LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, CO 80206
(303) 333-1105
FAX (303) 333-1107
E-mail: lsc@lscdenver.com

November 8, 2019

Mr. Daniel Madruga
Atwell, LLC
143 Union Blvd., Suite 700
Lakewood, CO 80228

Re: Hightower Ranch
Commerce City, CO
LSC #180590

Dear Mr. Madruga:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Hightower Ranch development to address City comments. As shown on Figure 1, the site is located north of E. 88th Avenue, south of E. 96th Avenue, and east of Tower Road in Commerce City, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the site's traffic impacts or the impacts from growth in background traffic.

LAND USE AND ACCESS

The site is proposed to include about 1,131 single-family dwelling units, about 1,421 multi-family dwelling units, an 825-student school, about 1,137,000 square feet of retail space, about 553,000 square feet of office space, about 553,000 square feet of light industrial space, and about 737,000 square feet of warehouse space. Access is proposed from several locations to Tower Road, E. 88th Avenue, and E. 96th Avenue as shown in the conceptual site plan in Figure 2.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Tower Road** is a north-south, four-lane arterial roadway west of the site. The intersections with E. 88th Avenue and E. 96th Avenue are signalized with auxiliary turn lanes. The posted speed limit in the vicinity of the site is 45 mph. It is assumed to be six lanes with full auxiliary turn lanes between 2026 and 2040.

- **E. 88th Avenue** is an east-west, two-lane minor arterial roadway south of the site. The intersection with Tower Road is signalized with auxiliary lanes. The posted speed limit in the vicinity of the site is 45 mph. It is planned to be widened to four lanes between 2026 and 2040. E. 88th Avenue passes over E-470 with no interchange but an interchange is planned by 2040.

- **E. 96th Avenue** is an east-west, two-lane major arterial roadway north of the site. The intersection with Tower Road is signalized with auxiliary lanes. The posted speed limit in the vicinity of the site is 40 mph. It is assumed to be six lanes with full auxiliary lanes between 2026 and 2040. E. 96th Avenue passes over E-470 at an existing interchange. The interchange will need to be expanded as the area builds out.

Existing Traffic Conditions

Figure 3 shows the existing lane geometries, traffic controls, posted speed limits, and traffic volumes in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes and daily traffic counts are from the attached traffic counts conducted by Counter Measures, Inc..

2026 and 2040 Background Traffic

Figure 4 shows the estimated 2026 background traffic and Figure 5 shows the estimated 2040 background traffic based on the City's 2040 build-out traffic projections of 75,000 vehicles per day on Tower Road less site-generated traffic. It also includes buildout of the following developments in the vicinity of the site: Nexus North, Denver Tech Center, Second Creek Farms, Reunion, and Buffalo Highlands.

Existing, 2026, and 2040 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3, 4, and 5 were analyzed as appropriate to determine the existing, 2026 background, and 2040 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

1. **Tower Road/E. 96th Avenue:** This signalized intersection currently operates at an overall LOS "B" during both morning and afternoon peak-hours. In 2026 and 2040, both peak-hours are expected to operate at LOS "C" and "D", respectively.

2. **E. 96th Avenue/Settlers Crossing/West Collector:** All movements at this unsignalized intersection are expected to operate at LOS "D" or better during both morning and afternoon peak-hours through 2040.

3. **E. 96th Avenue/Settlers Crossing/East Collector:** All movements at this unsignalized intersection are expected to operate at LOS "C" or better during both peak-hours through 2026. In 2040, this intersection is expected to be signalized and as such is expected to operate at an overall LOS "B" or better during both peak-hours.

4. **Intentionally Left Blank**

5. **E. 96th Avenue/E-470 SB Ramps:** All movements at this unsignalized intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2026. In 2040, this intersection is expected to be improved with turn lanes and signalized and as such is expected to operate at an overall LOS "B" or better during both peak-hours.

6. **E. 96th Avenue/E-470 NB Ramps:** All movements at this unsignalized intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2026. In 2040, this intersection is expected to be improved with turn lanes and signalized and as such is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour.

7. **Tower Road/E. 94th Avenue/Second Creek Plaza Drive:** This future signalized intersection is expected to operate at an overall LOS "B" or better during both peak-hours through 2040.

8. **Tower Road/E. 92nd Avenue:** This future signalized intersection is expected to operate at an overall LOS "B" or better during both peak-hours through 2040.

9. **Intentionally Left Blank**

10. **Tower Road/E. 88th Avenue:** This signalized intersection currently operates at an overall LOS "A" during both morning and afternoon peak-hours and is expected to operate at LOS "C" or better through 2040.

11. **Intentionally Left Blank**

12. **Intentionally Left Blank**

13. **Intentionally Left Blank**

14. **Tower Road/E. 81st Avenue:** This signalized intersection currently operates at an overall LOS "A" during both morning and afternoon peak-hours and is expected to operate at LOS "C" or better through 2040.

TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 50,179 external vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 1,637 vehicles would enter and about 1,621 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 2,871 vehicles would enter the site and about 3,037 vehicles would exit. The assumed internal trip and pass-by trip reductions are shown in Table 2.

TRIP DISTRIBUTION

Figure 6 shows the estimated 2026 and 2040 directional distribution of residential site-generated traffic volumes on the area roadways based on the location of the site with respect to the regional population, employment, and activity centers; and the site's proposed land use.

Figure 7 shows the estimated 2026 and 2040 directional distribution of non-residential site-generated traffic volumes on the area roadways based on the location of the site with respect to the regional population, employment, and activity centers; and the site's proposed land use.

TRIP ASSIGNMENT

Figure 8 shows the estimated pass-by site-generated traffic volumes based on the pass-by trip generation estimate (from Table 2) and is assumed to be the same for 2026 and 2040.

Figure 9 shows the estimated 2026 primary site-generated traffic volumes based on the primary trip generation estimate (from Table 2) and the 2026 directional distribution estimates from Figures 6 and 7.

Figure 10 shows the estimated 2026 total site-generated traffic volumes which is the sum of the volumes in Figures 8 and 9.

Figure 11 shows the estimated 2040 primary site-generated traffic volumes based on the primary trip generation estimate (from Table 2) and the 2040 directional distribution estimates from Figures 6 and 7.

Figure 12 shows the estimated 2040 total site-generated traffic volumes which is the sum of the volumes in Figures 10 and 11.

2026 AND 2040 TOTAL TRAFFIC

Figure 13 shows the 2026 total traffic which is the sum of 2026 background traffic volumes (from Figure 4) and the 2026 total site-generated traffic volumes (from Figure 10). Figure 13 also shows the 2026 recommended lane geometry and traffic control. The recommended improvements are described in more detail in Tables 3 and 4.

Figure 14 shows the 2040 total traffic which is the sum of 2040 background traffic volumes (from Figure 5) and the 2040 total site-generated traffic volumes (from Figure 12). Figures 14, 15, 16, and 17 show the 2040 recommended lane geometry and traffic control. The recommended improvements are described in more detail in Tables 3 and 4.

PROJECTED LEVELS OF SERVICE

The intersections in Figures 13 and 14 were analyzed to determine the 2026 and 2040 total traffic levels of service. Table 1 shows the level of service analysis results. The level of service reports are attached.

1. **Tower Road/E. 96th Avenue:** This signalized intersection is expected to operate at an overall LOS "D" or better through 2040 with the recommended improvements which include widening to six lanes plus auxiliary lanes between 2026 and 2040. The northbound left, southbound left, and westbound left movements may need a triple left-turn lane for buildout conditions.

2. **E. 96th Avenue/Settlers Crossing/West Collector:** This future signalized intersection is expected to operate at an overall LOS "C" during both morning and afternoon peak-hours in 2026. In 2040, the morning peak-hour is expected to operate at LOS "B" and the afternoon peak-hour is expected to operate at LOS "C".

3. **E. 96th Avenue/Settlers Crossing/East Collector:** This future signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour through 2040.

4. **Intentially Left Blank**.

5. **E. 96th Avenue/E-470 SB Ramps:** All movements at this unsignalized intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2026. In 2040, this intersection is expected to be improved with turn lanes and signalized and as such is expected to operate at an overall LOS "A" during the morning peak-hour and LOS "B" during the afternoon peak-hour. The interchange bridge over E-470 will need to be expanded between 2026 and 2040.

6. **E. 96th Avenue/E-470 NB Ramps:** All movements at this unsignalized intersection are expected to operate at LOS "D" or better during both morning and afternoon peak-hours through 2026 with the following exception: The northbound left-turn movement will likely operate at LOS "F" in 2026 if all of the developments reach buildout prior to this intersection being signalized. In 2040, this intersection is expected to be signalized and as such is expected to operate at an overall LOS "C" or better during both peak-hours.

7. **Tower Road/E. 94th Avenue/Second Creek Plaza Drive:** This future signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "D" during the afternoon peak-hour in 2026. In 2040, the morning peak-hour is expected to operate at LOS "B" and the afternoon peak-hour is expected to operate at LOS "C".

8. **Tower Road/E. 92nd Avenue:** This future signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "D" during the afternoon peak-hour in 2026. In 2040, the morning peak-hour is expected to operate at LOS "C" and the afternoon peak-hour is expected to operate at LOS "D".

9. **Tower Road/Three-Quarter Site Access:** All movements at this future unsignalized three-quarter movement intersection are expected to operate at LOS "B" or better through

2040 with the exception of the southbound left-turn movement which is expected to operate at LOS "F" in the afternoon peak-hour. This movement will benefit from gaps created by the adjacent traffic signals.

10. **Tower Road/E. 88th Avenue:** This signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the afternoon peak-hour in 2026. In 2040 the intersection is expected to operate at LOS "C" in the morning peak-hour and LOS "E" in the afternoon peak-hour. The LOS "E" can be mitigated to LOS "D" by providing a third left-turn lane on the westbound approach. This third left-turn lane will not likely be needed until near buildout conditions.

11. **E. 88th Avenue/West Collector:** All movements at this future right-in/right-out intersection are expected to operate at LOS "C" or better through 2040.

12. **E. 88th Avenue/Middle Prime Access:** All movements at this future unsignalized intersection are expected to operate at LOS "C" or better through 2040.

13. **E. 88th Avenue/East Collector:** All movements at this future unsignalized intersection are expected to operate at LOS "B" or better through 2026. In 2040, this intersection is expected to be signalized and as such is expected to operate at an overall LOS "B" or better during both peak-hours.

14. **Tower Road/E. 81st Avenue:** This signalized intersection is expected to operate at LOS "D" or better through 2040.

QUEUING ANALYSIS

The projected 95th percentile queue lengths and existing/proposed auxiliary turn lane lengths at the signalized intersections are shown in Table 3. Additional detail is provided in Table 4.

RECOMMENDED IMPROVEMENTS

Table 4 includes a detailed list of the recommended improvements for both 2026 and 2040.

CONCEPTUAL LANE GEOMETRY

Figures 15, 16, and 17 show the 2040 conceptual lane geometry and intersection spacing for E. 88th Avenue, E. 96th Avenue, and Tower Road adjacent to the site.

TRAFFIC SIGNAL WARRANT ANALYSES

Tables 5, 6, 7, 8, and 9 show a traffic signal warrant is expected to be met over time at the intersections of E. 96th Avenue/Settlers Crossing/West Collector (#2), E. 96th Avenue/Settlers Crossing/East Collector (#3), Tower Road/E. 94th Avenue (#7), Tower Road/E. 92nd Avenue/ Settlers Creek Plaza Drive (#8), and E. 88th Avenue/East Collector (#13).

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

1. The site is projected to generate about 50,179 external vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 1,637 vehicles would enter and about 1,621 vehicles would exit the site. During the afternoon peak-hour, about 2,871 vehicles would enter the site and about 3,037 vehicles would exit. The assumed internal trip and pass-by trip reductions are shown in Table 2.

Projected Levels of Service

2. The signalized intersections are expected to operate at an overall LOS "D" or better during both morning and afternoon peak-hours through 2040 assuming all of the recommended improvements shown in Table 4 are made when appropriate.

3. All movements at all of the unsignalized intersections are expected to operate at LOS "D" or better through 2040 with the following exceptions:

    - The northbound through/left movement at the E. 96th Avenue/ E-470 NB Ramps intersection (#6) could operate at LOS "F" by 2026 prior to traffic signal control.
    - The southbound left-turn movement at the Tower Road/Three-Quarter Site Access intersection (#9) could operate at LOS "F" in the afternoon peak-hour. This movement will benefit from gaps created by the adjacent traffic signals.

Recommendations

4. The 2026 recommended improvements are shown in Figure 13 and detailed in Tables 3 and 4. Table 4 assigns the most likely responsible party for each improvement.

5. The 2040 recommended improvements are shown in Figures 14, 15, 16, and 17 and detailed in Tables 3 and 4. Table 4 assigns the most likely responsible party for each improvement.

* * * * *

We trust our findings will assist you in gaining approval of the proposed Hightower Ranch development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By_____
Christopher S. McGranahan, PE, PTOE
Principal

COLORADO LICENSED
CHRISTOPHER S. MCGRANAHAN
39018
PROFESSIONAL ENGINEER

11-8-19

CSM/wc

Enclosures: Tables 1 - 9
Figures 1 - 17
Traffic Count Reports
Traffic Signal Timing Plans
Level of Service Definitions
Level of Service Reports
Queuing Reports

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Table 1 (Page 1 of 4)
Intersection Levels of Service Analysis
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Traffic Control	Existing Traffic		2026 Background Traffic		2026 Total Traffic		2040 Background Traffic		2040 Total Traffic		2040 Total Traffic Mitigated (1)	
		Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM
1) Tower Road/E. 96th Avenue	Signalized												
EB Left		C	D	D	D	C	E	E	E	E	E	E	E
EB Through		E	E	D	D	D	E	E	E	E	E	E	E
EB Right		B	B	A	A	A	A	A	A	A	A	A	A
WB Left		D	D	E	E	E	E	E	E	E	F	E	E
WB Through		D	D	D	D	D	D	D	E	E	E	E	D
WB Right		A	A	A	A	A	C	A	A	A	A	A	A
NB Left		B	B	E	D	D	E	D	D	E	E	D	E
NB Through/Right		B	A	--	--	--	--	--	--	--	--	--	--
NB Through		--	--	B	A	D	D	D	C	D	E	D	D
NB Right		--	--	A	A	B	B	A	A	A	A	A	A
SB Left		A	A	E	D	E	E	D	D	E	E	D	E
SB Through/Right		B	B	C	C	--	--	--	--	--	--	--	--
SB Through		--	--	--	--	D	D	C	D	C	E	C	D
SB Right		--	--	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec./veh.)		19.2	15.8	24.8	24.3	36.3	48.1	36.3	37.8	43.7	53.6	38.6	42.8
Entire Intersection LOS		B	B	C	C	D	D	D	D	D	D	D	D
2) E. 96th Avenue/Settler's Crossing/West Collector	TWSC												
EB Left		--	--	A	A	--	--	B	B	--	--		
SB Left		--	--	B	C	--	--	D	D	--	--		
SB Right		--	--	B	B	--	--	B	B	--	--		
Critical Movement Delay		--	--	14.3	24.5	--	--	25.7	28.6	--	--		
	Signalized												
EB Left		--	--	--	--	B	B	--	--	A	D		
EB Through		--	--	--	--	D	D	--	--	B	D		
EB Right		--	--	--	--	A	A	--	--	A	C		
WB Left		--	--	--	--	A	C	--	--	B	C		
WB Through		--	--	--	--	B	C	--	--	A	C		
WB Right		--	--	--	--	A	A	--	--	A	A		
NB Left		--	--	--	--	D	D	--	--	D	D		
NB Through/Right		--	--	--	--	B	A	--	--	B	A		
SB Left		--	--	--	--	D	D	--	--	C	D		
SB Through/Right		--	--	--	--	A	B	--	--	B	B		
Entire Intersection Delay (sec./veh.)		--	--	--	--	26.8	32.4	--	--	15.8	30.9		
Entire Intersection LOS		--	--	--	--	C	C	--	--	B	C		
3) E. 96th Avenue/Settler's Crossing East Collector	TWSC												
EB Left/Through		--	--	A	A	--	--	--	--	--	--		
SB Left		--	--	B	C	--	--	--	--	--	--		
SB Right		--	--	A	B	--	--	--	--	--	--		
Critical Movement Delay		--	--	14.2	19.2	--	--	--	--	--	--		

Notes:
(1) Mitigation is a triple left-turn lane for the SB LT, NB LT, and WB LT movements. These lanes will not likely be needed until near buildout conditions.

Table 1 (Page 2 of 4)
Intersection Levels of Service Analysis
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Traffic Control	Existing Traffic Level of Service AM	Existing Traffic Level of Service PM	2026 Background Traffic Level of Service AM	2026 Background Traffic Level of Service PM	2026 Total Traffic Level of Service AM	2026 Total Traffic Level of Service PM	2040 Background Traffic Level of Service AM	2040 Background Traffic Level of Service PM	2040 Total Traffic Level of Service AM	2040 Total Traffic Level of Service PM	2040 Total Traffic Mitigated Level of Service AM	2040 Total Traffic Mitigated Level of Service PM
3) E. 96th Avenue/Settler's Crossing East Collector	Signalized												
EB Left		--	--	--	--	A	B	A	D	A	E		
EB Through		--	--	--	--	B	D	A	B	A	B		
EB Right		--	--	--	--	A	B	--	--	A	A		
WB Left		--	--	--	--	A	C	--	--	A	C		
WB Through		--	--	--	--	A	B	A	B	B	C		
WB Right		--	--	--	--	A	A	A	A	A	A		
NB Left		--	--	--	--	D	D	--	--	D	D		
NB Through		--	--	--	--	D	C	--	--	D	C		
NB Right		--	--	--	--	B	A	--	--	B	A		
SB Left		--	--	--	--	D	C	D	D	D	D		
SB Through		--	--	--	--	D	D	--	--	D	D		
SB Right		--	--	--	--	A	A	A	B	A	B		
Entire Intersection Delay (sec./veh.)		--	--	--	--	12.2	26.3	6.5	16.7	10.4	26.3		
Entire Intersection LOS		--	--	--	--	B	C	A	B	B	C		
4) Intentionally Left Blank													
5) E. 96th Avenue/E-470 SB Ramps	TWSC												
WB Left		A	A	A	A	A	A	--	--	--	--		
SB Approach		A	A	A	B	B	C	--	--	--	--		
Critical Movement Delay		8.8	9.3	9.8	12.4	11.0	22.1	--	--	--	--		
	Signalized												
EB Through		--	--	--	--	--	--	A	A	A	A		
EB Right		--	--	--	--	--	--	A	A	A	A		
WB Left		--	--	--	--	--	--	A	A	A	A		
WB Through		--	--	--	--	--	--	A	A	A	B		
SB Left		--	--	--	--	--	--	E	C	D	C		
SB Left/Through		--	--	--	--	--	--	E	C	D	C		
SB Right		--	--	--	--	--	--	B	D	B	D		
Entire Intersection Delay (sec./veh.)		--	--	--	--	--	--	6.5	11.2	5.1	14.6		
Entire Intersection LOS		--	--	--	--	--	--	A	B	A	B		
6) E. 96th Avenue/E-470 NB Ramps	TWSC												
NB Left/Through		A	B	B	C	D	F	--	--	--	--		
NB Right		A	A	A	A	A	A	--	--	--	--		
EB Left		A	A	A	A	A	A	--	--	--	--		
Critical Movement Delay		9.5	10.2	12.4	24.9	26.4	>240	--	--	--	--		
	Signalized												
EB Left		--	--	--	--	--	--	D	E	D	E		
EB Through		--	--	--	--	--	--	A	A	A	A		
WB Through		--	--	--	--	--	--	A	B	A	C		
WB Through/Right		--	--	--	--	--	--	--	--	--	--		
WB Right		--	--	--	--	--	--	A	A	A	A		
NB Left/Through		--	--	--	--	--	--	--	--	--	--		
NB Left		--	--	--	--	--	--	E	E	E	E		
NB Through		--	--	--	--	--	--	E	E	E	E		
NB Right		--	--	--	--	--	--	A	A	A	A		
Entire Intersection Delay (sec./veh.)		--	--	--	--	--	--	14.9	26.7	16.6	30.1		
Entire Intersection LOS		--	--	--	--	--	--	B	C	B	C		

Table 1 (Page 3 of 4)
Intersection Levels of Service Analysis
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Traffic Control	Existing Traffic		2026 Background Traffic		2026 Total Traffic		2040 Background Traffic		2040 Total Traffic		2040 Total Traffic Mitigated (1)	
		Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM
7) Tower Road/94th Avenue/Second Creek Plaza Drive	Signalized												
EB Left		--	--	D	D	D	E	D	D	D	E		
EB Through		--	--	--	--	D	D	--	--	D	D		
EB Right		--	--	A	A	A	A	A	A	A	A		
WB Left		--	--	--	--	D	D	--	--	D	D		
WB Through		--	--	--	--	D	D	--	--	D	D		
WB Right		--	--	--	--	A	A	--	--	A	A		
NB Left		--	--	A	D	C	D	B	E	B	D		
NB Through		--	--	A	A	A	D	A	A	B	C		
NB Right		--	--	--	--	A	A	--	--	A	A		
SB Left		--	--	--	--	A	D	--	--	A	D		
SB Through/Right		--	--	--	--	--	--	--	--	--	--		
SB Through		--	--	A	A	A	C	A	B	B	C		
SB Right		--	--	A	A	A	A	A	A	A	A		
Entire Intersection Delay (sec./veh.)		--	--	2.4	10.6	8.8	38.1	5.2	14.6	16.3	28.7		
Entire Intersection LOS		--	--	A	B	A	D	A	B	B	C		
8) Tower Road/E. 92nd Avenue	Signalized												
EB Left		--	--	D	D	D	E	D	D	D	E		
EB Through		--	--	--	--	D	D	--	--	D	D		
EB Right		--	--	A	A	A	A	A	A	A	A		
WB Left		--	--	--	--	E	E	--	--	D	E		
WB Through		--	--	--	--	D	D	--	--	D	D		
WB Right		--	--	--	--	A	A	--	--	A	A		
NB Left		--	--	A	C	B	D	D	C	D	C		
NB Through		--	--	A	A	B	E	A	A	C	D		
NB Right		--	--	--	--	A	A	--	--	B	B		
SB Left		--	--	--	--	E	D	--	--	D	D		
SB Through/Right		--	--	--	--	--	--	--	--	--	--		
SB Through		--	--	A	A	B	A	A	C	C	C		
SB Right		--	--	A	A	A	A	A	A	A	A		
Entire Intersection Delay (sec./veh.)		--	--	5.5	8.3	16.6	44.3	4.9	19.4	27.2	36.0		
Entire Intersection LOS		--	--	A	A	B	D	A	B	C	D		
9) Tower Road/Three-Quarter Site Access	TWSC												
WB Right	Three-	--	--	--	--	A	A	--	--	A	A		
SB Left	Quarter	--	--	--	--	A	F	--	--	B	F		
Critical Movement Delay	Movement	--	--	--	--	9.9	>240	--	--	11.1	220.5		

Notes:
(1) Mitigation is a triple left-turn lane for the WB LT movement. This lane will not likely be needed until near buildout conditions.

Table 1 (Page 4 of 4)
Intersection Levels of Service Analysis
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Traffic Control	Existing Traffic Level of Service AM	Existing Traffic Level of Service PM	2026 Background Traffic Level of Service AM	2026 Background Traffic Level of Service PM	2026 Total Traffic Level of Service AM	2026 Total Traffic Level of Service PM	2040 Background Traffic Level of Service AM	2040 Background Traffic Level of Service PM	2040 Total Traffic Level of Service AM	2040 Total Traffic Level of Service PM	2040 Total Traffic Mitigated Level of Service AM	2040 Total Traffic Mitigated Level of Service PM
10) Tower Road/E. 88th Avenue	Signalized												
EB Left		--	--	E	E	E	E	D	E	D	E	D	E
EB Through		--	--	D	D	D	D	D	E	D	E	D	D
EB Right		--	--	A	A	A	A	A	A	A	A	A	A
WB Left		E	E	D	D	E	E	E	E	E	F	D	E
WB Through/Right		A	A	--	--	--	--	--	--	--	--	--	--
WB Through		--	--	D	D	D	D	E	D	D	D	D	D
WB Right		--	--	A	A	A	A	A	A	A	A	A	A
NB Left		--	--	A	B	B	D	D	E	D	E	D	E
NB Through		A	A	A	B	B	D	B	C	C	E	C	E
NB Right		A	A	A	A	A	A	A	A	A	A	A	A
SB Left		A	A	A	A	C	C	E	E	D	E	D	E
SB Through/Right		A	A	--	--	--	--	--	--	--	--	--	--
SB Through		--	--	A	C	A	B	A	C	C	D	C	D
SB Right		--	--	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec./veh.)		2.1	3.6	8.2	21.1	15.4	34.0	16.1	31.2	27.3	66.3	26.5	53.4
Entire Intersection LOS		A	A	A	C	B	C	B	C	C	E	C	D
11) E. 88th Avenue/West Collector	TWSC												
SB Right	Right-In/Right-Out	--	--	--	--	A	B	--	--	A	C		
Critical Movement Delay	Movement	--	--	--	--	9.7	13.4	--	--	9.9	19.7		
12) E. 88th Avenue/Middle Access	TWSC												
EB Left		--	--	--	--	A	A	--	--	A	A		
SB Left		--	--	--	--	C	B	--	--	B	C		
SB Right		--	--	--	--	A	B	--	--	A	B		
Critical Movement Delay		--	--	--	--	16.8	13.6	--	--	13.5	21.6		
13) E. 88th Avenue/East Collector	TWSC												
EB Left		--	--	--	--	A	A	--	--	--	--		
SB Left		--	--	--	--	B	B	--	--	--	--		
SB Right		--	--	--	--	A	B	--	--	--	--		
Critical Movement Delay		--	--	--	--	13.4	12.6	--	--	--	--		
	Signalized												
EB Left		--	--	--	--	--	--	--	--	A	B		
EB Through		--	--	--	--	--	--	--	--	A	A		
WB Through		--	--	--	--	--	--	--	--	A	B		
WB Right		--	--	--	--	--	--	--	--	A	A		
SB Left		--	--	--	--	--	--	--	--	E	D		
SB Right		--	--	--	--	--	--	--	--	B	B		
Entire Intersection Delay (sec./veh.)		--	--	--	--	--	--	--	--	7.7	13.4		
Entire Intersection LOS		--	--	--	--	--	--	--	--	A	B		
14) Tower Road/E. 81st Avenue	Signalized												
EB Left/Through		D	D	D	D	D	E	D	D	D	D		
EB Right		B	B	C	D	C	E	B	E	B	E		
WB Left/Through		D	D	D	D	D	D	D	D	D	D		
WB Right		A	A	A	A	A	A	A	A	A	A		
NB Left		A	A	D	B	E	D	D	E	D	E		
NB Through		A	A	A	B	A	D	A	B	A	C		
NB Right		A	A	A	A	A	A	A	A	A	A		
SB Left		A	A	A	A	A	A	A	A	A	A		
SB Through		A	A	C	B	D	C	C	B	D	C		
SB Right		A	A	A	A	A	A	A	A	A	A		
Entire Intersection Delay (sec./veh.)		8.1	8.5	19.4	15.7	34.9	43.9	18.7	18.4	27.7	30.9		
Entire Intersection LOS		A	A	B	B	C	D	B	B	C	C		

Table 2
Trip Generation Estimate
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Land Use Description	Trip Generating Category	Area	Density (DU/Acre) or F.A.R.	Trip Generation Units	Trip Generation Rates [1] Average Weekday Traffic	Morning Peak-Hour In	Morning Peak-Hour Out	Afternoon Peak-Hour In	Afternoon Peak-Hour Out	Total Trips Generated Average Weekday Traffic	Morning Peak-Hour In	Morning Peak-Hour Out	Afternoon Peak-Hour In	Afternoon Peak-Hour Out
Single Family Attached Residential	Single-Family Homes [3]	13.7	15	206 DU [4]	9.44	0.19	0.56	0.62	0.37	1,945	38	114	128	75
Single Family Attached Residential	Single-Family Homes	13.9	15	208 DU	9.44	0.19	0.56	0.62	0.37	1,964	38	115	130	76
Single Family Detached Residential	Single-Family Homes	47.1	5	220 DU	9.44	0.19	0.56	0.62	0.37	2,077	41	122	137	81
Single Family Detached Residential	Single-Family Homes	106.3	5	497 DU	9.44	0.19	0.56	0.62	0.37	4,692	92	276	310	182
Neighborhood Park	Park	10	- - -	10.0 Acres	9.49	0.01	0.01	1.28	1.04	95	0	0	13	10
School Site	Middle School [5]	25	- - -	825 Students	2.13	0.31	0.27	0.08	0.09	1,757	258	220	69	72
Multi-Family Residential	Multi-Family Housing [6]	19.9	24	478 DU	7.32	0.11	0.35	0.35	0.21	3,499	51	169	169	99
Commercial	Shopping Center [7]	19.2	0.25	209 KSF [8]	27.62	0.39	0.24	1.39	1.50	5,772	82	50	290	314
Commercial	Shopping Center	14.9	0.25	162 KSF	27.62	0.39	0.24	1.39	1.50	4,474	64	39	225	243
Commercial	Shopping Center	36.8	0.25	401 KSF	27.62	0.39	0.24	1.39	1.50	11,074	157	97	556	602
Mixed Use[2]	Shopping Center	18.2	0.33	105 KSF	27.62	0.39	0.24	1.39	1.50	2,900	41	25	146	158
	Multi-Family Housing		24	437 DU	7.32	0.11	0.35	0.35	0.21	3,199	46	155	154	91
Mixed Use	Shopping Center	21.1	0.33	121 KSF	27.62	0.39	0.24	1.39	1.50	3,342	48	29	168	182
	Multi-Family Housing		24	506 DU	7.32	0.11	0.35	0.35	0.21	3,704	54	179	179	105
Commercial	Shopping Center	12.8	0.25	139 KSF	27.62	0.39	0.24	1.39	1.50	3,839	55	33	193	209
Detention Pond		14.9	- - -	- - - - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Office Flex	Office [9]	12.5	0.25	41 KSF	10.08	0.85	0.14	0.17	0.88	413	35	6	7	36
	Light Industrial [10]			41 KSF	3.89	0.25	0.03	0.03	0.19	160	10	1	1	8
	Warehouse [11]			54 KSF	1.64	0.12	0.04	0.04	0.12	89	6	2	2	6
Office Flex	Office	80.2	0.25	262 KSF	10.08	0.85	0.14	0.17	0.88	2,641	223	36	44	230
	Light Industrial			262 KSF	3.89	0.25	0.03	0.03	0.19	1,020	66	9	7	49
	Warehouse			349 KSF	1.64	0.12	0.04	0.04	0.12	573	41	12	15	40
Office Flex	Office	76.6	0.25	250 KSF	10.08	0.85	0.14	0.17	0.88	2,520	212	35	42	219
	Light Industrial			250 KSF	3.89	0.25	0.03	0.03	0.19	974	63	9	7	47
	Warehouse			334 KSF	1.64	0.12	0.04	0.04	0.12	548	40	12	14	38
										63,271	**1,761**	**1,745**	**3,006**	**3,172**
									Internal Trips					
									School to Residential [12]	439	65	28	17	18
									Residential to School	439	28	65	18	17
									Park to Residential [13]	71	0	0	10	8
									Residential to Park	72	0	0	8	10
									Retail/Office to Residential [14]	804	22	9	34	48
									Residential to Retail/Office	804	9	22	48	34
									Total Internal Trips	**2,629**	**124**	**124**	**135**	**135**
									Pass-By Trips [15]	**10,463**	**120**	**120**	**548**	**548**
									Primary Trips	**50,179**	**1,517**	**1,501**	**2,323**	**2,489**

Notes:
(1) Source: *Trip Generation* , 10th Edition, 2017 by the Institute of Transportation Engineers (ITE)
(2) The Mixed Use parcels were assumed to be developed with 40% of the area for multi-family residential land uses and 60% of the area for retail land uses. The total number of multi-family residential units was calculated based on the total area of the parcel times the maximum gross density (24 DU/Acre). The resulting density for the residential areas is 40 DU/Ac.
(3) ITE Land Use No. 210 Single Family Detached Housing
(4) DU = dwelling unit
(5) ITE Land Use No. 520 Middle School/Junior High School
(6) ITE Land Use No. 220 Multifamily Housing (Low-Rise)
(7) ITE Land Use No. 820 Shopping Center
(8) KSF = 1,000 square feet of floor space
(9) ITE Land Use No. 710 General Office Building
(10) ITE Land Use No. 110 General Light Industrial
(11) ITE Land Use No. 150 Warehousing
(12) 25% of the school trips were assumed to be internal to the site. The school internal trips were balanced with trips to and from the residential areas.
(13) 75% of the park trips were assumed to be internal to the site. The park internal trips were balanced with trips to and from the residential areas.
(14) 2% of the commercial and office flex trips were assumed to be internal to the site. The internal commercial/office flex trips were balanced with trips to and from the residential areas.
(15) 34% of the Shopping Center trips were assumed to be pass-by trips based on the percentages shown in the *Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition 2017* by ITE

Table 3 (Page 1 of 2)
95th Percentile Queue Length
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Existing Turn Lane Length (feet)	Proposed Turn Lane Lengths (feet) 2026	Proposed Turn Lane Lengths (feet) 2040	2026 Total Traffic 95th Percentile Queue Length (feet) AM	2026 Total Traffic 95th Percentile Queue Length (feet) PM	2040 Total Traffic 95th Percentile Queue Length (feet) AM	2040 Total Traffic 95th Percentile Queue Length (feet) PM
1) Tower Road/E. 96th Avenue							
EB Left	125	200	2 @ 200	48	151	130	197
EB Through	--	--	--	216	317	313	295
EB Right	125	125	275	0	0	146	181
WB Left	100	2 @ 250	2 @ 400	128	m244	168	m397
WB Through	--	--	--	146	m285	165	m337
WB Right	100	275	275	15	m134	0	m21
NB Left	545	1 @ 600 1 @ 335	1 @ 600 1 @ 335	304	m330	382	m496
NB Through	--	--	--	468	m674	356	698
NB Right	--	275	275	144	m198	0	m0
SB Left	470	1 @ 470 1 @ 240	1 @ 470 1 @ 240	103	163	415	310
SB Through	--	--	--	560	684	351	469
SB Right	--	275	275	0	0	0	0
2) E. 96th Avenue/West Collector							
EB Left	--	300	300	m18	m38	20	140
EB Through	--	--	--	560	m676	425	329
EB Right	--	Continuous	Continuous	m36	m71	10	62
WB Left	--	300	300	25	m67	m19	m65
WB Through	--	--	--	118	401	103	394
WB Right	--	275	275	m1	m1	m0	m0
NB Left	--	250	250	120	246	102	198
NB Through/Right	--	--	--	34	44	37	47
SB Left	--	TBD	TBD	31	19	40	89
SB Through/Right	--	--	--	37	31	49	44
3) E. 96th Avenue/East Collector							
EB Left	--	275	275	m4	m21	44	264
EB Through	--	--	--	161	m294	71	95
EB Right	--	275	275	29	m210	10	22
WB Left	--	300	300	95	303	36	m272
WB Through	--	--	--	126	332	85	491
WB Right	--	275	275	0	0	2	m37
NB Left	--	2 @ 300	2 @ 300	100	300	89	289
NB Through	--	--	--	6	6	6	5
NB Right	--	100	100	72	87	60	69
SB Left	--	TBD	TBD	24	16	137	157
SB Through	--	--	--	7	7	6	6
SB Right	--	TBD	TBD	0	0	32	78
5) E. 96th Avenue/E-470 SB Ramps							
EB Through	--	--	--	--	--	54	102
EB Right	400	400	400	--	--	0	5
WB Left	200	150	150	--	--	12	m30
WB Through	--	--	--	--	--	32	188
SB Left	--	--	275	--	--	84	33
SB Through	--	--	--	--	--	84	34
SB Right	--	--	440	--	--	71	439
6) E. 96th Avenue/E-470 NB Ramps							
EB Left	150	200	260	--	--	178	260
EB Through	--	--	--	--	--	109	16
WB Through	--	--	--	--	--	52	310
WB Right	--	--	275	--	--	0	45
NB Left	--	--	275	--	--	130	281
NB Left/Through	--	--	--	--	--	131	281
NB Right	400	400	400	--	--	17	0

Table 3 (Page 2 of 2)
95th Percentile Queue Length
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Intersection No. & Location	Existing Turn Lane Length (feet)	Proposed Turn Lane Lengths (feet) 2026	Proposed Turn Lane Lengths (feet) 2040	2026 Total Traffic 95th Percentile Queue Length (feet) AM	2026 Total Traffic 95th Percentile Queue Length (feet) PM	2040 Total Traffic 95th Percentile Queue Length (feet) AM	2040 Total Traffic 95th Percentile Queue Length (feet) PM
7) Tower Road/Second Creek Plaza Drive							
E. 94th Avenue							
EB Left	--	2 @ 165	2 @ 165	41	165	35	131
EB Through	--	--	--	30	37	30	37
EB Right	--	165	165	0	0	0	0
WB Left	--	2 @ 150	2 @ 150	78	128	79	128
WB Through	--	--	--	12	47	12	44
WB Right	--	150	150	0	0	0	0
NB Left	150	275	275	m67	m239	67	m227
NB Through	--	--	--	161	m1025	612	m949
NB Right	--	275	275	m1	m61	m39	m90
SB Left	100	275	275	m3	m127	m13	m88
SB Through	--	--	--	848	m941	698	m804
SB Right	--	275	275	m2	m36	m12	m36
8) Tower Road/E. 92nd Avenue							
EB Left	--	2 @ 115	2 @ 115	62	114	67	90
EB Through	--	--	--	30	22	30	22
EB Right	--	115	115	0	0	0	0
WB Left	--	2 @ 200	2 @ 200	179	200	184	178
WB Through	--	--	--	18	33	19	33
WB Right	--	200	200	0	0	0	0
NB Left	100	275	2 @ 275	m26	m208	m58	m165
NB Through	--	--	--	533	m1253	401	m942
NB Right	--	275	275	41	m27	m75	m120
SB Left	100	2 @ 275	2 @ 275	m130	m240	91	m127
SB Through	--	--	--	316	m204	691	794
SB Right	--	275	275	m2	m5	m9	m52
10) Tower Road/E. 88th Avenue							
EB Left	100	2 @ 250	2 @ 250	112	252	72	162
EB Through	--	--	--	17	17	75	84
EB Right	--	250	250	0	0	0	0
WB Left	140	2 @ 175	2 @ 575	107	168	161	545
WB Through	--	--	--	15	21	53	104
WB Right	--	275	275	0	0	0	0
NB Left	140	275	2 @ 275	46	184	68	211
NB Through	--	--	--	448	1,417	436	1,064
NB Right	175	275	275	55	22	64	110
SB Left	150	275	2 @ 275	m150	m33	244	m196
SB Through	--	--	--	733	658	627	635
SB Right	--	275	275	m4	m2	m6	m19
13) E. 88th Avenue/East Collector							
EB Left	--	275	275	--	--	m20	m23
EB Through	--	--	--	--	--	42	m28
WB Through	--	--	--	--	--	68	297
WB Right	--	275	275	--	--	25	29
SB Left	--	--	--	--	--	140	222
SB Right	--	225	225	--	--	60	131
14) Tower Road/E. 81st Avenue							
EB Left/Through	--	--	--	69	176	77	168
EB Right	410	410	410	196	390	125	382
WB Left/Through	140	140	140	29	45	27	43
WB Right	140	140	140	0	0	0	0
NB Left	250	250	250	451	237	372	248
NB Through	--	--	--	390	1,511	379	1,226
NB Right	465	465	275	6	0	5	0
SB Left	105	105	105	5	4	4	4
SB Through	--	--	--	1,028	996	961	1,032
SB Right	Continuous	Continuous	275	36	28	37	29

Table 4 (Page 1 of 3)
Recommended Improvements to Public Street Network
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Inter-section No.	Intersection Location	Recommended Improvements by 2026 (1)	Responsibility (2)	Recommended Improvements by 2040 (1)	Responsibility (2)
#1	Tower Road/E. 96th Avenue	EB Through - add second through lane	Others	NB Through - add third through lane	Others
		EB LT - lengthen lane to 200 feet and 160-foot transition taper	Others	SB Through - add third through lane	Others
		WB LT - construct second lane - 2 @ 250 feet and 320-foot transition taper	Applicant	WB LT - extend to 2 @ 400 feet and 320-foot transition taper	Others
		WB Through - add second through lane	Others	EB LT - add second lane - 2 @ 200 feet and 320-foot transition taper	Others
		WB RT - lengthen lane to 275 feet and 160-foot transition taper	Applicant	EB RT - lengthen lane to 275 feet and 160-foot transition taper	Others
		NB LT - utilize second lane - 1 @ 600 feet and 160-foot transition taper plus 1 @ 335 feet	Others	Add right-turn acceleration lane to additional approaches when needed	Others
		NB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant	Potential Mitigation: Add third NB LT Lane for buildout conditions.	Others
		SB LT - utilize second lane - 1 @ 470 feet and 160-foot transition taper plus 1 @ 240 feet	Others	Potential Mitigation: Add third SB LT Lane for buildout conditions.	Others
		SB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others	Potential Mitigation: Add third WB LT Lane for buildout conditions.	Others
		Construct EB to SB right-turn acceleration lane - 390 feet plus 160-foot transition taper	Others		
#2	E. 96th Avenue/Settlers Crossing/ West Collector	EB LT - construct lane - 1 @ 300 feet and 160-foot transition taper	Others		
		EB RT - construct continuous lane back to Tower Road (#1)	Applicant		
		WB LT - construct lane - 1 @ 300 feet and 160-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others		
		NB LT - construct lane - 1 @ 250 feet and 120-foot transition taper	Applicant		
		SB Approach - to be determined by future use to the north	Others		
		Traffic signalization if/when warranted which is likely	Shared		
#3	E. 96th Avenue/Settlers Crossing/ East Collector	EB LT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others		
		EB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		WB LT - construct lane - 1 @ 300 feet and 160-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others		
		NB LT - construct dual lane - 2 @ 300 feet and 240-foot transition taper	Applicant		
		NB RT - construct lane - 1 @ 100 feet and 120-foot transition taper	Applicant		
		SB Approach - to be determined by future use to north	Others		
		Traffic signalization if/when warranted which is likely	Shared		
#4	Intentionally Left Blank				
#5	E. 96th Avenue/SB E-470 Ramps	WB LT - shorten lane to 150 feet by restriping	Others	SB RT - construct lane - 1 @ 440 feet	Others
				SB LT - construct lane - 1 @ 275 feet	Others
				Traffic signalization if/when warranted which is likely	Others

(1) A transition taper of 13.5:1 was used for 45 mph (160 feet) and 10:1 was used for 35 mph (120 feet). Dual left-turn lanes have transition taper lengths of 320 feet and 240 feet, respectively. An appropriate redirect taper for 45 mph is 45:1 and for 35 mph is 20:1. Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

(2) Others could include partial funding from the applicant. Generally speaking, the applicant will be responsible for their half of the adjacent arterial roadways which will include turn lanes in/out of the site and partial or full funding of traffic signal installation if/when warranted.

Table 4 (Page 2 of 3)
Recommended Improvements to Public Street Network
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Inter-section No.	Intersection Location	Recommended Improvements by 2026 (1)	Responsibility (2)	Recommended Improvements by 2040 (1)	Responsibility (2)
#6	E. 96th Avenue/NB E-470 Ramps	EB LT - lengthen lane to 200 feet by restriping	Others	WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others
				NB LT - construct lane - 1 @ 275 feet	Others
				EB LT - lengthen lane to 260 feet and 160-foot transition taper	Others
				Traffic signalization if/when warranted which is likely	Others
E. 96th Avenue Corridor		Add second through lane in each direction between #1 and #3	Others	Add second and/or third through lane in each direction between #1 and #6 This will require a larger bridge over E-470.	Others
#7	Tower Road/Second Creek Plaza Drive/E. 94th Avenue	NB LT - lengthen lane to 275 feet and 160-foot transition taper	Others		
		NB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		SB LT - lengthen lane to 275 feet and 160-foot transition taper	Applicant		
		SB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others		
		EB LT - construct dual lanes - 2 @ 165 feet and 240-foot transition taper	Others		
		EB RT - construct lane - 1 @ 165 feet and 120-foot transition taper	Others		
		WB LT - construct dual lanes - 2 @ 150 feet and 240-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 150 feet and 120-foot transition taper	Applicant		
		WB to NB Accel lane - 390 feet and 160-foot transition taper or continuous lane to #1	Applicant		
		EB to SB Accel lane - 390 feet and 160-foot transition taper or continuous lane to #8	Others		
		Traffic signalization when warranted which is likely	Shared		
#8	Tower Road/E. 92nd Avenue	NB LT - lengthen lane to 275 feet and 160-foot transition taper	Others	NB LT - add second lane - 2 @ 275 feet and 320-foot transition taper	Others
		NB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		SB LT - construct second lane - 2 @ 275 feet and 320-foot transition taper	Applicant		
		SB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others		
		EB LT - construct dual lanes - 2 @ 115 feet and 240-foot transition taper	Others		
		EB RT - construct lane - 1 @ 115 feet and 120-foot transition taper	Others		
		EB to SB Accel lane - 390 feet and 160-foot transition taper	Others		
		WB LT - construct dual lane - 2 @ 200 feet and 240-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 200 feet and 120-foot transition taper	Applicant		
		WB to NB Accel lane - 390 feet and 160-foot transition taper or continuous lane to #7	Applicant		
		Traffic signalization when warranted which is likely	Shared		

(1) A transition taper of 13.5:1 was used for 45 mph (160 feet) and 10:1 was used for 35 mph (120 feet). Dual left-turn lanes have transition taper lengths of 320 feet and 240 feet, respectively. An appropriate redirect taper for 45 mph is 45:1 and for 35 mph is 20:1. Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

(2) Others could include partial funding from the applicant. Generally speaking, the applicant will be responsible for their half of the adjacent arterial roadways which will include turn lanes in/out of the site and partial or full funding of traffic signal installation if/when warranted.

Table 4 (Page 3 of 3)
Recommended Improvements to Public Street Network
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

Inter-section No.	Intersection Location	Recommended Improvements by 2026 (1)	Responsibility (2)	Recommended Improvements by 2040 (1)	Responsibility (2)
#9	Tower Road/Three-Quarter Site Access	SB LT - construct lane - 1 @ 370 feet and 160-foot transition taper	Applicant		
		NB RT - construct lane - continuous lane back to 88th Avenue (#10)	Applicant		
		WB to NB Accel lane - 390 feet and 160-foot transition taper or continuous lane to #8	Applicant		
#10	Tower Road/E. 88th Avenue	NB LT - lengthen lane to 275 feet and 160-foot transition taper	Others	NB LT - add second lane - 2 @ 275 feet and 320-foot transition taper	Others
		NB RT - construct lane - 1 @ 275 feet and 160-foot transition taper.	Applicant	SB LT - add second lane - 2 @ 275 feet and 320-foot transition taper	Applicant
		SB LT - lengthen lane to 275 feet and 160-foot transition taper	Applicant	WB LT - lengthen dual lanes to 2 @ 575 feet and 320-foot transition taper	Applicant
		SB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Others	Potential Mitigation: Add third WB LT Lane for buildout conditions.	Others
		EB LT - construct second lane - 2 @ 250 feet and 320-foot transition taper	Others		
		EB RT - construct lane - 1 @ 250 feet and 160-foot transition taper	Others		
		WB LT - construct second lane - 2 @ 175 feet and 320-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		WB to NB Accel lane - 390 feet and 160-foot transition taper or continuous lane to #9	Applicant		
		EB to SB Accel lane - 390 feet and 160-foot transition taper	Others		
#11	E. 88th Avenue/West Collector	WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
#12	E. 88th Avenue/Middle Access	EB LT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		SB LT - construct lane - 1 @ 125 feet and 120-foot transition taper	Applicant		
#13	E. 88th Avenue/East Collector	EB LT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant	Traffic signalization if/when warranted which is likely	Applicant
		WB RT - construct lane - 1 @ 275 feet and 160-foot transition taper	Applicant		
		SB RT - construct lane - 1 @ 225 feet and 120-foot transition taper	Applicant		
#14	Tower Road/E. 81st Avenue	No proposed changes			
E. 88th Avenue Corridor				Complete second through lane in each direction	Others
				Construct grade-separated interchange at E-470	Others
Tower Road Corridor				Complete third through lane in each direction plus turn lanes from #1 to #14	Others

(1) A transition taper of 13.5:1 was used for 45 mph (160 feet) and 10:1 was used for 35 mph (120 feet). Dual left-turn lanes have transition taper lengths of 320 feet and 240 feet, respectively. An appropriate redirect taper for 45 mph is 45:1 and for 35 mph is 20:1. Some of the right-turn deceleration and acceleration lane termini are close enough that a continuous right-turn lane may be appropriate between intersections.

(2) Others could include partial funding from the applicant. Generally speaking, the applicant will be responsible for their half of the adjacent arterial roadways which will include turn lanes in/out of the site and partial or full funding of traffic signal installation if/when warranted.

Table 5
Traffic Signal Warrant Analysis - E. 96th Avenue/Settlers Crossing/West Collector (Intersection #2)
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

	Traffic Volumes			Warrant Analysis[1]													
				Warrant 1, Eight Hour Vehicular Volume Evaluation								Warrant 2, Four Hour Vehicular Volume Evaluation			Warrant 3, Peak Hour Vehicular Volume Evaluation		
				Warrant Thresholds				Warrant Threshold Met?					Warrant Threshold Met?			Warrant Threshold Met?	
		Minor		Condition A		Condition B		North Leg		South Leg		Warrant Threshold Minor	North	South	Warrant Threshold Minor	North	South
Hour	Major[2]	North[3]	South[4]	Major	Minor	Major	Minor	A	B	A	B	Minimum	Leg	Leg	Minimum	Leg	Leg
2026 Background Traffic																	
AM Peak	687	17	- - -	420	105	630	53	No	No	- - -	- - -	104	No	- - -	206	No	- - -
PM Peak	991	9	- - -	420	105	630	53	No	No	- - -	- - -	60	No	- - -	122	No	- - -
2026 Total Traffic																	
AM Peak	1237	17	99	420	105	630	53	No	No	No	**Yes**	60	No	**Yes**	78	No	**Yes**
PM Peak	2288	9	209	420	105	630	53	No	No	**Yes**	**Yes**	60	No	**Yes**	75	No	**Yes**
2040 Background Traffic																	
AM Peak	2102	122	- - -	420	105	630	53	**Yes**	**Yes**	- - -	- - -	60	**Yes**	- - -	75	**Yes**	- - -
PM Peak	2864	168	- - -	420	105	630	53	**Yes**	**Yes**	- - -	- - -	60	**Yes**	- - -	75	**Yes**	- - -
2040 Total Traffic																	
AM Peak	2539	122	232	420	105	630	53	**Yes**	**Yes**	**Yes**	**Yes**	60	**Yes**	**Yes**	75	**Yes**	**Yes**
PM Peak	3686	168	756	420	105	630	53	**Yes**	**Yes**	**Yes**	**Yes**	60	**Yes**	**Yes**	75	**Yes**	**Yes**

Notes:
(1) Thresholds are based on 2 or more lanes on the major approach and 1 lane on the minor approach with the 70% factor used
(2) The major street traffic includes all eastbound and westbound movements (left, through and right) on E. 96th Avenue.
(3) The north leg minor street traffic includes all southbound left and through traffic and 50% of right-turn traffic from the Settler's Crossing west access
(4) The south leg minor street traffic includes all nortbound left and through traffic and 50% of right-turn traffic from the West Collector.

Source: LSC Transportation Consultants, Inc.

Table 6
Traffic Signal Warrant Analysis - E. 96th Avenue/Settlers Crossing/East Collector (Intersection #3)
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

	Traffic Volumes			Warrant Analysis[1]													
				Warrant 1, Eight Hour Vehicular Volume Evaluation								Warrant 2, Four Hour Vehicular Volume Evaluation			Warrant 3, Peak Hour Vehicular Volume Evaluation		
				Warrant Thresholds				Warrant Threshold Met?					Warrant Threshold Met?			Warrant Threshold Met?	
		Minor		Condition A		Condition B		North Leg		South Leg		Warrant Threshold Minor	North	South	Warrant Threshold Minor	North	South
Hour	Major[2]	North[3]	South[4]	Major	Minor	Major	Minor	A	B	A	B	Minimum	Leg	Leg	Minimum	Leg	Leg
2026 Background Traffic																	
AM Peak	658	26	- - -	420	140	630	70	No	No	- - -	- - -	155	No	- - -	283	No	- - -
PM Peak	923	18	- - -	420	140	630	70	No	No	- - -	- - -	80	No	- - -	169	No	- - -
2026 Total Traffic																	
AM Peak	1274	26	366	420	140	630	70	No	No	**Yes**	**Yes**	80	No	**Yes**	100	No	**Yes**
PM Peak	1928	18	1014	420	140	630	70	No	No	**Yes**	**Yes**	80	No	**Yes**	100	No	**Yes**
2040 Background Traffic																	
AM Peak	2102	180	- - -	420	140	630	70	**Yes**	**Yes**	- - -	- - -	80	**Yes**	- - -	100	**Yes**	- - -
PM Peak	2864	281	- - -	420	140	630	70	**Yes**	**Yes**	- - -	- - -	80	**Yes**	- - -	100	**Yes**	- - -
2040 Total Traffic																	
AM Peak	2539	180	304	420	140	630	70	**Yes**	**Yes**	**Yes**	**Yes**	80	**Yes**	**Yes**	100	**Yes**	**Yes**
PM Peak	3686	281	895	420	140	630	70	**Yes**	**Yes**	**Yes**	**Yes**	80	**Yes**	**Yes**	100	**Yes**	**Yes**

Notes:
(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor used
(2) The major street traffic includes all eastbound and westbound movements (left, through and right) on E. 96th Avenue.
(3) The north leg minor street traffic includes all southbound left and through traffic and 50% of right-turn traffic from the Settler's Crossing east access.
(4) The south leg minor street traffic includes all nortbound left and through traffic and 50% of right-turn traffic from the East Collector.

Source: LSC Transportation Consultants, Inc.

Table 7
Traffic Signal Warrant Analysis - Tower Road/Second Creek Plaza Drive/E. 94th Avenue (Intersection #7)
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

	Traffic Volumes			Warrant Analysis[1]													
				Warrant 1, Eight Hour Vehicular Volume Evaluation								Warrant 2, Four Hour Vehicular Volume Evaluation			Warrant 3, Peak Hour Vehicular Volume Evaluation		
				Warrant Thresholds				Warrant Threshold Met?					Warrant Threshold Met?			Warrant Threshold Met?	
		Minor		Condition A (70%)		Condition B (70%)		West Leg		East Leg		70% Warrant Threshold Minor	West	East	70% Warrant Threshold Minor	West	East
Hour	Major[2]	West[3]	East[4]	Major	Minor	Major	Minor	A	B	A	B	Minimum	Leg	Leg	Minimum	Leg	Leg
2026 Background Traffic																	
AM Peak	2551	94	- - -	420	140	630	70	No	Yes	- - -	- - -	80	Yes	- - -	100	No	- - -
PM Peak	3812	381	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
2026 Total Traffic																	
AM Peak	3507	106	171	420	140	630	70	No	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes
PM Peak	5351	395	381	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes
2040 Background Traffic																	
AM Peak	3317	87	- - -	420	140	630	70	No	Yes	- - -	- - -	80	Yes	- - -	100	No	- - -
PM Peak	4782	330	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
2040 Total Traffic																	
AM Peak	4168	99	168	420	140	630	70	No	Yes	Yes	Yes	80	Yes	Yes	100	No	Yes
PM Peak	6155	347	382	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes

Notes:
(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor used.
(2) The major street traffic includes all northbound and southbound movements (left, through and right) on Tower Road.
(3) The west leg minor street traffic includes all eastbound left and through traffic and 50% of right-turn traffic from Second Creek Plaza Drive.
(4) The east leg minor street traffic includes all westbound left and through traffic and 50% of right-turn traffic from E. 94th Avenue.

Source: LSC Transportation Consultants, Inc.

Table 8
Traffic Signal Warrant Analysis - Tower Road/E. 92nd Avenue (Intersection #8)
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

	Traffic Volumes			Warrant Analysis[1]													
				Warrant 1, Eight Hour Vehicular Volume Evaluation								Warrant 2, Four Hour Vehicular Volume Evaluation			Warrant 3, Peak Hour Vehicular Volume Evaluation		
				Warrant Thresholds				Warrant Threshold Met?					Warrant Threshold Met?			Warrant Threshold Met?	
		Minor		Condition A (70%)		Condition B (70%)		West Leg		East Leg		70% Warrant Threshold Minor	West	East	70% Warrant Threshold Minor	West	East
Hour	Major[2]	West[3]	East[4]	Major	Minor	Major	Minor	A	B	A	B	Minimum	Leg	Leg	Minimum	Leg	Leg
2026 Background Traffic																	
AM Peak	2522	168	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
PM Peak	3863	241	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
2026 Total Traffic																	
AM Peak	3392	180	462	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes
PM Peak	5485	249	379	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes
2040 Background Traffic																	
AM Peak	3346	232	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
PM Peak	5100	266	- - -	420	140	630	70	Yes	Yes	- - -	- - -	80	Yes	- - -	100	Yes	- - -
2040 Total Traffic																	
AM Peak	4165	244	463	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes
PM Peak	6641	274	390	420	140	630	70	Yes	Yes	Yes	Yes	80	Yes	Yes	100	Yes	Yes

Notes:
(1) Thresholds are based on 2 or more lanes on the major approach and 2 or more lanes on the minor approach with the 70% factor used.
(2) The major street traffic includes all northbound and southbound movements (left, through and right) on Tower Road.
(3) The west leg minor street traffic includes all eastbound left and through traffic and 50% of right-turn traffic from E. 92nd Avenue.
(4) The east leg minor street traffic includes all westbound left and through traffic and 50% of right-turn traffic from E. 92nd Avenue.

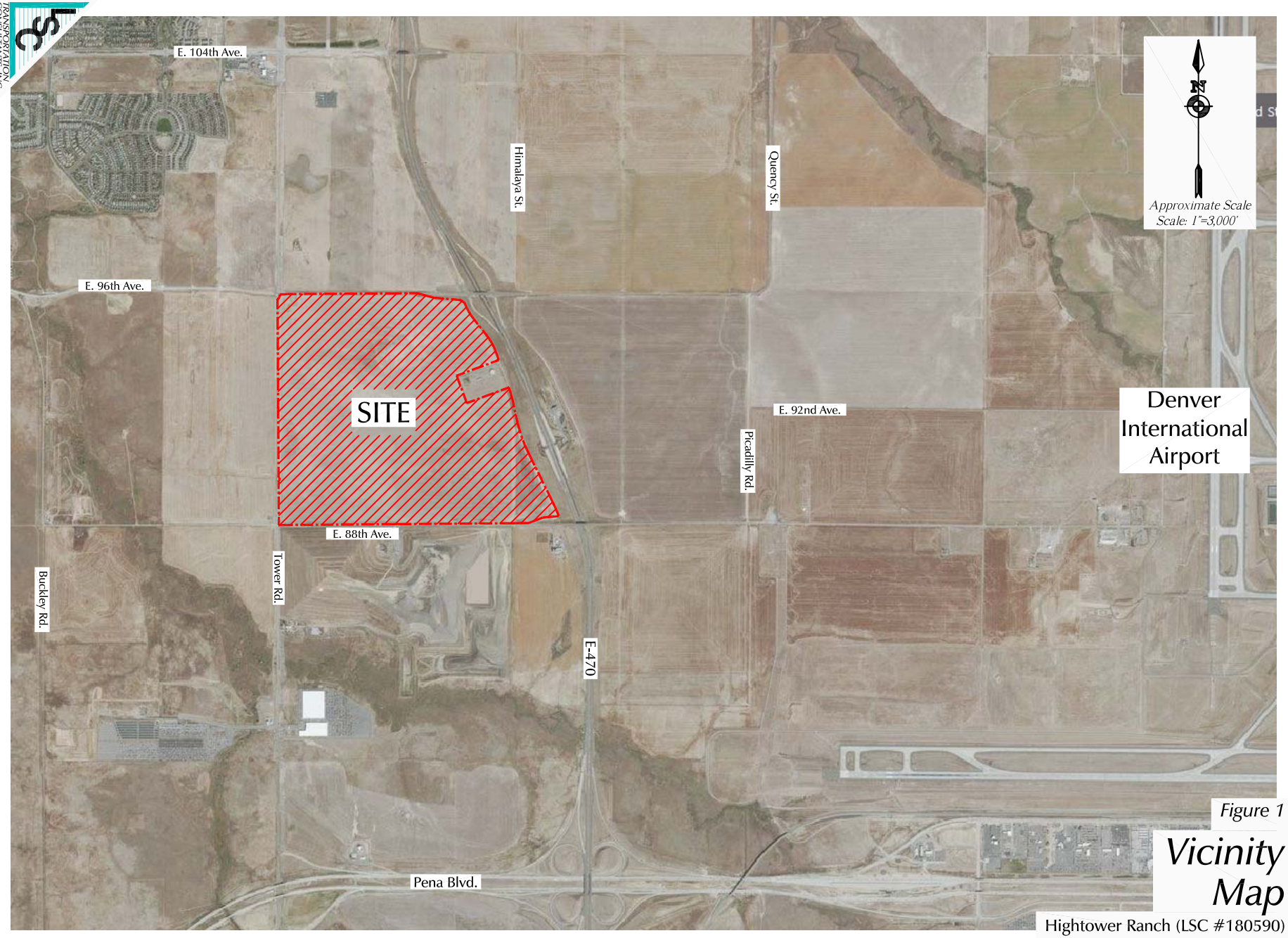
Source: LSC Transportation Consultants, Inc.

Table 9
Traffic Signal Warrant Analysis - E. 88th Avenue/East Collector (Intersection #13)
Hightower Ranch
Commerce City, CO
LSC #180590; November, 2019

	Traffic Volumes		Warrant Analysis[1]									
			Warrant 1, Eight Hour Vehicular Volume Evaluation						Warrant 2, Four Hour Vehicular Volume Evaluation		Warrant 3, Peak Hour Vehicular Volume Evaluation	
			Warrant Thresholds									
			Condition A (70%)		Condition B (70%)		North Leg		70% Warrant Threshold Minor	Warrant Threshold	70% Warrant Threshold Minor	Warrant Threshold
Hour	Major[2]	Minor[4]	Major	Minor	Major	Minor	A	B	Minimum	Met?	Minimum	Met?
2026 Total Traffic												
AM Peak	317	7	420	105	630	53	No	No	257	No	390	No
PM Peak	313	14	420	105	630	53	No	No	259	No	392	No
2040 Total Traffic												
AM Peak	1387	107	420	105	630	53	**Yes**	**Yes**	60	**Yes**	75	**Yes**
PM Peak	1974	186	420	105	630	53	**Yes**	**Yes**	60	**Yes**	75	**Yes**

Notes:
(1) Thresholds are based on 2 or more lanes on the major approach and 1 lane on the minor approach with the 70% factor used.
(2) The major street traffic includes all eastbound and westbound movements (left, through and right) on E. 88th Avenue
(3) The minor street traffic includes the southbound left traffic only

Source: LSC Transportation Consultants, Inc.

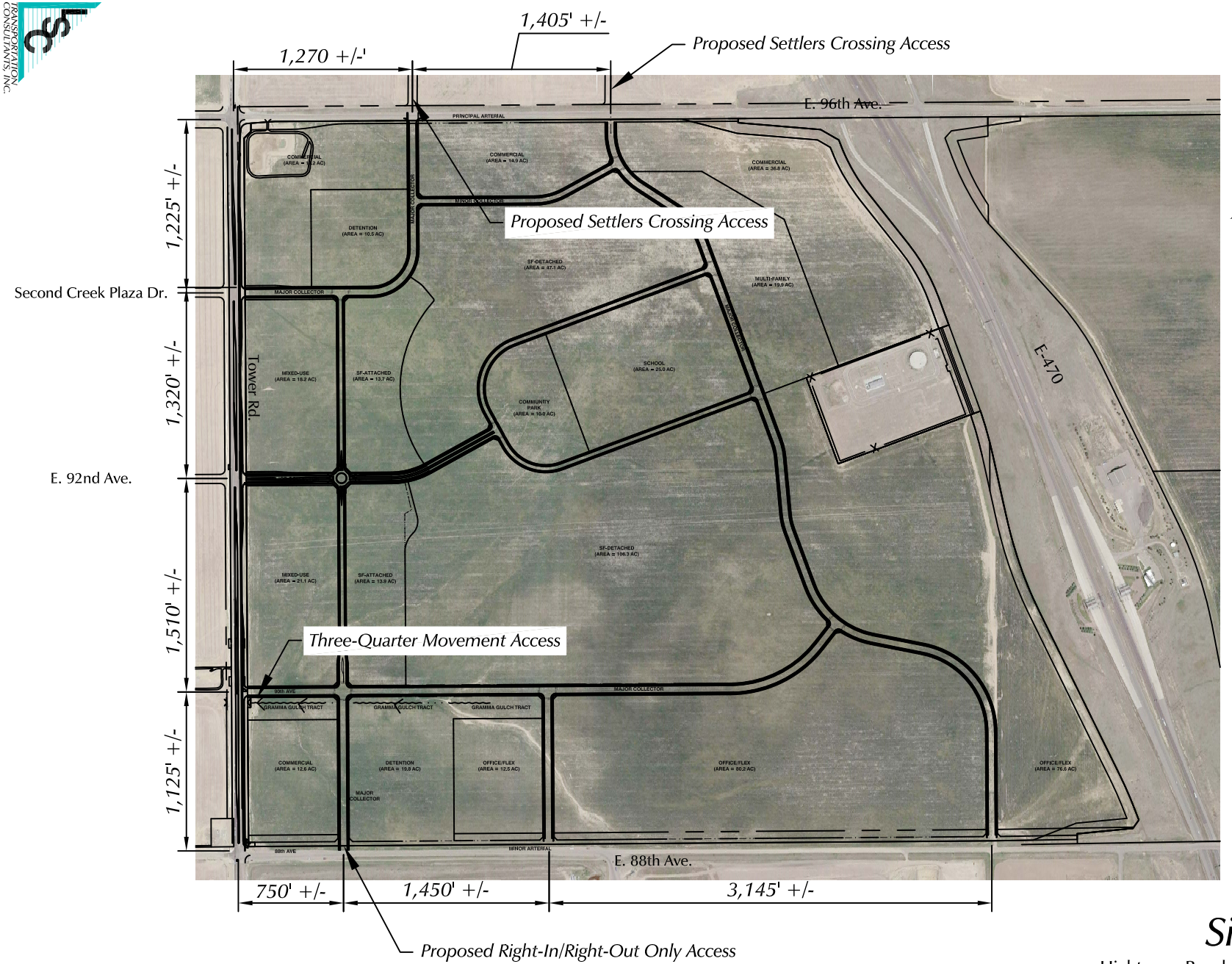


TRANSPORTATION CONSULTANTS, INC.

Figure 1

Vicinity Map

Hightower Ranch (LSC #180590)

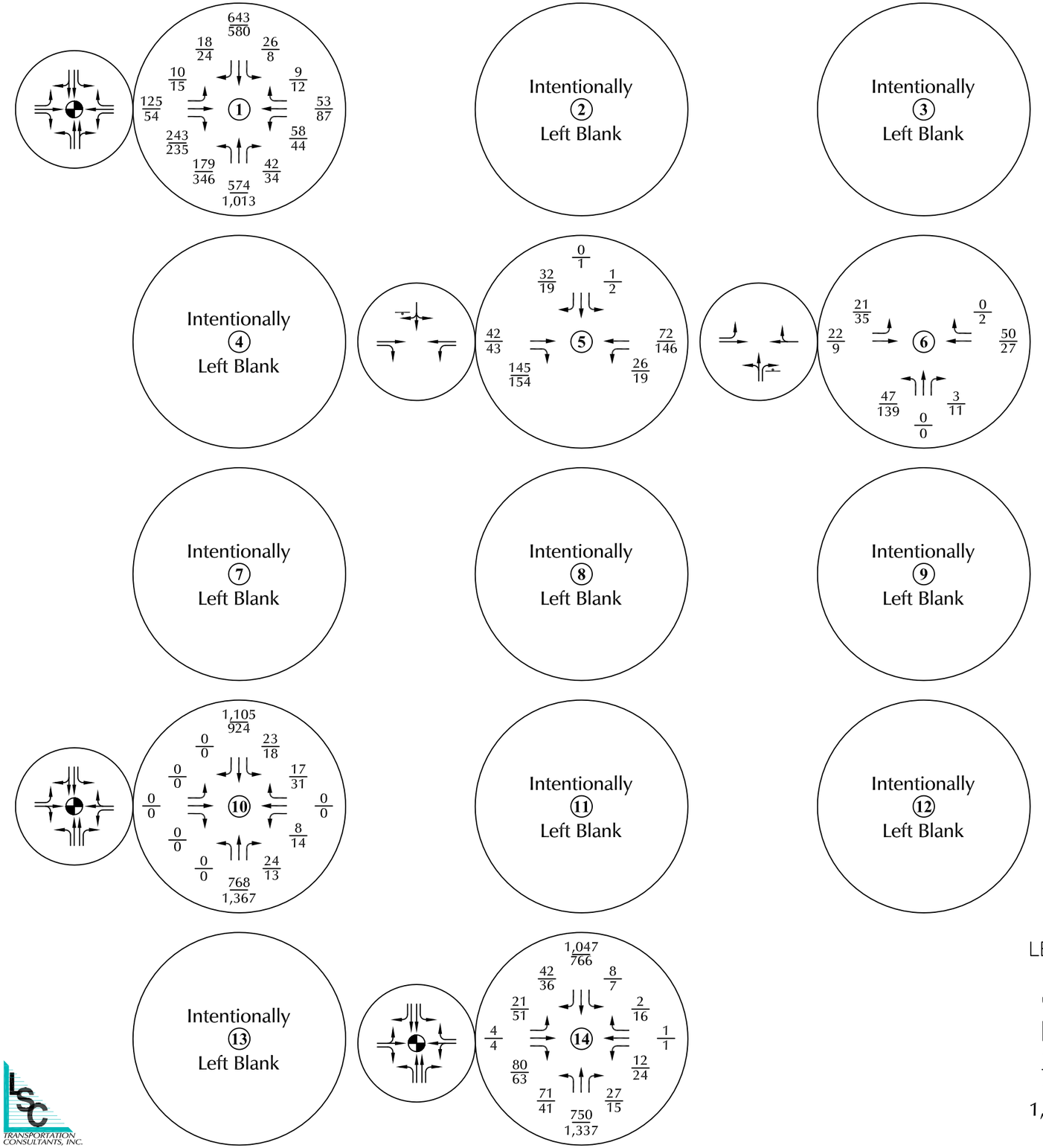


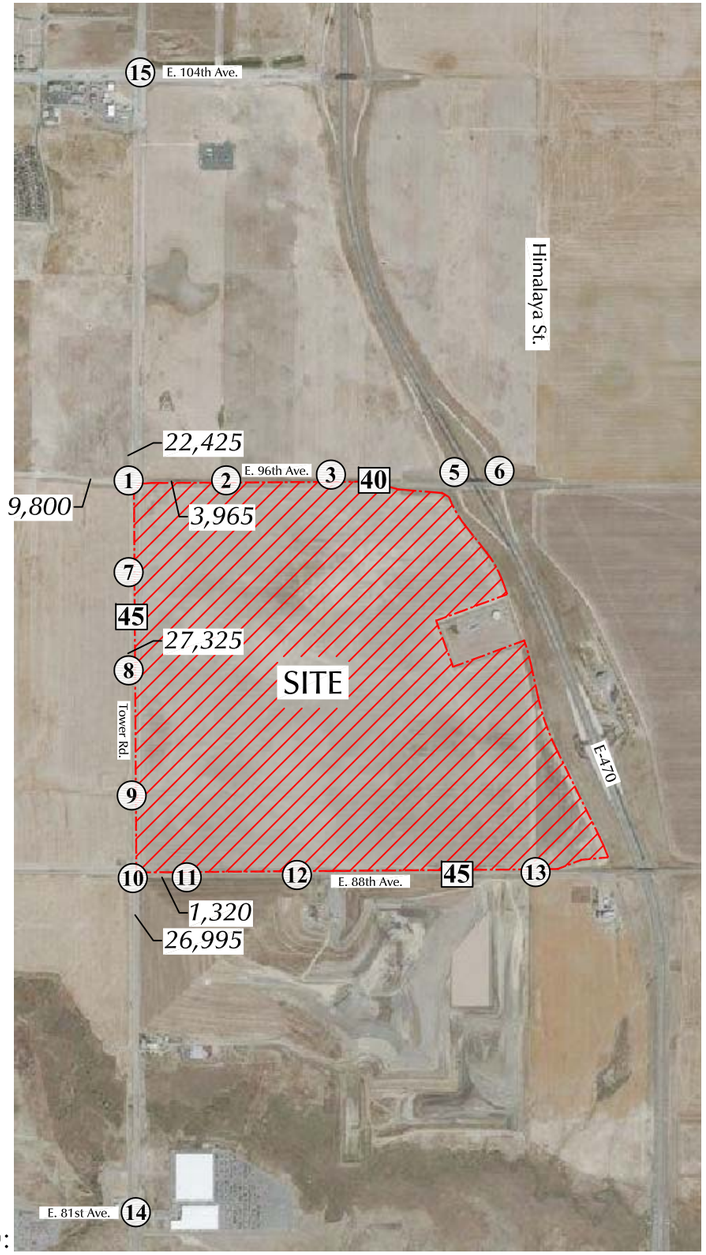
Approximate Scale
Scale: 1"=1,000'

Figure 2

Site Plan

Hightower Ranch (LSC #180590)





Approximate Scale
Scale: 1"= 2,000'

LEGEND:

= Stop Sign

= Traffic Signal

40 = Speed Limit

26/35 = AM Peak Hour Traffic / PM Peak Hour Traffic

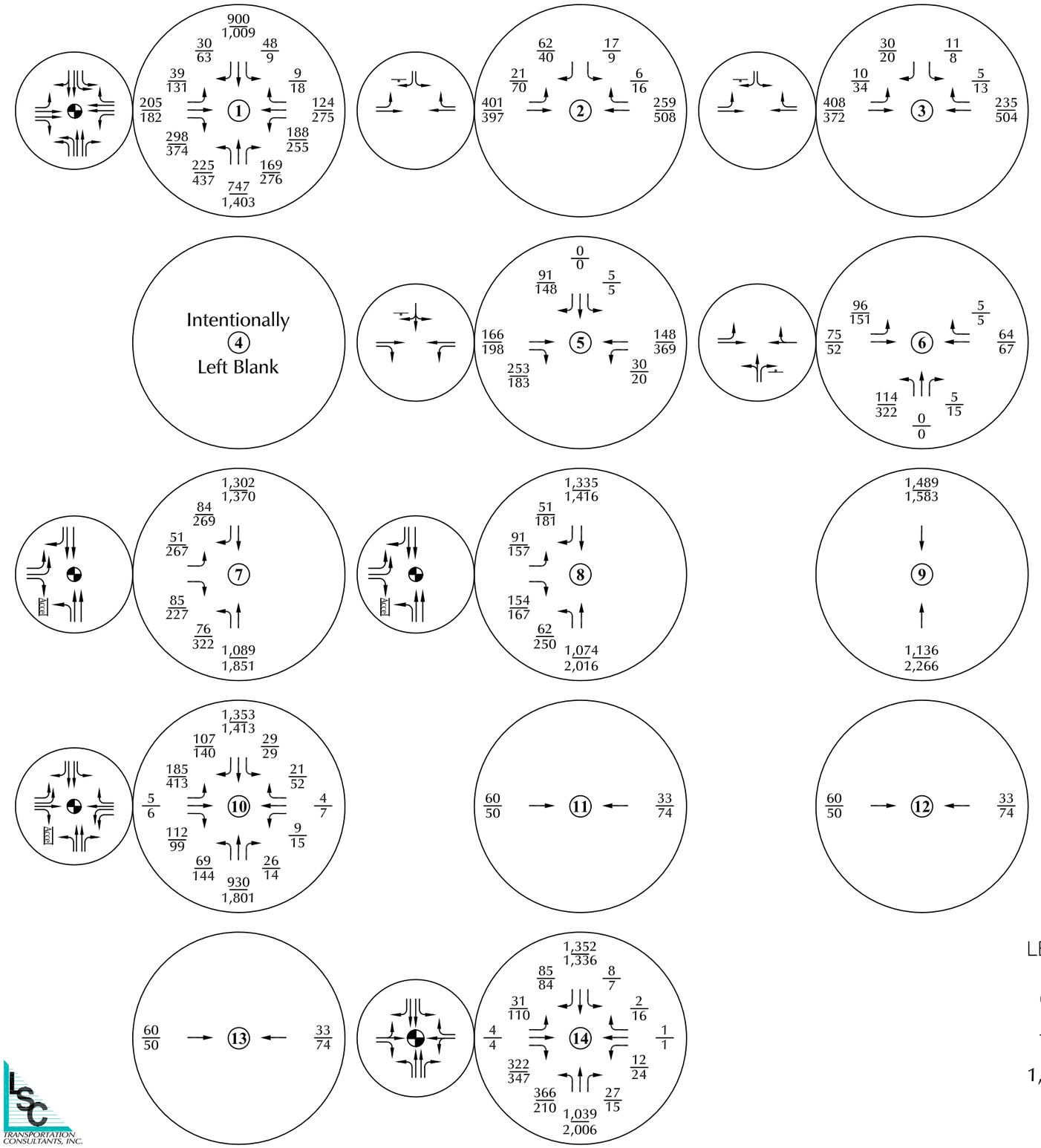
1,000 = Average Daily Traffic

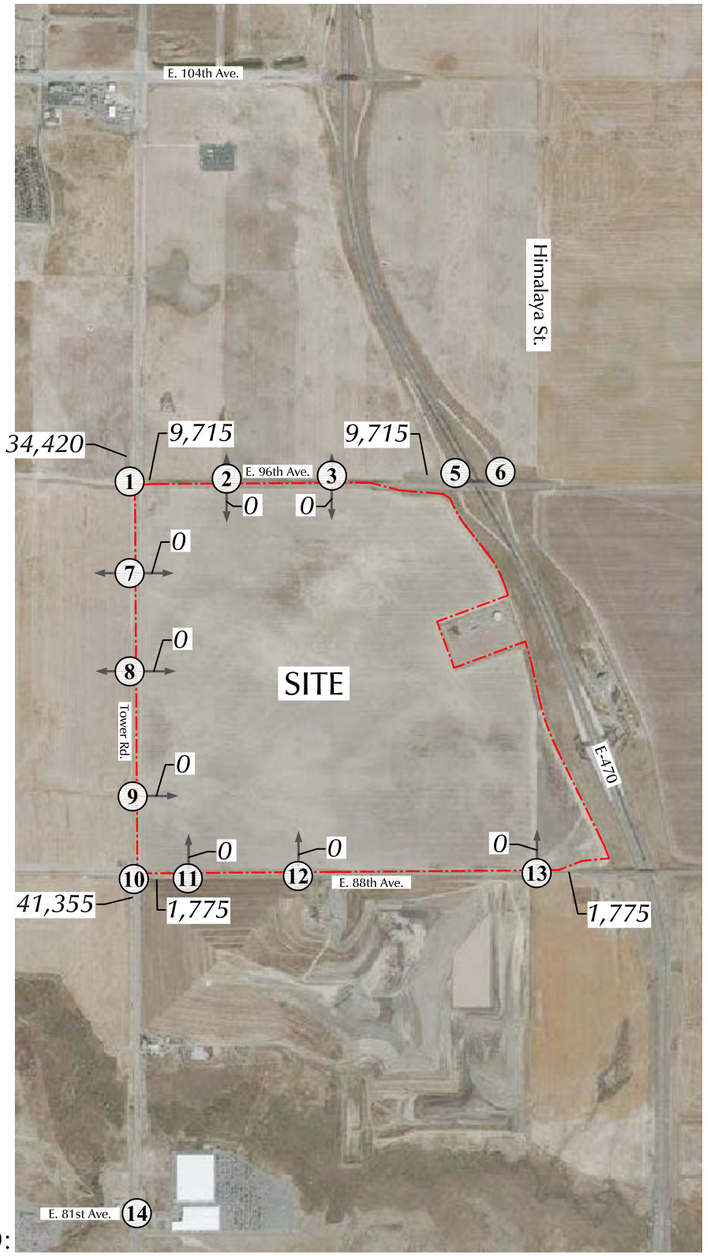
LSC TRANSPORTATION CONSULTANTS, INC.

Figure 3

Existing Traffic, Lane Geometry and Traffic Control

Hightower Ranch (LSC #180590)





Approximate Scale
Scale: 1"= 2,000'

LEGEND:

= Stop Sign

= Traffic Signal

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

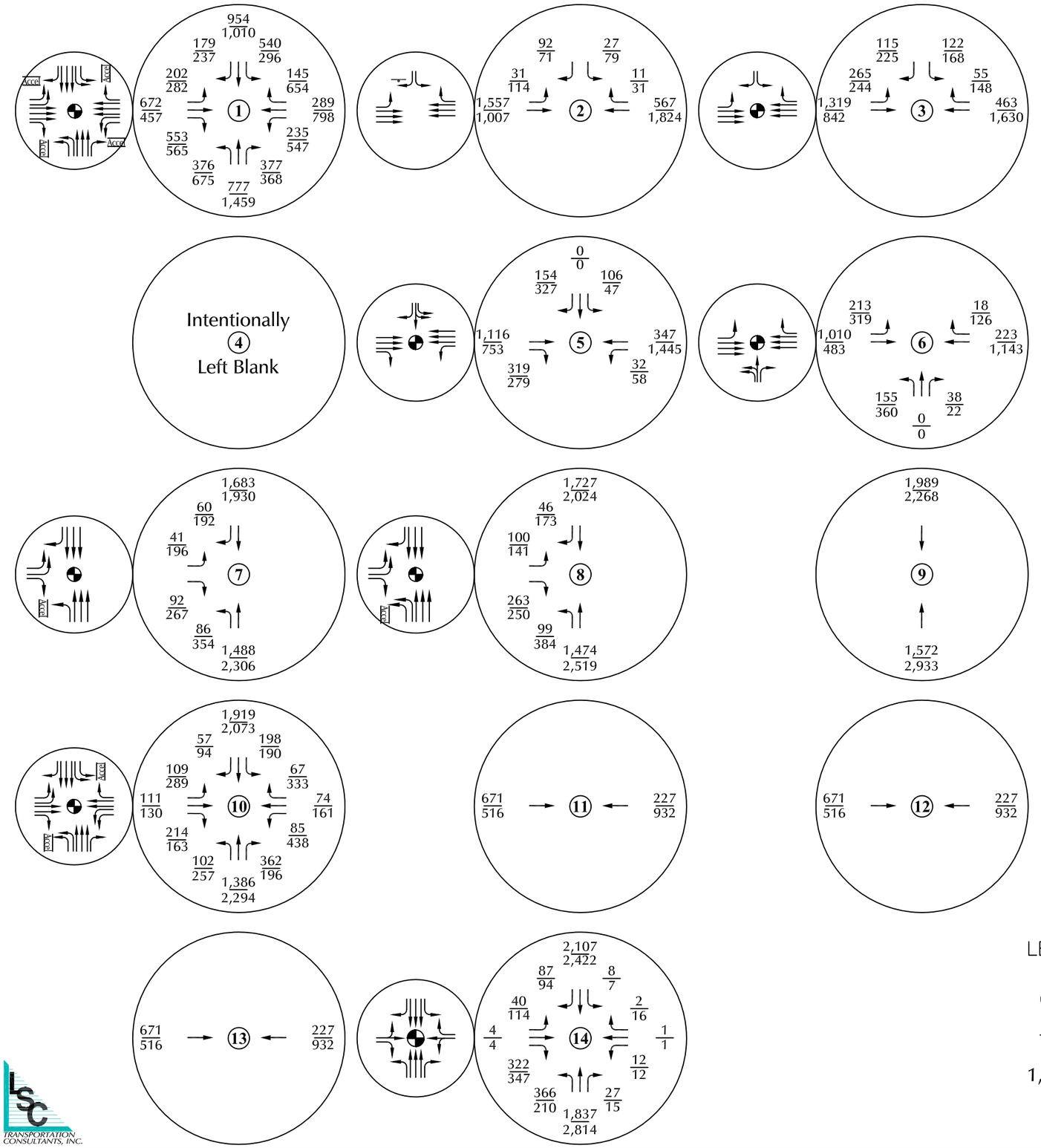
1,000 = Average Daily Traffic

Figure 4

Year 2026 Background Traffic, Lane Geometry and Traffic Control

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.



LEGEND:

= Stop Sign

= Traffic Signal

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

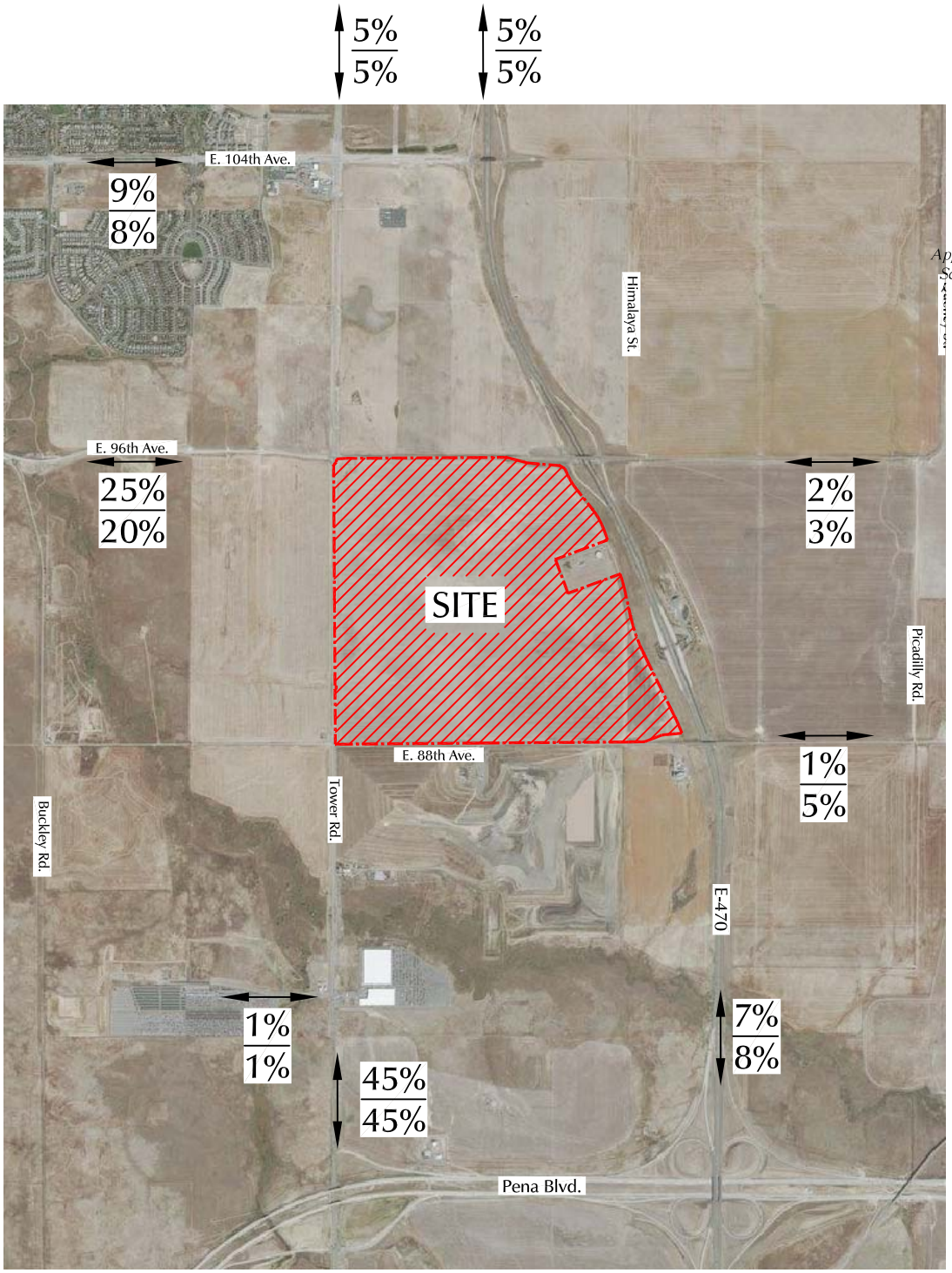
1,000 = Average Daily Traffic

Figure 5

Year 2040 Background Traffic, Lane Geometry and Traffic Control

Hightower Ranch (LSC #180590)

TRANSPORTATION CONSULTANTS, INC.



LEGEND:

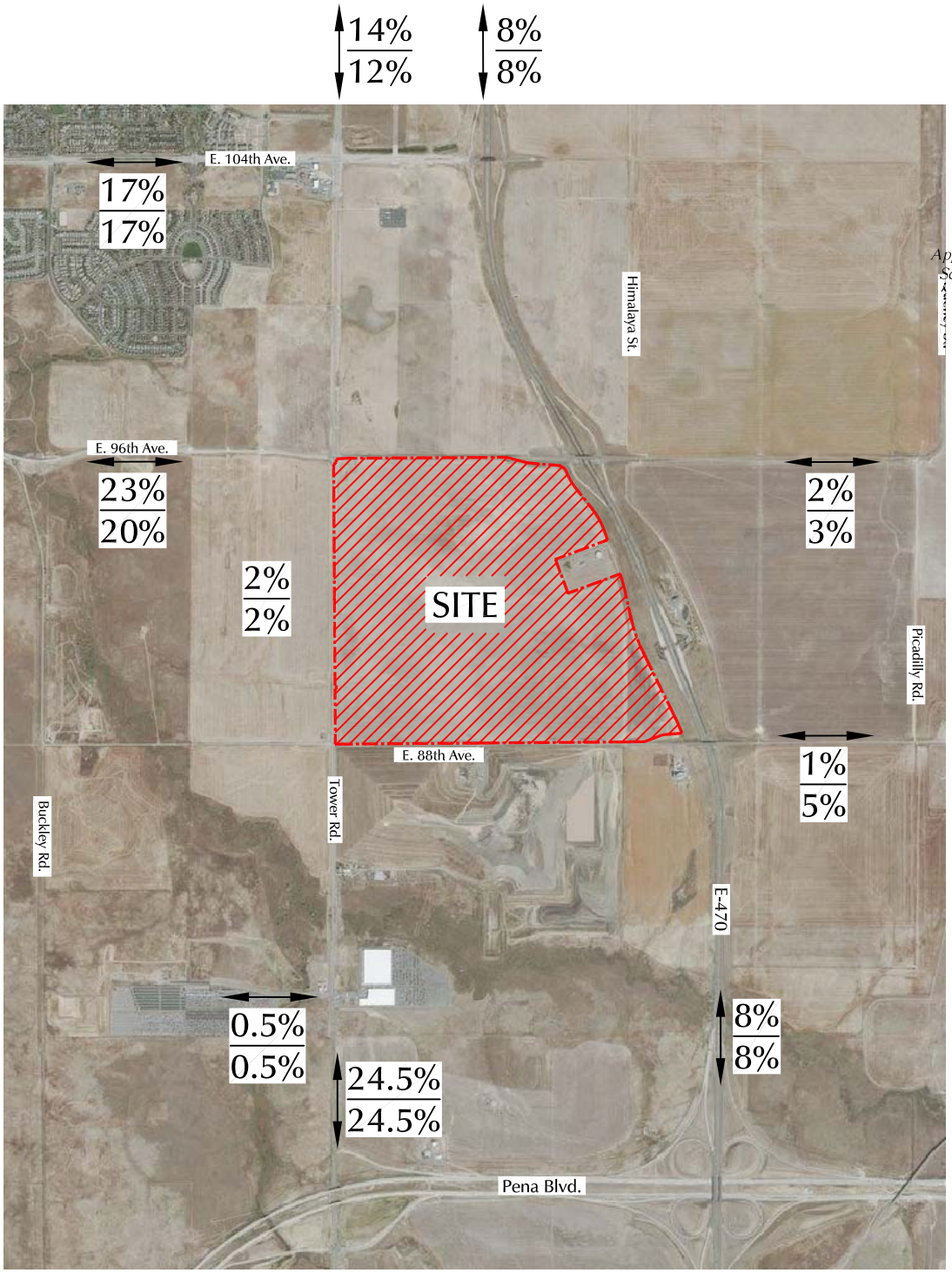
5% / 5% = Year 2026 Percent Directional Distribution / Year 2040 Percent Directional Distribution

Figure 6

Directional Distribution of Residential Site-Generated Traffic

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.



LEGEND:

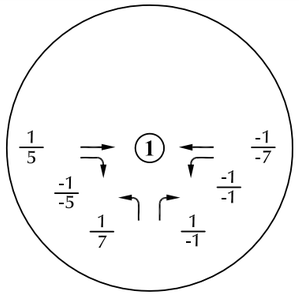
5% / 5% = Year 2026 Percent Directional Distribution / Year 2040 Percent Directional Distribution

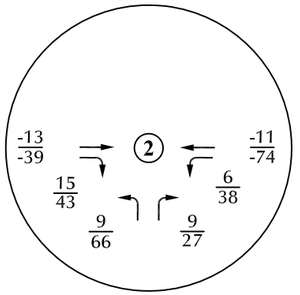
Figure 7

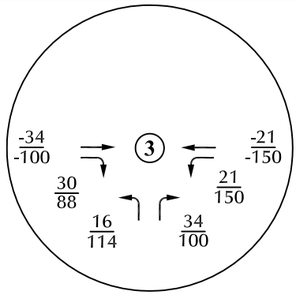
Directional Distribution of Non-Residential Site-Generated Traffic

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.







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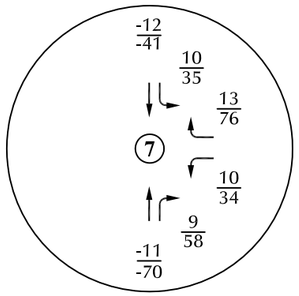

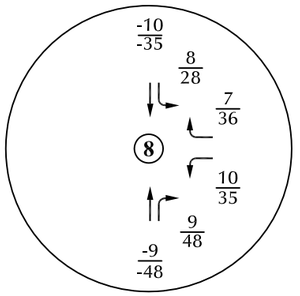

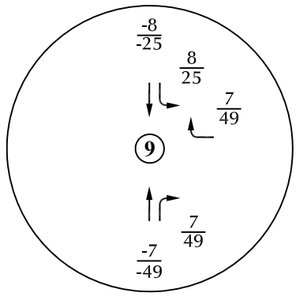

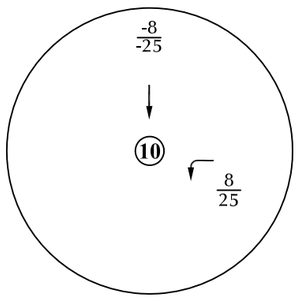

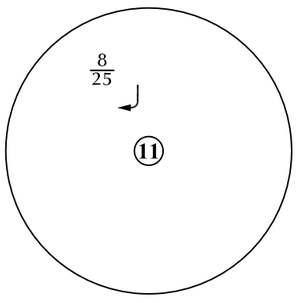

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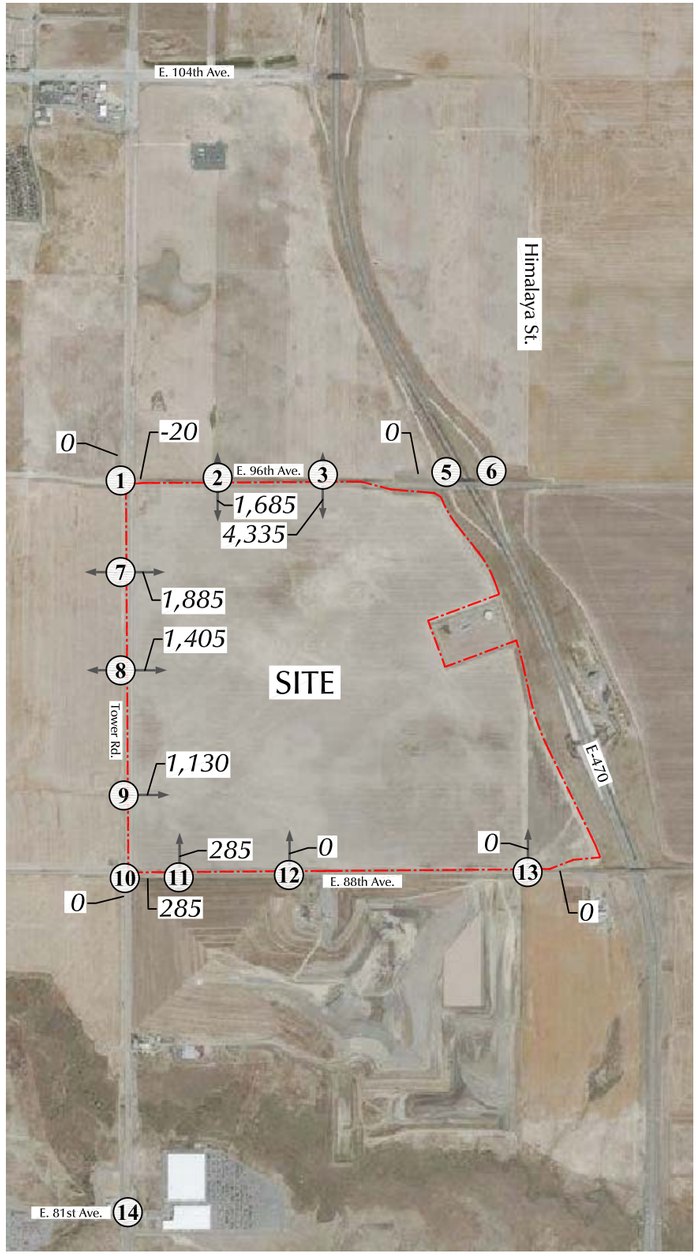


Approximate Scale
Scale: 1"= 2,000'

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

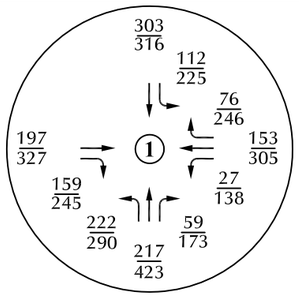
1,000 = Average Daily Traffic

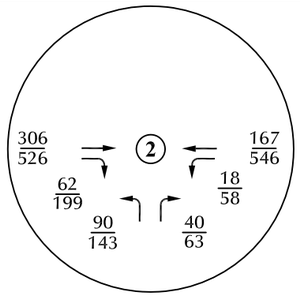
Figure 8

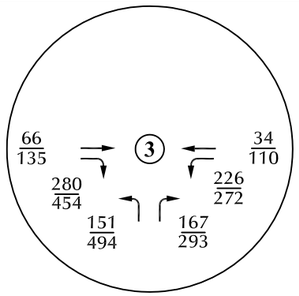
Assignment of Passby Site-Generated Traffic

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.







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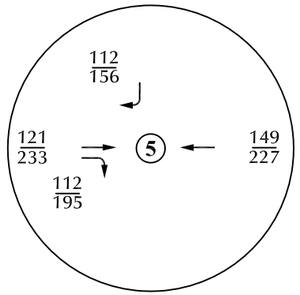
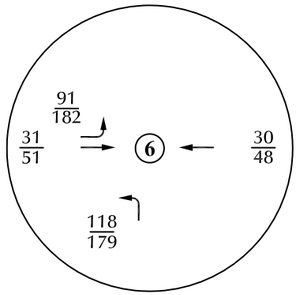
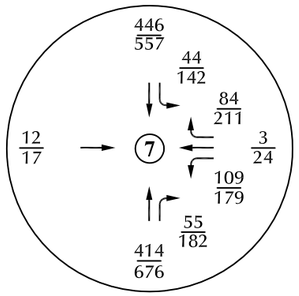
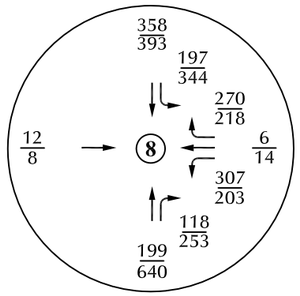
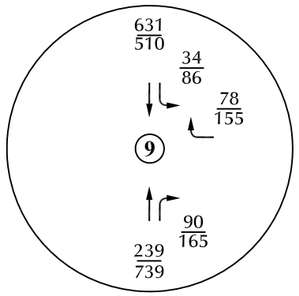
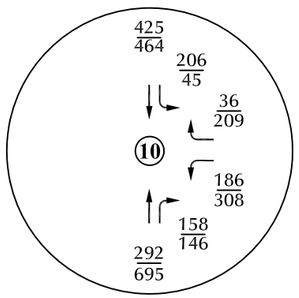


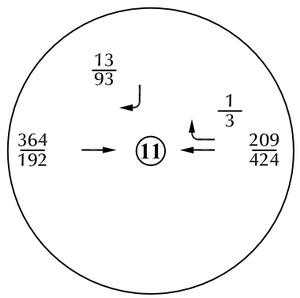


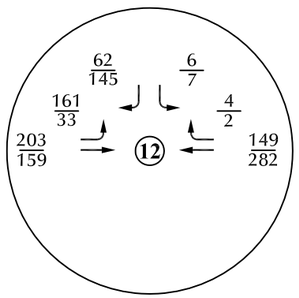


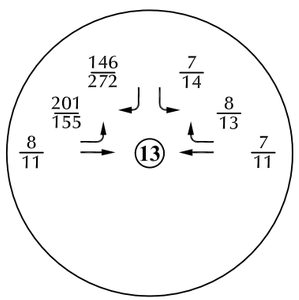


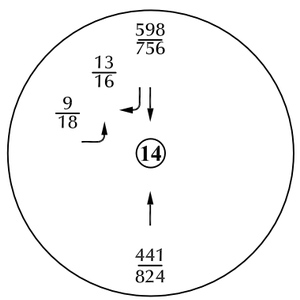












Approximate Scale
Scale: 1" = 2,000'

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

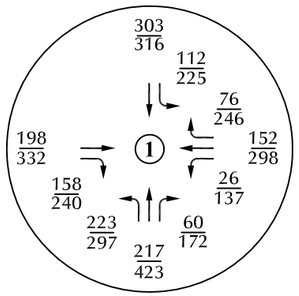
1,000 = Average Daily Traffic

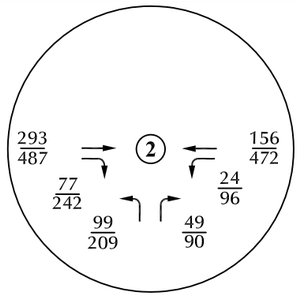
Figure 9

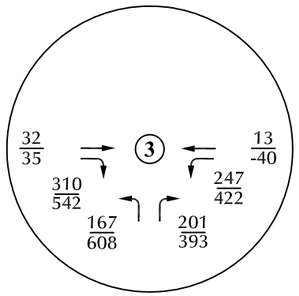
Year 2026 Assignment of Primary Site-Generated Traffic

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.







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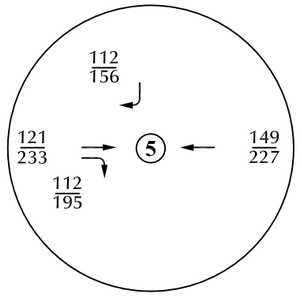
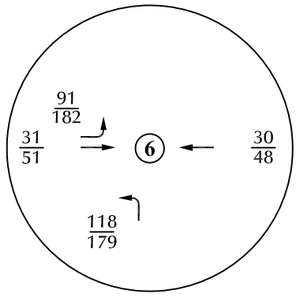
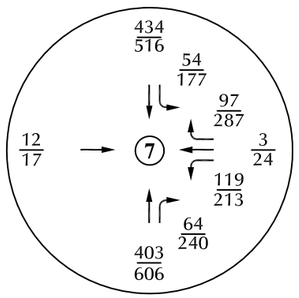
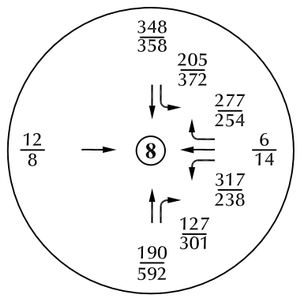
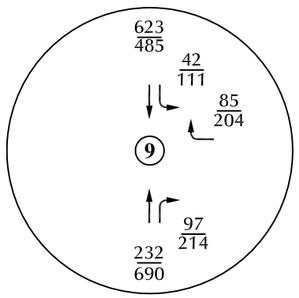
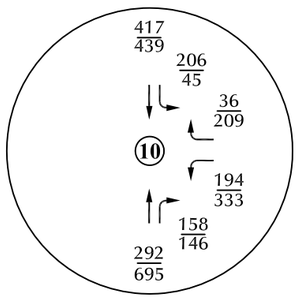


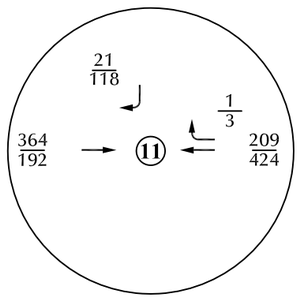


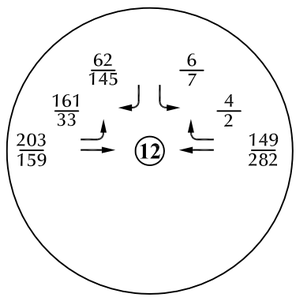


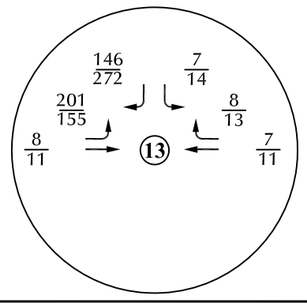


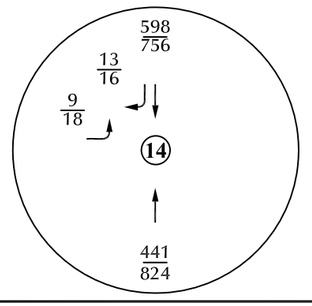


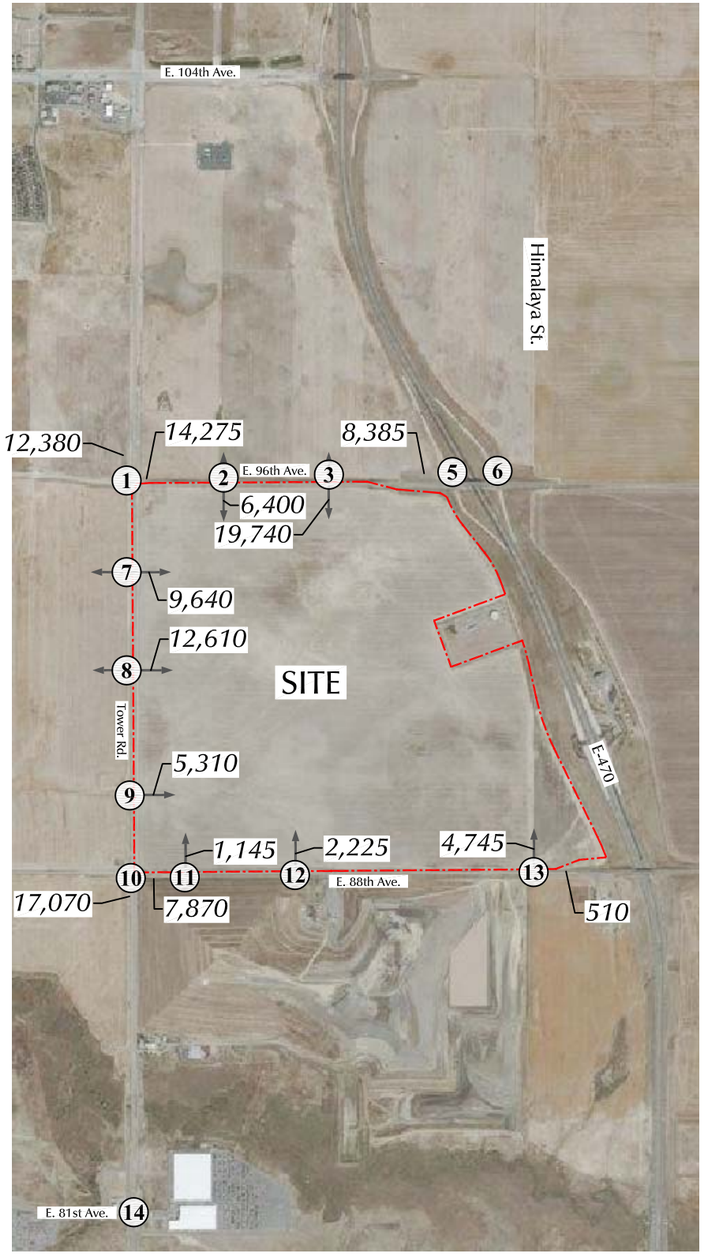












Approximate Scale
Scale: 1"= 2,000'

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

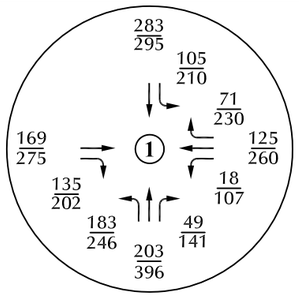
1,000 = Average Daily Traffic

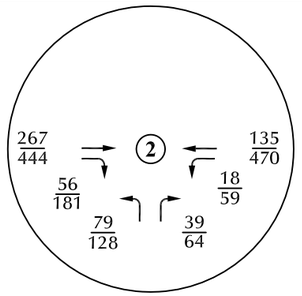
TRANSPORTATION CONSULTANTS, INC.

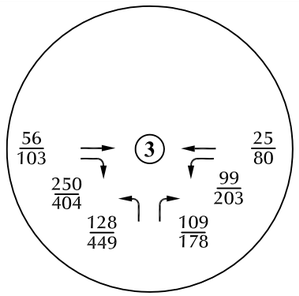
Figure 10

Year 2026 Assignment of Total Site-Generated Traffic

Hightower Ranch (LSC #180590)







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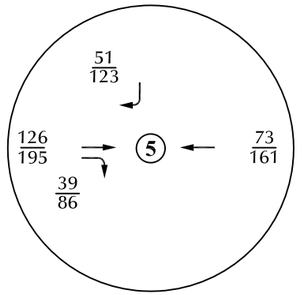
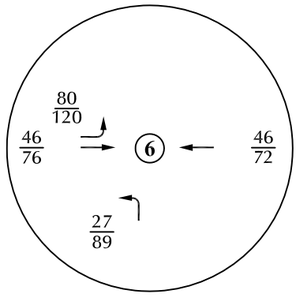
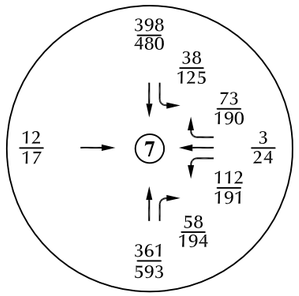
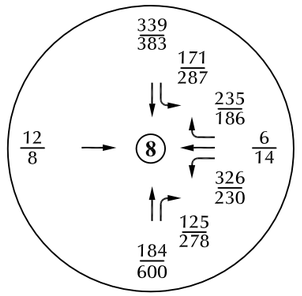
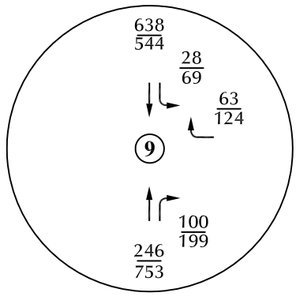
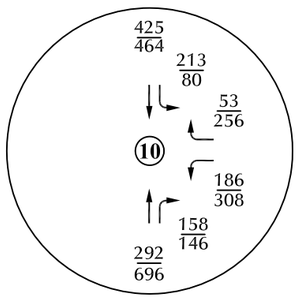


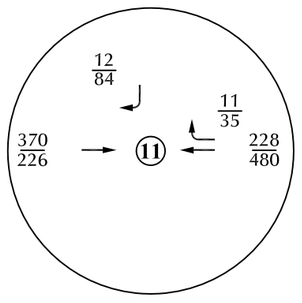


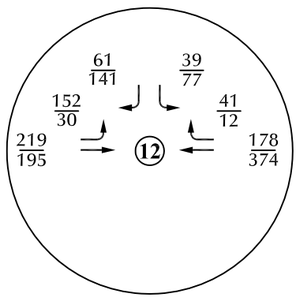


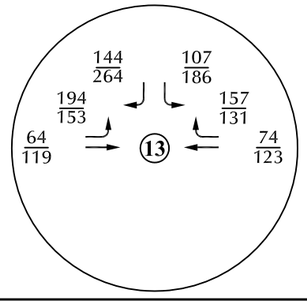


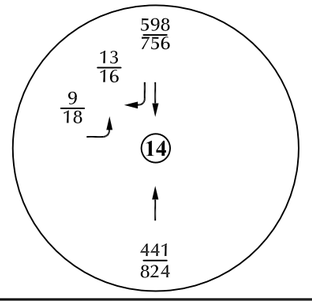


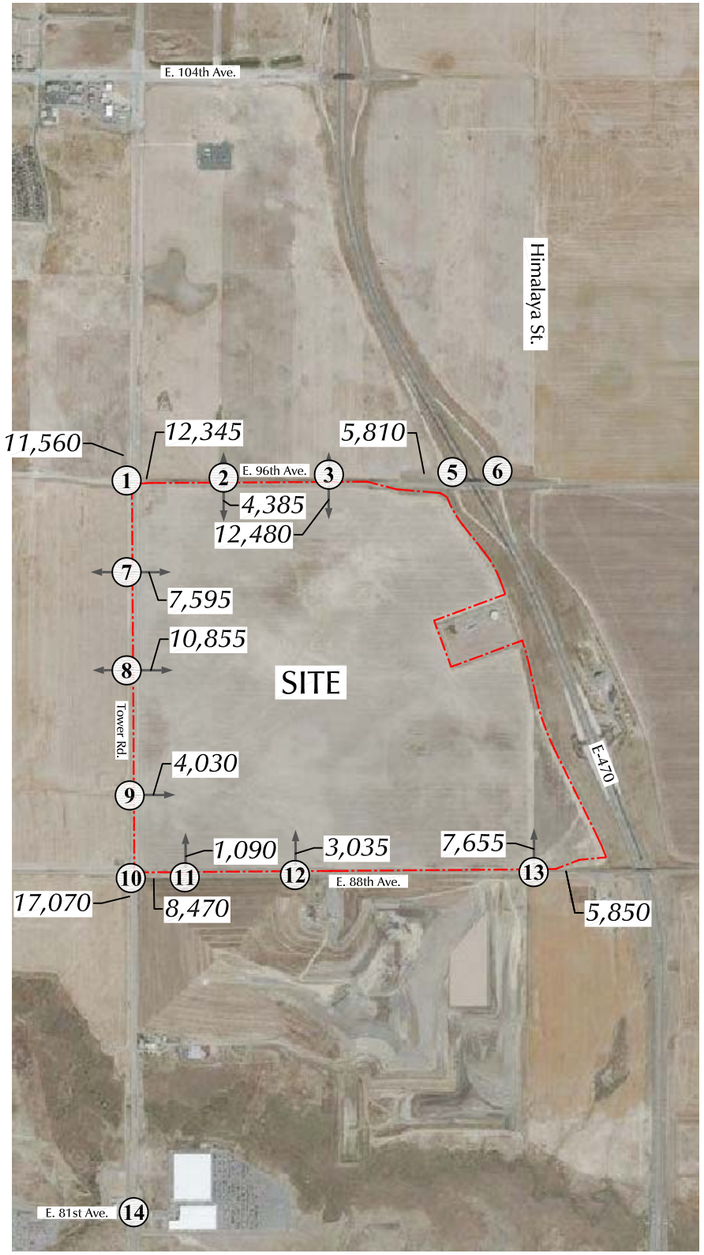












Approximate Scale
Scale: 1" = 2,000'

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

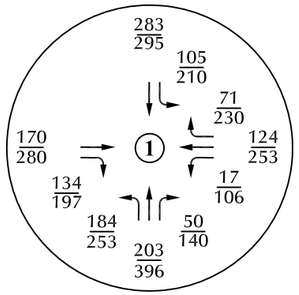
1,000 = Average Daily Traffic

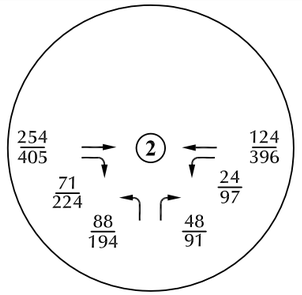
Figure 11

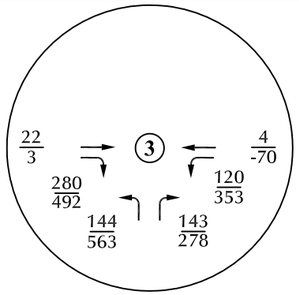
Year 2040 Assignment of Primary Site-Generated Traffic

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.







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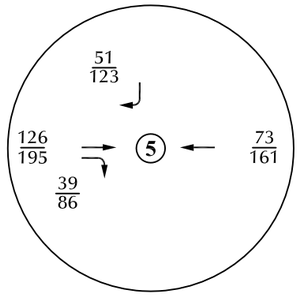
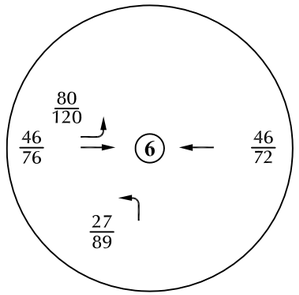
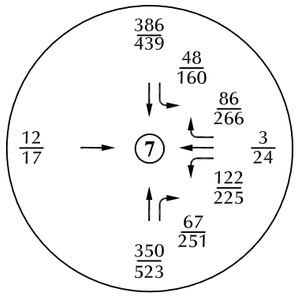
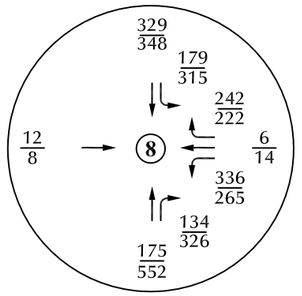
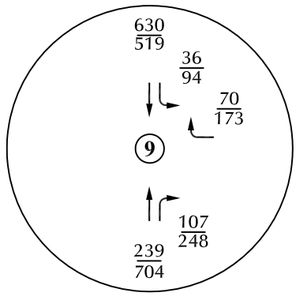
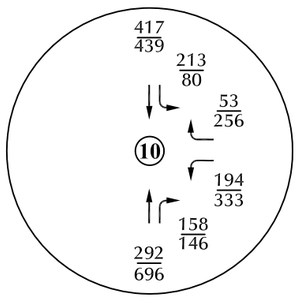


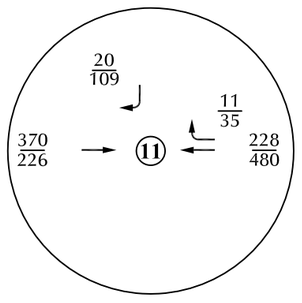


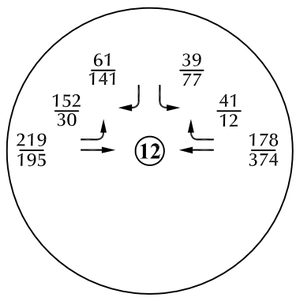


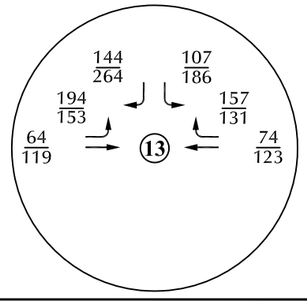


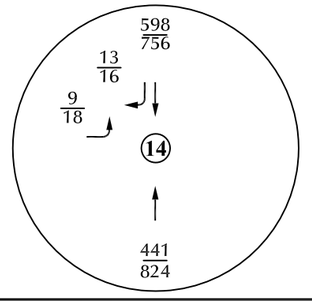


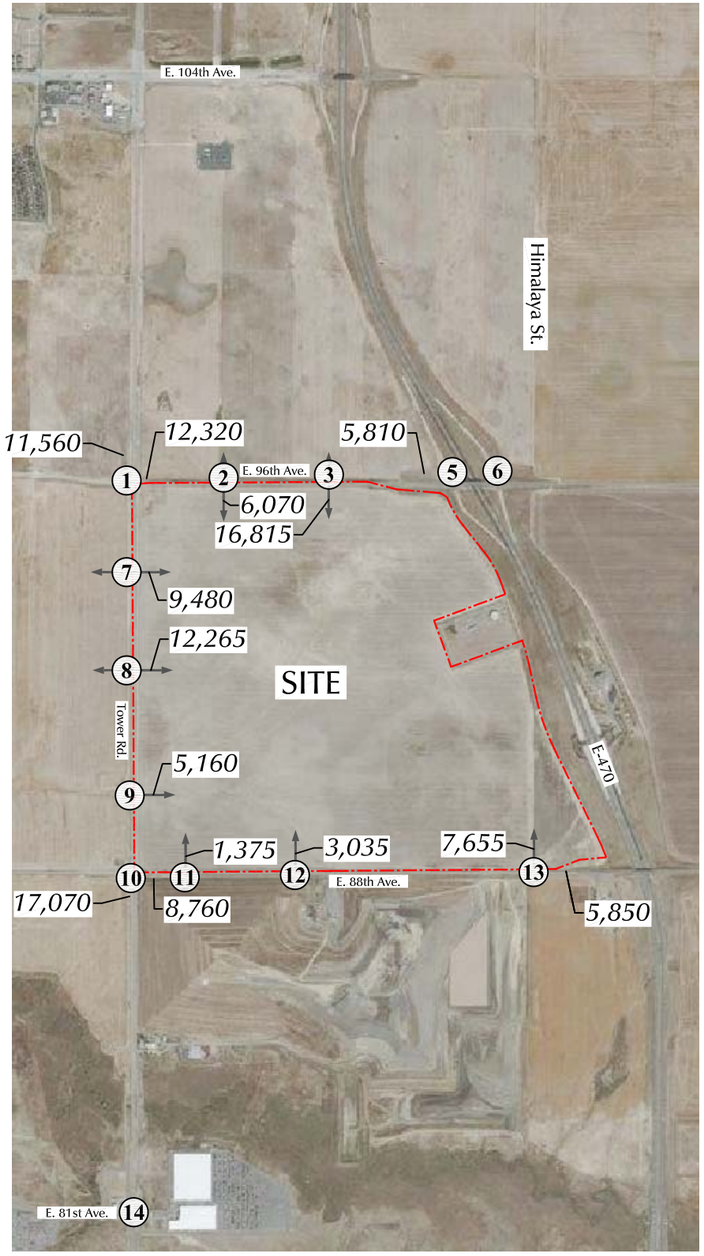












Approximate Scale
Scale: 1" = 2,000'

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

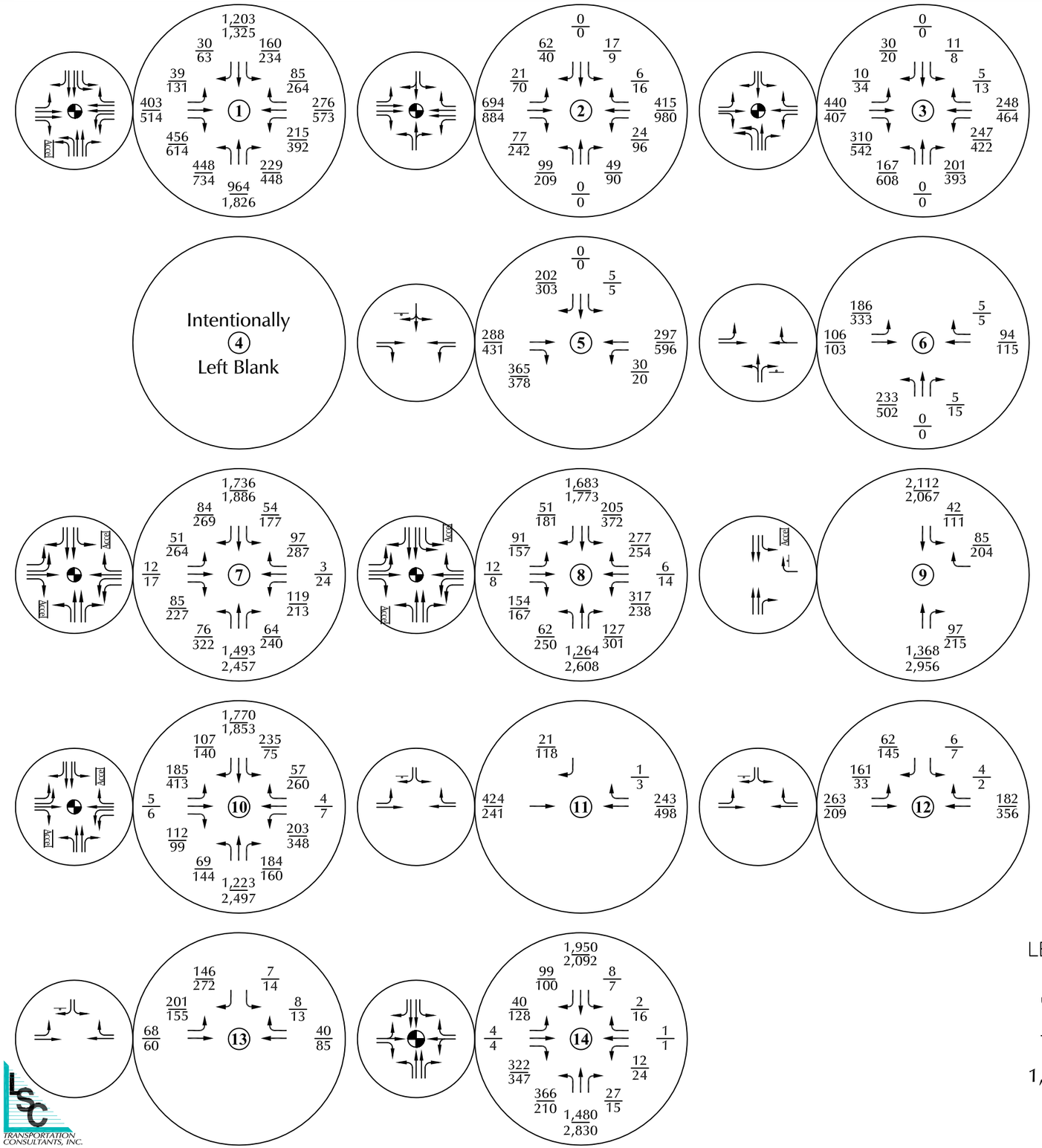
1,000 = Average Daily Traffic

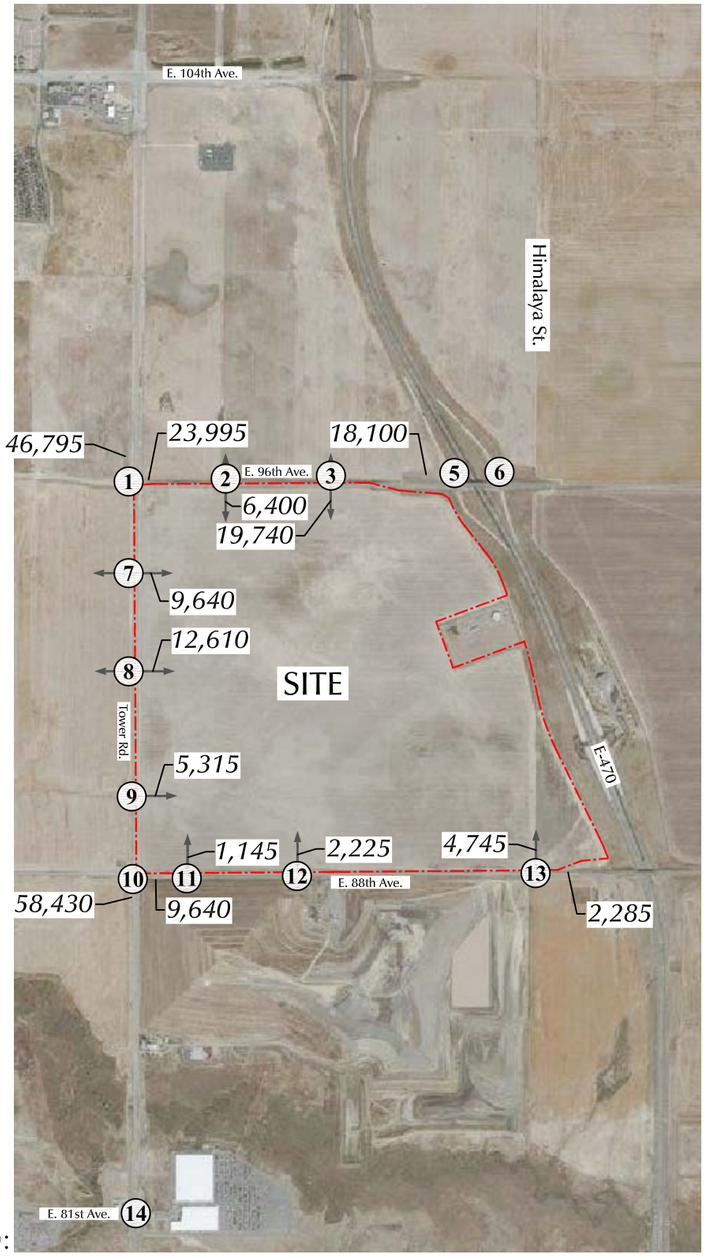
TRANSPORTATION CONSULTANTS, INC.

Figure 12

Year 2040 Assignment of Total Site-Generated Traffic

Hightower Ranch (LSC #180590)





Approximate Scale
Scale: 1"= 2,000'

LEGEND:

= Stop Sign

= Traffic Signal

26/35 = AM Peak Hour Traffic / PM Peak Hour Traffic

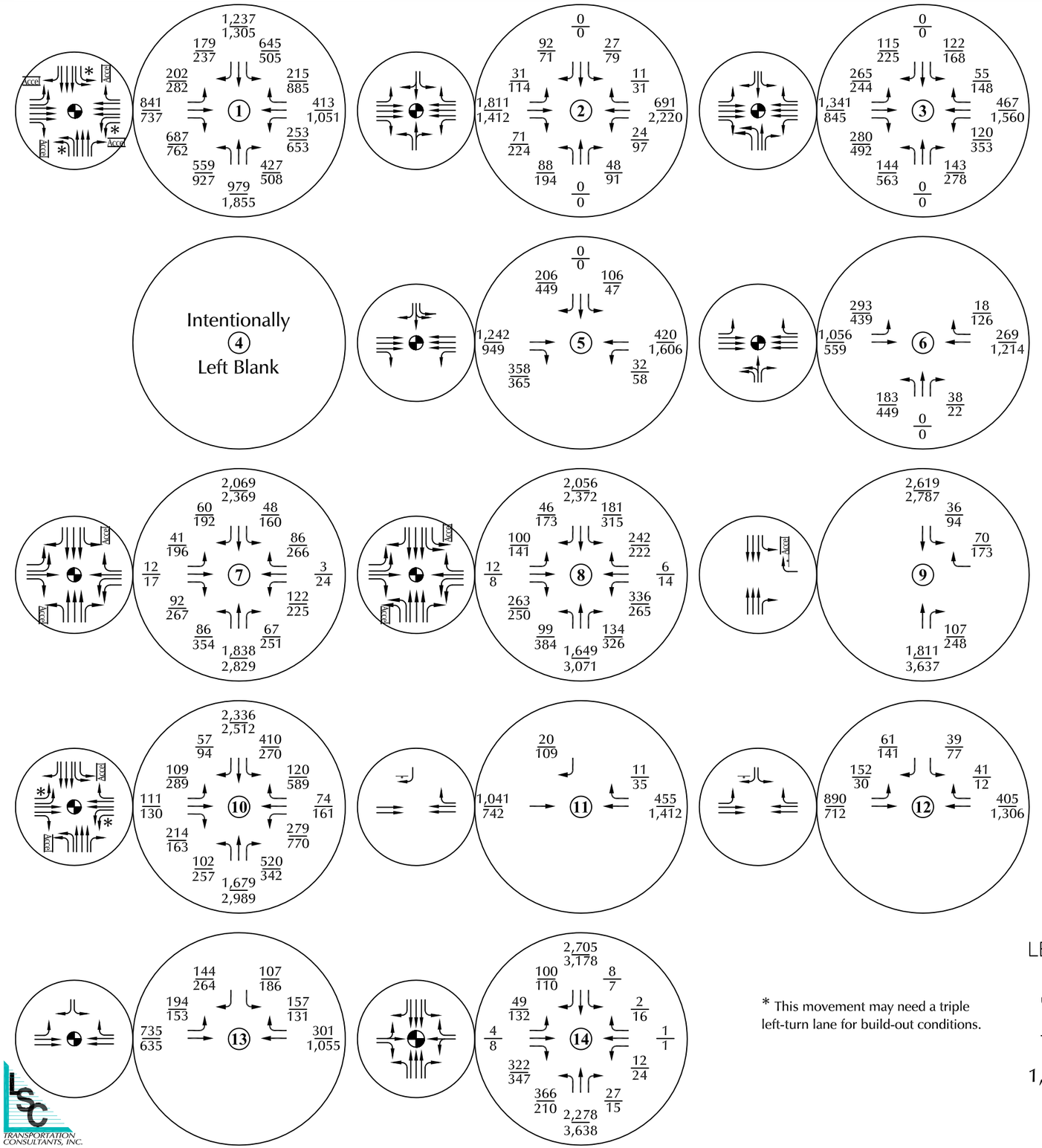
1,000 = Average Daily Traffic

TRANSPORTATION CONSULTANTS, INC.

Figure 13

Year 2026 Total Traffic, Lane Geometry and Traffic Control

Hightower Ranch (LSC #180590)



Approximate Scale
Scale: 1"= 2,000'

* This movement may need a triple left-turn lane for build-out conditions.

LEGEND:

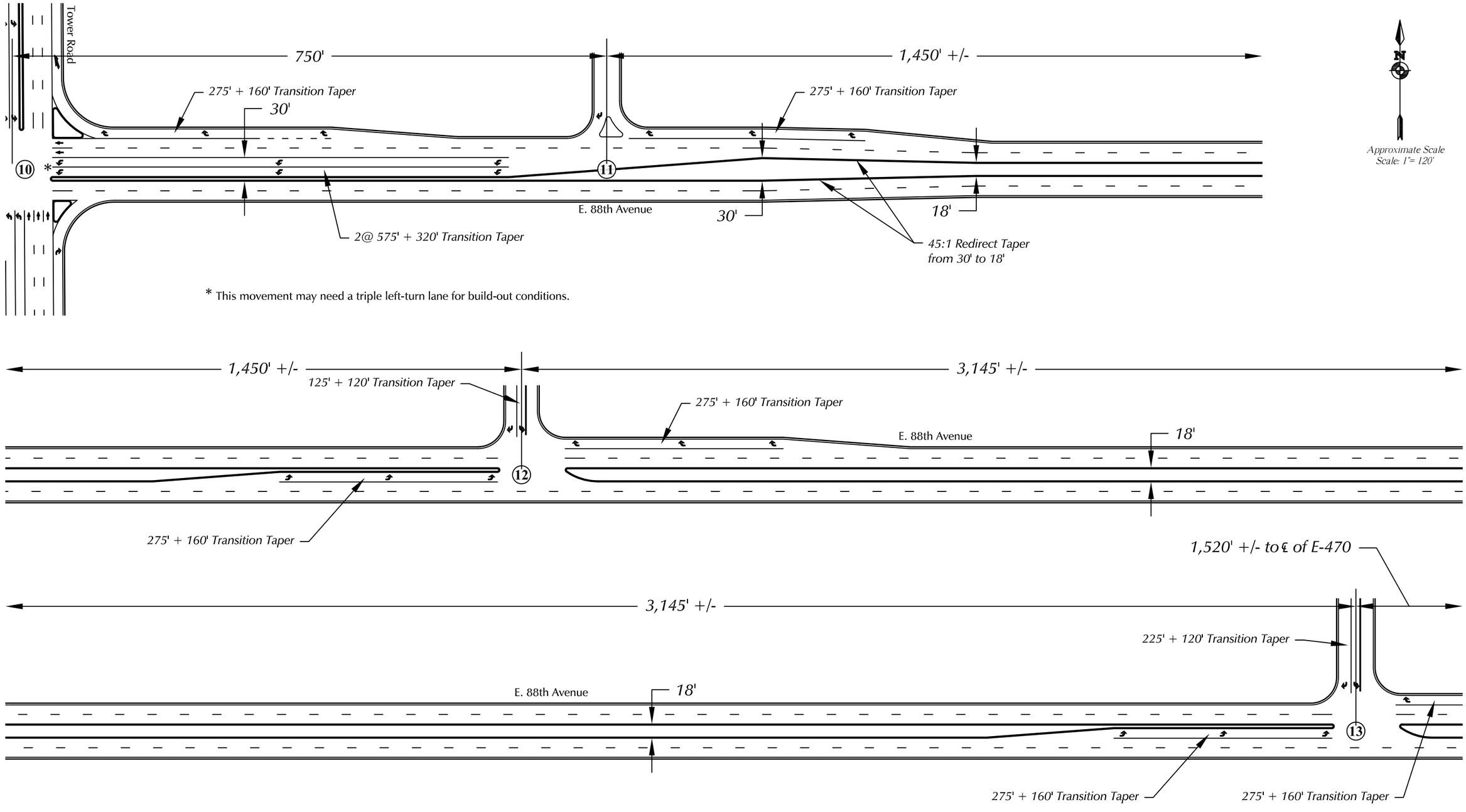
- = Stop Sign
- = Traffic Signal
- 26/35 = AM Peak Hour Traffic / PM Peak Hour Traffic
- 1,000 = Average Daily Traffic

Figure 14

Year 2040 Total Traffic, Lane Geometry and Traffic Control

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.



* This movement may need a triple left-turn lane for build-out conditions.

LEGEND:

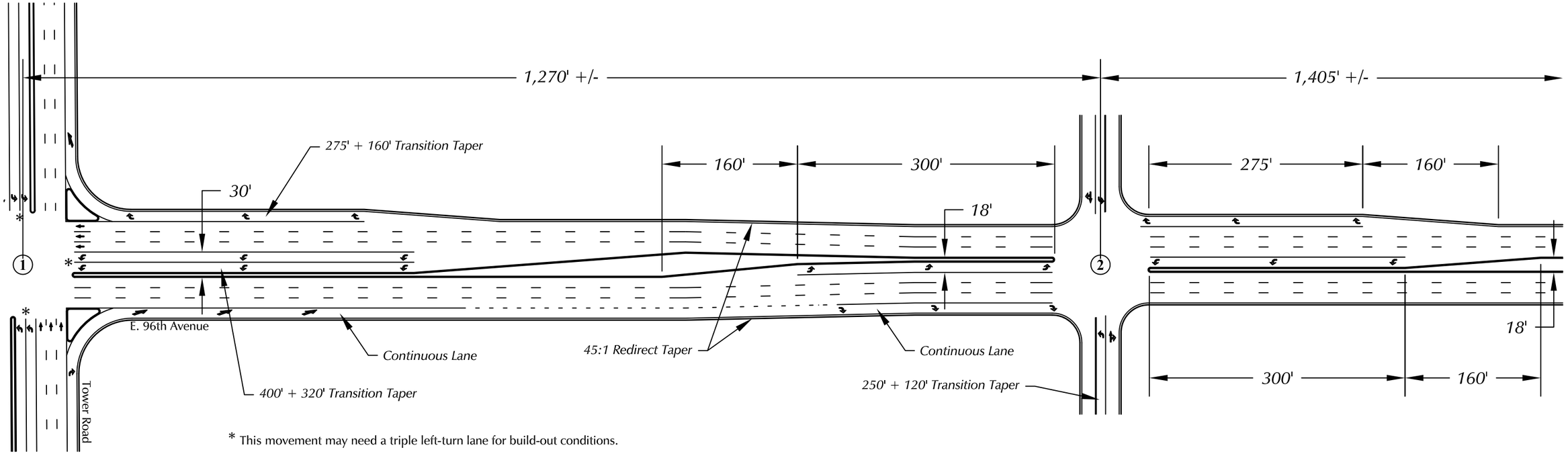
(#) = Intersection Number

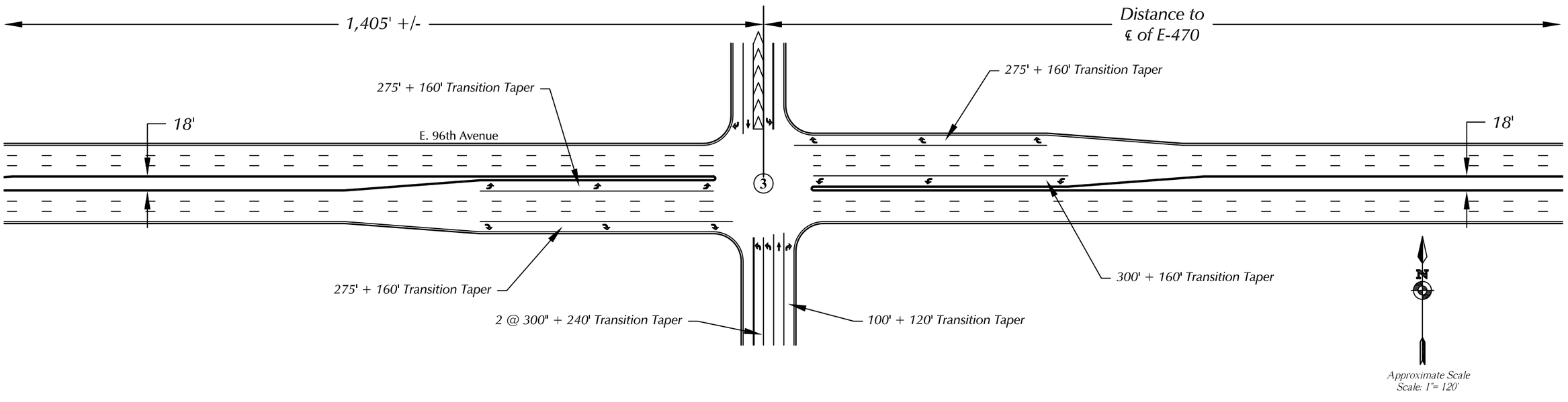
TRANSPORTATION CONSULTANTS, INC.

Figure 15

2040 Conceptual Lane Geometry Along E. 88th Avenue

Hightower Ranch (LSC #180590)





LEGEND:

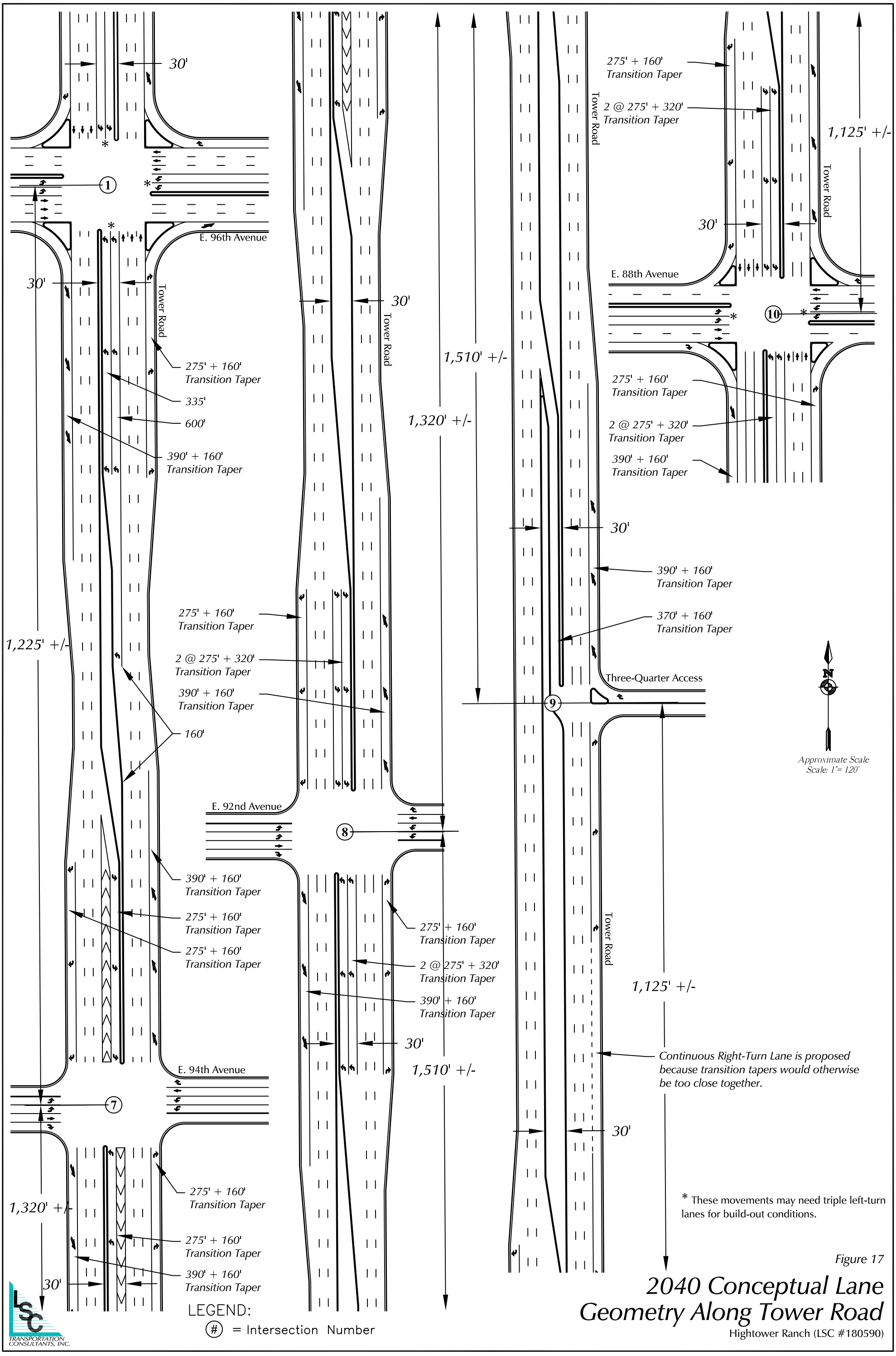
(#) = Intersection Number

Figure 16

2040 Conceptual Lane Geometry Along E. 96th Avenue

Hightower Ranch (LSC #180590)

LSC TRANSPORTATION CONSULTANTS, INC.



* These movements may need triple left-turn lanes for build-out conditions.

Figure 17

2040 Conceptual Lane Geometry Along Tower Road

Hightower Ranch (LSC #180590)

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 88TH AVE
CITY: DENVER
COUNTY: DENVER

File Name : TOWE88THA
Site Code : 00000010
Start Date : 3/21/2018
Page No : 1

Groups Printed- VEHICLES

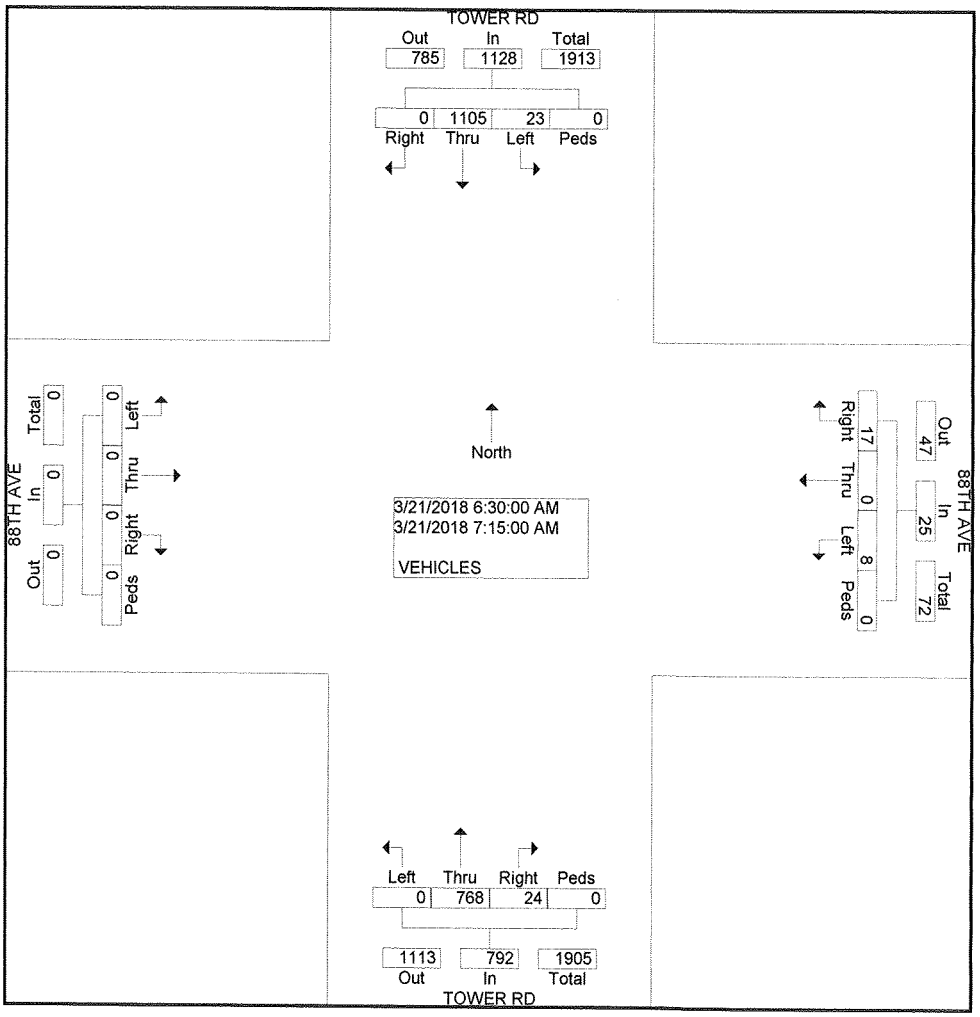
	TOWER RD Southbound				88TH AVE Westbound				TOWER RD Northbound				88TH AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	4	319	0	0	2	0	4	0	0	194	9	0	0	0	0	0	532
06:45 AM	7	281	0	0	2	0	5	0	0	201	5	0	0	0	0	0	501
Total	11	600	0	0	4	0	9	0	0	395	14	0	0	0	0	0	1033
07:00 AM	7	265	0	0	1	0	2	0	0	184	4	0	0	0	0	0	463
07:15 AM	5	240	0	0	3	0	6	0	0	189	6	0	0	0	0	0	449
07:30 AM	8	255	0	0	3	0	5	0	0	206	3	0	0	0	0	0	480
07:45 AM	12	262	0	0	3	0	8	0	0	219	4	0	0	0	0	0	508
Total	32	1022	0	0	10	0	21	0	0	798	17	0	0	0	0	0	1900
08:00 AM	2	242	0	0	5	0	10	0	0	180	11	0	0	0	0	0	450
08:15 AM	1	253	0	0	4	0	4	0	0	152	7	0	0	0	0	0	421
Total	3	495	0	0	9	0	14	0	0	332	18	0	0	0	0	0	871
04:00 PM	1	192	0	0	2	0	11	0	0	299	7	0	0	0	0	0	512
04:15 PM	1	193	0	0	1	0	11	0	0	363	4	0	0	0	0	0	573
04:30 PM	2	228	0	0	1	0	7	0	0	325	5	0	0	0	0	0	568
04:45 PM	8	203	0	0	4	0	8	0	0	349	4	0	0	0	0	0	576
Total	12	816	0	0	8	0	37	0	0	1336	20	0	0	0	0	0	2229
05:00 PM	4	240	0	0	2	0	9	0	0	347	6	0	0	0	0	0	608
05:15 PM	2	250	0	0	6	0	16	0	0	341	2	0	0	0	0	0	617
05:30 PM	4	231	0	0	2	0	6	0	0	330	1	0	0	0	0	0	574
05:45 PM	2	181	0	0	1	0	9	0	0	312	2	1	0	0	0	0	508
Total	12	902	0	0	11	0	40	0	0	1330	11	1	0	0	0	0	2307
Grand Total	70	3835	0	0	42	0	121	0	0	4191	80	1	0	0	0	0	8340
Apprch %	1.8	98.2	0.0	0.0	25.8	0.0	74.2	0.0	0.0	98.1	1.9	0.0	0.0	0.0	0.0	0.0	
Total %	0.8	46.0	0.0	0.0	0.5	0.0	1.5	0.0	0.0	50.3	1.0	0.0	0.0	0.0	0.0	0.0	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 88TH AVE
CITY: DENVER
COUNTY: DENVER

File Name : TOWE88THA
Site Code : 00000010
Start Date : 3/21/2018
Page No : 2

	TOWER RD Southbound					88TH AVE Westbound					TOWER RD Northbound					88TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																					
Intersection	06:30 AM																				
Volume	23	1105	0	0	1128	8	0	17	0	25	0	768	24	0	792	0	0	0	0	0	1945
Percent	2.0	98.0	0.0	0.0		32.0	0.0	68.0	0.0		0.0	97.0	3.0	0.0		0.0	0.0	0.0	0.0		
06:30 Volume	4	319	0	0	323	2	0	4	0	6	0	194	9	0	203	0	0	0	0	0	532
Peak Factor																					0.914
High Int.	06:30 AM					07:15 AM					06:45 AM					6:15:00 AM					
Volume	4	319	0	0	323	3	0	6	0	9	0	201	5	0	206						
Peak Factor					0.873					0.694					0.961						

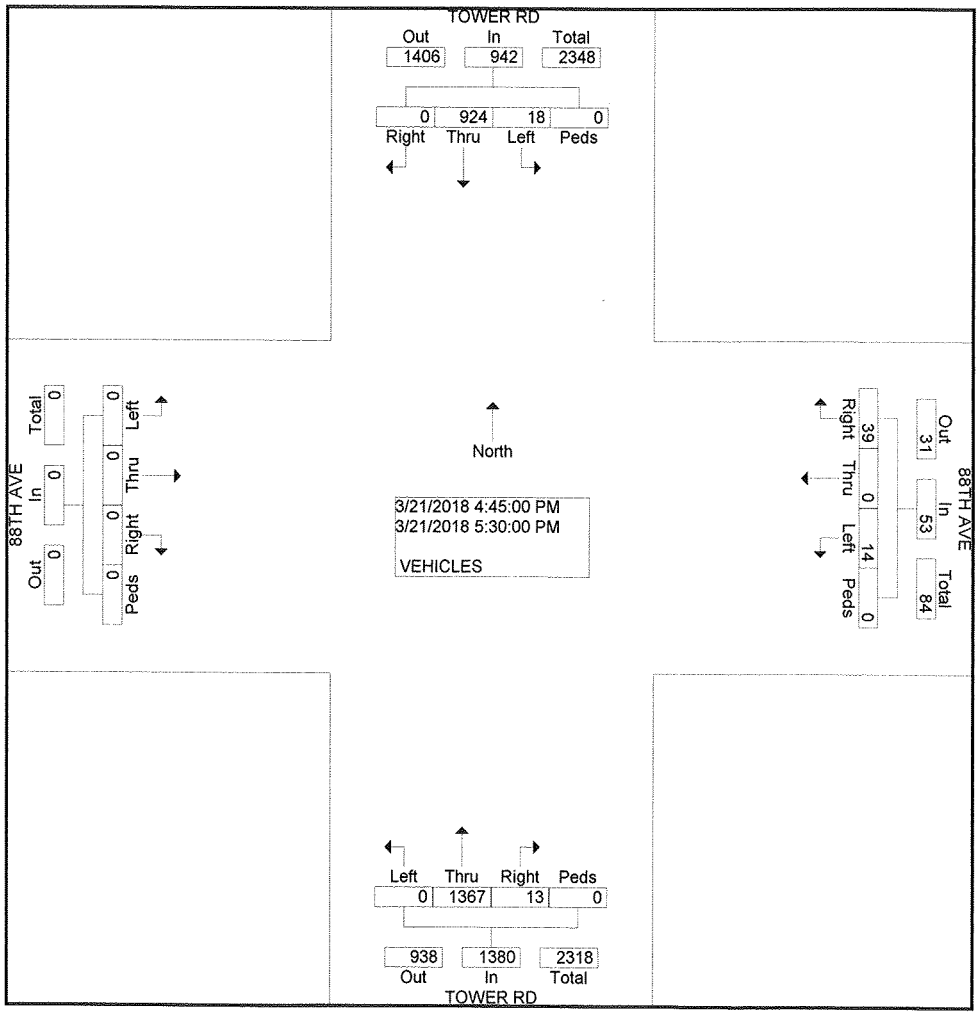


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 88TH AVE
CITY: DENVER
COUNTY: DENVER

File Name : TOWE88THA
Site Code : 00000010
Start Date : 3/21/2018
Page No : 2

	TOWER RD Southbound					88TH AVE Westbound					TOWER RD Northbound					88TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	18	924	0	0	942	14	0	39	0	53	0	1367	13	0	1380	0	0	0	0	0	2375
Percent	1.9	98.1	0.0	0.0		26.4	0.0	73.6	0.0		0.0	99.1	0.9	0.0		0.0	0.0	0.0	0.0		
05:15 Volume	2	250	0	0	252	6	0	16	0	22	0	341	2	0	343	0	0	0	0	0	617
Peak Factor																					0.962
High Int.	05:15 PM					05:15 PM					04:45 PM										
Volume	2	250	0	0	252	6	0	16	0	22	0	349	4	0	353						
Peak Factor					0.935					0.602					0.977						



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : TOWE96THA
Site Code : 00000016
Start Date : 6/21/2018
Page No : 1

Groups Printed- VEHICLES

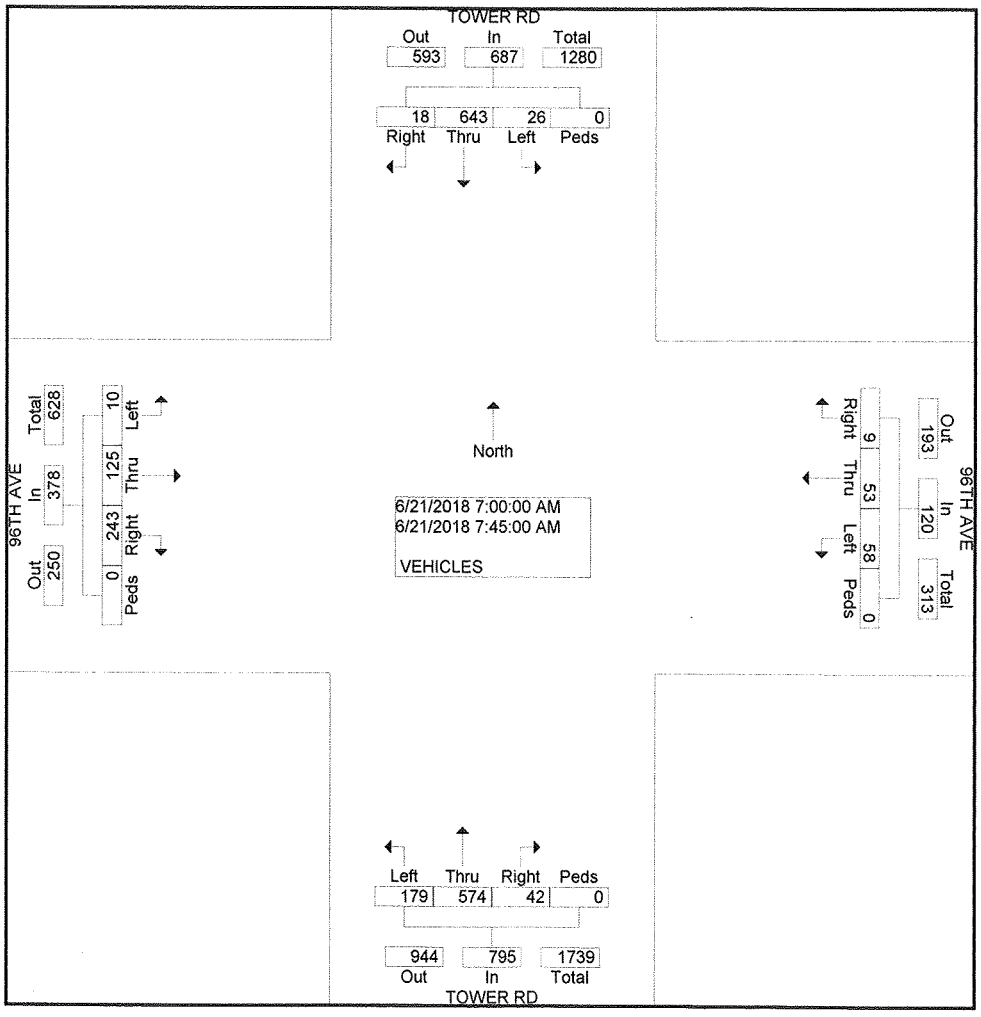
	TOWER RD Southbound				96TH AVE Westbound				TOWER RD Northbound				96TH AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	4	240	1	0	6	10	1	0	38	131	17	0	3	35	68	0	554
06:45 AM	9	153	3	0	17	4	1	0	41	136	11	0	1	34	47	0	457
Total	13	393	4	0	23	14	2	0	79	267	28	0	4	69	115	0	1011
07:00 AM	9	178	4	0	18	19	1	0	37	140	8	0	2	33	44	0	493
07:15 AM	7	150	6	0	17	9	2	0	33	132	12	0	2	30	52	0	452
07:30 AM	6	176	6	0	11	6	1	0	62	156	12	0	2	30	74	0	542
07:45 AM	4	139	2	0	12	19	5	0	47	146	10	0	4	32	73	0	493
Total	26	643	18	0	58	53	9	0	179	574	42	0	10	125	243	0	1980
08:00 AM	6	163	6	1	15	6	1	0	63	109	11	0	3	20	53	1	458
08:15 AM	3	141	5	0	23	10	1	1	32	104	3	0	10	18	74	0	425
Total	9	304	11	1	38	16	2	1	95	213	14	0	13	38	127	1	883
04:00 PM	4	151	8	0	13	26	5	0	94	275	5	0	4	16	45	0	646
04:15 PM	3	137	8	0	9	20	2	0	90	260	9	0	4	14	61	0	617
04:30 PM	1	138	4	0	12	20	4	0	85	257	8	0	6	11	67	0	613
04:45 PM	0	154	4	0	10	21	1	0	77	221	12	0	1	13	62	0	576
Total	8	580	24	0	44	87	12	0	346	1013	34	0	15	54	235	0	2452
05:00 PM	4	175	8	0	9	42	8	0	78	177	16	0	5	14	61	0	597
05:15 PM	3	144	7	0	5	34	4	0	83	225	22	0	5	32	71	0	635
05:30 PM	2	154	7	0	10	21	6	0	72	210	26	0	4	26	82	0	620
05:45 PM	2	145	1	0	4	26	3	0	70	208	22	0	8	24	64	0	577
Total	11	618	23	0	28	123	21	0	303	820	86	0	22	96	278	0	2429
Grand Total	67	2538	80	1	191	293	46	1	1002	2887	204	0	64	382	998	1	8755
Apprch %	2.5	94.5	3.0	0.0	36.0	55.2	8.7	0.2	24.5	70.5	5.0	0.0	4.4	26.4	69.1	0.1	
Total %	0.8	29.0	0.9	0.0	2.2	3.3	0.5	0.0	11.4	33.0	2.3	0.0	0.7	4.4	11.4	0.0	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : TOWE96THA
Site Code : 00000016
Start Date : 6/21/2018
Page No : 2

	TOWER RD Southbound					96TH AVE Westbound					TOWER RD Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	26	643	18	0	687	58	53	9	0	120	179	574	42	0	795	10	125	243	0	378	1980
Percent	3.8	93.6	2.6	0.0		48.3	44.2	7.5	0.0		22.5	72.2	5.3	0.0		2.6	33.1	64.3	0.0		
07:30 Volume	6	176	6	0	188	11	6	1	0	18	62	156	12	0	230	2	30	74	0	106	542
Peak Factor																					0.913
High Int.	07:00 AM					07:00 AM					07:30 AM					07:45 AM					
Volume	9	178	4	0	191	18	19	1	0	38	62	156	12	0	230	4	32	73	0	109	
Peak Factor					0.899					0.789					0.864					0.867	

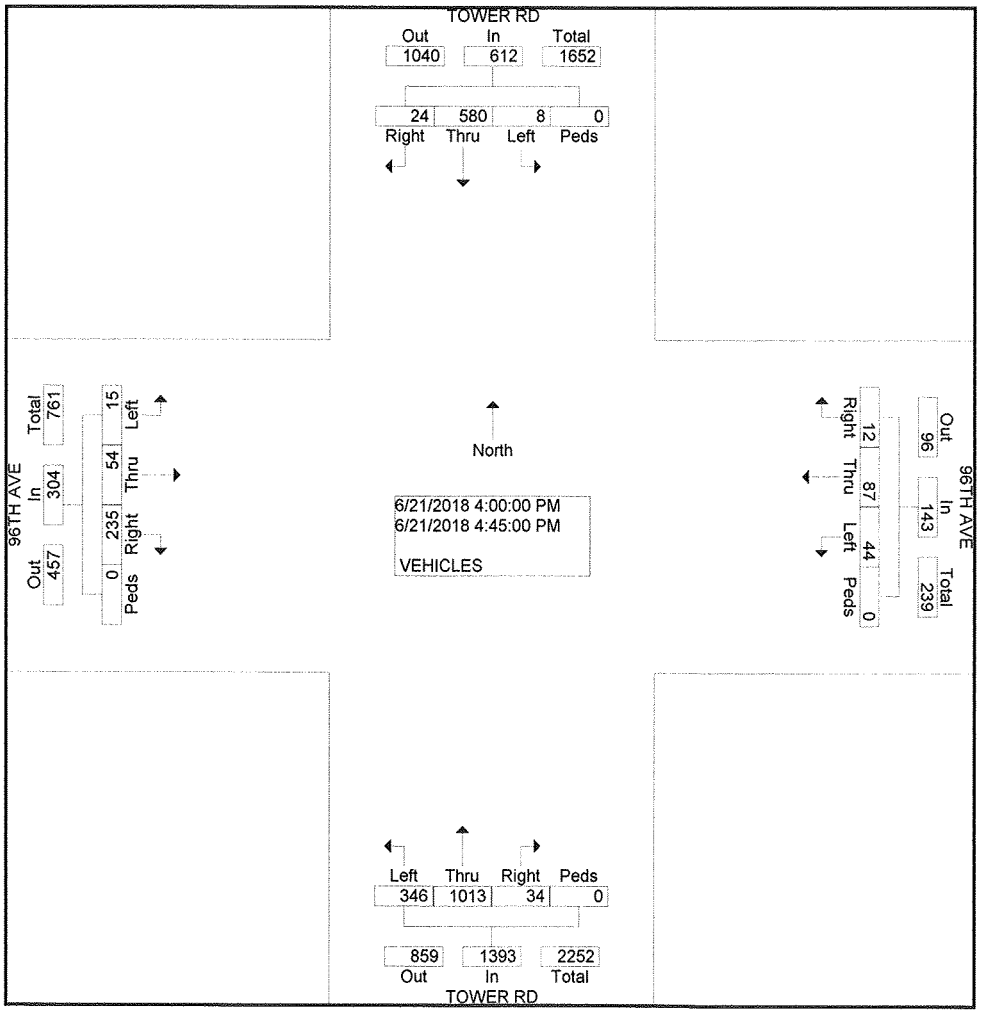


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: TOWER RD
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : TOWE96THA
Site Code : 00000016
Start Date : 6/21/2018
Page No : 2

	TOWER RD Southbound					96TH AVE Westbound					TOWER RD Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 04:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	8	580	24	0	612	44	87	12	0	143	346	1013	34	0	1393	15	54	235	0	304	2452
Percent	1.3	94.8	3.9	0.0		30.8	60.8	8.4	0.0		24.8	72.7	2.4	0.0		4.9	17.8	77.3	0.0		
04:00 Volume	4	151	8	0	163	13	26	5	0	44	94	275	5	0	374	4	16	45	0	65	646
Peak Factor																					0.949
High Int.	04:00 PM					04:00 PM					04:00 PM					04:30 PM					
Volume	4	151	8	0	163	13	26	5	0	44	94	275	5	0	374	6	11	67	0	84	
Peak Factor					0.939					0.813					0.931					0.905	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: E-470 WEST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470W96T
Site Code : 00000001
Start Date : 6/21/2018
Page No : 1

Groups Printed- VEHICLES

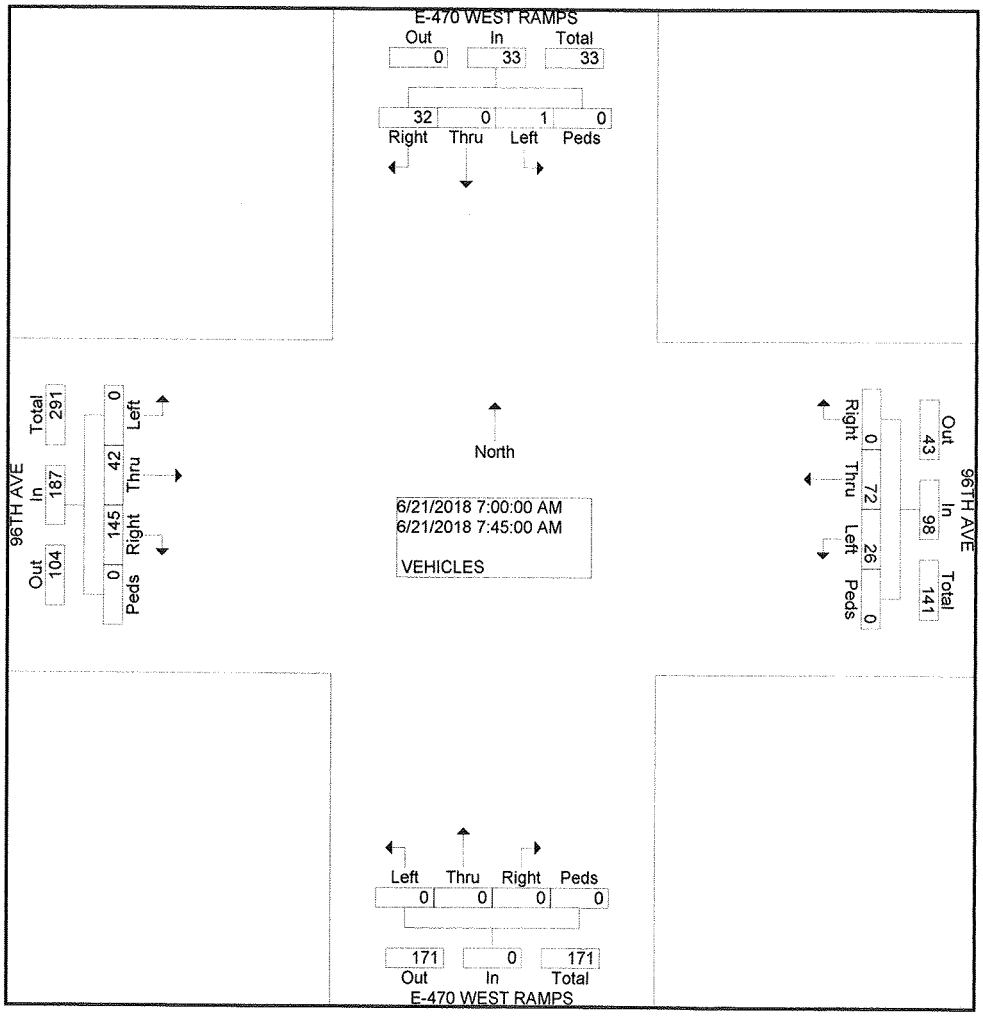
	E-470 WEST RAMPS Southbound				96TH AVE Westbound				E-470 WEST RAMPS Northbound				96TH AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	2	0	3	0	5	13	0	1	0	0	0	0	0	20	31	0	75
06:45 AM	2	1	9	0	6	10	0	0	0	0	0	0	0	16	36	0	80
Total	4	1	12	0	11	23	0	1	0	0	0	0	0	36	67	0	155
07:00 AM	0	0	8	0	2	17	0	0	0	0	0	0	0	7	49	0	83
07:15 AM	0	0	8	0	11	17	0	0	0	0	0	0	0	11	33	0	80
07:30 AM	0	0	8	0	8	16	0	0	0	0	0	0	0	14	35	0	81
07:45 AM	1	0	8	0	5	22	0	0	0	0	0	0	0	10	28	0	74
Total	1	0	32	0	26	72	0	0	0	0	0	0	0	42	145	0	318
08:00 AM	1	0	13	0	4	12	0	0	0	0	0	0	0	12	23	1	66
08:15 AM	0	0	7	0	2	19	0	1	0	0	0	0	0	3	17	0	49
Total	1	0	20	0	6	31	0	1	0	0	0	0	0	15	40	1	115
04:00 PM	0	0	10	0	3	37	0	0	0	0	0	0	0	10	14	0	74
04:15 PM	0	0	3	0	6	24	0	0	0	0	0	0	0	10	17	0	60
04:30 PM	0	0	6	0	2	27	0	0	0	0	0	0	0	11	13	0	59
04:45 PM	0	0	7	0	5	23	0	0	0	0	0	0	0	9	13	0	57
Total	0	0	26	0	16	111	0	0	0	0	0	0	0	40	57	0	250
05:00 PM	0	0	10	0	6	47	0	0	0	0	0	0	0	8	30	0	101
05:15 PM	2	0	5	0	4	35	0	0	0	0	0	0	0	6	47	0	99
05:30 PM	0	1	3	0	5	32	0	0	0	0	0	0	0	12	40	0	93
05:45 PM	0	0	1	0	4	32	0	0	0	0	0	0	0	17	37	0	91
Total	2	1	19	0	19	146	0	0	0	0	0	0	0	43	154	0	384
Grand Total	8	2	109	0	78	383	0	2	0	0	0	0	0	176	463	1	1222
Apprch %	6.7	1.7	91.6	0.0	16.8	82.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0	27.5	72.3	0.2	
Total %	0.7	0.2	8.9	0.0	6.4	31.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	14.4	37.9	0.1	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: E-470 WEST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470W96T
Site Code : 00000001
Start Date : 6/21/2018
Page No : 2

	E-470 WEST RAMPS Southbound					96TH AVE Westbound					E-470 WEST RAMPS Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	1	0	32	0	33	26	72	0	0	98	0	0	0	0	0	0	42	145	0	187	318
Percent	3.0	0.0	97.0	0.0		26.5	73.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	22.5	77.5	0.0		
07:00 Volume	0	0	8	0	8	2	17	0	0	19	0	0	0	0	0	0	7	49	0	56	83
Peak Factor																					0.958
High Int.	07:45 AM					07:15 AM										07:00 AM					
Volume	1	0	8	0	9	11	17	0	0	28	0	0	0	0	0	0	7	49	0	56	
Peak Factor					0.917					0.875										0.835	

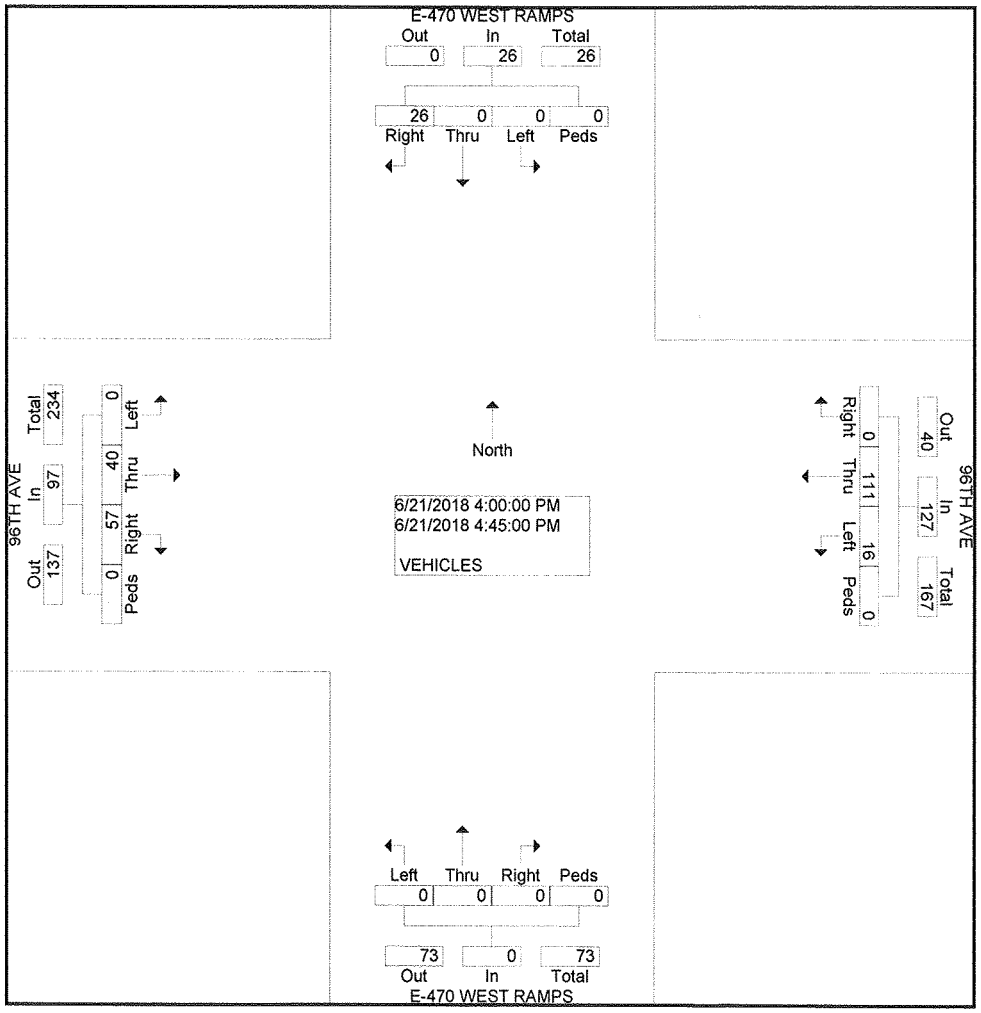


COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO
303-333-7409

N/S STREET: E-470 WEST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470W96T
Site Code : 00000001
Start Date : 6/21/2018
Page No : 2

	E-470 WEST RAMPS Southbound					96TH AVE Westbound					E-470 WEST RAMPS Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 04:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	0	26	0	26	16	111	0	0	127	0	0	0	0	0	0	40	57	0	97	250
Percent	0.0	0.0	100.0	0.0		12.6	87.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	41.2	58.8	0.0		
04:00 Volume	0	0	10	0	10	3	37	0	0	40	0	0	0	0	0	0	10	14	0	24	74
Peak Factor																					0.845
High Int.	04:00 PM					04:00 PM										04:15 PM					
Volume	0	0	10	0	10	3	37	0	0	40	0	0	0	0	0	0	10	17	0	27	
Peak Factor					0.650					0.794										0.898	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO
303-333-7409

N/S STREET: E-470 EAST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470E96
Site Code : 00000014
Start Date : 6/21/2018
Page No : 1

Groups Printed- VEHICLES

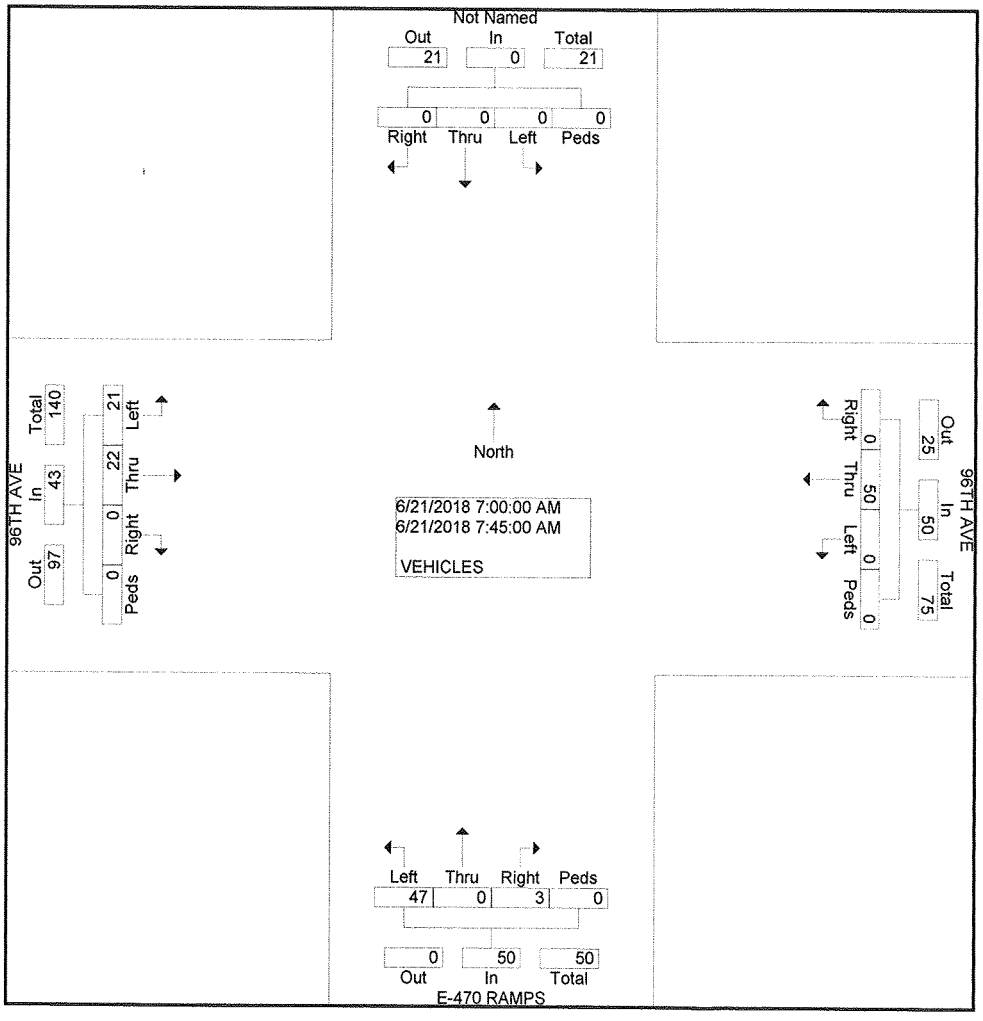
	Southbound				96TH AVE Westbound				E-470 RAMPS Northbound				96TH AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	0	0	0	0	8	0	1	9	0	2	0	7	15	0	0	42
06:45 AM	0	0	0	0	0	7	0	0	9	0	2	0	3	15	0	0	36
Total	0	0	0	0	0	15	0	1	18	0	4	0	10	30	0	0	78
07:00 AM	0	0	0	0	0	8	0	0	11	0	2	0	4	2	0	0	27
07:15 AM	0	0	0	0	0	14	0	0	13	0	0	0	7	5	0	0	39
07:30 AM	0	0	0	0	0	15	0	0	9	0	0	0	5	9	0	0	38
07:45 AM	0	0	0	0	0	13	0	0	14	0	1	0	5	6	0	0	39
Total	0	0	0	0	0	50	0	0	47	0	3	0	21	22	0	0	143
08:00 AM	0	0	0	0	0	7	0	0	10	0	1	0	6	6	0	1	31
08:15 AM	0	0	0	0	0	7	0	1	14	0	1	0	1	3	0	0	27
Total	0	0	0	0	0	14	0	1	24	0	2	0	7	9	0	1	58
04:00 PM	0	0	0	0	0	11	0	0	29	0	0	0	7	5	0	0	52
04:15 PM	0	0	0	0	0	6	1	0	24	0	1	0	8	2	0	0	42
04:30 PM	0	0	0	0	0	5	0	0	26	0	3	0	10	1	0	0	45
04:45 PM	0	0	0	0	0	8	0	0	18	0	2	0	7	2	0	0	37
Total	0	0	0	0	0	30	1	0	97	0	6	0	32	10	0	0	176
05:00 PM	0	0	0	0	0	4	0	0	51	0	3	0	5	2	0	0	65
05:15 PM	0	0	0	0	0	6	0	0	31	0	4	0	4	4	0	0	49
05:30 PM	0	0	0	0	0	10	1	0	27	0	3	0	11	1	0	0	53
05:45 PM	0	0	0	0	0	7	1	0	30	0	1	0	15	2	0	0	56
Total	0	0	0	0	0	27	2	0	139	0	11	0	35	9	0	0	223
Grand Total	0	0	0	0	0	136	3	2	325	0	26	0	105	80	0	1	678
Apprch %	0.0	0.0	0.0	0.0	0.0	96.5	2.1	1.4	92.6	0.0	7.4	0.0	56.5	43.0	0.0	0.5	
Total %	0.0	0.0	0.0	0.0	0.0	20.1	0.4	0.3	47.9	0.0	3.8	0.0	15.5	11.8	0.0	0.1	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: E-470 EAST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470E96
Site Code : 00000014
Start Date : 6/21/2018
Page No : 2

	Southbound					96TH AVE Westbound					E-470 RAMPS Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	0	0	0	0	0	50	0	0	50	47	0	3	0	50	21	22	0	0	43	143
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		94.0	0.0	6.0	0.0		48.8	51.2	0.0	0.0		
07:45 Volume	0	0	0	0	0	0	13	0	0	13	14	0	1	0	15	5	6	0	0	11	39
Peak Factor																					0.917
High Int.						07:30 AM					07:45 AM					07:30 AM					
Volume	0	0	0	0	0	0	15	0	0	15	14	0	1	0	15	5	9	0	0	14	
Peak Factor										0.833					0.833					0.768	

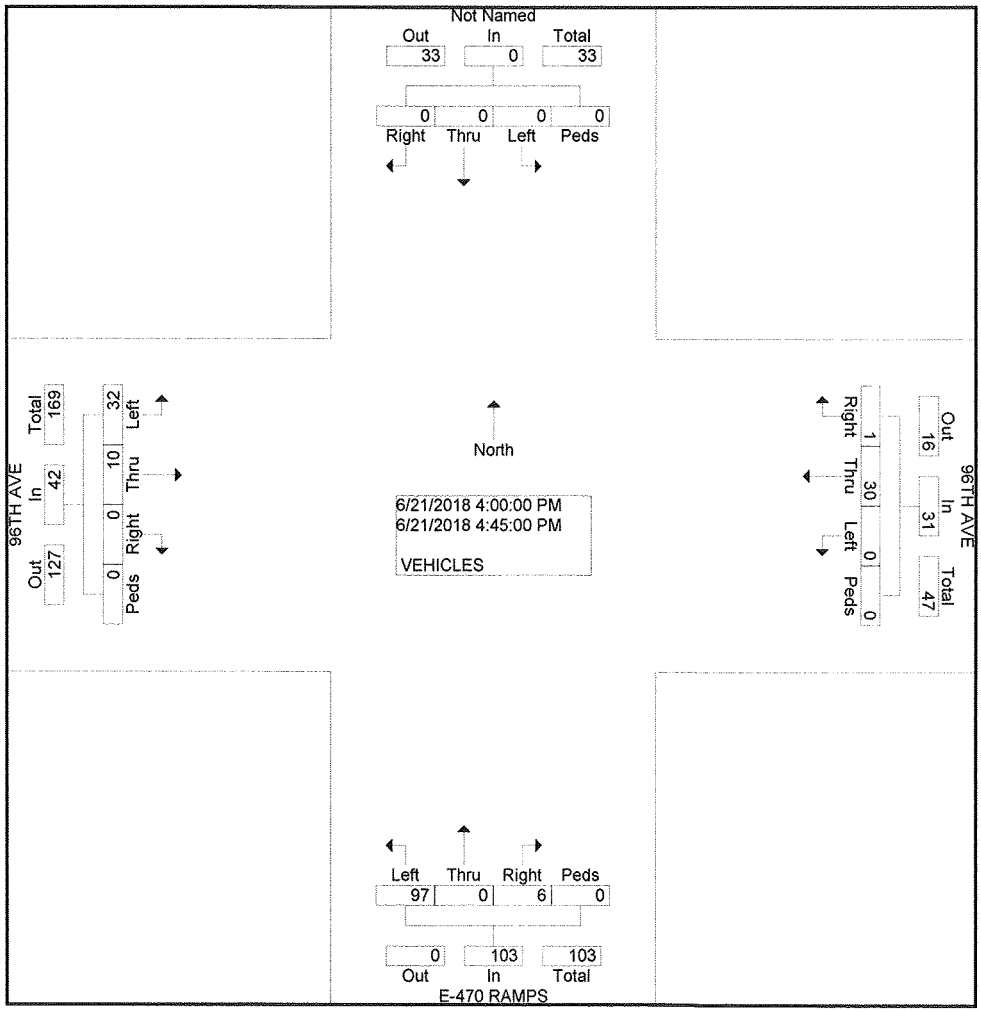


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: E-470 EAST RAMPS
E/W STREET: 96TH AVE
CITY: COMMERCE CITY
COUNTY: ADAMS

File Name : E470E96
Site Code : 00000014
Start Date : 6/21/2018
Page No : 2

	Southbound					96TH AVE Westbound					E-470 RAMPS Northbound					96TH AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 04:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	0	0	0	0	0	30	1	0	31	97	0	6	0	103	32	10	0	0	42	176
Percent	0.0	0.0	0.0	0.0		0.0	96.8	3.2	0.0		94.2	0.0	5.8	0.0		76.2	23.8	0.0	0.0		
04:00 Volume	0	0	0	0	0	0	11	0	0	11	29	0	0	0	29	7	5	0	0	12	52
Peak Factor																					0.846
High Int.						04:00 PM					04:00 PM					04:00 PM					
Volume	0	0	0	0	0	0	11	0	0	11	29	0	0	0	29	7	5	0	0	12	
Peak Factor										0.705					0.888					0.875	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: TOWER RD S/O 88TH AVE
City: DENVER
County: DENVER
Direction: NORTHBOUND-SOUTHBOUND

Site Code: 032017
Station ID: 032017

Start Time	22-Mar-18 Thu	NB	SB							Total
12:00 AM		179	50							229
01:00		124	55							179
02:00		78	85							163
03:00		71	200							271
04:00		114	296							410
05:00		318	745							1063
06:00		713	**1169**							1882
07:00		**857**	1041							**1898**
08:00		727	925							1652
09:00		574	752							1326
10:00		546	548							1094
11:00		592	452							1044
12:00 PM		668	603							1271
01:00		759	620							1379
02:00		950	646							1596
03:00		1295	710							2005
04:00		**1361**	836							2197
05:00		1360	**852**							**2212**
06:00		943	640							1583
07:00		602	466							1068
08:00		508	304							812
09:00		418	286							704
10:00		386	174							560
11:00		286	113							399
Total		14429	12568							26997
Percent		53.4%	46.6%							
AM Peak	-	07:00	06:00	-	-	-	-	-	-	07:00
Vol.	-	857	1169	-	-	-	-	-	-	1898
PM Peak	-	16:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	1361	852	-	-	-	-	-	-	2212
Grand Total		14429	12568							26997
Percent		53.4%	46.6%							
ADT		ADT 26,997		AADT 26,997						

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: TOWER RD N/O 96TH AVE
City:
County: ADAMS
Direction: NORTHBOUND-SOUTHBOUND

Site Code: 062015
Station ID: 062015

Start Time	21-Jun-18 Thu	NB	SB							Total
12:00 AM		162	45							207
01:00		136	57							193
02:00		92	63							155
03:00		69	164							233
04:00		118	300							418
05:00		296	673							969
06:00		570	**911**							**1481**
07:00		**685**	785							1470
08:00		498	657							1155
09:00		441	476							917
10:00		458	456							914
11:00		558	436							994
12:00 PM		588	514							1102
01:00		699	518							1217
02:00		760	550							1310
03:00		978	652							1630
04:00		**1076**	616							**1692**
05:00		880	**674**							1554
06:00		884	510							1394
07:00		516	436							952
08:00		434	350							784
09:00		376	312							688
10:00		401	194							595
11:00		320	82							402
Total		11995	10431							22426
Percent		53.5%	46.5%							
AM Peak	-	07:00	06:00	-	-	-	-	-	-	06:00
Vol.	-	685	911	-	-	-	-	-	-	1481
PM Peak	-	16:00	17:00	-	-	-	-	-	-	16:00
Vol.	-	1076	674	-	-	-	-	-	-	1692
Grand Total		11995	10431							22426
Percent		53.5%	46.5%							
ADT		ADT 22,426		AADT 22,426						

Agency Name:Counter Measures Inc

Site ID:062054000000
Description:96TH AVE E/O TOWER RD
County:ADAMS

6/21/2018	Lane 1 (West)	Lane 2 (East)	All Lanes
00:00	25	14	39
01:00	0	22	22
02:00	7	5	12
03:00	22	8	30
04:00	33	19	52
05:00	53	121	174
06:00	82	222	304
07:00	120	241	361
08:00	112	140	252
09:00	93	114	207
10:00	73	82	155
11:00	74	84	158
12:00	70	103	173
13:00	91	92	183
14:00	126	113	239
15:00	177	79	256
16:00	186	108	294
17:00	206	204	410
18:00	136	88	224
19:00	67	63	130
20:00	35	74	109
21:00	25	42	67
22:00	22	44	66
23:00	27	19	46
AM Peak Hour	07:00 - 07:59	07:00 - 07:59	07:00 - 07:59
AM Peak Value	120	241	361
PM Peak Hour	17:00 - 17:59	17:00 - 17:59	17:00 - 17:59
PM Peak Value	206	204	410
Total	1862	2101	3963
Percentages	46.98%	53.02%	100.00%

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: 96TH AVE W/O TOWER RD
City:
County: ADAMS
Direction: WESTBOUND-EASTBOUND

Site Code: 062016
Station ID: 062016

Start Time	21-Jun-18 Thu	WB	EB							Total
12:00 AM		52	22							74
01:00		37	26							63
02:00		25	14							39
03:00		22	47							69
04:00		50	98							148
05:00		149	210							359
06:00		206	378							584
07:00		**286**	**414**							**700**
08:00		250	340							590
09:00		243	231							474
10:00		170	238							408
11:00		186	205							391
12:00 PM		224	206							430
01:00		333	204							537
02:00		358	234							592
03:00		486	226							712
04:00		**528**	350							878
05:00		512	**404**							**916**
06:00		386	194							580
07:00		206	182							388
08:00		162	148							310
09:00		154	109							263
10:00		98	62							160
11:00		95	38							133
Total		5218	4580							9798
Percent		53.3%	46.7%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	286	414	-	-	-	-	-	-	700
PM Peak	-	16:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	528	404	-	-	-	-	-	-	916
Grand Total		5218	4580							9798
Percent		53.3%	46.7%							

ADT ADT 9,798 AADT 9,798

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: 88TH AVE E/O TOWER RD
City:
County: ADAMS
Direction: WESTBOUND-EASTBOUND

Site Code: 062019
Station ID: 062019

Start Time	21-Jun-18 Thu	WB	EB							Total
12:00 AM		1	4							5
01:00		1	2							3
02:00		0	1							1
03:00		2	2							4
04:00		5	2							7
05:00		40	18							58
06:00		33	33							66
07:00		40	25							65
08:00		44	41							85
09:00		45	44							89
10:00		**51**	45							**96**
11:00		45	**48**							93
12:00 PM		44	39							83
01:00		**52**	**59**							**111**
02:00		51	52							103
03:00		41	44							85
04:00		42	58							100
05:00		33	47							80
06:00		22	25							47
07:00		18	18							36
08:00		15	15							30
09:00		14	14							28
10:00		12	18							30
11:00		8	9							17
Total		659	663							1322
Percent		49.8%	50.2%							
AM Peak	-	10:00	11:00	-	-	-	-	-	-	10:00
Vol.	-	51	48	-	-	-	-	-	-	96
PM Peak	-	13:00	13:00	-	-	-	-	-	-	13:00
Vol.	-	52	59	-	-	-	-	-	-	111
Grand Total		659	663							1322
Percent		49.8%	50.2%							
ADT		ADT 1,322		AADT 1,322						

SEPAC ECOM All Data

7/10/2019
4:19:57PM

Intersection Name: **88th & Tower**

Intersection Alias: **88Tower**

Access Data

1 :**1200 Baud**
3 :**1200 Baud**

Access Code: **9999** Channel: Address: **0**

Revision: **3.57b** IP Address: **10.254.4.137**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	1-Inact	3-Yel	1-Inact	1-Inact	1-Inact	3-Yel	1-Inact	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Vehical Basic Timings							Misc Timings						Pedestrian Timings						
Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank: 1																			
1	5	2.0	35	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	10	4.0	60	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	16	0	0	No	0	Yes
3	5	2.0	15	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	2.0	25	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	23	0	0	No	0	No
5	5	2.0	35	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	10	4.0	60	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	16	0	0	No	0	Yes
7	5	2.0	15	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	5	2.0	25	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	21	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 2																			
1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 3																			
1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

Phase Data Bank: 4

1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call

Phase Data Bank: 1

1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	No	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 2																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 3																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 4																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:1	5	Veh	0	0.0	5
Veh Det:2	2	Veh	0	0.0	0
Veh Det:3	7	Veh	0	0.0	5
Veh Det:4	4	Veh	0	0.0	5
Veh Det:5	3	Veh	0	0.0	5
Veh Det:6	8	Veh	0	0.0	5
Veh Det:7	1	Veh	0	0.0	5
Veh Det:8	6	Veh	0	0.0	0

Pedestrian Detector

	Assign Phase	Mode	Switch Phase	Extend	Delay
Ped Det:1	2	Ped	0	0.0	0
Ped Det:2	4	Ped	0	0.0	0
Ped Det:3	6	Ped	0	0.0	0
Ped Det:4	8	Ped	0	0.0	0

Special Detector Phase Assignment

Assign Phase	Mode	Switch Phase	Extend	Delay

:

Default Data

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:
ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 0
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	2	4	6	8												

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	1	3	6	7												

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

	Ph. Pair 1	Ph. Pair 2
Alt. Seq. 1	**1/2**	
Alt. Seq. 3	**3/4**	
Alt. Seq. 5	**5/6**	
Alt. Seq. 7	**7/8**	
Alt. Seq. 9	**1/2**	**5/6**
Alt. Seq. 1	**3/4**	**7/8**

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40
0	Used	No	No
1	Used	No	No
8	Used	No	No
16	Used	No	No
18	Used	No	No

Load Switch	Red Type	Red Arg	Yellow Type	Yellow Arg	Green Type	Green Arg
1	1 - Phase Vehicle 1	Red	1 - Phase Vehicle 1	Yellow	1 - Phase Vehicle 1	Green
2	2 - Phase Vehicle 2	Red	2 - Phase Vehicle 2	Yellow	2 - Phase Vehicle 2	Green
3	3 - Phase Vehicle 3	Red	3 - Phase Vehicle 3	Yellow	3 - Phase Vehicle 3	Green
4	4 - Phase Vehicle 4	Red	4 - Phase Vehicle 4	Yellow	4 - Phase Vehicle 4	Green
5	5 - Phase Vehicle 5	Red	5 - Phase Vehicle 5	Yellow	5 - Phase Vehicle 5	Green
6	6 - Phase Vehicle 6	Red	6 - Phase Vehicle 6	Yellow	6 - Phase Vehicle 6	Green
7	7 - Phase Vehicle 7	Red	7 - Phase Vehicle 7	Yellow	7 - Phase Vehicle 7	Green
8	8 - Phase Vehicle 8	Red	8 - Phase Vehicle 8	Yellow	8 - Phase Vehicle 8	Green
9	18 - Phase Pedestrian 2	Don't Walk	18 - Phase Pedestrian 2	Ped Clear	18 - Phase Pedestrian 2	Walk
10	20 - Phase Pedestrian 4	Don't Walk	20 - Phase Pedestrian 4	Ped Clear	20 - Phase Pedestrian 4	Walk
11	22 - Phase Pedestrian 6	Don't Walk	22 - Phase Pedestrian 6	Ped Clear	22 - Phase Pedestrian 6	Walk
12	24 - Phase Pedestrian 8	Don't Walk	24 - Phase Pedestrian 8	Ped Clear	24 - Phase Pedestrian 8	Walk
13	33 - Overlap A	Red	33 - Overlap A	Yellow	33 - Overlap A	Green
14	34 - Overlap B	Red	34 - Overlap B	Yellow	34 - Overlap B	Green
15	35 - Overlap C	Red	35 - Overlap C	Yellow	35 - Overlap C	Green
16	36 - Overlap D	Red	36 - Overlap D	Yellow	36 - Overlap D	Green
17	17 - Phase Pedestrian 1	Don't Walk	17 - Phase Pedestrian 1	Ped Clear	17 - Phase Pedestrian 1	Walk
18	19 - Phase Pedestrian 3	Don't Walk	19 - Phase Pedestrian 3	Ped Clear	19 - Phase Pedestrian 3	Walk
19	21 - Phase Pedestrian 5	Don't Walk	21 - Phase Pedestrian 5	Ped Clear	21 - Phase Pedestrian 5	Walk
20	23 - Phase Pedestrian 7	Don't Walk	23 - Phase Pedestrian 7	Ped Clear	23 - Phase Pedestrian 7	Walk
21	55 - Phase Status 1	On	55 - Phase Status 1	Next	55 - Phase Status 1	Check
22	56 - Phase Status 2	On	56 - Phase Status 2	Next	56 - Phase Status 2	Check
23	57 - Phase Status 3	On	57 - Phase Status 3	Next	57 - Phase Status 3	Check
24	58 - Phase Status 4	On	58 - Phase Status 4	Next	58 - Phase Status 4	Check
25	59 - Phase Status 5	On	59 - Phase Status 5	Next	59 - Phase Status 5	Check
26	60 - Phase Status 6	On	60 - Phase Status 6	Next	60 - Phase Status 6	Check
27	61 - Phase Status 7	On	61 - Phase Status 7	Next	61 - Phase Status 7	Check
28	62 - Phase Status 8	On	62 - Phase Status 8	Next	62 - Phase Status 8	Check

P2P Sources

Unit Bank:

ID	Peer IP	Timeout	PeerName

Peer Functions

Unit Bank:

ID	Peer ID	Source Functio	Source Index	Input Function	Input Index	Fail State

Coordination Data

General Coordination Dat

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way

Offset Mode: 1=End Grn
Force Mode: 0=Plan
Max Dwell Time: 0
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	120
2/1	80

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	25	0=Actuated	2	45	1=Coordinate	3	20	0=Actuated	4	30	0=Actuated
5	25	0=Actuated	6	45	1=Coordinate	7	20	0=Actuated	8	30	0=Actuated

Dial 2 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	15	0=Actuated	2	30	1=Coordinate	3	15	0=Actuated	4	20	0=Actuated
5	15	0=Actuated	6	30	1=Coordinate	7	15	0=Actuated	8	20	0=Actuated

Traffic Plan Data

Plan: 1/1/1	Offset Time: 30	Alternat Sequence: 1	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 2/1/1	Offset Time: 55	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero ReferenceHours: 24 Min: 0
End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	6:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	22:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	2	6:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	9:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	15:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	19:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	2	22:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
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Phase 8 Max2								X								

Phase Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
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Phase 8 Phase Omit																X

Ped Omit

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function

Veh Det Switch Omit

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 = Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	De Lock-Out	Boun ce	Gate Ext	Min G | W		Select Ped Clear	Yel	Red	Track Grn	Ped	Yel	Red	Dwell Green	Return Ped Clear	Yel	Red	Sel Ret Mode
1	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
2	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
3	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
4	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	10	10	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
6	N	0	0	0	0	0	0	0.0	0	10	10	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Ext end	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap	
														Signal Type	Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority 1

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 2

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 3

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 4

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 5

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 6

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4
Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6
Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 2

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 3

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 4

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 5

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 6

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Green	Green	No
5	Green	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle	Trail Grn
A	Flash Grn	Flash Grn	No	No Trail
C	Flash Grn	Flash Grn	No	No Trail

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Green	Green	No
6	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
A	Flash Grn	Flash Grn	No	No Trail
C	Flash Grn	Flash Grn	No	No Trail

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle
3	Red	Green	No
8	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
B	Flash Grn	Flash Gr	No	No Trail
D	Flash Grn	Flash Gr	No	No Trail

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
B	Flash Grn	Flash Gr	No	No Trail
D	Flash Grn	Flash Gr	No	No Trail

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	Queue 1 System Detectors	Queue 1 Weight Factor	Queue 2 Detectors	Queue 2 System Detectors	Queue 2 Weight Factor

Default Data

Sample Interval: 0

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Speed Trap Dial/Split/Offset

Speed Trap Low Treshold

Speed Trap High Treshold

//

Default Data

Default Data

Volume Detector Data

Report Interval 0

Volume Detector Number

Controller Detector Channel

Default Data

SEPAC ECOM All Data

7/10/2019
4:17:48PM

Intersection Name: **96th & Tower**

Intersection Alias: **96Tower**

Access Data

1 :**1200 Baud**
3 :**19200 Baud**

Access Code: **9999**

Channel:

Address: **0**

Revision: **3.57b**

IP Address: **10.254.4.135**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	1-Inact	3-Yel	1-Inact	1-Inact	1-Inact	3-Yel	1-Inact	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

	Vehical Basic Timings						Misc Timings						Pedestrian Timings						
Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank: 1																			
1	5	2.0	35	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	10	4.0	60	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	12	0	0	No	0	Yes
3	5	2.0	15	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	2.0	25	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	24	0	0	No	0	No
5	5	2.0	35	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	10	4.0	60	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	15	0	0	No	0	Yes
7	5	2.0	15	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	5	2.0	25	0	4.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	5	23	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 2																			
1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 3																			
1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

Phase Data Bank: 4

1	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	4.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank: 1																		
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	NonActI	Min	None	0	No	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	NonActI	Min	None	0	No	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 2																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 3																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank: 4																		
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:1	5	Veh	0	0.0	5
Veh Det:2	2	Veh	0	0.0	0
Veh Det:3	7	Veh	0	0.0	5
Veh Det:4	4	Veh	0	0.0	5
Veh Det:5	1	Veh	0	0.0	5
Veh Det:6	6	Veh	0	0.0	0
Veh Det:7	3	Veh	0	0.0	5
Veh Det:8	8	Veh	0	0.0	5

Pedestrian Detector

	Assign Phase	Mode	Switch Phase	Extend	Delay
Ped Det:1	2	Ped	0	0.0	0
Ped Det:2	4	Ped	0	0.0	0
Ped Det:3	6	Ped	0	0.0	0
Ped Det:4	8	Ped	0	0.0	0

Special Detector Phase Assignment

Assign Phase	Mode	Switch Phase	Extend	Delay

:

Default Data

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:
ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 0
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	2	4	6	8												

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	1	3	6	7												

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

	Ph. Pair 1	Ph. Pair 2	Ph. Pair 8
Alt. Seq. 1	**1/2**		
Alt. Seq. 3	**3/4**		
Alt. Seq. 5	**5/6**		**5/6**
Alt. Seq. 7	**7/8**		
Alt. Seq. 9	**1/2**	**5/6**	
Alt. Seq. 1	**3/4**	**7/8**	

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40
0	Used	No	No
1	Used	No	No
8	Used	No	No
16	Used	No	No
18	Used	No	No

Load Switch	Red Type	Red Arg	Yellow Type	Yellow Arg	Green Type	Green Arg
1	1 - Phase Vehicle 1	Red	1 - Phase Vehicle 1	Yellow	1 - Phase Vehicle 1	Green
2	2 - Phase Vehicle 2	Red	2 - Phase Vehicle 2	Yellow	2 - Phase Vehicle 2	Green
3	3 - Phase Vehicle 3	Red	3 - Phase Vehicle 3	Yellow	3 - Phase Vehicle 3	Green
4	4 - Phase Vehicle 4	Red	4 - Phase Vehicle 4	Yellow	4 - Phase Vehicle 4	Green
5	5 - Phase Vehicle 5	Red	5 - Phase Vehicle 5	Yellow	5 - Phase Vehicle 5	Green
6	6 - Phase Vehicle 6	Red	6 - Phase Vehicle 6	Yellow	6 - Phase Vehicle 6	Green
7	7 - Phase Vehicle 7	Red	7 - Phase Vehicle 7	Yellow	7 - Phase Vehicle 7	Green
8	8 - Phase Vehicle 8	Red	8 - Phase Vehicle 8	Yellow	8 - Phase Vehicle 8	Green
9	18 - Phase Pedestrian 2	Don't Walk	18 - Phase Pedestrian 2	Ped Clear	18 - Phase Pedestrian 2	Walk
10	20 - Phase Pedestrian 4	Don't Walk	20 - Phase Pedestrian 4	Ped Clear	20 - Phase Pedestrian 4	Walk
11	22 - Phase Pedestrian 6	Don't Walk	22 - Phase Pedestrian 6	Ped Clear	22 - Phase Pedestrian 6	Walk
12	24 - Phase Pedestrian 8	Don't Walk	24 - Phase Pedestrian 8	Ped Clear	24 - Phase Pedestrian 8	Walk
13	33 - Overlap A	Red	33 - Overlap A	Yellow	33 - Overlap A	Green
14	34 - Overlap B	Red	34 - Overlap B	Yellow	34 - Overlap B	Green
15	35 - Overlap C	Red	35 - Overlap C	Yellow	35 - Overlap C	Green
16	36 - Overlap D	Red	36 - Overlap D	Yellow	36 - Overlap D	Green
17	17 - Phase Pedestrian 1	Don't Walk	17 - Phase Pedestrian 1	Ped Clear	17 - Phase Pedestrian 1	Walk
18	19 - Phase Pedestrian 3	Don't Walk	19 - Phase Pedestrian 3	Ped Clear	19 - Phase Pedestrian 3	Walk
19	21 - Phase Pedestrian 5	Don't Walk	21 - Phase Pedestrian 5	Ped Clear	21 - Phase Pedestrian 5	Walk
20	23 - Phase Pedestrian 7	Don't Walk	23 - Phase Pedestrian 7	Ped Clear	23 - Phase Pedestrian 7	Walk
21	55 - Phase Status 1	On	55 - Phase Status 1	Next	55 - Phase Status 1	Check
22	56 - Phase Status 2	On	56 - Phase Status 2	Next	56 - Phase Status 2	Check
23	57 - Phase Status 3	On	57 - Phase Status 3	Next	57 - Phase Status 3	Check
24	58 - Phase Status 4	On	58 - Phase Status 4	Next	58 - Phase Status 4	Check
25	59 - Phase Status 5	On	59 - Phase Status 5	Next	59 - Phase Status 5	Check
26	60 - Phase Status 6	On	60 - Phase Status 6	Next	60 - Phase Status 6	Check
27	61 - Phase Status 7	On	61 - Phase Status 7	Next	61 - Phase Status 7	Check
28	62 - Phase Status 8	On	62 - Phase Status 8	Next	62 - Phase Status 8	Check

P2P Sources

Unit Bank:

ID	Peer IP	Timeout	PeerName

Peer Functions

Unit Bank:

ID	Peer ID	Source Functio	Source Index	Input Function	Input Index	Fail State

Coordination Data

General Coordination Dat

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way

Offset Mode: 1=End Grn
Force Mode: 0=Plan
Max Dwell Time: 0
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	120
2/1	80

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	25	0=Actuated	2	45	1=Coordinate	3	20	0=Actuated	4	30	0=Actuated
5	25	0=Actuated	6	45	1=Coordinate	7	20	0=Actuated	8	30	0=Actuated

Dial 2 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	15	0=Actuated	2	30	1=Coordinate	3	15	0=Actuated	4	20	0=Actuated
5	15	0=Actuated	6	30	1=Coordinate	7	15	0=Actuated	8	20	0=Actuated

Traffic Plan Data

Plan: 1/1/1	Offset Time: 85	Alternat Sequence: 5	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 2/1/1	Offset Time: 45	Alternat Sequence: 1	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero ReferenceHours: 24 Min: 0
End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	6:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	22:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	2	6:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	9:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	15:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	19:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	2	22:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													

Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
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Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								

Phase Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
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Phase 5 Phase Omit													X			
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Phase 3 Phase Omit											X					
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Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		

Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
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Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			

Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
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Phase 4 Phase Omit												X				

Phase 5 Phase Omit													X			
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Phase 1 Phase Omit									X							
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Phase 1 Phase Omit									X							

Phase 2 Phase Omit										X						
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Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function

Veh Det Switch Omit

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function

PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 = Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	De Lock-Out	Boun ce	Gate Ext	Min G | W		Select Ped Clear	Yel	Red	Track Grn	Ped	Yel	Red	Dwell Green	Return Ped Clear	Yel	Red	Sel Ret Mode
1	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
2	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
3	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
4	N	0	0	0	5	120	0	0.0	0	0	0	0	0.0	0.0	0	0	0.0	0.0	5	0	0.0	0.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	10	10	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
6	N	0	0	0	0	0	0	0.0	0	10	10	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Ext end	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap	
														Signal Type	Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority 1

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 2

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 3

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 4

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 5

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority 6

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4
Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6
Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	1-Partial		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank :1
Queue Phase Detector Time
Default data
Priority Bank :2
Queue Phase Detector Time
Default data
Priority Bank :3
Queue Phase Detector Time
Default data
Priority Bank :4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 2

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 3

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 4

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 5

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 6

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Green	Green	No
5	Green	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle	Trail Grn
A	Flash Grn	Flash Grn	No	No Trail
C	Flash Grn	Flash Grn	No	No Trail

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
1	Green	Green	No
6	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
A	Flash Grn	Flash Grn	No	No Trail
C	Flash Grn	Flash Grn	No	No Trail

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle
3	Green	Green	No
8	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
B	Flash Grn	Flash Gr	No	No Trail
D	Flash Grn	Flash Gr	No	No Trail

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
B	Flash Grn	Flash Gr	No	No Trail
D	Flash Grn	Flash Gr	No	No Trail

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	Queue 1 System Detectors	Queue 1 Weight Factor	Queue 2 Detectors	Queue 2 System Detectors	Queue 2 Weight Factor

Default Data

Sample Interval: 0

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Speed Trap Dial/Split/Offset

Speed Trap Low Treshold

Speed Trap High Treshold

//

Default Data

Default Data

Volume Detector Data

Report Interval 0

Volume Detector Number

Controller Detector Channel

Default Data

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

LOS	Average Vehicle Delay sec/vehicle	Operational Characteristics
A	<10 seconds	Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	10 to 20 seconds	Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20 to 35 seconds	Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	35 to 55 seconds	Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55 to 80 seconds	Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
F	>80 seconds	Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

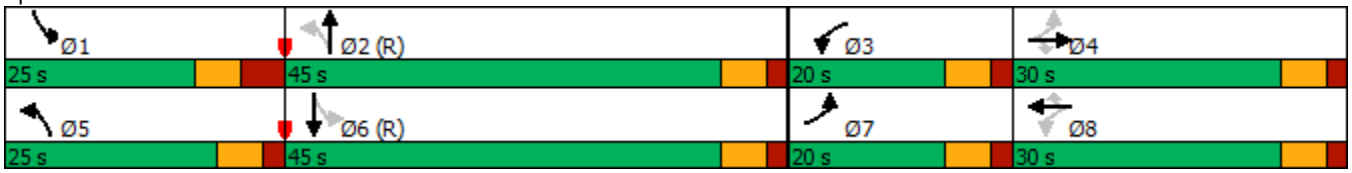
Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

LOS	Average Vehicle Control Delay	Operational Characteristics
A	<10 seconds	Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.
B	10 to 15 seconds	Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn.
C	15 to 25 seconds	Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.
D	25 to 35 seconds	This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.
E	35 to 50 seconds	The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach.
F	>50 seconds	The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	125	243	58	53	9	179	574	26	643
Future Volume (vph)	10	125	243	58	53	9	179	574	26	643
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.0	35.0	35.0	11.0	34.0	34.0	11.0	24.0	13.0	26.0
Total Split (s)	20.0	30.0	30.0	20.0	30.0	30.0	25.0	45.0	25.0	45.0
Total Split (%)	16.7%	25.0%	25.0%	16.7%	25.0%	25.0%	20.8%	37.5%	20.8%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	8.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	17.5	13.2	13.2	24.7	22.5	22.5	81.7	74.8	70.9	67.5
Actuated g/C Ratio	0.15	0.11	0.11	0.21	0.19	0.19	0.68	0.62	0.59	0.56
v/c Ratio	0.05	0.67	0.65	0.28	0.17	0.02	0.41	0.31	0.06	0.37
Control Delay	33.5	66.7	13.5	38.5	39.8	0.1	10.7	13.5	9.8	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	66.7	13.5	38.5	39.8	0.1	10.7	13.5	9.8	17.2
LOS	C	E	B	D	D	A	B	B	A	B
Approach Delay		31.6			36.1			12.9		16.9
Approach LOS		C			D			B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.



Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	42	145	26	72	0	0	0	0	1	0	32
Future Vol, veh/h	0	42	145	26	72	0	0	0	0	1	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	44	151	27	75	0	0	0	0	1	0	33

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	195	0	0	249	324	75
Stage 1	-	-	-	-	-	-	129	129	-
Stage 2	-	-	-	-	-	-	120	195	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1378	-	0	739	594	986
Stage 1	0	-	-	-	-	0	897	789	-
Stage 2	0	-	-	-	-	0	905	739	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1378	-	-	724	0	986
Mov Cap-2 Maneuver	-	-	-	-	-	-	724	0	-
Stage 1	-	-	-	-	-	-	879	0	-
Stage 2	-	-	-	-	-	-	905	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1378	-	975
HCM Lane V/C Ratio	-	-	0.02	-	0.035
HCM Control Delay (s)	-	-	7.7	-	8.8
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	22	0	0	50	0	47	0	3	0	0	0
Future Vol, veh/h	21	22	0	0	50	0	47	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	24	0	0	54	0	51	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	54	0	-	-	-	0	124	124	24
Stage 1	-	-	-	-	-	-	70	70	-
Stage 2	-	-	-	-	-	-	54	54	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	0	0	-	-	871	766	1052
Stage 1	-	-	0	0	-	-	953	837	-
Stage 2	-	-	0	0	-	-	969	850	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1551	-	-	-	-	-	858	0	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	858	0	-
Stage 1	-	-	-	-	-	-	939	0	-
Stage 2	-	-	-	-	-	-	969	0	-

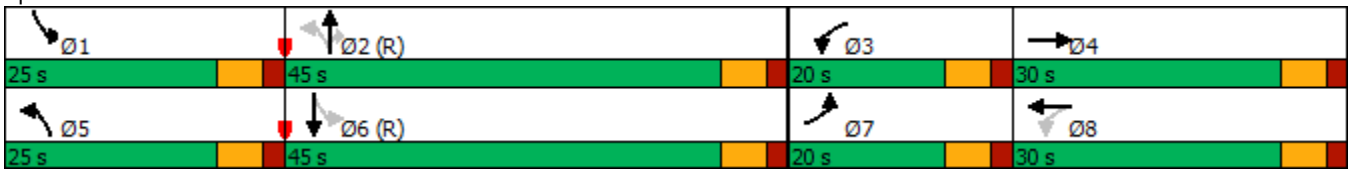
Approach	EB	WB	NB
HCM Control Delay, s	3.6	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	858	1052	1551	-	-	-
HCM Lane V/C Ratio	0.06	0.003	0.015	-	-	-
HCM Control Delay (s)	9.5	8.4	7.4	-	-	-
HCM Lane LOS	A	A	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0	0	-	-	-

Lane Group	WBL	WBT	NBT	NBR	SBL	SBT	Ø4	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	8	0	768	24	23	1105			
Future Volume (vph)	8	0	768	24	23	1105			
Turn Type	pm+pt	NA	NA	Perm	pm+pt	NA			
Protected Phases	3	8	2		1	6	4	5	7
Permitted Phases	8			2	6				
Detector Phase	3	8	2	2	1	6			
Switch Phase									
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	5.0
Minimum Split (s)	11.0	32.0	27.0	27.0	11.0	27.0	34.0	11.0	11.0
Total Split (s)	20.0	30.0	45.0	45.0	25.0	45.0	30.0	25.0	20.0
Total Split (%)	16.7%	25.0%	37.5%	37.5%	20.8%	37.5%	25%	21%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)	5.4	5.3	105.1	105.1	109.3	112.9			
Actuated g/C Ratio	0.04	0.04	0.88	0.88	0.91	0.94			
v/c Ratio	0.11	0.03	0.27	0.02	0.04	0.36			
Control Delay	57.8	0.1	2.8	0.0	1.2	1.3			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	57.8	0.1	2.8	0.0	1.2	1.3			
LOS	E	A	A	A	A	A			
Approach Delay		18.6	2.7			1.3			
Approach LOS		B	A			A			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	4	80	12	1	2	71	750	27	8	1047	42
Future Volume (vph)	21	4	80	12	1	2	71	750	27	8	1047	42
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	70.0	70.0	20.0	70.0	70.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	16.7%	58.3%	58.3%	16.7%	58.3%	58.3%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.0	20.0		20.0	20.0	96.4	94.2	94.2	92.8	88.0	88.0
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.80	0.78	0.78	0.77	0.73	0.73
v/c Ratio		0.11	0.26		0.06	0.01	0.21	0.30	0.02	0.02	0.44	0.04
Control Delay		43.8	11.0		42.8	0.0	4.6	5.4	1.0	3.5	9.2	2.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.8	11.0		42.8	0.0	4.6	5.4	1.0	3.5	9.2	2.1
LOS		D	B		D	A	A	A	A	A	A	A
Approach Delay		18.7			37.5			5.2			8.9	
Approach LOS		B			D			A			A	

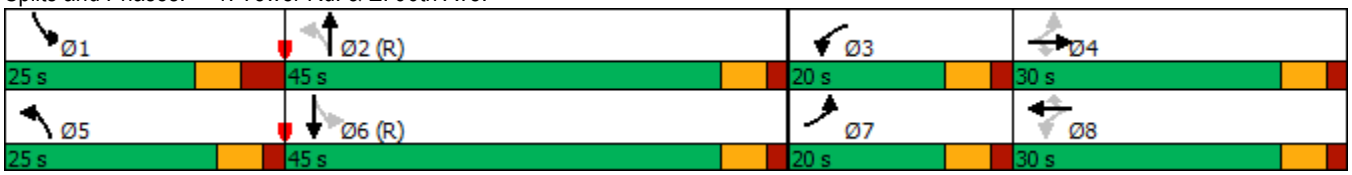
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	15	54	235	44	87	12	346	1013	8	580
Future Volume (vph)	15	54	235	44	87	12	346	1013	8	580
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.0	35.0	35.0	11.0	34.0	34.0	11.0	24.0	13.0	26.0
Total Split (s)	20.0	30.0	30.0	20.0	30.0	30.0	25.0	45.0	25.0	45.0
Total Split (%)	16.7%	25.0%	25.0%	16.7%	25.0%	25.0%	20.8%	37.5%	20.8%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	8.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	13.6	9.0	9.0	18.6	15.0	15.0	88.0	85.4	70.8	67.7
Actuated g/C Ratio	0.11	0.08	0.08	0.16	0.12	0.12	0.73	0.71	0.59	0.56
v/c Ratio	0.09	0.41	0.71	0.23	0.39	0.04	0.61	0.44	0.02	0.32
Control Delay	38.9	60.7	18.2	41.6	52.9	0.2	11.2	9.8	8.9	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	60.7	18.2	41.6	52.9	0.2	11.2	9.8	8.9	16.5
LOS	D	E	B	D	D	A	B	A	A	B
Approach Delay		26.8			44.9			10.2		16.4
Approach LOS		C			D			B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.



Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	43	154	19	146	0	0	0	0	2	1	19
Future Vol, veh/h	0	43	154	19	146	0	0	0	0	2	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	162	20	154	0	0	0	0	2	1	20

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	207	0	0	320	401	154
Stage 1	-	-	-	-	-	-	194	194	-
Stage 2	-	-	-	-	-	-	126	207	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1364	-	0	673	538	892
Stage 1	0	-	-	-	-	0	839	740	-
Stage 2	0	-	-	-	-	0	900	731	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1364	-	-	663	0	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	663	0	-
Stage 1	-	-	-	-	-	-	826	0	-
Stage 2	-	-	-	-	-	-	900	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.9	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1364	-	864
HCM Lane V/C Ratio	-	-	0.015	-	0.027
HCM Control Delay (s)	-	-	7.7	-	9.3
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0	-	0.1

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	9	0	0	27	2	139	0	11	0	0	0
Future Vol, veh/h	35	9	0	0	27	2	139	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	10	0	0	31	2	162	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	33	0	-	-	-	0	124	125	10
Stage 1	-	-	-	-	-	-	92	92	-
Stage 2	-	-	-	-	-	-	32	33	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1579	-	0	0	-	-	871	765	1071
Stage 1	-	-	0	0	-	-	932	819	-
Stage 2	-	-	0	0	-	-	991	868	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1579	-	-	-	-	-	848	0	1071
Mov Cap-2 Maneuver	-	-	-	-	-	-	848	0	-
Stage 1	-	-	-	-	-	-	908	0	-
Stage 2	-	-	-	-	-	-	991	0	-

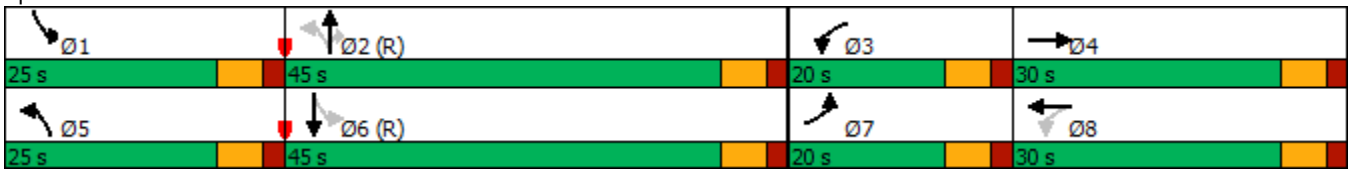
Approach	EB	WB	NB
HCM Control Delay, s	5.8	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	848	1071	1579	-	-	-
HCM Lane V/C Ratio	0.191	0.012	0.026	-	-	-
HCM Control Delay (s)	10.2	8.4	7.3	-	-	-
HCM Lane LOS	B	A	A	-	-	-
HCM 95th %tile Q(veh)	0.7	0	0.1	-	-	-

Lane Group	WBL	WBT	NBT	NBR	SBL	SBT	Ø4	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	14	0	1367	13	18	924			
Future Volume (vph)	14	0	1367	13	18	924			
Turn Type	pm+pt	NA	NA	Perm	pm+pt	NA			
Protected Phases	3	8	2		1	6	4	5	7
Permitted Phases	8			2	6				
Detector Phase	3	8	2	2	1	6			
Switch Phase									
Minimum Initial (s)	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	5.0
Minimum Split (s)	11.0	32.0	27.0	27.0	11.0	27.0	34.0	11.0	11.0
Total Split (s)	20.0	30.0	45.0	45.0	25.0	45.0	30.0	25.0	20.0
Total Split (%)	16.7%	25.0%	37.5%	37.5%	20.8%	37.5%	25%	21%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)	5.8	5.7	101.3	101.3	104.5	105.7			
Actuated g/C Ratio	0.05	0.05	0.84	0.84	0.87	0.88			
v/c Ratio	0.18	0.07	0.48	0.01	0.06	0.31			
Control Delay	59.1	0.3	4.4	0.0	1.8	1.9			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	59.1	0.3	4.4	0.0	1.8	1.9			
LOS	E	A	A	A	A	A			
Approach Delay		16.0	4.3			1.9			
Approach LOS		B	A			A			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 3.6	Intersection LOS: A
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	4	63	24	1	16	41	1337	15	7	766	36
Future Volume (vph)	51	4	63	24	1	16	41	1337	15	7	766	36
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	70.0	70.0	20.0	70.0	70.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	16.7%	58.3%	58.3%	16.7%	58.3%	58.3%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.0	20.0		20.0	20.0	96.2	94.2	94.2	93.3	88.5	88.5
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.80	0.78	0.78	0.78	0.74	0.74
v/c Ratio		0.25	0.21		0.11	0.05	0.08	0.50	0.01	0.02	0.31	0.03
Control Delay		46.9	11.9		44.0	0.3	3.7	7.2	0.0	3.6	7.6	1.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		46.9	11.9		44.0	0.3	3.7	7.2	0.0	3.6	7.6	1.7
LOS		D	B		D	A	A	A	A	A	A	A
Approach Delay		28.1			26.7			7.0			7.3	
Approach LOS		C			C			A			A	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.5 — Intersection LOS: A
Intersection Capacity Utilization 82.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	205	298	188	124	9	225	747	169	48	900	30
Future Volume (vph)	39	205	298	188	124	9	225	747	169	48	900	30
Turn Type	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	25.0		11.0	25.0	25.0	11.0	24.0	24.0	13.0	26.0	26.0
Total Split (s)	12.0	27.0		18.0	33.0	33.0	20.0	60.0	60.0	15.0	55.0	55.0
Total Split (%)	10.0%	22.5%		15.0%	27.5%	27.5%	16.7%	50.0%	50.0%	12.5%	45.8%	45.8%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0	-1.0	-2.0	-1.0	-1.0	-1.0	-1.0	0.0
Total Lost Time (s)	5.0	4.0		5.0	4.0	5.0	4.0	5.0	5.0	7.0	5.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.4	13.7	120.0	11.6	20.8	19.8	14.6	69.0	69.0	7.3	62.1	61.1
Actuated g/C Ratio	0.16	0.11	1.00	0.10	0.17	0.16	0.12	0.58	0.58	0.06	0.52	0.51
v/c Ratio	0.18	0.54	0.20	0.60	0.21	0.02	0.57	0.39	0.18	0.25	0.52	0.04
Control Delay	35.6	54.8	0.3	59.5	43.6	0.1	60.8	11.6	1.4	56.2	21.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	54.8	0.3	59.5	43.6	0.1	60.8	11.6	1.4	56.2	21.5	0.1
LOS	D	D	A	E	D	A	E	B	A	E	C	A
Approach Delay		23.4			51.8			19.8			22.5	
Approach LOS		C			D			B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	401	259	6	17	62
Future Vol, veh/h	21	401	259	6	17	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	360	-	-	185	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	422	273	6	18	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	279	0	-	0	739	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1284	-	-	-	414	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1284	-	-	-	407	766
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	694	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1284	-	-	-	407	766
HCM Lane V/C Ratio	0.017	-	-	-	0.044	0.085
HCM Control Delay (s)	7.9	-	-	-	14.3	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	408	235	5	11	30
Future Vol, veh/h	10	408	235	5	11	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	360	-	-	185	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	429	247	5	12	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	252	0	-	0	698	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1313	-	-	-	407	792
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1313	-	-	-	404	792
Mov Cap-2 Maneuver	-	-	-	-	404	-
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	642	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1313	-	-	-	404	792
HCM Lane V/C Ratio	0.008	-	-	-	0.029	0.04
HCM Control Delay (s)	7.8	-	-	-	14.2	9.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	166	253	30	148	0	0	0	0	5	0	91
Future Vol, veh/h	0	166	253	30	148	0	0	0	0	5	0	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	175	266	32	156	0	0	0	0	5	0	96

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	441	0	0	528	661	156
Stage 1	-	-	-	-	-	-	220	220	-
Stage 2	-	-	-	-	-	-	308	441	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1119	-	0	511	383	890
Stage 1	0	-	-	-	-	0	817	721	-
Stage 2	0	-	-	-	-	0	745	577	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1119	-	-	496	0	890
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	0	-
Stage 1	-	-	-	-	-	-	793	0	-
Stage 2	-	-	-	-	-	-	745	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1119	-	855
HCM Lane V/C Ratio	-	-	0.028	-	0.118
HCM Control Delay (s)	-	-	8.3	-	9.8
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0.1	-	0.4

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	75	0	0	64	5	114	0	5	0	0	0
Future Vol, veh/h	96	75	0	0	64	5	114	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	79	0	0	67	5	120	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	72	0	-	-	-	0	351	353	79
Stage 1	-	-	-	-	-	-	281	281	-
Stage 2	-	-	-	-	-	-	70	72	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	0	0	-	-	646	572	981
Stage 1	-	-	0	0	-	-	767	678	-
Stage 2	-	-	0	0	-	-	953	835	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1528	-	-	-	-	-	603	0	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	603	0	-
Stage 1	-	-	-	-	-	-	716	0	-
Stage 2	-	-	-	-	-	-	953	0	-

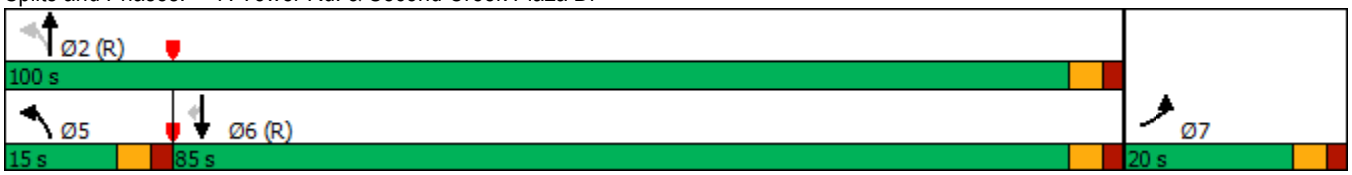
Approach	EB	WB	NB
HCM Control Delay, s	4.2	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	603	981	1528	-	-	-
HCM Lane V/C Ratio	0.199	0.005	0.066	-	-	-
HCM Control Delay (s)	12.4	8.7	7.5	-	-	-
HCM Lane LOS	B	A	A	-	-	-
HCM 95th %tile Q(veh)	0.7	0	0.2	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	85	76	1089	1302	84
Future Volume (vph)	51	85	76	1089	1302	84
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	20.0		15.0	100.0	85.0	85.0
Total Split (%)	16.7%		12.5%	83.3%	70.8%	70.8%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	0.0
Total Lost Time (s)	3.0		3.0	3.0	3.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.3	120.0	106.8	107.4	98.3	96.7
Actuated g/C Ratio	0.08	1.00	0.89	0.90	0.82	0.81
v/c Ratio	0.20	0.06	0.21	0.36	0.47	0.07
Control Delay	53.2	0.1	2.0	1.3	1.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	0.1	2.0	1.3	1.7	0.3
LOS	D	A	A	A	A	A
Approach Delay	20.1			1.3	1.6	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 2.4	Intersection LOS: A
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	91	154	62	1074	1335	51
Future Volume (vph)	91	154	62	1074	1335	51
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	20.0		15.0	100.0	85.0	85.0
Total Split (%)	16.7%		12.5%	83.3%	70.8%	70.8%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0		3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	10.7	120.0	103.3	103.3	94.2	94.2
Actuated g/C Ratio	0.09	1.00	0.86	0.86	0.78	0.78
v/c Ratio	0.31	0.10	0.19	0.37	0.51	0.04
Control Delay	53.4	0.1	3.3	3.9	4.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	0.1	3.3	3.9	4.4	1.0
LOS	D	A	A	A	A	A
Approach Delay	20.0			3.8	4.2	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & E 92nd Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	5	112	9	4	21	69	930	26	29	1353	107
Future Volume (vph)	185	5	112	9	4	21	69	930	26	29	1353	107
Turn Type	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free	8		Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	19.0	25.0		15.0	21.0		12.0	68.0	68.0	12.0	68.0	68.0
Total Split (%)	15.8%	20.8%		12.5%	17.5%		10.0%	56.7%	56.7%	10.0%	56.7%	56.7%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-2.0	-1.0	-1.0	-2.0	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	4.0	5.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.9	11.9	120.0	7.4	6.1	120.0	93.3	90.0	89.0	91.3	87.3	86.3
Actuated g/C Ratio	0.10	0.10	1.00	0.06	0.05	1.00	0.78	0.75	0.74	0.76	0.73	0.72
v/c Ratio	0.58	0.03	0.07	0.04	0.04	0.01	0.27	0.37	0.02	0.07	0.55	0.10
Control Delay	58.3	47.8	0.1	46.1	55.0	0.0	5.9	7.1	0.0	1.5	3.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	47.8	0.1	46.1	55.0	0.0	5.9	7.1	0.0	1.5	3.4	0.5
LOS	E	D	A	D	D	A	A	A	A	A	A	A
Approach Delay		36.6			18.1			6.8			3.2	
Approach LOS		D			B			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	4	322	12	1	2	366	1039	27	8	1352	85
Future Volume (vph)	31	4	322	12	1	2	366	1039	27	8	1352	85
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	19.0	19.0	19.0	19.0	19.0	19.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	26.0	85.0	85.0	12.0	71.0	71.0
Total Split (%)	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	21.7%	70.8%	70.8%	10.0%	59.2%	59.2%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.0		-1.0	-1.0	-2.0	-2.0	-1.0	-1.0	-3.0	-1.0
Total Lost Time (s)		3.0	3.0		3.0	3.0	2.0	4.0	5.0	3.0	3.0	5.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.0	20.0		20.0	20.0	95.0	91.2	90.2	75.2	69.2	67.2
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.79	0.76	0.75	0.63	0.58	0.56
v/c Ratio		0.15	0.72		0.05	0.01	0.90	0.42	0.02	0.03	0.70	0.10
Control Delay		44.7	21.8		42.8	0.0	53.7	5.9	0.9	4.8	20.6	3.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		44.7	21.8		42.8	0.0	53.7	5.9	0.9	4.8	20.6	3.0
LOS		D	C		D	A	D	A	A	A	C	A
Approach Delay		24.1			37.5			18.0			19.4	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 19.4	Intersection LOS: B
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	182	374	255	275	18	437	1403	276	9	1009	63
Future Volume (vph)	131	182	374	255	275	18	437	1403	276	9	1009	63
Turn Type	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	35.0		11.0	34.0	34.0	11.0	24.0	24.0	13.0	26.0	26.0
Total Split (s)	11.0	23.0		18.0	30.0	30.0	28.0	66.0	66.0	13.0	51.0	51.0
Total Split (%)	9.2%	19.2%		15.0%	25.0%	25.0%	23.3%	55.0%	55.0%	10.8%	42.5%	42.5%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0		-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	5.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	21.8	13.8	120.0	14.5	20.3	20.3	22.8	80.0	80.0	8.1	56.9	56.9
Actuated g/C Ratio	0.18	0.12	1.00	0.12	0.17	0.17	0.19	0.67	0.67	0.07	0.47	0.47
v/c Ratio	0.57	0.47	0.25	0.64	0.48	0.04	0.68	0.61	0.25	0.04	0.61	0.07
Control Delay	46.5	53.1	0.4	57.8	47.4	0.2	50.1	10.0	1.9	52.7	26.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	53.1	0.4	57.8	47.4	0.2	50.1	10.0	1.9	52.7	26.6	0.2
LOS	D	D	A	E	D	A	D	A	A	D	C	A
Approach Delay		23.1			50.7			17.2			25.3	
Approach LOS		C			D			B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	397	508	16	9	40
Future Vol, veh/h	70	397	508	16	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	360	-	-	185	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	418	535	17	9	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	552	0	-	0	1101	535
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1018	-	-	-	209	545
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1018	-	-	-	194	545
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	544	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1018	-	-	-	194	545
HCM Lane V/C Ratio	0.072	-	-	-	0.049	0.077
HCM Control Delay (s)	8.8	-	-	-	24.5	12.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	372	504	13	8	20
Future Vol, veh/h	34	372	504	13	8	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	360	-	-	185	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	392	531	14	8	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	545	0	-	0	995	531
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	464	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1024	-	-	-	271	548
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	633	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1024	-	-	-	262	548
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	633	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1024	-	-	-	262	548
HCM Lane V/C Ratio	0.035	-	-	-	0.032	0.038
HCM Control Delay (s)	8.6	-	-	-	19.2	11.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	198	183	20	369	0	0	0	0	5	0	148
Future Vol, veh/h	0	198	183	20	369	0	0	0	0	5	0	148
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	208	193	21	388	0	0	0	0	5	0	156

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	401	0	0	735	831	388
Stage 1	-	-	-	-	-	-	430	430	-
Stage 2	-	-	-	-	-	-	305	401	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1158	-	0	387	305	660
Stage 1	0	-	-	-	-	0	656	583	-
Stage 2	0	-	-	-	-	0	748	601	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1158	-	-	380	0	660
Mov Cap-2 Maneuver	-	-	-	-	-	-	380	0	-
Stage 1	-	-	-	-	-	-	644	0	-
Stage 2	-	-	-	-	-	-	748	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.4	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1158	-	644
HCM Lane V/C Ratio	-	-	0.018	-	0.25
HCM Control Delay (s)	-	-	8.2	-	12.4
HCM Lane LOS	-	-	A	-	B
HCM 95th %tile Q(veh)	-	-	0.1	-	1

Intersection	
Int Delay, s/veh	15.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	151	52	0	0	67	5	322	0	15	0	0	0
Future Vol, veh/h	151	52	0	0	67	5	322	0	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	159	55	0	0	71	5	339	0	16	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	76	0	-	-	-	0	447	449	55
Stage 1	-	-	-	-	-	-	373	373	-
Stage 2	-	-	-	-	-	-	74	76	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1523	-	0	0	-	-	569	505	1012
Stage 1	-	-	0	0	-	-	696	618	-
Stage 2	-	-	0	0	-	-	949	832	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1523	-	-	-	-	-	510	0	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	510	0	-
Stage 1	-	-	-	-	-	-	624	0	-
Stage 2	-	-	-	-	-	-	949	0	-

Approach	EB	WB	NB
HCM Control Delay, s	5.7	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	510	1012	1523	-	-	-
HCM Lane V/C Ratio	0.665	0.016	0.104	-	-	-
HCM Control Delay (s)	24.9	8.6	7.6	-	-	-
HCM Lane LOS	C	A	A	-	-	-
HCM 95th %tile Q(veh)	4.8	0	0.3	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	264	227	322	1851	1370	269
Future Volume (vph)	264	227	322	1851	1370	269
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	25.0		14.0	95.0	81.0	81.0
Total Split (%)	20.8%		11.7%	79.2%	67.5%	67.5%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-3.0	-3.0	0.0
Total Lost Time (s)	3.0		3.0	2.0	2.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	17.0	120.0	97.0	98.0	79.0	76.0
Actuated g/C Ratio	0.14	1.00	0.81	0.82	0.66	0.63
v/c Ratio	0.57	0.15	0.89	0.67	0.62	0.26
Control Delay	52.6	0.2	48.9	5.3	4.3	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	0.2	48.9	5.3	4.3	0.8
LOS	D	A	D	A	A	A
Approach Delay	28.4			11.7	3.8	
Approach LOS	C			B	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	157	167	250	2016	1416	181
Future Volume (vph)	157	167	250	2016	1416	181
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	26.0		12.0	94.0	82.0	82.0
Total Split (%)	21.7%		10.0%	78.3%	68.3%	68.3%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-3.0	-3.0	-2.0
Total Lost Time (s)	3.0		3.0	2.0	2.0	3.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	13.1	120.0	100.9	101.9	82.1	81.1
Actuated g/C Ratio	0.11	1.00	0.84	0.85	0.68	0.68
v/c Ratio	0.44	0.11	0.67	0.71	0.62	0.17
Control Delay	53.3	0.1	22.0	4.8	7.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	0.1	22.0	4.8	7.9	1.0
LOS	D	A	C	A	A	A
Approach Delay	25.9			6.7	7.1	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & E 92nd Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	6	99	15	7	52	144	1801	14	29	1413	140
Future Volume (vph)	413	6	99	15	7	52	144	1801	14	29	1413	140
Turn Type	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free	8		Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	23.0		11.0	14.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	22.0	23.0		13.0	14.0		11.0	73.0	73.0	11.0	73.0	73.0
Total Split (%)	18.3%	19.2%		10.8%	11.7%		9.2%	60.8%	60.8%	9.2%	60.8%	60.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	3.0	4.0	4.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.8	15.8	120.0	10.9	7.3	120.0	90.8	85.9	84.9	85.8	79.5	78.5
Actuated g/C Ratio	0.15	0.13	1.00	0.09	0.06	1.00	0.76	0.72	0.71	0.72	0.66	0.65
v/c Ratio	0.86	0.02	0.07	0.05	0.06	0.03	0.57	0.73	0.01	0.18	0.61	0.13
Control Delay	66.8	46.7	0.1	41.9	54.1	0.0	16.7	14.3	0.0	8.9	20.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.8	46.7	0.1	41.9	54.1	0.0	16.7	14.3	0.0	8.9	20.6	4.5
LOS	E	D	A	D	D	A	B	B	A	A	C	A
Approach Delay		53.9			13.5			14.3			18.9	
Approach LOS		D			B			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	4	347	24	1	16	210	2006	15	7	1336	84
Future Volume (vph)	110	4	347	24	1	16	210	2006	15	7	1336	84
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	19.0	19.0	19.0	19.0	19.0	19.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	18.0	87.0	87.0	10.0	79.0	79.0
Total Split (%)	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	15.0%	72.5%	72.5%	8.3%	65.8%	65.8%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-1.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	5.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		21.0	21.0		21.0	21.0	95.0	92.2	90.2	88.6	80.6	79.6
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.79	0.77	0.75	0.74	0.67	0.66
v/c Ratio		0.53	0.88		0.11	0.05	0.66	0.75	0.01	0.05	0.57	0.08
Control Delay		54.3	46.7		43.1	0.2	16.3	10.5	0.0	3.6	12.1	1.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.3	46.7		43.1	0.2	16.3	10.5	0.0	3.6	12.1	1.9
LOS		D	D		D	A	B	B	A	A	B	A
Approach Delay		48.6			26.5			11.0			11.4	
Approach LOS		D			C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	403	456	215	276	85	448	964	229	160	1203	30
Future Volume (vph)	39	403	456	215	276	85	448	964	229	160	1203	30
Turn Type	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	25.0		11.0	25.0	25.0	11.0	24.0	24.0	13.0	26.0	26.0
Total Split (s)	12.0	27.0		18.0	33.0	33.0	20.0	60.0	60.0	15.0	55.0	55.0
Total Split (%)	10.0%	22.5%		15.0%	27.5%	27.5%	16.7%	50.0%	50.0%	12.5%	45.8%	45.8%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0	-1.0	-2.0	-1.0	-1.0	-1.0	-1.0	0.0
Total Lost Time (s)	5.0	4.0		5.0	4.0	5.0	4.0	5.0	5.0	5.0	5.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	25.9	20.1	120.0	12.1	27.7	26.7	19.4	58.9	58.9	9.9	50.4	49.4
Actuated g/C Ratio	0.22	0.17	1.00	0.10	0.23	0.22	0.16	0.49	0.49	0.08	0.42	0.41
v/c Ratio	0.15	0.72	0.30	0.66	0.36	0.19	0.85	0.58	0.27	0.59	0.85	0.04
Control Delay	30.2	54.2	0.5	58.0	40.4	4.6	51.7	35.8	11.2	62.0	38.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	54.2	0.5	58.0	40.4	4.6	51.7	35.8	11.2	62.0	38.4	0.1
LOS	C	D	A	E	D	A	D	D	B	E	D	A
Approach Delay		25.9			41.7			36.7			40.3	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 36.3	Intersection LOS: D
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	21	694	77	24	415	6	99	1	17	1
Future Volume (vph)	21	694	77	24	415	6	99	1	17	1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	74.0	74.0	12.0	74.0	74.0	34.0	34.0	34.0	34.0
Total Split (%)	10.0%	61.7%	61.7%	10.0%	61.7%	61.7%	28.3%	28.3%	28.3%	28.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	77.9	74.2	74.2	78.1	74.2	74.2	29.0	29.0	29.0	29.0
Actuated g/C Ratio	0.65	0.62	0.62	0.65	0.62	0.62	0.24	0.24	0.24	0.24
v/c Ratio	0.03	0.64	0.08	0.07	0.20	0.01	0.32	0.13	0.06	0.15
Control Delay	12.3	37.2	9.1	9.5	15.6	0.8	40.8	10.6	35.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	37.2	9.1	9.5	15.6	0.8	40.8	10.6	35.7	9.7
LOS	B	D	A	A	B	A	D	B	D	A
Approach Delay		33.8			15.1			30.7		15.3
Approach LOS		C			B			C		B

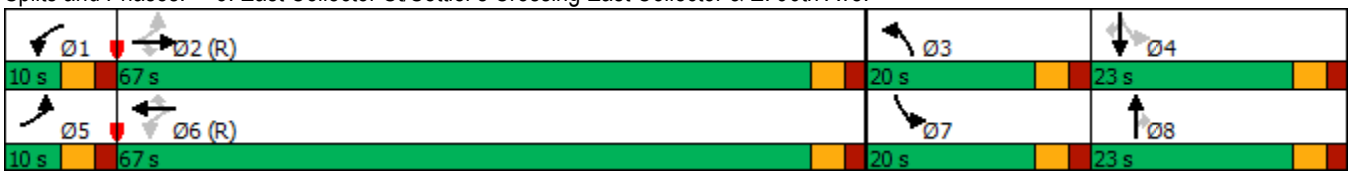
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: E. 94th Ave/Settlers Crossing West Collector & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	440	310	247	248	5	167	1	201	11	1	30
Future Volume (vph)	10	440	310	247	248	5	167	1	201	11	1	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	10.0	23.0	23.0	10.0	23.0	23.0	10.0	20.0	20.0
Total Split (s)	10.0	67.0	67.0	10.0	67.0	67.0	20.0	23.0	23.0	20.0	23.0	23.0
Total Split (%)	8.3%	55.8%	55.8%	8.3%	55.8%	55.8%	16.7%	19.2%	19.2%	16.7%	19.2%	19.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	84.0	78.3	77.3	92.9	91.7	90.7	13.5	14.3	14.3	11.5	6.8	6.8
Actuated g/C Ratio	0.70	0.65	0.64	0.77	0.76	0.76	0.11	0.12	0.12	0.10	0.06	0.06
v/c Ratio	0.01	0.38	0.29	0.39	0.18	0.00	0.46	0.00	0.57	0.08	0.01	0.17
Control Delay	4.6	10.1	2.9	6.3	5.8	0.0	53.3	46.0	12.8	39.4	53.0	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	10.1	2.9	6.3	5.8	0.0	53.3	46.0	12.8	39.4	53.0	1.9
LOS	A	B	A	A	A	A	D	D	B	D	D	A
Approach Delay		7.1			6.0			31.2			13.0	
Approach LOS		A			A			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: East Collector St/Settler's Crossing East Collector & E. 96th Ave.



Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	288	365	30	297	0	0	0	0	5	0	202
Future Vol, veh/h	0	288	365	30	297	0	0	0	0	5	0	202
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	303	384	32	313	0	0	0	0	5	0	213

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	687	0	0	872	1064	313
Stage 1	-	-	-	-	-	-	377	377	-
Stage 2	-	-	-	-	-	-	495	687	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	907	-	0	318	205	*849
Stage 1	0	-	-	-	-	0	750	658	-
Stage 2	0	-	-	-	-	0	613	447	-
Platoon blocked, %		-	-		-		1	1	1
Mov Cap-1 Maneuver	-	-	-	907	-	-	307	0	*849
Mov Cap-2 Maneuver	-	-	-	-	-	-	307	0	-
Stage 1	-	-	-	-	-	-	723	0	-
Stage 2	-	-	-	-	-	-	613	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.8	11
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	907	-	814
HCM Lane V/C Ratio	-	-	0.035	-	0.268
HCM Control Delay (s)	-	-	9.1	-	11
HCM Lane LOS	-	-	A	-	B
HCM 95th %tile Q(veh)	-	-	0.1	-	1.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	186	106	0	0	94	5	233	0	5	0	0	0
Future Vol, veh/h	186	106	0	0	94	5	233	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	196	112	0	0	99	5	245	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	104	0	-	-	-	0	606	608	112
Stage 1	-	-	-	-	-	-	504	504	-
Stage 2	-	-	-	-	-	-	102	104	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1488	-	0	0	-	-	469	417	*1002
Stage 1	-	-	0	0	-	-	611	544	-
Stage 2	-	-	0	0	-	-	922	809	-
Platoon blocked, %		-			-	-	1	1	1
Mov Cap-1 Maneuver	1488	-	-	-	-	-	407	0	*1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	0	-
Stage 1	-	-	-	-	-	-	531	0	-
Stage 2	-	-	-	-	-	-	922	0	-

Approach	EB	WB	NB
HCM Control Delay, s	5	0	26
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	407	1002	1488	-	-	-
HCM Lane V/C Ratio	0.603	0.005	0.132	-	-	-
HCM Control Delay (s)	26.4	8.6	7.8	-	-	-
HCM Lane LOS	D	A	A	-	-	-
HCM 95th %tile Q(veh)	3.8	0	0.5	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	12	85	119	3	97	76	1493	64	54	1736	84
Future Volume (vph)	51	12	85	119	3	97	76	1493	64	54	1736	84
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	15.0	20.0		15.0	20.0		15.0	73.0	73.0	12.0	70.0	70.0
Total Split (%)	12.5%	16.7%		12.5%	16.7%		12.5%	60.8%	60.8%	10.0%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.0	8.4	120.0	11.1	8.6	120.0	96.4	88.8	88.8	94.8	87.9	85.9
Actuated g/C Ratio	0.11	0.07	1.00	0.09	0.07	1.00	0.80	0.74	0.74	0.79	0.73	0.72
v/c Ratio	0.15	0.10	0.06	0.40	0.02	0.06	0.36	0.60	0.06	0.21	0.70	0.08
Control Delay	48.2	53.4	0.1	54.9	51.3	0.1	21.9	5.6	0.2	3.5	8.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	53.4	0.1	54.9	51.3	0.1	21.9	5.6	0.2	3.5	8.1	0.2
LOS	D	D	A	D	D	A	C	A	A	A	A	A
Approach Delay		21.2			30.6			6.2			7.6	
Approach LOS		C			C			A			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr/94th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	12	154	317	6	277	62	1264	127	205	1683	51
Future Volume (vph)	91	12	154	317	6	277	62	1264	127	205	1683	51
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	20.0		20.0	20.0		15.0	65.0	65.0	15.0	65.0	65.0
Total Split (%)	16.7%	16.7%		16.7%	16.7%		12.5%	54.2%	54.2%	12.5%	54.2%	54.2%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.1	8.4	120.0	16.5	9.0	120.0	83.6	74.8	74.8	14.8	82.8	82.8
Actuated g/C Ratio	0.15	0.07	1.00	0.14	0.08	1.00	0.70	0.62	0.62	0.12	0.69	0.69
v/c Ratio	0.19	0.10	0.10	0.71	0.04	0.18	0.31	0.60	0.13	0.51	0.73	0.05
Control Delay	45.3	53.4	0.1	58.3	50.3	0.3	17.4	12.8	3.3	56.3	10.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	53.4	0.1	58.3	50.3	0.3	17.4	12.8	3.3	56.3	10.4	1.0
LOS	D	D	A	E	D	A	B	B	A	E	B	A
Approach Delay		18.7			31.4			12.2			15.0	
Approach LOS		B			C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	1368	97	42	2112
Future Vol, veh/h	0	85	1368	97	42	2112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	0	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	89	1440	102	44	2223

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	-	0	0	1542	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	2.22	-
Pot Cap-1 Maneuver	0	0	-	-	*772	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %			-	-	1	-
Mov Cap-1 Maneuver	-	-	-	-	*772	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	* 772	-
HCM Lane V/C Ratio	-	-	-	0.057	-
HCM Control Delay (s)	-	-	0	9.9	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	5	112	203	4	57	69	1223	184	235	1770	107
Future Volume (vph)	185	5	112	203	4	57	69	1223	184	235	1770	107
Turn Type	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free	8		Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	19.0	25.0		15.0	21.0		12.0	68.0	68.0	12.0	68.0	68.0
Total Split (%)	15.8%	20.8%		12.5%	17.5%		10.0%	56.7%	56.7%	10.0%	56.7%	56.7%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-2.0	-1.0	-1.0	-2.0	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	4.0	5.0	5.0	4.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.0	6.9	120.0	12.5	6.1	120.0	77.9	71.7	70.7	95.7	86.8	85.8
Actuated g/C Ratio	0.10	0.06	1.00	0.10	0.05	1.00	0.65	0.60	0.59	0.80	0.72	0.72
v/c Ratio	0.57	0.05	0.07	0.60	0.04	0.04	0.41	0.61	0.20	0.57	0.73	0.10
Control Delay	58.1	53.0	0.1	55.8	55.0	0.1	17.3	17.3	4.2	25.9	6.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	53.0	0.1	55.8	55.0	0.1	17.3	17.3	4.2	25.9	6.8	0.4
LOS	E	D	A	E	D	A	B	B	A	C	A	A
Approach Delay		36.5			43.7			15.7			8.6	
Approach LOS		D			D			B			A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	424	243	1	0	21
Future Vol, veh/h	0	424	243	1	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	250	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	446	256	1	0	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	256
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	783
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	783
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	783
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	9.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	161	263	182	4	6	62
Future Vol, veh/h	161	263	182	4	6	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	169	277	192	4	6	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	196	0	-	0	807	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1377	-	-	-	355	850
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1377	-	-	-	311	850
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	545	-

Approach	EB	WB	SB
HCM Control Delay, s	3	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1377	-	-	-	311	850
HCM Lane V/C Ratio	0.123	-	-	-	0.02	0.077
HCM Control Delay (s)	8	-	-	-	16.8	9.6
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.1	0.2

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	201	68	40	8	7	146
Future Vol, veh/h	201	68	40	8	7	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	212	72	42	8	7	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	50	0	-	0	538	42
Stage 1	-	-	-	-	42	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1557	-	-	-	504	1029
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1557	-	-	-	435	1029
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	612	-

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1557	-	-	-	435	1029
HCM Lane V/C Ratio	0.136	-	-	-	0.017	0.149
HCM Control Delay (s)	7.7	-	-	-	13.4	9.1
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.1	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	4	322	12	1	2	366	1480	27	8	1950	99
Future Volume (vph)	40	4	322	12	1	2	366	1480	27	8	1950	99
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	19.0	19.0	19.0	19.0	19.0	19.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	26.0	85.0	85.0	12.0	71.0	71.0
Total Split (%)	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	21.7%	70.8%	70.8%	10.0%	59.2%	59.2%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.0		-1.0	-1.0	-2.0	-2.0	-1.0	-1.0	-3.0	-1.0
Total Lost Time (s)		3.0	3.0		3.0	3.0	2.0	4.0	5.0	3.0	3.0	5.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.0	20.0		20.0	20.0	95.0	91.2	90.2	74.0	68.0	66.0
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.79	0.76	0.75	0.62	0.57	0.55
v/c Ratio		0.19	0.75		0.05	0.01	0.95	0.60	0.02	0.04	1.02	0.12
Control Delay		45.5	26.2		42.8	0.0	70.6	7.9	0.9	5.0	52.6	4.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.5	26.2		42.8	0.0	70.6	7.9	0.9	5.0	52.6	4.6
LOS		D	C		D	A	E	A	A	A	D	A
Approach Delay		28.5			37.5			20.0			50.0	
Approach LOS		C			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 34.9	Intersection LOS: C
Intersection Capacity Utilization 100.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	514	614	392	573	264	734	1826	448	234	1325	63
Future Volume (vph)	131	514	614	392	573	264	734	1826	448	234	1325	63
Turn Type	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free			8			2			6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	35.0		11.0	34.0	34.0	11.0	24.0	24.0	13.0	26.0	26.0
Total Split (s)	11.0	23.0		18.0	30.0	30.0	28.0	66.0	66.0	13.0	51.0	51.0
Total Split (%)	9.2%	19.2%		15.0%	25.0%	25.0%	23.3%	55.0%	55.0%	10.8%	42.5%	42.5%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0		-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.0	20.0	120.0	15.0	27.0	27.0	25.0	63.0	63.0	10.0	48.0	48.0
Actuated g/C Ratio	0.23	0.17	1.00	0.12	0.22	0.22	0.21	0.52	0.52	0.08	0.40	0.40
v/c Ratio	0.75	0.91	0.41	0.95	0.76	0.55	1.05	1.00	0.50	0.84	0.96	0.08
Control Delay	57.9	69.7	0.8	77.3	50.1	22.4	74.5	47.6	16.1	78.7	50.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	69.7	0.8	77.3	50.1	22.4	74.5	47.6	16.1	78.7	50.8	0.2
LOS	E	E	A	E	D	C	E	D	B	E	D	A
Approach Delay		34.7			52.7			49.3			52.8	
Approach LOS		C			D			D			D	

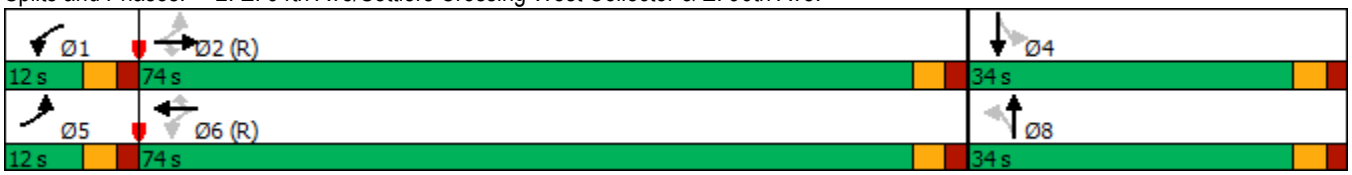
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	70	884	242	96	980	16	209	1	9	1
Future Volume (vph)	70	884	242	96	980	16	209	1	9	1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	5	2		1	6			8		4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	74.0	74.0	12.0	74.0	74.0	34.0	34.0	34.0	34.0
Total Split (%)	10.0%	61.7%	61.7%	10.0%	61.7%	61.7%	28.3%	28.3%	28.3%	28.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	75.9	69.2	69.2	77.1	71.5	71.5	29.0	29.0	29.0	29.0
Actuated g/C Ratio	0.63	0.58	0.58	0.64	0.60	0.60	0.24	0.24	0.24	0.24
v/c Ratio	0.22	0.87	0.25	0.51	0.49	0.02	0.67	0.21	0.03	0.10
Control Delay	12.2	43.4	8.6	24.5	29.8	2.8	52.6	8.5	35.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	43.4	8.6	24.5	29.8	2.8	52.6	8.5	35.2	11.5
LOS	B	D	A	C	C	A	D	A	D	B
Approach Delay		34.6			28.9			39.2		15.6
Approach LOS		C			C			D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 32.4	Intersection LOS: C
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

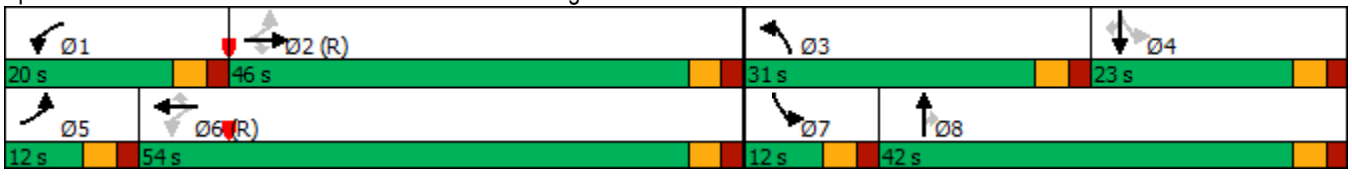
Splits and Phases: 2: E. 94th Ave/Settlers Crossing West Collector & E. 96th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	407	542	422	464	13	608	1	393	8	1	20
Future Volume (vph)	34	407	542	422	464	13	608	1	393	8	1	20
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	10.0	23.0	23.0	23.0	23.0	23.0	10.0	20.0	20.0
Total Split (s)	12.0	46.0	46.0	20.0	54.0	54.0	31.0	42.0	42.0	12.0	23.0	23.0
Total Split (%)	10.0%	38.3%	38.3%	16.7%	45.0%	45.0%	25.8%	35.0%	35.0%	10.0%	19.2%	19.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	52.9	46.5	45.5	80.0	73.8	72.8	26.6	29.7	29.7	11.0	6.6	6.6
Actuated g/C Ratio	0.44	0.39	0.38	0.67	0.62	0.61	0.22	0.25	0.25	0.09	0.06	0.06
v/c Ratio	0.08	0.59	0.62	0.71	0.43	0.01	0.82	0.00	0.59	0.05	0.01	0.08
Control Delay	15.6	39.8	14.7	21.2	16.1	0.0	53.8	34.0	7.3	31.5	54.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	39.8	14.7	21.2	16.1	0.0	53.8	34.0	7.3	31.5	54.0	0.6
LOS	B	D	B	C	B	A	D	C	A	C	D	A
Approach Delay		25.1			18.2			35.2			10.6	
Approach LOS		C			B			D			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: East Collector St/Settler's Crossing East Collector & E. 96th Ave.



Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑						✣	
Traffic Vol, veh/h	0	431	378	20	596	0	0	0	0	5	0	303
Future Vol, veh/h	0	431	378	20	596	0	0	0	0	5	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	350	175	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	454	398	21	627	0	0	0	0	5	0	319

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	852	0	0			1322	1521	627
Stage 1	-	-	-	-	-	-			669	669	-
Stage 2	-	-	-	-	-	-			653	852	-
Critical Hdwy	-	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	787	-	0			133	81	555
Stage 1	0	-	-	-	-	0			521	462	-
Stage 2	0	-	-	-	-	0			518	376	-
Platoon blocked, %		-	-		-				1	1	1
Mov Cap-1 Maneuver	-	-	-	787	-	-			129	0	555
Mov Cap-2 Maneuver	-	-	-	-	-	-			129	0	-
Stage 1	-	-	-	-	-	-			507	0	-
Stage 2	-	-	-	-	-	-			518	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.3	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	787	-	527
HCM Lane V/C Ratio	-	-	0.027	-	0.615
HCM Control Delay (s)	-	-	9.7	-	22.1
HCM Lane LOS	-	-	A	-	C
HCM 95th %tile Q(veh)	-	-	0.1	-	4.1

Intersection	
Int Delay, s/veh	315.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	333	103	0	0	115	5	502	0	15	0	0	0
Future Vol, veh/h	333	103	0	0	115	5	502	0	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175	-	-	-	-	-	-	-	375	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	351	108	0	0	121	5	528	0	16	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	126	0	-	-	-	0	934	936	108
Stage 1	-	-	-	-	-	-	810	810	-
Stage 2	-	-	-	-	-	-	124	126	-
Critical Hdwy	4.12	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1460	-	0	0	-	-	~ 292	262	988
Stage 1	-	-	0	0	-	-	~ 432	388	-
Stage 2	-	-	0	0	-	-	902	792	-
Platoon blocked, %		-			-	-	1	1	1
Mov Cap-1 Maneuver	1460	-	-	-	-	-	~ 222	0	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 222	0	-
Stage 1	-	-	-	-	-	-	~ 329	0	-
Stage 2	-	-	-	-	-	-	902	0	-

Approach	EB	WB	NB
HCM Control Delay, s	6.3	0	$ 649.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	222	988	1460	-	-	-
HCM Lane V/C Ratio	2.38	0.016	0.24	-	-	-
HCM Control Delay (s)	$ 669.1	8.7	8.2	-	-	-
HCM Lane LOS	F	A	A	-	-	-
HCM 95th %tile Q(veh)	42.9	0	0.9	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	17	227	213	24	287	322	2457	240	177	1886	269
Future Volume (vph)	264	17	227	213	24	287	322	2457	240	177	1886	269
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	16.0	21.0		16.0	21.0		12.0	69.0	69.0	14.0	71.0	71.0
Total Split (%)	13.3%	17.5%		13.3%	17.5%		10.0%	57.5%	57.5%	11.7%	59.2%	59.2%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	2.0	3.0	3.0	2.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.0	9.0	120.0	15.4	9.1	120.0	79.2	80.2	79.2	68.0	69.0	68.0
Actuated g/C Ratio	0.11	0.08	1.00	0.13	0.08	1.00	0.66	0.67	0.66	0.57	0.58	0.57
v/c Ratio	0.75	0.13	0.15	0.51	0.18	0.19	0.86	1.06	0.23	0.82	0.98	0.30
Control Delay	65.3	53.1	0.2	53.4	54.2	0.3	39.0	52.6	7.8	54.8	31.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.3	53.1	0.2	53.4	54.2	0.3	39.0	52.6	7.8	54.8	31.4	2.3
LOS	E	D	A	D	D	A	D	D	A	D	C	A
Approach Delay		35.8			24.3			47.4			29.8	
Approach LOS		D			C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 38.1	Intersection LOS: D
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr/94th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	8	167	238	14	254	250	2608	301	372	1773	181
Future Volume (vph)	157	8	167	238	14	254	250	2608	301	372	1773	181
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	11.0	15.0		11.0	15.0		12.0	83.0	83.0	11.0	82.0	82.0
Total Split (%)	9.2%	12.5%		9.2%	12.5%		10.0%	69.2%	69.2%	9.2%	68.3%	68.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	2.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	8.0	8.3	120.0	10.4	8.6	120.0	99.0	81.0	80.0	18.0	79.0	79.0
Actuated g/C Ratio	0.07	0.07	1.00	0.09	0.07	1.00	0.82	0.68	0.67	0.15	0.66	0.66
v/c Ratio	0.72	0.06	0.11	0.85	0.11	0.17	0.76	1.11	0.29	0.76	0.78	0.17
Control Delay	73.3	52.6	0.1	78.1	53.6	0.2	44.0	77.2	2.9	54.6	8.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.3	52.6	0.1	78.1	53.6	0.2	44.0	77.2	2.9	54.6	8.8	1.4
LOS	E	D	A	E	D	A	D	E	A	D	A	A
Approach Delay		35.9			38.4			67.2			15.7	
Approach LOS		D			D			E			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 44.3	Intersection LOS: D
Intersection Capacity Utilization 106.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	204	2956	215	111	2067
Future Vol, veh/h	0	204	2956	215	111	2067
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	0	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	215	3112	226	117	2176

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	-	0	0	3338	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	2.22	-
Pot Cap-1 Maneuver	0	0	-	-	-	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %			-	-	2	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	-	-
HCM Lane LOS	-	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	6	99	348	7	260	144	2497	160	75	1853	140
Future Volume (vph)	413	6	99	348	7	260	144	2497	160	75	1853	140
Turn Type	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free	8		Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	23.0		11.0	14.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	22.0	23.0		13.0	14.0		11.0	73.0	73.0	11.0	73.0	73.0
Total Split (%)	18.3%	19.2%		10.8%	11.7%		9.2%	60.8%	60.8%	9.2%	60.8%	60.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	3.0	4.0	4.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.8	9.1	120.0	17.6	7.3	120.0	91.0	83.0	82.0	83.9	76.8	75.8
Actuated g/C Ratio	0.15	0.08	1.00	0.15	0.06	1.00	0.76	0.69	0.68	0.70	0.64	0.63
v/c Ratio	0.86	0.04	0.07	0.72	0.06	0.17	0.63	1.04	0.15	0.43	0.83	0.14
Control Delay	66.8	49.2	0.1	56.1	54.1	0.2	35.8	50.5	1.3	23.6	12.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.8	49.2	0.1	56.1	54.1	0.2	35.8	50.5	1.3	23.6	12.5	0.5
LOS	E	D	A	E	D	A	D	D	A	C	B	A
Approach Delay		53.9			32.4			46.9			12.1	
Approach LOS		D			C			D			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 34.0	Intersection LOS: C
Intersection Capacity Utilization 101.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	241	498	3	0	118
Future Vol, veh/h	0	241	498	3	0	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	250	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	254	524	3	0	124

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	527	0	-	0	778	524
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1040	-	-	-	*370	553
Stage 1	-	-	-	-	*594	-
Stage 2	-	-	-	-	*849	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1040	-	-	-	*370	553
Mov Cap-2 Maneuver	-	-	-	-	*370	-
Stage 1	-	-	-	-	*594	-
Stage 2	-	-	-	-	*849	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1040	-	-	-	-	553
HCM Lane V/C Ratio	-	-	-	-	-	0.225
HCM Control Delay (s)	0	-	-	-	0	13.4
HCM Lane LOS	A	-	-	-	A	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	209	356	2	7	145
Future Vol, veh/h	32	209	356	2	7	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	220	375	2	7	153

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	377	0	-	0	663	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	288	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1181	-	-	-	441	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	804	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1181	-	-	-	428	671
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1181	-	-	-	428	671
HCM Lane V/C Ratio	0.029	-	-	-	0.017	0.227
HCM Control Delay (s)	8.1	-	-	-	13.6	11.9
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.9

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	155	60	85	13	14	272
Future Vol, veh/h	155	60	85	13	14	272
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	63	89	14	15	286

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	103	0	-	0	478	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1489	-	-	-	546	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	685	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1489	-	-	-	486	969
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	685	-

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1489	-	-	-	486	969
HCM Lane V/C Ratio	0.11	-	-	-	0.03	0.295
HCM Control Delay (s)	7.7	-	-	-	12.6	10.3
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.1	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	4	347	24	1	16	210	2830	15	7	2092	100
Future Volume (vph)	128	4	347	24	1	16	210	2830	15	7	2092	100
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	19.0	19.0	19.0	19.0	19.0	19.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	18.0	87.0	87.0	10.0	79.0	79.0
Total Split (%)	19.2%	19.2%	19.2%	19.2%	19.2%	19.2%	15.0%	72.5%	72.5%	8.3%	65.8%	65.8%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	4.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		21.0	21.0		21.0	21.0	95.0	92.2	91.2	85.4	77.4	76.4
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.79	0.77	0.76	0.71	0.64	0.64
v/c Ratio		0.62	0.96		0.11	0.05	0.82	1.06	0.01	0.05	0.94	0.11
Control Delay		58.4	67.4		43.1	0.2	54.3	52.5	0.0	3.9	28.9	3.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		58.4	67.4		43.1	0.2	54.3	52.5	0.0	3.9	28.9	3.0
LOS		E	E		D	A	D	D	A	A	C	A
Approach Delay		65.0			26.6			52.3			27.5	
Approach LOS		E			C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 43.9	Intersection LOS: D
Intersection Capacity Utilization 119.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	672	553	235	289	145	376	777	377	540	954	179
Future Volume (vph)	202	672	553	235	289	145	376	777	377	540	954	179
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	33.0		11.0	33.0		11.0	24.0		13.0	26.0	
Total Split (s)	16.0	33.0		16.0	33.0		22.0	46.0		25.0	49.0	
Total Split (%)	13.3%	27.5%		13.3%	27.5%		18.3%	38.3%		20.8%	40.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		4.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	21.5	24.2	120.0	11.8	14.5	120.0	19.8	46.1	120.0	24.9	51.2	120.0
Actuated g/C Ratio	0.18	0.20	1.00	0.10	0.12	1.00	0.16	0.38	1.00	0.21	0.43	1.00
v/c Ratio	0.34	0.68	0.36	0.72	0.49	0.10	0.69	0.41	0.25	0.79	0.46	0.12
Control Delay	64.4	66.1	2.7	65.5	51.8	0.1	42.3	42.4	0.4	54.2	26.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	66.1	2.7	65.5	51.8	0.1	42.3	42.4	0.4	54.2	26.2	0.2
LOS	E	E	A	E	D	A	D	D	A	D	C	A
Approach Delay		41.3			45.4			32.0			32.5	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 36.3	Intersection LOS: D
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	1557	567	11	27	92
Future Vol, veh/h	31	1557	567	11	27	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	200	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1639	597	12	28	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	609	0	-	0	1319	299
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	722	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	602	-	-	-	214	595
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	402	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	602	-	-	-	202	595
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	402	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	602	-	-	-	202	595
HCM Lane V/C Ratio	0.054	-	-	-	0.141	0.163
HCM Control Delay (s)	11.3	-	-	-	25.7	12.2
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	265	1319	463	55	122	115
Future Volume (vph)	265	1319	463	55	122	115
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	23.0	23.0	10.0	10.0
Total Split (s)	12.0	75.0	63.0	63.0	20.0	20.0
Total Split (%)	12.6%	78.9%	66.3%	66.3%	21.1%	21.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	75.2	75.2	62.4	62.4	13.8	13.8
Actuated g/C Ratio	0.79	0.79	0.66	0.66	0.15	0.15
v/c Ratio	0.37	0.34	0.15	0.05	0.50	0.36
Control Delay	4.2	3.3	6.6	2.0	43.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	3.3	6.6	2.0	43.7	10.0
LOS	A	A	A	A	D	A
Approach Delay		3.4	6.1		27.3	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 40.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: E. 96th Ave. & Settler's Crossing East Collector

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1116	319	32	347	106	0	154
Future Volume (vph)	1116	319	32	347	106	0	154
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	20.0	20.0
Total Split (s)	75.0	75.0	15.0	90.0	30.0	30.0	30.0
Total Split (%)	62.5%	62.5%	12.5%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min	Min
Act Effct Green (s)	95.8	95.8	102.4	102.4	11.6	11.6	11.6
Actuated g/C Ratio	0.80	0.80	0.85	0.85	0.10	0.10	0.10
v/c Ratio	0.29	0.25	0.08	0.08	0.35	0.35	0.54
Control Delay	4.1	1.0	2.3	1.3	55.5	55.5	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.1	1.0	2.3	1.3	55.5	55.5	14.5
LOS	A	A	A	A	E	E	B
Approach Delay	3.4			1.4		31.2	
Approach LOS	A			A		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: E. 96th Ave. & E-470 SB Ramps

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	213	1010	223	18	155	0	38
Future Volume (vph)	213	1010	223	18	155	0	38
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	35.0	90.0	55.0	55.0	30.0	30.0	30.0
Total Split (%)	29.2%	75.0%	45.8%	45.8%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Min	Min	Min
Act Effct Green (s)	16.0	100.2	81.2	81.2	13.8	13.8	13.8
Actuated g/C Ratio	0.13	0.84	0.68	0.68	0.12	0.12	0.12
v/c Ratio	0.54	0.28	0.08	0.02	0.47	0.47	0.18
Control Delay	54.9	2.2	7.5	0.1	56.8	56.8	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	2.2	7.5	0.1	56.8	56.8	7.0
LOS	D	A	A	A	E	E	A
Approach Delay		11.4	6.9			47.0	
Approach LOS		B	A			D	

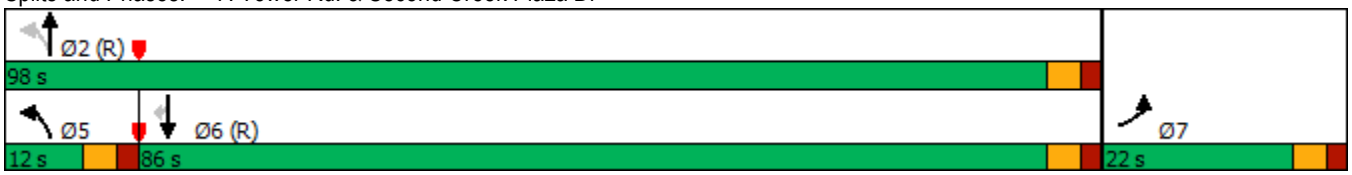
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: E-470 NB Ramp & E. 96th Ave.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	92	86	1488	1683	60
Future Volume (vph)	41	92	86	1488	1683	60
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	22.0		12.0	98.0	86.0	86.0
Total Split (%)	18.3%		10.0%	81.7%	71.7%	71.7%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0		3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	9.0	120.0	107.1	107.7	95.8	95.8
Actuated g/C Ratio	0.08	1.00	0.89	0.90	0.80	0.80
v/c Ratio	0.17	0.06	0.32	0.34	0.43	0.05
Control Delay	53.1	0.1	11.7	0.2	8.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	0.1	11.7	0.2	8.5	0.6
LOS	D	A	B	A	A	A
Approach Delay	16.4			0.9	8.2	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	100	263	99	1474	1727	46
Future Volume (vph)	100	263	99	1474	1727	46
Turn Type	Prot	Free	Prot	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free				6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	22.0		12.0	98.0	86.0	86.0
Total Split (%)	18.3%		10.0%	81.7%	71.7%	71.7%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-3.0	-2.0	0.0
Total Lost Time (s)	3.0		3.0	2.0	3.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	11.0	120.0	11.0	104.0	89.0	87.0
Actuated g/C Ratio	0.09	1.00	0.09	0.87	0.74	0.72
v/c Ratio	0.33	0.17	0.33	0.35	0.48	0.04
Control Delay	53.5	0.2	52.1	3.1	1.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	0.2	52.1	3.1	1.6	0.1
LOS	D	A	D	A	A	A
Approach Delay	14.9			6.2	1.5	
Approach LOS	B			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	111	214	85	74	67	102	1386	362	198	1919	57
Future Volume (vph)	109	111	214	85	74	67	102	1386	362	198	1919	57
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	20.0	27.0		20.0	27.0		12.0	61.0	61.0	12.0	61.0	61.0
Total Split (%)	16.7%	22.5%		16.7%	22.5%		10.0%	50.8%	50.8%	10.0%	50.8%	50.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.1	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		3.9	3.0	4.0	4.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.6	10.3	120.0	9.5	9.4	120.0	10.2	70.8	69.8	14.4	75.1	74.1
Actuated g/C Ratio	0.10	0.09	1.00	0.08	0.08	1.00	0.08	0.59	0.58	0.12	0.63	0.62
v/c Ratio	0.32	0.38	0.14	0.33	0.28	0.04	0.36	0.48	0.35	0.50	0.63	0.06
Control Delay	53.0	55.0	0.2	64.4	68.0	0.1	54.9	15.5	2.4	66.5	6.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	55.0	0.2	64.4	68.0	0.1	54.9	15.5	2.4	66.5	6.2	0.1
LOS	D	D	A	E	E	A	D	B	A	E	A	A
Approach Delay		27.5			46.5			15.1			11.6	
Approach LOS		C			D			B			B	

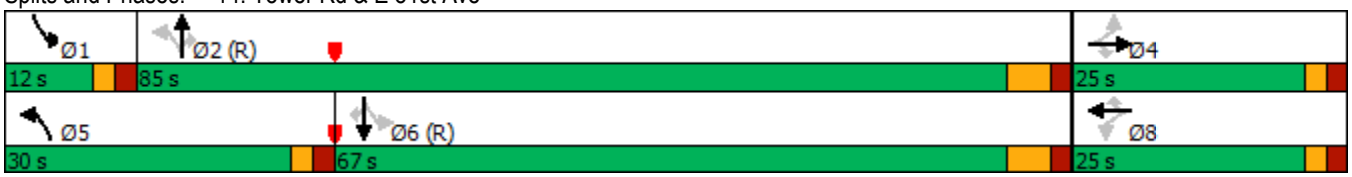
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 61.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	4	322	12	1	2	366	1837	27	8	2107	87
Future Volume (vph)	40	4	322	12	1	2	366	1837	27	8	2107	87
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	85.0	85.0	12.0	67.0	67.0
Total Split (%)	20.5%	20.5%	20.5%	20.5%	20.5%	20.5%	24.6%	69.7%	69.7%	9.8%	54.9%	54.9%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	4.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0	22.0		22.0	22.0	96.0	93.2	92.2	75.3	67.3	66.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.79	0.76	0.76	0.62	0.55	0.54
v/c Ratio		0.17	0.63		0.05	0.01	0.86	0.49	0.02	0.04	0.77	0.10
Control Delay		44.3	13.9		42.0	0.0	54.0	6.2	0.8	5.8	24.4	4.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		44.3	13.9		42.0	0.0	54.0	6.2	0.8	5.8	24.4	4.3
LOS		D	B		D	A	D	A	A	A	C	A
Approach Delay		17.6			36.4			14.0			23.6	
Approach LOS		B			D			B			C	

Intersection Summary	
Cycle Length: 122	
Actuated Cycle Length: 122	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 87.7%	ICU Level of Service E
Analysis Period (min) 15	

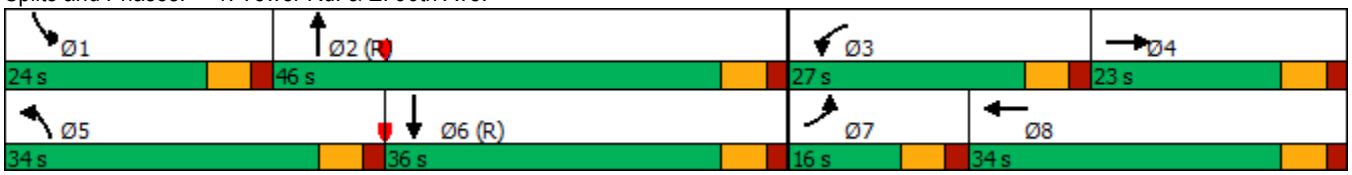
Splits and Phases: 14: Tower Rd & E 81st Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	457	565	547	798	654	675	1459	368	296	1010	237
Future Volume (vph)	282	457	565	547	798	654	675	1459	368	296	1010	237
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	35.0		11.0	34.0		11.0	24.0		13.0	26.0	
Total Split (s)	16.0	23.0		27.0	34.0		34.0	46.0		24.0	36.0	
Total Split (%)	13.3%	19.2%		22.5%	28.3%		28.3%	38.3%		20.0%	30.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-2.0	-3.0	
Total Lost Time (s)	4.0	3.0		4.0	3.0		3.0	3.0		4.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.0	18.1	120.0	22.6	28.7	120.0	29.4	48.5	120.0	16.8	36.9	120.0
Actuated g/C Ratio	0.10	0.15	1.00	0.19	0.24	1.00	0.24	0.40	1.00	0.14	0.31	1.00
v/c Ratio	0.86	0.62	0.37	0.88	0.68	0.43	0.82	0.73	0.24	0.64	0.66	0.16
Control Delay	74.3	62.2	3.5	74.4	60.9	1.1	44.9	34.5	0.3	54.8	39.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	62.2	3.5	74.4	60.9	1.1	44.9	34.5	0.3	54.8	39.3	0.2
LOS	E	E	A	E	E	A	D	C	A	D	D	A
Approach Delay		39.4			45.0			32.2			36.2	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.



Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	114	1007	1824	31	79	71
Future Vol, veh/h	114	1007	1824	31	79	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	200	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	1060	1920	33	83	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1953	0	-	0	2584	960
Stage 1	-	-	-	-	1920	-
Stage 2	-	-	-	-	664	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	*631	-	-	-	*289	*502
Stage 1	-	-	-	-	*515	-
Stage 2	-	-	-	-	*715	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*631	-	-	-	*234	*502
Mov Cap-2 Maneuver	-	-	-	-	*234	-
Stage 1	-	-	-	-	*417	-
Stage 2	-	-	-	-	*715	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	21.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	* 631	-	-	-	234	502
HCM Lane V/C Ratio	0.19	-	-	-	0.355	0.149
HCM Control Delay (s)	12	-	-	-	28.6	13.4
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.5	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	244	842	1630	148	168	225
Future Volume (vph)	244	842	1630	148	168	225
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	20.0	20.0
Minimum Split (s)	10.0	10.0	23.0	23.0	25.0	25.0
Total Split (s)	18.0	90.0	72.0	72.0	30.0	30.0
Total Split (%)	15.0%	75.0%	60.0%	60.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	89.3	89.3	68.6	68.6	20.7	20.7
Actuated g/C Ratio	0.74	0.74	0.57	0.57	0.17	0.17
v/c Ratio	0.80	0.23	0.59	0.16	0.58	0.55
Control Delay	35.6	17.2	11.3	0.9	53.9	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	17.2	11.3	0.9	53.9	15.8
LOS	D	B	B	A	D	B
Approach Delay		21.3	10.5		32.1	
Approach LOS		C	B		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: E. 96th Ave. & Settler's Crossing East Collector

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	753	279	58	1445	47	0	327
Future Volume (vph)	753	279	58	1445	47	0	327
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	20.0	20.0
Total Split (s)	60.0	60.0	15.0	75.0	45.0	45.0	45.0
Total Split (%)	50.0%	50.0%	12.5%	62.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min	Min
Act Effct Green (s)	74.4	74.4	84.2	84.2	29.8	29.8	29.8
Actuated g/C Ratio	0.62	0.62	0.70	0.70	0.25	0.25	0.25
v/c Ratio	0.25	0.27	0.13	0.43	0.06	0.06	0.78
Control Delay	5.6	1.1	7.3	7.8	30.9	31.0	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	1.1	7.3	7.8	30.9	31.0	45.7
LOS	A	A	A	A	C	C	D
Approach Delay	4.4			7.8		43.9	
Approach LOS	A			A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: E. 96th Ave. & E-470 SB Ramps

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	319	483	1143	126	360	0	22
Future Volume (vph)	319	483	1143	126	360	0	22
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	30.0	90.0	60.0	60.0	30.0	30.0	30.0
Total Split (%)	25.0%	75.0%	50.0%	50.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Min	Min	Min
Act Effct Green (s)	20.2	92.1	68.9	68.9	21.9	21.9	21.9
Actuated g/C Ratio	0.17	0.77	0.57	0.57	0.18	0.18	0.18
v/c Ratio	0.64	0.14	0.45	0.15	0.68	0.69	0.08
Control Delay	77.5	1.9	16.4	4.4	57.0	57.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	1.9	16.4	4.4	57.0	57.1	0.5
LOS	E	A	B	A	E	E	A
Approach Delay		32.0	15.2			53.8	
Approach LOS		C	B			D	

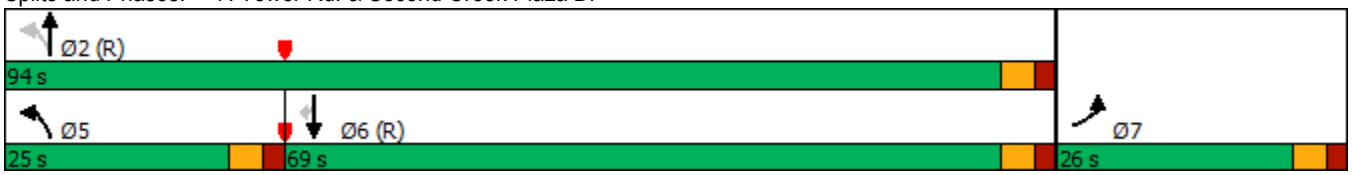
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 26.7	Intersection LOS: C
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: E-470 NB Ramp & E. 96th Ave.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	196	267	354	2306	1930	192
Future Volume (vph)	196	267	354	2306	1930	192
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	26.0		25.0	94.0	69.0	69.0
Total Split (%)	21.7%		20.8%	78.3%	57.5%	57.5%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0		3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	14.5	120.0	99.5	99.5	68.7	68.7
Actuated g/C Ratio	0.12	1.00	0.83	0.83	0.57	0.57
v/c Ratio	0.50	0.18	0.79	0.57	0.69	0.20
Control Delay	53.1	0.2	58.2	3.4	19.1	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	0.2	58.2	3.4	19.1	3.3
LOS	D	A	E	A	B	A
Approach Delay	22.6			10.8	17.6	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	141	250	384	2519	2024	173
Future Volume (vph)	141	250	384	2519	2024	173
Turn Type	Prot	Free	Prot	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases		Free				6
Detector Phase	7		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	35.0		15.0	85.0	70.0	70.0
Total Split (%)	29.2%		12.5%	70.8%	58.3%	58.3%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0		-2.0	-3.0	-2.0	0.0
Total Lost Time (s)	3.0		3.0	2.0	3.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Max	C-Max	C-Max
Act Effct Green (s)	12.5	120.0	26.1	102.5	72.4	70.4
Actuated g/C Ratio	0.10	1.00	0.22	0.85	0.60	0.59
v/c Ratio	0.41	0.17	0.54	0.60	0.69	0.18
Control Delay	53.4	0.2	33.0	6.9	33.3	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	0.2	33.0	6.9	33.3	8.0
LOS	D	A	C	A	C	A
Approach Delay	19.4			10.3	31.3	
Approach LOS	B			B	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 57 (48%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 19.4	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	289	130	163	438	161	333	257	2294	196	190	2073	94
Future Volume (vph)	289	130	163	438	161	333	257	2294	196	190	2073	94
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	21.0	18.0		23.0	20.0		12.0	68.0	68.0	11.0	67.0	67.0
Total Split (%)	17.5%	15.0%		19.2%	16.7%		10.0%	56.7%	56.7%	9.2%	55.8%	55.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-3.0	-2.0		-2.0	-3.0	-2.0	-3.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		3.0	4.0		4.0	3.0	4.0	3.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.7	11.0	120.0	19.6	13.9	120.0	11.4	65.8	64.8	10.6	64.0	63.0
Actuated g/C Ratio	0.13	0.09	1.00	0.16	0.12	1.00	0.10	0.55	0.54	0.09	0.53	0.52
v/c Ratio	0.67	0.42	0.11	0.80	0.41	0.22	0.82	0.84	0.22	0.65	0.78	0.11
Control Delay	57.4	55.0	0.1	67.3	45.0	0.3	74.4	26.5	4.0	56.5	26.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	55.0	0.1	67.3	45.0	0.3	74.4	26.5	4.0	56.5	26.0	6.2
LOS	E	E	A	E	D	A	E	C	A	E	C	A
Approach Delay		40.8			39.2			29.4			27.7	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 79.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	4	347	24	1	16	210	2814	15	7	2422	94
Future Volume (vph)	114	4	347	24	1	16	210	2814	15	7	2422	94
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	15.0	83.0	83.0	12.0	80.0	80.0
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	12.5%	69.2%	69.2%	10.0%	66.7%	66.7%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	4.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.8	22.8		22.8	22.8	93.2	90.4	89.4	85.6	77.6	76.6
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.78	0.75	0.74	0.71	0.65	0.64
v/c Ratio		0.48	0.92		0.10	0.05	0.87	0.75	0.01	0.04	0.75	0.09
Control Delay		50.3	62.1		41.2	0.2	62.8	10.5	0.0	3.9	16.5	1.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		50.3	62.1		41.2	0.2	62.8	10.5	0.0	3.9	16.5	1.9
LOS		D	E		D	A	E	B	A	A	B	A
Approach Delay		59.1			25.6			14.1			16.0	
Approach LOS		E			C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	841	687	252	413	215	559	979	427	645	1237	179
Future Volume (vph)	202	841	687	252	413	215	559	979	427	645	1237	179
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	33.0		11.0	33.0		11.0	24.0		13.0	26.0	
Total Split (s)	16.0	33.0		16.0	33.0		22.0	46.0		25.0	49.0	
Total Split (%)	13.3%	27.5%		13.3%	27.5%		18.3%	38.3%		20.8%	40.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		4.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	22.2	27.7	120.0	12.0	17.5	120.0	21.3	43.0	120.0	24.3	46.0	120.0
Actuated g/C Ratio	0.18	0.23	1.00	0.10	0.15	1.00	0.18	0.36	1.00	0.20	0.38	1.00
v/c Ratio	0.33	0.75	0.45	0.77	0.58	0.14	0.96	0.56	0.28	0.97	0.66	0.12
Control Delay	65.1	65.1	4.3	75.7	62.9	0.2	72.3	45.8	0.4	75.1	32.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	65.1	4.3	75.7	62.9	0.2	72.3	45.8	0.4	75.1	32.6	0.2
LOS	E	E	A	E	E	A	E	D	A	E	C	A
Approach Delay		40.9			51.3			43.5			43.1	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 43.7	Intersection LOS: D
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	31	1811	71	24	691	11	88	1	27	1
Future Volume (vph)	31	1811	71	24	691	11	88	1	27	1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	20.0	5.0	20.0
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	10.0	25.0	10.0	25.0
Total Split (s)	12.0	71.0	71.0	12.0	71.0	71.0	12.0	25.0	12.0	25.0
Total Split (%)	10.0%	59.2%	59.2%	10.0%	59.2%	59.2%	10.0%	20.8%	10.0%	20.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	75.2	71.2	71.2	75.0	71.1	71.1	29.0	24.8	26.5	20.0
Actuated g/C Ratio	0.63	0.59	0.59	0.62	0.59	0.59	0.24	0.21	0.22	0.17
v/c Ratio	0.07	0.63	0.08	0.16	0.24	0.01	0.30	0.14	0.09	0.28
Control Delay	8.0	17.9	1.0	10.9	9.9	0.0	37.5	13.2	33.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	17.9	1.0	10.9	9.9	0.0	37.5	13.2	33.8	11.0
LOS	A	B	A	B	A	A	D	B	C	B
Approach Delay		17.1			9.8			28.8		16.1
Approach LOS		B			A			C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: E. 94th Ave/Settler's Crossing West Access & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	1340	280	120	467	55	144	1	143	122	1	115
Future Volume (vph)	265	1340	280	120	467	55	144	1	143	122	1	115
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	23.0	23.0	23.0	23.0	23.0	10.0	10.0	10.0
Total Split (s)	12.0	63.0	63.0	12.0	63.0	63.0	30.0	33.0	33.0	12.0	15.0	15.0
Total Split (%)	10.0%	52.5%	52.5%	10.0%	52.5%	52.5%	25.0%	27.5%	27.5%	10.0%	12.5%	12.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	89.8	76.8	76.8	83.9	73.7	73.7	12.7	11.9	11.9	17.2	8.2	8.2
Actuated g/C Ratio	0.75	0.64	0.64	0.70	0.61	0.61	0.11	0.10	0.10	0.14	0.07	0.07
v/c Ratio	0.39	0.43	0.27	0.39	0.16	0.06	0.42	0.01	0.52	0.56	0.01	0.48
Control Delay	4.9	5.4	0.8	8.2	10.6	1.0	53.3	46.0	13.9	51.5	51.0	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	5.4	0.8	8.2	10.6	1.0	53.3	46.0	13.9	51.5	51.0	10.0
LOS	A	A	A	A	B	A	D	D	B	D	D	A
Approach Delay		4.6			9.3			33.7			31.4	
Approach LOS		A			A			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: East Collector St & E. 96th Ave.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1242	358	32	420	106	0	206
Future Volume (vph)	1242	358	32	420	106	0	206
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	20.0	20.0
Total Split (s)	75.0	75.0	15.0	90.0	30.0	30.0	30.0
Total Split (%)	62.5%	62.5%	12.5%	75.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min	Min
Act Effct Green (s)	95.5	95.5	102.2	102.2	11.8	11.8	11.8
Actuated g/C Ratio	0.80	0.80	0.85	0.85	0.10	0.10	0.10
v/c Ratio	0.32	0.28	0.09	0.10	0.34	0.34	0.62
Control Delay	1.8	0.5	3.0	1.7	54.8	54.8	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	0.5	3.0	1.7	54.8	54.8	14.4
LOS	A	A	A	A	D	D	B
Approach Delay	1.5			1.8		28.1	
Approach LOS	A			A		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 42.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: E. 96th Ave. & E-470 SB Ramps

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	293	1056	269	18	183	0	38
Future Volume (vph)	293	1056	269	18	183	0	38
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	35.0	90.0	55.0	55.0	30.0	30.0	30.0
Total Split (%)	29.2%	75.0%	45.8%	45.8%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Min	Min	Min
Act Effct Green (s)	19.2	99.0	76.8	76.8	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.82	0.64	0.64	0.12	0.12	0.12
v/c Ratio	0.62	0.29	0.10	0.02	0.51	0.51	0.17
Control Delay	52.5	2.1	9.3	0.1	56.7	56.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	2.1	9.3	0.1	56.7	56.9	6.6
LOS	D	A	A	A	E	E	A
Approach Delay		13.1	8.7			48.2	
Approach LOS		B	A			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 42.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: E-470 NB Ramp & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	12	92	122	3	86	86	1838	67	48	2069	60
Future Volume (vph)	41	12	92	122	3	86	86	1838	67	48	2069	60
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	16.0	22.0		16.0	22.0		12.0	70.0	70.0	12.0	70.0	70.0
Total Split (%)	13.3%	18.3%		13.3%	18.3%		10.0%	58.3%	58.3%	10.0%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.1	8.4	120.0	11.5	8.9	120.0	96.2	88.3	88.3	93.4	85.1	85.1
Actuated g/C Ratio	0.11	0.07	1.00	0.10	0.07	1.00	0.80	0.74	0.74	0.78	0.71	0.71
v/c Ratio	0.12	0.10	0.06	0.39	0.02	0.06	0.44	0.51	0.06	0.22	0.60	0.05
Control Delay	47.8	53.4	0.1	54.2	50.7	0.1	18.7	17.8	5.9	7.5	14.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	53.4	0.1	54.2	50.7	0.1	18.7	17.8	5.9	7.5	14.1	1.2
LOS	D	D	A	D	D	A	B	B	A	A	B	A
Approach Delay		18.0			31.9			17.5			13.6	
Approach LOS		B			C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr/94th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	12	263	336	7	243	99	1649	134	181	2056	46
Future Volume (vph)	100	12	263	336	7	243	99	1649	134	181	2056	46
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	23.0	22.0		23.0	22.0		12.0	63.0	63.0	12.0	63.0	63.0
Total Split (%)	19.2%	18.3%		19.2%	18.3%		10.0%	52.5%	52.5%	10.0%	52.5%	52.5%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	-2.0	-2.0	-2.0	0.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	2.0	3.0	3.0	3.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	8.4	120.0	18.4	9.5	120.0	11.0	74.5	73.5	14.2	76.6	74.6
Actuated g/C Ratio	0.16	0.07	1.00	0.15	0.08	1.00	0.09	0.62	0.61	0.12	0.64	0.62
v/c Ratio	0.19	0.10	0.17	0.67	0.05	0.16	0.33	0.54	0.14	0.47	0.66	0.05
Control Delay	44.2	53.4	0.2	54.5	49.3	0.2	35.5	26.3	14.1	42.2	28.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	53.4	0.2	54.5	49.3	0.2	35.5	26.3	14.1	42.2	28.8	2.3
LOS	D	D	A	D	D	A	D	C	B	D	C	A
Approach Delay		13.7			31.9			25.9			29.4	
Approach LOS		B			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 57 (48%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	70	1811	107	36	2619
Future Vol, veh/h	0	70	1811	107	36	2619
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	200	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	96	95	95	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	74	1886	113	38	2728

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	-	0	0	1999	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.12	-
Pot Cap-1 Maneuver	0	0	-	-	*627	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %			-	-	1	-
Mov Cap-1 Maneuver	-	-	-	-	*627	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	* 627	-
HCM Lane V/C Ratio	-	-	-	0.06	-
HCM Control Delay (s)	-	-	0	11.1	-
HCM Lane LOS	-	-	A	B	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	111	214	279	74	120	102	1679	520	410	2336	57
Future Volume (vph)	109	111	214	279	74	120	102	1679	520	410	2336	57
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	20.0	27.0		20.0	27.0		12.0	61.0	61.0	12.0	61.0	61.0
Total Split (%)	16.7%	22.5%		16.7%	22.5%		10.0%	50.8%	50.8%	10.0%	50.8%	50.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.1	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		3.9	3.0	4.0	4.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.6	10.3	120.0	15.0	13.9	120.0	10.2	58.0	57.0	21.6	69.5	68.5
Actuated g/C Ratio	0.11	0.09	1.00	0.12	0.12	1.00	0.08	0.48	0.48	0.18	0.58	0.57
v/c Ratio	0.29	0.38	0.14	0.68	0.19	0.08	0.36	0.71	0.53	0.69	0.83	0.06
Control Delay	52.3	55.0	0.2	55.9	46.3	0.1	54.9	26.5	3.8	51.0	25.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	55.0	0.2	55.9	46.3	0.1	54.9	26.5	3.8	51.0	25.8	2.3
LOS	D	D	A	E	D	A	D	C	A	D	C	A
Approach Delay		27.3			40.3			22.6			29.0	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1041	455	11	0	20
Future Vol, veh/h	0	1041	455	11	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1096	479	12	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	240
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	761
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	761
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	761
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	9.9
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	152	890	405	41	39	61
Future Vol, veh/h	152	890	405	41	39	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	160	937	426	43	41	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	469	0	-	0	1215	213
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	789	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1343	-	-	-	*530	*925
Stage 1	-	-	-	-	*873	-
Stage 2	-	-	-	-	*680	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1343	-	-	-	*467	*925
Mov Cap-2 Maneuver	-	-	-	-	*467	-
Stage 1	-	-	-	-	*769	-
Stage 2	-	-	-	-	*680	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1343	-	-	-	467	925
HCM Lane V/C Ratio	0.119	-	-	-	0.088	0.069
HCM Control Delay (s)	8	-	-	-	13.5	9.2
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	735	301	157	107	144
Future Volume (vph)	194	735	301	157	107	144
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	90.0	78.0	78.0	30.0	30.0
Total Split (%)	10.0%	75.0%	65.0%	65.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Min	Min
Act Effct Green (s)	97.0	97.0	83.3	83.3	13.0	13.0
Actuated g/C Ratio	0.81	0.81	0.69	0.69	0.11	0.11
v/c Ratio	0.24	0.27	0.13	0.14	0.59	0.50
Control Delay	1.9	1.7	6.9	1.5	62.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	1.7	6.9	1.5	62.9	13.1
LOS	A	A	A	A	E	B
Approach Delay		1.8	5.1		34.3	
Approach LOS		A	A		C	

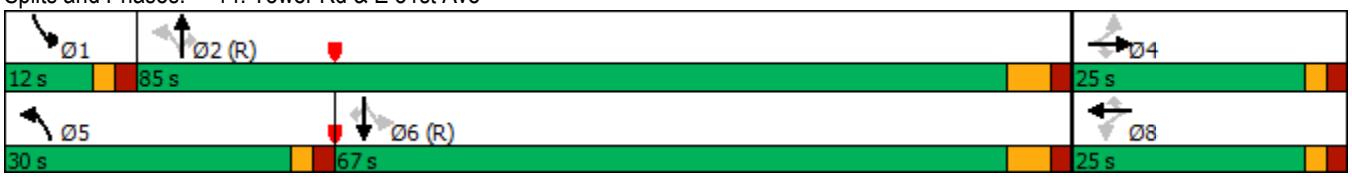
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 37.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: E. 88th Ave. & East Collector

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	4	322	12	1	2	366	2278	27	8	2705	100
Future Volume (vph)	49	4	322	12	1	2	366	2278	27	8	2705	100
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	85.0	85.0	12.0	67.0	67.0
Total Split (%)	20.5%	20.5%	20.5%	20.5%	20.5%	20.5%	24.6%	69.7%	69.7%	9.8%	54.9%	54.9%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	4.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0	22.0		22.0	22.0	96.0	93.2	92.2	75.3	67.3	66.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.79	0.76	0.76	0.62	0.55	0.54
v/c Ratio		0.21	0.63		0.05	0.01	0.87	0.60	0.02	0.05	0.99	0.11
Control Delay		45.0	14.1		41.9	0.0	54.7	7.5	0.8	6.2	43.5	5.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		45.0	14.1		41.9	0.0	54.7	7.5	0.8	6.2	43.5	5.2
LOS		D	B		D	A	D	A	A	A	D	A
Approach Delay		18.5			36.3			13.9			42.0	
Approach LOS		B			D			B			D	

Intersection Summary	
Cycle Length: 122	
Actuated Cycle Length: 122	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

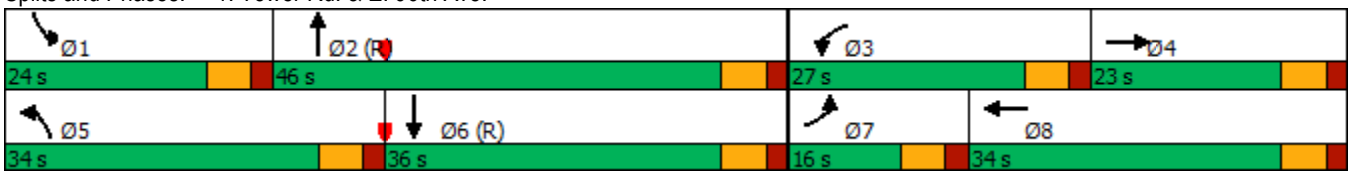
Splits and Phases: 14: Tower Rd & E 81st Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	737	762	653	1051	885	927	1855	508	505	1305	237
Future Volume (vph)	282	737	762	653	1051	885	927	1855	508	505	1305	237
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	35.0		11.0	34.0		11.0	24.0		13.0	26.0	
Total Split (s)	16.0	23.0		27.0	34.0		34.0	46.0		24.0	36.0	
Total Split (%)	13.3%	19.2%		22.5%	28.3%		28.3%	38.3%		20.0%	30.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-2.0	-3.0	
Total Lost Time (s)	4.0	3.0		4.0	3.0		3.0	3.0		4.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.0	20.0	120.0	23.0	31.0	120.0	31.0	43.0	120.0	20.0	33.0	120.0
Actuated g/C Ratio	0.10	0.17	1.00	0.19	0.26	1.00	0.26	0.36	1.00	0.17	0.28	1.00
v/c Ratio	0.86	0.91	0.50	1.04	0.83	0.58	1.07	1.04	0.33	0.92	0.95	0.16
Control Delay	66.3	74.5	6.2	89.3	58.1	1.8	75.8	75.4	0.3	71.8	58.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.3	74.5	6.2	89.3	58.1	1.8	75.8	75.4	0.3	71.8	58.1	0.2
LOS	E	E	A	F	E	A	E	E	A	E	E	A
Approach Delay		44.0			46.7			63.7			54.7	
Approach LOS		D			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 53.6	Intersection LOS: D
Intersection Capacity Utilization 97.9%	ICU Level of Service F
Analysis Period (min) 15	

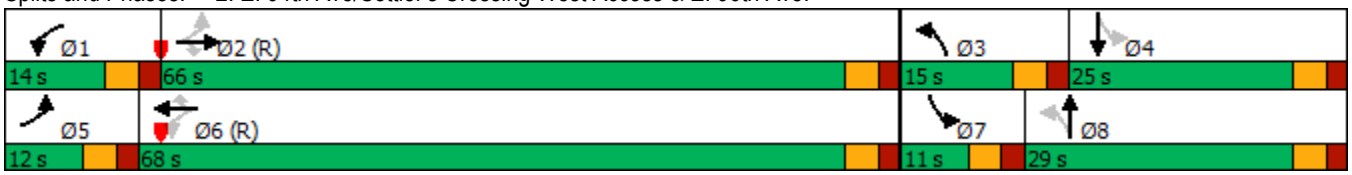
Splits and Phases: 1: Tower Rd. & E. 96th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	114	1412	224	97	2220	31	194	1	79	1
Future Volume (vph)	114	1412	224	97	2220	31	194	1	79	1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	5	2		1	6		3	8	7	4
Permitted Phases	2		2	6		6	8		4	
Detector Phase	5	2	2	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	20.0	5.0	20.0
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	10.0	25.0	10.0	25.0
Total Split (s)	12.0	66.0	66.0	14.0	68.0	68.0	15.0	29.0	11.0	25.0
Total Split (%)	10.0%	55.0%	55.0%	11.7%	56.7%	56.7%	12.5%	24.2%	9.2%	20.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	72.0	65.1	65.1	74.0	66.0	66.0	31.2	23.2	22.0	20.0
Actuated g/C Ratio	0.60	0.54	0.54	0.62	0.55	0.55	0.26	0.19	0.18	0.17
v/c Ratio	0.73	0.54	0.25	0.44	0.84	0.04	0.61	0.25	0.32	0.23
Control Delay	49.2	44.0	24.7	20.5	23.3	0.2	44.3	9.8	37.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	44.0	24.7	20.5	23.3	0.2	44.3	9.8	37.3	11.8
LOS	D	D	C	C	C	A	D	A	D	B
Approach Delay		41.8			22.9			33.2		25.1
Approach LOS		D			C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: E. 94th Ave/Settler's Crossing West Access & E. 96th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	244	846	492	353	1560	148	563	1	278	168	1	225
Future Volume (vph)	244	846	492	353	1560	148	563	1	278	168	1	225
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	23.0	23.0	23.0	23.0	23.0	10.0	10.0	10.0
Total Split (s)	25.0	45.0	45.0	30.0	50.0	50.0	30.0	33.0	33.0	12.0	15.0	15.0
Total Split (%)	20.8%	37.5%	37.5%	25.0%	41.7%	41.7%	25.0%	27.5%	27.5%	10.0%	12.5%	12.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	69.4	51.3	51.3	76.2	55.1	55.1	25.6	25.8	25.8	18.2	9.2	9.2
Actuated g/C Ratio	0.58	0.43	0.43	0.64	0.46	0.46	0.21	0.22	0.22	0.15	0.08	0.08
v/c Ratio	0.78	0.41	0.53	0.73	0.70	0.19	0.81	0.00	0.51	0.74	0.01	0.70
Control Delay	65.0	11.3	3.4	30.6	27.9	7.3	54.3	34.0	7.5	53.8	49.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	11.3	3.4	30.6	27.9	7.3	54.3	34.0	7.5	53.8	49.0	18.0
LOS	E	B	A	C	C	A	D	C	A	D	D	B
Approach Delay		17.1			26.9			38.8			33.4	
Approach LOS		B			C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: East Collector St & E. 96th Ave.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	949	365	58	1606	47	0	449
Future Volume (vph)	949	365	58	1606	47	0	449
Turn Type	NA	Perm	pm+pt	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	20.0	20.0	10.0	20.0	20.0	20.0	20.0
Total Split (s)	60.0	60.0	15.0	75.0	45.0	45.0	45.0
Total Split (%)	50.0%	50.0%	12.5%	62.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min	Min
Act Effct Green (s)	66.3	66.3	76.3	76.3	37.7	37.7	37.7
Actuated g/C Ratio	0.55	0.55	0.64	0.64	0.31	0.31	0.31
v/c Ratio	0.36	0.37	0.17	0.52	0.05	0.05	0.88
Control Delay	8.4	1.3	9.8	10.9	26.7	26.7	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	1.3	9.8	10.9	26.7	26.7	51.1
LOS	A	A	A	B	C	C	D
Approach Delay	6.4			10.9		48.8	
Approach LOS	A			B		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: E. 96th Ave. & E-470 SB Ramps

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	439	559	1214	126	449	0	22
Future Volume (vph)	439	559	1214	126	449	0	22
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	30.0	90.0	60.0	60.0	30.0	30.0	30.0
Total Split (%)	25.0%	75.0%	50.0%	50.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Min	Min	Min
Act Effct Green (s)	24.2	89.8	62.6	62.6	24.2	24.2	24.2
Actuated g/C Ratio	0.20	0.75	0.52	0.52	0.20	0.20	0.20
v/c Ratio	0.74	0.17	0.53	0.17	0.77	0.77	0.07
Control Delay	69.2	1.6	20.8	5.6	60.8	60.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	1.6	20.8	5.6	60.8	60.8	0.4
LOS	E	A	C	A	E	E	A
Approach Delay		31.3	19.4			57.9	
Approach LOS		C	B			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: E-470 NB Ramp & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	17	267	225	24	266	354	2829	251	160	2369	192
Future Volume (vph)	196	17	267	225	24	266	354	2829	251	160	2369	192
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free	2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	13.0	13.0		21.0	21.0		25.0	68.0	68.0	18.0	61.0	61.0
Total Split (%)	10.8%	10.8%		17.5%	17.5%		20.8%	56.7%	56.7%	15.0%	50.8%	50.8%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.2	8.6	120.0	16.6	11.8	120.0	92.4	76.1	76.1	77.2	63.9	63.9
Actuated g/C Ratio	0.09	0.07	1.00	0.14	0.10	1.00	0.77	0.63	0.63	0.64	0.53	0.53
v/c Ratio	0.64	0.13	0.18	0.50	0.14	0.18	0.85	0.91	0.25	0.65	0.91	0.22
Control Delay	62.9	54.0	0.2	51.3	48.6	0.2	35.1	34.3	8.8	51.4	24.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	54.0	0.2	51.3	48.6	0.2	35.1	34.3	8.8	51.4	24.9	2.7
LOS	E	D	A	D	D	A	D	C	A	D	C	A
Approach Delay		27.7			24.8			32.5			24.9	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Tower Rd. & Second Creek Plaza Dr/94th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	8	250	265	14	222	384	3071	326	315	2372	173
Future Volume (vph)	141	8	250	265	14	222	384	3071	326	315	2372	173
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	15.0	20.0		15.0	20.0		15.0	70.0	70.0	15.0	70.0	70.0
Total Split (%)	12.5%	16.7%		12.5%	16.7%		12.5%	58.3%	58.3%	12.5%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.0	8.3	120.0	14.4	8.6	120.0	23.8	74.7	74.7	19.2	70.2	70.2
Actuated g/C Ratio	0.10	0.07	1.00	0.12	0.07	1.00	0.20	0.62	0.62	0.16	0.58	0.58
v/c Ratio	0.43	0.06	0.17	0.68	0.11	0.15	0.59	1.01	0.33	0.60	0.83	0.18
Control Delay	55.0	52.6	0.2	59.2	53.6	0.2	32.5	43.4	13.5	51.4	33.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	52.6	0.2	59.2	53.6	0.2	32.5	43.4	13.5	51.4	33.3	5.9
LOS	E	D	A	E	D	A	C	D	B	D	C	A
Approach Delay		20.6			32.9			39.7			33.7	
Approach LOS		C			C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 57 (48%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 92.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Tower Rd. & 92nd Ave.

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	173	3607	248	94	2793
Future Vol, veh/h	0	173	3607	248	94	2793
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	200	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	182	3797	261	99	2940

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	-	0	0	4058	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.12	-
Pot Cap-1 Maneuver	0	0	-	-	*~ 88	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %			-	-	1	-
Mov Cap-1 Maneuver	-	-	-	-	*~ 88	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	7.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	~ * 88	-
HCM Lane V/C Ratio	-	-	-	1.124	-
HCM Control Delay (s)	-	-	0	220.5	-
HCM Lane LOS	-	-	A	F	-
HCM 95th %tile Q(veh)	-	-	-	6.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	289	130	163	770	161	589	257	2989	342	270	2512	94
Future Volume (vph)	289	130	163	770	161	589	257	2989	342	270	2512	94
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	21.0	18.0		23.0	20.0		12.0	68.0	68.0	11.0	67.0	67.0
Total Split (%)	17.5%	15.0%		19.2%	16.7%		10.0%	56.7%	56.7%	9.2%	55.8%	55.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-3.0	-2.0		-2.0	-3.0	-2.0	-3.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		3.0	4.0		4.0	3.0	4.0	3.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.7	11.0	120.0	20.0	14.3	120.0	11.0	65.0	64.0	11.0	64.0	63.0
Actuated g/C Ratio	0.13	0.09	1.00	0.17	0.12	1.00	0.09	0.54	0.53	0.09	0.53	0.52
v/c Ratio	0.67	0.42	0.11	1.37	0.40	0.39	0.85	1.10	0.38	0.89	0.95	0.11
Control Delay	57.4	55.0	0.1	212.9	46.9	0.7	78.4	77.5	6.8	68.7	40.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	55.0	0.1	212.9	46.9	0.7	78.4	77.5	6.8	68.7	40.1	6.1
LOS	E	E	A	F	D	A	E	E	A	E	D	A
Approach Delay		40.8			112.0			70.7			41.7	
Approach LOS		D			F			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 66.3	Intersection LOS: E
Intersection Capacity Utilization 104.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	742	1412	35	0	109
Future Vol, veh/h	0	742	1412	35	0	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	781	1486	37	0	115

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	743
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	358
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	358
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	358
HCM Lane V/C Ratio	-	-	-	0.32
HCM Control Delay (s)	-	-	-	19.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	712	1306	12	77	141
Future Vol, veh/h	30	712	1306	12	77	141
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	150	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	749	1375	13	81	148

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1388	0	-	0	1814	688			
Stage 1	-	-	-	-	1375	-			
Stage 2	-	-	-	-	439	-			
Critical Hdwy	4.14	-	-	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	2.22	-	-	-	3.52	3.32			
Pot Cap-1 Maneuver	*811	-	-	-	*309	*542			
Stage 1	-	-	-	-	*511	-			
Stage 2	-	-	-	-	*752	-			
Platoon blocked, %	1	-	-	-	1	1			
Mov Cap-1 Maneuver	*811	-	-	-	*297	*542			
Mov Cap-2 Maneuver	-	-	-	-	*297	-			
Stage 1	-	-	-	-	*491	-			
Stage 2	-	-	-	-	*752	-			

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	* 811	-	-	-	297	542
HCM Lane V/C Ratio	0.039	-	-	-	0.273	0.274
HCM Control Delay (s)	9.6	-	-	-	21.6	14.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1	1.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	153	635	1055	131	186	264
Future Volume (vph)	153	635	1055	131	186	264
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	15.0	93.0	78.0	78.0	27.0	27.0
Total Split (%)	12.5%	77.5%	65.0%	65.0%	22.5%	22.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	88.0	88.0	74.4	74.4	22.0	22.0
Actuated g/C Ratio	0.73	0.73	0.62	0.62	0.18	0.18
v/c Ratio	0.45	0.26	0.51	0.13	0.60	0.60
Control Delay	10.0	2.4	13.8	2.4	53.9	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	2.4	13.8	2.4	53.9	17.2
LOS	B	A	B	A	D	B
Approach Delay		3.9	12.5		32.3	
Approach LOS		A	B		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: E. 88th Ave. & East Collector

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	4	347	24	1	16	210	3638	15	7	3178	110
Future Volume (vph)	132	4	347	24	1	16	210	3638	15	7	3178	110
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.0	23.0	23.0	9.0	23.0	23.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	15.0	83.0	83.0	12.0	80.0	80.0
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	12.5%	69.2%	69.2%	10.0%	66.7%	66.7%
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	2.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)		2.0	2.0		2.0	2.0	2.0	3.0	4.0	2.0	3.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.8	22.8		22.8	22.8	93.2	90.4	89.4	85.6	77.6	76.6
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.78	0.75	0.74	0.71	0.65	0.64
v/c Ratio		0.55	0.93		0.10	0.05	0.87	0.97	0.01	0.04	0.99	0.11
Control Delay		53.3	64.4		41.2	0.2	62.8	23.4	0.0	3.9	33.9	3.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		53.3	64.4		41.2	0.2	62.8	23.4	0.0	3.9	33.9	3.0
LOS		D	E		D	A	E	C	A	A	C	A
Approach Delay		61.2			25.6			25.4			32.8	
Approach LOS		E			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 113.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 14: Tower Rd & E 81st Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	841	687	252	413	215	559	979	427	645	1237	179
Future Volume (vph)	202	841	687	252	413	215	559	979	427	645	1237	179
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	33.0		11.0	33.0		11.0	24.0		13.0	26.0	
Total Split (s)	16.0	33.0		16.0	33.0		22.0	46.0		25.0	49.0	
Total Split (%)	13.3%	27.5%		13.3%	27.5%		18.3%	38.3%		20.8%	40.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		4.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	21.7	27.7	120.0	11.5	17.5	120.0	19.0	46.2	120.0	21.6	48.7	120.0
Actuated g/C Ratio	0.18	0.23	1.00	0.10	0.15	1.00	0.16	0.38	1.00	0.18	0.41	1.00
v/c Ratio	0.34	0.75	0.45	0.55	0.58	0.14	0.74	0.52	0.28	0.75	0.62	0.12
Control Delay	65.5	65.2	4.3	63.8	62.9	0.2	51.9	43.2	0.4	52.4	30.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.5	65.2	4.3	63.8	62.9	0.2	51.9	43.2	0.4	52.4	30.6	0.2
LOS	E	E	A	E	E	A	D	D	A	D	C	A
Approach Delay		41.0			47.8			36.4			34.8	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 38.6	Intersection LOS: D
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Tower Rd. & E. 96th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	111	214	279	74	120	102	1679	520	410	2336	57
Future Volume (vph)	109	111	214	279	74	120	102	1679	520	410	2336	57
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	34.0		11.0	32.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	20.0	27.0		20.0	27.0		12.0	61.0	61.0	12.0	61.0	61.0
Total Split (%)	16.7%	22.5%		16.7%	22.5%		10.0%	50.8%	50.8%	10.0%	50.8%	50.8%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.1	-3.0	-2.0	-2.0	-3.0	-2.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		3.9	3.0	4.0	4.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.3	10.3	120.0	13.3	12.6	120.0	10.2	58.0	57.0	23.4	71.3	70.3
Actuated g/C Ratio	0.11	0.09	1.00	0.11	0.10	1.00	0.08	0.48	0.48	0.20	0.59	0.59
v/c Ratio	0.30	0.38	0.14	0.53	0.21	0.08	0.36	0.71	0.53	0.64	0.81	0.06
Control Delay	52.5	55.0	0.2	50.6	47.1	0.1	54.9	26.5	3.8	48.2	24.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	55.0	0.2	50.6	47.1	0.1	54.9	26.5	3.8	48.2	24.7	2.3
LOS	D	D	A	D	D	A	D	C	A	D	C	A
Approach Delay		27.4			37.3			22.6			27.7	
Approach LOS		C			D			C			C	

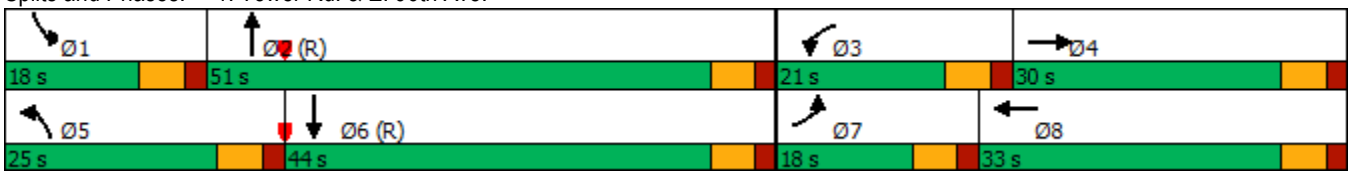
Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Tower Rd. & E. 88th Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	737	762	653	1051	885	927	1855	508	505	1305	237
Future Volume (vph)	282	737	762	653	1051	885	927	1855	508	505	1305	237
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			Free
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	35.0		11.0	34.0		11.0	24.0		13.0	26.0	
Total Split (s)	18.0	30.0		21.0	33.0		25.0	51.0		18.0	44.0	
Total Split (%)	15.0%	25.0%		17.5%	27.5%		20.8%	42.5%		15.0%	36.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-3.0	-3.0		-3.0	-3.0		-2.0	-3.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		4.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.7	26.5	120.0	18.0	29.7	120.0	22.5	48.1	120.0	14.4	41.0	120.0
Actuated g/C Ratio	0.11	0.22	1.00	0.15	0.25	1.00	0.19	0.40	1.00	0.12	0.34	1.00
v/c Ratio	0.75	0.69	0.50	0.91	0.87	0.58	1.01	0.93	0.33	0.88	0.77	0.16
Control Delay	59.0	65.6	6.2	69.2	53.4	1.8	62.1	54.3	0.3	69.0	38.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	65.6	6.2	69.2	53.4	1.8	62.1	54.3	0.3	69.0	38.8	0.2
LOS	E	E	A	E	D	A	E	D	A	E	D	A
Approach Delay		39.2			39.7			48.0			41.8	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 85 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 42.8	Intersection LOS: D
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

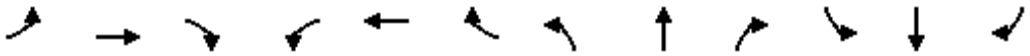
Splits and Phases: 1: Tower Rd. & E. 96th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	289	130	163	770	161	589	257	2989	342	270	2512	94
Future Volume (vph)	289	130	163	770	161	589	257	2989	342	270	2512	94
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	18.0		11.0	20.0		11.0	27.0	27.0	11.0	27.0	27.0
Total Split (s)	21.0	18.0		23.0	20.0		13.0	68.0	68.0	11.0	66.0	66.0
Total Split (%)	17.5%	15.0%		19.2%	16.7%		10.8%	56.7%	56.7%	9.2%	55.0%	55.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.1		-3.0	-2.2		-2.0	-3.0	-2.0	-3.0	-3.0	-2.0
Total Lost Time (s)	4.0	3.9		3.0	3.8		4.0	3.0	4.0	3.0	3.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.7	11.1	120.0	20.0	14.5	120.0	12.0	65.0	64.0	11.0	63.0	62.0
Actuated g/C Ratio	0.13	0.09	1.00	0.17	0.12	1.00	0.10	0.54	0.53	0.09	0.52	0.52
v/c Ratio	0.67	0.41	0.11	0.95	0.39	0.39	0.78	1.10	0.38	0.89	0.96	0.11
Control Delay	57.4	54.8	0.1	62.1	46.1	0.7	69.5	77.5	6.8	67.9	43.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	54.8	0.1	62.1	46.1	0.7	69.5	77.5	6.8	67.9	43.1	6.4
LOS	E	D	A	E	D	A	E	E	A	E	D	A
Approach Delay		40.8			36.3			70.0			44.2	
Approach LOS		D			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 53.4	Intersection LOS: D
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

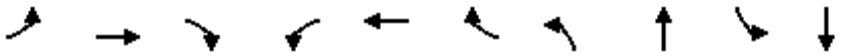
Splits and Phases: 10: Tower Rd. & E. 88th Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	41	424	480	226	291	89	472	1015	241	168	1266	32
v/c Ratio	0.15	0.72	0.30	0.66	0.36	0.19	0.85	0.58	0.27	0.59	0.85	0.04
Control Delay	30.2	54.2	0.5	58.0	40.4	4.6	51.7	35.8	11.2	62.0	38.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	54.2	0.5	58.0	40.4	4.6	51.7	35.8	11.2	62.0	38.4	0.1
Queue Length 50th (ft)	22	164	0	89	107	4	190	356	53	64	461	0
Queue Length 95th (ft)	48	216	0	128	146	15	#304	468	144	103	560	0
Internal Link Dist (ft)		1232			699			1200			845	
Turn Bay Length (ft)	285		185	360		185	485			435		
Base Capacity (vph)	273	678	1583	371	863	476	556	1736	895	295	1485	730
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.63	0.30	0.61	0.34	0.19	0.85	0.58	0.27	0.57	0.85	0.04

Intersection Summary

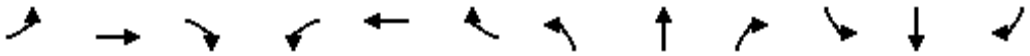
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	731	81	25	437	6	104	53	18	66
v/c Ratio	0.03	0.64	0.08	0.07	0.20	0.01	0.32	0.13	0.06	0.15
Control Delay	12.3	37.2	9.1	9.5	15.6	0.8	40.8	10.6	35.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	37.2	9.1	9.5	15.6	0.8	40.8	10.6	35.7	9.7
Queue Length 50th (ft)	8	434	0	10	125	0	67	1	11	1
Queue Length 95th (ft)	m18	560	m36	25	118	m1	120	34	31	37
Internal Link Dist (ft)		430			1340			494		397
Turn Bay Length (ft)	360			200		185				
Base Capacity (vph)	639	1151	1009	368	2189	1003	321	423	325	432
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.64	0.08	0.07	0.20	0.01	0.32	0.13	0.06	0.15

Intersection Summary

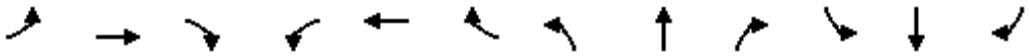
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	463	326	260	261	5	176	1	212	12	1	32
v/c Ratio	0.01	0.38	0.29	0.39	0.18	0.00	0.46	0.00	0.57	0.08	0.01	0.17
Control Delay	4.6	10.1	2.9	6.3	5.8	0.0	53.3	46.0	12.8	39.4	53.0	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	10.1	2.9	6.3	5.8	0.0	53.3	46.0	12.8	39.4	53.0	1.9
Queue Length 50th (ft)	0	117	24	53	50	0	67	1	0	8	1	0
Queue Length 95th (ft)	m4	161	29	95	126	0	100	6	72	24	7	0
Internal Link Dist (ft)		1340			560			300			384	
Turn Bay Length (ft)	360		185	250		185						
Base Capacity (vph)	815	1214	1135	665	1422	1222	486	307	438	286	294	342
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.38	0.29	0.39	0.18	0.00	0.36	0.00	0.48	0.04	0.00	0.09

Intersection Summary

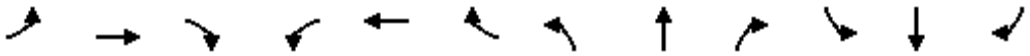
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	54	13	89	125	3	102	80	1572	67	57	1827	88
v/c Ratio	0.15	0.10	0.06	0.40	0.02	0.06	0.36	0.60	0.06	0.21	0.70	0.08
Control Delay	48.2	53.4	0.1	54.9	51.3	0.1	21.9	5.6	0.2	3.5	8.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	53.4	0.1	54.9	51.3	0.1	21.9	5.6	0.2	3.5	8.1	0.2
Queue Length 50th (ft)	20	10	0	47	2	0	10	122	1	1	42	0
Queue Length 95th (ft)	41	30	0	78	12	0	m67	161	m1	m3	848	m2
Internal Link Dist (ft)		380			797			1236			1200	
Turn Bay Length (ft)							385			150		150
Base Capacity (vph)	411	263	1583	343	263	1583	263	2617	1199	280	2593	1164
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.05	0.06	0.36	0.01	0.06	0.30	0.60	0.06	0.20	0.70	0.08

Intersection Summary

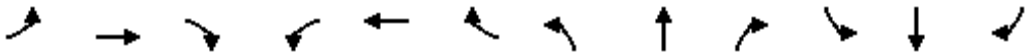
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	96	13	162	334	6	292	65	1331	134	216	1772	54
v/c Ratio	0.19	0.10	0.10	0.71	0.04	0.18	0.31	0.60	0.13	0.51	0.73	0.05
Control Delay	45.3	53.4	0.1	58.3	50.3	0.3	17.4	12.8	3.3	56.3	10.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	53.4	0.1	58.3	50.3	0.3	17.4	12.8	3.3	56.3	10.4	1.0
Queue Length 50th (ft)	34	10	0	128	4	0	10	341	16	86	147	0
Queue Length 95th (ft)	62	30	0	179	18	0	m26	533	41	m130	316	m2
Internal Link Dist (ft)		312			413			871			1236	
Turn Bay Length (ft)				410			285		185	285		
Base Capacity (vph)	554	263	1583	486	263	1583	253	2204	1027	427	2441	1126
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.05	0.10	0.69	0.02	0.18	0.26	0.60	0.13	0.51	0.73	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	195	5	118	214	4	60	73	1287	194	247	1863	113
v/c Ratio	0.57	0.05	0.07	0.60	0.04	0.04	0.41	0.61	0.20	0.57	0.73	0.10
Control Delay	58.1	53.0	0.1	55.8	55.0	0.1	17.3	17.3	4.2	25.9	6.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	53.0	0.1	55.8	55.0	0.1	17.3	17.3	4.2	25.9	6.8	0.4
Queue Length 50th (ft)	75	4	0	82	3	0	9	291	14	57	160	2
Queue Length 95th (ft)	112	17	0	107	15	0	46	448	55	m150	733	m4
Internal Link Dist (ft)		570			672			1155			1055	
Turn Bay Length (ft)	135		150	285			135		175	155		150
Base Capacity (vph)	400	310	1583	363	248	1583	186	2115	992	430	2559	1170
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.02	0.07	0.59	0.02	0.04	0.39	0.61	0.20	0.57	0.73	0.10

Intersection Summary

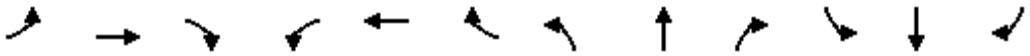
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	350	14	2	398	1609	29	9	2053	108
v/c Ratio	0.19	0.75	0.05	0.01	0.95	0.60	0.02	0.04	1.02	0.12
Control Delay	45.5	26.2	42.8	0.0	70.6	7.9	0.9	5.0	52.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	26.2	42.8	0.0	70.6	7.9	0.9	5.0	52.6	4.6
Queue Length 50th (ft)	32	78	9	0	252	226	0	1	~891	9
Queue Length 95th (ft)	69	#196	29	0	#451	390	6	5	#1028	36
Internal Link Dist (ft)	738		974			601			515	
Turn Bay Length (ft)					250		250	105		
Base Capacity (vph)	242	465	258	347	417	2689	1201	288	2006	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.75	0.05	0.01	0.95	0.60	0.02	0.03	1.02	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



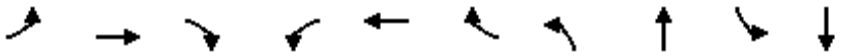
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	138	535	646	408	603	278	749	1863	472	239	1352	66
v/c Ratio	0.75	0.91	0.41	0.95	0.76	0.55	1.05	1.00	0.50	0.84	0.96	0.08
Control Delay	57.9	69.7	0.8	77.3	50.1	22.4	74.5	47.6	16.1	78.7	50.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	69.7	0.8	77.3	50.1	22.4	74.5	47.6	16.1	78.7	50.8	0.2
Queue Length 50th (ft)	79	216	0	159	252	96	~335	~681	189	95	527	0
Queue Length 95th (ft)	#151	#317	0	m#244	m285	m134	m#330	m674	m198	#163	#684	0
Internal Link Dist (ft)		1232			699			1200			845	
Turn Bay Length (ft)	285		185	360		185	485			435		
Base Capacity (vph)	184	589	1583	429	796	504	715	1857	940	286	1415	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.91	0.41	0.95	0.76	0.55	1.05	1.00	0.50	0.84	0.96	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

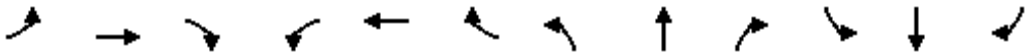
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	74	931	255	101	1032	17	220	96	9	43
v/c Ratio	0.22	0.87	0.25	0.51	0.49	0.02	0.67	0.21	0.03	0.10
Control Delay	12.2	43.4	8.6	24.5	29.8	2.8	52.6	8.5	35.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	43.4	8.6	24.5	29.8	2.8	52.6	8.5	35.2	11.5
Queue Length 50th (ft)	27	555	37	45	361	0	155	1	5	1
Queue Length 95th (ft)	m38	m676	m71	m67	401	m1	246	44	19	31
Internal Link Dist (ft)		430			1340			414		397
Turn Bay Length (ft)	360			200		185				
Base Capacity (vph)	336	1074	1002	201	2107	968	328	455	311	415
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.87	0.25	0.50	0.49	0.02	0.67	0.21	0.03	0.10

Intersection Summary

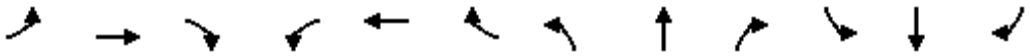
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	36	428	571	444	488	14	620	1	414	8	1	21
v/c Ratio	0.08	0.59	0.62	0.71	0.43	0.01	0.82	0.00	0.59	0.05	0.01	0.08
Control Delay	15.6	39.8	14.7	21.2	16.1	0.0	53.8	34.0	7.3	31.5	54.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	39.8	14.7	21.2	16.1	0.0	53.8	34.0	7.3	31.5	54.0	0.6
Queue Length 50th (ft)	15	233	129	171	229	0	232	1	0	4	1	0
Queue Length 95th (ft)	m21	m294	m210	303	332	0	300	6	87	16	7	0
Internal Link Dist (ft)		1340			560			300			384	
Turn Bay Length (ft)	360		185	250		185						
Base Capacity (vph)	462	721	921	625	1145	1021	801	589	784	165	294	418
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.59	0.62	0.71	0.43	0.01	0.77	0.00	0.53	0.05	0.00	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



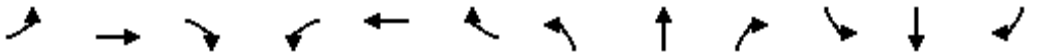
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	278	18	239	224	25	302	339	2507	253	186	1985	283
v/c Ratio	0.75	0.13	0.15	0.51	0.18	0.19	0.86	1.06	0.23	0.82	0.98	0.30
Control Delay	65.3	53.1	0.2	53.4	54.2	0.3	39.0	52.6	7.8	54.8	31.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.3	53.1	0.2	53.4	54.2	0.3	39.0	52.6	7.8	54.8	31.4	2.3
Queue Length 50th (ft)	109	13	0	76	18	0	~251	~1167	63	102	852	31
Queue Length 95th (ft)	#165	37	0	128	47	0	m#239	m#1025	m61	m127	m#941	m36
Internal Link Dist (ft)		380			797			1236			1200	
Turn Bay Length (ft)							385			150		150
Base Capacity (vph)	371	279	1583	440	279	1583	392	2364	1092	227	2034	953
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.06	0.15	0.51	0.09	0.19	0.86	1.06	0.23	0.82	0.98	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	8	176	251	15	267	263	2661	317	392	1809	191
v/c Ratio	0.72	0.06	0.11	0.85	0.11	0.17	0.76	1.11	0.29	0.76	0.78	0.17
Control Delay	73.3	52.6	0.1	78.1	53.6	0.2	44.0	77.2	2.9	54.6	8.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.3	52.6	0.1	78.1	53.6	0.2	44.0	77.2	2.9	54.6	8.8	1.4
Queue Length 50th (ft)	65	6	0	~113	11	0	120	~1280	40	164	183	2
Queue Length 95th (ft)	#114	22	0	#200	33	0	m#208	m#1253	m27	m#240	m204	m5
Internal Link Dist (ft)		312			413			871			1236	
Turn Bay Length (ft)				410			285		185	285		
Base Capacity (vph)	228	186	1583	297	186	1583	345	2388	1112	513	2329	1107
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.04	0.11	0.85	0.08	0.17	0.76	1.11	0.29	0.76	0.78	0.17

Intersection Summary

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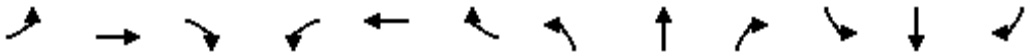
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	435	6	104	366	7	274	152	2548	168	79	1891	147
v/c Ratio	0.86	0.04	0.07	0.72	0.06	0.17	0.63	1.04	0.15	0.43	0.83	0.14
Control Delay	66.8	49.2	0.1	56.1	54.1	0.2	35.8	50.5	1.3	23.6	12.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.8	49.2	0.1	56.1	54.1	0.2	35.8	50.5	1.3	23.6	12.5	0.5
Queue Length 50th (ft)	171	5	0	140	5	0	55	~1119	0	10	291	1
Queue Length 95th (ft)	#252	17	0	168	21	0	#184	#1417	22	m33	658	m2
Internal Link Dist (ft)		570			672			1155			1055	
Turn Bay Length (ft)	135		150	285			135		175	155		150
Base Capacity (vph)	514	294	1583	506	155	1583	241	2446	1141	184	2266	1070
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.02	0.07	0.72	0.05	0.17	0.63	1.04	0.15	0.43	0.83	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

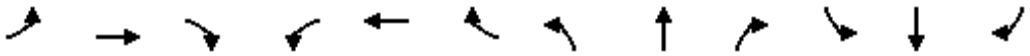
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	143	377	27	17	228	2888	16	8	2135	109
v/c Ratio	0.62	0.96	0.11	0.05	0.82	1.06	0.01	0.05	0.94	0.11
Control Delay	58.4	67.4	43.1	0.2	54.3	52.5	0.0	3.9	28.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	67.4	43.1	0.2	54.3	52.5	0.0	3.9	28.9	3.0
Queue Length 50th (ft)	104	192	18	0	118	~1274	0	1	748	7
Queue Length 95th (ft)	176	#390	45	0	#237	#1511	0	4	#996	28
Internal Link Dist (ft)	738		974			601			515	
Turn Bay Length (ft)					250		250	105		
Base Capacity (vph)	232	393	244	359	298	2719	1213	181	2282	1038
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.96	0.11	0.05	0.77	1.06	0.01	0.04	0.94	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

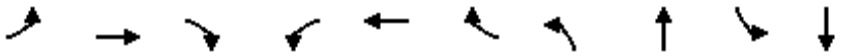


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	210	876	716	263	430	224	582	1020	445	672	1289	186
v/c Ratio	0.33	0.75	0.45	0.77	0.58	0.14	0.96	0.56	0.28	0.97	0.66	0.12
Control Delay	65.1	65.1	4.3	75.7	62.9	0.2	72.3	45.8	0.4	75.1	32.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	65.1	4.3	75.7	62.9	0.2	72.3	45.8	0.4	75.1	32.6	0.2
Queue Length 50th (ft)	89	260	95	110	127	0	~249	250	0	~274	298	0
Queue Length 95th (ft)	130	313	146	#168	165	0	#382	356	0	#415	351	0
Internal Link Dist (ft)		1232			699			1200			1801	
Turn Bay Length (ft)	285		185	360		185	485			435		
Base Capacity (vph)	633	1271	1583	343	1271	1583	609	1822	1583	695	1949	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.69	0.45	0.77	0.34	0.14	0.96	0.56	0.28	0.97	0.66	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

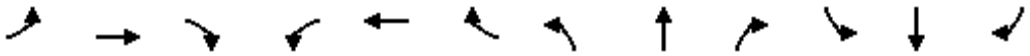
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	1906	75	25	727	12	93	52	28	98
v/c Ratio	0.07	0.63	0.08	0.16	0.24	0.01	0.30	0.14	0.09	0.28
Control Delay	8.0	17.9	1.0	10.9	9.9	0.0	37.5	13.2	33.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	17.9	1.0	10.9	9.9	0.0	37.5	13.2	33.8	11.0
Queue Length 50th (ft)	8	365	0	7	84	0	56	1	16	1
Queue Length 95th (ft)	20	425	10	m19	103	m0	102	37	40	49
Internal Link Dist (ft)		439			1331			568		306
Turn Bay Length (ft)	200		150	200		200				
Base Capacity (vph)	463	3016	983	166	3011	982	307	368	327	345
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.63	0.08	0.15	0.24	0.01	0.30	0.14	0.09	0.28

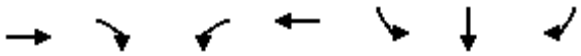
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	279	1411	295	126	492	58	152	1	151	128	1	121
v/c Ratio	0.39	0.43	0.27	0.39	0.16	0.06	0.42	0.01	0.52	0.56	0.01	0.48
Control Delay	4.9	5.4	0.8	8.2	10.6	1.0	53.3	46.0	13.9	51.5	51.0	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	5.4	0.8	8.2	10.6	1.0	53.3	46.0	13.9	51.5	51.0	10.0
Queue Length 50th (ft)	31	58	3	16	68	1	57	1	0	87	1	0
Queue Length 95th (ft)	44	71	10	36	85	2	89	6	60	137	6	32
Internal Link Dist (ft)		1331			560			300			483	
Turn Bay Length (ft)	250		150	250		150	150					
Base Capacity (vph)	708	3255	1099	325	3123	1031	772	465	509	229	186	297
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.43	0.27	0.39	0.16	0.06	0.20	0.00	0.30	0.56	0.01	0.41

Intersection Summary

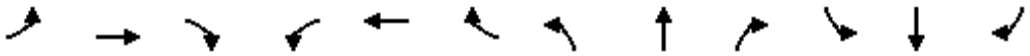


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1307	377	34	442	56	56	217
v/c Ratio	0.32	0.28	0.09	0.10	0.34	0.34	0.62
Control Delay	1.8	0.5	3.0	1.7	54.8	54.8	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	0.5	3.0	1.7	54.8	54.8	14.4
Queue Length 50th (ft)	52	1	1	4	43	43	0
Queue Length 95th (ft)	54	0	12	32	84	84	71
Internal Link Dist (ft)	840			518		626	
Turn Bay Length (ft)		350	175				
Base Capacity (vph)	4047	1337	427	4329	378	378	524
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.28	0.08	0.10	0.15	0.15	0.41

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	341	1228	313	21	106	107	44
v/c Ratio	0.62	0.29	0.10	0.02	0.51	0.51	0.17
Control Delay	52.5	2.1	9.3	0.1	56.7	56.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	2.1	9.3	0.1	56.7	56.9	6.6
Queue Length 50th (ft)	133	10	31	0	82	83	0
Queue Length 95th (ft)	178	109	52	0	130	131	17
Internal Link Dist (ft)		518	856			775	
Turn Bay Length (ft)	175			150			375
Base Capacity (vph)	915	4197	3255	1036	378	378	405
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.29	0.10	0.02	0.28	0.28	0.11

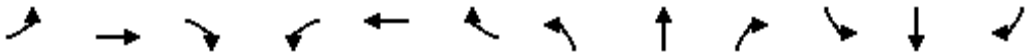
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	13	97	128	3	91	91	1915	71	51	2155	63
v/c Ratio	0.12	0.10	0.06	0.39	0.02	0.06	0.44	0.51	0.06	0.22	0.60	0.05
Control Delay	47.8	53.4	0.1	54.2	50.7	0.1	18.7	17.8	5.9	7.5	14.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	53.4	0.1	54.2	50.7	0.1	18.7	17.8	5.9	7.5	14.1	1.2
Queue Length 50th (ft)	15	10	0	48	2	0	35	206	5	2	513	0
Queue Length 95th (ft)	35	30	0	79	12	0	67	612	m39	m13	698	m12
Internal Link Dist (ft)		642			797			1236			1200	
Turn Bay Length (ft)	310						385		150	150		150
Base Capacity (vph)	439	294	1583	371	294	1583	216	3740	1193	240	3604	1153
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.04	0.06	0.35	0.01	0.06	0.42	0.51	0.06	0.21	0.60	0.05

Intersection Summary

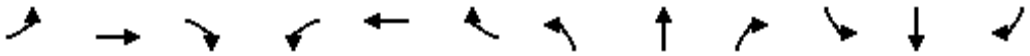
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	13	277	354	7	256	104	1718	141	191	2142	48
v/c Ratio	0.19	0.10	0.17	0.67	0.05	0.16	0.33	0.54	0.14	0.47	0.66	0.05
Control Delay	44.2	53.4	0.2	54.5	49.3	0.2	35.5	26.3	14.1	42.2	28.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	53.4	0.2	54.5	49.3	0.2	35.5	26.3	14.1	42.2	28.8	2.3
Queue Length 50th (ft)	36	10	0	133	5	0	39	334	35	59	609	0
Queue Length 95th (ft)	67	30	0	184	19	0	m58	401	m75	91	691	m9
Internal Link Dist (ft)		518			413			871			1236	
Turn Bay Length (ft)	285		185	410			285		185	285		
Base Capacity (vph)	640	294	1583	572	294	1583	317	3155	1012	405	3247	1025
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.04	0.17	0.62	0.02	0.16	0.33	0.54	0.14	0.47	0.66	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

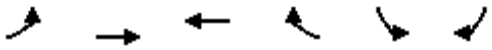


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	114	116	223	291	77	125	106	1749	542	427	2433	59
v/c Ratio	0.29	0.38	0.14	0.68	0.19	0.08	0.36	0.71	0.53	0.69	0.83	0.06
Control Delay	52.3	55.0	0.2	55.9	46.3	0.1	54.9	26.5	3.8	51.0	25.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	55.0	0.2	55.9	46.3	0.1	54.9	26.5	3.8	51.0	25.8	2.3
Queue Length 50th (ft)	43	45	0	111	28	0	40	380	4	172	379	0
Queue Length 95th (ft)	72	75	0	161	53	0	68	436	64	#244	627	m6
Internal Link Dist (ft)		570			672			1155			1055	
Turn Bay Length (ft)	335			285			385		250	285		250
Base Capacity (vph)	503	678	1583	457	678	1583	294	2457	1030	619	2946	962
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.17	0.14	0.64	0.11	0.08	0.36	0.71	0.53	0.69	0.83	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	204	774	317	165	113	152
v/c Ratio	0.24	0.27	0.13	0.14	0.59	0.50
Control Delay	1.9	1.7	6.9	1.5	62.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	1.7	6.9	1.5	62.9	13.1
Queue Length 50th (ft)	13	28	38	0	85	0
Queue Length 95th (ft)	m20	42	68	25	140	60
Internal Link Dist (ft)		3055	910		478	
Turn Bay Length (ft)	250			150		
Base Capacity (vph)	852	2860	2457	1149	368	450
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.27	0.13	0.14	0.31	0.34

Intersection Summary

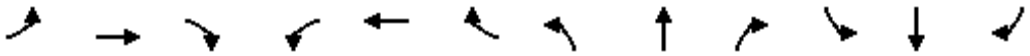
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	332	13	2	377	2348	28	8	2789	103
v/c Ratio	0.21	0.63	0.05	0.01	0.87	0.60	0.02	0.05	0.99	0.11
Control Delay	45.0	14.1	41.9	0.0	54.7	7.5	0.8	6.2	43.5	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	14.1	41.9	0.0	54.7	7.5	0.8	6.2	43.5	5.2
Queue Length 50th (ft)	37	28	9	0	228	233	0	1	~861	8
Queue Length 95th (ft)	77	125	27	0	#372	379	5	4	#961	37
Internal Link Dist (ft)	738		974			601			515	
Turn Bay Length (ft)					250		250	105		
Base Capacity (vph)	273	533	295	377	471	3882	1207	208	2805	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.62	0.04	0.01	0.80	0.60	0.02	0.04	0.99	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



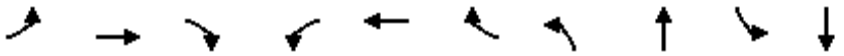
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	294	768	794	680	1095	922	946	1893	529	526	1332	247
v/c Ratio	0.86	0.91	0.50	1.04	0.83	0.58	1.07	1.04	0.33	0.92	0.95	0.16
Control Delay	66.3	74.5	6.2	89.3	58.1	1.8	75.8	75.4	0.3	71.8	58.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.3	74.5	6.2	89.3	58.1	1.8	75.8	75.4	0.3	71.8	58.1	0.2
Queue Length 50th (ft)	125	228	157	~301	295	22	~429	~598	0	208	371	0
Queue Length 95th (ft)	#197	#295	181	m#397	m337	m21	m#496	#698	m0	#310	#469	0
Internal Link Dist (ft)		1232			699			1200			1843	
Turn Bay Length (ft)	285		185	360		185	485			435		
Base Capacity (vph)	343	847	1583	657	1313	1583	886	1822	1583	572	1398	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.91	0.50	1.04	0.83	0.58	1.07	1.04	0.33	0.92	0.95	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

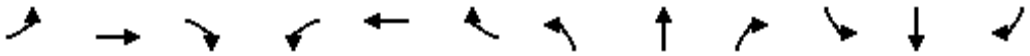
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	1486	236	102	2337	33	204	97	83	76
v/c Ratio	0.73	0.54	0.25	0.44	0.84	0.04	0.61	0.25	0.32	0.23
Control Delay	47.0	19.5	4.8	20.5	23.3	0.2	44.3	9.8	37.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	19.5	4.8	20.5	23.3	0.2	44.3	9.8	37.3	11.8
Queue Length 50th (ft)	43	279	19	32	295	0	127	1	48	1
Queue Length 95th (ft)	#140	329	62	m65	394	m0	198	47	89	44
Internal Link Dist (ft)		439			1331			511		306
Turn Bay Length (ft)	200		150	200		200				
Base Capacity (vph)	165	2757	943	249	2798	919	337	394	261	327
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.54	0.25	0.41	0.84	0.04	0.61	0.25	0.32	0.23

Intersection Summary

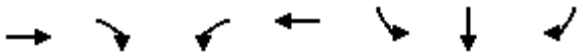
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	257	891	518	372	1642	156	593	1	293	177	1	237
v/c Ratio	0.78	0.41	0.53	0.73	0.70	0.19	0.81	0.00	0.51	0.74	0.01	0.70
Control Delay	63.7	15.7	3.1	30.6	27.9	7.3	54.3	34.0	7.5	53.8	49.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	15.7	3.1	30.6	27.9	7.3	54.3	34.0	7.5	53.8	49.0	18.0
Queue Length 50th (ft)	175	78	4	167	280	10	223	1	0	105	1	0
Queue Length 95th (ft)	264	95	22	m272	491	m37	289	5	69	157	6	78
Internal Link Dist (ft)		1331			560			300			483	
Turn Bay Length (ft)	250		150	250		150	150					
Base Capacity (vph)	387	2171	970	567	2333	810	772	465	615	240	186	371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.41	0.53	0.66	0.70	0.19	0.77	0.00	0.48	0.74	0.01	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	999	384	61	1691	24	25	473
v/c Ratio	0.36	0.37	0.17	0.52	0.05	0.05	0.88
Control Delay	8.4	1.3	9.8	10.9	26.7	26.7	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	1.3	9.8	10.9	26.7	26.7	51.1
Queue Length 50th (ft)	78	4	17	171	12	13	294
Queue Length 95th (ft)	102	5	m30	188	33	34	#439
Internal Link Dist (ft)	840			518		626	
Turn Bay Length (ft)		350	175				
Base Capacity (vph)	2810	1046	395	3235	588	588	595
Starvation Cap Reductn	0	0	0	167	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.37	0.15	0.55	0.04	0.04	0.79

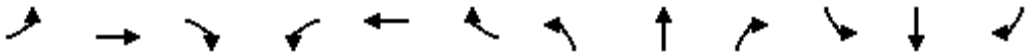
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	510	650	1412	147	261	261	26
v/c Ratio	0.74	0.17	0.53	0.17	0.77	0.77	0.07
Control Delay	69.2	1.6	20.8	5.6	60.8	60.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	1.6	20.8	5.6	60.8	60.8	0.4
Queue Length 50th (ft)	215	15	270	13	197	197	0
Queue Length 95th (ft)	260	16	310	45	281	281	0
Internal Link Dist (ft)		518	856			775	
Turn Bay Length (ft)	175			150			375
Base Capacity (vph)	772	3806	2653	880	378	378	405
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.17	0.53	0.17	0.69	0.69	0.06

Intersection Summary



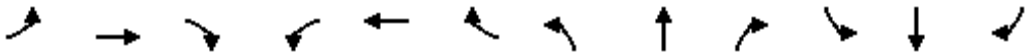
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	206	18	281	237	25	280	373	2947	264	168	2468	202
v/c Ratio	0.64	0.13	0.18	0.50	0.14	0.18	0.85	0.91	0.25	0.65	0.91	0.22
Control Delay	62.9	54.0	0.2	51.3	48.6	0.2	35.1	34.3	8.8	51.4	24.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	54.0	0.2	51.3	48.6	0.2	35.1	34.3	8.8	51.4	24.9	2.7
Queue Length 50th (ft)	81	13	0	84	18	0	178	893	70	92	~752	32
Queue Length 95th (ft)	#131	37	0	128	44	0	m227	m#949	m90	m88	m#804	m36
Internal Link Dist (ft)		642			797			1236			1200	
Turn Bay Length (ft)	310						385		150	150		150
Base Capacity (vph)	320	155	1583	537	279	1583	440	3225	1060	291	2708	936
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.12	0.18	0.44	0.09	0.18	0.85	0.91	0.25	0.58	0.91	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

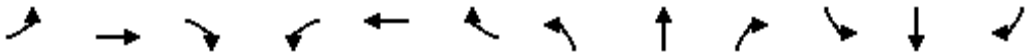


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	148	8	263	279	15	234	404	3199	343	332	2471	182
v/c Ratio	0.43	0.06	0.17	0.68	0.11	0.15	0.59	1.01	0.33	0.60	0.83	0.18
Control Delay	55.0	52.6	0.2	59.2	53.6	0.2	32.5	43.4	13.5	51.4	33.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	52.6	0.2	59.2	53.6	0.2	32.5	43.4	13.5	51.4	33.3	5.9
Queue Length 50th (ft)	56	6	0	110	11	0	138	644	105	104	737	28
Queue Length 95th (ft)	90	22	0	#178	33	0	m165	m#942	m120	m127	794	m52
Internal Link Dist (ft)		518			413			871			1236	
Turn Bay Length (ft)	285		185	410			285		185	285		
Base Capacity (vph)	343	263	1583	412	263	1583	680	3167	1049	549	2974	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.03	0.17	0.68	0.06	0.15	0.59	1.01	0.33	0.60	0.83	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



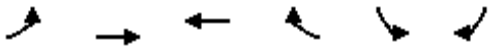
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	301	135	170	786	168	614	268	3050	356	281	2563	98
v/c Ratio	0.67	0.42	0.11	1.37	0.40	0.39	0.85	1.10	0.38	0.89	0.95	0.11
Control Delay	57.4	55.0	0.1	212.9	46.9	0.7	78.4	77.5	6.8	68.7	40.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	55.0	0.1	212.9	46.9	0.7	78.4	77.5	6.8	68.7	40.1	6.1
Queue Length 50th (ft)	114	52	0	~419	66	0	107	~979	50	119	486	7
Queue Length 95th (ft)	162	84	0	#545	104	0	#211	#1064	110	m#196	#635	m19
Internal Link Dist (ft)		570			672			1155			1055	
Turn Bay Length (ft)	335			285			385		250	285		250
Base Capacity (vph)	486	412	1583	572	471	1583	315	2782	949	315	2712	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.33	0.11	1.37	0.36	0.39	0.85	1.10	0.38	0.89	0.95	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	161	668	1111	138	196	278
v/c Ratio	0.45	0.26	0.51	0.13	0.60	0.60
Control Delay	10.0	2.4	13.8	2.4	53.9	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	2.4	13.8	2.4	53.9	17.2
Queue Length 50th (ft)	12	27	235	3	141	41
Queue Length 95th (ft)	m23	m28	297	29	222	131
Internal Link Dist (ft)		3055	910		478	
Turn Bay Length (ft)	250			150		
Base Capacity (vph)	372	2595	2194	1029	324	466
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.26	0.51	0.13	0.60	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	140	358	26	16	216	3712	15	7	3243	113
v/c Ratio	0.55	0.93	0.10	0.05	0.87	0.97	0.01	0.04	0.99	0.11
Control Delay	53.3	64.4	41.2	0.2	62.8	23.4	0.0	3.9	33.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	64.4	41.2	0.2	62.8	23.4	0.0	3.9	33.9	3.0
Queue Length 50th (ft)	99	199	17	0	112	771	0	1	843	7
Queue Length 95th (ft)	168	#382	43	0	#248	#1226	0	4	#1032	29
Internal Link Dist (ft)	738		974			601			515	
Turn Bay Length (ft)					250		250	105		
Base Capacity (vph)	255	389	270	355	255	3830	1190	211	3289	1042
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.92	0.10	0.05	0.85	0.97	0.01	0.03	0.99	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.