Delay	1679.6					
Intersection Capacity Utilization	37.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
90: Border Village Rd (W)/Border Village Rd (E) & Virginia Av

3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	80	120	134	80	80	80
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	528	590	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)				925		
pX, platoon unblocked						
vC, conflicting volume	942			1734	766	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	942			1734	766	
vCu, unblocked vol	4.1			6.8	6.9	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	51			0	0	
cM capacity (veh/h)	724			40	346	
Direction, Lane #	EB 1	EB 2	SB 1	SB 2		
Volume Total	528	352	704			
Volume Left	352	0	352			
Volume Right	0	0	352			
cSH	724	1700	72			
Volume to Capacity	0.49	0.21	9.71			
Queue Length 95th (ft)	67	0	Err			
Control Delay (s)	12.4	0.0	Err			
Lane LOS	B		F			
Approach Delay (s)	7.4		Err			
Approach LOS			F			
Intersection Summary						
Average Delay	Err		Err			
Intersection Capacity Utilization			Err			H
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
92: Border Village Rd (W) & Hall Rd

3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	20	0	0	20	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	88	0	0	88	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)					203	
pX, platoon unblocked						
vC, conflicting volume	176	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	176	0			0	
vCu, unblocked vol	6.8	6.9			4.1	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	92			95	
cM capacity (veh/h)	754	1084			1622	
Direction, Lane #	WB 1	SB 1	SB 2			
Volume Total	88	88	0			
Volume Left	0	88	0			
Volume Right	88	0	0			
cSH	1084	1622	1700			
Volume to Capacity	0.08	0.05	0.00			
Queue Length 95th (ft)	7	4	0			
Control Delay (s)	8.6	7.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	7.3				
Approach LOS		A				
Intersection Summary						
Average Delay			8.0			
Intersection Capacity Utilization			13.3%			A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
95: E. San Ysidro Blvd 3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	251	51	51	153	51	51
Sign Control	Free	Free	Free	Stop	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	1104	224	224	673	224	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TW/TL		
Median storage (veh)	2			2		
Upstream signal (ft)	685					
pX, platoon unblocked	0.68			0.68		0.68
vC, conflicting volume	1329			2339		1217
vC1, stage 1 conf vol				1122		
vC2, stage 2 conf vol	1248			2735		1083
vCU, unblocked vol	4.1			6.4		6.2
IC, single (s)				5.4		
IC, 2 stage (s)				3.5		3.3
IF (s)				41		0
p0 queue free %				379		104
cM capacity (veh/h)				104		179
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	1329	224	673	449		
Volume Left	0	224	0	224		
Volume Right	224	0	0	224		
cSH	1700	379	1700	132		
Volume to Capacity	0.78	0.59	0.40	3.41		
Queue Length 95th (ft)	0	92	0	Err		
Control Delay (s)	0.0	27.4	0.0	Err		
Lane LOS	D	F	F	F		
Approach Delay (s)	0.0	6.9	Err	F		
Approach LOS				F		
Intersection Summary						
Average Delay	1679.8			148.1		
Intersection Capacity Utilization	37.8%			27.0%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
98: Virginia Av 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (veh/h)	80	80	80	80	0	80
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	0	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	880			528		704
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	880			528		704
vCU, unblocked vol	6.4			6.2		4.1
IC, single (s)				3.3		2.2
IC, 2 stage (s)				3.3		2.2
IF (s)				0		36
p0 queue free %				318		550
cM capacity (veh/h)				550		894
Direction, Lane #	WB 1	NB 1	SB 1	SB 1		
Volume Total	704	704	352			
Volume Left	352	0	0			
Volume Right	352	352	0			
cSH	403	1700	894			
Volume to Capacity	1.75	0.41	0.00			
Queue Length 95th (ft)	1082	0	0			
Control Delay (s)	370.2	0.0	0.0			
Lane LOS	F	F	F			
Approach Delay (s)	370.2	0.0	0.0			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay	148.1			148.1		
Intersection Capacity Utilization	27.0%			27.0%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
100: E. San Ysidro Blvd

3/31/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	178	20	20	164	20	20
Volume (veh/h)	Free	Free	Free	Stop	0%	0%
Sign Control	0%	0%	0%	0%	0%	0%
Grade	0.25	0.25	0.25	0.25	0.25	0.25
Peak Hour Factor	783	88	88	722	88	88
Hourly flow rate (vph)						
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				323		
pX platoon unblocked				0.90		
vC, conflicting volume	871			1725		827
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	871			1750		827
vCU, unblocked vol	4.1			6.4		6.2
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5		3.3
p0 queue free %	89			0		76
cM capacity (veh/h)	774			75		371
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	871	88	722	176		
Volume Left	0	88	0	88		
Volume Right	88	0	0	88		
cSH	1700	774	1700	125		
Volume to Capacity	0.51	0.11	0.42	1.41		
Queue Length 95th (ft)	0	10	0	298		
Control Delay (s)	0.0	10.2	0.0	289.0		
Lane LOS	B	B	F	F		
Approach Delay (s)	0.0	1.1		289.0		
Approach LOS				F		
Intersection Summary						
Average Delay			27.9			
Intersection Capacity Utilization			28.3%		ICU Level of Service	A
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
103: W. San Ysidro Blvd/E. San Ysidro Blvd & West Olive Dr

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	0	0	0	0	0	0	0	0	0	0	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)												
Total Lost time (s)												
Lane Util. Factor												
FI Protected												
Satd. Flow (prot)												
FI Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases		4		8		8		2				6
Permitted Phases		4		8		8		2				6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)	0.0		0.0		0.0		0.0		0.0		0.0	
Approach LOS	A		A		A		A		A		A	
Intersection Summary												
HCM 2000 Control Delay			0.0		0.0		0.0		0.0		0.0	
HCM 2000 Volume to Capacity ratio			0.00		0.00		0.00		0.00		0.00	
Actuated Cycle Length (s)			24.5		24.5		24.5		24.5		24.5	
Intersection Capacity Utilization			0.0%		0.0%		0.0%		0.0%		0.0%	
Analysis Period (min)			15		15		15		15		15	
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
104: Border Village Rd (E) 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (veh/h)	6	41	53	6	6	6
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	26	180	233	26	26	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			453			
pX platoon unblocked						
vC, conflicting volume	260				389	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	260				389	246
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	98				95	96
cM capacity (veh/h)	1302				575	754
Direction, Lane #	EB 1	EB 2	SB 1	SB 1		
Volume Total	87	120	53			
Volume Left	26	0	26			
Volume Right	0	0	26			
cSH	1302	1700	652			
Volume to Capacity	0.02	0.07	0.08			
Queue Length 95th (ft)	2	0	7			
Control Delay (s)	2.3	0.0	11.0			
Lane LOS	A	B	B			
Approach Delay (s)	1.0		11.0			
Approach LOS			B			
Intersection Summary						
Average Delay		Err				
Intersection Capacity Utilization		Err%		ICU Level of Service	H	
Analysis Period (min)		15				

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
107: Virginia Av 3/31/2015

Movement	EBL	EBR	NBL	NBT	SBL	SBR
Volume (veh/h)	80	80	80	80	80	80
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	352	352	352	352	352	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume	1584	528	704			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1584	528	704			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	0	36	81			
cM capacity (veh/h)	72	550	894			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	704	704	704			
Volume Left	352	352	0			
Volume Right	0	0	352			
cSH	128	894	1700			
Volume to Capacity	5.51	0.39	0.41			
Queue Length 95th (ft)	Err	47	0			
Control Delay (s)	Err	8.7	0.0			
Lane LOS	F	A	A			
Approach Delay (s)	Err	8.7	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			3335.9			
Intersection Capacity Utilization			39.8%	ICU Level of Service	A	
Analysis Period (min)			15			

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
11: E. San Ysidro Blvd 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Volume (veh/h)	0	178	164	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	783	722	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)	1174					
pX, platoon unblocked						
vC, conflicting volume	722			1505	722	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	722			1505	722	
vCu, unblocked vol	4.1			6.4	6.2	
IC, 1 stage (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
cM capacity (veh/h)	880			133	427	
Direction, Lane #	EB 1	EB 2	WB 1	WB 1	SB 1	
Volume Total	0	783	722	0	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.00	0.46	0.42	0.00	0.00	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.0			0.0		
Intersection Capacity Utilization	13.6%			13.6%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
11: E. San Ysidro Blvd 3/31/2015

Movement	EBT	EBR	WBT	WBR	NBL	NBR
Volume (veh/h)	178	20	20	164	20	20
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	783	88	88	722	88	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None		
Median storage (veh)						
Upstream signal (ft)	684					
pX, platoon unblocked						
vC, conflicting volume	871			1725	827	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	871			1748	827	
vCu, unblocked vol	4.1			6.4	6.2	
IC, 1 stage (s)						
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	89			0	76	
cM capacity (veh/h)	774			76	371	
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 1	
Volume Total	871	88	722	176	176	
Volume Left	0	88	0	88	0	
Volume Right	88	0	0	88	88	
cSH	1700	774	1700	126	126	
Volume to Capacity	0.51	0.11	0.42	1.40	1.40	
Queue Length 95th (ft)	0	10	0	296	296	
Control Delay (s)	0.0	10.2	0.0	284.7	284.7	
Lane LOS	F	B	F	F	F	
Approach Delay (s)	0.0	1.1	284.7	284.7	284.7	
Approach LOS	F	F	F	F	F	
Intersection Summary						
Average Delay	27.5			27.5		
Intersection Capacity Utilization	28.3%			28.3%		
Analysis Period (min)	15			15		
ICU Level of Service	A			A		

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 128: Dairy Mart Rd & Tecuilla Way

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Fr												
Full Protected												
Satd. Flow (prot)												
Full Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	4			8			2			2		6
Permitted Phases	4			8			2			2		6
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service	0.0			0.0			0.0			0.0		0.0
Approach Delay (s)	A			A			A			A		A
Approach LOS	A			A			A			A		A
Intersection Summary												
HCM 2000 Control Delay	0.0 HCM 2000 Level of Service A											
HCM 2000 Volume to Capacity ratio	0.00											
Actuated Cycle Length (s)	24.5 Sum of lost time (s) 8.0											
Intersection Capacity Utilization	0.0% ICU Level of Service A											
Analysis Period (min)	15											
c Critical Lane Group												

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 128: Border Village Rd (W)

3/31/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (veh/h)	10	190	204	10	10	10	10	10	10	10	10	10
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	44	836	898	44	44	44	44	44	44	44	44	44
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn lane (veh)												
Median type	None	None	None	None	None	None	None	None	None	None	None	None
Median storage (veh)												
Upstream signal (ft)		740										
pX, platoon unblocked												
vC, conflicting volume		942								1426		920
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol		942								1426		920
IC, single (s)		4.1								6.8		6.9
IC, 2 stage (s)												
IF (s)		2.2								3.5		3.3
p0 queue free %		94								63		84
cM capacity (veh/h)		724								119		273
Direction, Lane #	EB 1	EB 2	WB 1	WB 1	SB 1							
Volume Total	323	557	942	88								
Volume Left	44	0	0	44								
Volume Right	0	0	44	44								
cSH	724	1700	1700	165								
Volume to Capacity	0.06	0.33	0.55	0.53								
Queue Length 95th (ft)	5	0	0	0						67		
Control Delay (s)	2.1	0.0	0.0	49.1								
Lane LOS	A			E						E		
Approach Delay (s)	0.8			0.0						49.1		
Approach LOS	E			E						E		
Intersection Summary												
Average Delay	2.6											
Intersection Capacity Utilization	23.9%											
ICU Level of Service	A											
Analysis Period (min)	15											

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 143: Cottonwood Rd & Seaward Ave 3/31/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		P			4
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			1080			
pX, platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	0	0	0	0	0	0
vCu, unblocked vol	6.4	6.2	4.1			
IC, single (s)						
IC, 2 stage (s)	3.5	3.3	2.2			
IF (s)	100	100	100			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1023	1085	1623			
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0		0.0		0.0	
Intersection Capacity Utilization	0.0%		0.0%		0.0%	
Analysis Period (min)	15		15		15	
ICU Level of Service	A		A		A	

San Ysidro CPU-Mobility Element Horizon Year Alternative B with Improvements I-805 Ramp
 500: Beyer Blvd & Cottonwood Rd 3/31/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4	4	W	
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			810		816	
pX, platoon unblocked						
vC, conflicting volume	0	0	0	0	0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	0	0	0	0	0	0
vCu, unblocked vol	4.1		6.8		6.9	
IC, single (s)						
IC, 2 stage (s)	2.2		3.5		3.3	
IF (s)	100		100		100	
p0 queue free %	100		100		100	
cM capacity (veh/h)	1622		1023		1084	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A	A	A	A	A
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Approach LOS	A	A	A	A	A	A
Intersection Summary						
Average Delay	0.0		0.0		0.0	
Intersection Capacity Utilization	0.0%		0.0%		0.0%	
Analysis Period (min)	15		15		15	
ICU Level of Service	A		A		A	

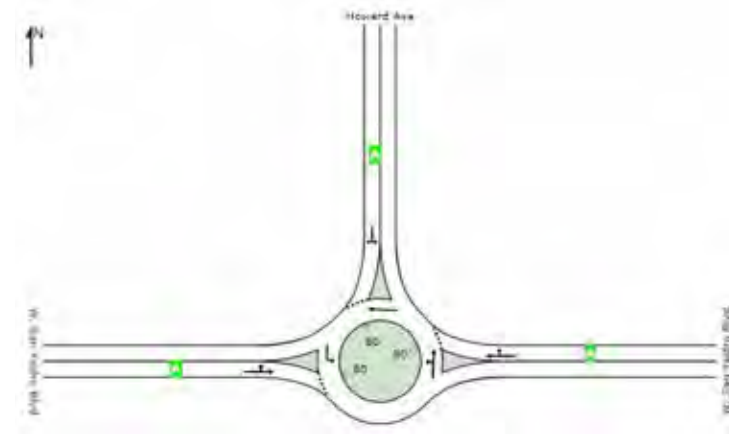
APPENDIX F

PROPOSED FUTURE LAND USE ALTERNATIVE – PEAK-HOUR VOLUMES
ROUNDBOUT CALCULATION WORKSHEETS

AM PEAK

LEVEL OF SERVICE

	East	North	West	Intersection
LOS	A	A	A	A



DEGREE OF SATURATION

	East	North	West	Intersection
Degree of Saturation	0.38	0.30	0.15	0.38



CONTROL DELAY

	East	North	West	Intersection
Delay (Control)	7.5	6.2	5.9	6.8
LOS	A	A	A	A



95TH PERCENTILE QUEUE

	East	North	West	Intersection
Vehicle Queue (%ile)	47	35	13	47



PM PEAK

	East	North	West	Intersection
LOS	A	A	A	A



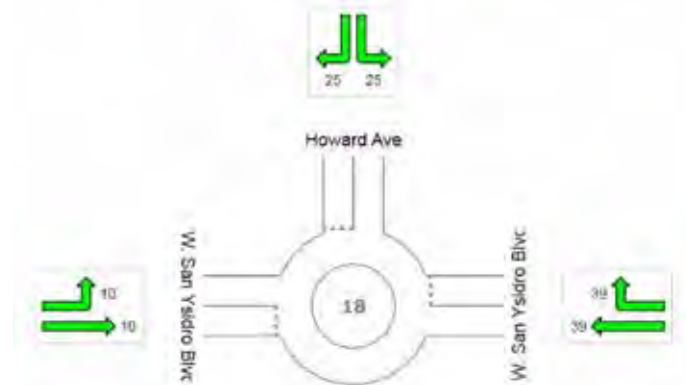
	East	North	West	Intersection
Degree of Saturation	0.32	0.23	0.11	0.32



	East	North	West	Intersection
Delay (Control)	6.6	5.7	5.0	6.1
LOS	A	A	A	A



	East	North	West	Intersection
Vehicle Queue (%ile)	39	25	10	39



LEGEND

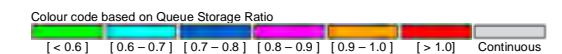
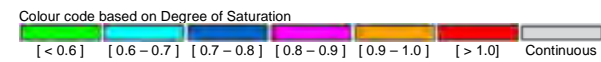


Figure F-1

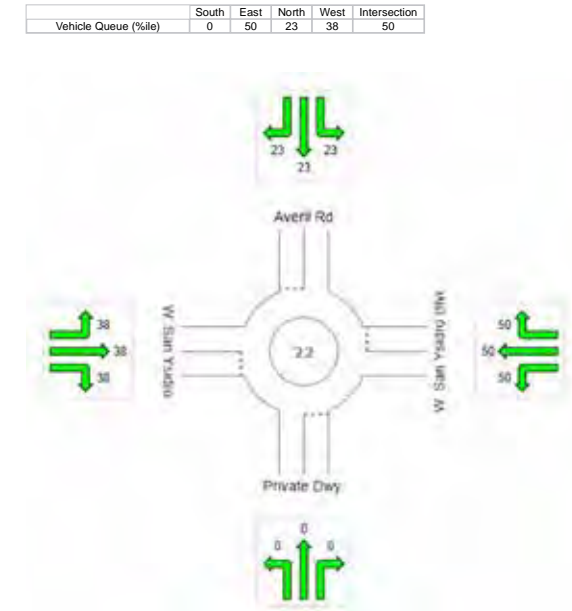
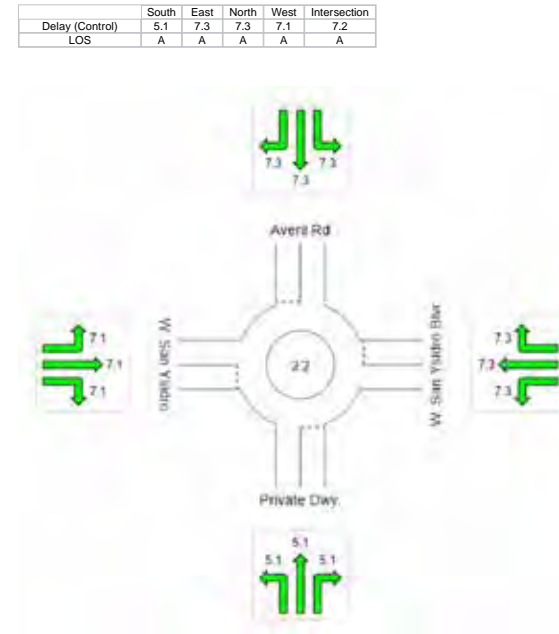
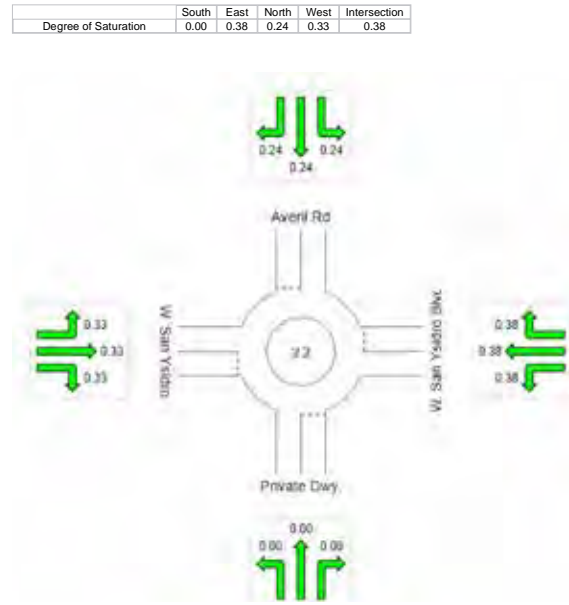
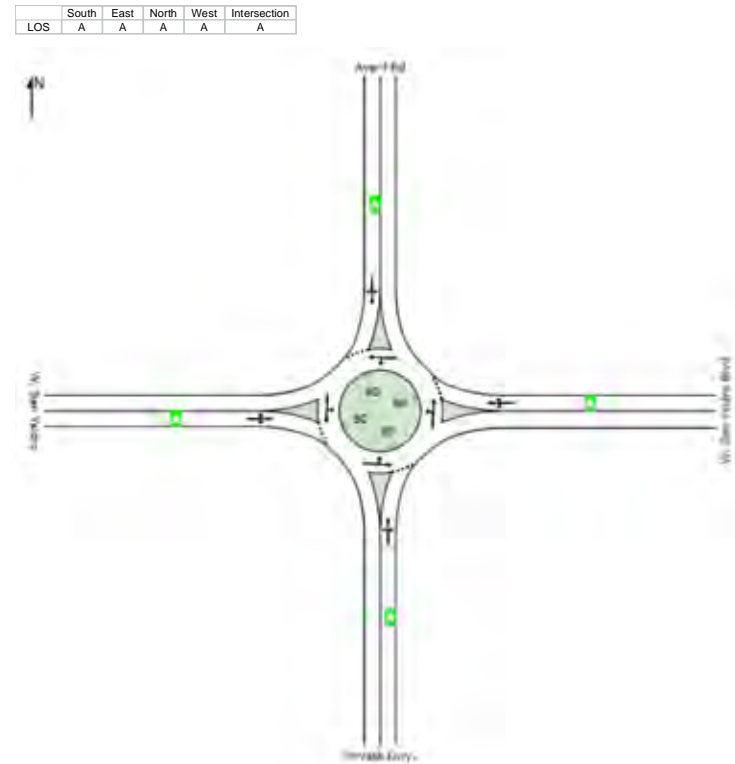
LEVEL OF SERVICE

DEGREE OF SATURATION

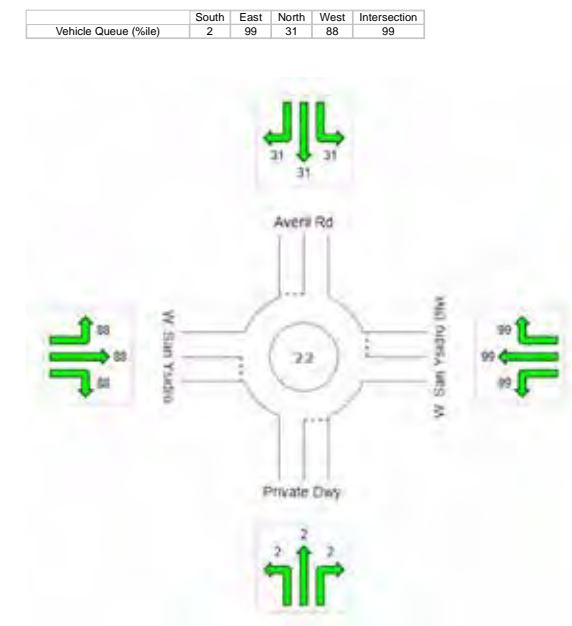
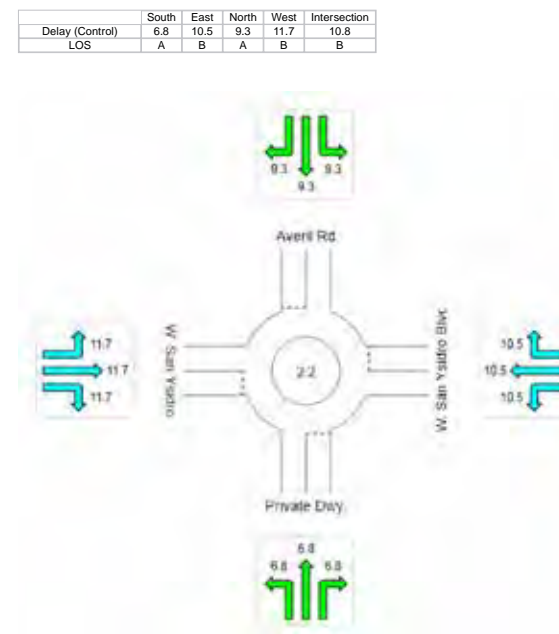
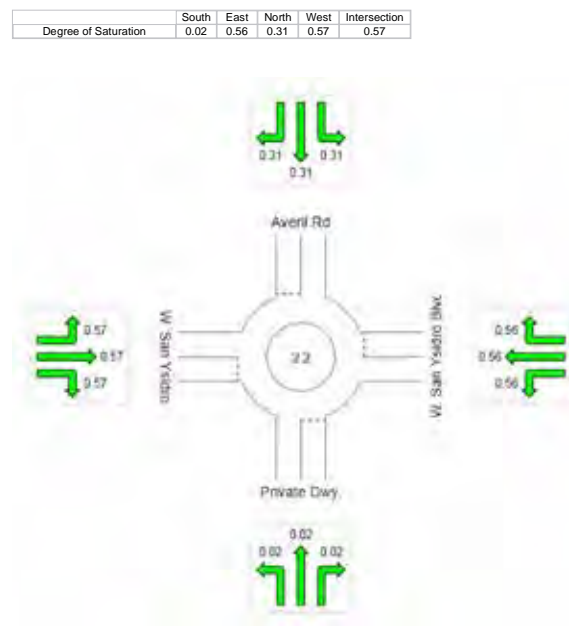
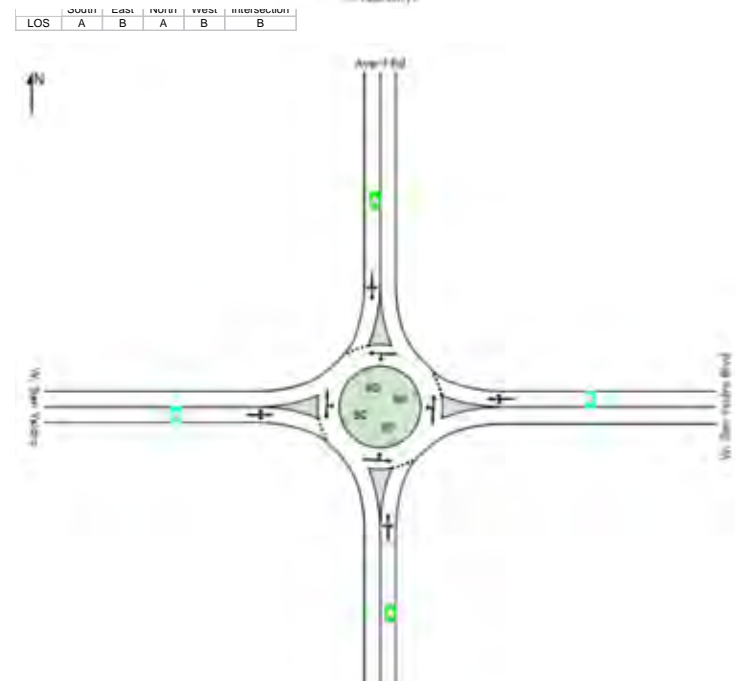
CONTROL DELAY

95TH PERCENTILE QUEUE

AM PEAK



PM PEAK



LEGEND

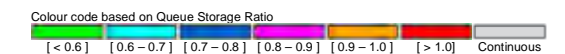
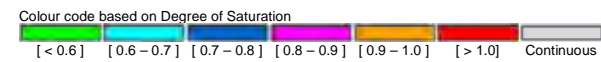
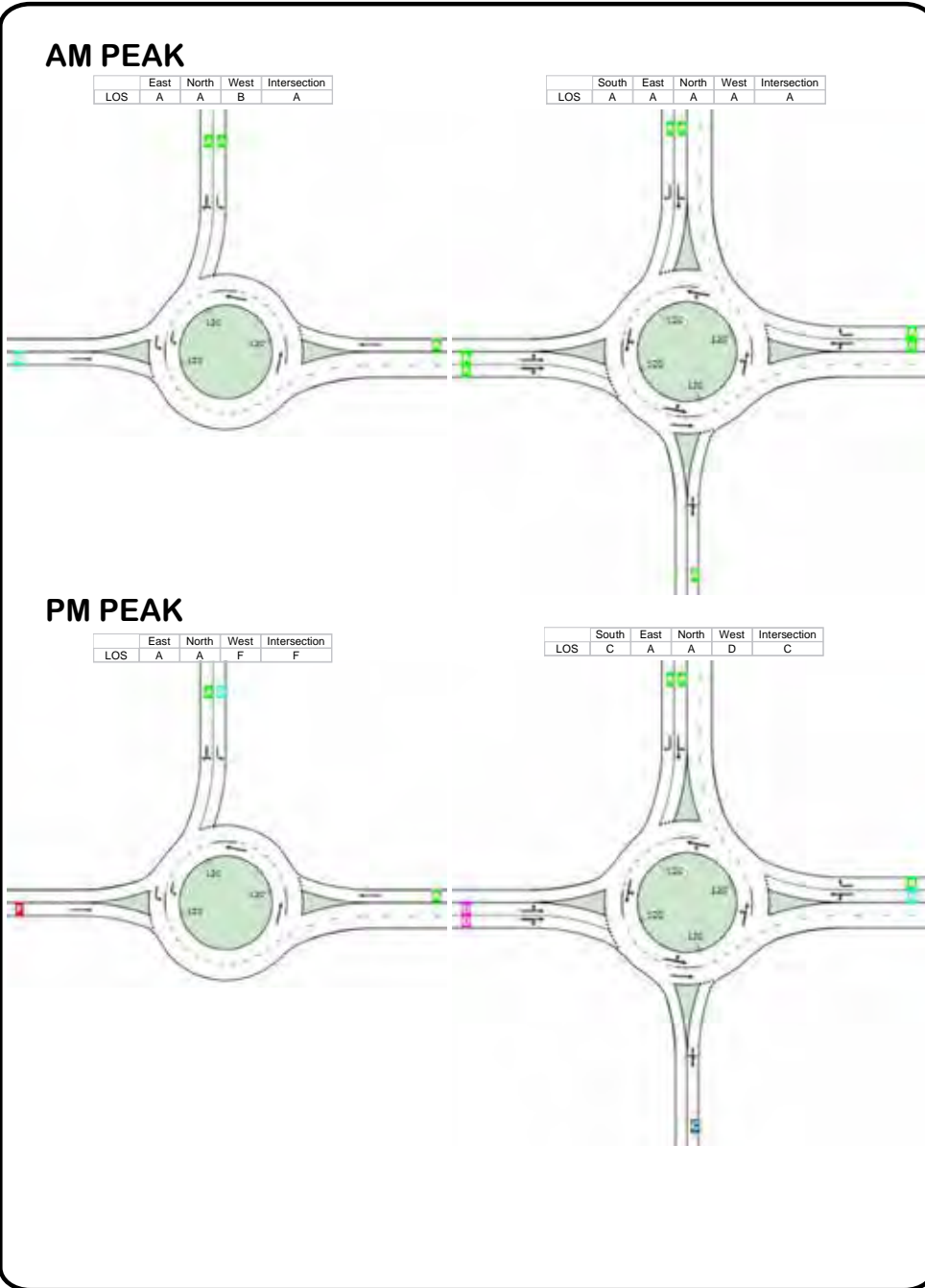
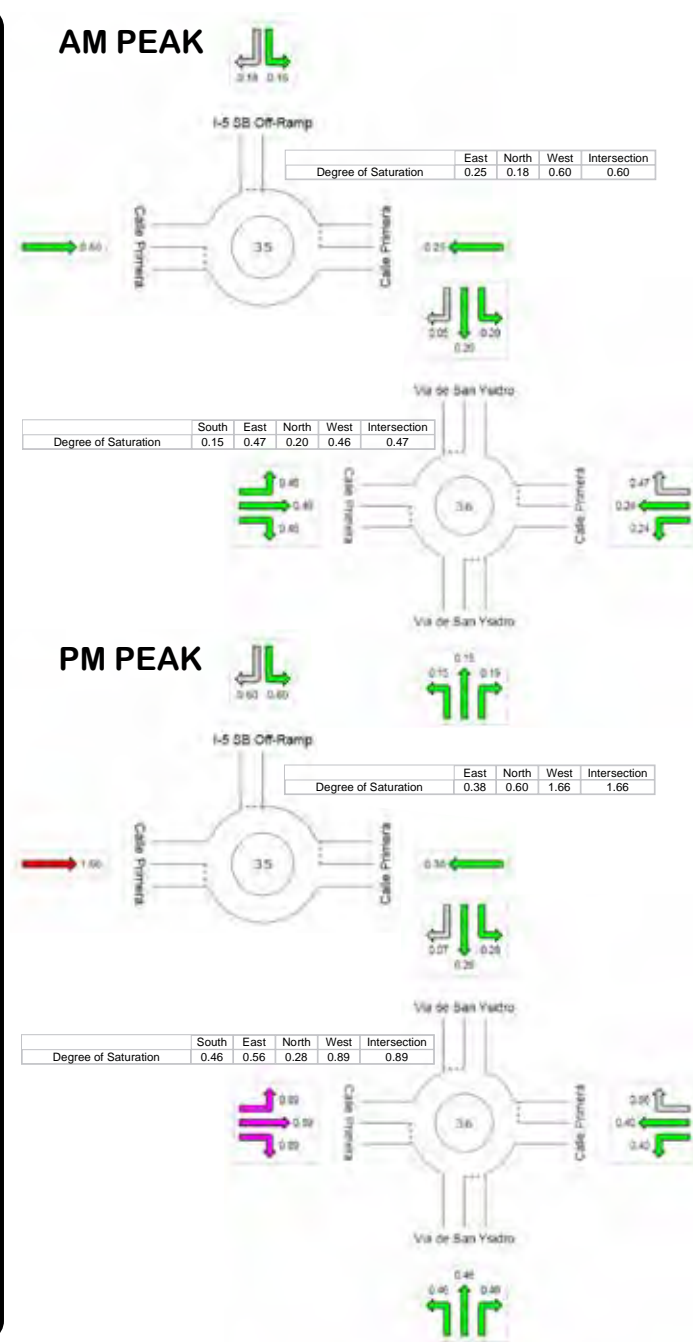


Figure F-2

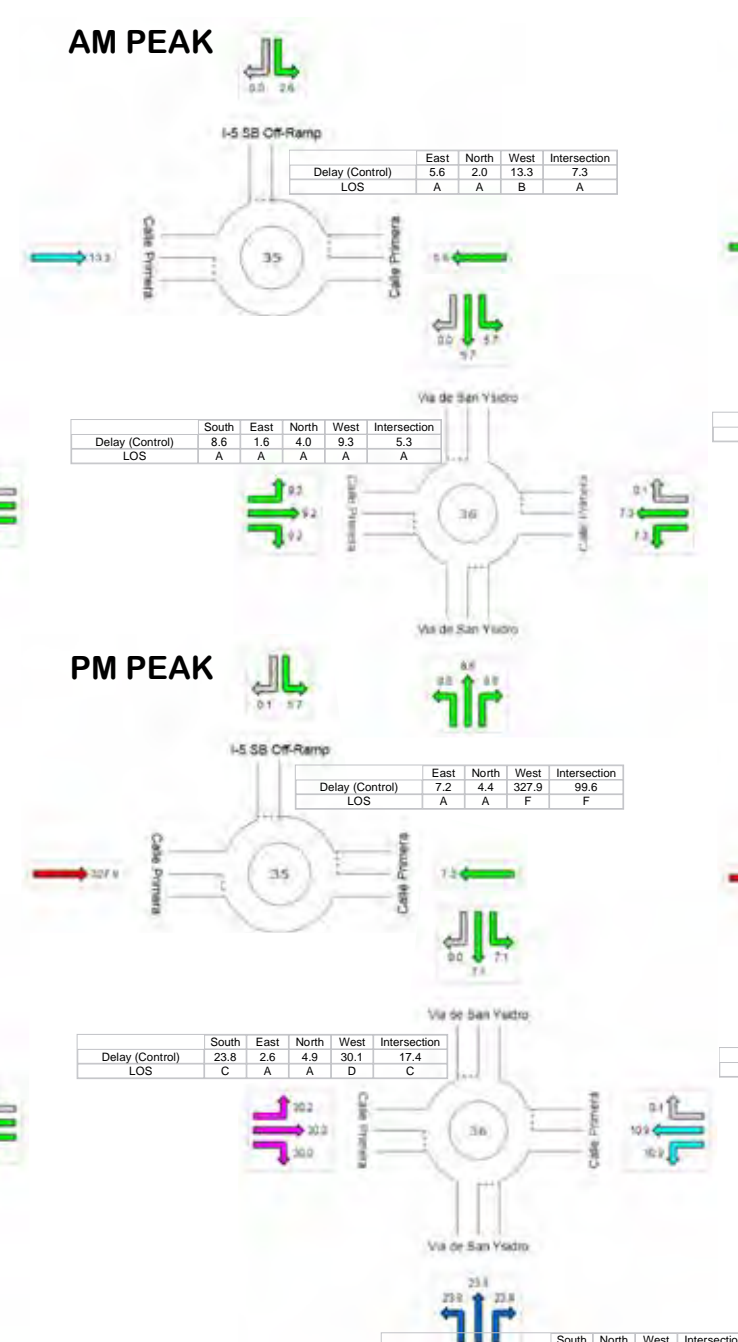
LEVEL OF SERVICE



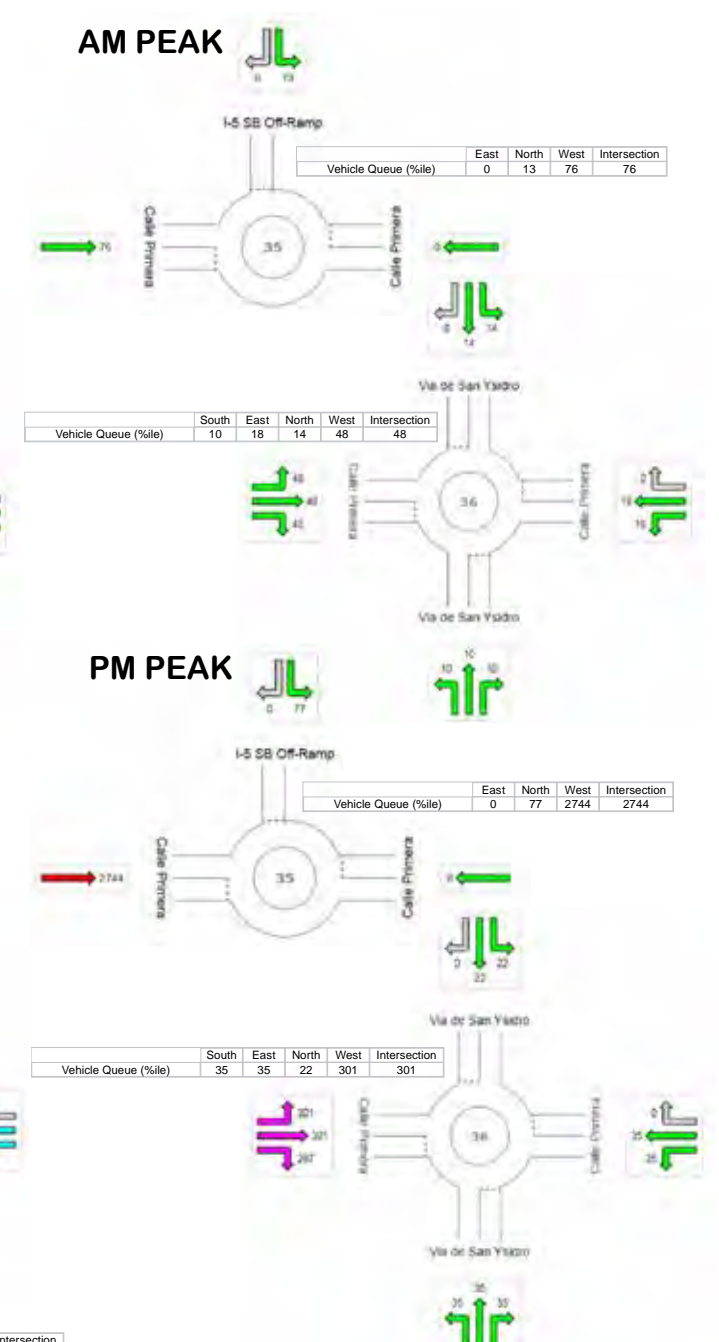
DEGREE OF SATURATION



CONTROL DELAY



95TH PERCENTILE QUEUE



LEGEND

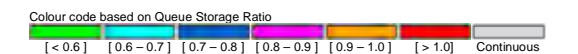
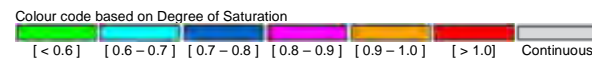


Figure F-3

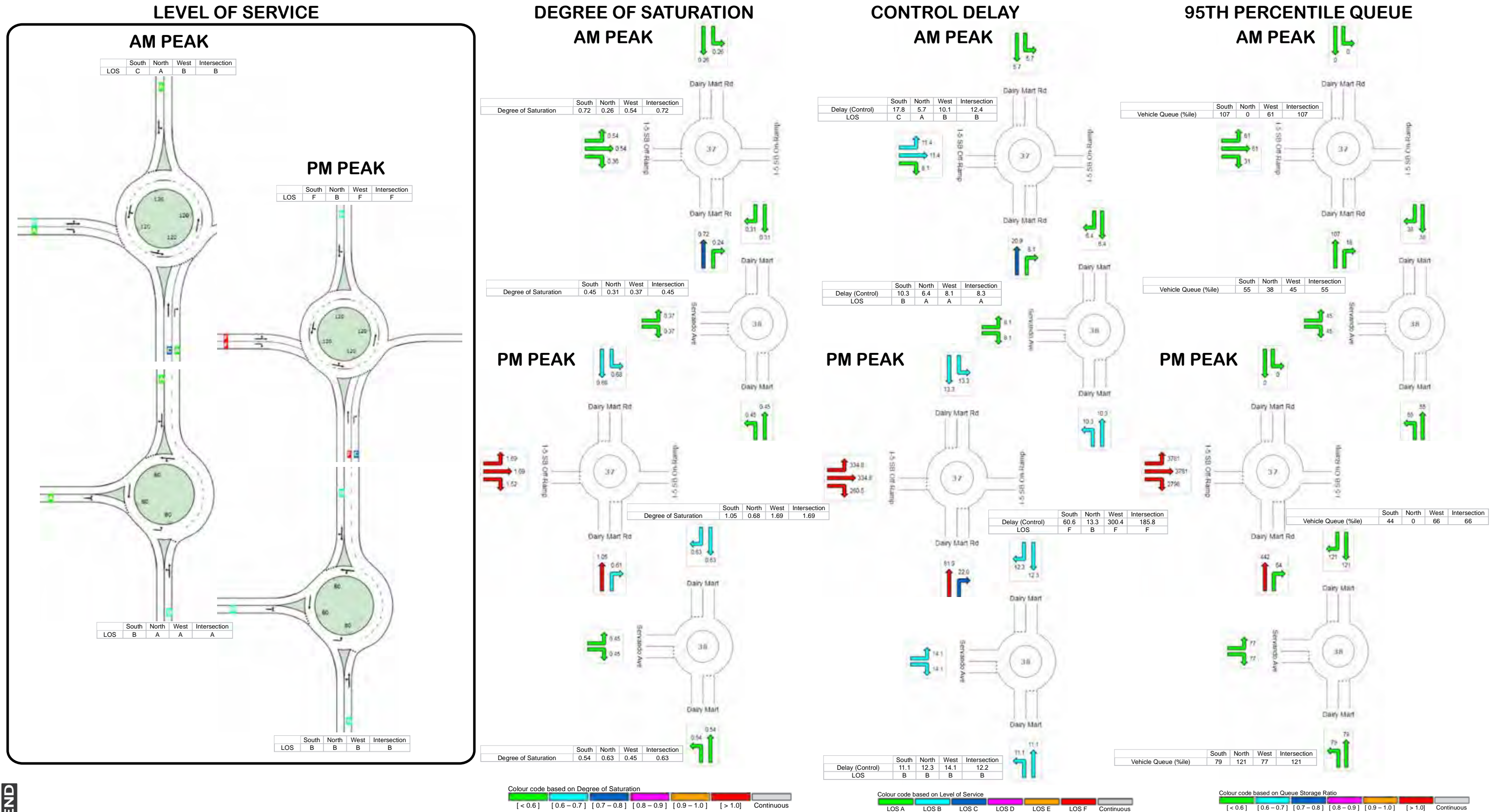


Figure F-4

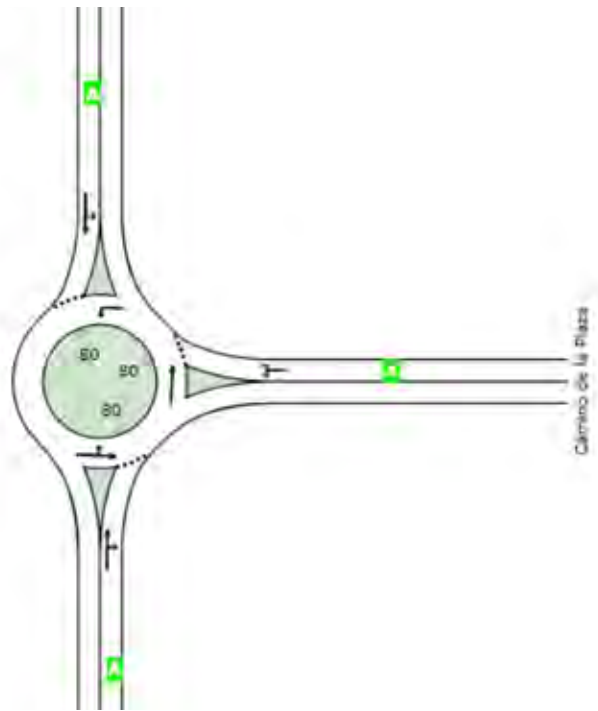
LEVEL OF SERVICE

DEGREE OF SATURATION

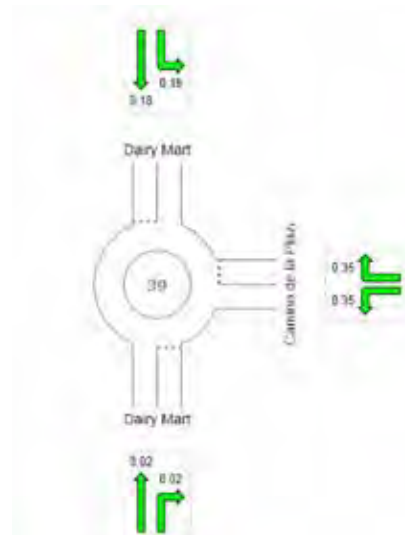
CONTROL DELAY

95TH PERCENTILE QUEUE

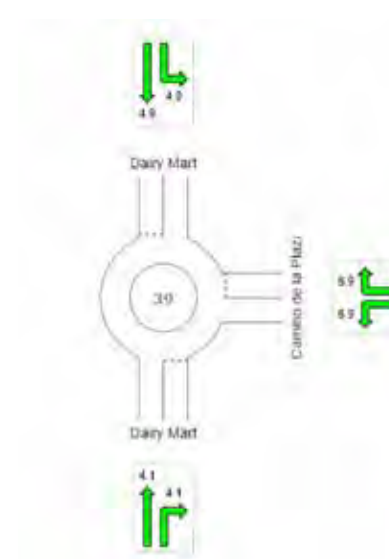
AM PEAK



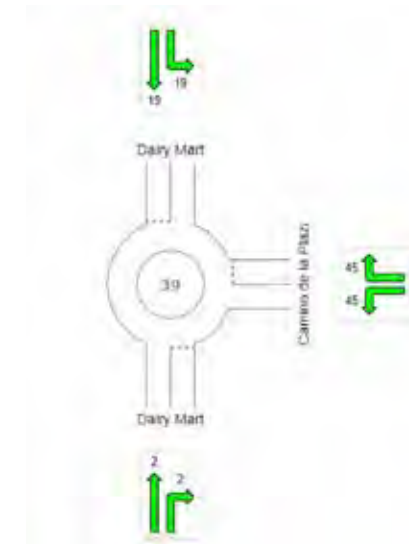
Degree of Saturation	South	East	North	Intersection
	0.02	0.35	0.18	0.35



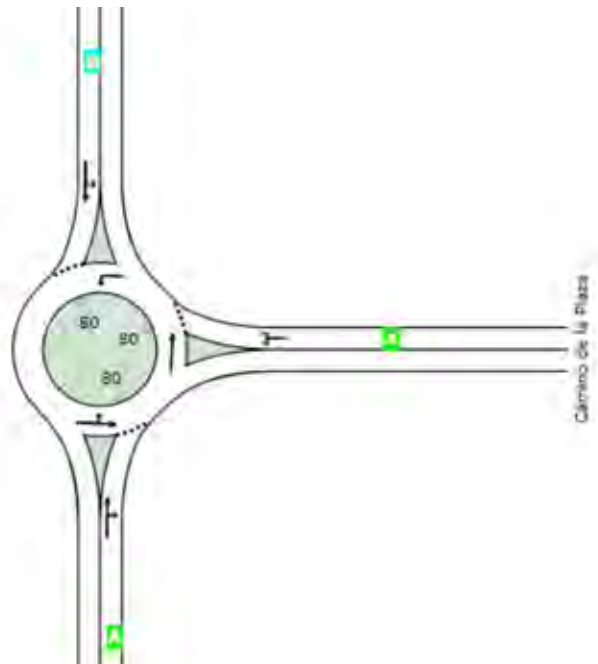
Delay (Control)	South	East	North	Intersection
	4.1	6.9	4.9	6.1
LOS	A	A	A	A



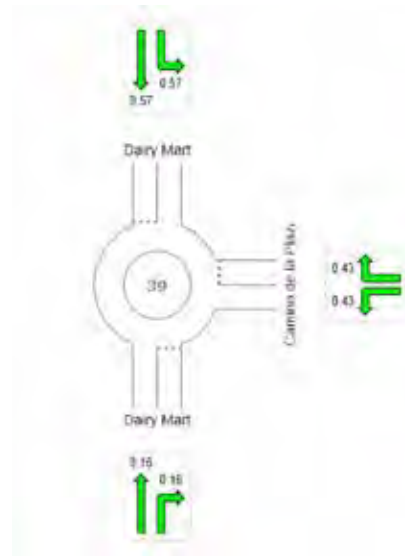
Vehicle Queue (%ile)	South	East	North	Intersection
	2	45	19	45



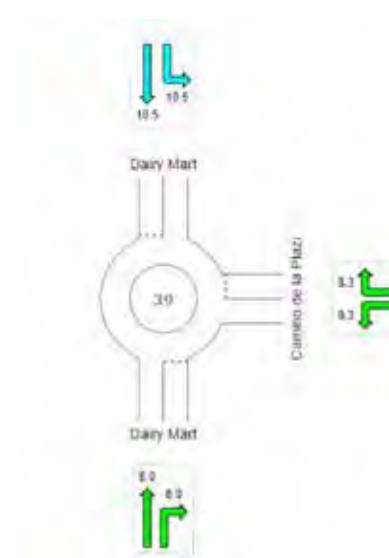
PM PEAK



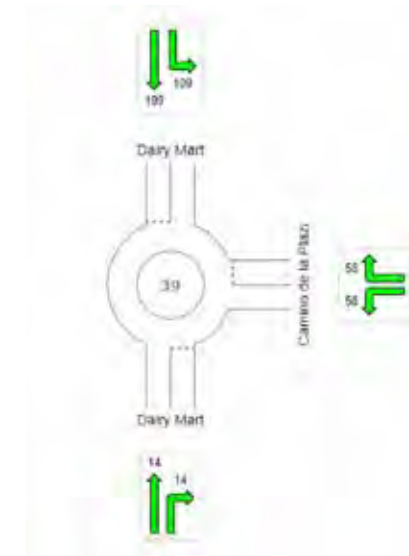
Degree of Saturation	South	East	North	Intersection
	0.16	0.43	0.57	0.57



Delay (Control)	South	East	North	Intersection
	8.0	8.3	10.5	9.4
LOS	A	A	B	A



Vehicle Queue (%ile)	South	East	North	Intersection
	14	58	109	109



LEGEND

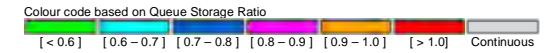
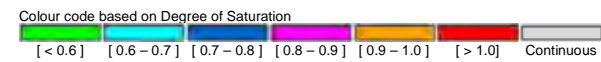


Figure F-5