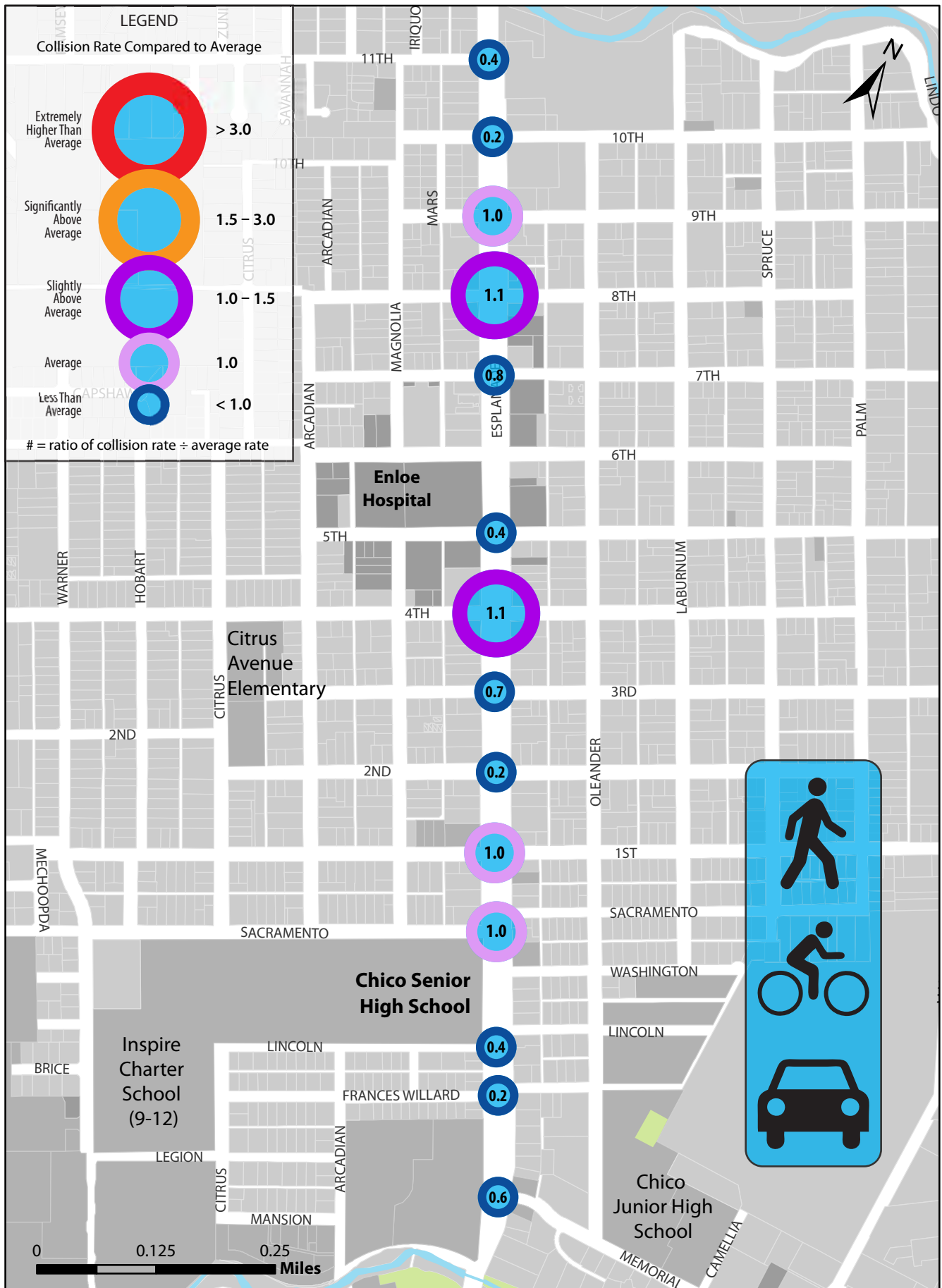
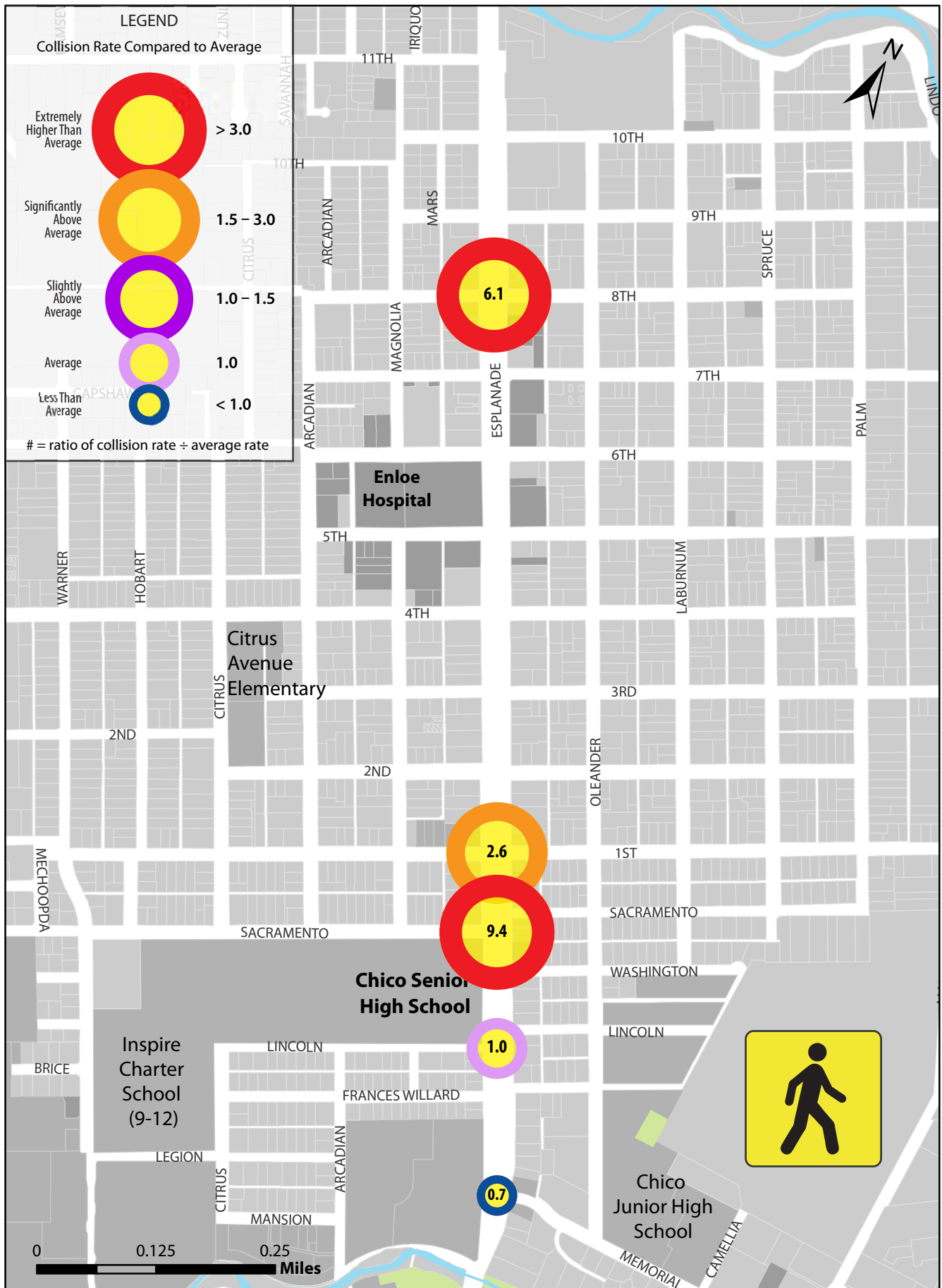


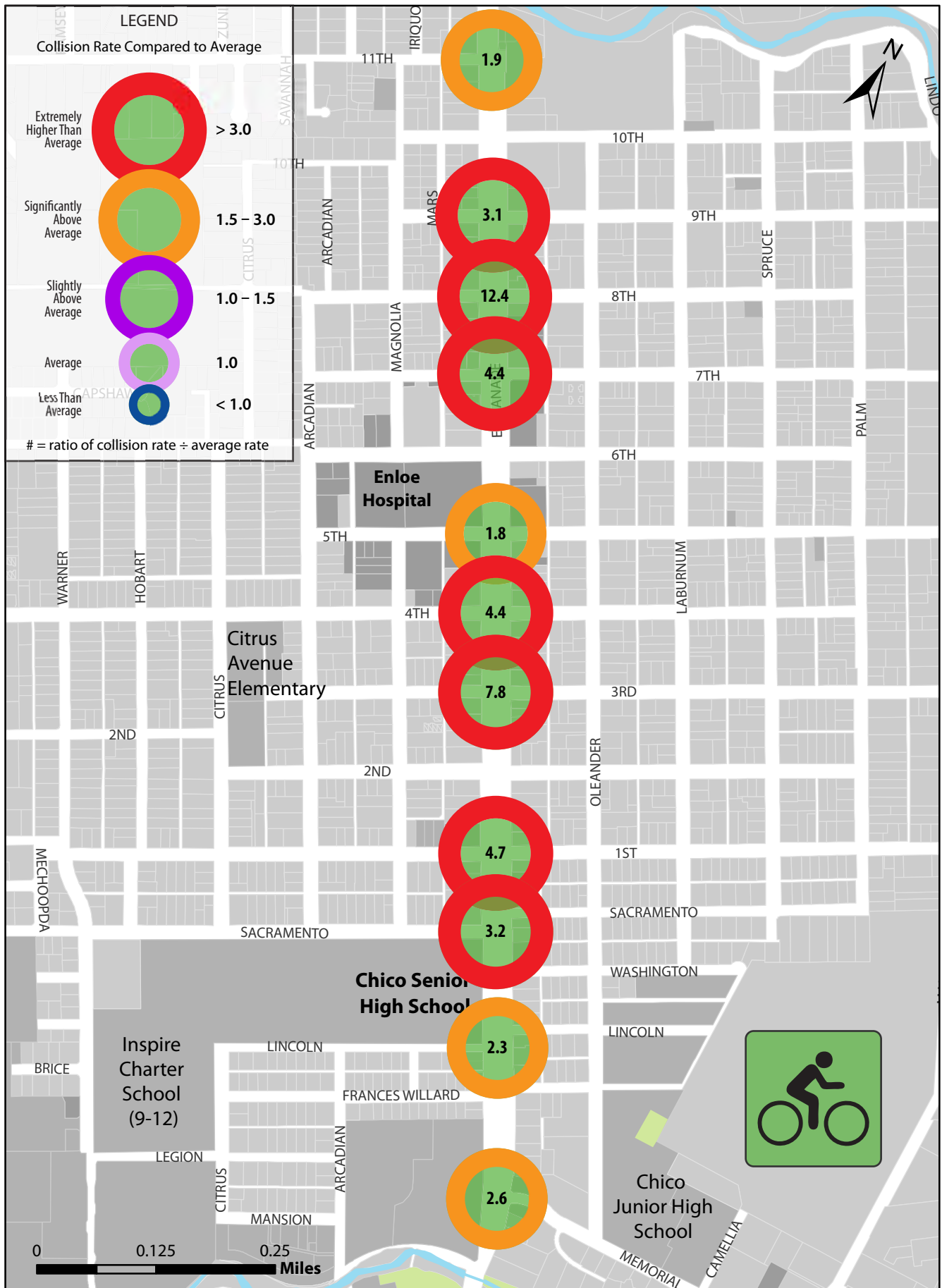
Esplanade Corridor Safety and Accessibility Improvement Project

Traffic Technical Memorandum Technical Appendix

Collision Analysis Data







Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 1: Esplanade & Memorial Way
Date of Count: Thursday, May 14, 2015

Number of Collisions: 6
Number of Injuries: 5
Number of Fatalities: 0
ADT: 19000
Start Date: January 1, 2010
End Date: December 31, 2014
Number of Years: 5

Intersection Type: Multi-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{6}{19,000} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.17 c/mve	0.0%	83.3%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2012 Collision Data on California State Highways, Caltrans

Intersection # 2: Esplanade & Frances Willard Avenue
Date of Count: Thursday, May 14, 2015

Number of Collisions: 1
Number of Injuries: 1
Number of Fatalities: 0
ADT: 21000
Start Date: January 1, 2010
End Date: December 31, 2014
Number of Years: 5

Intersection Type: Multi-Legged
Control Type: Stop & Yield Controls
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{1}{21,000} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.03 c/mve	0.0%	100.0%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 3: Esplanade & Lincoln Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 4

Number of Injuries: 2

Number of Fatalities: 0

ADT: 20300

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{4}{20,300} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.11 c/mve	0.0%	50.0%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 4: Esplanade & Sacramento Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 6

Number of Injuries: 5

Number of Fatalities: 0

ADT: 21300

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{6}{21,300} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.15 c/mve	0.0%	83.3%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 5: Esplanade & 1st Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 14

Number of Injuries: 10

Number of Fatalities: 0

ADT: 28800

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{14}{28,800} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.27 c/mve	0.0%	71.4%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 6: Esplanade & 2nd Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 1

Number of Injuries: 1

Number of Fatalities: 0

ADT: 19400

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{1}{19,400} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.03 c/mve	0.0%	100.0%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 7: Esplanade & 3rd Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 7

Number of Injuries: 6

Number of Fatalities: 0

ADT: 20200

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{7}{20,200} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.19 c/mve	0.0%	85.7%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 8: Esplanade & 4th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 6

Number of Injuries: 5

Number of Fatalities: 0

ADT: 20600

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{6}{20,600} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.16 c/mve	0.0%	83.3%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 9: Esplanade & 5th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 5

Number of Injuries: 4

Number of Fatalities: 0

ADT: 22300

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{5}{22,300} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.12 c/mve	0.0%	80.0%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 10: Esplanade & 6th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 0

Number of Injuries: 0

Number of Fatalities: 0

ADT: 20300

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{0}{20,300} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.00 c/mve	0.0%	0.0%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 11: Esplanade & 7th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 8

Number of Injuries: 8

Number of Fatalities: 0

ADT: 21300

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{8}{21,300} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.21 c/mve	0.0%	100.0%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 12: Esplanade & 8th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 7

Number of Injuries: 6

Number of Fatalities: 0

ADT: 22100

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{7}{22,100} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.17 c/mve	0.0%	85.7%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 13: Esplanade & 9th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 11

Number of Injuries: 8

Number of Fatalities: 0

ADT: 21500

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{11}{21,500} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.28 c/mve	0.0%	72.7%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection # 14: Esplanade & 10th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 1

Number of Injuries: 0

Number of Fatalities: 0

ADT: 19900

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Stop & Yield Controls

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{1}{19,900} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.03 c/mve	0.0%	0.0%
Statewide Average*	0.15 c/mve	1.0%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Esplanade Area Complete Street Plan

Intersection # 15: Esplanade & 11th Avenue

Date of Count: Thursday, May 14, 2015

Number of Collisions: 4

Number of Injuries: 3

Number of Fatalities: 0

ADT: 22200

Start Date: January 1, 2010

End Date: December 31, 2014

Number of Years: 5

Intersection Type: Multi-Legged

Control Type: Signals

Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{4}{22,200} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.10 c/mve	0.0%	75.0%
Statewide Average*	0.27 c/mve	0.4%	41.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2012 Collision Data on California State Highways, Caltrans

Chico Esplanade Collision Rates

Intersection with Esplanade	# of Bike and Ped Collisions (10 years)	Involved with Bike	Involved with Ped	Total Collisions (5 years)	Bike ADT	Ped ADT	Vehicle ADT	Bike Collision Rate	Ped Collision Rate	Vehicle Collision Rate	Statewide Average Collision Rate	Bike Rate Compared to Statewide Average	Ped Rate Compared to Statewide Average	Vehicle Rate Compared to Statewide Average
<i>Memorial</i>	4	3	1	6	1,150	1,388	19,040	0.71	0.20	0.17	0.27	2.6	0.7	0.6
<i>Frances Willard</i>	0	0	0	1	1,100	675	20,970	0.00	0.00	0.03	0.15	0.0	0.0	0.2
<i>Lincoln</i>	3	2	1	4	875	1,038	20,250	0.63	0.26	0.11	0.27	2.3	1.0	0.4
<i>West Sacramento</i>	4	2	2	6	1,150	388	21,320	0.48	1.41	0.15	0.15	3.2	9.4	1.0
<i>1st</i>	6	5	1	14	1,075	388	28,820	1.27	0.71	0.27	0.27	4.7	2.6	1.0
<i>2nd</i>	0	0	0	1	713	250	19,440	0.00	0.00	0.03	0.15	0.0	0.0	0.2
<i>3rd</i>	5	5	0	7	652	263	20,150	2.10	0.00	0.19	0.27	7.8	0.0	0.7
<i>4th</i>	1	1	0	6	413	225	20,570	0.66	0.00	0.16	0.15	4.4	0.0	1.1
<i>5th</i>	1	1	0	5	575	463	22,330	0.48	0.00	0.12	0.27	1.8	0.0	0.4
<i>6th</i>	0	0	0	0	488	313	20,320	0.00	0.00	0.00	0.15	0.0	0.0	0.0
<i>7th</i>	2	2	0	8	463	413	21,310	1.18	0.00	0.21	0.27	4.4	0.0	0.8
<i>8th</i>	5	4	1	7	588	300	22,120	1.86	0.91	0.17	0.15	12.4	6.1	1.1
<i>9th</i>	3	3	0	11	963	325	21,460	0.85	0.00	0.28	0.27	3.1	0.0	1.0
<i>10th</i>	0	0	0	1	888	350	19,890	0.00	0.00	0.03	0.15	0.0	0.0	0.2
<i>11th</i>	2	2	0	4	1,088	375	22,160	0.50	0.00	0.10	0.27	1.9	0.0	0.4
Average		30.0	6.0	81.0	812.1	476.9	21343.3	0.71	0.23	0.13	0.21	3.2	1.3	0.6

Note: All collision rates = # collisions per million vehicles (or bike or ped) entering intersection

Collision rate near the average (less than 1.5 x average)

Collision rate above the average by 1.5 to 2.5 x average

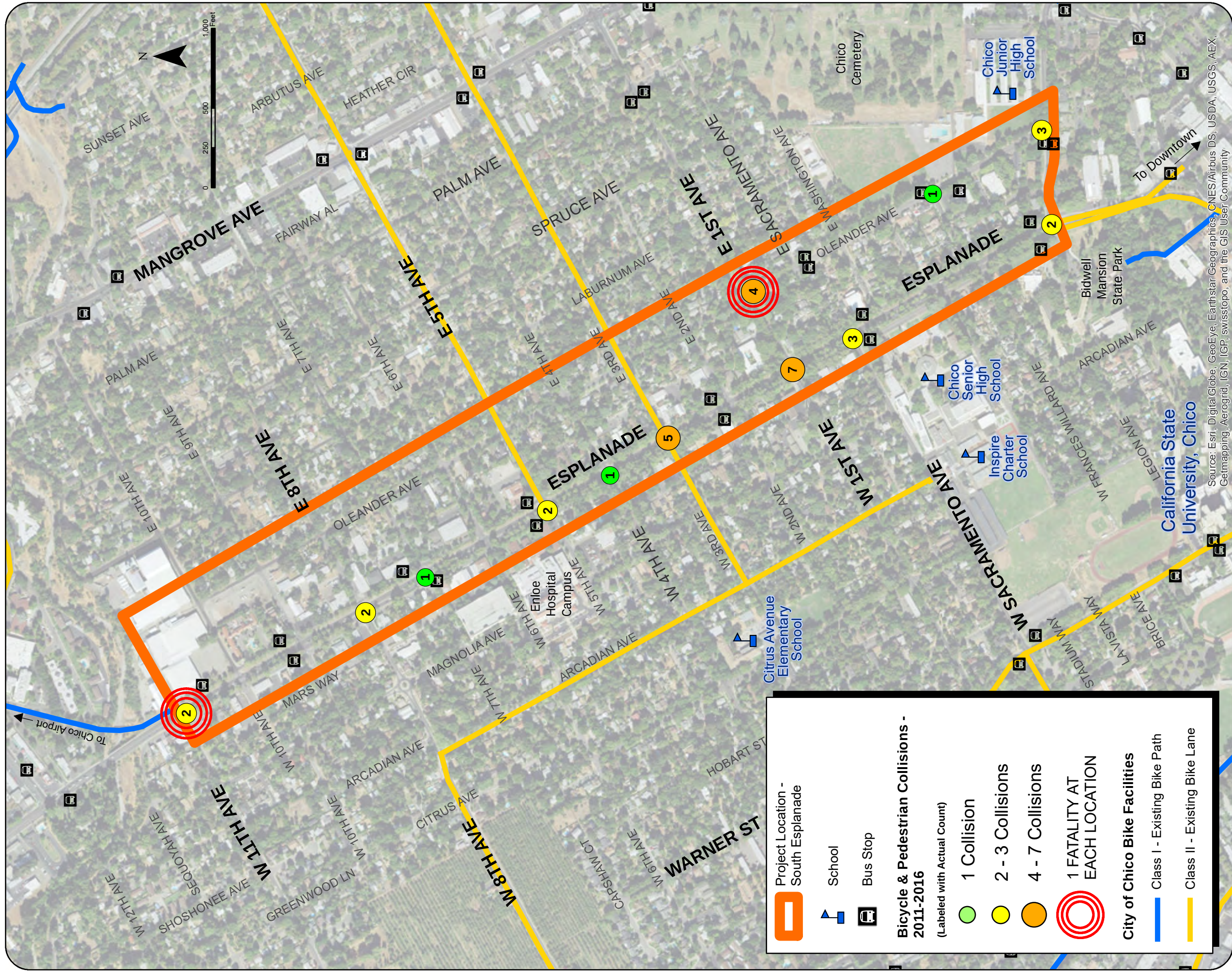
Collision rate above the average by 2.5 to 3.0 x average

Collision rate above the average by 3.0 x average and above

ACTIVE TRANSPORTATION PROGRAM

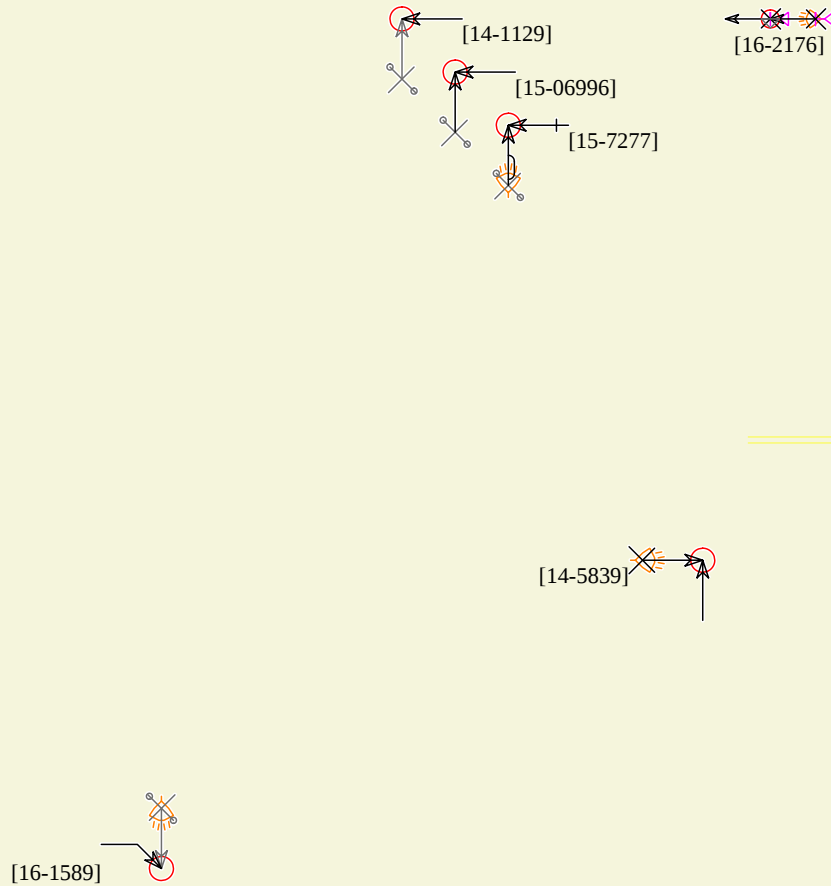
2016 GRANT APPLICATION

CYCLE III



6 Crashes

Ped & Bike

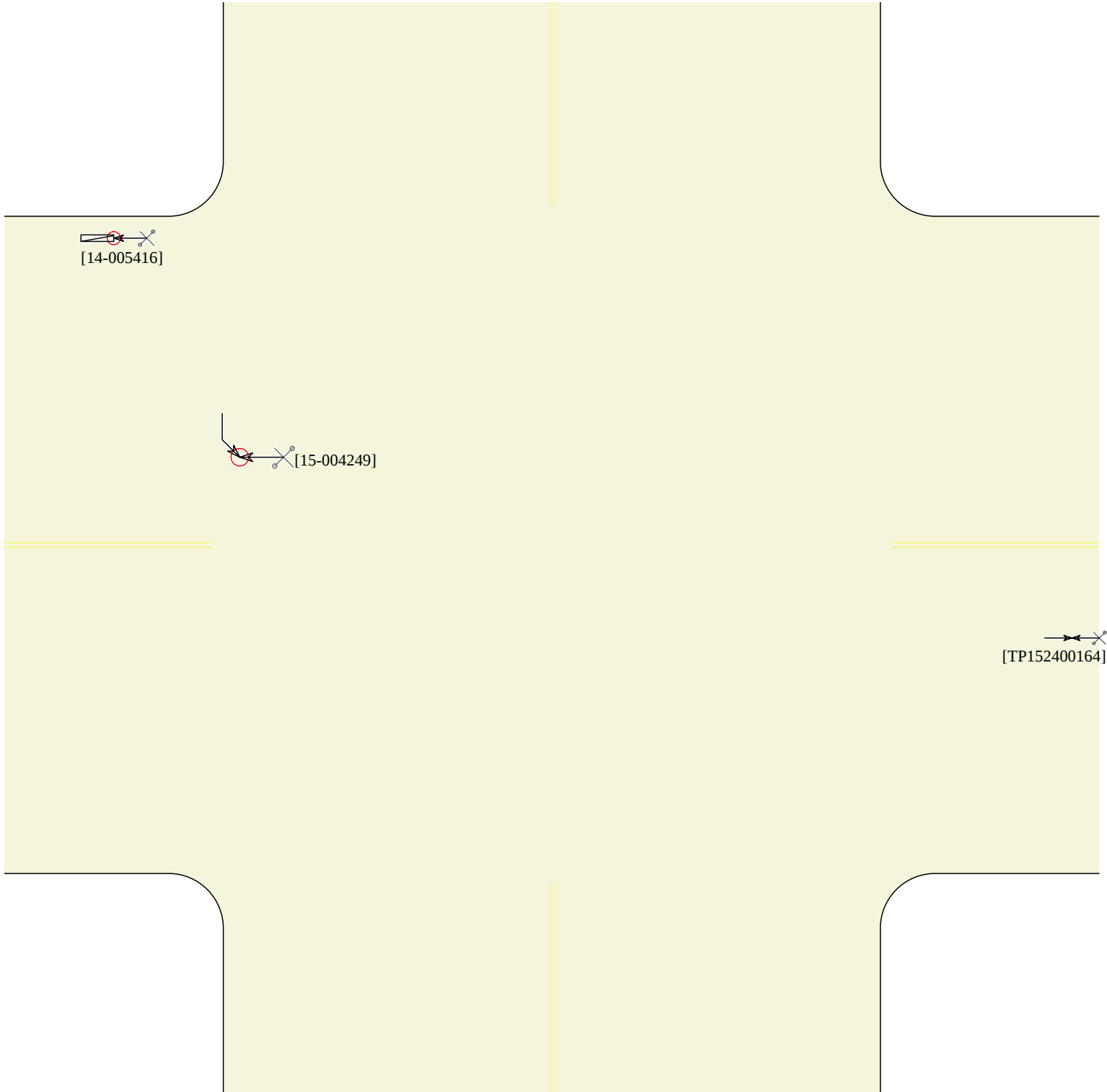


(0) crashes could not be placed in this schematic

← Straight	▬ Parked	× Pedestrian	Fixed objects:	
← Stopped	↖ Erratic	⊗ Bicycle	□ General	□ Pole
← Unknown	↗ Out of control	○ Injury	▣ Signal	▣ Curb
↔ Backing	↘ Right turn	◎ Fatality	▣ Tree	↘ Animal
↔ Overtaking	↙ Left turn	🌙 Nighttime	◀ 3rd vehicle	
↔ Sideswipe	↺ U-turn	🚦 DUI	✱ Extra data	

3 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

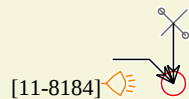
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

1 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

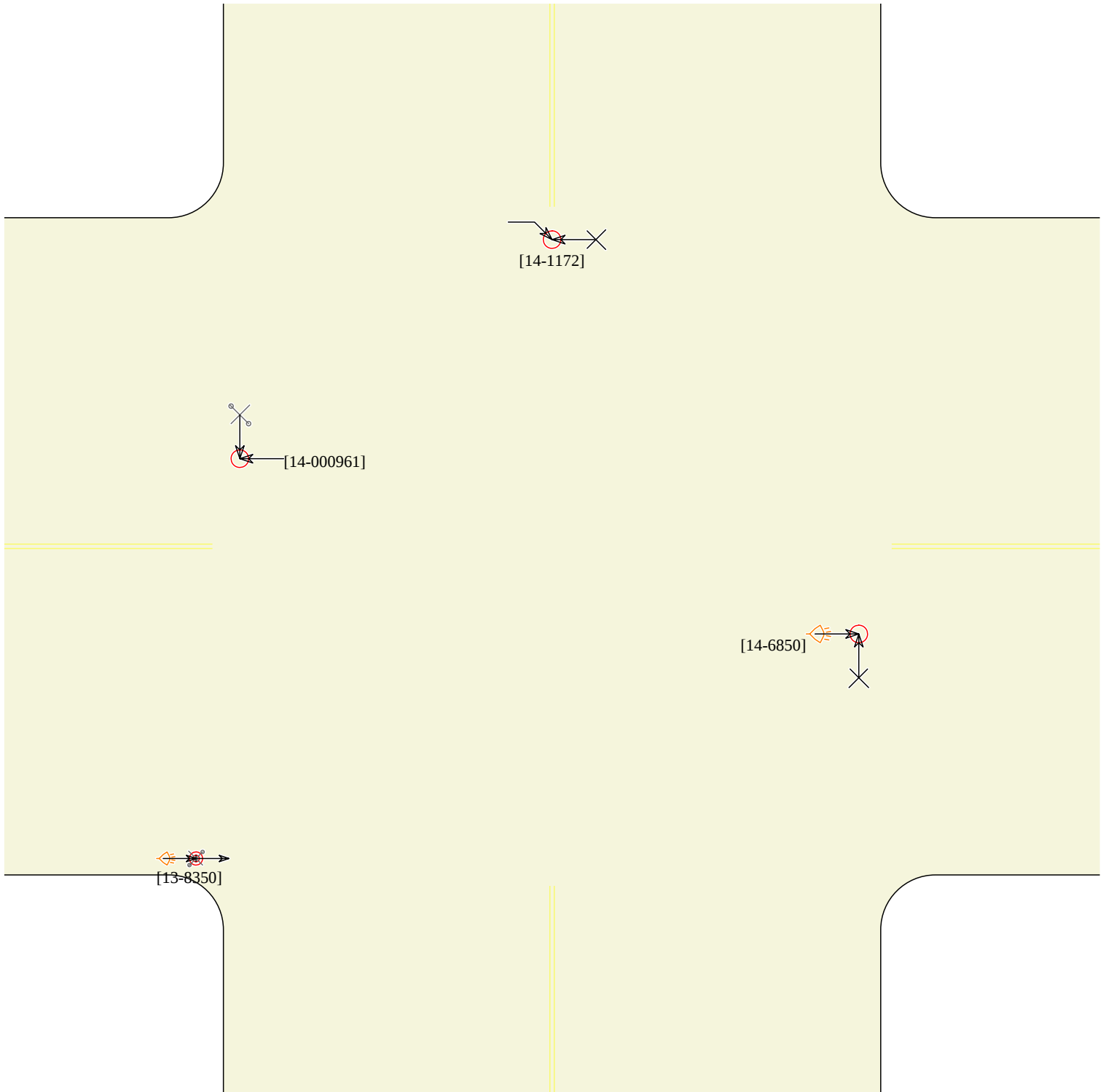
- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- General
- Signal
- Tree
- Pole
- Curb
- Animal
- 3rd vehicle
- Extra data

4 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

← Straight
 ← Stopped
 ← Unknown
 ↔ Backing
 ↔ Overtaking
 ↔ Sideswipe

▭ Parked
 ⚡ Erratic
 ⚡ Out of control
 ↘ Right turn
 ↙ Left turn
 ↻ U-turn

× Pedestrian
 ⚡ Bicycle
 ○ Injury
 ⊙ Fatality
 ⚡ Nighttime
 ⚡ DUI

Fixed objects:

□ General
 ▣ Signal
 ▣ Tree
 □ Pole
 ▣ Curb
 ⚡ Animal

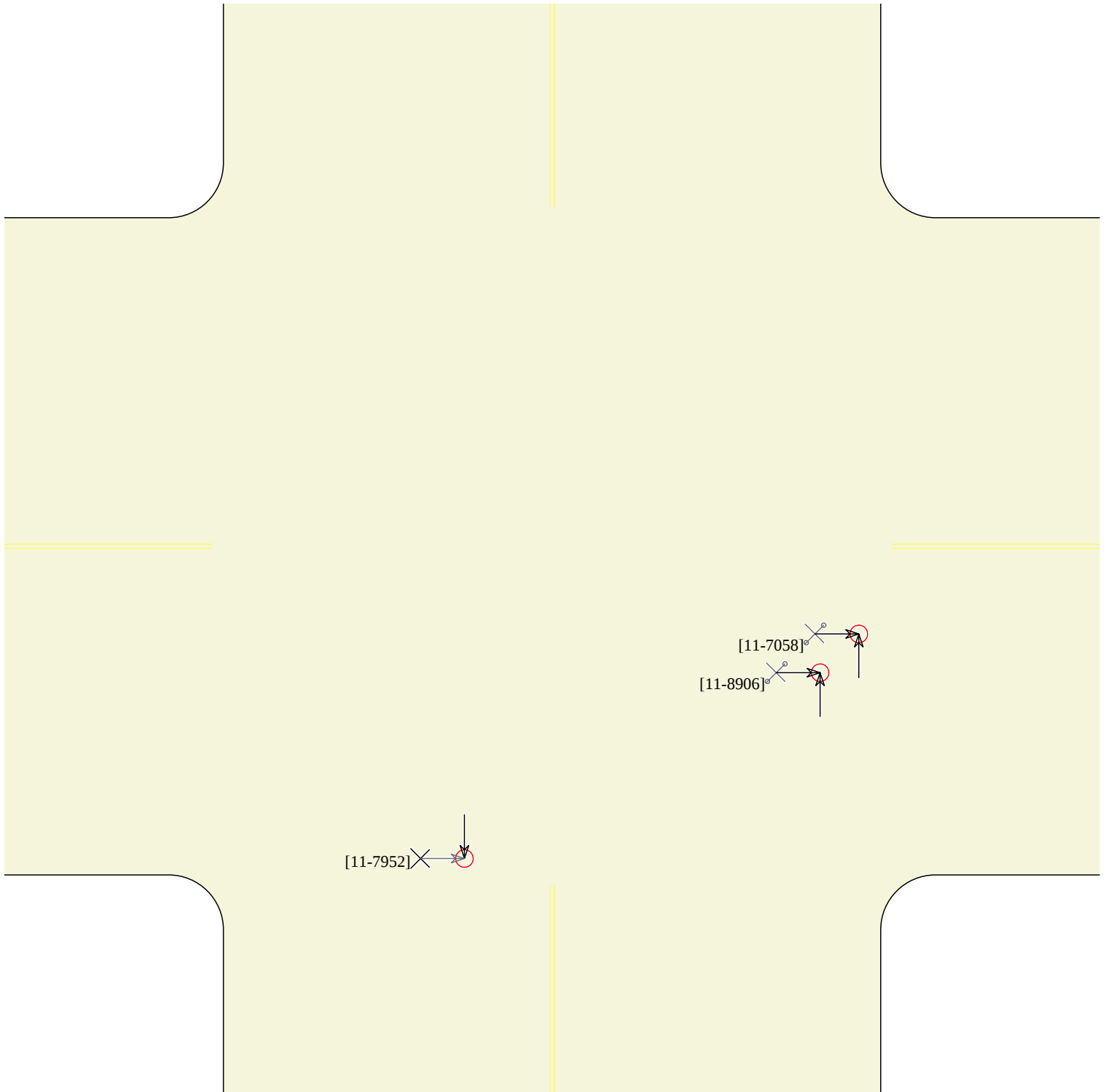
◁ 3rd vehicle
 * Extra data

ESPLANADE & W SACRAMENTO AVE

6/6/2011 - 6/6/2016

3 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

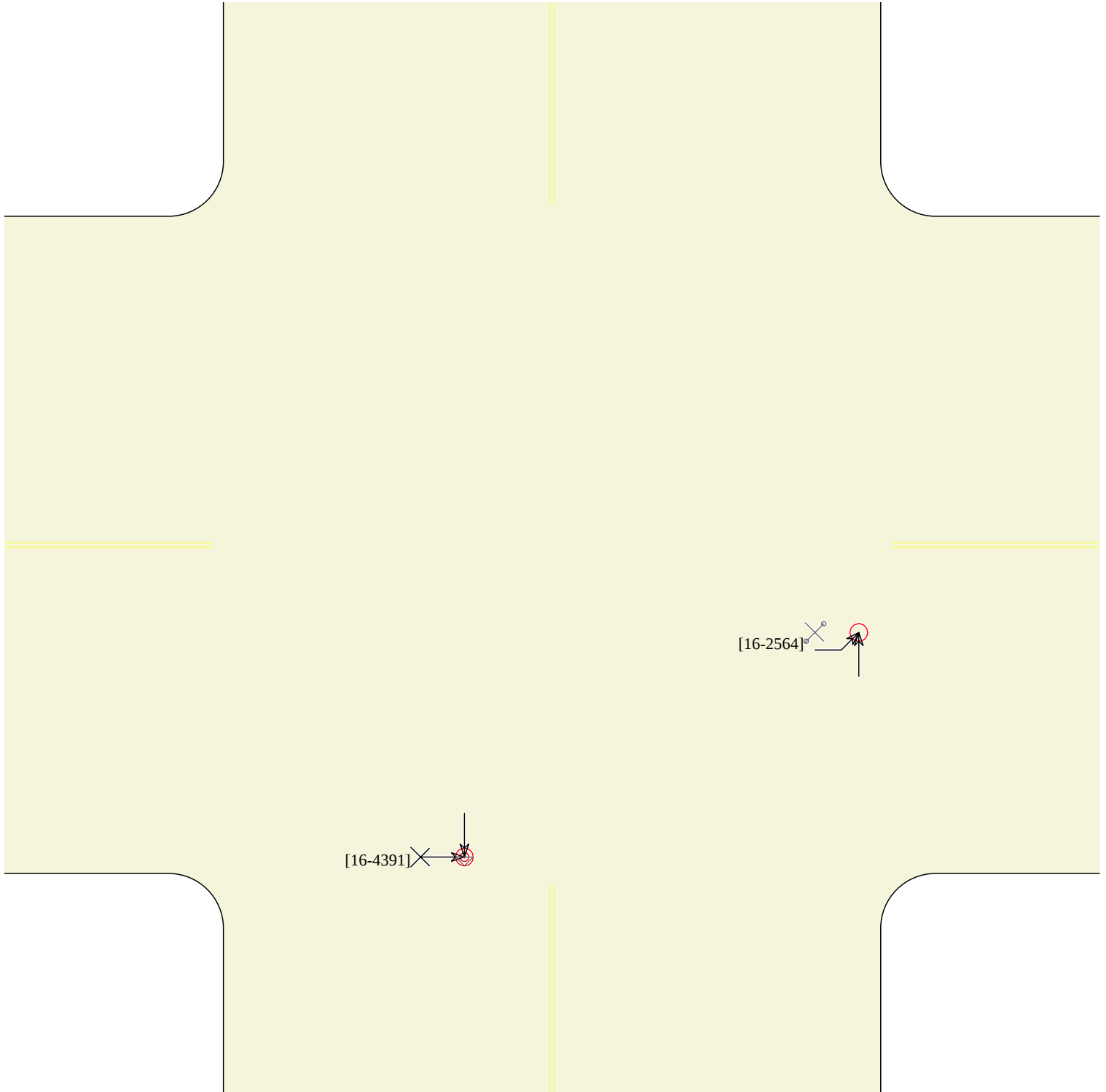
Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◀ 3rd vehicle
- * Extra data

Pd' Programming, Inc. 6/6/2016

2 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

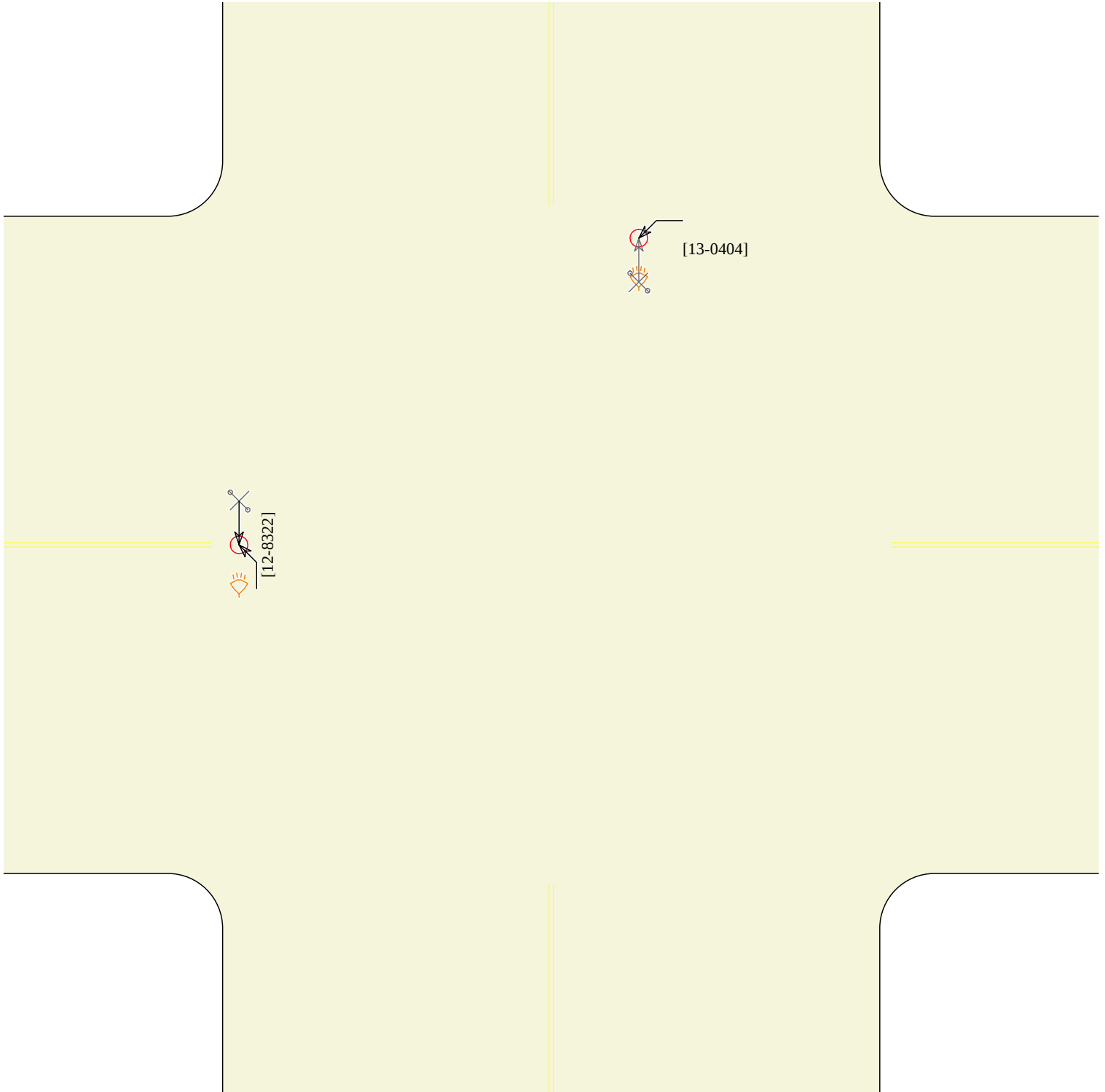
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

2 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

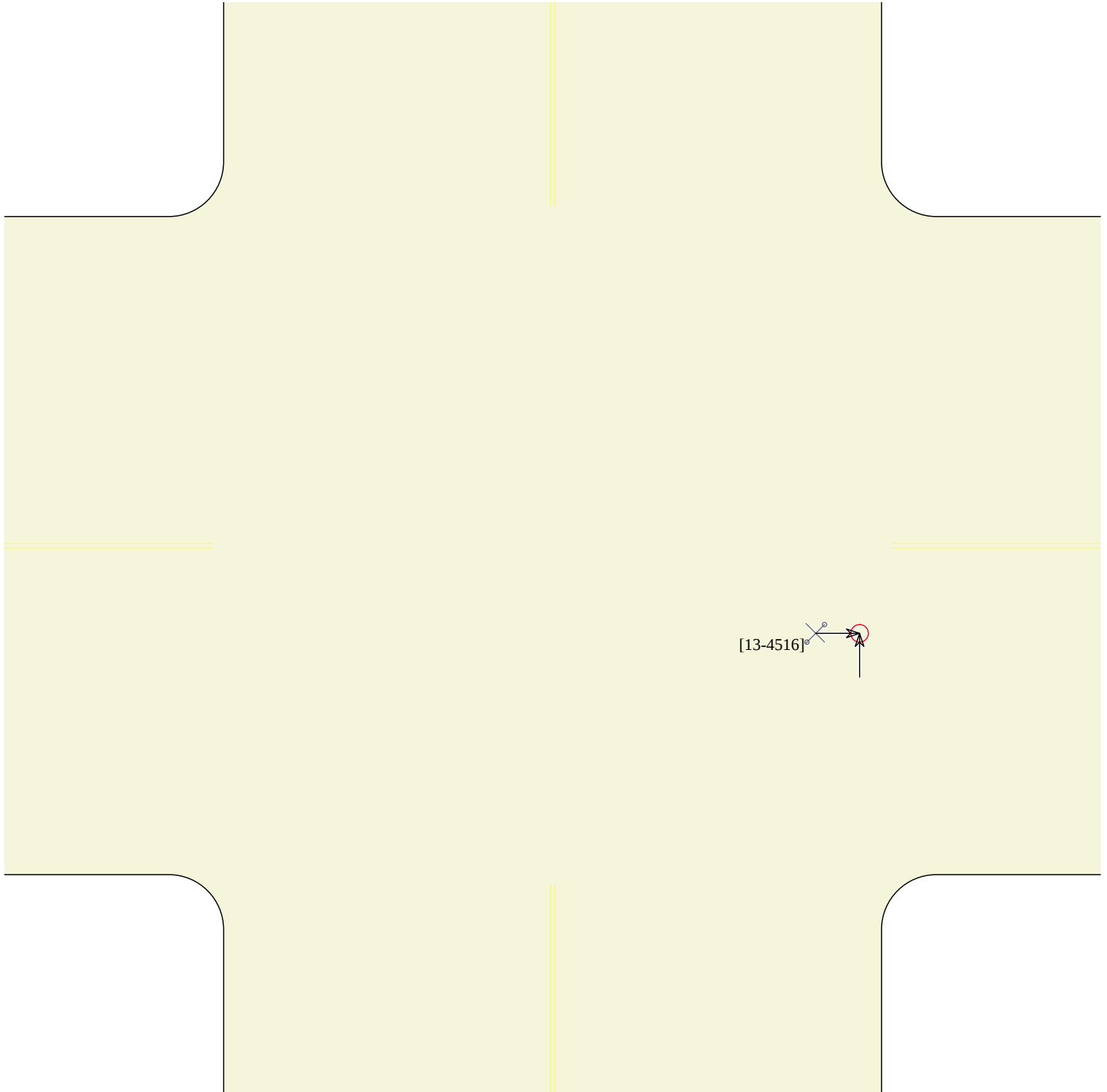
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

1 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

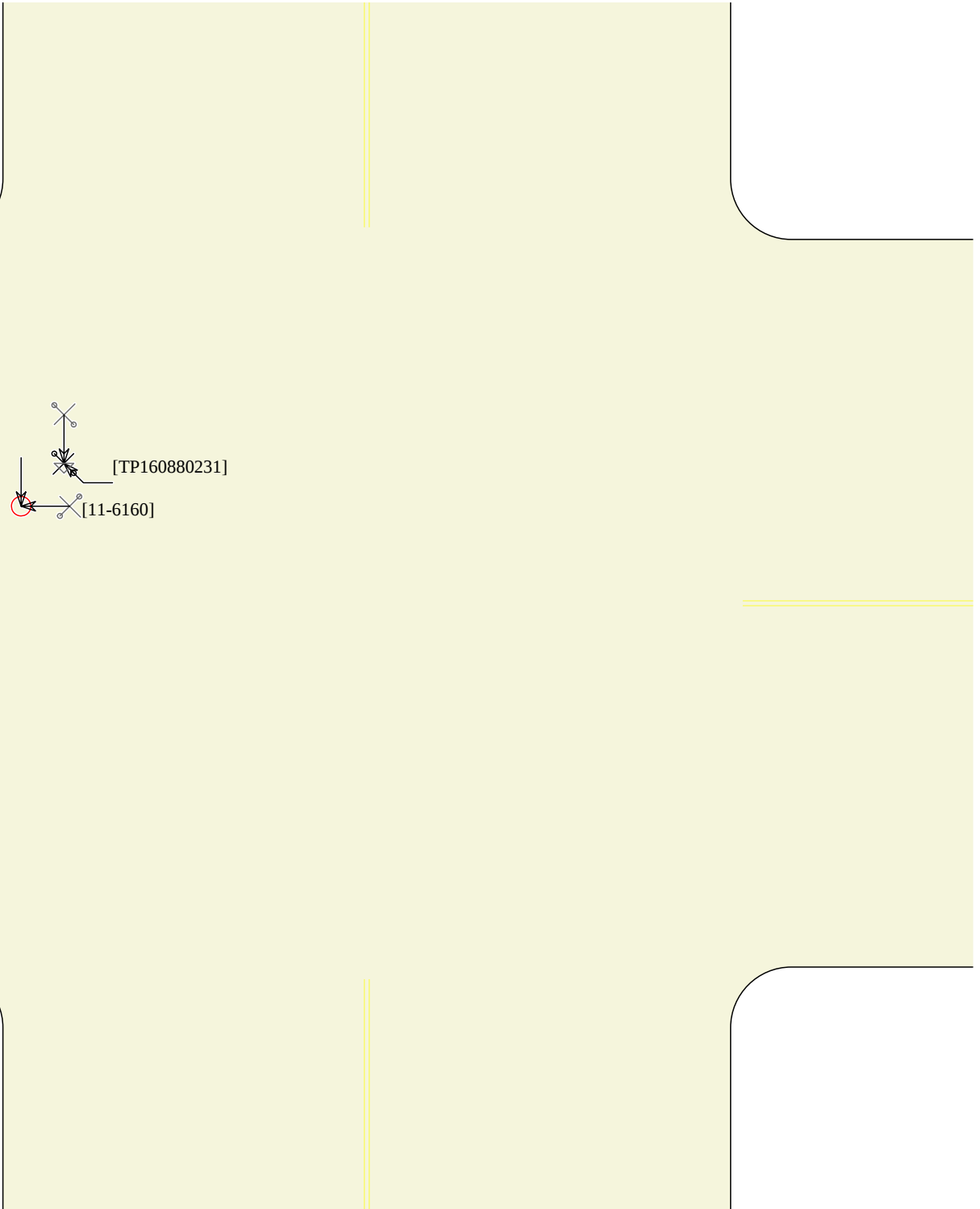
- × Pedestrian
- × Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- Pole
- ▣ Curb
- ⚡ Animal
- ◀ 3rd vehicle
- * Extra data

2 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

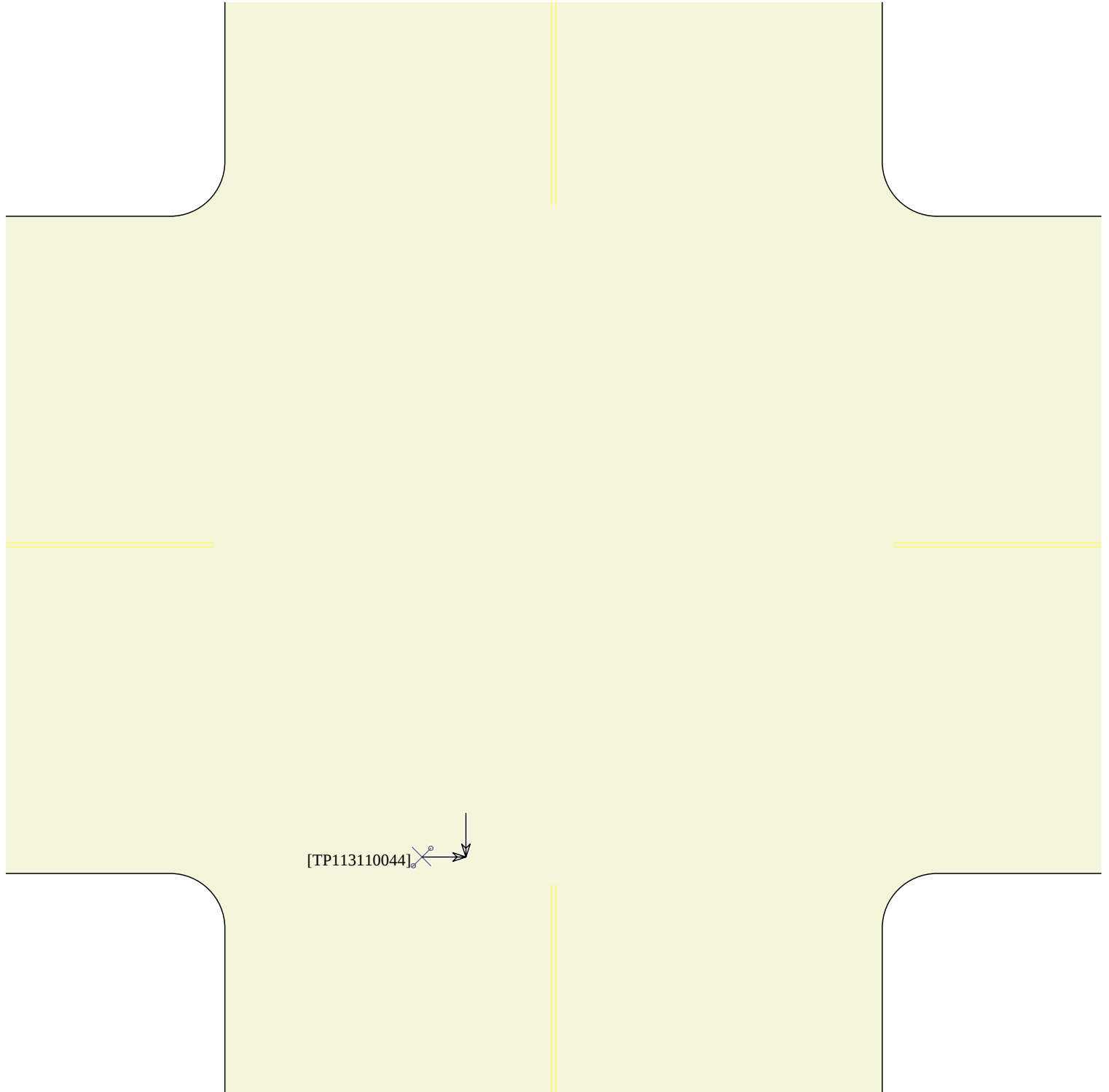
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

1 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↖ Erratic
- ↖ Out of control
- ↖ Right turn
- ↖ Left turn
- ↖ U-turn

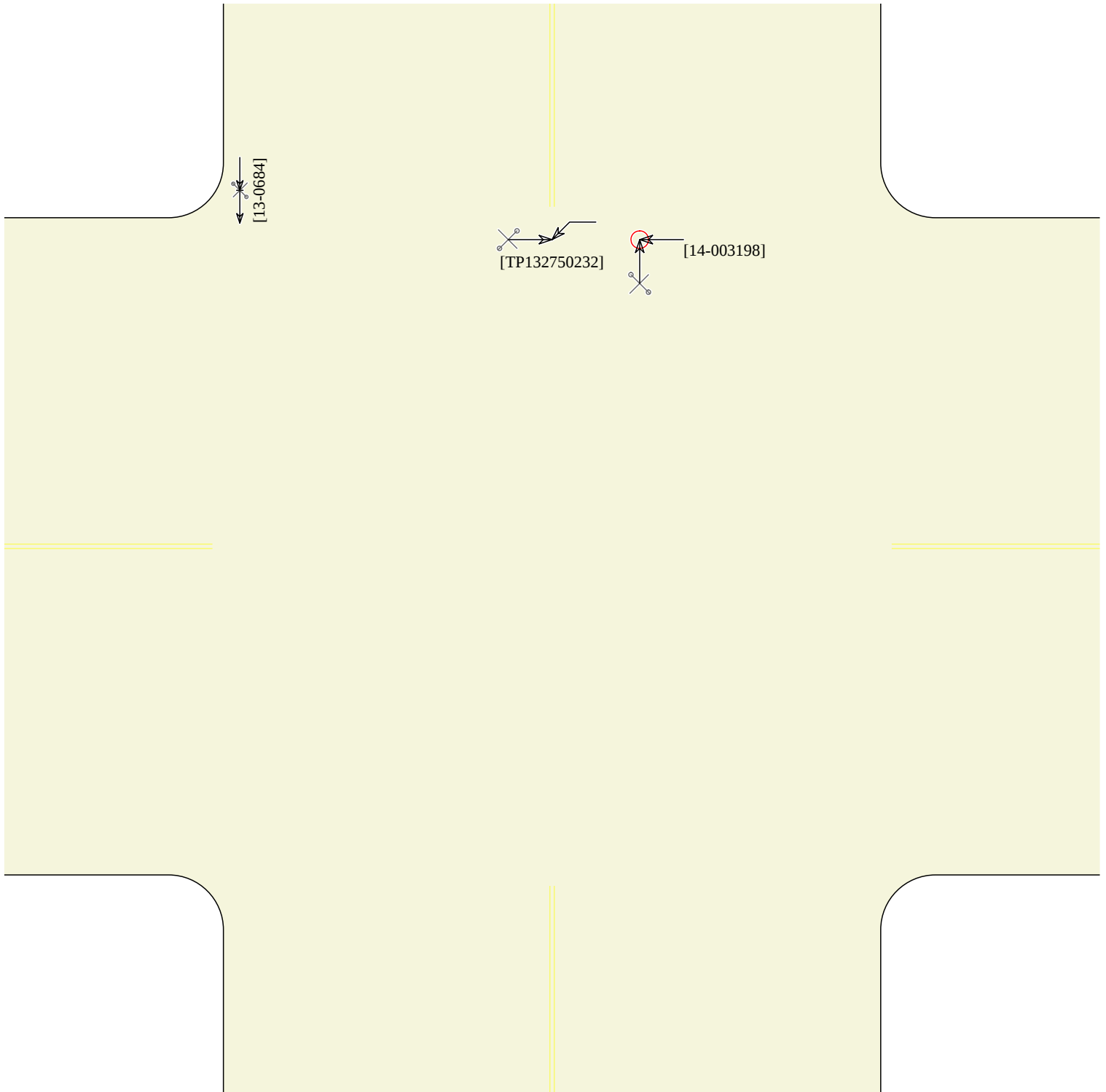
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⌘ Animal
- ◁ 3rd vehicle
- * Extra data

3 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

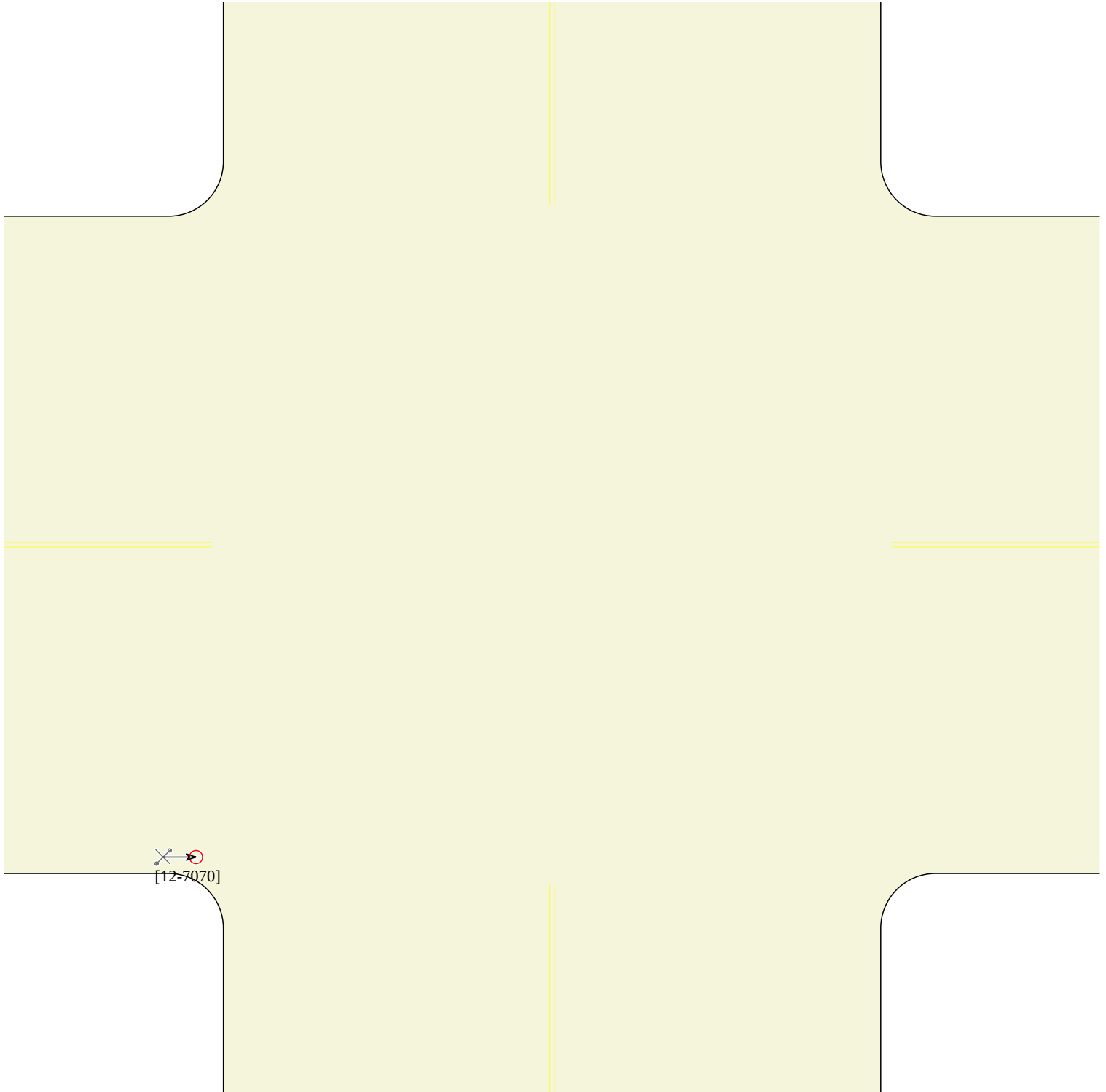
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

1 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

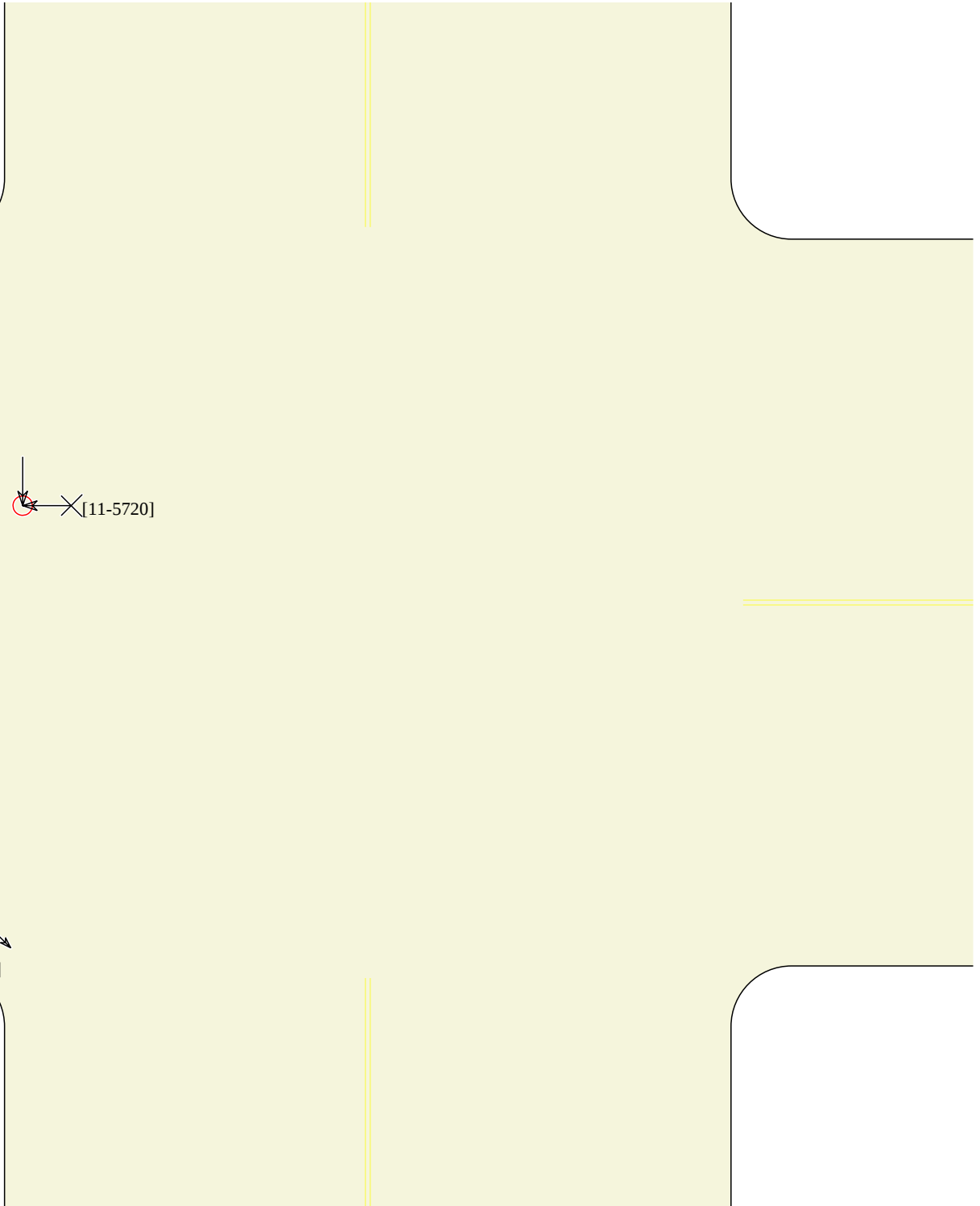
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

2 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

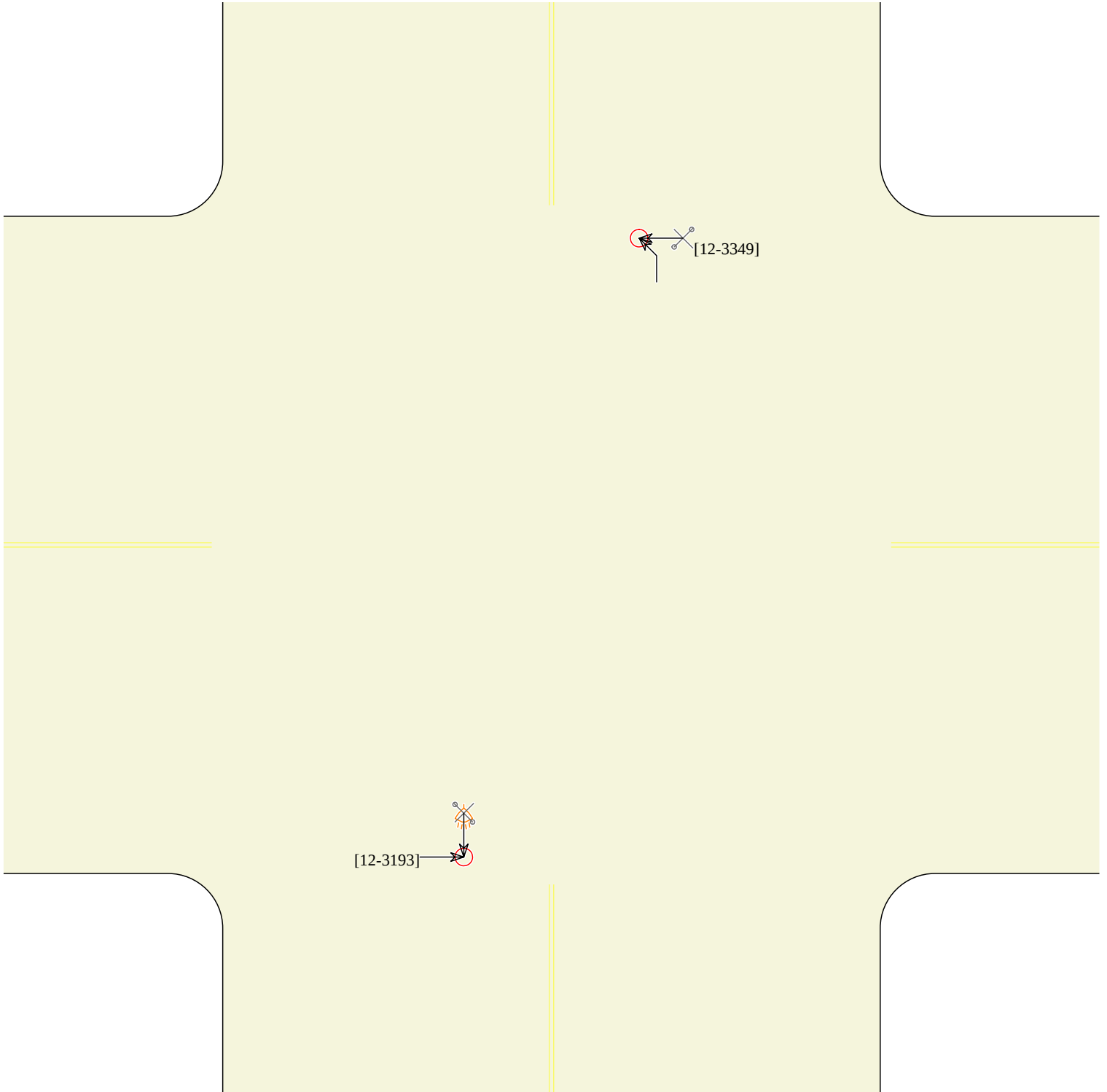
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

- General
- ▣ Signal
- ▣ Tree
- Pole
- ▣ Curb
- ⚡ Animal
- ◁ 3rd vehicle
- * Extra data

2 Crashes

Ped & Bike



(0) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ↔ Backing
- ↔ Overtaking
- ↔ Sideswipe

- ▭ Parked
- ↔ Erratic
- ↔ Out of control
- ↔ Right turn
- ↔ Left turn
- ↔ U-turn

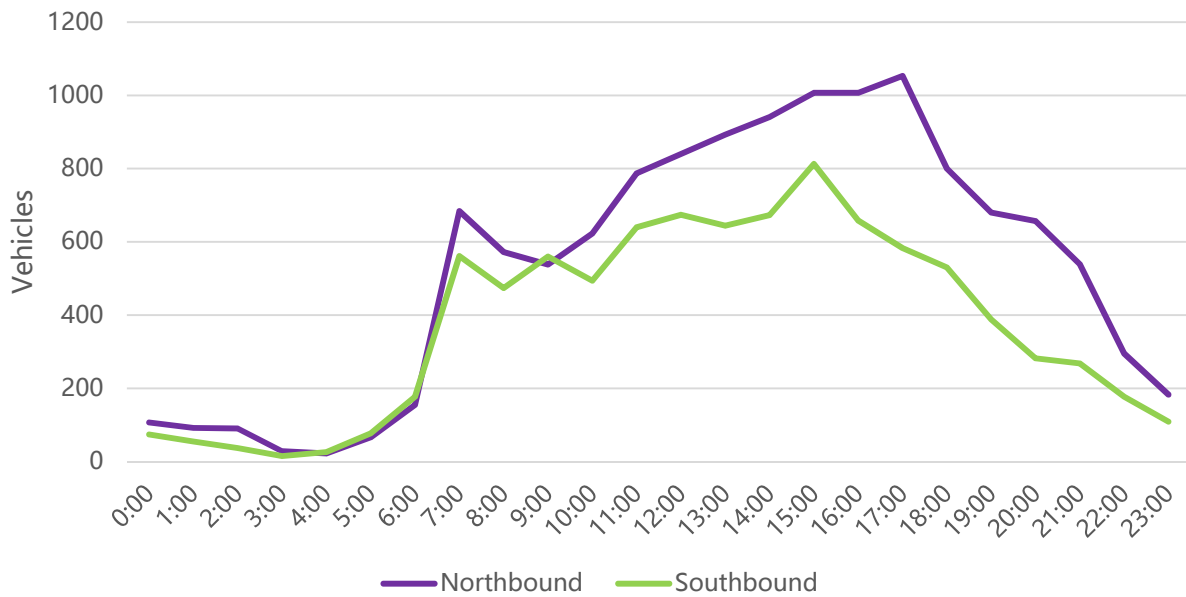
- × Pedestrian
- ⊗ Bicycle
- Injury
- ⊙ Fatality
- ⚡ Nighttime
- ⚡ DUI

Fixed objects:

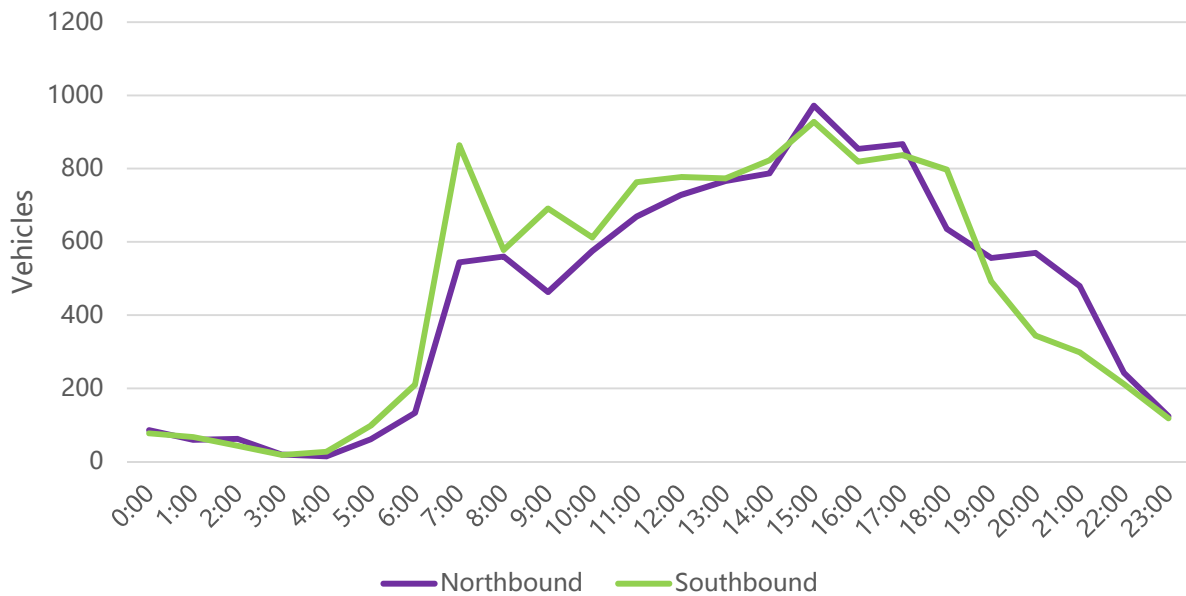
- General
- ▣ Signal
- ▣ Tree
- ▣ Pole
- ▣ Curb
- ▣ Animal
- ◁ 3rd vehicle
- * Extra data

Traffic Volume Count Data

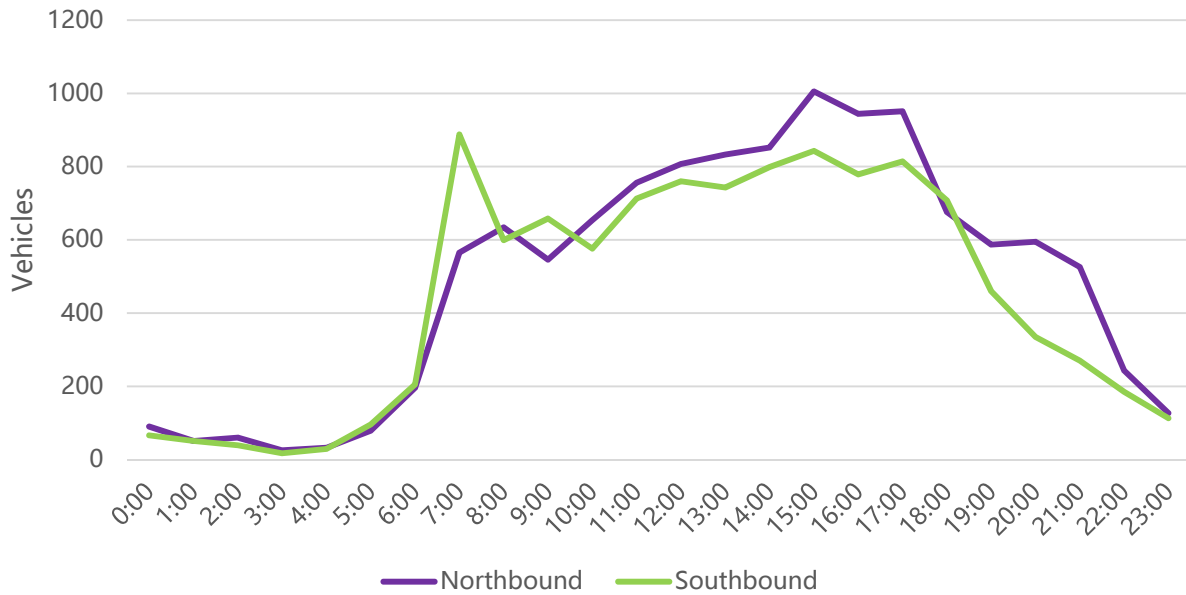
24-Hour Counts on Esplanade between Memorial Way and Francis Willard Ave



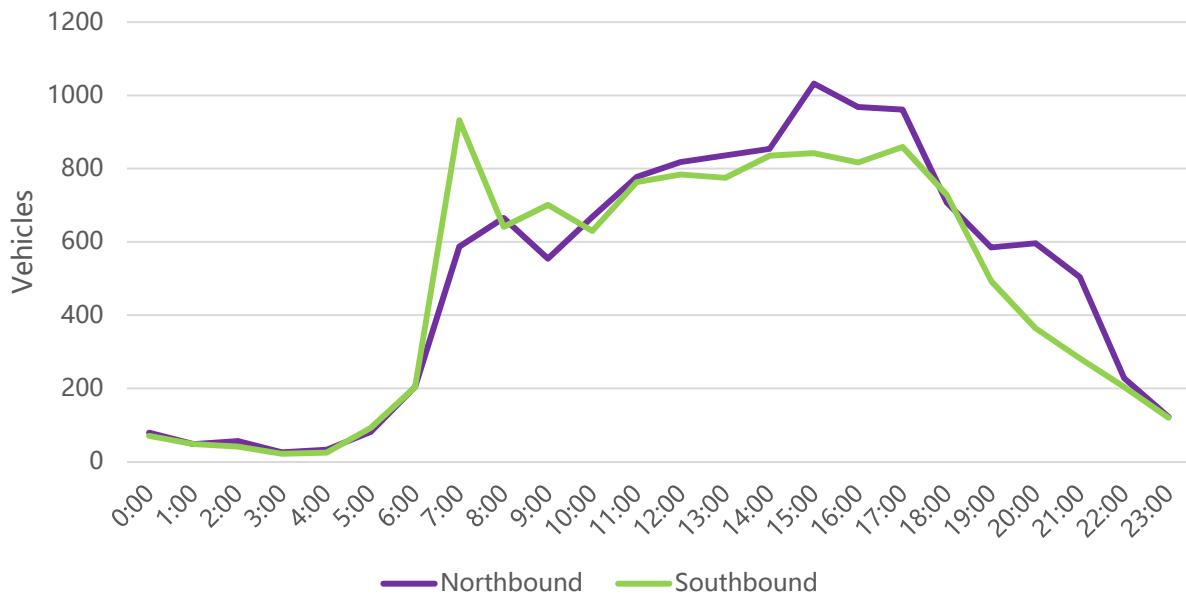
24-Hour Counts on Esplanade between Sacramento Ave and 1st Ave



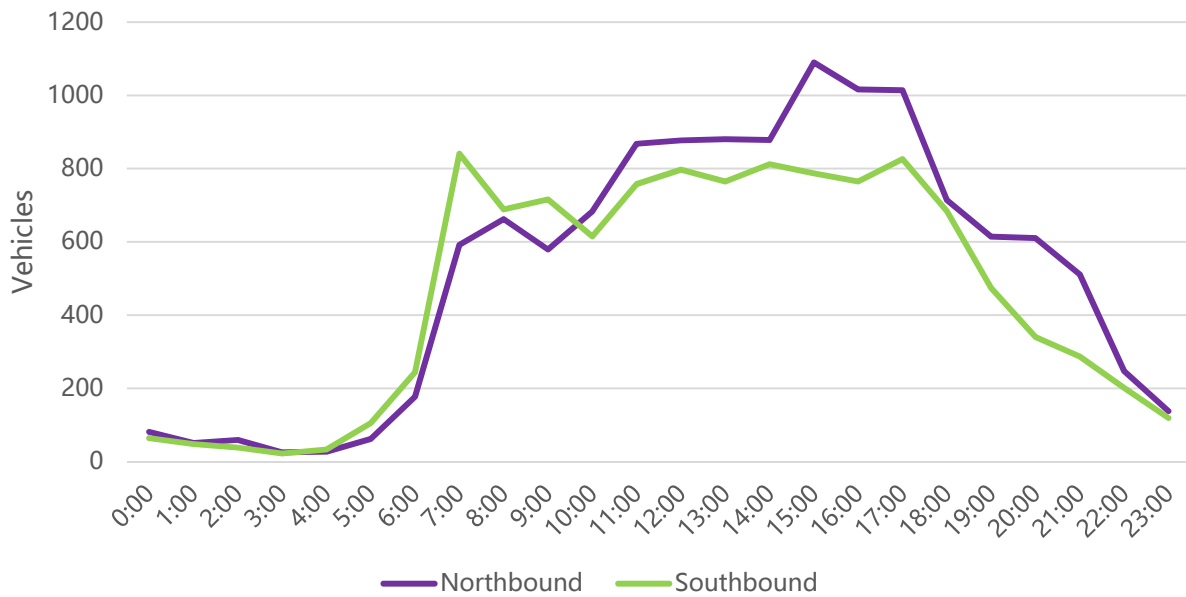
24-Hour Counts on Esplanade between 2nd Ave and 3rd Ave



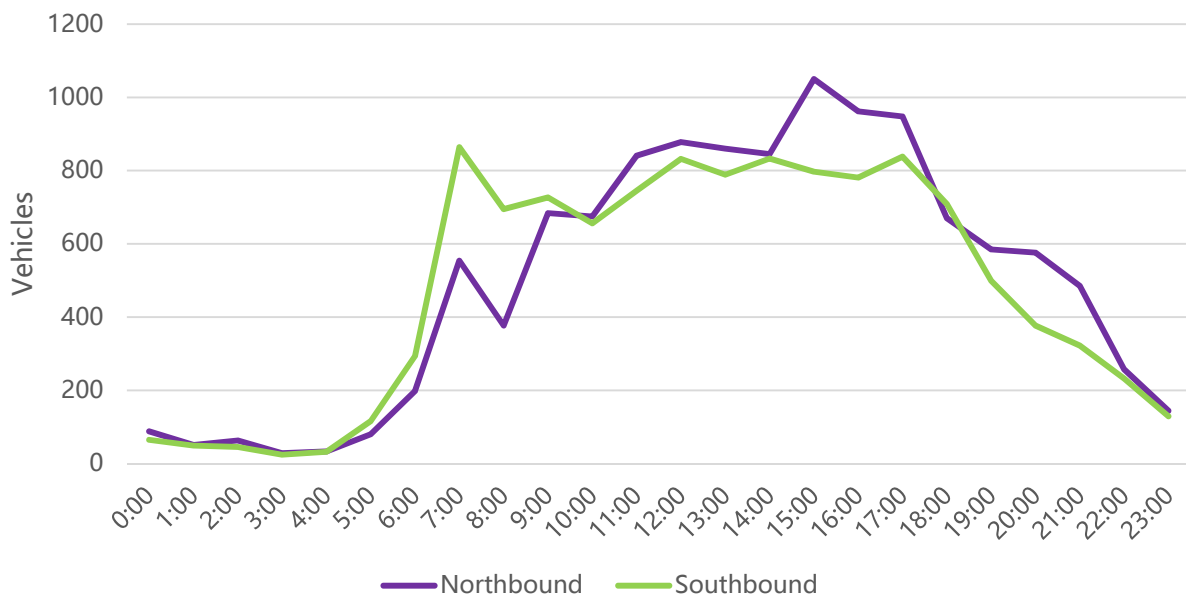
24-Hour Counts on Esplanade between 4th Ave and 5th Ave



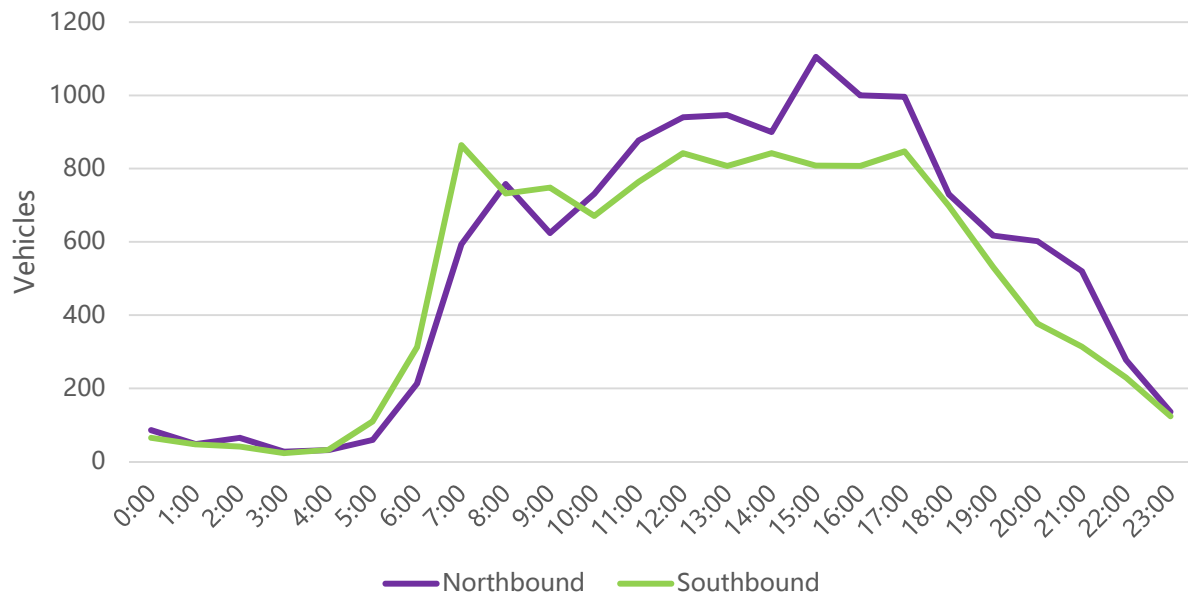
24-Hour Counts on Esplanade between 6th Ave and 7th Ave



24-Hour Counts on Esplanade between 8th Ave and 9th Ave



24-Hour Counts on Esplanade between 10th Ave and 11th Ave



Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-001

Location: Esplanade between Memorial Way and Frances Willard Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	33	200			24	181				
12:15	28	215			18	187				
12:30	27	195			22	146				
12:45	19	230	107	840	10	160	74	674	181	1514
1:00	17	229			11	178				
1:15	24	217			17	142				
1:30	22	199			14	160				
1:45	29	248	92	893	13	164	55	644	147	1537
2:00	31	205			9	179				
2:15	28	189			9	153				
2:30	17	220			9	171				
2:45	14	327	90	941	10	170	37	673	127	1614
3:00	7	300			4	215				
3:15	8	268			5	217				
3:30	9	202			1	179				
3:45	4	237	28	1007	5	202	15	813	43	1820
4:00	5	248			6	186				
4:15	8	230			5	144				
4:30	4	286			8	166				
4:45	5	243	22	1007	7	162	26	658	48	1665
5:00	8	295			10	161				
5:15	11	290			15	134				
5:30	21	243			25	142				
5:45	26	225	66	1053	27	146	77	583	143	1636
6:00	22	205			24	130				
6:15	34	209			34	131				
6:30	41	197			50	148				
6:45	58	189	155	800	69	121	177	530	332	1330
7:00	75	183			64	118				
7:15	118	173			96	84				
7:30	193	157			157	92				
7:45	298	167	684	680	244	94	561	388	1245	1068
8:00	169	194			135	71				
8:15	147	170			101	86				
8:30	138	156			119	64				
8:45	118	137	572	657	119	61	474	282	1046	939
9:00	114	199			133	65				
9:15	153	132			123	71				
9:30	127	106			143	64	0			
9:45	144	102	538	539	161	68	560	268	1098	807
10:00	135	85			139	62				
10:15	169	89			92	39				
10:30	161	69			125	37				
10:45	158	52	623	295	138	39	494	177	1117	472
11:00	170	57			135	38				
11:15	216	48			155	27				
11:30	182	48			163	26				
11:45	219	30	787	183	187	18	640	109	1427	292
Total	3764	8895	3764	8895	3190	5799	3190	5799	6954	14694
Combined Total	12659		12659		8989		8989		21648	
AM Peak	11:45 AM				11:30 AM					
Vol.	829				718					
P.H.F.	0.946				0.960					
PM Peak	2:30 PM				3:00 PM					
Vol.	1115				813					
P.H.F.	0.877				0.937					
Percentage	29.7%	70.3%			35.5%	64.5%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-002

Location: Esplanade between Sacramento Avenue and 1st Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	25	192			27	206				
12:15	24	194			19	214				
12:30	21	156			22	167				
12:45	16	186	86	728	9	190	77	777	163	1505
1:00	9	188			15	205				
1:15	19	190			19	184				
1:30	10	172			16	190				
1:45	21	216	59	766	17	194	67	773	126	1539
2:00	16	179			11	191				
2:15	21	157			12	176				
2:30	17	198			9	218				
2:45	8	253	62	787	11	238	43	823	105	1610
3:00	5	289			3	250				
3:15	4	283			3	227				
3:30	7	192			6	209				
3:45	3	208	19	972	6	242	18	928	37	1900
4:00	3	216			6	214				
4:15	5	209			5	182				
4:30	3	227			6	205				
4:45	3	202	14	854	10	218	27	819	41	1673
5:00	9	250			13	212				
5:15	7	255			22	199				
5:30	16	194			30	204				
5:45	29	168	61	867	33	222	98	837	159	1704
6:00	18	163			29	191				
6:15	25	163			38	201				
6:30	33	151			64	216				
6:45	57	158	133	635	79	189	210	797	343	1432
7:00	63	147			102	136				
7:15	76	151			146	119				
7:30	117	112			276	125				
7:45	288	146	544	556	340	112	864	492	1408	1048
8:00	179	162			156	84				
8:15	134	148			139	99				
8:30	130	131			134	79				
8:45	117	129	560	570	149	82	578	344	1138	914
9:00	102	157			159	86				
9:15	133	136			156	79				
9:30	99	103			188	63	0			
9:45	129	83	463	479	188	70	691	298	1154	777
10:00	119	62			164	68				
10:15	159	83			113	51				
10:30	144	58			163	43				
10:45	153	39	575	242	172	49	612	211	1187	453
11:00	152	45			180	39				
11:15	177	33			183	35				
11:30	164	26			183	23				
11:45	176	20	669	124	217	21	763	118	1432	242
Total	3245	7580	3245	7580	4048	7217	4048	7217	7293	14797
Combined Total	10825		10825		11265		11265		22090	
AM Peak	7:45 AM				7:15 AM					
Vol.	731				918					
P.H.F.	0.635				0.675					
PM Peak	2:30 PM				2:30 PM					
Vol.	1023				933					
P.H.F.	0.890				0.933					
Percentage	30.0%	70.0%			35.9%	64.1%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-003

Location: Esplanade between 2nd Avenue and 3rd Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	30	218			22	202				
12:15	26	208			15	197				
12:30	15	185			21	178				
12:45	19	190	90	801	8	183	66	760	156	1561
1:00	10	211			11	181				
1:15	17	210			18	191				
1:30	9	196			12	179				
1:45	15	216	51	833	10	192	51	743	102	1576
2:00	17	205			11	172				
2:15	20	172			13	174				
2:30	16	201			5	216				
2:45	7	274	60	852	10	237	39	799	99	1651
3:00	5	290			3	239				
3:15	6	269			5	191				
3:30	9	212			4	193				
3:45	5	234	25	1005	5	220	17	843	42	1848
4:00	3	239			7	198				
4:15	14	234			6	174				
4:30	5	256			8	208				
4:45	10	215	32	944	8	199	29	779	61	1723
5:00	7	280			16	197				
5:15	15	270			22	212				
5:30	21	203			25	201				
5:45	36	198	79	951	33	204	96	814	175	1765
6:00	30	175			26	158				
6:15	35	164			38	177				
6:30	57	174			59	209				
6:45	74	163	196	676	82	164	205	708	401	1384
7:00	74	155			101	135				
7:15	102	155			153	100				
7:30	120	124			295	127				
7:45	269	153	565	587	339	98	888	460	1453	1047
8:00	198	171			161	85				
8:15	150	153			155	101				
8:30	138	140			146	71				
8:45	148	131	634	595	137	78	599	335	1233	930
9:00	119	164			148	71				
9:15	160	141			147	74				
9:30	129	114			174	61	0			
9:45	138	107	546	526	189	64	658	270	1204	796
10:00	140	64			136	62				
10:15	184	79			113	41				
10:30	161	60			156	43				
10:45	169	40	654	243	171	39	576	185	1230	428
11:00	176	42			176	39				
11:15	210	31			179	29				
11:30	180	33			172	26				
11:45	190	21	756	127	186	19	713	113	1469	240
Total	3688	8140	3688	8140	3937	6809	3937	6809	7625	14949
Combined Total	11828		11828		10746		10746		22574	
AM Peak	11:45 AM				7:30 AM					
Vol.	801				950					
P.H.F.	0.919				0.701					
PM Peak	2:45 PM				2:30 PM					
Vol.	1045				883					
P.H.F.	0.950				0.924					
Percentage	31.2%	68.8%			36.6%	63.4%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-004

Location: Esplanade between 4th Avenue and 5th Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	26	226			22	214				
12:15	24	234			18	184				
12:30	11	172			20	196				
12:45	18	186	79	818	10	190	70	784	149	1602
1:00	12	208			10	206				
1:15	12	216			19	193				
1:30	9	187			11	180				
1:45	15	225	48	836	8	196	48	775	96	1611
2:00	15	201			11	185				
2:15	20	174			14	202				
2:30	15	212			6	208				NB
2:45	6	267	56	854	10	240	41	835	97	1689
3:00	5	305			5	240				854
3:15	6	284			6	197				958
3:30	9	219			6	195				1068
3:45	5	224	25	1032	4	210	21	842	46	1874
4:00	4	260			8	206				NB
4:15	14	234			5	188				937
4:30	5	248			5	208				966
4:45	9	226	32	968	6	215	24	817	56	1785
5:00	9	299			16	216				968
5:15	11	270			17	229				1007
5:30	24	206			27	211				1043
5:45	37	186	81	961	32	203	92	859	173	1820
6:00	29	175			28	172				961
6:15	34	168			40	181				
6:30	59	189			66	203				
6:45	82	175	204	707	69	172	203	728	407	1435
7:00	74	152			119	142				
7:15	103	157			166	117				
7:30	121	117			322	125				NB
7:45	289	159	587	585	325	109	932	493	1519	1078
8:00	225	165			177	108				587
8:15	156	162			160	100				738
8:30	139	139			150	78				791
8:45	145	130	665	596	154	78	641	364	1306	809
9:00	122	149			148	67				665
9:15	162	139			153	82				
9:30	122	119			193	69	0			
9:45	148	97	554	504	207	64	701	282	1255	786
10:00	138	56			141	62				
10:15	185	82			128	49				
10:30	167	51			177	47				
10:45	178	39	668	228	184	46	630	204	1298	432
11:00	182	42			187	41				
11:15	232	31			198	33				
11:30	171	27			182	24				
11:45	192	22	777	122	196	22	763	120	1540	242
Total	3776	8211	3776	8211	4166	7103	4166	7103	7942	15314
Combined Total	11987		11987		11269		11269		23256	
AM Peak	11:45 AM				7:15 AM					
Vol.	824				990					
P.H.F.	0.880				0.762					
PM Peak	2:45 PM				2:15 PM					
Vol.	1075				890					
P.H.F.	0.934				0.927					
Percentage	31.5%	68.5%			37.0%	63.0%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-005

Location: Esplanade between 6th Avenue and 7th Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	27	242			20	217				
12:15	21	239			15	173				
12:30	11	191			21	207				
12:45	22	205	81	877	8	200	64	797	145	1674
1:00	12	232			10	203				
1:15	14	225			20	189				
1:30	10	195			12	180				
1:45	15	228	51	880	6	193	48	765	99	1645
2:00	16	213			11	186				
2:15	18	195			11	197				
2:30	16	205			6	209				NB
2:45	9	265	59	878	10	220	38	812	97	1690
3:00	4	310			5	220				878
3:15	6	281			4	188				975
3:30	8	238			6	181				1061
3:45	7	261	25	1090	7	198	22	787	47	1094
4:00	4	264			9	206				NB
4:15	11	246			5	175				1009
4:30	4	259			9	176				1030
4:45	8	247	27	1016	10	208	33	765	60	1016
5:00	9	303			17	214				1055
5:15	7	292			17	217				1101
5:30	22	210			36	198				1052
5:45	24	209	62	1014	35	197	105	826	167	1014
6:00	27	180			30	161				
6:15	35	169			58	160				
6:30	46	187			69	191				
6:45	69	178	177	714	87	172	244	684	421	1398
7:00	70	157			108	124				
7:15	104	157			159	118				
7:30	133	138			281	120				NB
7:45	285	162	592	614	293	112	841	474	1433	592
8:00	225	163			201	111				747
8:15	151	163			174	88				794
8:30	147	146			154	73				808
8:45	139	138	662	610	160	68	689	340	1351	662
9:00	139	145			149	70				
9:15	157	147			159	84				
9:30	132	117			196	63	0			
9:45	151	102	579	511	212	70	716	287	1295	798
10:00	141	62			143	67				
10:15	187	86			133	49				
10:30	167	57			161	47				
10:45	188	42	683	247	178	38	615	201	1298	448
11:00	213	41			184	39				
11:15	235	31			193	31				
11:30	191	37			187	24				
11:45	229	29	868	138	194	25	758	119	1626	257
Total	3866	8589	3866	8589	4173	6857	4173	6857	8039	15446
Combined Total	12455		12455		11030		11030		23485	
AM Peak	11:30 AM				7:30 AM					
Vol.	901				949					
P.H.F.	0.931				0.810					
PM Peak	4:30 PM				2:15 PM					
Vol.	1101				846					
P.H.F.	0.917				0.961					
Percentage	31.0%	69.0%			37.8%	62.2%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-006

Location: Esplanade between 8th Avenue and 9th Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	29	242			22	228				
12:15	26	229			16	180				
12:30	13	193			20	212				
12:45	20	214	88	878	7	212	65	832	153	1710
1:00	16	227			10	207				
1:15	16	214			18	199				
1:30	7	189			11	184				
1:45	12	230	51	860	10	199	49	789	100	1649
2:00	16	200			14	190				
2:15	21	190			13	201				
2:30	16	213			6	215				
2:45	10	242	63	845	12	227	45	833	108	1678
3:00	5	295			4	219				
3:15	6	274			4	182				
3:30	8	238			7	186				
3:45	9	243	28	1050	9	210	24	797	52	1847
4:00	4	255			8	202				
4:15	13	241			1	175				
4:30	5	243			10	189				
4:45	11	223	33	962	13	215	32	781	65	1743
5:00	17	294			16	231				
5:15	12	263			22	204				
5:30	26	198			34	199				
5:45	25	193	80	948	44	204	116	838	196	1786
6:00	26	172			38	168				
6:15	49	162			71	162				
6:30	57	176			78	212				
6:45	66	160	198	670	107	167	294	709	492	1379
7:00	65	141			116	134				
7:15	99	143			169	123				
7:30	140	147			274	128				
7:45	250	154	554	585	305	114	864	499	1418	1084
8:00	211	151			189	122				
8:15	162	165			176	98				
8:30	147	134			163	84				
8:45	157	126	677	576	167	73	695	377	1372	953
9:00	128	134			152	78				
9:15	158	136			172	86				
9:30	134	125			190	64	0			
9:45	164	90	584	485	213	94	727	322	1311	807
10:00	143	63			160	69				
10:15	180	90			149	62				
10:30	164	61			185	56				
10:45	188	43	675	257	162	45	656	232	1331	489
11:00	196	43			180	39				
11:15	224	33			185	38				
11:30	188	38			199	28				
11:45	233	30	841	144	181	24	745	129	1586	273
Total	3872	8260	3872	8260	4312	7138	4312	7138	8184	15398
Combined Total	12132		12132		11450		11450		23582	
AM Peak	11:45 AM				7:30 AM					
Vol.	897				944					
P.H.F.	0.927				0.774					
PM Peak	3:00 PM				2:15 PM					
Vol.	1050				862					
P.H.F.	0.886				0.949					
Percentage	31.9%	68.1%			37.7%	62.3%				

Volumes for: Thursday, May 14, 2015

City: Chico

Project #: 15-7425-007

Location: Esplanade between 10th Avenue and 11th Avenue

Start Time	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	27	267			21	235				
12:15	26	236			18	195				
12:30	14	208			19	199				
12:45	19	229	86	940	7	213	65	842	151	1782
1:00	17	245			8	221				
1:15	10	236			20	210				
1:30	8	209			10	189				
1:45	13	256	48	946	9	187	47	807	95	1753
2:00	18	218			12	179				
2:15	21	202			13	201				
2:30	17	223			6	223				NB
2:45	9	257	65	900	10	239	41	842	106	1742
3:00	4	298			4	223				900
3:15	7	303			4	185				980
3:30	7	250			8	193				1081
3:45	9	254	27	1105	7	207	23	808	50	1108
4:00	5	259			6	207				NB
4:15	10	260			1	173				1023
4:30	5	241			9	202				1014
4:45	11	240	31	1000	16	225	32	807	63	1014
5:00	16	300			15	245				1000
5:15	7	275			26	197				1041
5:30	17	235			30	199				1056
5:45	19	186	59	996	39	206	110	847	169	1050
6:00	29	184			48	175				996
6:15	45	181			75	164				
6:30	62	200			73	192				
6:45	77	165	213	730	116	167	312	698	525	1428
7:00	69	155			119	136				
7:15	104	149			170	133				
7:30	141	154			263	142				NB
7:45	279	159	593	617	312	120	864	531	1457	593
8:00	214	166			196	116				738
8:15	197	177			182	95				831
8:30	171	129			185	88				861
8:45	176	130	758	602	169	78	732	377	1490	758
9:00	142	148			159	74				
9:15	156	141			178	90				
9:30	153	136			187	63	0			
9:45	173	95	624	520	224	87	748	314	1372	834
10:00	160	69			166	75				
10:15	201	95			153	51				
10:30	176	65			180	57				
10:45	194	48	731	277	172	46	671	229	1402	506
11:00	204	46			175	42				
11:15	223	23			188	35				
11:30	203	38			198	24				
11:45	247	29	877	136	203	23	764	124	1641	260
Total	4112	8769	4112	8769	4409	7226	4409	7226	8521	15995
Combined Total	12881		12881		11635		11635		24516	
AM Peak	11:45 AM				7:30 AM					
Vol.	958				953					
P.H.F.	0.897				0.764					
PM Peak	2:45 PM				2:15 PM					
Vol.	1108				886					
P.H.F.	0.958				0.927					
Percentage	31.9%	68.1%			37.9%	62.1%				

ALL TRAFFIC DATA

(916) 771-8700

orders@aldtraffic.com

File Name : 15-7424-001 Esplanade-Memorial Way.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound					Memorial Way Westbound					Esplanade Northbound					Memorial Way Eastbound					Total	Uturn Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP-TOTAL	LEFT	THRU	RIGHT	UTURNS	APP-TOTAL	LEFT	THRU	RIGHT	UTURNS	APP-TOTAL	LEFT	THRU	RIGHT	UTURNS		
07:00	0	65	1	0	66	4	3	11	0	18	0	56	5	0	61	0	0	1	0	1	146	0
07:15	0	96	4	0	100	7	5	32	0	44	0	82	1	0	83	1	7	2	0	10	237	0
07:30	0	140	8	0	148	16	2	44	1	63	0	135	8	0	143	1	19	8	0	28	382	1
07:45	0	219	19	0	238	33	6	71	0	110	0	212	18	0	230	8	39	12	0	59	637	0
Total	0	520	32	0	552	60	16	158	1	235	0	485	32	0	517	10	65	23	0	98	1402	1
08:00	0	143	9	0	152	11	4	41	0	56	0	121	8	0	129	3	14	4	0	21	358	0
08:15	0	98	0	0	98	8	1	23	0	32	1	129	11	0	141	2	0	6	0	8	279	0
08:30	5	108	5	1	119	6	3	19	0	28	0	113	11	0	124	2	4	3	0	9	280	1
08:45	2	119	3	0	124	11	2	21	0	34	0	103	13	0	116	2	2	3	0	7	281	0
Total	7	468	17	1	493	36	10	104	0	150	1	466	43	0	510	9	20	16	0	45	1198	1
14:30	1	167	7	0	175	15	3	32	0	50	0	170	12	0	182	2	5	3	0	10	417	0
14:45	2	160	11	0	173	12	3	76	0	91	0	257	21	0	278	1	14	7	0	22	564	0
15:00	0	194	18	0	212	24	12	44	0	80	0	218	20	0	238	21	36	9	0	66	596	0
15:15	1	221	18	0	240	22	4	45	0	71	0	202	14	0	216	17	33	9	0	59	586	0
Total	4	742	54	0	800	73	22	197	0	292	0	847	67	0	914	41	88	28	0	157	2163	0
15:30	1	177	7	0	185	11	2	39	0	52	0	158	11	0	169	2	15	5	0	22	428	0
15:45	0	204	6	0	210	16	0	43	0	59	0	196	11	0	207	3	8	2	0	13	489	0
16:00	0	175	9	0	184	12	4	33	0	49	0	229	22	0	251	4	5	4	0	13	497	0
16:15	0	140	3	0	143	6	1	38	0	45	0	198	18	1	217	2	9	2	0	13	418	1
Total	1	696	25	0	722	45	7	153	0	205	0	781	62	1	844	11	37	13	0	61	1832	1
16:30	0	164	8	0	172	14	1	42	0	57	0	244	12	1	257	2	8	5	0	15	501	1
16:45	0	158	4	0	162	11	4	34	0	49	0	199	11	0	210	5	7	2	0	14	435	0
17:00	0	154	8	0	162	10	0	51	0	61	0	244	15	0	259	6	13	5	0	24	506	0
17:15	0	123	6	0	129	10	2	44	0	56	0	244	12	0	256	3	14	5	0	22	463	0
Total	0	599	26	0	625	45	7	171	0	223	0	931	50	1	982	16	42	17	0	75	1905	1
Grand Total	12	3025	154	1	3192	259	62	783	1	1105	1	3510	254	2	3767	87	252	97	0	436	8500	4
Approach %	0.4%	94.8%	4.8%	0.0%	0.0%	23.4%	5.6%	70.9%	0.1%	13.0%	0.0%	93.2%	6.7%	0.1%	44.3%	20.0%	57.8%	22.2%	0.0%	5.1%	100.0%	
Total %	0.1%	35.6%	1.8%	0.0%	0.0%	3.0%	0.7%	9.2%	0.0%	0.0%	0.0%	41.3%	3.0%	0.0%	4.4%	1.0%	3.0%	1.1%	0.0%	0.0%		

AM PEAK HOUR	Esplanade Southbound					Memorial Way Westbound					Esplanade Northbound					Memorial Way Eastbound					Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	0	140	8	0	148	16	2	44	1	63	0	135	8	0	143	1	19	8	0	28	382
07:45	0	219	19	0	238	33	6	71	0	110	0	212	18	0	230	8	39	12	0	59	637
08:00	0	143	9	0	152	11	4	41	0	56	0	121	8	0	129	3	14	4	0	21	358
08:15	0	98	0	0	98	8	1	23	0	32	1	129	11	0	141	2	0	6	0	8	279
Total Volume	0	600	36	0	636	68	13	179	1	261	1	597	45	0	643	14	72	30	0	116	1656
% App Total	0.0%	94.3%	5.7%	0.0%	0.0%	26.1%	5.0%	68.6%	0.4%	0.2%	92.8%	7.0%	0.0%	0.0%	12.1%	62.1%	25.9%	0.0%	0.0%	0.0%	0.0%
PHF	.000	.685	.474	.000	.668	.515	.542	.630	.250	.593	.250	.704	.625	.000	.699	.438	.462	.625	.000	.492	.650
PM PEAK HOUR	Esplanade Southbound					Memorial Way Westbound					Esplanade Northbound					Memorial Way Eastbound					Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	
Peak Hour Analysis From 14:45 to 15:45																					
Peak Hour For Entire Intersection Begins at 14:45																					
14:45	2	160	11	0	173	12	3	76	0	91	0	257	21	0	278	1	14	7	0	22	564
15:00	0	194	18	0	212	24	12	44	0	80	0	218	20	0	238	21	36	9	0	66	596
15:15	1	221	18	0	240	22	4	45	0	71	0	202	14	0	216	17	33	9	0	59	586
15:30	1	177	7	0	185	11	2	39	0	52	0	158	11	0	169	2	15	5	0	22	428
Total Volume	4	752	54	0	810	69	21	204	0	294	0	835	66	0	901	41	98	30	0	169	2174
% App Total	0.5%	92.8%	6.7%	0.0%	0.0%	23.5%	7.1%	69.4%	0.0%	0.0%	92.7%	7.3%	0.0%	0.0%	24.3%	58.0%	17.8%	0.0%	0.0%	0.0%	0.0%
PHF	.500	.851	.750	.000	.844	.719	.438	.671	.000	.808	.000	.812	.786	.000	.810	.488	.681	.833	.000	.640	.912

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-002 Esplanade-1st Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					1st Avenue Westbound					Esplanade Northbound					1st Avenue Eastbound					Total	Ultm Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
07:00	0	97	6	0	103	14	33	10	0	57	0	57	3	0	60	9	38	1	0	48	268	0
07:15	0	136	17	0	153	9	55	16	0	80	0	70	9	0	79	14	67	3	0	84	396	0
07:30	0	263	33	0	296	26	109	15	0	150	0	113	10	0	123	10	94	10	0	114	683	0
07:45	0	312	33	0	345	20	129	19	0	168	0	252	36	0	288	20	113	16	0	149	950	0
Total	0	808	89	0	897	69	326	60	0	455	0	492	58	0	550	53	312	30	0	395	2297	0
08:00	0	144	10	0	154	11	52	11	0	74	1	160	16	0	177	26	75	6	0	107	512	0
08:15	0	124	13	0	137	10	57	17	0	84	0	129	8	0	137	9	60	7	0	76	434	0
08:30	0	132	10	0	142	10	28	9	0	47	0	119	8	0	127	13	56	3	0	72	388	0
08:45	0	121	14	0	135	19	63	27	0	109	0	107	12	0	119	20	82	11	0	113	476	0
Total	0	521	47	0	568	50	200	64	0	314	1	515	44	0	560	68	273	27	0	368	1810	0
14:30	1	185	21	0	207	22	78	31	0	131	0	173	22	0	195	15	93	10	0	118	651	0
14:45	0	212	19	0	231	27	82	33	0	142	0	236	29	0	265	21	93	14	0	128	766	0
15:00	0	219	17	0	236	29	119	27	0	175	0	258	27	0	285	18	100	17	0	135	831	0
15:15	0	181	14	0	195	27	103	26	0	156	2	248	35	0	285	13	101	16	0	130	766	0
Total	1	797	71	0	869	105	382	117	0	604	2	915	113	0	1030	67	387	57	0	511	3014	0
15:30	0	181	12	0	193	27	118	28	0	173	0	182	17	0	199	20	99	10	0	129	694	0
15:45	0	207	10	0	217	26	98	31	0	155	0	201	15	0	216	19	107	15	0	141	729	0
16:00	0	186	11	0	197	28	91	40	0	159	0	192	27	0	219	23	95	8	0	126	701	0
16:15	0	152	13	0	165	27	80	37	0	144	0	204	8	0	212	17	93	5	0	115	636	0
Total	0	726	46	0	772	108	387	136	0	631	0	779	67	0	846	79	394	38	0	511	2760	0
16:30	0	185	15	0	200	25	112	24	0	161	0	231	16	0	247	17	72	9	0	98	706	0
16:45	0	182	14	0	196	29	103	26	0	158	0	189	23	0	212	12	104	12	0	128	694	0
17:00	0	168	17	0	185	27	105	40	0	172	1	239	29	0	269	22	89	10	0	121	747	0
17:15	0	188	18	0	206	12	103	25	0	140	0	249	17	0	266	24	92	8	0	124	736	0
Total	0	723	64	0	787	93	423	115	0	631	1	908	85	0	994	75	357	39	0	471	2883	0
Grand Total	1	3575	317	0	3893	425	1718	492	0	2635	4	3609	367	0	3980	342	1723	191	0	2256	12764	0
Approach %	0.0%	91.8%	8.1%	0.0%		16.1%	65.2%	18.7%	0.0%	0.0%	0.1%	90.7%	9.2%	0.0%	0.0%	15.2%	76.4%	8.5%	0.0%	0.0%		
Total %	0.0%	28.0%	2.5%	0.0%	30.5%	3.3%	13.5%	3.9%	0.0%	20.6%	0.0%	28.3%	2.9%	0.0%	31.2%	2.7%	13.5%	1.5%	0.0%	17.7%	100.0%	

AM PEAK HOUR	Esplanade Southbound					1st Avenue Westbound					Esplanade Northbound					1st Avenue Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
07:30	0	263	33	0	296	26	109	15	0	150	0	113	10	0	123	10	94	10	0	114	683	
07:45	0	312	33	0	345	20	129	19	0	168	0	252	36	0	288	20	113	16	0	149	950	
08:00	0	144	10	0	154	11	52	11	0	74	1	160	16	0	177	26	75	6	0	107	512	
08:15	0	124	13	0	137	10	57	17	0	84	0	129	8	0	137	9	60	7	0	76	434	
Total Volume	0	843	89	0	932	67	347	62	0	476	1	654	70	0	725	65	342	39	0	446	2579	
% App Total	0.0%	90.5%	9.5%	0.0%		14.1%	72.9%	13.0%	0.0%	0.0%	0.1%	90.2%	9.7%	0.0%	0.0%	14.6%	76.7%	8.7%	0.0%	0.0%		
PHF	.000	.675	.674	.000	.675	.644	.672	.816	.000	.708	.250	.649	.486	.000	.629	.625	.757	.609	.000	.748	.679	

PM PEAK HOUR	Esplanade Southbound					1st Avenue Westbound					Esplanade Northbound					1st Avenue Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
Peak Hour Analysis From 14:45 to 15:45																						
Peak Hour For Entire Intersection Begins at 14:45																						
14:45	0	212	19	0	231	27	82	33	0	142	0	236	29	0	265	21	93	14	0	128	766	
15:00	0	219	17	0	236	29	119	27	0	175	0	258	27	0	285	18	100	17	0	135	831	
15:15	0	181	14	0	195	27	103	26	0	156	2	248	35	0	285	13	101	16	0	130	766	
15:30	0	181	12	0	193	27	118	28	0	173	0	182	17	0	199	20	99	10	0	129	694	
Total Volume	0	793	62	0	855	110	422	114	0	646	2	924	108	0	1034	72	393	57	0	522	3057	
% App Total	0.0%	92.7%	7.3%	0.0%		17.0%	65.3%	17.6%	0.0%	0.0%	0.2%	89.4%	10.4%	0.0%	0.0%	13.8%	75.3%	10.9%	0.0%	0.0%		
PHF	.000	.905	.816	.000	.906	.948	.887	.864	.000	.923	.250	.895	.771	.000	.907	.857	.973	.838	.000	.967	.920	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-003 Esplanade-Frances Willard Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					Frances Willard Avenue Westbound					Esplanade Northbound					Frances Willard Avenue Eastbound					Total	Ultm Total	
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL			
07:00	10	0	4	1	15	0	0	0	0	0	5	0	0	0	5	0	0	1	0	0	1	21	1
07:15	21	0	11	1	33	0	0	2	0	2	13	0	0	0	13	0	0	0	0	0	0	48	1
07:30	50	0	29	0	79	0	0	9	0	9	51	0	9	0	60	0	0	4	0	0	4	152	0
07:45	78	0	40	1	119	0	0	26	0	26	93	0	11	0	104	0	0	0	0	0	0	249	1
Total	159	0	84	3	246	0	0	37	0	37	162	0	20	0	182	0	0	5	0	0	5	470	3
08:00	29	0	12	2	43	0	0	6	0	6	17	0	1	0	18	0	0	2	0	0	2	69	2
08:15	26	0	9	1	36	1	0	2	0	3	7	0	1	0	8	0	0	0	0	0	0	47	1
08:30	22	0	5	0	27	0	0	2	0	2	10	0	1	0	11	0	0	0	0	0	0	40	0
08:45	21	0	5	0	26	0	0	1	0	1	8	0	0	1	9	0	0	1	0	0	1	37	1
Total	98	0	31	3	132	1	0	11	0	12	42	0	3	1	46	0	0	3	0	0	3	193	4
14:30	41	0	15	5	61	0	0	1	0	1	11	0	3	0	14	0	0	1	0	0	1	77	5
14:45	56	0	25	1	82	0	0	0	0	0	42	0	4	1	47	0	0	1	0	0	1	130	2
15:00	51	0	26	2	79	0	0	0	0	0	48	0	4	0	52	1	0	3	0	0	4	135	2
15:15	55	0	21	1	77	0	0	0	0	0	28	0	5	1	34	0	0	3	0	0	3	114	2
Total	203	0	87	9	299	0	0	1	0	1	129	0	16	2	147	1	0	8	0	0	9	456	11
15:30	55	0	13	3	71	0	0	2	0	2	15	0	0	1	16	2	0	3	0	0	5	94	4
15:45	45	0	12	4	61	0	0	0	0	0	19	0	0	0	19	1	0	1	0	0	2	82	4
16:00	40	0	11	2	53	0	0	5	0	5	7	0	4	0	11	0	0	0	0	0	0	69	2
16:15	36	0	17	2	55	2	0	4	0	6	9	0	0	1	10	0	0	1	0	0	1	72	3
Total	176	0	53	11	240	2	0	11	0	13	50	0	4	2	56	3	0	5	0	0	8	317	13
16:30	43	0	21	0	64	0	0	1	0	1	12	0	2	2	16	0	0	0	0	0	0	81	2
16:45	39	0	24	0	63	0	0	2	0	2	18	0	1	0	19	0	0	1	0	0	1	85	0
17:00	58	0	13	0	71	0	0	6	0	6	20	0	1	2	23	0	0	2	0	0	2	102	2
17:15	60	0	16	1	77	0	0	2	0	2	8	0	0	1	9	0	0	0	0	0	0	88	2
Total	200	0	74	1	275	0	0	11	0	11	58	0	4	5	67	0	0	3	0	0	3	356	6
Grand Total	836	0	329	27	1192	3	0	71	0	74	441	0	47	10	498	4	0	24	0	0	28	1792	37
Approach %	70.1%	0.0%	27.6%	2.3%	66.5%	4.1%	0.0%	95.9%	0.0%	4.1%	88.6%	0.0%	9.4%	2.0%	27.8%	14.3%	0.0%	85.7%	0.0%	0.0%	1.6%	100.0%	
Total %	46.7%	0.0%	18.4%	1.5%		0.2%	0.0%	4.0%	0.0%		24.6%	0.0%	2.6%	0.6%		0.2%	0.0%	1.3%	0.0%				

AM PEAK HOUR	Esplanade Southbound					Frances Willard Avenue Westbound					Esplanade Northbound					Frances Willard Avenue Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	21	0	11	1	33	0	0	2	0	2	13	0	0	0	13	0	0	0	0	0	48
07:30	50	0	29	0	79	0	9	0	9	0	51	0	9	0	60	0	0	4	0	4	152
07:45	78	0	40	1	119	0	26	0	26	0	93	0	11	0	104	0	0	0	0	0	249
08:00	29	0	12	2	43	0	0	6	0	6	17	0	1	0	18	0	0	2	0	2	69
Total Volume	178	0	92	4	274	0	0	43	0	43	174	0	21	0	195	0	0	6	0	6	518
% App Total	65.0%	0.0%	33.6%	1.5%		0.0%	0.0%	100.0%	0.0%		89.2%	0.0%	10.8%	0.0%		0.0%	0.0%	100.0%	0.0%		
PHF	.571	.000	.575	.500		.000	.000	.413	.000	.413	.468	.000	.477	.000	.469	.000	.000	.375	.000	.375	.520
PM PEAK HOUR	Esplanade Southbound					Frances Willard Avenue Westbound					Esplanade Northbound					Frances Willard Avenue Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 14:45 to 15:45																					
Peak Hour For Entire Intersection Begins at 14:45																					
14:45	56	0	25	1	82	0	0	0	0	0	42	0	4	1	47	0	0	1	0	1	130
15:00	51	0	26	2	79	0	0	0	0	0	48	0	4	0	52	1	0	3	0	4	135
15:15	55	0	21	1	77	0	0	0	0	0	28	0	5	1	34	0	0	3	0	3	114
15:30	55	0	13	3	71	0	0	2	0	2	15	0	0	1	16	2	0	3	0	5	94
Total Volume	217	0	85	7	309	0	0	2	0	2	133	0	13	3	149	3	0	10	0	13	473
% App Total	70.2%	0.0%	27.5%	2.3%		0.0%	0.0%	100.0%	0.0%		89.3%	0.0%	8.7%	2.0%		23.1%	0.0%	76.9%	0.0%		
PHF	.969	.000	.817	.583		.000	.000	.250	.000	.250	.693	.000	.650	.750	.716	.375	.000	.833	.000	.650	.876

ALL TRAFFIC DATA

(916) 771-8700

orders@aldtraffic.com

File Name : 15-7424-004 Esplanade-Lincoln Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					Westbound					Esplanade Northbound					Lincoln Avenue Eastbound					Total	Uturn Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	9	9	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	7	0	19	19	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	0	23	0	64	64	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	54	0	148	148	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	0	85	0	240	240	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	9	0	46	46	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	7	0	30	30	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	3	0	31	31	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	3	0	34	34	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	0	22	0	141	141	0
14:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	32	0	8	0	40	41	0
14:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	31	0	14	0	45	46	0
15:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	68	0	43	0	111	112	0
15:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	73	0	28	0	101	102	0
Total	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	204	0	93	0	297	301	0
15:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	44	0	20	0	64	66	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	6	0	38	38	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	15	0	43	43	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	20	0	6	0	26	27	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	124	0	47	0	171	174	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0	11	0	40	40	0
16:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	28	0	7	0	35	37	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	12	0	42	42	0
17:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	28	0	10	0	38	39	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	115	0	40	0	155	158	0
Grand Total	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	717	0	287	0	1004	1014	0
Approach %	0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.4%	0.0%	28.6%	0.0%			
Total %	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.7%	0.0%	28.3%	0.0%	99.0%	100.0%	

AM PEAK HOUR	Esplanade Southbound					Westbound					Esplanade Northbound					Lincoln Avenue Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
START TIME	07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	0	23	0	64	64
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	54	0	148	148
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	9	0	46	46
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	7	0	30	30
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195	0	93	0	288	288
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.7%	0.0%	32.3%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.519	.000	.431	.000	.486	.486
Peak Hour For Entire Intersection Begins at 07:30																					
Peak Hour For Entire Intersection Begins at 14:45 to 15:45																					
START TIME	14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	14	0	45	46
15:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	68	0	43	0	111	112
15:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	73	0	28	0	101	102
15:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	44	0	20	0	64	66
Total Volume	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	216	0	105	0	321	326
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	67.3%	0.0%	32.7%	0.0%		
PHF	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.740	.000	.610	.000	.723	.728

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-005 Esplanade-Sacramento Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					Westbound					Esplanade Northbound					Sacramento Avenue Eastbound					Total	Unm Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
07:00	0	0	25	0	25	0	0	0	0	0	15	0	0	0	15	0	0	5	0	5	45	0
07:15	0	0	47	0	47	0	0	0	0	0	39	0	0	0	39	0	0	20	0	20	106	0
07:30	0	0	101	0	101	0	0	0	0	0	53	0	0	0	53	0	0	26	0	26	180	0
07:45	0	0	107	0	107	0	0	0	0	0	71	0	0	0	71	0	0	57	0	57	235	0
Total	0	0	280	0	280	0	0	0	0	0	178	0	0	0	178	0	0	108	0	108	566	0
08:00	0	0	26	0	26	0	0	0	0	0	42	0	0	0	42	0	0	15	0	15	83	0
08:15	0	0	22	0	22	0	0	0	0	0	25	0	0	0	25	1	0	13	0	14	61	0
08:30	0	0	16	0	16	0	0	0	0	0	32	0	0	0	32	0	0	14	0	14	62	0
08:45	0	0	21	0	21	0	0	0	0	0	23	0	0	0	23	1	0	16	0	17	61	0
Total	0	0	85	0	85	0	0	0	0	0	122	0	0	0	122	2	0	58	0	60	267	0

14:30	0	0	20	0	20	0	0	0	0	0	45	0	0	0	45	0	0	27	0	27	92	0
14:45	0	0	47	0	47	0	0	0	0	0	81	0	0	1	82	1	0	29	0	30	159	1
15:00	0	0	62	0	62	0	0	0	0	0	48	0	0	0	48	0	0	40	0	40	150	0
15:15	0	0	27	0	27	0	0	0	0	0	68	0	0	3	71	1	0	48	0	48	146	3
Total	0	0	156	0	156	0	0	0	0	0	242	0	0	4	246	1	0	144	0	145	547	4
15:30	0	0	28	0	28	0	0	0	0	0	46	0	0	0	46	1	0	49	0	50	124	0
15:45	0	0	26	0	26	0	0	0	0	0	52	0	0	0	52	0	0	36	0	36	114	0
16:00	0	0	30	0	30	0	0	0	0	0	59	0	0	0	59	0	0	37	0	37	126	0
16:15	0	0	28	0	28	0	0	0	0	0	52	0	0	0	52	0	0	40	0	40	120	0
Total	0	0	112	0	112	0	0	0	0	0	209	0	0	0	209	1	0	162	0	163	484	0

16:30	0	0	29	0	29	0	0	0	0	0	48	0	0	1	49	0	0	29	1	30	108	2
16:45	0	0	28	0	28	0	0	0	0	0	38	0	0	0	38	3	0	25	1	29	95	1
17:00	0	0	36	0	36	0	0	0	0	0	51	0	0	0	51	0	0	37	0	37	124	0
17:15	0	0	29	0	29	0	0	0	0	0	67	0	0	0	67	0	0	29	0	29	125	0
Total	0	0	122	0	122	0	0	0	0	0	204	0	0	1	205	3	0	120	2	125	452	3
Grand Total	0	0	755	0	755	0	0	0	0	0	955	0	0	5	960	7	0	592	2	601	2316	7
Approch %	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.5%	0.0%	0.0%	0.5%	0.0%	1.2%	0.0%	98.5%	0.3%	0.0%	100.0%	
Total %	0.0%	0.0%	32.6%	0.0%	32.6%	0.0%	0.0%	0.0%	0.0%	0.0%	41.2%	0.0%	0.0%	0.2%	41.5%	0.3%	0.0%	25.6%	0.1%	25.9%	100.0%	

AM PEAK HOUR	Esplanade Southbound					Westbound					Esplanade Northbound					Sacramento Avenue Eastbound					Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL					
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
07:15	0	0	47	0	0	0	0	0	0	0	0	39	0	0	20	0	20	106			
07:30	0	0	101	0	0	0	0	0	0	0	0	53	0	0	26	0	26	180			
07:45	0	0	107	0	0	0	0	0	0	0	0	71	0	0	57	0	57	235			
08:00	0	0	26	0	0	0	0	0	0	0	0	42	0	0	15	0	15	83			
Total Volume	0	0	281	0	0	0	0	0	0	0	0	205	0	0	118	0	118	604			
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%				
PHF	.000	.000	.657	.000	.000	.000	.000	.000	.000	.000	.000	.722	.000	.000	.518	.000	.518	.643			

PM PEAK HOUR	Esplanade Southbound					Westbound					Esplanade Northbound					Sacramento Avenue Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL
Peak Hour Analysis From 14:45 to 15:45																						
Peak Hour For Entire Intersection Begins at 14:45																						
14:45	0	0	47	0	47	0	0	0	0	0	81	0	0	1	82	1	0	29	0	30	159	
15:00	0	0	62	0	62	0	0	0	0	0	48	0	0	0	48	0	0	40	0	40	150	
15:15	0	0	27	0	27	0	0	0	0	0	68	0	0	3	71	0	0	48	0	48	146	
15:30	0	0	28	0	28	0	0	0	0	0	46	0	0	0	46	1	0	49	0	50	124	
Total Volume	0	0	164	0	164	0	0	0	0	0	243	0	0	4	247	2	0	166	0	168	579	
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98.4%	0.0%	0.0%	1.6%	1.2%	0.0%	0.0%	98.8%	0.0%	0.0%		
PHF	.000	.000	.661	.000	.661	.000	.000	.000	.000	.000	.750	.000	.000	.333	.753	.500	.000	.847	.000	.840	.910	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-006 Esplanade-2nd Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound					2nd Avenue Westbound					Esplanade Northbound					2nd Avenue Eastbound					Total	Uturn Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS			APP TOTAL
	07:00	4	0	2	0	6	1	0	1	0	2	3	0	2	0	5	1	0	4	0	5	18	0
	07:15	6	0	3	0	9	2	0	4	0	6	4	0	1	0	5	1	0	1	0	2	22	0
	07:30	5	0	8	0	13	0	0	8	0	8	15	0	2	0	17	1	0	3	0	4	42	0
	07:45	5	0	27	1	33	1	1	1	0	3	24	0	1	0	25	1	0	5	0	6	67	1
	Total	20	0	40	1	61	4	1	14	0	19	46	0	6	0	52	4	0	13	0	17	149	1
	08:00	14	0	5	0	19	0	0	5	0	5	7	0	0	0	7	1	1	7	0	9	40	0
	08:15	12	0	8	0	20	0	0	4	0	4	5	0	2	0	7	0	0	4	0	4	35	0
	08:30	14	0	1	0	15	1	0	1	0	2	5	0	1	0	6	0	0	4	0	4	27	0
	08:45	8	0	3	0	11	0	0	0	0	0	7	0	2	0	9	2	1	4	0	7	27	0
	Total	48	0	17	0	65	1	0	10	0	11	24	0	5	0	29	3	2	19	0	24	129	0
	15:30	12	0	3	0	15	1	0	5	0	6	8	0	6	0	14	0	0	2	0	2	37	0
	15:45	14	0	2	0	16	2	0	6	0	8	10	0	4	0	14	1	0	1	0	2	40	0
	16:00	13	0	2	0	15	0	0	7	0	7	9	0	5	0	14	1	0	5	0	6	42	0
	16:15	18	0	3	0	21	1	0	4	0	5	19	0	1	0	20	0	1	4	0	5	51	0
	Total	57	0	10	0	67	4	0	22	0	26	46	0	16	0	62	2	1	12	0	15	170	0
	16:30	14	0	3	0	17	1	0	2	0	3	12	0	2	0	14	2	0	1	0	3	37	0
	16:45	12	0	9	0	21	3	0	4	0	7	8	0	3	0	11	1	0	3	0	4	43	0
	17:00	15	0	4	0	19	0	0	2	0	2	11	0	4	0	15	1	0	5	0	6	42	0
	17:15	21	0	1	0	22	0	0	3	0	3	17	0	7	0	24	0	0	2	0	2	51	0
	Total	62	0	17	0	79	4	0	11	0	15	48	0	16	0	64	4	0	11	0	15	173	0
Grand Total	Total	187	0	84	1	272	13	1	57	0	71	164	0	43	0	207	13	3	55	0	71	621	1
Approach %	68.8%	0.0%	30.9%	0.4%	0.2%	43.8%	18.3%	1.4%	80.3%	0.0%	11.4%	79.2%	0.0%	20.8%	0.0%	33.3%	18.3%	4.2%	77.5%	0.0%	11.4%	100.0%	
Total %	30.1%	0.0%	13.5%	0.2%			2.1%	0.2%	9.2%			26.4%	0.0%	6.9%			2.1%	0.5%	8.9%				

AM PEAK HOUR	Esplanade Southbound					2nd Avenue Westbound					Esplanade Northbound					2nd Avenue Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
07:30	5	0	8	0	13		0	0	8	0	8	15	0	2	0	17	1	0	3	0	4	42
07:45	5	0	27	1	33		1	1	0	3	24	0	1	0	25	1	0	5	0	6	67	
08:00	14	0	5	0	19		0	0	5	0	5	7	0	0	7	1	1	7	0	9	40	
08:15	12	0	8	0	20		0	0	4	0	4	5	0	2	0	7	0	0	4	0	4	35
Total Volume	36	0	48	1	85		1	1	18	0	20	51	0	5	0	56	3	1	19	0	23	184
% App Total	42.4%	0.0%	56.5%	1.2%			5.0%	5.0%	90.0%	0.0%		91.1%	0.0%	8.9%	0.0%		13.0%	4.3%	82.6%	0.0%		
PHF	.643	.000	.444	.250	.644		.250	.250	.563	.000	.625	.531	.000	.625	.000	.560	.750	.250	.679	.000	.639	.687
PM PEAK HOUR	Esplanade Southbound					2nd Avenue Westbound					Esplanade Northbound					2nd Avenue Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	13	0	2	0	15		0	0	7	0	7	9	0	5	0	14	1	0	5	0	6	42
16:15	18	0	3	0	21		1	0	4	0	5	19	0	1	0	20	0	1	4	0	5	51
16:30	14	0	3	0	17		1	0	2	0	3	12	0	2	0	14	2	0	1	0	3	37
16:45	12	0	9	0	21		3	0	4	0	7	8	0	3	0	11	1	0	3	0	4	43
Total Volume	57	0	17	0	74		5	0	17	0	22	48	0	11	0	59	4	1	13	0	18	173
% App Total	77.0%	0.0%	23.0%	0.0%			22.7%	0.0%	77.3%	0.0%		81.4%	0.0%	18.6%	0.0%		22.2%	5.6%	72.2%	0.0%		
PHF	.792	.000	.472	.000	.881		.417	.000	.607	.000	.786	.632	.000	.550	.000	.738	.500	.250	.650	.000	.750	.848

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-007 Esplanade-3rd Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound						3rd Avenue Westbound						Esplanade Northbound						3rd Avenue Eastbound													
	LEFT			THRU			RIGHT			UTURNS			APP TOTAL			LEFT			THRU			RIGHT			UTURNS			APP TOTAL			Total	Ultm Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL						
07:00	0	0	1	0	0	1	4	0	6	0	10	0	0	0	0	0	1	5	1	0	0	7	18	0								
07:15	0	0	2	0	2	2	3	1	1	0	5	0	0	3	0	3	5	5	0	0	10	20	0									
07:30	0	0	5	0	5	5	9	16	7	0	32	0	0	3	0	3	14	19	9	0	42	82	0									
07:45	0	0	8	0	8	8	27	25	7	0	59	0	0	6	0	6	31	20	10	0	61	134	0									
Total	0	0	16	0	16	16	43	42	21	0	106	0	0	12	0	12	51	49	20	0	120	254	0									
08:00	0	0	5	0	5	5	6	10	11	0	27	0	0	2	0	2	19	19	5	0	43	77	0									
08:15	0	0	0	0	0	0	4	5	7	0	16	0	0	7	0	7	9	6	0	0	15	38	0									
08:30	0	0	4	0	4	4	7	1	6	0	14	0	0	2	0	2	5	5	1	0	11	31	0									
08:45	0	0	4	0	4	4	2	3	7	0	12	0	0	3	0	3	7	4	3	0	14	33	0									
Total	0	0	13	0	13	13	19	19	31	0	69	0	0	14	0	14	40	34	9	0	83	179	0									
15:30	0	0	2	0	2	2	7	1	6	0	14	0	0	5	0	5	12	10	1	0	23	44	0									
15:45	0	0	0	0	0	0	10	7	8	0	25	0	0	5	0	5	8	10	10	0	28	58	0									
16:00	0	0	3	0	3	3	6	2	11	0	19	0	0	3	0	3	12	11	3	0	26	51	0									
16:15	0	0	8	0	8	8	6	2	6	0	14	0	0	7	0	7	8	13	3	0	24	53	0									
Total	0	0	13	0	13	13	29	12	31	0	72	0	0	20	0	20	40	44	17	0	101	206	0									
16:30	0	0	2	0	2	2	5	8	7	0	20	0	0	3	0	3	9	8	1	0	18	43	0									
16:45	0	0	4	0	4	4	9	6	10	0	25	0	0	3	0	3	9	5	5	0	19	51	0									
17:00	0	0	4	0	4	4	5	6	15	0	26	0	0	2	0	2	18	14	4	0	36	68	0									
17:15	0	0	8	0	8	8	4	11	9	0	24	0	0	8	0	8	14	11	2	0	27	67	0									
Total	0	0	18	0	18	18	23	31	41	0	95	0	0	16	0	16	50	38	12	0	100	229	0									
Grand Total	0	0	60	0	60	60	114	104	124	0	342	0	0	62	0	62	181	165	58	0	404	868	0									
Approch %	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	33.3%	30.4%	36.3%	0.0%	39.4%	0.0%	0.0%	100.0%	0.0%	0.0%	44.8%	40.8%	14.4%	0.0%	0.0%	46.5%	100.0%									
Total %	0.0%	0.0%	6.9%	0.0%	0.0%	6.9%	13.1%	12.0%	14.3%	0.0%	39.4%	0.0%	0.0%	7.1%	0.0%	7.1%	20.9%	19.0%	6.7%	0.0%	46.5%	100.0%										

AM PEAK HOUR	Esplanade Southbound						3rd Avenue Westbound						Esplanade Northbound						3rd Avenue Eastbound												
	LEFT			THRU			RIGHT			UTURNS			APP TOTAL			LEFT			THRU			RIGHT			UTURNS			APP TOTAL			Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL					
Peak Hour Analysis From 07:30 to 08:30																															
Peak Hour For Entire Intersection Begins at 07:30																															
07:30	0	0	5	0	0	5	9	16	7	0	32	0	0	3	0	3	14	19	9	0	42	82									
07:45	0	0	8	0	0	8	27	25	7	0	59	0	0	6	0	6	31	20	10	0	61	134									
08:00	0	0	5	0	0	5	6	10	11	0	27	0	0	2	0	2	19	19	5	0	43	77									
08:15	0	0	0	0	0	0	4	5	7	0	16	0	0	7	0	7	9	6	0	0	15	38									
Total Volume	0	0	18	0	0	18	46	56	32	0	134	0	0	18	0	18	73	64	24	0	161	331									
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	34.3%	41.8%	23.9%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	45.3%	39.8%	14.9%	0.0%	0.0%	61.8									
PHF	.000	.000	.563	.000	.000	.563	.426	.560	.727	.000	.568	.000	.000	.643	.000	.643	.589	.800	.600	.000	.000	.618									

PM PEAK HOUR	Esplanade Southbound						3rd Avenue Westbound						Esplanade Northbound						3rd Avenue Eastbound												
	LEFT			THRU			RIGHT			UTURNS			APP TOTAL			LEFT			THRU			RIGHT			UTURNS			APP TOTAL			Total
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL					
Peak Hour Analysis From 16:30 to 17:30																															
Peak Hour For Entire Intersection Begins at 16:30																															
16:30	0	0	2	0	0	2	5	8	7	0	20	0	0	3	0	3	9	8	1	0	18	43									
16:45	0	0	4	0	0	4	9	6	10	0	25	0	0	3	0	3	9	5	5	0	19	51									
17:00	0	0	4	0	0	4	5	6	15	0	26	0	0	2	0	2	18	14	4	0	36	68									
17:15	0	0	8	0	0	8	4	11	9	0	24	0	0	8	0	8	14	11	2	0	27	67									
Total Volume	0	0	18	0	0	18	23	31	41	0	95	0	0	16	0	16	50	38	12	0	100	229									
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	24.2%	32.6%	43.2%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	50.0%	38.0%	12.0%	0.0%	0.0%	229									
PHF	.000	.000	.563	.000	.000	.563	.639	.705	.683	.000	.913	.000	.000	.500	.000	.500	.694	.679	.600	.000	.000	.842									

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-008 Esplanade-4th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound					4th Avenue Westbound					Esplanade Northbound					4th Avenue Eastbound					Total	Uturn Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS			APP TOTAL
	07:00	6	0	15	0	21	0	0	0	0	0	9	0	0	0	9	1	0	4	0	5	35	0
	07:15	9	0	8	0	17	1	1	0	0	2	5	0	2	0	7	6	1	7	0	14	40	0
	07:30	12	0	20	0	32	1	0	2	0	3	10	0	2	0	12	3	2	9	0	14	61	0
	07:45	16	0	17	0	33	0	1	4	0	5	22	0	1	1	24	1	2	13	0	16	78	1
	Total	43	0	60	0	103	2	2	6	0	10	46	0	5	1	52	11	5	33	0	49	214	1
	08:00	18	0	15	1	34	0	0	1	0	1	10	0	0	0	10	3	1	9	0	13	58	1
	08:15	17	0	9	0	26	0	0	1	0	1	11	0	1	0	12	7	2	8	0	17	56	0
	08:30	11	0	6	0	17	0	0	2	0	2	12	0	2	0	14	2	0	6	0	8	41	0
	08:45	9	0	6	0	15	0	0	1	0	1	9	0	2	0	11	3	1	10	0	14	41	0
	Total	55	0	36	1	92	0	0	5	0	5	42	0	5	0	47	15	4	33	0	52	196	1
	15:30	10	0	7	0	17	1	0	3	0	4	13	0	1	0	14	8	5	16	0	29	64	0
	15:45	18	0	16	0	34	0	2	1	0	3	21	0	0	0	21	6	1	14	0	21	79	0
	16:00	12	0	10	1	23	1	1	3	0	5	15	0	2	0	17	6	1	13	0	20	65	1
	16:15	10	0	8	1	19	1	1	1	0	3	12	0	1	0	13	4	2	11	0	17	52	1
	Total	50	0	41	2	93	3	4	8	0	15	61	0	4	0	65	24	9	54	0	87	260	2
	16:30	14	0	8	1	23	0	0	4	0	4	21	0	3	0	24	9	1	15	0	25	76	1
	16:45	16	0	9	0	25	0	2	1	0	3	11	0	4	0	15	10	1	8	0	19	62	0
	17:00	17	0	13	0	30	2	0	2	0	4	16	0	1	0	17	7	2	10	0	19	70	0
	17:15	16	0	12	0	28	0	1	0	0	1	14	0	4	0	18	5	1	12	0	18	65	0
	Total	63	0	42	1	106	2	3	7	0	12	62	0	12	0	74	31	5	45	0	81	273	1
Grand Total		211	0	179	4	394	7	9	26	0	42	211	0	26	1	238	81	23	165	0	269	943	5
Approach %		53.6%	0.0%	45.4%	1.0%	16.7%	16.7%	21.4%	61.9%	0.0%	0.0%	88.7%	0.0%	10.9%	0.4%	30.1%	8.6%	8.6%	61.3%	0.0%	0.0%	28.5%	100.0%
Total %		22.4%	0.0%	19.0%	0.4%	41.8%	0.7%	1.0%	2.8%	0.0%	4.5%	22.4%	0.0%	2.8%	0.1%	25.2%	8.6%	2.4%	17.5%	0.0%	0.0%	28.5%	100.0%

AM PEAK HOUR	Esplanade Southbound					4th Avenue Westbound					Esplanade Northbound					4th Avenue Eastbound					Total		
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL	
Peak Hour Analysis From 07:30 to 08:30																							
Peak Hour For Entire Intersection Begins at 07:30																							
07:30	12	0	20	0	32		1	0	2	0	3		10	0	2	0	12		3	2	9	0	14
07:45	16	0	17	0	33		0	1	4	0	5		22	0	1	1	24		1	2	13	0	16
08:00	18	0	15	1	34		0	0	1	0	1		10	0	0	0	10		3	1	9	0	13
08:15	17	0	9	0	26		0	0	1	0	1		11	0	1	0	12		7	2	8	0	17
Total Volume	63	0	61	1	125		1	1	8	0	10		53	0	4	1	58		14	7	39	0	60
% App Total	50.4%	0.0%	48.8%	0.8%	10.0%		10.0%	10.0%	80.0%	0.0%	0.0%		91.4%	0.0%	6.9%	1.7%	23.3%		23.3%	11.7%	65.0%	0.0%	
PHF	.875	.000	.763	.250	.919		.250	.250	.500	.000	.500		.602	.000	.500	.250	.604		.500	.875	.750	.000	.882
Peak Hour Analysis From 16:30 to 17:30																							
Peak Hour For Entire Intersection Begins at 16:30																							
16:30	14	0	8	1	23		0	0	4	0	4		21	0	3	0	24		9	1	15	0	25
16:45	16	0	9	0	25		0	2	1	0	3		11	0	4	0	15		10	1	8	0	19
17:00	17	0	13	0	30		2	0	2	0	4		16	0	1	0	17		7	2	10	0	19
17:15	16	0	12	0	28		0	1	0	0	1		14	0	4	0	18		5	1	12	0	18
Total Volume	63	0	42	1	106		2	3	7	0	12		62	0	12	0	74		31	5	45	0	81
% App Total	59.4%	0.0%	39.6%	0.9%	16.7%		16.7%	25.0%	58.3%	0.0%	0.0%		83.8%	0.0%	16.2%	0.0%	38.3%		38.3%	6.2%	55.6%	0.0%	
PHF	.926	.000	.808	.250	.883		.250	.375	.438	.000	.750		.738	.000	.750	.000	.771		.775	.625	.750	.000	.810

ALL TRAFFIC DATA

(916) 771-8700

orders@aidtraffic.com

File Name : 15-7424-009 Esplanade-5th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound					5th Avenue Westbound					Esplanade Northbound					5th Avenue Eastbound					Total	Uturn Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS			APP TOTAL
07:00	0	0	1	0	1	34	13	11	10	0	34	0	0	5	0	5	3	8	3	0	14	54	0
07:15	0	0	4	0	4	42	19	7	16	0	42	0	0	6	0	6	8	17	0	0	25	77	0
07:30	0	0	6	0	6	90	47	19	24	0	90	0	0	3	0	3	6	21	4	0	31	130	0
07:45	0	0	12	0	12	102	39	27	36	0	102	0	0	14	0	14	14	27	7	0	48	176	0
Total	0	0	23	0	23	268	118	64	86	0	268	0	0	28	0	28	31	73	14	0	118	437	0
08:00	0	0	15	0	15	55	18	11	26	0	55	0	0	16	0	16	6	18	3	0	27	113	0
08:15	0	0	7	0	7	36	9	9	18	0	36	1	0	11	0	12	12	13	4	0	29	84	0
08:30	0	0	5	0	5	35	12	4	19	0	35	0	0	8	0	8	9	9	0	0	18	66	0
08:45	0	0	5	0	5	45	12	15	18	0	45	0	0	9	0	9	5	10	3	0	18	77	0
Total	0	0	32	0	32	171	51	39	81	0	171	1	0	44	0	45	32	50	10	0	92	340	0
15:30	0	0	6	0	6	65	14	29	22	0	65	0	0	15	0	15	15	25	5	0	45	131	0
15:45	0	0	5	0	5	52	12	12	28	0	52	0	0	14	0	14	10	16	4	0	30	101	0
16:00	0	0	9	0	9	56	14	17	25	0	56	0	0	18	0	18	12	26	5	0	43	126	0
16:15	0	0	6	0	6	53	26	12	15	0	53	0	0	9	0	9	8	27	2	0	37	105	0
Total	0	0	26	0	26	226	66	70	90	0	226	0	0	56	0	56	45	94	16	0	155	463	0
16:30	0	0	6	0	6	56	17	19	20	0	56	0	0	8	0	8	8	19	3	0	30	100	0
16:45	0	0	6	0	6	68	18	16	34	0	68	0	0	18	0	18	6	28	3	0	37	129	0
17:00	0	0	7	0	7	69	22	17	30	0	69	0	0	22	0	22	11	22	1	0	34	132	0
17:15	0	0	4	0	4	58	19	17	22	0	58	0	0	23	0	23	14	21	6	0	41	126	0
Total	0	0	23	0	23	251	76	69	106	0	251	0	0	71	0	71	39	90	13	0	142	487	0
Grand Total	0	0	104	0	104	916	311	242	363	0	916	1	0	199	0	200	147	307	53	0	507	1727	0
Approach %	0.0%	0.0%	100.0%	0.0%	0.0%	53.0%	34.0%	26.4%	39.6%	0.0%	0.0%	0.5%	0.0%	99.5%	0.0%	11.6%	29.0%	60.6%	10.5%	0.0%	29.4%	100.0%	0
Total %	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	18.0%	14.0%	21.0%	0.0%	0.0%	0.1%	0.0%	11.5%	0.0%	0.0%	8.5%	17.8%	3.1%	0.0%	0.0%	100.0%	0

AM PEAK HOUR	Esplanade Southbound					5th Avenue Westbound					Esplanade Northbound					5th Avenue Eastbound					Total		
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL	
07:30	0	0	6	0	6	90	47	19	24	0	90	0	0	3	0	3	6	21	4	0	31	130	0
07:45	0	0	12	0	12	102	39	27	36	0	102	0	0	14	0	14	14	27	7	0	48	176	0
08:00	0	0	15	0	15	55	18	11	26	0	55	0	0	16	0	16	6	18	3	0	27	113	0
08:15	0	0	7	0	7	36	9	9	18	0	36	1	0	11	0	12	12	13	4	0	29	84	0
Total Volume	0	0	40	0	40	283	113	66	104	0	283	1	0	44	0	45	38	79	18	0	135	503	0
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	39.9%	23.3%	36.7%	0.0%	0.0%	2.2%	0.0%	97.8%	0.0%	0.0%	28.1%	58.5%	13.3%	0.0%	0.0%	100.0%	0
PHF	.000	.000	.667	.000	.667	.694	.601	.611	.722	.000	.694	.250	.000	.688	.000	.703	.679	.731	.643	.000	.703	.714	0

PM PEAK HOUR	Esplanade Southbound					5th Avenue Westbound					Esplanade Northbound					5th Avenue Eastbound					Total		
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL	
16:30	0	0	6	0	6	56	17	19	20	0	56	0	0	8	0	8	8	19	3	0	30	100	0
16:45	0	0	6	0	6	68	18	16	34	0	68	0	0	18	0	18	6	28	3	0	37	129	0
17:00	0	0	7	0	7	69	22	17	30	0	69	0	0	22	0	22	11	22	1	0	34	132	0
17:15	0	0	4	0	4	58	19	17	22	0	58	0	0	23	0	23	14	21	6	0	41	126	0
Total Volume	0	0	23	0	23	251	76	69	106	0	251	0	0	71	0	71	39	90	13	0	142	487	0
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	30.3%	27.5%	42.2%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	27.5%	63.4%	9.2%	0.0%	0.0%	100.0%	0
PHF	.000	.000	.821	.000	.821	.909	.864	.908	.779	.000	.909	.000	.000	.772	.000	.772	.696	.804	.542	.000	.866	.922	0

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-010 Esplanade-6th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					6th Avenue Westbound					Esplanade Northbound					6th Avenue Eastbound					Total	Uturn Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
07:00	4	0	5	1	10	0	0	0	0	0	11	0	1	0	12	1	0	5	0	6	28	1
07:15	11	0	6	0	17	0	0	0	0	0	21	0	0	0	21	4	1	5	0	10	48	0
07:30	16	0	10	0	26	0	0	0	0	0	19	0	1	0	20	2	7	21	0	30	76	0
07:45	20	0	12	0	32	0	0	6	0	6	40	0	1	0	41	0	0	12	0	12	91	0
Total	51	0	33	1	85	0	0	6	0	6	91	0	3	0	94	7	8	43	0	58	243	1
08:00	26	0	6	0	32	1	0	1	0	2	11	0	4	0	15	1	0	2	0	3	52	0
08:15	14	0	11	1	26	0	1	0	0	1	27	0	4	1	32	3	0	7	0	10	69	2
08:30	16	0	7	0	23	0	0	2	0	2	15	0	2	0	17	1	0	5	0	6	48	0
08:45	11	0	7	0	18	0	1	2	0	3	22	0	2	0	24	0	0	7	0	7	52	0
Total	67	0	31	1	99	1	2	5	0	8	75	0	12	1	88	5	0	21	0	26	221	2
15:30	9	0	2	0	11	1	0	4	0	5	10	0	4	0	14	3	1	3	0	7	37	0
15:45	14	0	7	0	21	2	0	5	0	7	9	0	1	0	10	5	2	15	0	22	60	0
16:00	22	0	8	0	30	1	0	4	0	5	11	0	2	0	13	1	1	12	0	14	62	0
16:15	17	0	8	1	26	2	0	3	0	5	10	0	2	0	12	3	2	11	0	16	59	1
Total	62	0	25	1	88	6	0	16	0	22	40	0	9	0	49	12	6	41	0	59	218	1
16:30	10	0	8	0	18	1	0	0	0	1	10	0	1	0	11	4	1	23	0	28	58	0
16:45	12	0	6	1	19	3	1	10	0	14	10	0	2	0	12	1	0	9	0	10	55	1
17:00	13	0	7	1	21	1	0	4	0	5	14	0	3	1	18	3	1	12	0	16	60	2
17:15	21	0	4	0	25	2	0	6	0	8	10	0	0	0	10	4	2	12	0	18	61	0
Total	56	0	25	2	83	7	1	20	0	28	44	0	6	1	51	12	4	56	0	72	234	3
Grand Total	236	0	114	5	355	14	3	47	0	64	250	0	30	2	282	36	18	161	0	215	916	7
Approach %	66.5%	0.0%	32.1%	1.4%		21.9%	4.7%	73.4%	0.0%		88.7%	0.0%	10.6%	0.7%		16.7%	8.4%	74.9%	0.0%			
Total %	25.8%	0.0%	12.4%	0.5%	38.8%	1.5%	0.3%	5.1%	0.0%	7.0%	27.3%	0.0%	3.3%	0.2%	30.8%	3.9%	2.0%	17.6%	0.0%	23.5%	100.0%	

AM PEAK HOUR	Esplanade Southbound					6th Avenue Westbound					Esplanade Northbound					6th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
07:30	16	0	10	0	26		0	0	0	0	0	19	0	1	0	20	2	7	21	0	30	76
07:45	20	0	12	0	32		0	0	6	0	6	40	0	1	0	41	0	0	12	0	12	91
08:00	26	0	6	0	32		1	0	1	0	2	11	0	4	0	15	1	0	2	0	3	52
08:15	14	0	11	1	26		0	1	0	0	1	27	0	4	1	32	3	0	7	0	10	69
Total Volume	76	0	39	1	116		1	1	7	0	9	97	0	10	1	108	6	7	42	0	55	288
% App Total	65.5%	0.0%	33.6%	0.9%			11.1%	11.1%	77.8%	0.0%		89.8%	0.0%	9.3%	0.9%		10.9%	12.7%	76.4%	0.0%		
PHF	.731	.000	.813	.250	.906		.250	.250	.292	.000	.375	.606	.000	.625	.250	.659	.500	.250	.500	.000	.458	.791
PM PEAK HOUR	Esplanade Southbound					6th Avenue Westbound					Esplanade Northbound					6th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour Analysis From 15:45 to 16:45																						
Peak Hour For Entire Intersection Begins at 15:45																						
15:45	14	0	7	0	21		2	0	5	0	7	9	0	1	0	10	5	2	15	0	22	60
16:00	22	0	8	0	30		1	0	4	0	5	11	0	2	0	13	1	1	12	0	14	62
16:15	17	0	8	1	26		2	0	3	0	5	10	0	2	0	12	3	2	11	0	16	59
16:30	10	0	8	0	18		1	0	0	0	1	10	0	1	0	11	4	1	23	0	28	58
Total Volume	63	0	31	1	95		6	0	12	0	18	40	0	6	0	46	13	6	61	0	80	239
% App Total	66.3%	0.0%	32.6%	1.1%			33.3%	0.0%	66.7%	0.0%		87.0%	0.0%	13.0%	0.0%		16.3%	7.5%	76.3%	0.0%		
PHF	.716	.000	.969	.250	.792		.750	.000	.600	.000	.643	.909	.000	.750	.000	.885	.650	.750	.663	.000	.714	.964

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-011 Esplanade-7th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					7th Avenue Westbound					Esplanade Northbound					7th Avenue Eastbound						
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total	Utum Total
07:00	0	0	5	0	5	1	3	3	0	7	0	0	3	0	3	2	5	1	0	8	23	0
07:15	0	0	13	0	13	1	5	4	0	10	0	0	3	0	3	3	6	6	0	15	41	0
07:30	0	0	6	0	6	3	13	9	0	25	0	0	8	0	8	21	23	10	0	54	93	0
07:45	0	0	13	0	13	4	9	11	0	24	0	0	6	0	6	16	15	9	0	40	83	0
Total	0	0	37	0	37	9	30	27	0	66	0	0	20	0	20	42	49	26	0	117	240	0
08:00	0	0	9	0	9	4	10	10	0	24	0	0	5	0	5	12	14	7	0	33	71	0
08:15	0	0	9	0	9	2	9	10	0	21	0	0	2	0	2	9	6	4	0	19	51	0
08:30	0	0	7	0	7	4	5	6	0	15	0	0	3	0	3	7	4	7	0	18	43	0
08:45	0	0	5	0	5	6	5	12	0	23	0	0	5	0	5	10	4	4	0	18	51	0
Total	0	0	30	0	30	16	29	38	0	83	0	0	15	0	15	38	28	22	0	88	216	0
15:30	0	0	5	0	5	2	3	15	0	20	0	0	7	0	7	22	18	6	0	46	78	0
15:45	0	0	10	0	10	7	6	14	0	27	0	0	4	0	4	18	6	2	0	26	67	0
16:00	0	0	6	0	6	7	9	14	0	30	1	0	7	0	8	17	10	5	0	32	76	0
16:15	0	0	2	0	2	4	3	9	0	16	1	0	3	0	4	13	12	4	0	29	51	0
Total	0	0	23	0	23	20	21	52	0	93	2	0	21	0	23	70	46	17	0	133	272	0
16:30	0	0	3	0	3	6	5	5	0	16	0	0	0	0	0	17	15	6	0	38	57	0
16:45	0	0	8	0	8	4	9	13	0	26	0	0	2	0	2	16	16	11	0	43	79	0
17:00	0	0	8	0	8	7	8	18	0	33	0	0	2	0	2	25	11	7	0	43	86	0
17:15	0	0	7	0	7	4	4	7	0	15	0	0	6	0	6	18	8	6	0	32	60	0
Total	0	0	26	0	26	21	26	43	0	90	0	0	10	0	10	76	50	30	0	156	282	0
Grand Total	0	0	116	0	116	66	106	160	0	332	2	0	66	0	68	226	173	95	0	494	1010	0
Approch %	0.0%	0.0%	100.0%	0.0%		19.9%	31.9%	48.2%	0.0%		2.9%	0.0%	97.1%	0.0%		45.7%	35.0%	19.2%	0.0%			
Total %	0.0%	0.0%	11.5%	0.0%		6.5%	10.5%	15.8%	0.0%		0.2%	0.0%	6.5%	0.0%		22.4%	17.1%	9.4%	0.0%	48.9%	100.0%	

AM PEAK HOUR	Esplanade Southbound					7th Avenue Westbound					Esplanade Northbound					7th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour For Entire Intersection Begins at 07:30																						
07:30	0	0	6	0	6		3	13	9	0	25	0	0	8	0	8	21	23	10	0	54	93
07:45	0	0	13	0	13		4	9	11	0	24	0	0	6	0	6	16	15	9	0	40	83
08:00	0	0	9	0	9		4	10	10	0	24	0	0	5	0	5	12	14	7	0	33	71
08:15	0	0	9	0	9		2	9	10	0	21	0	0	2	0	2	9	6	4	0	19	51
Total Volume	0	0	37	0	37		13	41	40	94		0	0	21	0	21	58	58	30	0	146	298
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%		13.8%	43.6%	42.6%	0.0%		0.0%	0.0%	100.0%	0.0%	0.0%	39.7%	39.7%	20.5%	0.0%		
PHF	.000	.000	.712	.000	.712		.813	.788	.909	.000	.940	.000	.000	.656	.000	.656	.690	.630	.750	.000	.676	.801
PM PEAK HOUR	Esplanade Southbound					7th Avenue Westbound					Esplanade Northbound					7th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	3	0	3		6	5	5	0	16	0	0	0	0	0	17	15	6	0	38	57
16:45	0	0	8	0	8		4	9	13	0	26	0	0	2	0	2	16	16	11	0	43	79
17:00	0	0	8	0	8		7	8	18	0	33	0	0	2	0	2	25	11	7	0	43	86
17:15	0	0	7	0	7		4	4	7	0	15	0	0	6	0	6	18	8	6	0	32	60
Total Volume	0	0	26	0	26		21	26	43	0	90	0	0	10	0	10	76	50	30	0	156	282
% App Total	0.0%	0.0%	100.0%	0.0%	0.0%		23.3%	28.9%	47.8%	0.0%		0.0%	0.0%	100.0%	0.0%	0.0%	48.7%	32.1%	19.2%	0.0%		
PHF	.000	.000	.813	.000	.813		.750	.722	.597	.000	.682	.000	.000	.417	.000	.417	.760	.781	.682	.000	.907	.820

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7424-012 Esplanade-8th Avenue.ppd
Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					8th Avenue Westbound					Esplanade Northbound					8th Avenue Eastbound				
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL
07:00	3	0	16	0	19	0	2	0	0	2	14	0	3	0	17	9	1	14	0	24
07:15	5	0	21	0	26	0	2	0	0	2	15	0	2	0	17	7	2	28	0	37
07:30	7	0	16	0	23	0	1	2	0	3	22	0	2	0	24	9	0	25	0	34
07:45	11	0	31	0	42	0	0	1	0	1	51	0	4	0	55	5	0	39	0	44
Total	26	0	84	0	110	0	5	3	0	8	102	0	11	0	113	30	3	106	0	139
08:00	11	0	19	0	30	1	1	1	0	3	47	0	1	0	48	11	3	39	0	53
08:15	5	0	18	0	23	0	0	5	0	5	24	0	3	0	27	11	2	29	0	42
08:30	14	0	22	0	36	1	0	1	0	2	22	0	1	0	23	7	1	20	0	28
08:45	7	0	16	0	23	1	1	4	0	6	15	0	1	0	16	12	4	10	0	26
Total	37	0	75	0	112	3	2	11	0	16	108	0	6	0	114	41	10	98	0	149
15:30	12	0	22	0	34	0	0	6	0	6	39	0	4	0	43	8	5	31	0	44
15:45	8	0	27	1	36	1	1	4	0	6	45	0	1	0	46	7	2	22	0	31
16:00	7	0	26	0	33	0	1	5	0	6	48	0	7	0	55	9	0	28	0	37
16:15	13	0	19	0	32	0	1	6	0	7	35	0	6	0	41	11	4	21	0	36
Total	40	0	94	1	135	1	3	21	0	25	167	0	18	0	185	35	11	102	0	148
16:30	11	0	31	0	42	0	0	4	0	4	49	0	6	0	55	6	2	22	0	30
16:45	8	0	30	0	38	1	0	7	0	8	57	0	5	0	62	9	1	17	0	27
17:00	14	0	31	0	45	0	0	9	0	9	63	0	6	0	69	7	3	24	0	34
17:15	5	0	25	0	30	0	1	5	0	6	56	0	1	1	58	8	1	36	0	45
Total	38	0	117	0	155	1	1	25	0	27	225	0	18	1	244	30	7	99	0	136
Grand Total	141	0	370	1	512	5	11	60	0	76	602	0	53	1	656	136	31	405	0	572
Approch %	27.5%	0.0%	72.3%	0.2%		6.6%	14.5%	78.9%	0.0%		91.8%	0.0%	8.1%	0.2%		23.8%	5.4%	70.8%	0.0%	
Total %	7.8%	0.0%	20.4%	0.1%	28.2%	0.3%	0.6%	3.3%	0.0%	4.2%	33.1%	0.0%	2.9%	0.1%	36.1%	7.5%	1.7%	22.3%	0.0%	31.5%

AM PEAK HOUR	Esplanade Southbound					8th Avenue Westbound					Esplanade Northbound					8th Avenue Eastbound				
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL
07:45	11	0	31	0	42	0	0	1	0	1	51	0	4	0	55	5	0	39	0	44
08:00	11	0	19	0	30	1	1	1	0	3	47	0	1	0	48	11	3	39	0	53
08:15	5	0	18	0	23	0	0	5	0	5	24	0	3	0	27	11	2	29	0	42
08:30	14	0	22	0	36	1	0	1	0	2	22	0	1	0	23	7	1	20	0	28
Total Volume	41	0	90	0	131	2	1	8	0	11	144	0	9	0	153	34	6	127	0	167
% App Total	31.3%	0.0%	68.7%	0.0%		18.2%	9.1%	72.7%	0.0%		94.1%	0.0%	5.9%	0.0%		20.4%	3.6%	76.0%	0.0%	
PHF	.732	.000	.726	.000	.780	.500	.250	.400	.000	.550	.706	.000	.563	.000	.695	.773	.500	.814	.000	.788
PM PEAK HOUR	Esplanade Southbound					8th Avenue Westbound					Esplanade Northbound					8th Avenue Eastbound				
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL
16:30	11	0	31	0	42	0	0	4	0	4	49	0	6	0	55	6	2	22	0	30
16:45	8	0	30	0	38	1	0	7	0	8	57	0	5	0	62	9	1	17	0	27
17:00	14	0	31	0	45	0	0	9	0	9	63	0	6	0	69	7	3	24	0	34
17:15	5	0	25	0	30	0	1	5	0	6	56	0	1	1	58	8	1	36	0	45
Total Volume	38	0	117	0	155	1	1	25	0	27	225	0	18	1	244	30	7	99	0	136
% App Total	24.5%	0.0%	75.5%	0.0%		3.7%	3.7%	92.6%	0.0%		92.2%	0.0%	7.4%	0.4%		22.1%	5.1%	72.8%	0.0%	
PHF	.679	.000	.944	.000	.861	.250	.250	.694	.000	.750	.893	.000	.750	.250	.884	.833	.583	.688	.000	.756

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7424-013 Esplanade-9th Avenue.ppd
Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound						9th Avenue Westbound						Esplanade Northbound						9th Avenue Eastbound																	
	LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS		
	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL				
07:00	0	0	1	0	1	0	24	0	0	3	4	0	35	0	0	9	0	16	0	21	0	11	1	0	17	5	11	1	0	28	51	0				
07:15	0	0	2	0	2	0	35	0	0	9	9	0	53	0	0	16	0	21	0	22	0	9	17	2	0	16	9	17	2	0	81	0				
07:30	0	0	2	0	2	0	53	0	0	8	10	0	45	0	0	21	0	22	0	22	0	11	35	2	0	48	11	35	2	0	124	0				
07:45	0	0	1	0	1	0	45	0	0	24	7	14	0	157	0	0	68	0	68	0	47	99	11	0	64	22	36	6	0	132	0					
Total	0	0	6	0	6	0	157	0	0	93	27	37	0	457	0	0	157	0	157	0	47	99	11	0	157	47	99	11	0	388	0					
08:00	0	0	4	0	4	0	36	0	0	14	14	8	0	26	0	0	26	0	26	0	11	31	5	0	47	11	31	5	0	113	0					
08:15	0	0	3	0	3	0	53	0	0	18	15	20	0	53	0	0	12	0	12	0	14	15	6	0	35	14	15	6	0	103	0					
08:30	0	0	6	0	6	0	47	0	0	18	8	21	0	47	0	0	9	0	9	0	9	10	10	0	20	8	10	10	0	82	0					
08:45	0	0	2	0	2	0	46	0	0	24	9	13	0	46	0	0	23	0	23	0	22	19	3	0	44	22	19	3	0	115	0					
Total	0	0	15	0	15	0	182	0	0	74	46	62	0	182	0	0	70	0	70	0	57	75	14	0	146	57	75	14	0	413	0					
15:30	0	0	4	0	4	0	50	0	0	13	15	22	0	50	0	0	24	0	24	0	9	11	5	0	25	9	11	5	0	103	0					
15:45	0	0	6	0	6	0	62	0	0	27	22	13	0	62	0	0	15	0	15	0	9	14	7	0	30	9	14	7	0	113	0					
16:00	0	0	3	0	3	0	63	0	0	15	28	20	0	63	0	0	25	0	25	0	10	15	2	0	27	10	15	2	0	118	0					
16:15	0	0	5	0	5	0	46	0	0	14	9	23	0	46	0	0	21	0	21	0	13	20	2	0	35	13	20	2	0	107	0					
Total	0	0	18	0	18	0	221	0	0	69	74	78	0	221	0	0	85	0	85	0	41	60	16	0	117	41	60	16	0	441	0					
16:30	0	0	6	0	6	0	44	0	0	13	16	15	0	44	0	0	15	0	15	0	11	13	1	0	25	11	13	1	0	90	0					
16:45	0	0	5	0	5	0	37	0	0	16	10	11	0	37	0	0	12	0	12	0	18	25	1	0	44	18	25	1	0	98	0					
17:00	0	0	11	0	11	0	46	0	0	16	18	12	0	46	0	0	26	0	26	0	14	23	2	0	39	14	23	2	0	122	0					
17:15	0	0	4	0	4	0	64	0	0	25	22	17	0	64	0	0	27	0	27	0	14	19	2	0	35	14	19	2	0	130	0					
Total	0	0	26	0	26	0	191	0	0	70	66	55	0	191	0	0	80	0	80	0	57	80	6	0	143	57	80	6	0	440	0					
Grand Total	0	0	65	0	65	0	751	0	0	306	213	232	0	751	0	0	303	0	303	0	202	314	47	0	563	202	314	47	0	1682	0					
Approch %	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	40.7%	28.4%	30.9%	0.0%	0.0%	12.7%	0.0%	44.6%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	35.9%	55.8%	8.3%	0.0%	33.5%	35.9%	55.8%	8.3%	0.0%	100.0%	0					
Total %	0.0%	0.0%	3.9%	0.0%	3.9%	0.0%	18.2%	12.7%	13.8%	0.0%	0.0%	13.8%	0.0%	18.0%	0.0%	0.0%	18.0%	0.0%	18.0%	0.0%	12.0%	18.7%	2.8%	0.0%	18.0%	12.0%	18.7%	2.8%	0.0%	100.0%	0					

AM PEAK HOUR	Esplanade Southbound						9th Avenue Westbound						Esplanade Northbound						9th Avenue Eastbound																	
	LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS		
	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL				
07:30	0	0	2	0	2	0	53	0	0	35	8	10	0	53	0	0	21	0	21	0	11	35	2	0	48	11	35	2	0	124	0					
07:45	0	0	1	0	1	0	45	0	0	24	7	14	0	45	0	0	22	0	22	0	22	36	6	0	64	22	36	6	0	132	0					
08:00	0	0	4	0	4	0	36	0	0	14	14	8	0	36	0	0	26	0	26	0	11	31	5	0	47	11	31	5	0	113	0					
08:15	0	0	3	0	3	0	53	0	0	18	15	20	0	53	0	0	12	0	12	0	14	15	6	0	35	14	15	6	0	103	0					
Total Volume	0	0	10	0	10	0	187	0	0	91	44	52	0	187	0	0	81	0	81	0	58	117	19	0	194	58	117	19	0	472	0					
% App Total	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	48.7%	23.5%	27.8%	0.0%	0.0%	23.5%	0.0%	48.2%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	29.9%	60.3%	9.8%	0.0%	33.5%	29.9%	60.3%	9.8%	0.0%	100.0%	0					
PHF	.000	.000	.625	.000	.625	.000	.650	.733	.650	.000	.650	.733	.650	.882	.000	.000	.779	.000	.779	.000	.659	.813	.792	.000	.758	.659	.813	.792	.000	.894	0					

PM PEAK HOUR	Esplanade Southbound						9th Avenue Westbound						Esplanade Northbound						9th Avenue Eastbound																	
	LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS			LEFT			THRU			RIGHT			UTURNS		
	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL	APP	TOTAL				
15:30	0	0	4	0	4	0	50	0	0	13	15	22	0	50	0	0	24	0	24	0	9	11	5	0	25	9	11	5	0	103	0					
15:45	0	0	6	0	6	0	62	0	0	27	22	13	0	62	0	0	15	0	15	0	9	14	7	0	30	9	14	7	0	113	0					
16:00	0	0	3	0	3	0	63	0	0	15	28	20	0	63	0	0	25	0	25	0	10	15	2	0	27	10	15	2	0	118	0					
16:15	0	0	5	0	5	0	46	0	0	14	9	23	0	46	0	0	21	0	21	0	13	20	2	0	35	13	20	2	0	107	0					
Total Volume	0	0	18	0	18	0	221	0	0	69	74	78	0	221	0	0	85	0	85	0	41	60	16	0	117	41	60	16	0	441	0					
% App Total	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	31.2%	33.5%	35.3%	0.0%	0.0%	33.5%	0.0%	87.7	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	35.0%	51.3%	13.7%	0.0%	33.5%	35.0%	51.3%	13.7%	0.0%	100.0%	0					
PHF	.000	.000	.750	.000	.750	.000	.877	.661	.848	.000	.639	.661	.848	.877	.000	.000	.850	.000	.850	.000	.788	.750	.571	.000	.836	.788	.750	.571	.000	.934	0					

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 15-7424-014 Esplanade-10th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

START TIME	Esplanade Southbound					10th Avenue Westbound					Esplanade Northbound					10th Avenue Eastbound					Total	Uturn Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
07:00	14	0	1	0	15	0	1	7	0	8	0	0	3	0	3	0	1	0	0	1	27	0
07:15	19	0	0	0	19	0	0	4	0	4	0	0	2	1	3	0	0	0	0	0	26	1
07:30	22	0	2	0	24	1	0	9	0	10	0	0	1	0	1	0	1	3	0	4	39	0
07:45	24	0	3	0	27	0	0	16	0	16	1	0	2	0	3	0	0	2	0	2	48	0
Total	79	0	6	0	85	1	1	36	0	38	1	0	8	1	10	0	2	5	0	7	140	1
08:00	29	0	3	0	32	1	0	14	0	15	4	0	1	2	7	1	1	1	0	3	57	2
08:15	25	0	1	0	26	1	0	12	0	13	1	0	0	0	1	1	0	1	0	2	42	0
08:30	24	0	3	0	27	0	0	14	0	14	2	0	2	0	4	1	0	1	0	2	47	0
08:45	26	0	0	0	26	0	0	10	0	10	2	0	2	0	4	1	1	0	0	2	42	0
Total	104	0	7	0	111	2	0	50	0	52	9	0	5	2	16	4	2	3	0	9	188	2
15:30	22	0	5	1	28	0	0	15	0	15	4	0	1	0	5	0	0	3	0	3	51	1
15:45	17	0	4	0	21	1	1	8	0	10	5	0	0	0	5	0	1	1	0	2	38	0
16:00	19	0	0	0	19	0	0	14	0	14	7	0	5	0	12	0	0	2	0	2	47	0
16:15	11	0	5	0	16	2	2	8	0	12	7	0	2	0	9	0	0	2	0	2	39	0
Total	69	0	14	1	84	3	3	45	0	51	23	0	8	0	31	0	1	8	0	9	175	1
16:30	15	0	3	0	18	0	0	4	0	4	10	0	3	0	13	0	0	4	0	4	39	0
16:45	21	0	3	0	24	2	1	12	0	15	6	0	2	0	8	3	2	0	0	5	52	0
17:00	20	0	1	0	21	0	0	14	0	14	5	0	2	0	7	0	0	2	0	2	44	0
17:15	13	0	2	1	16	2	0	15	0	17	11	0	1	0	12	0	1	3	0	4	49	1
Total	69	0	9	1	79	4	1	45	0	50	32	0	8	0	40	3	3	9	0	15	184	1
Grand Total	321	0	36	2	359	10	5	176	0	191	65	0	29	3	97	7	8	25	0	40	687	5
Approach %	89.4%	0.0%	10.0%	0.6%		5.2%	2.6%	92.1%	0.0%		67.0%	0.0%	29.9%	3.1%		17.5%	20.0%	62.5%	0.0%			
Total %	46.7%	0.0%	5.2%	0.3%	52.3%	1.5%	0.7%	25.6%	0.0%	27.8%	9.5%	0.0%	4.2%	0.4%	14.1%	1.0%	1.2%	3.6%	0.0%	5.8%		100.0%

AM PEAK HOUR	Esplanade Southbound					10th Avenue Westbound					Esplanade Northbound					10th Avenue Eastbound					Total	
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS		APP TOTAL
Peak Hour For Entire Intersection Begins at 07:45																						
Peak Hour Analysis From 07:45 to 08:45																						
07:45	24	0	3	0		27	0	0	16	0	16	1	0	2	0	3	0	0	2	0	2	48
08:00	29	0	3	0		32	1	0	14	0	15	4	0	1	2	7	1	1	1	0	3	57
08:15	25	0	1	0		26	1	0	12	0	13	1	0	0	0	1	1	0	1	0	2	42
08:30	24	0	3	0		27	0	0	14	0	14	2	0	2	0	4	1	0	1	0	2	47
Total Volume	102	0	10	0		112	2	0	56	0	58	8	0	5	2	15	3	1	5	0	9	194
% App Total	91.1%	0.0%	8.9%	0.0%			3.4%	0.0%	96.6%	0.0%		53.3%	0.0%	33.3%	13.3%		33.3%	11.1%	55.6%	0.0%		
PHF	.879	.000	.833	.000		.875	.500	.000	.875	.000	.906	.500	.000	.625	.250	.536	.750	.250	.625	.000	.750	.851
Peak Hour For Entire Intersection Begins at 16:30																						
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	15	0	3	0		18	0	0	4	0	4	10	0	3	0	13	0	0	4	0	4	39
16:45	21	0	3	0		24	2	1	12	0	15	6	0	2	0	8	3	2	0	0	5	52
17:00	20	0	1	0		21	0	0	14	0	14	5	0	2	0	7	0	0	2	0	2	44
17:15	13	0	2	1		16	2	0	15	0	17	11	0	1	0	12	0	1	3	0	4	49
Total Volume	69	0	9	1		79	4	1	45	0	50	32	0	8	0	40	3	3	9	0	15	184
% App Total	87.3%	0.0%	11.4%	1.3%			8.0%	2.0%	90.0%	0.0%		80.0%	0.0%	20.0%	0.0%		20.0%	20.0%	60.0%	0.0%		
PHF	.821	.000	.750	.250		.823	.500	.250	.750	.000	.735	.727	.000	.667	.000	.769	.250	.375	.563	.000	.750	.885

ALL TRAFFIC DATA

(916) 771-8700

orders@aidtraffic.com

File Name : 15-7424-015 Esplanade-11th Avenue.ppd

Date : 5/14/2015

Unshifted Count = All Vehicles

	Esplanade Southbound					11th Avenue Westbound					Esplanade Northbound					11th Avenue Eastbound							
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total	Uturn Total
07:00	0	0	6	0	6	0	0	0	0	0	4	0	2	0	6	29	0	10	0	39	51	0	0
07:15	0	0	7	0	7	0	0	0	0	0	3	0	0	0	3	35	0	28	0	63	73	0	0
07:30	0	0	11	0	11	0	0	1	0	1	11	0	0	0	11	48	0	48	0	96	119	0	0
07:45	0	0	12	0	12	0	0	0	0	0	17	0	0	0	17	60	0	53	0	113	142	0	0
Total	0	0	36	0	36	0	0	1	0	1	35	0	2	0	37	172	0	139	0	311	385	0	0
08:00	0	0	24	0	24	0	0	1	0	1	20	0	1	0	21	37	0	42	0	79	125	0	0
08:15	0	0	18	0	18	0	0	2	0	2	17	0	2	0	19	48	0	25	0	73	112	0	0
08:30	0	0	25	0	25	0	0	4	0	4	22	0	0	0	22	40	0	30	0	70	121	0	0
08:45	0	0	9	0	9	0	0	1	0	1	17	0	0	0	17	39	0	33	0	72	99	0	0
Total	0	0	76	0	76	0	0	8	0	8	76	0	3	0	79	164	0	130	0	294	457	0	0
15:30	0	0	35	0	35	0	0	3	0	3	24	0	2	0	26	28	0	22	0	50	114	0	0
15:45	0	0	33	0	33	2	2	3	0	7	27	0	2	0	29	31	1	25	0	57	126	0	0
16:00	0	0	41	0	41	1	0	2	0	3	29	0	1	0	30	28	1	40	0	69	143	0	0
16:15	0	0	33	0	33	0	0	1	0	1	33	0	0	0	33	27	0	22	0	49	116	0	0
Total	0	0	142	0	142	3	2	9	0	14	113	0	5	0	118	114	2	109	0	225	499	0	0
16:30	0	0	22	0	22	0	0	1	0	1	33	0	0	0	33	34	0	19	0	53	109	0	0
16:45	0	0	45	0	45	1	0	1	0	2	35	0	0	0	35	25	0	22	0	47	129	0	0
17:00	0	0	52	0	52	0	1	2	0	3	49	0	0	0	49	28	0	20	0	48	152	0	0
17:15	0	0	45	0	45	0	1	0	0	1	36	0	0	0	36	34	0	30	0	64	146	0	0
Total	0	0	164	0	164	1	2	4	0	7	153	0	0	0	153	121	0	91	0	212	536	0	0
Grand Total	0	0	418	0	418	4	4	22	0	30	377	0	10	0	387	571	2	469	0	1042	1877	0	0
Approach %	0.0%	0.0%	100.0%	0.0%		13.3%	13.3%	73.3%	0.0%	0.0%	97.4%	0.0%	2.6%	0.0%	0.0%	54.8%	0.2%	45.0%	0.0%				
Total %	0.0%	0.0%	22.3%	0.0%	22.3%	0.2%	0.2%	1.2%	0.0%	1.6%	20.1%	0.0%	0.5%	0.0%	20.6%	30.4%	0.1%	25.0%	0.0%	55.5%	100.0%		

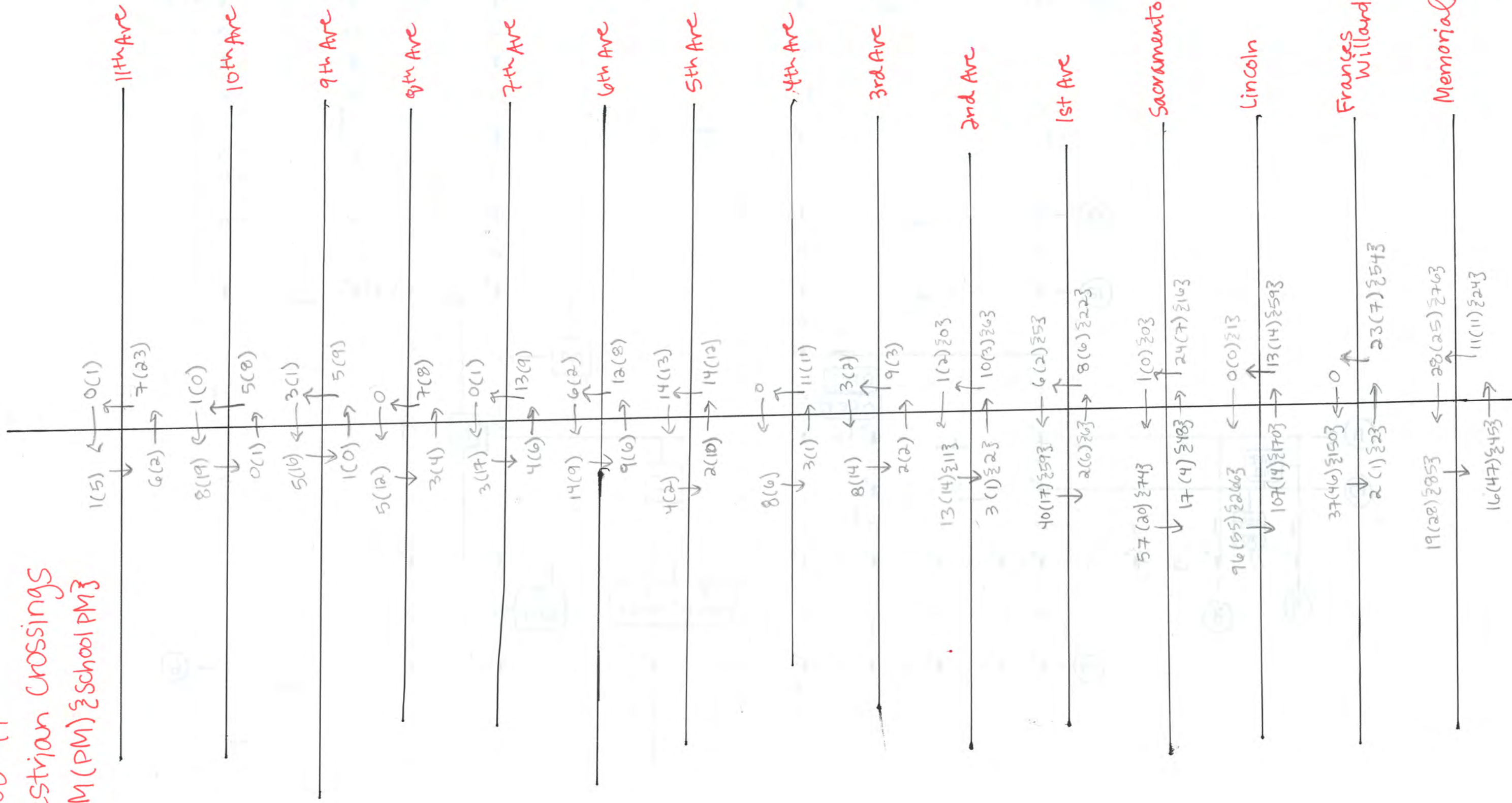
AM PEAK HOUR	Esplanade Southbound					11th Avenue Westbound					Esplanade Northbound					11th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																						
Peak Hour For Entire Intersection Begins at 07:45																						
07:45	0	0	12	0	12	0	0	0	0	0	17	0	0	0	17	60	0	53	0	113	142	
08:00	0	0	24	0	24	0	0	1	0	1	20	0	1	0	21	37	0	42	0	79	125	
08:15	0	0	18	0	18	0	0	2	0	2	17	0	2	0	19	48	0	25	0	73	112	
08:30	0	0	25	0	25	0	0	4	0	4	22	0	0	0	22	40	0	30	0	70	121	
Total Volume	0	0	79	0	79	0	0	7	0	7	76	0	3	0	79	185	0	150	0	335	500	
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	100.0%	0.0%	0.0%	96.2%	0.0%	3.8%	0.0%	0.0%	55.2%	0.0%	44.8%	0.0%			
PHF	.000	.000	.790	.000	.790	.000	.000	.438	.000	.438	.864	.000	.375	.000	.898	.771	.000	.708	.000	.741	.880	

PM PEAK HOUR	Esplanade Southbound					11th Avenue Westbound					Esplanade Northbound					11th Avenue Eastbound						
	START TIME	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	22	0	22	0	0	1	0	1	33	0	0	0	33	34	0	19	0	53	109	
16:45	0	0	45	0	45	1	0	1	0	2	35	0	0	0	35	25	0	22	0	47	129	
17:00	0	0	52	0	52	0	1	2	0	3	49	0	0	0	49	28	0	20	0	48	152	
17:15	0	0	45	0	45	0	1	0	0	1	36	0	0	0	36	34	0	30	0	64	146	
Total Volume	0	0	164	0	164	1	2	4	0	7	153	0	0	0	153	121	0	91	0	212	536	
% App Total	0.0%	0.0%	100.0%	0.0%		14.3%	28.6%	57.1%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	57.1%	0.0%	42.9%	0.0%			
PHF	.000	.000	.788	.000	.788	.250	.500	.500	.000	.583	.781	.000	.000	.000	.781	.890	.000	.758	.000	.828	.882	

CHI 900-17

Pedestrian Crossings

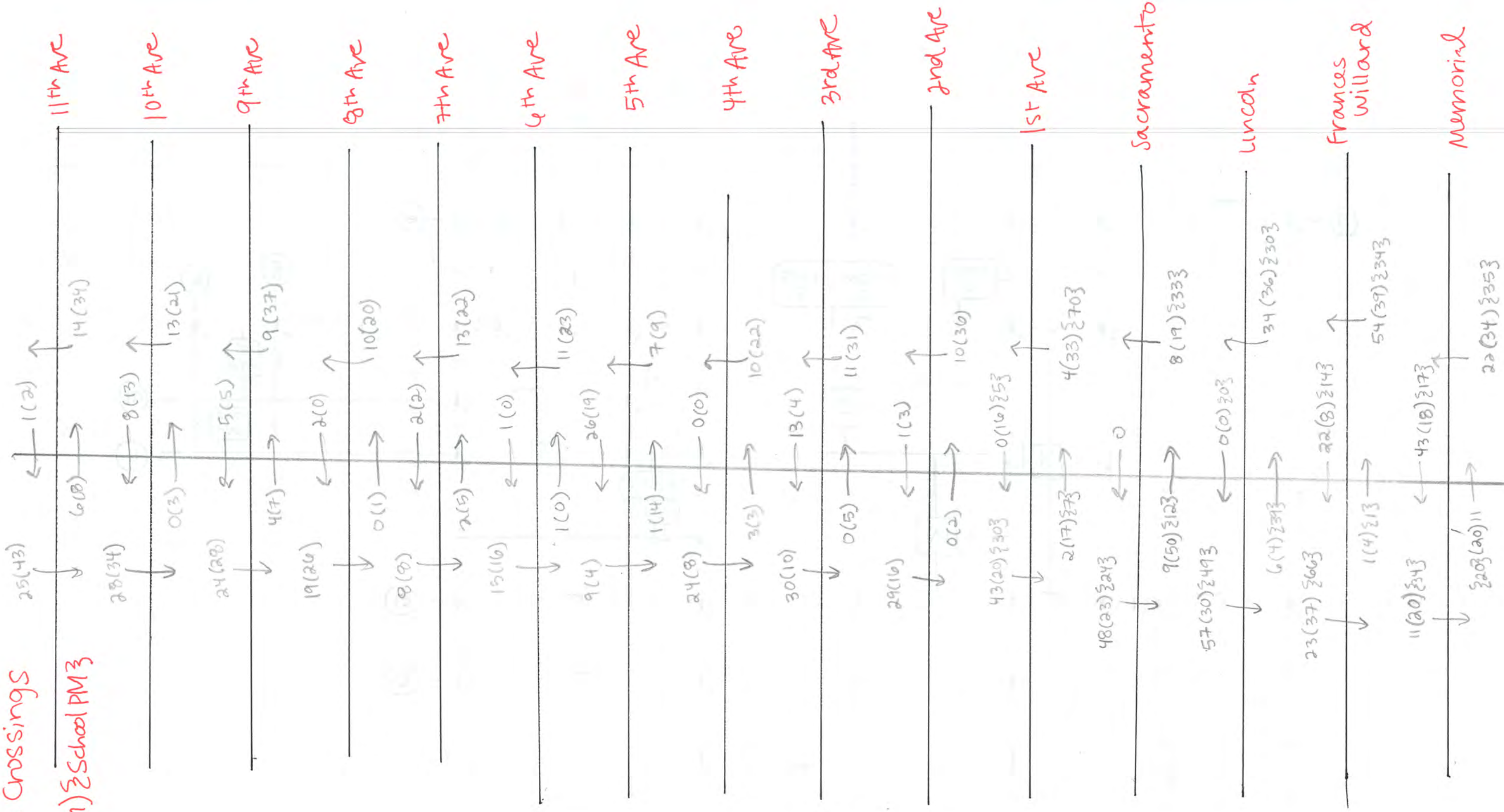
AM (PM) School PM

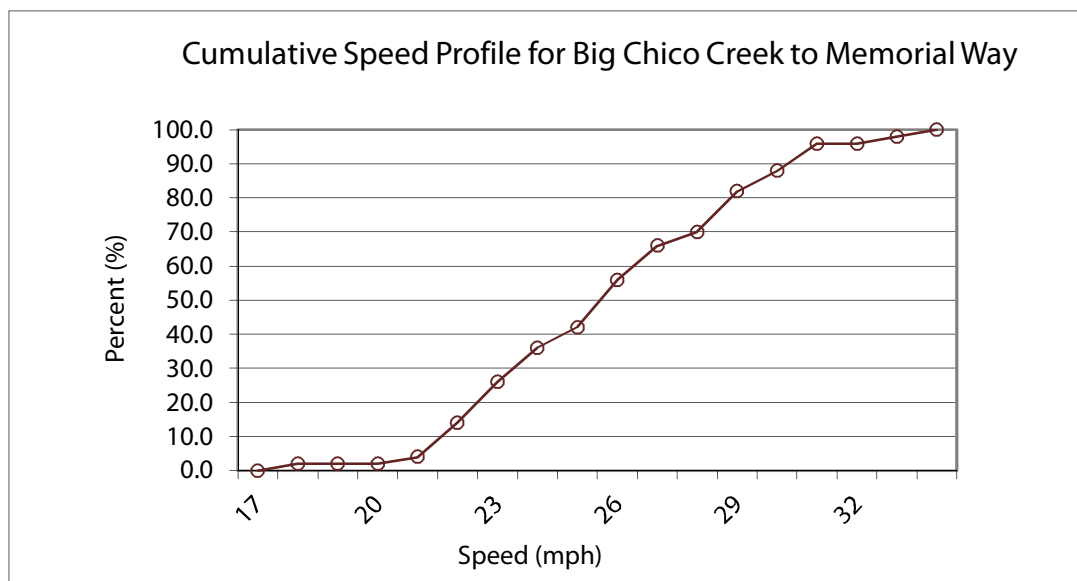
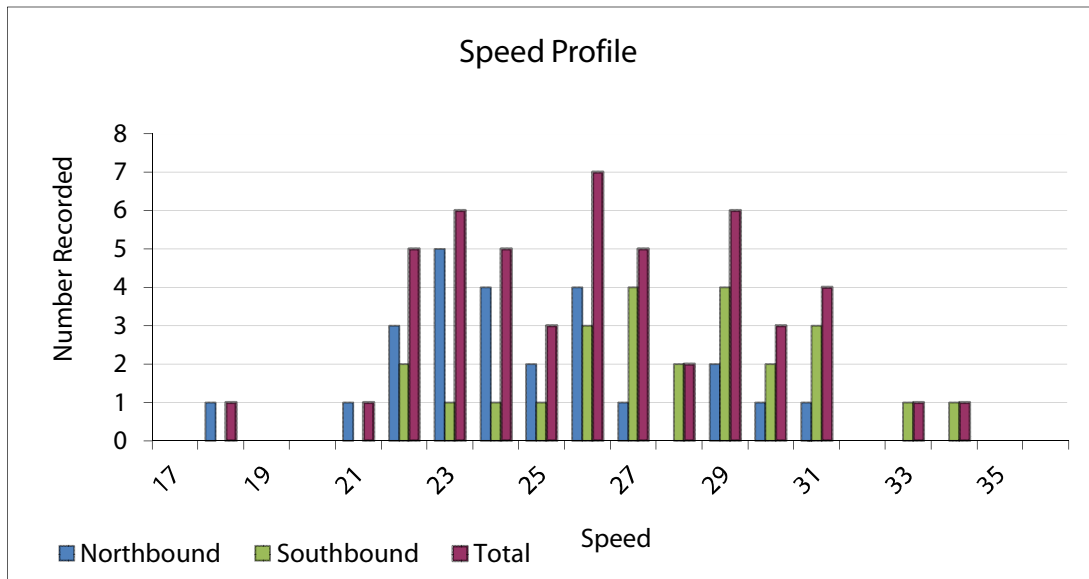


CHI 900-17

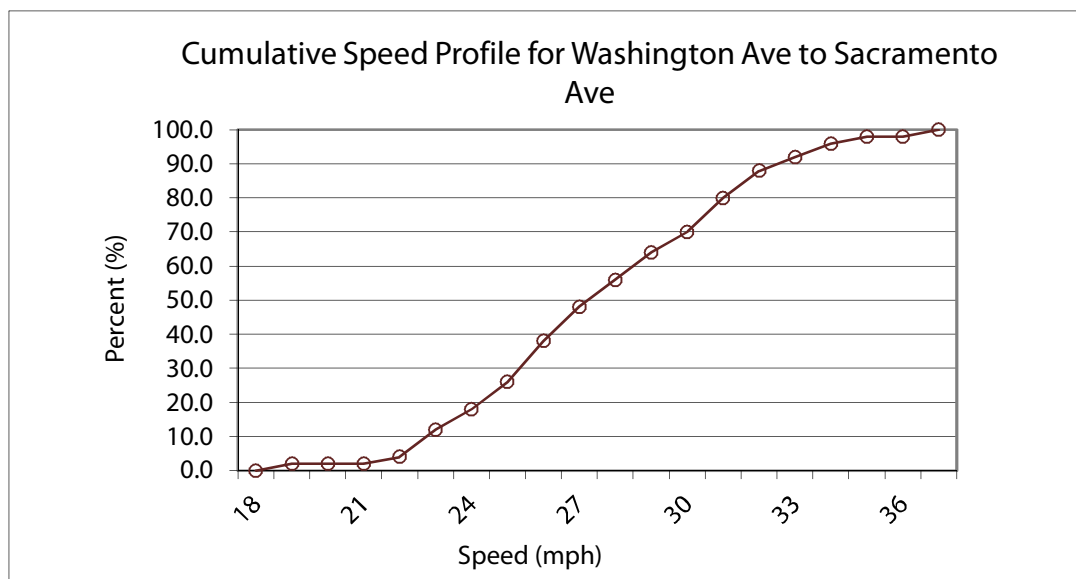
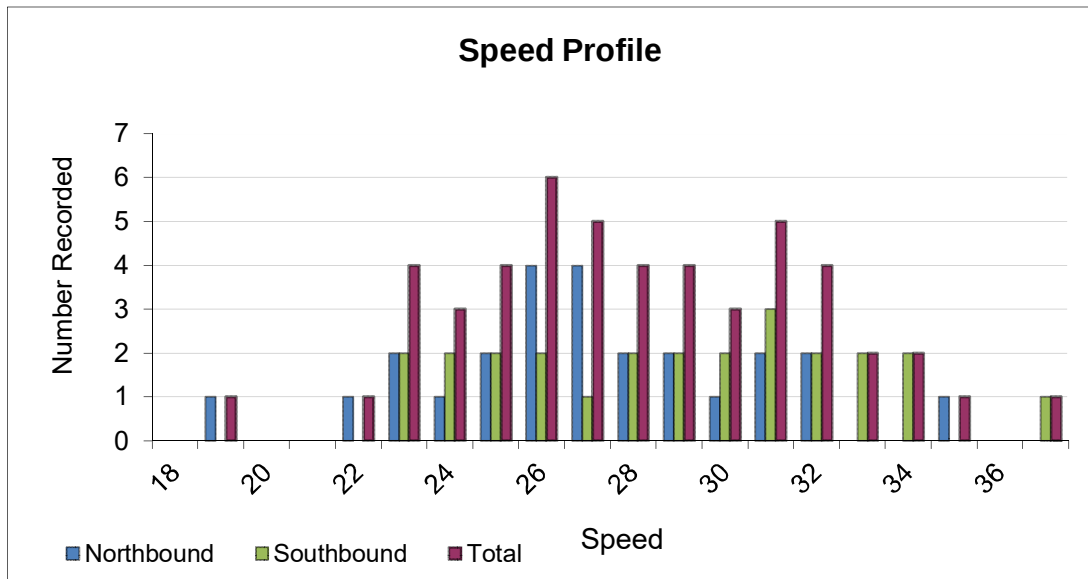
Bicycle Crossings

AM (PM) School PM 3

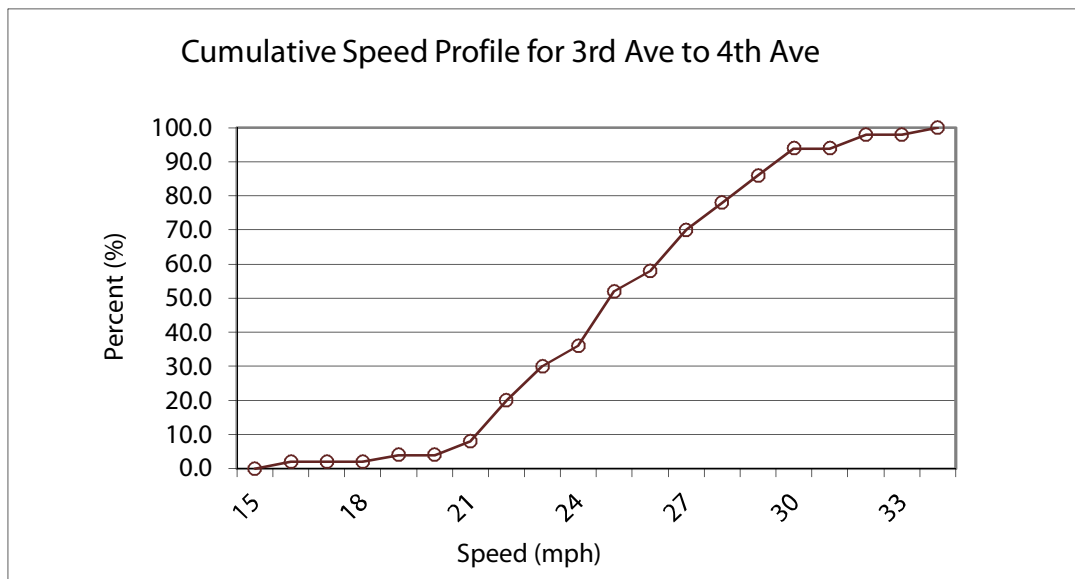
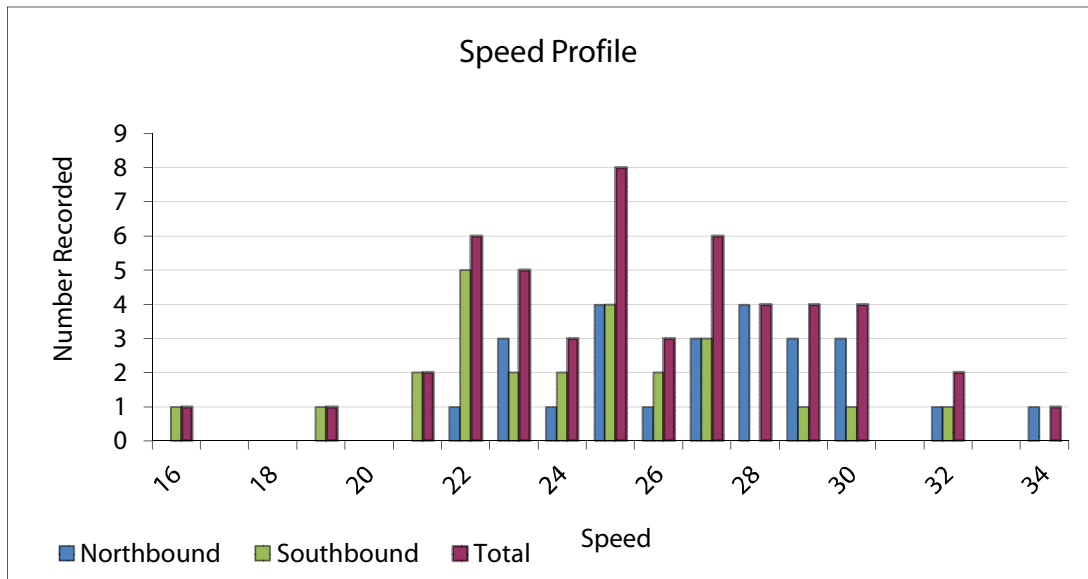




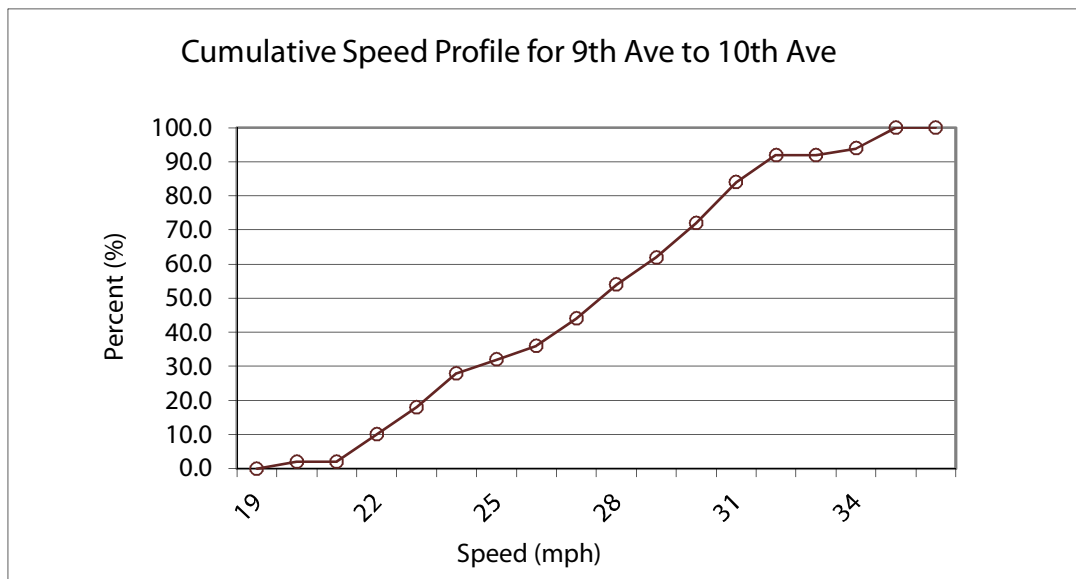
<i>Date Data Collected:</i>	May 20, 2015	<i>Start Time:</i> 1:00 PM	<i>Weather:</i>	Sunny
<i>Day of the Week:</i>	Wednesday	<i>End Time:</i> 1:20 PM	<i>Recorder:</i>	LGD



<i>Date Data Collected:</i>	May 20, 2015	<i>Start Time:</i> 1:30 PM	<i>Weather:</i>	Sunny
<i>Day of the Week:</i>	Wednesday	<i>End Time:</i> 1:50 PM	<i>Recorder:</i>	LGD



Date Data Collected:	May 20, 2015	Start Time: 2:00 PM	Weather: Sunny
Day of the Week:	Wednesday	End Time: 2:20 PM	Recorder: LGD



<i>Date Data Collected:</i>	May 20, 2015	<i>Start Time:</i> 2:30 PM	<i>Weather:</i>	Sunny
<i>Day of the Week:</i>	Wednesday	<i>End Time:</i> 2:50 PM	<i>Recorder:</i>	LGD

Synchro Level of Service Output Reports

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	↔
Traffic Volume (vph)	14	72	30	68	13	179	0	597	45	0	560	36
Future Volume (vph)	14	72	30	68	13	179	0	597	45	0	560	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.95
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.96			0.91			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1772			1621			3497			3539	1496
Flt Permitted		0.94			0.87			1.00			1.00	1.00
Satd. Flow (perm)		1676			1433			3497			3539	1496
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	20	102	43	97	18	255	0	950	64	0	891	51
RTOR Reduction (vph)	0	17	0	0	38	0	0	6	0	0	0	20
Lane Group Flow (vph)	0	148	0	0	332	0	0	1008	0	0	891	31
Confl. Peds. (#/hr)	28		16	16		28	19		11	11		19
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		31.3			31.3			34.3			34.3	34.3
Effective Green, g (s)		31.3			31.3			34.8			34.8	34.3
Actuated g/C Ratio		0.42			0.42			0.46			0.46	0.46
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		699			598			1622			1642	684
v/s Ratio Prot								c0.29			0.25	
v/s Ratio Perm		0.09			c0.23							0.02
v/c Ratio		0.21			0.55			0.62			0.54	0.05
Uniform Delay, d1		14.0			16.6			15.1			14.4	11.3
Progression Factor		1.00			1.00			1.00			0.26	0.12
Incremental Delay, d2		0.7			3.7			1.8			0.9	0.1
Delay (s)		14.7			20.2			16.9			4.6	1.4
Level of Service		B			C			B			A	A
Approach Delay (s)		14.7			20.2			16.9			4.4	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.5									
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			75.0									
Intersection Capacity Utilization			51.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	0	93	0	0	25	0	640	25	0	748	0
Future Volume (vph)	195	0	93	0	0	25	0	640	25	0	748	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.97				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.96				0.86		0.99			1.00	
Flt Protected		0.97				1.00		1.00			1.00	
Satd. Flow (prot)		1664				1611		3516			3539	
Flt Permitted		0.97				1.00		1.00			1.00	
Satd. Flow (perm)		1664				1611		3516			3539	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	277	0	132	0	0	36	0	1019	36	0	1190	0
RTOR Reduction (vph)	0	45	0	0	0	24	0	3	0	0	0	0
Lane Group Flow (vph)	0	364	0	0	0	12	0	1052	0	0	1190	0
Confl. Peds. (#/hr)			107	107			96		13	13		96
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		25.3				25.3		33.3			33.3	
Effective Green, g (s)		25.3				25.3		33.3			33.3	
Actuated g/C Ratio		0.34				0.34		0.44			0.44	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		561				543		1561			1571	
v/s Ratio Prot								0.30			c0.34	
v/s Ratio Perm		0.22				0.01						
v/c Ratio		0.65				0.02		0.67			0.76	
Uniform Delay, d1		21.1				16.6		16.5			17.5	
Progression Factor		1.00				1.00		1.24			0.48	
Incremental Delay, d2		5.7				0.1		2.0			1.5	
Delay (s)		26.8				16.7		22.4			9.9	
Level of Service		C				B		C			A	
Approach Delay (s)		26.8			16.7			22.4			9.9	
Approach LOS		C			B			C			A	
Intersection Summary												
HCM 2000 Control Delay		17.5				HCM 2000 Level of Service		B				
HCM 2000 Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		75.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		56.8%				ICU Level of Service		B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	342	39	67	347	62	0	610	70	0	813	89
Future Volume (vph)	65	342	39	67	347	62	0	610	70	0	813	89
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1767	1835		1769	1820			3478			3460	
Flt Permitted	0.16	1.00		0.20	1.00			1.00			1.00	
Satd. Flow (perm)	298	1835		370	1820			3478			3460	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	92	544	55	95	552	88	0	971	100	0	1294	127
RTOR Reduction (vph)	0	5	0	0	8	0	0	10	0	0	10	0
Lane Group Flow (vph)	92	594	0	95	632	0	0	1061	0	0	1411	0
Confl. Peds. (#/hr)	6		2	2		6	40		8	8		40
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	30.9	30.9		30.9	30.9			27.3			27.3	
Effective Green, g (s)	31.4	31.4		31.4	31.4			27.8			27.8	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.37			0.37	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	124	768		154	761			1289			1282	
v/s Ratio Prot		0.32			c0.35			0.31			c0.41	
v/s Ratio Perm	0.31			0.26								
v/c Ratio	0.74	0.77		0.62	0.83			0.82			1.10	
Uniform Delay, d1	18.4	18.7		17.1	19.4			21.4			23.6	
Progression Factor	1.00	1.00		1.00	1.00			0.63			0.31	
Incremental Delay, d2	32.6	7.5		17.1	10.3			4.7			51.9	
Delay (s)	51.0	26.2		34.2	29.7			18.2			59.2	
Level of Service	D	C		C	C			B			E	
Approach Delay (s)		29.5			30.3			18.2			59.2	
Approach LOS		C			C			B			E	
Intersection Summary												
HCM 2000 Control Delay			37.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			75.0			Sum of lost time (s)			11.8			
Intersection Capacity Utilization			67.9%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	64	24	46	56	32	0	719	18	0	882	18
Future Volume (vph)	73	64	24	46	56	32	0	719	18	0	882	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1780			1765			3525			3527	
Flt Permitted		0.79			0.85			1.00			1.00	
Satd. Flow (perm)		1438			1521			3525			3527	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	104	91	34	65	80	46	0	1144	26	0	1404	26
RTOR Reduction (vph)	0	9	0	0	15	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	220	0	0	176	0	0	1168	0	0	1428	0
Confl. Peds. (#/hr)	3		2	2		3	8		9	9		8
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			33.3			33.3	
Effective Green, g (s)		25.3			25.3			33.3			33.3	
Actuated g/C Ratio		0.34			0.34			0.44			0.44	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		485			513			1565			1565	
v/s Ratio Prot								0.33			c0.40	
v/s Ratio Perm		c0.15			0.12							
v/c Ratio		0.45			0.34			0.75			0.91	
Uniform Delay, d1		19.4			18.6			17.3			19.5	
Progression Factor		1.00			1.00			0.86			0.93	
Incremental Delay, d2		3.1			1.8			2.1			5.9	
Delay (s)		22.5			20.4			17.1			24.1	
Level of Service		C			C			B			C	
Approach Delay (s)		22.5			20.4			17.1			24.1	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM 2000 Control Delay		21.0			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			12.4				
Intersection Capacity Utilization		56.8%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	79	18	113	66	104	0	747	44	0	837	40
Future Volume (vph)	38	79	18	113	66	104	0	747	44	0	837	40
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.99			0.99	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1796			1804	1545		3504			3513	
Flt Permitted		0.86			0.69	1.00		1.00			1.00	
Satd. Flow (perm)		1559			1287	1545		3504			3513	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	54	112	26	161	94	148	0	1189	63	0	1332	57
RTOR Reduction (vph)	0	8	0	0	0	92	0	5	0	0	4	0
Lane Group Flow (vph)	0	184	0	0	255	56	0	1247	0	0	1385	0
Confl. Peds. (#/hr)	14		2	2		14	4		14	14		4
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		25.9			25.9	25.9		32.3			32.3	
Effective Green, g (s)		26.4			26.4	26.4		32.8			32.8	
Actuated g/C Ratio		0.35			0.35	0.35		0.44			0.44	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		548			453	543		1532			1536	
v/s Ratio Prot								0.36			c0.39	
v/s Ratio Perm		0.12			c0.20	0.04						
v/c Ratio		0.34			0.56	0.10		0.81			0.90	
Uniform Delay, d1		17.9			19.6	16.3		18.4			19.6	
Progression Factor		1.00			1.00	1.00		0.36			0.14	
Incremental Delay, d2		1.7			5.0	0.4		3.5			4.1	
Delay (s)		19.5			24.6	16.7		10.2			6.8	
Level of Service		B			C	B		B			A	
Approach Delay (s)		19.5			21.7			10.2			6.8	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay		10.7										
HCM 2000 Volume to Capacity ratio		0.70										
Actuated Cycle Length (s)		75.0										
Intersection Capacity Utilization		77.7%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	58	30	13	41	40	0	773	21	0	905	37
Future Volume (vph)	58	58	30	13	41	40	0	773	21	0	905	37
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1770			1743			3523			3517	
Flt Permitted		0.83			0.95			1.00			1.00	
Satd. Flow (perm)		1505			1668			3523			3517	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	83	83	43	18	58	57	0	1230	30	0	1440	53
RTOR Reduction (vph)	0	12	0	0	36	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	197	0	0	97	0	0	1258	0	0	1490	0
Confl. Peds. (#/hr)			4	4			3		13	13		3
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.9			25.9			32.3			32.3	
Effective Green, g (s)		26.4			26.4			32.8			32.8	
Actuated g/C Ratio		0.35			0.35			0.44			0.44	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		529			587			1540			1538	
v/s Ratio Prot								0.36			c0.42	
v/s Ratio Perm		c0.13			0.06							
v/c Ratio		0.37			0.16			0.82			0.97	
Uniform Delay, d1		18.1			16.7			18.5			20.6	
Progression Factor		1.00			1.00			0.98			0.62	
Incremental Delay, d2		2.0			0.6			3.4			13.0	
Delay (s)		20.1			17.3			21.6			25.7	
Level of Service		C			B			C			C	
Approach Delay (s)		20.1			17.3			21.6			25.7	
Approach LOS		C			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			23.3									
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			75.0									
Intersection Capacity Utilization			57.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	58	117	19	91	44	52	0	682	81	0	838	10
Future Volume (vph)	58	117	19	91	44	52	0	682	81	0	838	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1808			1743			3479			3533	
Flt Permitted		0.84			0.69			1.00			1.00	
Satd. Flow (perm)		1536			1237			3479			3533	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	83	166	27	129	63	74	0	1085	115	0	1334	14
RTOR Reduction (vph)	0	5	0	0	18	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	271	0	0	248	0	0	1190	0	0	1347	0
Confl. Peds. (#/hr)	3		1	1		3	5		5	5		5
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			33.3			33.3	
Effective Green, g (s)		25.8			25.8			33.8			33.8	
Actuated g/C Ratio		0.34			0.34			0.45			0.45	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		528			425			1567			1592	
v/s Ratio Prot								0.34			c0.38	
v/s Ratio Perm		0.18			c0.20							
v/c Ratio		0.51			0.58			0.76			0.85	
Uniform Delay, d1		19.6			20.2			17.2			18.3	
Progression Factor		1.00			1.00			0.56			0.69	
Incremental Delay, d2		3.5			5.7			2.4			1.9	
Delay (s)		23.1			25.9			12.0			14.5	
Level of Service		C			C			B			B	
Approach Delay (s)		23.1			25.9			12.0			14.5	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay		15.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.69										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			11.4				
Intersection Capacity Utilization		54.3%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	0	150	0	0	7	76	752	3	0	803	79
Future Volume (vph)	185	0	150	0	0	7	76	752	3	0	803	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.86		1.00	1.00			0.99	
Flt Protected		0.97			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1688			1611		1711	3537			3490	
Flt Permitted		0.82			1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1428			1611		1711	3537			3490	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	263	0	213	0	0	10	108	1197	4	0	1278	112
RTOR Reduction (vph)	0	63	0	0	7	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	413	0	0	3	0	108	1201	0	0	1382	0
Confl. Peds. (#/hr)			6	6			1		7	7		1
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA			NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		23.9			23.9		8.3	41.7			28.8	
Effective Green, g (s)		24.4			24.4		8.8	42.2			29.3	
Actuated g/C Ratio		0.33			0.33		0.12	0.56			0.39	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		464			524		200	1990			1363	
v/s Ratio Prot					0.00		0.06	c0.34			c0.40	
v/s Ratio Perm		c0.29										
v/c Ratio		0.89			0.01		0.54	0.60			1.01	
Uniform Delay, d1		24.0			17.1		31.2	10.9			22.8	
Progression Factor		1.00			1.00		1.51	2.22			1.00	
Incremental Delay, d2		19.2			0.0		1.2	1.0			27.9	
Delay (s)		43.3			17.1		48.3	25.1			50.7	
Level of Service		D			B		D	C			D	
Approach Delay (s)		43.3			17.1			27.0			50.7	
Approach LOS		D			B			C			D	
Intersection Summary												
HCM 2000 Control Delay			39.8				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			12.5		
Intersection Capacity Utilization			68.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	42	17	45	7	171	0	931	50	0	605	26
Future Volume (vph)	16	42	17	45	7	171	0	931	50	0	605	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.93
Flpb, ped/bikes		1.00			0.99			1.00			1.00	1.00
Frt		0.97			0.90			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1762			1598			3509			3539	1470
Flt Permitted		0.93			0.93			1.00			1.00	1.00
Satd. Flow (perm)		1647			1503			3509			3539	1470
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	17	46	18	49	8	186	0	1131	54	0	735	28
RTOR Reduction (vph)	0	11	0	0	35	0	0	4	0	0	0	13
Lane Group Flow (vph)	0	70	0	0	208	0	0	1181	0	0	735	15
Confl. Peds. (#/hr)	25		47	47		25	28		11	11		28
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		27.3			27.3			38.3			38.3	38.3
Effective Green, g (s)		27.3			27.3			38.8			38.8	38.3
Actuated g/C Ratio		0.36			0.36			0.52			0.52	0.51
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		599			547			1815			1830	750
v/s Ratio Prot								c0.34			0.21	
v/s Ratio Perm		0.04			c0.14							0.01
v/c Ratio		0.12			0.38			0.65			0.40	0.02
Uniform Delay, d1		15.8			17.6			13.2			11.0	9.1
Progression Factor		1.00			1.00			1.00			0.46	0.74
Incremental Delay, d2		0.4			2.0			1.8			0.5	0.0
Delay (s)		16.2			19.6			15.0			5.6	6.8
Level of Service		B			B			B			A	A
Approach Delay (s)		16.2			19.6			15.0			5.6	
Approach LOS		B			B			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			75.0			Sum of lost time (s)			8.9			
Intersection Capacity Utilization			59.0%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	0	40	0	0	25	0	1038	25	0	860	3
Future Volume (vph)	115	0	40	0	0	25	0	1038	25	0	860	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.99				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.97				0.86		1.00			1.00	
Flt Protected		0.96				1.00		1.00			1.00	
Satd. Flow (prot)		1723				1611		3525			3536	
Flt Permitted		0.96				1.00		1.00			1.00	
Satd. Flow (perm)		1723				1611		3525			3536	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	125	0	43	0	0	27	0	1261	27	0	1045	3
RTOR Reduction (vph)	0	43	0	0	0	17	0	2	0	0	0	0
Lane Group Flow (vph)	0	125	0	0	0	10	0	1286	0	0	1048	0
Confl. Peds. (#/hr)			14	14			55		14	14		55
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		27.3				27.3		31.3			31.3	
Effective Green, g (s)		27.3				27.3		31.3			31.3	
Actuated g/C Ratio		0.36				0.36		0.42			0.42	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		627				586		1471			1475	
v/s Ratio Prot								c0.36			0.30	
v/s Ratio Perm		0.07				0.01						
v/c Ratio		0.20				0.02		0.87			0.71	
Uniform Delay, d1		16.4				15.3		20.0			18.1	
Progression Factor		1.00				1.00		1.66			0.66	
Incremental Delay, d2		0.7				0.1		6.2			2.5	
Delay (s)		17.1				15.3		39.5			14.5	
Level of Service		B				B		D			B	
Approach Delay (s)		17.1			15.3			39.5			14.5	
Approach LOS		B			B			D			B	
Intersection Summary												
HCM 2000 Control Delay		27.4				HCM 2000 Level of Service		C				
HCM 2000 Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		75.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		69.2%				ICU Level of Service		C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	357	39	93	423	115	0	890	85	0	715	64
Future Volume (vph)	75	357	39	93	423	115	0	890	85	0	715	64
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1769	1835		1766	1803			3489			3485	
Flt Permitted	0.15	1.00		0.31	1.00			1.00			1.00	
Satd. Flow (perm)	270	1835		569	1803			3489			3485	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	81	434	42	101	514	125	0	1081	92	0	869	70
RTOR Reduction (vph)	0	5	0	0	12	0	0	9	0	0	8	0
Lane Group Flow (vph)	81	471	0	101	627	0	0	1164	0	0	931	0
Confl. Peds. (#/hr)	2		6	6		2	17		6	6		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	29.9	29.9		29.9	29.9			28.3			28.3	
Effective Green, g (s)	30.4	30.4		30.4	30.4			28.8			28.8	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.38			0.38	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	109	743		230	730			1339			1338	
v/s Ratio Prot		0.26			c0.35			c0.33			0.27	
v/s Ratio Perm	0.30			0.18								
v/c Ratio	0.74	0.63		0.44	0.86			0.87			0.70	
Uniform Delay, d1	19.0	17.8		16.1	20.3			21.4			19.4	
Progression Factor	1.00	1.00		1.00	1.00			0.20			0.10	
Incremental Delay, d2	36.3	4.1		6.0	12.5			4.7			2.4	
Delay (s)	55.3	21.9		22.1	32.9			9.0			4.2	
Level of Service	E	C		C	C			A			A	
Approach Delay (s)		26.8			31.4			9.0			4.2	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		15.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.81										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		78.2%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	50	38	12	23	31	41	0	1005	16	0	790	18
Future Volume (vph)	50	38	12	23	31	41	0	1005	16	0	790	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1783			1722			3531			3525	
Flt Permitted		0.84			0.93			1.00			1.00	
Satd. Flow (perm)		1528			1621			3531			3525	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	54	41	13	25	34	45	0	1221	17	0	960	20
RTOR Reduction (vph)	0	6	0	0	29	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	102	0	0	75	0	0	1237	0	0	978	0
Confl. Peds. (#/hr)	2		2	2		2	14		3	3		14
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		27.3			27.3			31.3			31.3	
Effective Green, g (s)		27.3			27.3			31.3			31.3	
Actuated g/C Ratio		0.36			0.36			0.42			0.42	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		556			590			1473			1471	
v/s Ratio Prot								0.35			0.28	
v/s Ratio Perm		0.07			0.05							
v/c Ratio		0.18			0.13			0.84			0.67	
Uniform Delay, d1		16.2			15.9			19.6			17.6	
Progression Factor		1.00			1.00			0.98			0.75	
Incremental Delay, d2		0.7			0.4			3.1			2.0	
Delay (s)		17.0			16.4			22.3			15.3	
Level of Service		B			B			C			B	
Approach Delay (s)		17.0			16.4			22.3			15.3	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM 2000 Control Delay			19.0				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			12.4		
Intersection Capacity Utilization			60.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	90	13	76	69	106	0	980	71	0	774	23
Future Volume (vph)	39	90	13	76	69	106	0	980	71	0	774	23
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.99			1.00	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1807			1809	1546		3498			3523	
Flt Permitted		0.89			0.78	1.00		1.00			1.00	
Satd. Flow (perm)		1639			1457	1546		3498			3523	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	42	98	14	83	75	115	0	1191	77	0	940	25
RTOR Reduction (vph)	0	5	0	0	0	73	0	6	0	0	2	0
Lane Group Flow (vph)	0	149	0	0	158	42	0	1262	0	0	963	0
Confl. Peds. (#/hr)	13		10	10		13	2		12	12		2
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		26.9			26.9	26.9		31.3			31.3	
Effective Green, g (s)		27.4			27.4	27.4		31.8			31.8	
Actuated g/C Ratio		0.37			0.37	0.37		0.42			0.42	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		598			532	564		1483			1493	
v/s Ratio Prot								c0.36			0.27	
v/s Ratio Perm		0.09			c0.11	0.03						
v/c Ratio		0.25			0.30	0.07		0.85			0.64	
Uniform Delay, d1		16.6			16.9	15.5		19.5			17.1	
Progression Factor		1.00			1.00	1.00		0.43			1.11	
Incremental Delay, d2		1.0			1.4	0.3		4.1			1.8	
Delay (s)		17.6			18.4	15.8		12.4			20.8	
Level of Service		B			B	B		B			C	
Approach Delay (s)		17.6			17.3			12.4			20.8	
Approach LOS		B			B			B			C	
Intersection Summary												
HCM 2000 Control Delay		16.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		85.8%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	50	30	21	26	43	0	1091	10	0	758	26
Future Volume (vph)	76	50	30	21	26	43	0	1091	10	0	758	26
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1764			1710			3534			3518	
Flt Permitted		0.82			0.92			1.00			1.00	
Satd. Flow (perm)		1483			1594			3534			3518	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	83	54	33	23	28	47	0	1326	11	0	921	28
RTOR Reduction (vph)	0	11	0	0	30	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	159	0	0	68	0	0	1336	0	0	946	0
Confl. Peds. (#/hr)	1		6	6		1	17		9	9		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		26.9			26.9			31.3			31.3	
Effective Green, g (s)		27.4			27.4			31.8			31.8	
Actuated g/C Ratio		0.37			0.37			0.42			0.42	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		541			582			1498			1491	
v/s Ratio Prot								c0.38			0.27	
v/s Ratio Perm		c0.11			0.04							
v/c Ratio		0.29			0.12			0.89			0.63	
Uniform Delay, d1		16.9			15.8			20.0			17.0	
Progression Factor		1.00			1.00			0.22			0.61	
Incremental Delay, d2		1.4			0.4			5.7			1.8	
Delay (s)		18.3			16.2			10.2			12.3	
Level of Service		B			B			B			B	
Approach Delay (s)		18.3			16.2			10.2			12.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		11.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.58										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		62.6%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	80	6	70	66	55	0	943	80	0	763	26
Future Volume (vph)	57	80	6	70	66	55	0	943	80	0	763	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1815			1752			3493			3519	
Flt Permitted		0.83			0.84			1.00			1.00	
Satd. Flow (perm)		1543			1502			3493			3519	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	62	87	7	76	72	60	0	1146	87	0	927	28
RTOR Reduction (vph)	0	2	0	0	20	0	0	8	0	0	3	0
Lane Group Flow (vph)	0	154	0	0	188	0	0	1225	0	0	952	0
Confl. Peds. (#/hr)						1	16		9	9		16
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			33.3			33.3	
Effective Green, g (s)		25.8			25.8			33.8			33.8	
Actuated g/C Ratio		0.34			0.34			0.45			0.45	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		530			516			1574			1585	
v/s Ratio Prot								c0.35			0.27	
v/s Ratio Perm		0.10			c0.13							
v/c Ratio		0.29			0.36			0.78			0.60	
Uniform Delay, d1		17.9			18.5			17.4			15.5	
Progression Factor		1.00			1.00			0.41			0.69	
Incremental Delay, d2		1.4			2.0			2.3			1.3	
Delay (s)		19.3			20.4			9.5			12.1	
Level of Service		B			C			A			B	
Approach Delay (s)		19.3			20.4			9.5			12.1	
Approach LOS		B			C			A			B	
Intersection Summary												
HCM 2000 Control Delay		11.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			11.4				
Intersection Capacity Utilization		59.9%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	0	91	1	2	4	153	903	0	0	777	164
Future Volume (vph)	121	0	91	1	2	4	153	903	0	0	777	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.92		1.00	1.00			0.98	
Flt Protected		0.97			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1693			1693		1711	3539			3441	
Flt Permitted		0.82			0.96		0.95	1.00			1.00	
Satd. Flow (perm)		1427			1642		1711	3539			3441	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	131	0	99	1	2	4	166	1097	0	0	944	178
RTOR Reduction (vph)	0	74	0	0	3	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	156	0	0	4	0	166	1097	0	0	1106	0
Confl. Peds. (#/hr)	1		2	2		1	5		23	23		5
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA		Perm	NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		14.6			14.6		9.6	51.0			36.8	
Effective Green, g (s)		15.1			15.1		10.1	51.5			37.3	
Actuated g/C Ratio		0.20			0.20		0.13	0.69			0.50	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		287			330		230	2430			1711	
v/s Ratio Prot							c0.10	0.31			c0.32	
v/s Ratio Perm		c0.11			0.00							
v/c Ratio		0.54			0.01		0.72	0.45			0.65	
Uniform Delay, d1		26.9			24.0		31.1	5.3			14.0	
Progression Factor		1.00			1.00		1.26	2.20			1.00	
Incremental Delay, d2		2.6			0.0		6.5	0.4			1.9	
Delay (s)		29.5			24.0		45.7	12.2			15.9	
Level of Service		C			C		D	B			B	
Approach Delay (s)		29.5			24.0			16.6			15.9	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			17.4				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			12.5		
Intersection Capacity Utilization			67.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	75	31	71	14	186	0	691	47	0	648	37
Future Volume (vph)	15	75	31	71	14	186	0	691	47	0	648	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.94
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.97			0.91			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1772			1620			3500			3539	1493
Flt Permitted		0.94			0.87			1.00			1.00	1.00
Satd. Flow (perm)		1669			1435			3500			3539	1493
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	21	107	44	101	20	265	0	1100	67	0	1031	53
RTOR Reduction (vph)	0	15	0	0	32	0	0	6	0	0	0	17
Lane Group Flow (vph)	0	157	0	0	354	0	0	1161	0	0	1031	36
Confl. Peds. (#/hr)	28		16	16		28	19		11	11		19
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		31.3			31.3			39.3			39.3	39.3
Effective Green, g (s)		31.3			31.3			39.8			39.8	39.3
Actuated g/C Ratio		0.39			0.39			0.50			0.50	0.49
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		652			561			1741			1760	733
v/s Ratio Prot								c0.33			0.29	
v/s Ratio Perm		0.09			c0.25							0.02
v/c Ratio		0.24			0.63			0.67			0.59	0.05
Uniform Delay, d1		16.4			19.7			15.1			14.3	10.6
Progression Factor		1.00			1.00			1.00			0.51	0.18
Incremental Delay, d2		0.9			5.3			2.0			0.9	0.1
Delay (s)		17.2			25.0			17.2			8.1	2.0
Level of Service		B			C			B			A	A
Approach Delay (s)		17.2			25.0			17.2			7.8	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			14.6									
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			80.0									
Intersection Capacity Utilization			55.3%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	0	97	0	0	26	0	740	26	0	865	0
Future Volume (vph)	202	0	97	0	0	26	0	740	26	0	865	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.96				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.96				0.86		1.00			1.00	
Flt Protected		0.97				1.00		1.00			1.00	
Satd. Flow (prot)		1660				1611		3518			3539	
Flt Permitted		0.97				1.00		1.00			1.00	
Satd. Flow (perm)		1660				1611		3518			3539	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	287	0	138	0	0	37	0	1178	37	0	1377	0
RTOR Reduction (vph)	0	44	0	0	0	25	0	3	0	0	0	0
Lane Group Flow (vph)	0	381	0	0	0	12	0	1212	0	0	1377	0
Confl. Peds. (#/hr)			107	107			96		13	13		96
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		25.3				25.3		38.3			38.3	
Effective Green, g (s)		25.3				25.3		38.3			38.3	
Actuated g/C Ratio		0.32				0.32		0.48			0.48	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		524				509		1684			1694	
v/s Ratio Prot								0.34			c0.39	
v/s Ratio Perm		0.23				0.01						
v/c Ratio		0.73				0.02		0.72			0.81	
Uniform Delay, d1		24.3				18.8		16.6			17.8	
Progression Factor		1.00				1.00		0.94			0.71	
Incremental Delay, d2		8.6				0.1		2.2			1.7	
Delay (s)		32.9				18.9		17.8			14.3	
Level of Service		C				B		B			B	
Approach Delay (s)		32.9			18.9			17.8			14.3	
Approach LOS		C			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		18.3				HCM 2000 Level of Service		B				
HCM 2000 Volume to Capacity ratio		0.73										
Actuated Cycle Length (s)		80.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		59.9%				ICU Level of Service		B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	395	40	70	401	65	0	705	73	0	940	93
Future Volume (vph)	68	395	40	70	401	65	0	705	73	0	940	93
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1837		1770	1823			3483			3466	
Flt Permitted	0.12	1.00		0.13	1.00			1.00			1.00	
Satd. Flow (perm)	217	1837		239	1823			3483			3466	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	97	629	57	100	638	92	0	1122	104	0	1496	132
RTOR Reduction (vph)	0	4	0	0	6	0	0	9	0	0	8	0
Lane Group Flow (vph)	97	682	0	100	724	0	0	1217	0	0	1620	0
Confl. Peds. (#/hr)	6		2	2		6	40		8	8		40
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	33.9	33.9		33.9	33.9			33.3			33.3	
Effective Green, g (s)	34.4	34.4		34.4	34.4			33.8			33.8	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.42			0.42	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	93	789		102	783			1471			1464	
v/s Ratio Prot		0.37			0.40			0.35			c0.47	
v/s Ratio Perm	c0.45			0.42								
v/c Ratio	1.04	0.86		0.98	0.92			0.83			1.11	
Uniform Delay, d1	22.8	20.7		22.5	21.6			20.5			23.1	
Progression Factor	1.00	1.00		1.00	1.00			0.56			0.80	
Incremental Delay, d2	105.5	12.1		83.9	18.3			3.9			52.3	
Delay (s)	128.3	32.8		106.4	39.8			15.3			70.7	
Level of Service	F	C		F	D			B			E	
Approach Delay (s)		44.6			47.9			15.3			70.7	
Approach LOS		D			D			B			E	
Intersection Summary												
HCM 2000 Control Delay		46.7			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		1.06										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			10.8				
Intersection Capacity Utilization		75.5%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	67	25	48	59	33	0	831	19	0	1020	19
Future Volume (vph)	74	67	25	48	59	33	0	831	19	0	1020	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1779			1766			3526			3528	
Flt Permitted		0.77			0.83			1.00			1.00	
Satd. Flow (perm)		1403			1498			3526			3528	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	105	95	36	68	84	47	0	1323	27	0	1623	27
RTOR Reduction (vph)	0	8	0	0	14	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	228	0	0	185	0	0	1348	0	0	1648	0
Confl. Peds. (#/hr)	3		2	2		3	8		9	9		8
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.3			25.3			38.3			38.3	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		443			473			1688			1689	
v/s Ratio Prot								0.38			c0.47	
v/s Ratio Perm		c0.16			0.12							
v/c Ratio		0.51			0.39			0.80			0.98	
Uniform Delay, d1		22.3			21.3			17.6			20.4	
Progression Factor		1.00			1.00			1.70			0.70	
Incremental Delay, d2		4.2			2.4			2.5			10.4	
Delay (s)		26.6			23.8			32.5			24.7	
Level of Service		C			C			C			C	
Approach Delay (s)		26.6			23.8			32.5			24.7	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM 2000 Control Delay		27.9			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.75										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			12.4				
Intersection Capacity Utilization		61.2%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	82	19	117	69	108	0	864	45	0	968	41
Future Volume (vph)	39	82	19	117	69	108	0	864	45	0	968	41
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.97		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.99			0.99	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1796			1804	1543		3508			3516	
Flt Permitted		0.85			0.67	1.00		1.00			1.00	
Satd. Flow (perm)		1552			1253	1543		3508			3516	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	55	117	27	166	98	154	0	1375	64	0	1541	58
RTOR Reduction (vph)	0	7	0	0	0	82	0	4	0	0	3	0
Lane Group Flow (vph)	0	192	0	0	264	72	0	1435	0	0	1596	0
Confl. Peds. (#/hr)	14		2	2		14	4		14	14		4
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		25.9			25.9	25.9		37.3			37.3	
Effective Green, g (s)		26.4			26.4	26.4		37.8			37.8	
Actuated g/C Ratio		0.33			0.33	0.33		0.47			0.47	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		512			413	509		1657			1661	
v/s Ratio Prot								0.41			c0.45	
v/s Ratio Perm		0.12			c0.21	0.05						
v/c Ratio		0.37			0.64	0.14		0.87			0.96	
Uniform Delay, d1		20.5			22.8	18.8		18.8			20.4	
Progression Factor		1.00			1.00	1.00		0.73			0.53	
Incremental Delay, d2		2.1			7.4	0.6		4.3			5.8	
Delay (s)		22.6			30.1	19.4		18.0			16.6	
Level of Service		C			C	B		B			B	
Approach Delay (s)		22.6			26.2			18.0			16.6	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay		18.6										
HCM 2000 Volume to Capacity ratio		0.78										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		81.3%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	61	61	31	14	42	41	0	893	22	0	1047	38
Future Volume (vph)	61	61	31	14	42	41	0	893	22	0	1047	38
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1771			1744			3524			3520	
Flt Permitted		0.84			0.94			1.00			1.00	
Satd. Flow (perm)		1515			1657			3524			3520	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	87	87	44	20	60	58	0	1421	31	0	1666	54
RTOR Reduction (vph)	0	11	0	0	33	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	207	0	0	105	0	0	1450	0	0	1717	0
Confl. Peds. (#/hr)			4	4			3		13	13		3
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.9			25.9			37.3			37.3	
Effective Green, g (s)		26.4			26.4			37.8			37.8	
Actuated g/C Ratio		0.33			0.33			0.47			0.47	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		499			546			1665			1663	
v/s Ratio Prot								0.41			c0.49	
v/s Ratio Perm		c0.14			0.06							
v/c Ratio		0.41			0.19			0.87			1.03	
Uniform Delay, d1		20.8			19.2			18.9			21.1	
Progression Factor		1.00			1.00			0.75			0.82	
Incremental Delay, d2		2.5			0.8			4.2			26.4	
Delay (s)		23.3			20.0			18.3			43.6	
Level of Service		C			B			B			D	
Approach Delay (s)		23.3			20.0			18.3			43.6	
Approach LOS		C			B			B			D	
Intersection Summary												
HCM 2000 Control Delay			31.0									
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			80.0									
Intersection Capacity Utilization			62.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	121	20	95	45	55	0	789	84	0	969	11
Future Volume (vph)	61	121	20	95	45	55	0	789	84	0	969	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1808			1742			3484			3533	
Flt Permitted		0.82			0.66			1.00			1.00	
Satd. Flow (perm)		1506			1174			3484			3533	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	87	172	28	135	64	78	0	1256	119	0	1542	16
RTOR Reduction (vph)	0	5	0	0	18	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	282	0	0	259	0	0	1366	0	0	1557	0
Confl. Peds. (#/hr)	3		1	1		3	5		5	5		5
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.8			25.8			38.8			38.8	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		485			378			1689			1713	
v/s Ratio Prot								0.39			c0.44	
v/s Ratio Perm		0.19			c0.22							
v/c Ratio		0.58			0.69			0.81			0.91	
Uniform Delay, d1		22.6			23.6			17.5			19.0	
Progression Factor		1.00			1.00			0.52			0.19	
Incremental Delay, d2		5.0			9.7			2.6			0.9	
Delay (s)		27.6			33.3			11.6			4.6	
Level of Service		C			C			B			A	
Approach Delay (s)		27.6			33.3			11.6			4.6	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM 2000 Control Delay		11.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.77										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.4				
Intersection Capacity Utilization		58.5%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	0	156	0	0	8	79	870	4	0	928	82
Future Volume (vph)	192	0	156	0	0	8	79	870	4	0	928	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.86		1.00	1.00			0.99	
Flt Protected		0.97			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1688			1611		1711	3536			3495	
Flt Permitted		0.82			1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1427			1611		1711	3536			3495	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	273	0	222	0	0	11	112	1385	6	0	1477	117
RTOR Reduction (vph)	0	58	0	0	7	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	437	0	0	4	0	112	1391	0	0	1587	0
Confl. Peds. (#/hr)			6	6			1		7	7		1
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA			NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		25.2			25.2		6.1	45.4			34.7	
Effective Green, g (s)		25.7			25.7		6.6	45.9			35.2	
Actuated g/C Ratio		0.32			0.32		0.08	0.57			0.44	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		458			517		141	2028			1537	
v/s Ratio Prot					0.00		0.07	c0.39			c0.45	
v/s Ratio Perm		c0.31										
v/c Ratio		0.95			0.01		0.79	0.69			1.03	
Uniform Delay, d1		26.6			18.5		36.0	12.0			22.4	
Progression Factor		1.00			1.00		0.74	1.24			1.00	
Incremental Delay, d2		30.5			0.0		17.3	1.3			31.7	
Delay (s)		57.0			18.5		44.1	16.2			54.1	
Level of Service		E			B		D	B			D	
Approach Delay (s)		57.0			18.5			18.3			54.1	
Approach LOS		E			B			B			D	
Intersection Summary												
HCM 2000 Control Delay			39.4				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			80.0				Sum of lost time (s)			12.5		
Intersection Capacity Utilization			73.8%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	43	18	47	8	177	0	1076	53	0	700	27
Future Volume (vph)	17	43	18	47	8	177	0	1076	53	0	700	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.93
Flpb, ped/bikes		1.00			0.99			1.00			1.00	1.00
Frt		0.97			0.90			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1756			1597			3510			3539	1465
Flt Permitted		0.92			0.93			1.00			1.00	1.00
Satd. Flow (perm)		1633			1496			3510			3539	1465
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	18	47	20	51	9	192	0	1307	58	0	851	29
RTOR Reduction (vph)	0	13	0	0	28	0	0	4	0	0	0	11
Lane Group Flow (vph)	0	72	0	0	224	0	0	1361	0	0	851	18
Confl. Peds. (#/hr)	25		47	47		25	28		11	11		28
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		27.3			27.3			43.3			43.3	43.3
Effective Green, g (s)		27.3			27.3			43.8			43.8	43.3
Actuated g/C Ratio		0.34			0.34			0.55			0.55	0.54
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		557			510			1921			1937	792
v/s Ratio Prot								0.39			0.24	
v/s Ratio Perm		0.04			0.15							0.01
v/c Ratio		0.13			0.44			0.71			0.44	0.02
Uniform Delay, d1		18.2			20.4			13.4			10.8	8.5
Progression Factor		1.00			1.00			1.00			0.26	0.13
Incremental Delay, d2		0.5			2.7			2.2			0.5	0.0
Delay (s)		18.6			23.2			15.6			3.3	1.2
Level of Service		B			C			B			A	A
Approach Delay (s)		18.6			23.2			15.6			3.2	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay		12.2										
HCM 2000 Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		63.6%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	0	41	0	0	26	0	1200	26	0	995	4
Future Volume (vph)	119	0	41	0	0	26	0	1200	26	0	995	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.99				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.97				0.86		1.00			1.00	
Flt Protected		0.96				1.00		1.00			1.00	
Satd. Flow (prot)		1722				1611		3526			3536	
Flt Permitted		0.96				1.00		1.00			1.00	
Satd. Flow (perm)		1722				1611		3526			3536	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	129	0	45	0	0	28	0	1458	28	0	1209	4
RTOR Reduction (vph)	0	42	0	0	0	18	0	2	0	0	1	0
Lane Group Flow (vph)	0	132	0	0	0	10	0	1484	0	0	1212	0
Confl. Peds. (#/hr)			14	14			55		14	14		55
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		27.3				27.3		36.3			36.3	
Effective Green, g (s)		27.3				27.3		36.3			36.3	
Actuated g/C Ratio		0.34				0.34		0.45			0.45	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		587				549		1599			1604	
v/s Ratio Prot								c0.42			0.34	
v/s Ratio Perm		0.08				0.01						
v/c Ratio		0.22				0.02		0.93			0.76	
Uniform Delay, d1		18.8				17.5		20.6			18.2	
Progression Factor		1.00				1.00		0.91			0.60	
Incremental Delay, d2		0.9				0.1		8.7			2.4	
Delay (s)		19.7				17.5		27.4			13.2	
Level of Service		B				B		C			B	
Approach Delay (s)		19.7			17.5			27.4			13.2	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM 2000 Control Delay		20.9				HCM 2000 Level of Service		C				
HCM 2000 Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		80.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		74.3%				ICU Level of Service		D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	413	40	97	489	119	0	1029	88	0	827	67
Future Volume (vph)	78	413	40	97	489	119	0	1029	88	0	827	67
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1838		1766	1808			3493			3490	
Flt Permitted	0.13	1.00		0.28	1.00			1.00			1.00	
Satd. Flow (perm)	234	1838		519	1808			3493			3490	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	85	502	43	105	594	129	0	1250	96	0	1005	73
RTOR Reduction (vph)	0	4	0	0	10	0	0	7	0	0	7	0
Lane Group Flow (vph)	85	541	0	105	713	0	0	1339	0	0	1071	0
Confl. Peds. (#/hr)	2		6	6		2	17		6	6		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	35.9	35.9		35.9	35.9			27.3			27.3	
Effective Green, g (s)	36.4	36.4		36.4	36.4			27.8			27.8	
Actuated g/C Ratio	0.45	0.45		0.45	0.45			0.35			0.35	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	106	836		236	822			1213			1212	
v/s Ratio Prot		0.29			c0.39			c0.38			0.31	
v/s Ratio Perm	0.36			0.20								
v/c Ratio	0.80	0.65		0.44	0.87			1.10			0.88	
Uniform Delay, d1	18.7	16.8		14.9	19.6			26.1			24.6	
Progression Factor	1.00	1.00		1.00	1.00			0.35			0.21	
Incremental Delay, d2	45.5	3.9		6.0	12.0			53.3			7.3	
Delay (s)	64.2	20.7		20.9	31.6			62.5			12.4	
Level of Service	E	C		C	C			E			B	
Approach Delay (s)		26.6			30.2			62.5			12.4	
Approach LOS		C			C			E			B	
Intersection Summary												
HCM 2000 Control Delay		35.9			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		0.91										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		87.0%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	39	13	24	32	42	0	1162	17	0	914	19
Future Volume (vph)	53	39	13	24	32	42	0	1162	17	0	914	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1782			1723			3531			3526	
Flt Permitted		0.83			0.93			1.00			1.00	
Satd. Flow (perm)		1509			1614			3531			3526	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	58	42	14	26	35	46	0	1412	18	0	1111	21
RTOR Reduction (vph)	0	7	0	0	30	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	107	0	0	77	0	0	1429	0	0	1130	0
Confl. Peds. (#/hr)	2		2	2		2	14		3	3		14
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		27.3			27.3			36.3			36.3	
Effective Green, g (s)		27.3			27.3			36.3			36.3	
Actuated g/C Ratio		0.34			0.34			0.45			0.45	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		514			550			1602			1599	
v/s Ratio Prot								c0.40			0.32	
v/s Ratio Perm		c0.07			0.05							
v/c Ratio		0.21			0.14			0.89			0.71	
Uniform Delay, d1		18.7			18.2			20.1			17.6	
Progression Factor		1.00			1.00			1.07			0.88	
Incremental Delay, d2		0.9			0.5			0.8			2.1	
Delay (s)		19.6			18.8			22.3			17.6	
Level of Service		B			B			C			B	
Approach Delay (s)		19.6			18.8			22.3			17.6	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM 2000 Control Delay		20.1			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			12.4				
Intersection Capacity Utilization		65.5%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	94	14	79	72	110	0	1133	74	0	895	24
Future Volume (vph)	40	94	14	79	72	110	0	1133	74	0	895	24
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.99			1.00	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1806			1808	1545		3502			3525	
Flt Permitted		0.89			0.80	1.00		1.00			1.00	
Satd. Flow (perm)		1632			1480	1545		3502			3525	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	43	102	15	86	78	119	0	1377	80	0	1087	26
RTOR Reduction (vph)	0	5	0	0	0	78	0	5	0	0	2	0
Lane Group Flow (vph)	0	155	0	0	164	41	0	1452	0	0	1111	0
Confl. Peds. (#/hr)	13		10	10		13	2		12	12		2
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		26.9			26.9	26.9		36.3			36.3	
Effective Green, g (s)		27.4			27.4	27.4		36.8			36.8	
Actuated g/C Ratio		0.34			0.34	0.34		0.46			0.46	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		558			506	529		1610			1621	
v/s Ratio Prot								c0.41			0.32	
v/s Ratio Perm		0.10			c0.11	0.03						
v/c Ratio		0.28			0.32	0.08		0.90			0.69	
Uniform Delay, d1		19.1			19.5	17.8		19.9			17.0	
Progression Factor		1.00			1.00	1.00		0.49			0.92	
Incremental Delay, d2		1.2			1.7	0.3		5.0			1.9	
Delay (s)		20.4			21.1	18.0		14.8			17.6	
Level of Service		C			C	B		B			B	
Approach Delay (s)		20.4			19.8			14.8			17.6	
Approach LOS		C			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		16.6										
HCM 2000 Volume to Capacity ratio		0.62										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		90.7%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	53	31	22	27	44	0	1261	11	0	877	27
Future Volume (vph)	79	53	31	22	27	44	0	1261	11	0	877	27
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1765			1711			3534			3520	
Flt Permitted		0.82			0.92			1.00			1.00	
Satd. Flow (perm)		1476			1586			3534			3520	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	86	58	34	24	29	48	0	1532	12	0	1066	29
RTOR Reduction (vph)	0	11	0	0	32	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	167	0	0	69	0	0	1543	0	0	1093	0
Confl. Peds. (#/hr)	1		6	6		1	17		9	9		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		26.9			26.9			36.3			36.3	
Effective Green, g (s)		27.4			27.4			36.8			36.8	
Actuated g/C Ratio		0.34			0.34			0.46			0.46	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		505			543			1625			1619	
v/s Ratio Prot								c0.44			0.31	
v/s Ratio Perm		c0.11			0.04							
v/c Ratio		0.33			0.13			0.95			0.68	
Uniform Delay, d1		19.5			18.1			20.7			16.9	
Progression Factor		1.00			1.00			0.52			0.87	
Incremental Delay, d2		1.8			0.5			8.7			1.9	
Delay (s)		21.3			18.6			19.4			16.7	
Level of Service		C			B			B			B	
Approach Delay (s)		21.3			18.6			19.4			16.7	
Approach LOS		C			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		18.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		67.9%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	83	7	73	69	58	0	1091	83	0	882	27
Future Volume (vph)	60	83	7	73	69	58	0	1091	83	0	882	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1814			1751			3497			3520	
Flt Permitted		0.83			0.85			1.00			1.00	
Satd. Flow (perm)		1534			1518			3497			3520	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	65	90	8	79	75	63	0	1326	90	0	1072	29
RTOR Reduction (vph)	0	2	0	0	18	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	161	0	0	199	0	0	1410	0	0	1098	0
Confl. Peds. (#/hr)						1	16		9	9		16
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.8			25.8			38.8			38.8	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		494			489			1696			1707	
v/s Ratio Prot								c0.40			0.31	
v/s Ratio Perm		0.10			c0.13							
v/c Ratio		0.33			0.41			0.83			0.64	
Uniform Delay, d1		20.5			21.1			17.8			15.4	
Progression Factor		1.00			1.00			0.41			0.27	
Incremental Delay, d2		1.8			2.5			2.5			1.3	
Delay (s)		22.3			23.6			9.7			5.6	
Level of Service		C			C			A			A	
Approach Delay (s)		22.3			23.6			9.7			5.6	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.9			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.62										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.4				
Intersection Capacity Utilization		64.6%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	95	2	3	5	159	1044	0	0	898	170
Future Volume (vph)	125	0	95	2	3	5	159	1044	0	0	898	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.93		1.00	1.00			0.98	
Flt Protected		0.97			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1692			1708		1711	3539			3450	
Flt Permitted		0.82			0.95		0.95	1.00			1.00	
Satd. Flow (perm)		1424			1633		1711	3539			3450	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	136	0	103	2	3	5	173	1269	0	0	1091	185
RTOR Reduction (vph)	0	69	0	0	4	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	170	0	0	6	0	173	1269	0	0	1262	0
Confl. Peds. (#/hr)	1		2	2		1	5		23	23		5
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA		Perm	NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		15.7			15.7		10.6	54.9			39.7	
Effective Green, g (s)		16.2			16.2		11.1	55.4			40.2	
Actuated g/C Ratio		0.20			0.20		0.14	0.69			0.50	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		288			330		237	2450			1733	
v/s Ratio Prot							c0.10	0.36			c0.37	
v/s Ratio Perm		c0.12			0.00							
v/c Ratio		0.59			0.02		0.73	0.52			0.73	
Uniform Delay, d1		28.9			25.5		33.0	5.9			15.6	
Progression Factor		1.00			1.00		0.87	0.90			1.00	
Incremental Delay, d2		3.8			0.0		6.0	0.5			2.7	
Delay (s)		32.7			25.5		34.7	5.8			18.3	
Level of Service		C			C		C	A			B	
Approach Delay (s)		32.7			25.5			9.3			18.3	
Approach LOS		C			C			A			B	
Intersection Summary												
HCM 2000 Control Delay		15.1			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.70										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			12.5				
Intersection Capacity Utilization		72.6%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	80	33	75	15	197	0	733	49	0	688	40
Future Volume (vph)	16	80	33	75	15	197	0	733	49	0	688	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.94
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.97			0.91			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1772			1620			3501			3539	1493
Flt Permitted		0.93			0.87			1.00			1.00	1.00
Satd. Flow (perm)		1659			1431			3501			3539	1493
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	23	114	47	107	21	280	0	1167	70	0	1095	57
RTOR Reduction (vph)	0	16	0	0	24	0	0	6	0	0	0	17
Lane Group Flow (vph)	0	168	0	0	384	0	0	1231	0	0	1095	40
Confl. Peds. (#/hr)	28		16	16		28	19		11	11		19
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		32.3			32.3			38.3			38.3	38.3
Effective Green, g (s)		32.3			32.3			38.8			38.8	38.3
Actuated g/C Ratio		0.40			0.40			0.48			0.48	0.48
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		669			577			1697			1716	714
v/s Ratio Prot								c0.35			0.31	
v/s Ratio Perm		0.10			c0.27							0.03
v/c Ratio		0.25			0.67			0.73			0.64	0.06
Uniform Delay, d1		15.8			19.4			16.4			15.4	11.2
Progression Factor		1.00			1.00			1.00			0.99	0.72
Incremental Delay, d2		0.9			6.0			2.7			1.0	0.1
Delay (s)		16.7			25.4			19.1			16.1	8.2
Level of Service		B			C			B			B	A
Approach Delay (s)		16.7			25.4			19.1			15.7	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM 2000 Control Delay			18.5									
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			80.0									
Intersection Capacity Utilization			57.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	0	103	0	0	28	0	785	28	0	918	0
Future Volume (vph)	214	0	103	0	0	28	0	785	28	0	918	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.96				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.96				0.86		1.00			1.00	
Flt Protected		0.97				1.00		1.00			1.00	
Satd. Flow (prot)		1659				1611		3518			3539	
Flt Permitted		0.97				1.00		1.00			1.00	
Satd. Flow (perm)		1659				1611		3518			3539	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	304	0	147	0	0	40	0	1249	40	0	1461	0
RTOR Reduction (vph)	0	44	0	0	0	27	0	3	0	0	0	0
Lane Group Flow (vph)	0	407	0	0	0	13	0	1286	0	0	1461	0
Confl. Peds. (#/hr)			107	107			96		13	13		96
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		25.3				25.3		38.3			38.3	
Effective Green, g (s)		25.3				25.3		38.3			38.3	
Actuated g/C Ratio		0.32				0.32		0.48			0.48	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		524				509		1684			1694	
v/s Ratio Prot								0.37			c0.41	
v/s Ratio Perm		0.25				0.01						
v/c Ratio		0.78				0.02		0.76			0.86	
Uniform Delay, d1		24.8				18.8		17.1			18.5	
Progression Factor		1.00				1.00		0.75			0.73	
Incremental Delay, d2		10.8				0.1		2.6			1.7	
Delay (s)		35.6				18.9		15.4			15.3	
Level of Service		D				B		B			B	
Approach Delay (s)		35.6			18.9			15.4			15.3	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		18.2				HCM 2000 Level of Service		B				
HCM 2000 Volume to Capacity ratio		0.78										
Actuated Cycle Length (s)		80.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		61.4%				ICU Level of Service		B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	420	43	74	426	69	0	749	78	0	998	98
Future Volume (vph)	72	420	43	74	426	69	0	749	78	0	998	98
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1837		1770	1823			3483			3466	
Flt Permitted	0.12	1.00		0.12	1.00			1.00			1.00	
Satd. Flow (perm)	223	1837		223	1823			3483			3466	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	102	668	61	105	678	98	0	1192	111	0	1588	139
RTOR Reduction (vph)	0	4	0	0	6	0	0	9	0	0	8	0
Lane Group Flow (vph)	102	725	0	105	770	0	0	1294	0	0	1719	0
Confl. Peds. (#/hr)	6		2	2		6	40		8	8		40
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	32.9	32.9		32.9	32.9			33.3			33.3	
Effective Green, g (s)	33.4	33.4		33.4	33.4			33.8			33.8	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.42			0.42	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	93	766		93	761			1471			1464	
v/s Ratio Prot		0.39			0.42			0.37			c0.50	
v/s Ratio Perm	0.46			c0.47								
v/c Ratio	1.10	0.95		1.13	1.01			0.88			1.17	
Uniform Delay, d1	23.3	22.4		23.3	23.3			21.2			23.1	
Progression Factor	1.00	1.00		1.00	1.00			0.55			0.80	
Incremental Delay, d2	121.9	21.8		132.4	35.4			5.3			80.5	
Delay (s)	145.2	44.2		155.7	58.7			17.1			98.9	
Level of Service	F	D		F	E			B			F	
Approach Delay (s)		56.6			70.3			17.1			98.9	
Approach LOS		E			E			B			F	
Intersection Summary												
HCM 2000 Control Delay			63.7			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			1.13									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)			11.8			
Intersection Capacity Utilization			79.4%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	71	27	50	62	35	0	882	20	0	1083	20
Future Volume (vph)	79	71	27	50	62	35	0	882	20	0	1083	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1780			1766			3526			3529	
Flt Permitted		0.76			0.82			1.00			1.00	
Satd. Flow (perm)		1374			1479			3526			3529	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	112	101	38	71	88	50	0	1404	28	0	1724	28
RTOR Reduction (vph)	0	8	0	0	14	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	243	0	0	195	0	0	1430	0	0	1750	0
Confl. Peds. (#/hr)	3		2	2		3	8		9	9		8
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.3			25.3			38.3			38.3	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		434			467			1688			1689	
v/s Ratio Prot								0.41			c0.50	
v/s Ratio Perm		c0.18			0.13							
v/c Ratio		0.56			0.42			0.85			1.04	
Uniform Delay, d1		22.7			21.5			18.3			20.9	
Progression Factor		1.00			1.00			0.58			1.11	
Incremental Delay, d2		5.1			2.7			3.0			24.1	
Delay (s)		27.9			24.3			13.6			47.3	
Level of Service		C			C			B			D	
Approach Delay (s)		27.9			24.3			13.6			47.3	
Approach LOS		C			C			B			D	
Intersection Summary												
HCM 2000 Control Delay			31.4									
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			80.0									
Intersection Capacity Utilization			63.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	87	20	124	73	114	0	917	48	0	1028	44
Future Volume (vph)	42	87	20	124	73	114	0	917	48	0	1028	44
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.97		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.99			0.99	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1797			1805	1543		3508			3516	
Flt Permitted		0.82			0.66	1.00		1.00			1.00	
Satd. Flow (perm)		1497			1231	1543		3508			3516	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	60	124	28	176	104	162	0	1459	68	0	1636	63
RTOR Reduction (vph)	0	7	0	0	0	80	0	4	0	0	3	0
Lane Group Flow (vph)	0	205	0	0	280	82	0	1523	0	0	1696	0
Confl. Peds. (#/hr)	14		2	2		14	4		14	14		4
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		25.9			25.9	25.9		37.3			37.3	
Effective Green, g (s)		26.4			26.4	26.4		37.8			37.8	
Actuated g/C Ratio		0.33			0.33	0.33		0.47			0.47	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		494			406	509		1657			1661	
v/s Ratio Prot								0.43			c0.48	
v/s Ratio Perm		0.14			c0.23	0.05						
v/c Ratio		0.42			0.69	0.16		0.92			1.02	
Uniform Delay, d1		20.8			23.2	19.0		19.7			21.1	
Progression Factor		1.00			1.00	1.00		0.35			0.62	
Incremental Delay, d2		2.6			9.2	0.7		6.3			12.9	
Delay (s)		23.4			32.5	19.6		13.1			25.9	
Level of Service		C			C	B		B			C	
Approach Delay (s)		23.4			27.8			13.1			25.9	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM 2000 Control Delay		20.9										
HCM 2000 Volume to Capacity ratio		0.83										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		83.1%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	65	33	15	45	44	0	948	23	0	1111	41
Future Volume (vph)	65	65	33	15	45	44	0	948	23	0	1111	41
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1771			1743			3524			3519	
Flt Permitted		0.84			0.94			1.00			1.00	
Satd. Flow (perm)		1513			1654			3524			3519	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	92	92	47	21	64	63	0	1509	33	0	1768	58
RTOR Reduction (vph)	0	11	0	0	34	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	220	0	0	115	0	0	1540	0	0	1823	0
Confl. Peds. (#/hr)			4	4			3		13	13		3
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.9			25.9			37.3			37.3	
Effective Green, g (s)		26.4			26.4			37.8			37.8	
Actuated g/C Ratio		0.33			0.33			0.47			0.47	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		499			545			1665			1662	
v/s Ratio Prot								0.44			c0.52	
v/s Ratio Perm		c0.15			0.07							
v/c Ratio		0.44			0.21			0.92			1.10	
Uniform Delay, d1		21.0			19.3			19.8			21.1	
Progression Factor		1.00			1.00			0.65			0.88	
Incremental Delay, d2		2.8			0.9			6.1			49.6	
Delay (s)		23.8			20.2			19.0			68.1	
Level of Service		C			C			B			E	
Approach Delay (s)		23.8			20.2			19.0			68.1	
Approach LOS		C			C			B			E	
Intersection Summary												
HCM 2000 Control Delay			43.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				11.8		
Intersection Capacity Utilization			64.2%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	129	21	100	48	58	0	838	90	0	1029	11
Future Volume (vph)	65	129	21	100	48	58	0	838	90	0	1029	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1808			1741			3484			3533	
Flt Permitted		0.81			0.64			1.00			1.00	
Satd. Flow (perm)		1490			1141			3484			3533	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	92	184	30	142	68	83	0	1334	128	0	1638	16
RTOR Reduction (vph)	0	5	0	0	18	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	301	0	0	275	0	0	1453	0	0	1653	0
Confl. Peds. (#/hr)	3		1	1		3	5		5	5		5
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.8			25.8			38.8			38.8	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		480			367			1689			1713	
v/s Ratio Prot								0.42			c0.47	
v/s Ratio Perm		0.20			c0.24							
v/c Ratio		0.63			0.75			0.86			0.96	
Uniform Delay, d1		23.0			24.2			18.2			19.9	
Progression Factor		1.00			1.00			0.45			0.19	
Incremental Delay, d2		6.1			13.2			3.2			2.3	
Delay (s)		29.1			37.4			11.4			6.1	
Level of Service		C			D			B			A	
Approach Delay (s)		29.1			37.4			11.4			6.1	
Approach LOS		C			D			B			A	
Intersection Summary												
HCM 2000 Control Delay		12.5										
HCM 2000 Volume to Capacity ratio		0.83										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		60.3%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	0	166	0	0	8	84	923	4	0	985	87
Future Volume (vph)	204	0	166	0	0	8	84	923	4	0	985	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.86		1.00	1.00			0.99	
Flt Protected		0.97			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		1688			1611		1711	3537			3495	
Flt Permitted		0.82			1.00		0.95	1.00			1.00	
Satd. Flow (perm)		1427			1611		1711	3537			3495	
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	290	0	236	0	0	11	119	1469	6	0	1568	124
RTOR Reduction (vph)	0	58	0	0	7	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	468	0	0	4	0	119	1475	0	0	1685	0
Confl. Peds. (#/hr)			6	6			1		7	7		1
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA			NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		25.3			25.3		6.2	45.3			34.5	
Effective Green, g (s)		25.8			25.8		6.7	45.8			35.0	
Actuated g/C Ratio		0.32			0.32		0.08	0.57			0.44	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		460			519		143	2024			1529	
v/s Ratio Prot					0.00		0.07	c0.42			c0.48	
v/s Ratio Perm		c0.33										
v/c Ratio		1.02			0.01		0.83	0.73			1.10	
Uniform Delay, d1		27.1			18.4		36.1	12.5			22.5	
Progression Factor		1.00			1.00		0.78	1.22			1.00	
Incremental Delay, d2		46.3			0.0		20.7	1.4			56.2	
Delay (s)		73.4			18.4		48.9	16.7			78.7	
Level of Service		E			B		D	B			E	
Approach Delay (s)		73.4			18.4			19.1			78.7	
Approach LOS		E			B			B			E	
Intersection Summary												
HCM 2000 Control Delay			52.9				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			80.0				Sum of lost time (s)			12.5		
Intersection Capacity Utilization			77.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Esplanade & Bidwell Mansion/Memorial Way

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	↔
Traffic Volume (vph)	18	46	19	49	8	188	0	1143	56	0	743	29
Future Volume (vph)	18	46	19	49	8	188	0	1143	56	0	743	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.2			4.2	4.7
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Frpb, ped/bikes		0.99			0.97			1.00			1.00	0.93
Flpb, ped/bikes		1.00			0.99			1.00			1.00	1.00
Frt		0.97			0.90			0.99			1.00	0.85
Flt Protected		0.99			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1756			1596			3511			3539	1465
Flt Permitted		0.91			0.93			1.00			1.00	1.00
Satd. Flow (perm)		1620			1494			3511			3539	1465
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	20	50	21	53	9	204	0	1389	61	0	903	31
RTOR Reduction (vph)	0	13	0	0	22	0	0	4	0	0	0	11
Lane Group Flow (vph)	0	78	0	0	244	0	0	1446	0	0	903	20
Confl. Peds. (#/hr)	25		47	47		25	28		11	11		28
Turn Type	Perm	NA		Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4								2
Actuated Green, G (s)		27.3			27.3			43.3			43.3	43.3
Effective Green, g (s)		27.3			27.3			43.8			43.8	43.3
Actuated g/C Ratio		0.34			0.34			0.55			0.55	0.54
Clearance Time (s)		4.7			4.7			4.7			4.7	4.7
Lane Grp Cap (vph)		552			509			1922			1937	792
v/s Ratio Prot								c0.41			0.26	
v/s Ratio Perm		0.05			c0.16							0.01
v/c Ratio		0.14			0.48			0.75			0.47	0.03
Uniform Delay, d1		18.2			20.7			13.9			11.0	8.5
Progression Factor		1.00			1.00			1.00			0.18	0.09
Incremental Delay, d2		0.5			3.2			2.8			0.5	0.0
Delay (s)		18.8			23.9			16.7			2.5	0.8
Level of Service		B			C			B			A	A
Approach Delay (s)		18.8			23.9			16.7			2.4	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.6									
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			80.0									
Intersection Capacity Utilization			66.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Esplanade & Lincoln Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	0	44	0	0	28	0	1274	28	0	1056	4
Future Volume (vph)	126	0	44	0	0	28	0	1274	28	0	1056	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7				4.7		4.7			4.7	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frpb, ped/bikes		0.99				1.00		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		0.96				0.86		1.00			1.00	
Flt Protected		0.96				1.00		1.00			1.00	
Satd. Flow (prot)		1722				1611		3526			3536	
Flt Permitted		0.96				1.00		1.00			1.00	
Satd. Flow (perm)		1722				1611		3526			3536	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	137	0	48	0	0	30	0	1548	30	0	1283	4
RTOR Reduction (vph)	0	42	0	0	0	20	0	2	0	0	0	0
Lane Group Flow (vph)	0	143	0	0	0	10	0	1576	0	0	1287	0
Confl. Peds. (#/hr)			14	14			55		14	14		55
Turn Type	Perm	NA				Perm		NA			NA	
Protected Phases		4						2			2	
Permitted Phases	4					4						
Actuated Green, G (s)		27.3				27.3		36.3			36.3	
Effective Green, g (s)		27.3				27.3		36.3			36.3	
Actuated g/C Ratio		0.34				0.34		0.45			0.45	
Clearance Time (s)		4.7				4.7		4.7			4.7	
Lane Grp Cap (vph)		587				549		1599			1604	
v/s Ratio Prot								c0.45			0.36	
v/s Ratio Perm		0.08				0.01						
v/c Ratio		0.24				0.02		0.99			0.80	
Uniform Delay, d1		18.9				17.5		21.6			18.8	
Progression Factor		1.00				1.00		0.92			0.71	
Incremental Delay, d2		1.0				0.1		15.9			3.0	
Delay (s)		19.9				17.5		35.8			16.4	
Level of Service		B				B		D			B	
Approach Delay (s)		19.9			17.5			35.8			16.4	
Approach LOS		B			B			D			B	
Intersection Summary												
HCM 2000 Control Delay		26.5				HCM 2000 Level of Service		C				
HCM 2000 Volume to Capacity ratio		0.63										
Actuated Cycle Length (s)		80.0				Sum of lost time (s)		12.4				
Intersection Capacity Utilization		76.6%				ICU Level of Service		D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Esplanade & 1st Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	438	43	103	519	126	0	1093	94	0	878	71
Future Volume (vph)	83	438	43	103	519	126	0	1093	94	0	878	71
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			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1837		1766	1808			3493			3490	
Flt Permitted	0.12	1.00		0.23	1.00			1.00			1.00	
Satd. Flow (perm)	217	1837		419	1808			3493			3490	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	113%	101%	101%	113%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	90	532	47	112	631	137	0	1328	102	0	1067	77
RTOR Reduction (vph)	0	4	0	0	10	0	0	7	0	0	7	0
Lane Group Flow (vph)	90	575	0	112	758	0	0	1423	0	0	1137	0
Confl. Peds. (#/hr)	2		6	6		2	17		6	6		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)	33.9	33.9		33.9	33.9			29.3			29.3	
Effective Green, g (s)	34.4	34.4		34.4	34.4			29.8			29.8	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.37			0.37	
Clearance Time (s)	5.1	5.1		5.1	5.1			4.7			4.7	
Lane Grp Cap (vph)	93	789		180	777			1301			1300	
v/s Ratio Prot		0.31			c0.42			c0.41			0.33	
v/s Ratio Perm	0.42			0.27								
v/c Ratio	0.97	0.73		0.62	0.98			1.09			0.87	
Uniform Delay, d1	22.3	18.9		17.7	22.4			25.1			23.4	
Progression Factor	1.00	1.00		1.00	1.00			0.29			0.26	
Incremental Delay, d2	84.8	5.8		15.1	26.9			47.8			6.0	
Delay (s)	107.1	24.8		32.9	49.3			55.1			12.1	
Level of Service	F	C		C	D			E			B	
Approach Delay (s)		35.9			47.2			55.1			12.1	
Approach LOS		D			D			E			B	
Intersection Summary												
HCM 2000 Control Delay			38.4			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)			11.8			
Intersection Capacity Utilization			91.7%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Esplanade & 3rd Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	42	14	25	34	45	0	1234	18	0	970	20
Future Volume (vph)	56	42	14	25	34	45	0	1234	18	0	970	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7			4.7			4.7			4.7	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1783			1722			3531			3526	
Flt Permitted		0.82			0.92			1.00			1.00	
Satd. Flow (perm)		1504			1611			3531			3526	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	61	46	15	27	37	49	0	1499	20	0	1179	22
RTOR Reduction (vph)	0	7	0	0	32	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	115	0	0	81	0	0	1518	0	0	1199	0
Confl. Peds. (#/hr)	2		2	2		2	14		3	3		14
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		27.3			27.3			36.3			36.3	
Effective Green, g (s)		27.3			27.3			36.3			36.3	
Actuated g/C Ratio		0.34			0.34			0.45			0.45	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		513			549			1602			1599	
v/s Ratio Prot								c0.43			0.34	
v/s Ratio Perm		c0.08			0.05							
v/c Ratio		0.22			0.15			0.95			0.75	
Uniform Delay, d1		18.8			18.3			20.9			18.1	
Progression Factor		1.00			1.00			0.98			0.90	
Incremental Delay, d2		1.0			0.6			1.7			2.5	
Delay (s)		19.8			18.8			22.2			18.8	
Level of Service		B			B			C			B	
Approach Delay (s)		19.8			18.8			22.2			18.8	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM 2000 Control Delay		20.6			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			12.4				
Intersection Capacity Utilization		67.8%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: Esplanade & 5th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	99	15	84	76	117	0	1202	79	0	950	25
Future Volume (vph)	43	99	15	84	76	117	0	1202	79	0	950	25
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			4.2	
Lane Util. Factor		1.00			1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.99			1.00	0.85		0.99			1.00	
Flt Protected		0.99			0.97	1.00		1.00			1.00	
Satd. Flow (prot)		1806			1809	1545		3501			3525	
Flt Permitted		0.88			0.79	1.00		1.00			1.00	
Satd. Flow (perm)		1618			1466	1545		3501			3525	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	47	108	16	91	83	127	0	1460	86	0	1154	27
RTOR Reduction (vph)	0	5	0	0	0	79	0	5	0	0	2	0
Lane Group Flow (vph)	0	166	0	0	174	48	0	1541	0	0	1179	0
Confl. Peds. (#/hr)	13		10	10		13	2		12	12		2
Turn Type	Perm	NA		Perm	NA	Perm		NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		26.9			26.9	26.9		36.3			36.3	
Effective Green, g (s)		27.4			27.4	27.4		36.8			36.8	
Actuated g/C Ratio		0.34			0.34	0.34		0.46			0.46	
Clearance Time (s)		5.1			5.1	5.1		4.7			4.7	
Lane Grp Cap (vph)		554			502	529		1610			1621	
v/s Ratio Prot								c0.44			0.33	
v/s Ratio Perm		0.10			c0.12	0.03						
v/c Ratio		0.30			0.35	0.09		0.96			0.73	
Uniform Delay, d1		19.3			19.6	17.8		20.8			17.5	
Progression Factor		1.00			1.00	1.00		0.45			0.81	
Incremental Delay, d2		1.4			1.9	0.3		8.2			2.2	
Delay (s)		20.7			21.5	18.2		17.5			16.4	
Level of Service		C			C	B		B			B	
Approach Delay (s)		20.7			20.1			17.5			16.4	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM 2000 Control Delay		17.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		93.0%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Esplanade & 7th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	56	33	23	29	47	0	1339	11	0	931	29
Future Volume (vph)	84	56	33	23	29	47	0	1339	11	0	931	29
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			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.94			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1765			1711			3534			3520	
Flt Permitted		0.81			0.91			1.00			1.00	
Satd. Flow (perm)		1466			1583			3534			3520	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	91	61	36	25	31	51	0	1627	12	0	1131	31
RTOR Reduction (vph)	0	11	0	0	34	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	177	0	0	73	0	0	1638	0	0	1160	0
Confl. Peds. (#/hr)	1		6	6		1	17		9	9		17
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		26.9			26.9			36.3			36.3	
Effective Green, g (s)		27.4			27.4			36.8			36.8	
Actuated g/C Ratio		0.34			0.34			0.46			0.46	
Clearance Time (s)		5.1			5.1			4.7			4.7	
Lane Grp Cap (vph)		502			542			1625			1619	
v/s Ratio Prot								c0.46			0.33	
v/s Ratio Perm		c0.12			0.05							
v/c Ratio		0.35			0.14			1.01			0.72	
Uniform Delay, d1		19.7			18.1			21.6			17.4	
Progression Factor		1.00			1.00			0.58			0.92	
Incremental Delay, d2		1.9			0.5			17.9			2.3	
Delay (s)		21.6			18.7			30.4			18.2	
Level of Service		C			B			C			B	
Approach Delay (s)		21.6			18.7			30.4			18.2	
Approach LOS		C			B			C			B	
Intersection Summary												
HCM 2000 Control Delay		24.9			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.69										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.8				
Intersection Capacity Utilization		70.4%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Esplanade & 9th Ave

09/03/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	88	7	78	73	61	0	1158	88	0	936	29
Future Volume (vph)	63	88	7	78	73	61	0	1158	88	0	936	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.96			0.99			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1815			1752			3497			3520	
Flt Permitted		0.82			0.84			1.00			1.00	
Satd. Flow (perm)		1517			1503			3497			3520	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	68	96	8	85	79	66	0	1407	96	0	1137	31
RTOR Reduction (vph)	0	2	0	0	18	0	0	6	0	0	3	0
Lane Group Flow (vph)	0	170	0	0	212	0	0	1497	0	0	1165	0
Confl. Peds. (#/hr)						1	16		9	9		16
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4								
Actuated Green, G (s)		25.3			25.3			38.3			38.3	
Effective Green, g (s)		25.8			25.8			38.8			38.8	
Actuated g/C Ratio		0.32			0.32			0.48			0.48	
Clearance Time (s)		4.7			4.7			4.7			4.7	
Lane Grp Cap (vph)		489			484			1696			1707	
v/s Ratio Prot								c0.43			0.33	
v/s Ratio Perm		0.11			c0.14							
v/c Ratio		0.35			0.44			0.88			0.68	
Uniform Delay, d1		20.7			21.4			18.5			15.9	
Progression Factor		1.00			1.00			0.45			0.34	
Incremental Delay, d2		1.9			2.9			3.0			1.4	
Delay (s)		22.6			24.2			11.3			6.8	
Level of Service		C			C			B			A	
Approach Delay (s)		22.6			24.2			11.3			6.8	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM 2000 Control Delay		11.2			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			11.4				
Intersection Capacity Utilization		66.9%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

15: Esplanade & 11th Ave

09/03/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕			↕	
Traffic Volume (vph)	133	0	100	2	3	5	169	1108	0	0	954	181
Future Volume (vph)	133	0	100	2	3	5	169	1108	0	0	954	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	10	11	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.1	4.2			4.2	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00			1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.94			0.93		1.00	1.00			0.98	
Flt Protected		0.97			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1692			1708		1711	3539			3449	
Flt Permitted		0.82			0.95		0.95	1.00			1.00	
Satd. Flow (perm)		1424			1633		1711	3539			3449	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	113%	101%	101%	113%	101%
Adj. Flow (vph)	144	0	109	2	3	5	184	1346	0	0	1159	197
RTOR Reduction (vph)	0	68	0	0	4	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	185	0	0	6	0	184	1346	0	0	1342	0
Confl. Peds. (#/hr)	1		2	2		1	5		23	23		5
Confl. Bikes (#/hr)			3									
Turn Type	Perm	NA		Perm	NA		Prot	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)		16.3			16.3		11.4	54.3			38.3	
Effective Green, g (s)		16.8			16.8		11.9	54.8			38.8	
Actuated g/C Ratio		0.21			0.21		0.15	0.68			0.48	
Clearance Time (s)		4.7			4.7		4.6	4.7			4.7	
Vehicle Extension (s)		4.0			2.0		0.5	4.0			4.0	
Lane Grp Cap (vph)		299			342		254	2424			1672	
v/s Ratio Prot							c0.11	0.38			c0.39	
v/s Ratio Perm		c0.13			0.00							
v/c Ratio		0.62			0.02		0.72	0.56			0.80	
Uniform Delay, d1		28.7			25.1		32.5	6.4			17.4	
Progression Factor		1.00			1.00		1.03	0.52			1.00	
Incremental Delay, d2		4.3			0.0		4.9	0.5			4.2	
Delay (s)		33.0			25.1		38.3	3.8			21.5	
Level of Service		C			C		D	A			C	
Approach Delay (s)		33.0			25.1			8.0			21.5	
Approach LOS		C			C			A			C	

Intersection Summary

HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group