APPENDIX G

# FREEWAY SEGMENT SENSITIVE RECEPTOR POLLUTION MODELING

Figure 4.3-2 **Interstate 680 – North of El Cerro Blvd Analysis**

**Weighted Lifetime Cancer Risk (chances in one million)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 45.7 | 30.9 | 18.0 | 11.9 | 8.4 | 6.2 | 4.7 | 3.6 | 2.9 | 2.4 | 2.0 |
| East of I-680 | 76.5 | 53.8 | 33.0 | 22.9 | 17.0 | 13.2 | 10.5 | 8.6 | 7.2 | 6.1 | 5.3 |

**Annual PM2.5 Concentration ($\mu g/m^3$)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 0.69 | 0.46 | 0.26 | 0.17 | 0.12 | 0.09 | 0.07 | 0.05 | 0.04 | 0.03 | 0.03 |
| East of I-680 | 1.21 | 0.84 | 0.51 | 0.35 | 0.27 | 0.21 | 0.17 | 0.14 | 0.12 | 0.10 | 0.09 |

Figure 4.3-3 **Interstate 680 – North of Diablo Road Analysis**

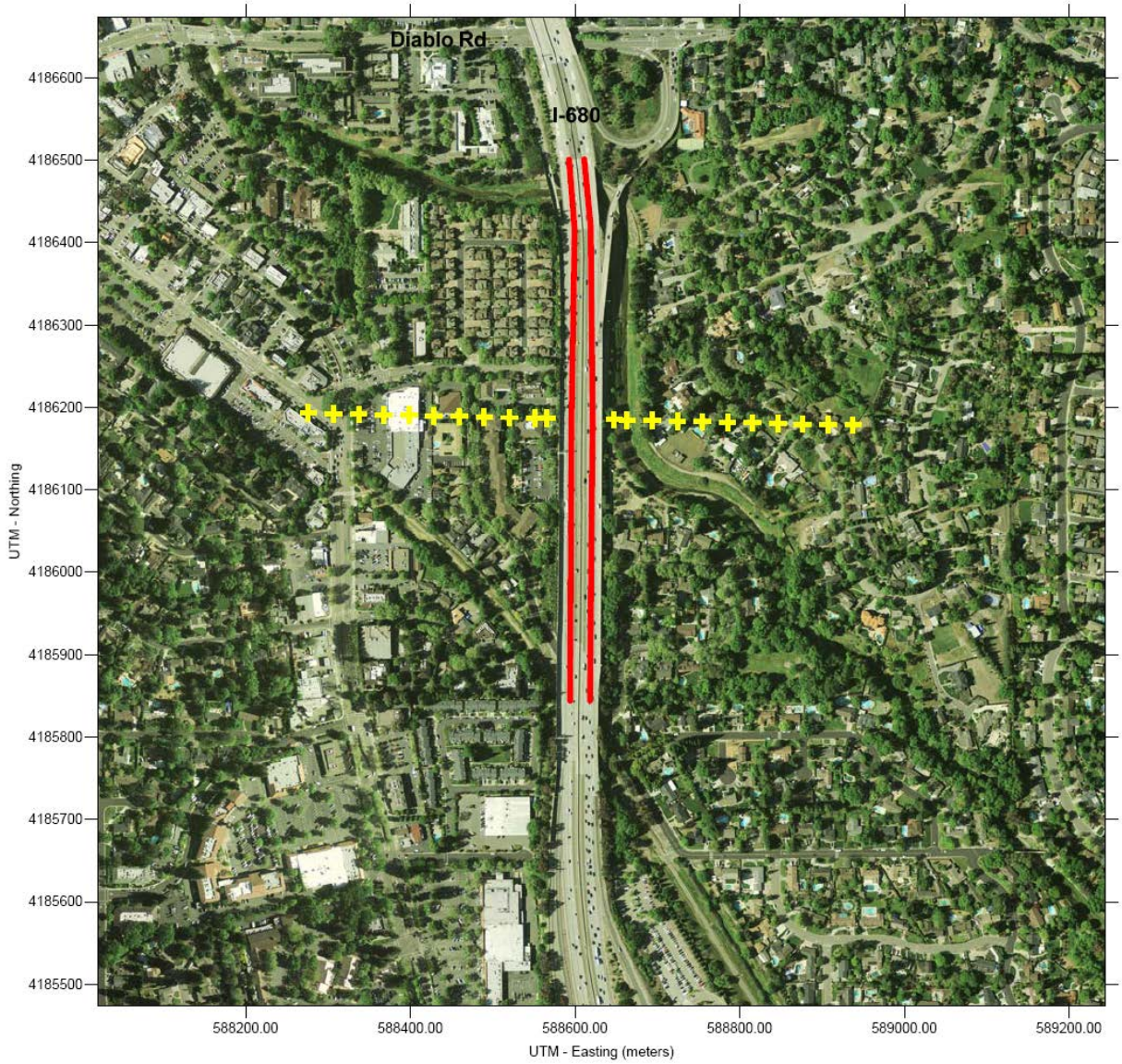
**Weighted Lifetime Cancer Risk (chances in one million)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 63.1 | 42.0 | 24.3 | 16.2 | 11.3 | 8.2 | 6.2 | 4.7 | 3.7 | 3.0 | 2.5 |
| East of I-680 | 62.8 | 44.2 | 26.9 | 18.6 | 13.8 | 10.8 | 8.7 | 7.2 | 6.0 | 5.2 | 4.5 |

**Annual PM2.5 Concentration ($\mu g/m^3$)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 0.89 | 0.58 | 0.33 | 0.22 | 0.15 | 0.11 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 |
| East of I-680 | 1.06 | 0.74 | 0.45 | 0.31 | 0.24 | 0.18 | 0.15 | 0.12 | 0.10 | 0.09 | 0.08 |

Figure 4.3-4 **Interstate 680 – South of Diablo Road Analysis**



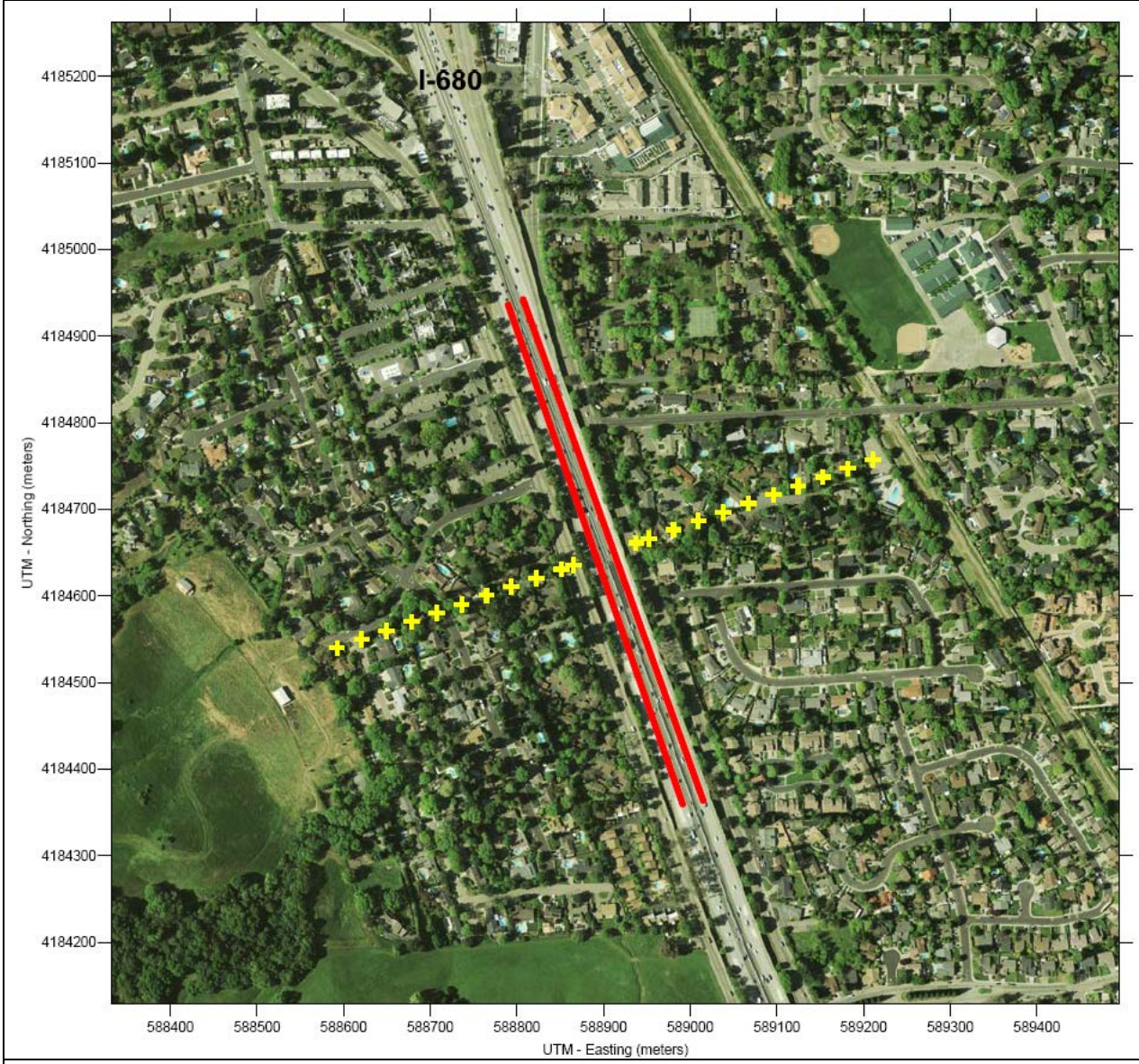

**Weighted Lifetime Cancer Risk (chances in one million)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 52.8 | 39.4 | 26.0 | 19.0 | 14.6 | 11.6 | 9.4 | 7.7 | 6.4 | 5.3 | 4.5 |
| East of I-680 | 64.1 | 46.6 | 30.2 | 21.8 | 16.8 | 13.3 | 10.8 | 8.9 | 7.5 | 6.3 | 5.4 |

**Annual PM2.5 Concentration ($\mu g/m^3$)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 0.89 | 0.58 | 0.33 | 0.22 | 0.15 | 0.11 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 |
| East of I-680 | 1.06 | 0.74 | 0.45 | 0.31 | 0.24 | 0.18 | 0.15 | 0.12 | 0.10 | 0.09 | 0.08 |

Figure 4.3-5 **Interstate 680 – South of Sycamore Valley Road Analysis**




**Weighted Lifetime Cancer Risk (chances in one million)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 53.9 | 37.3 | 22.0 | 14.5 | 10.2 | 7.5 | 5.7 | 4.5 | 3.6 | 2.9 | 2.4 |
| East of I-680 | 68.1 | 48.4 | 29.8 | 20.8 | 15.5 | 12.0 | 9.7 | 7.9 | 6.6 | 5.6 | 4.8 |

**Annual PM2.5 Concentration ($\mu g/m^3$)**

| Roadway (segment) | 50 ft | 100 ft | 200 ft | 300 ft | 400 ft | 500 ft | 600 ft | 700 ft | 800 ft | 900 ft | 1000 ft |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West of I-680 | 0.74 | 0.50 | 0.29 | 0.19 | 0.14 | 0.10 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 |
| East of I-680 | 1.17 | 0.82 | 0.50 | 0.35 | 0.26 | 0.21 | 0.17 | 0.14 | 0.12 | 0.10 | 0.08 |