

KUM & GO #692
PETERSON BOULEVARD & SPACE VILLAGE AVENUE
COLORADO SPRINGS, CO

TRAFFIC IMPACT STUDY

After the cover sheet add a page with the following signature blocks:

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

[Name, P.E. # _____]


Date

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

[Name, Title]
[Business Name]
[Address]

Date



Shane King, PE, PTOE
License # 48600

SEPTEMBER 2017

OLSSON ASSOCIATES PROJECT No. 017-1754

Table of Contents

1.0 Introduction and Objective 1

2.0 Data Collection 1

 2.1 Peak Hour Turning Movement Counts..... 1

 2.2 Field Review of Street Geometrics 4

3.0 Existing Conditions4

 3.1 Network Characteristics..... 4

 3.2 Existing Conditions Capacity Analysis Summary 6

4.0 Future Base Traffic Volumes and Analysis.....8

 4.1 Future Base Volumes..... 8

 4.2 Future Base Capacity Analysis..... 10

5.0 Site Characteristics..... 12

 5.1 Trip Generation 14

 5.2 Trip Distribution 14

6.0 Plus Site Analysis 18

 6.1 2019 Base plus Site Capacity Analysis..... 18

 6.2 2040 Base plus Site Capacity Analysis..... 22

7.0 Conclusions 24

List of Tables

Table 1. Existing Roadway Characteristics 4

Table 2. Intersection LOS Criteria 6

Table 3. Trip Generation 15

List of Figures

Figure 1. Vicinity Map 2
Figure 2. Existing Traffic Volumes 3
Figure 3. Existing Lane Configurations and Traffic Control 5
Figure 4. Existing Conditions Capacity Analysis Summary 7
Figure 5. 2040 Base Peak Hour Traffic Volumes 9
Figure 6. 2040 Base Conditions Capacity Analysis Summary 11
Figure 7. Site Plan 13
Figure 8. Trip Distribution 16
Figure 9. Site Trips 17
Figure 10. 2019 Base plus Site Peak Hour Traffic Volumes 19
Figure 11. 2040 Base plus Site Peak Hour Traffic Volumes 20
Figure 12. 2019 Base plus Site Conditions Capacity Analysis Summary 21
Figure 13. 2040 Base plus Site Conditions Capacity Analysis Summary 23
Figure 14. Recommended Improvements 25

List of Appendices

Appendix A Count Data
Appendix B Existing Capacity Analysis Reports
Appendix C 2040 Projected Volumes
Appendix D 2040 Base Capacity Analysis Reports
Appendix E 2019 Base plus Site Capacity Analysis Reports
Appendix F 2040 Base plus Site Capacity Analysis Reports

1.0 INTRODUCTION AND OBJECTIVE

This report documents the results of a Traffic Impact Study (TIS) conducted for a proposed Kum & Go located southeast of the interchange of Peterson Boulevard & US Highway 24 (US-24) in Colorado Springs, CO. A map showing the general location of the proposed development is illustrated in **Figure 1**.

This traffic study was conducted to identify expected trips that would be generated by the Kum & Go, how the trips flow through the study network, and to determine the effects of site traffic on the surrounding roadway network. There are four separate traffic conditions analyzed as part of this report:

- Existing Conditions
- 2040 Base Conditions
- 2019 Base plus Site Conditions
- 2040 Base plus Site Conditions

Specific recommendations are included at the end of this report to help mitigate traffic impacts.

2.0 DATA COLLECTION

The data collection effort included obtaining peak hour turning movement counts and documentation of current roadway geometrics and traffic control.

2.1 Peak Hour Turning Movement Counts

Olsson Associates (Olsson) coordinated intersection turning movement counts on Tuesday, August 1, 2017 at the following intersections:

- Peterson Boulevard & Space Village Avenue
- Loaf 'N Jug Drive & Space Village Avenue

Note that Loaf 'N Jug Drive and US-24 off-ramp along Space Village Avenue have offset northbound and southbound movements but is being treated as a four-leg intersection as part of this study.

Each count was taken at 15 minute intervals from 7:00am – 9:00am and 4:00pm – 6:00pm. In addition, Average Daily Traffic (ADT) 24-hour counts were taken along Space Village Avenue just east of Peterson Boulevard and along Peterson Boulevard just south of Space Village Avenue on Wednesday, June 28, 2017.

Existing peak hour traffic volumes are illustrated in **Figure 2**. Count data are illustrated in **Appendix A**.

FIGURE 1

Vicinity Map

Kum & Go #692
Colorado Springs, CO

LEGEND

 Study Intersection



FIGURE 2

Existing Traffic Volumes

Kum & Go #692
 Colorado Springs, CO

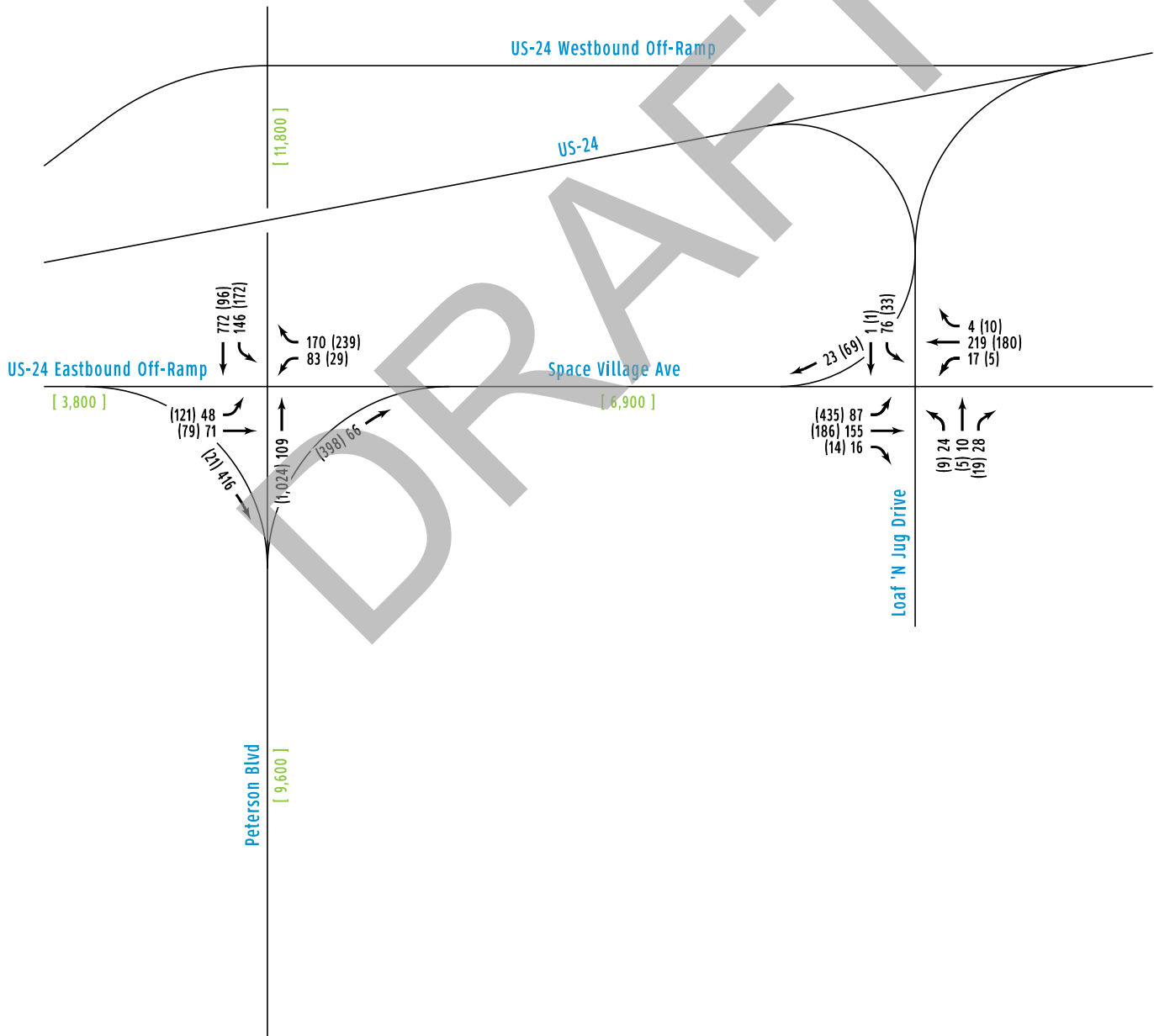
LEGEND

AM (PM) Peak Hour Volume

[XX,XXX] Existing ADTs

AM Peak Hour: 7:00am - 8:00am

PM Peak Hour: 4:00pm - 5:00pm



2.2 Field Review of Street Geometrics

A complete review of the existing roadway network including roadway type, general roadway geometrics, pedestrian and bicycle accommodations, and traffic control device locations was completed as part of the data collection effort. There are currently no existing bicycle lanes constructed within the study area.

3.0 EXISTING CONDITIONS

Existing traffic conditions were evaluated to identify any existing deficiencies and to provide a baseline for comparison purposes.

3.1 Network Characteristics

There are three major roadways within the study area: US-24, Peterson Boulevard, and Space Village Avenue. Data for each roadway was acquired from aerial photography, El Paso County Functional Classification Map, and the Colorado Department of Transportation (CDOT) Online Transportation Information System (OTIS).

Table 1. Existing Roadway Characteristics

Roadway	Section	Median Type	Posted Speed	Functional Classification
US-24	4-Lane	Divided	55 mph	Expressway
Peterson Boulevard	4-Lane	Divided	30 mph	Minor Arterial
Space Village Avenue	2-Lane	n/a	45 mph	Minor Arterial

The intersection of Peterson Boulevard & Space Village Avenue is a signalized intersection. There are channelized right-turn lanes for eastbound and northbound right-turning vehicles at this intersection. All other intersections in the study area are unsignalized. Along Space Village Avenue, there is a continuous eastbound right-turn lane that services three site drives within the study limits. Along Peterson Boulevard, the only destination south of Space Village Avenue is the Peterson Air Force Base.

There are two existing eastbound off-ramps from US-24 in the vicinity of the site. The first off-ramp intersects at Peterson Boulevard & Space Village Avenue. The eastbound lane geometry includes a shared through-left and a channelized free right-turn lane. The second off-ramp intersects Space Village Avenue approximately 700 feet east of Peterson Boulevard. This second off-ramp currently has about 300 feet of deceleration length along US-24 before its horizontal curve geometry begins, which is inadequate based on CDOT auxiliary lane guidelines. In addition, this off-ramp is on a steep downgrade before it intersects with Space Village Avenue. Similar to the first exit, this second off-ramp includes a free right-turn to travel west and an exclusive southbound left-turn lane.

Existing lane configurations and traffic control are illustrated in **Figure 3**.

FIGURE 3

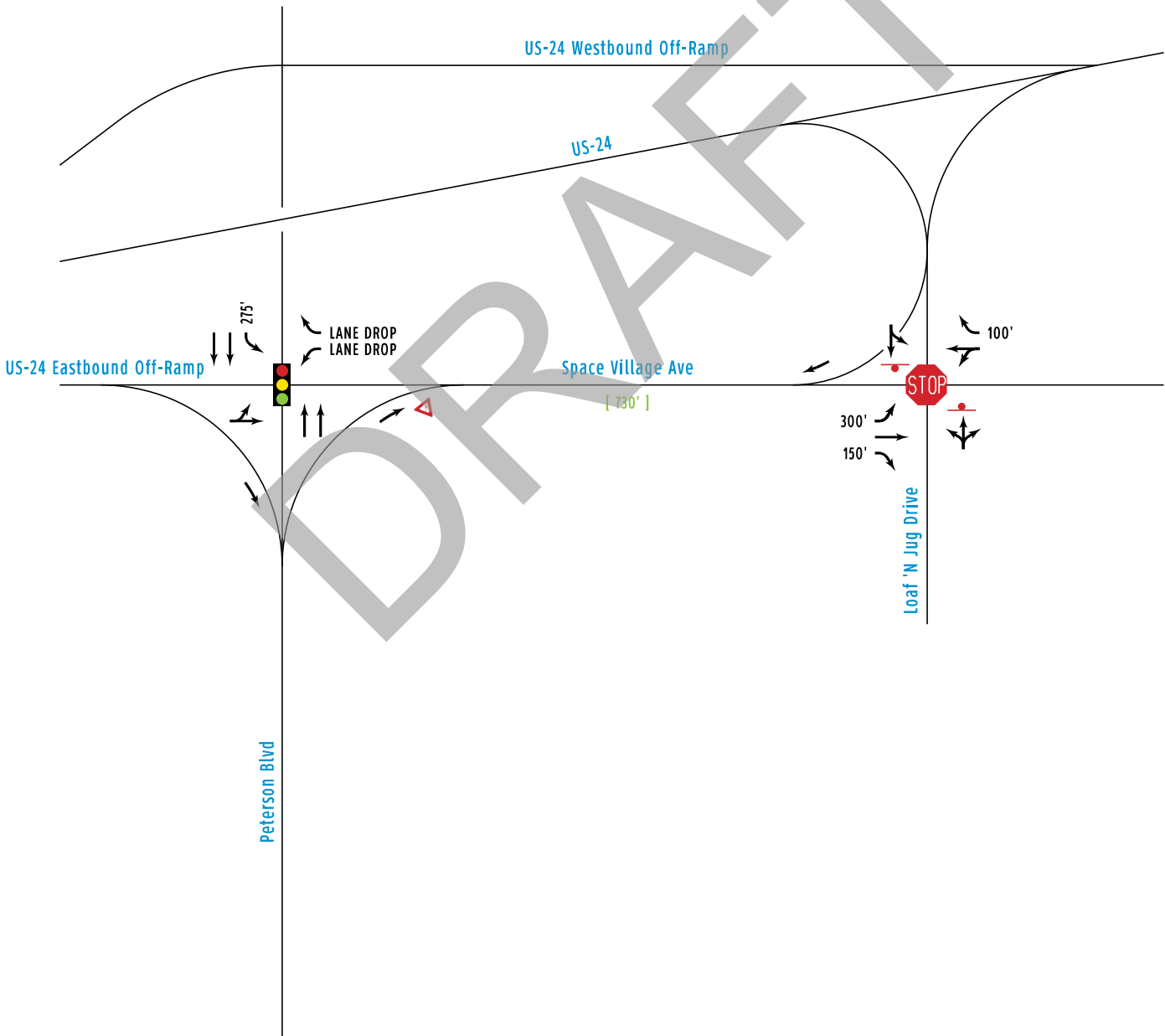
Existing Lane Configurations and Traffic Control

Kum & Go #692
 Colorado Springs, CO

LEGEND



- XX' → Lane Configuration & Storage Length
- ⬮ Existing Signalized Intersection
- ⬮ [XXX'] Intersection Spacing
- ⬮ Stop Controlled Intersection
- ⬮ Stop Sign
- ⬮ Yield Sign



3.2 Existing Conditions Capacity Analysis Summary

Capacity analyses were performed for the existing study intersections utilizing the existing lane configurations and traffic control. Analyses were conducted using Synchro, Version 10.0 which is based on the Highway Capacity Manual, 6th Edition delay methodologies. For simplicity, the amount of control delay is equated to a grade or Level of Service (LOS) based on thresholds of driver acceptance. The amount of delay is assigned a letter grade A through F, LOS A representing little or no delay and LOS F representing very high delay. **Table 1** shows the delays associated with each LOS grade for signalized and unsignalized intersections, respectively.

Table 2. Intersection LOS Criteria

Level-of-Service	Average Control Delay (seconds)	
	Signalized	Unsignalized
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50
Highway Capacity Manual (HCM, 6 th Ed.)		

Results of the analyses indicate that the signalized intersection of Peterson Boulevard & Space Village Avenue operates at LOS B or better in both peak hours. All individual movements operate at LOS C or better in both peak hours. The 95th percentile queue lengths for all movements do not queue past existing turn-bay storage lengths with the exception of the northbound through movement queuing through the channelized northbound right-turn lane, located approximately 225 feet south of the intersection. The 95th percentile queue length for the northbound through movement is approximately 270 feet in the PM peak hour.

The northbound movements at Loaf 'N Jug Drive & Space Village Avenue operate at LOS E in the PM peak hour. Likewise, the southbound left-turn movements operate at LOS F in the PM peak hour at this intersection. All other movements operate at LOS C or better. The 95th percentile queue length for southbound left-turn movements are approximately five vehicles (125 feet) which will spill back into the horizontal curve portion of the off-ramp, blocking the channelized right-turn. As additional vehicles exit US-24 at this off-ramp, they may not have enough space to slow down which could potentially cause safety issues. All other queue lengths are no more than three vehicles in any peak hour.

The Existing Conditions Capacity Analysis Summary is illustrated in **Figure 4**. Detailed results may be found in **Appendix B**.

FIGURE 4

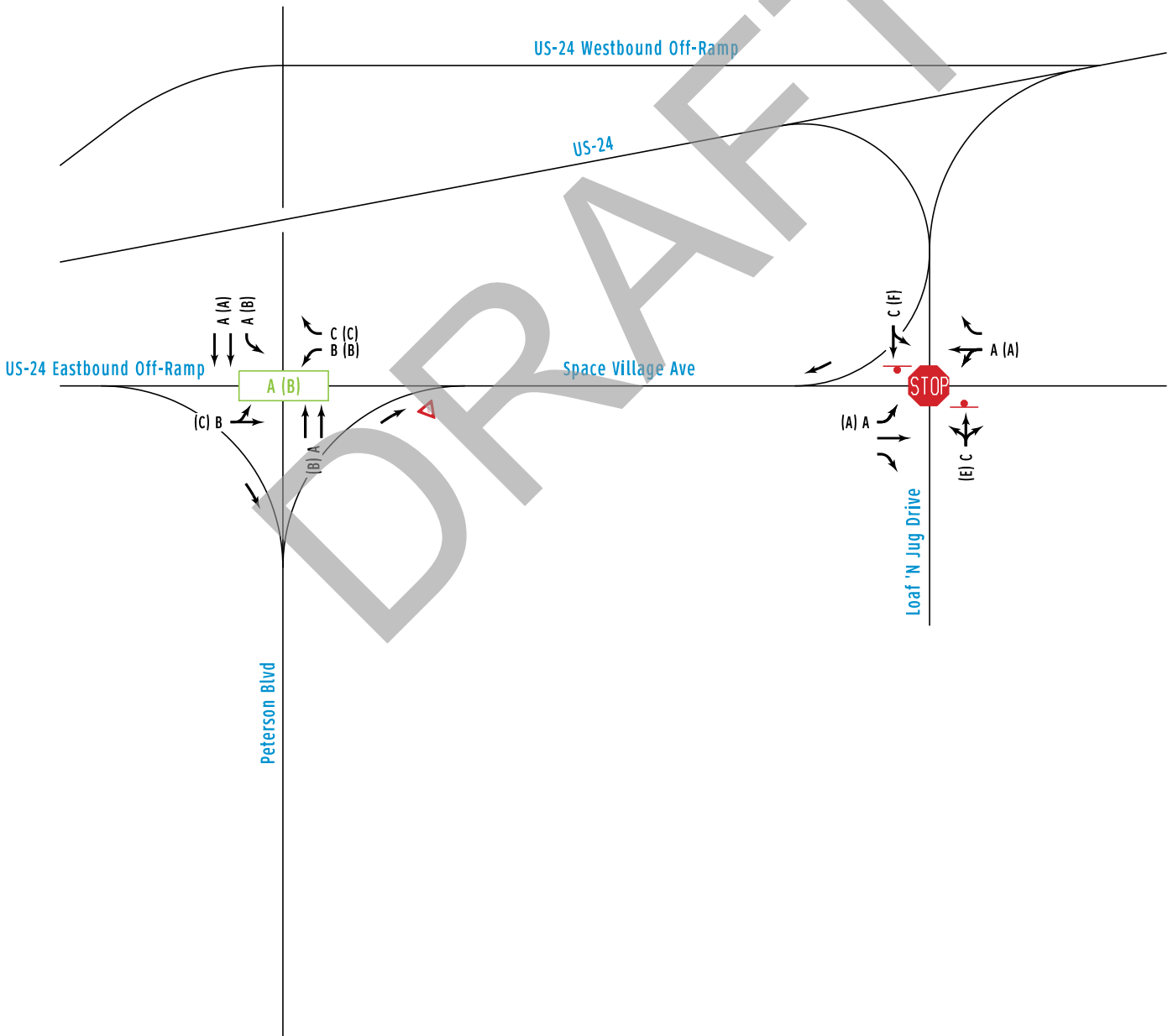
Existing Conditions Capacity Analysis Summary

Kum & Go #692
 Colorado Springs, CO

LEGEND



- | | |
|---|---------------|
| AM (PM) Signalized Intersection LOS | Stop Sign |
| AM (PM) Movement LOS | Lane Geometry |
| Stop Controlled Intersection | Yield Sign |



4.0 FUTURE BASE TRAFFIC VOLUMES AND ANALYSIS

To evaluate 2019 and 2040 conditions, it was necessary to establish peak hour volumes for both 2019 and 2040. Current traffic volumes and projected ADT volumes were used as a basis for peak hour volume projections. Year 2040 volumes were applied to the network and a capacity analysis was performed. Note that year 2019 base volumes were only analyzed in 2019 Base plus Site conditions due to the little traffic growth expected.

4.1 Future Base Volumes

Because Peterson Air Force Base is the terminal point for southbound Peterson Boulevard, it can be expected that the future traffic volumes will not grow significantly along Peterson Boulevard. For this study, a growth rate of 0.5% was used to develop 2040 projected volumes. An annual growth rate of 0.5% equates to a growth factor of 1.12 for the 2040 ADT volumes. This growth factor was applied directly to turning movement volumes to develop 2040 base volumes

The 2040 peak hour volumes are shown in **Figure 5**. Projected ADT volumes are illustrated in **Appendix C**.

At a minimum the growth rate must be 2.0%.

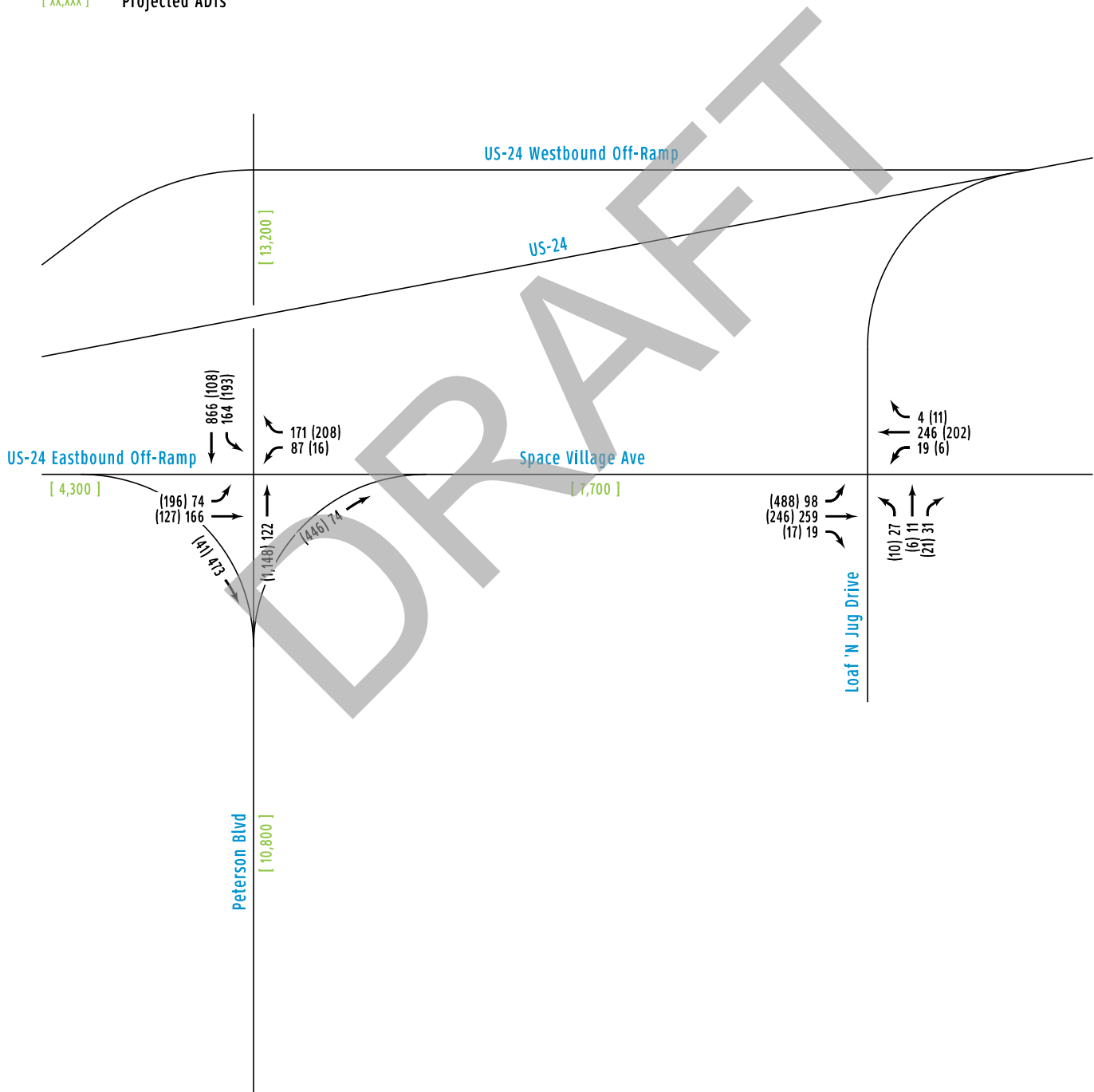
FIGURE 5

2040 Base Peak Hour Traffic Volumes

Kum & Go #692
Colorado Springs, CO

LEGEND

- AM (PM) Peak Hour Volume
- [xx,xxx] Projected ADTs



4.2 Future Base Capacity Analysis

Capacity analysis for 2040 conditions was conducted to analyze expected operations and as a baseline for comparison purposes. One of the recommended base improvements for 2040 includes removing the second off-ramp on eastbound US-24. Because an eastbound off-ramp already exists to the west of Peterson Boulevard, the second off-ramp to the east is redundant. This second off-ramp also does not have adequate deceleration length, is along a steep grade, and does not meet driver expectations. In addition, the merge lane is unnecessary at this off-ramp. The low volume of vehicles that use this off-ramp support the recommendation to remove it. To compensate for the removal of the second off-ramp, it is also recommended that an additional eastbound approach lane be constructed at the west leg of Peterson Boulevard & Space Village Avenue to include exclusive left-turn and through lanes. These improvements were included in the 2040 Base capacity analysis.

Results of the 2040 Base conditions capacity analysis indicate the signalized intersection of Peterson Boulevard & Space Village Avenue are expected to operate at LOS C or better in both peak hours. All individual movements are expected to operate at LOS C or better in both peak hours. The 95th percentile queue lengths for all turn movements are expected to be contained within existing storage lengths with the exception of northbound through movements. The 95th percentile queue length for the northbound through movement in the PM peak hour is approximately 345 feet, which will spill back past the northbound channelized right-turn lane.

The northbound movements at Loaf 'N Jug Drive & Space Village Avenue are expected to operate at LOS E in the PM peak hour. The 95th percentile queue lengths for these movements are expected to be no more than three vehicles in both peak hours. All other movements are expected to operate acceptably with no more than a three-vehicle queue.

Figure 6 illustrates the 2040 Base capacity analysis summary. Detailed results may be found in **Appendix D**.

FIGURE 6

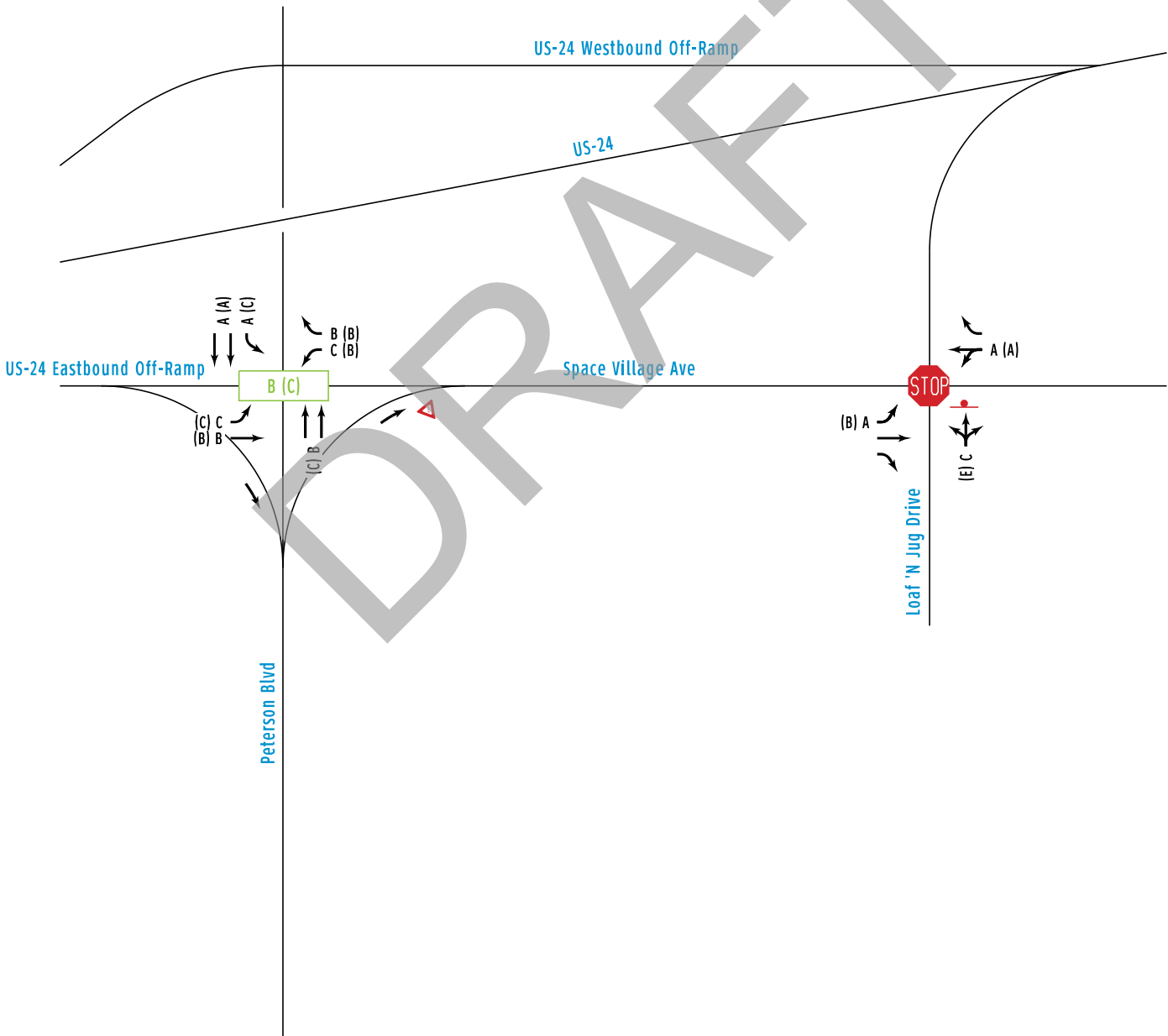
2040 Base Conditions Capacity Analysis Summary

Kum & Go #692
Colorado Springs, CO

LEGEND



- | | |
|---|---------------|
| AM (PM) Signalized Intersection LOS | Stop Sign |
| AM (PM) Movement LOS | Lane Geometry |
| Stop Controlled Intersection | Yield Sign |



5.0 SITE CHARACTERISTICS

To determine street network operations and development impacts, trips expected to be associated with the Kum & Go were generated and applied to the study network. This study assumes a total of two full-movement accesses to the site via existing access breaks: West Drive along Peterson Boulevard and North Drive along Space Village Avenue.

West Drive at Peterson Boulevard

After a review of spacing to Peterson Boulevard & Space Village Avenue, there are two conditions that must be met before providing a median break to open a full-movement drive at West Drive. First, a southbound left-turn lane must be provided along Peterson Boulevard for entering vehicles. Second, the existing channelized free right-turn lane must be modified to intersect Peterson Boulevard with yield control just south of Space Village Avenue. This would eliminate the weaving and merging conflicts near West Drive.

North Drive at Space Village Avenue

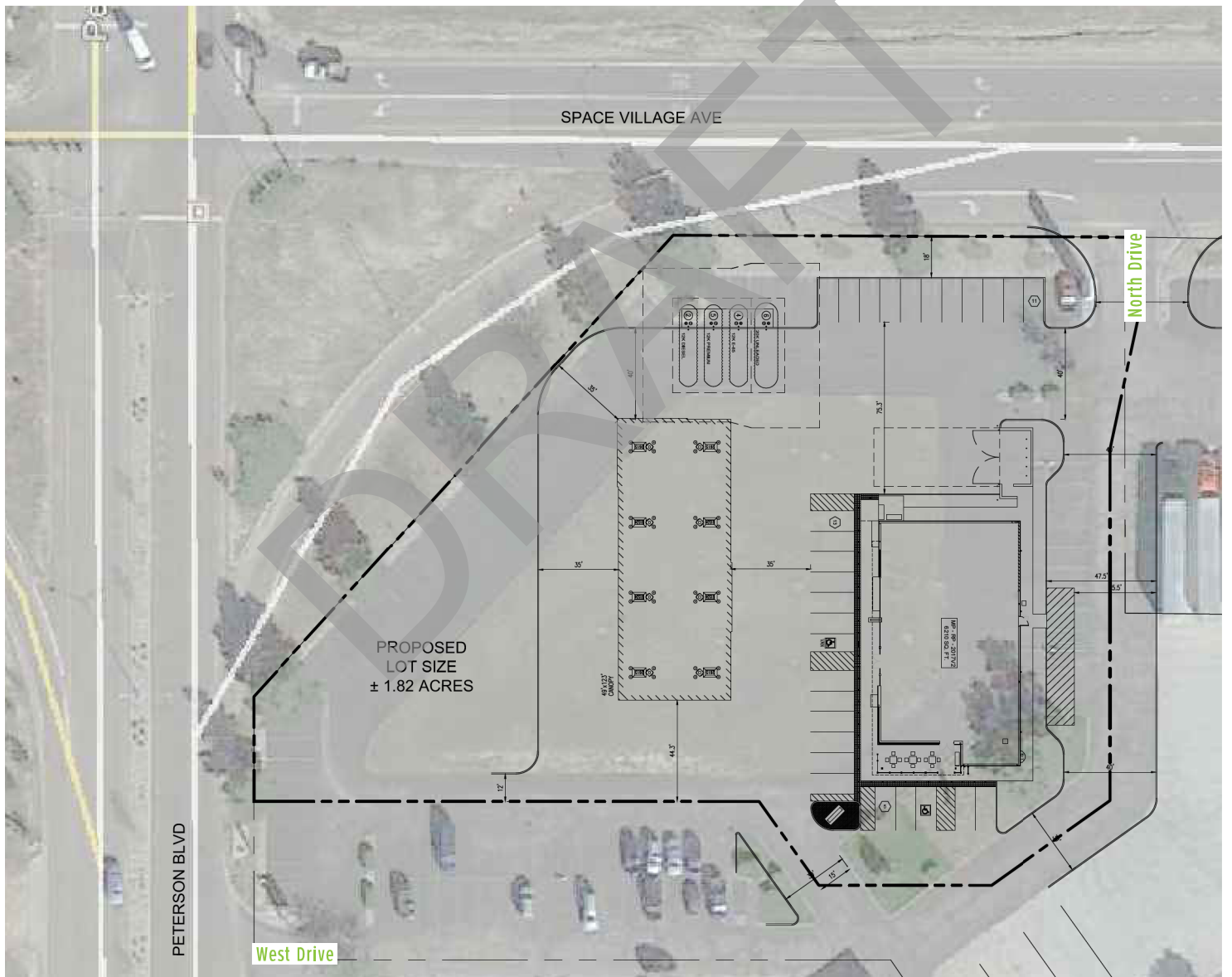
After a review of the site drive, two conditions should be included to improve safety at North Drive. First, a westbound left-turn lane along Space Village Avenue must be provided at North Drive. Modifications to the existing eastbound left-turn lane at the US-24 off-ramp are proposed. The existing eastbound left-turn lane would be restriped to provide 50 feet of two-way left-turn lane to provide storage for westbound left-turning vehicles into the proposed Kum & Go. Second, the merge lane off US-24 onto Space Village Avenue must be eliminated. This merge causes a weaving and merge conflict near North Drive immediately after a vehicle exits the off-ramp that presents a safety issue. All vehicles would be served at the portion of the off-ramp that intersects with Space Village Avenue after the removal of this merge.

The site plan used for this study is provided in **Figure 7**.

FIGURE 7

Site Plan

Kum & Go #692
Colorado Springs, CO



5.1 Trip Generation

To determine the impact of potential site traffic on the roadway network, trips expected to be associated with the proposed site were generated and applied to the study network. The Institute of Transportation Engineers (ITE) provides methods for estimated traffic volumes of common land uses in the *ITE Trip Generation Manual (9th Edition)*. The land use that most resembles the Kum & Go is Land Use Code (LUC) 853, Convenience Market with Gasoline Pumps. Based on *ITE Trip Generation Manual (9th Edition)*, trip generation characteristics were developed for the proposed Kum & Go site. The proposed site is expected to generate 5,251 daily, 254 AM peak hour and 316 PM peak hour trips.

A summary of the expected number of daily, AM peak hour, and PM peak hour site trips are shown in **Table 3**.

Based on ITE methodologies, a pass-by reduction was applied to the site trips to account for trips made to the site while on the way to another destination. Pass-by trips include trips that are diverted from the roadways adjacent to the development that have direct access. Primary trips are those made for the specific purpose of visiting the development. The methodology allows for a pass-by trip reduction of up to 63% in the AM peak hour and 66% in the PM peak hour for LUC 853. This reduction was applied to the total AM and PM peak hour site trips.

5.2 Trip Distribution

The trip distribution was developed based on existing and future traffic volumes, trip patterns, and land use characteristics. It is expected that site trips will originate locally and from the larger region. US Highway 24 is located just to the north of the site and is expected to draw a majority of the site traffic. Peterson Air Force Base is also located less than a quarter mile to the south of the site and is expected to draw trips from the north in the AM peak hour and from the south during the PM peak hour. It should be noted that there is an existing gas station within the air force base.

The trip distribution is illustrated in **Figure 8**. The year 2019 and 2040 site trips for both primary and pass-by trips are shown in **Figure 9**.

**Table 3
ITE TRIP GENERATION
Peterson Blvd and Space Village Ave
TRAFFIC IMPACT STUDY
COLORADO SPRINGS, CO**

			Daily Trip Generation							
ITE Code/Page	Land Use	Size		Trip Gen. Avg. Rate/Eq.	Daily Trips	Trip Distribution		Total Daily Trips		
						Enter	Exit	Enter	Exit	
853/1678	Convenience Market with Gasoline Pumps	6,210	SF	845.60	5,251	50%	50%	2,626	2,626	
Total					5,251			2,626	2,626	

			AM Peak Hour Trips											
ITE Code/Page	Land Use	Size		Trip Gen. Avg. Rate/Eq.	AM Peak Trips	Trip Distribution		Total AM Trips		Pass-by Reduction	Pass-by Trips		Primary Trips	
						Enter	Exit	Enter	Exit		Enter	Exit	Enter	Exit
853/1679	Convenience Market with Gasoline Pumps	6,210	SF	40.92	254	50%	50%	127	127	63%	80	80	47	47
Total					254			127	127		80	80	47	47

			PM Peak Hour Trips											
ITE Code/Page	Land Use	Size		Trip Gen. Avg. Rate/Eq.	PM Peak Peak Trips	Trip Distribution		Total PM Trips		Pass-by Reduction	Pass-by Trips		Primary Trips	
						Enter	Exit	Enter	Exit		Enter	Exit	Enter	Exit
853/1680	Convenience Market with Gasoline Pumps	6,210	SF	50.92	316	50%	50%	158	158	66%	104	104	54	54
Total					316			158	158		104	104	54	54

Revise the independent variable from KSF to Fuel Position

FIGURE 8

Trip Distribution

Kum & Go #692
Colorado Springs, CO

LEGEND

- XX% Primary Entering Distribution AM% (PM%) Pass-By Entering Distribution
- XX% Primary Exiting Distribution AM% (PM%) Pass-By Exiting Distribution
- XX% Primary External Distribution

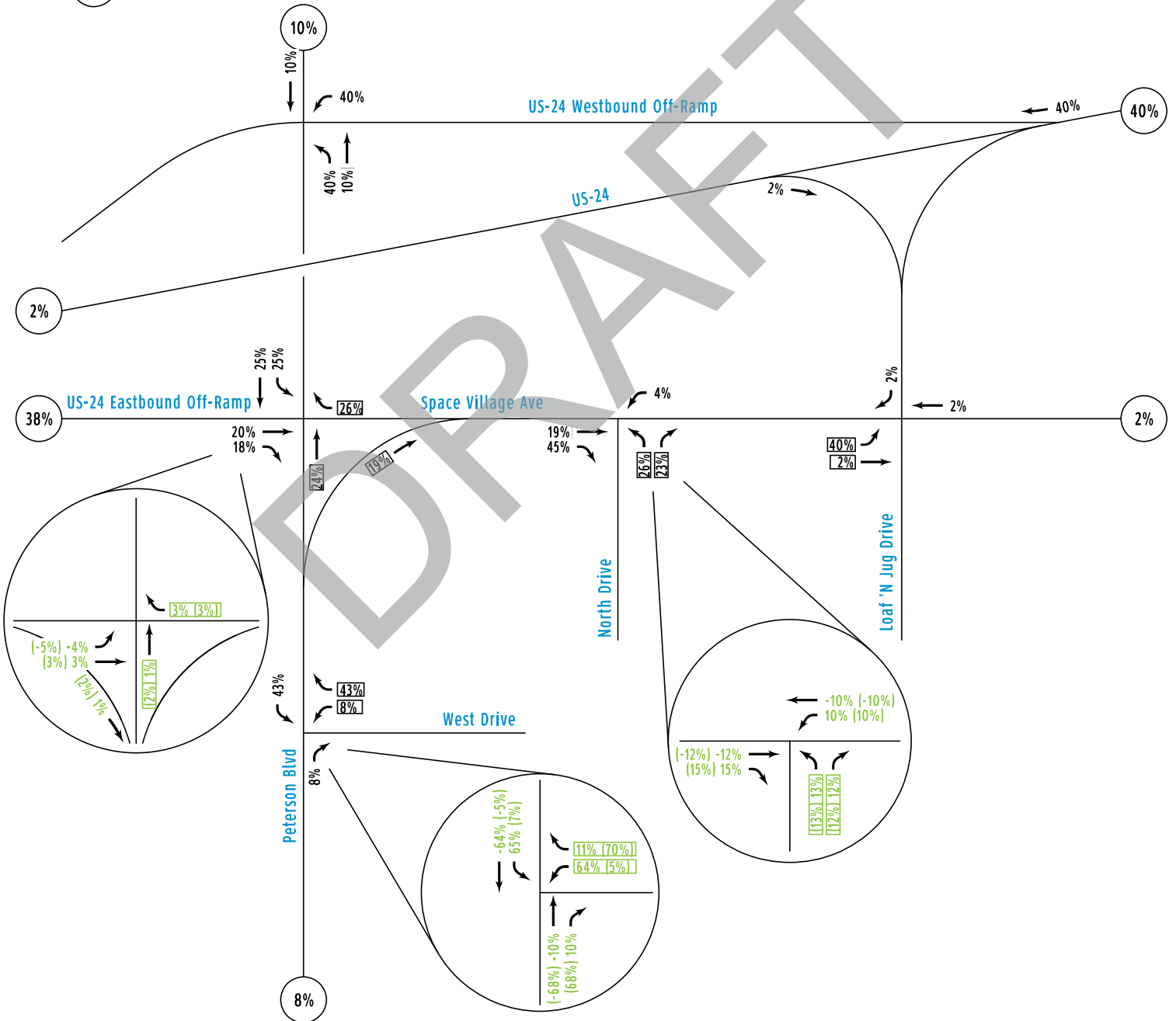


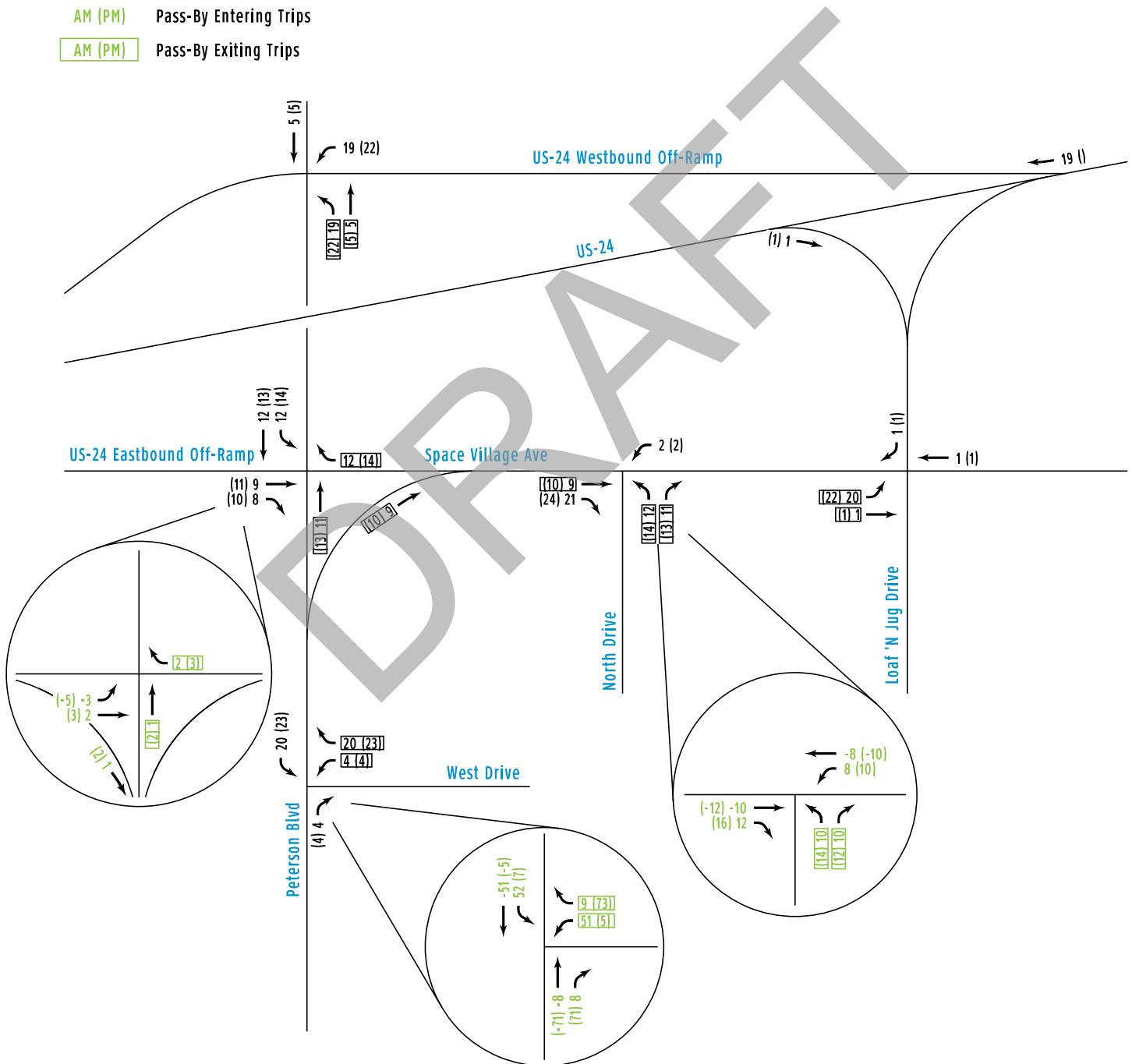
FIGURE 9

Site Trips

Kum & Go #692
Colorado Springs, CO

LEGEND

- AM (PM) Primary Entering Trips
- AM (PM) Primary Exiting Trips
- AM (PM) Pass-By Entering Trips
- AM (PM) Pass-By Exiting Trips



6.0 PLUS SITE ANALYSIS

The 2019 Base and 2040 Base traffic volumes were combined with the proposed site trips to develop the 2019 Base plus Site volumes and 2040 Base plus Site volumes for capacity analysis purposes. The second off-ramp along US-24 was modified to remove the merge lane as part of the plus site conditions analyses.

The 2019 Base plus Site peak hour volumes are shown in **Figure 10**. The 2040 Base plus Site peak hour volumes for are shown in **Figure 11**.

6.1 2019 Base plus Site Capacity Analysis

Results of the 2019 Base plus Site capacity analysis indicate that the signalized intersection of Peterson Boulevard & Space Village Avenue is expected to operate at LOS B or better in both peak hours. Individual movements at signalized intersections are expected to operate at LOS C or better in both peak hours. The 95th percentile queue lengths for all movements are expected to be contained within existing storage lengths with the exception of the northbound through movement, which again is expected to spill back past the existing northbound channelized right-turn lane.

Note the reconfigured eastbound right-turn lane at Peterson Boulevard & Space Village Avenue is yield-control. The HCM does not provide methodology to calculate delay for yield-controlled movements. If this movement were configured as stop-controlled, it is expected to operate at LOS E in the AM peak hour with a queue of approximately 10 vehicles. This movement is expected to have improved operations under yield control.

Most movements at unsignalized intersections are expected to operate at LOS D or better in both peak hours. The exceptions are the northbound and southbound movements at Loaf 'N Jug Drive & Space Village Avenue. The southbound vehicles are expected to experience queues of up to six vehicles, or 150 feet.

Figure 12 illustrates the 2019 Base plus Site capacity analysis summary. Detailed results may be found in **Appendix E**.

Include the traffic impacts generated by the proposed Colorado Military Academy on the base traffic volumes. Add a statement noting that the traffic impact from the Colorado Military Academy has been incorporated or considered.

Traffic Study for the Colorado Military Academy is available at <https://epcdevplanreview.com>. File Number PPR-17-012.

FIGURE 10

2019 Base plus Site Peak Hour Traffic Volumes

Kum & Go #692
Colorado Springs, CO

LEGEND

AM (PM) Peak Hour Volume

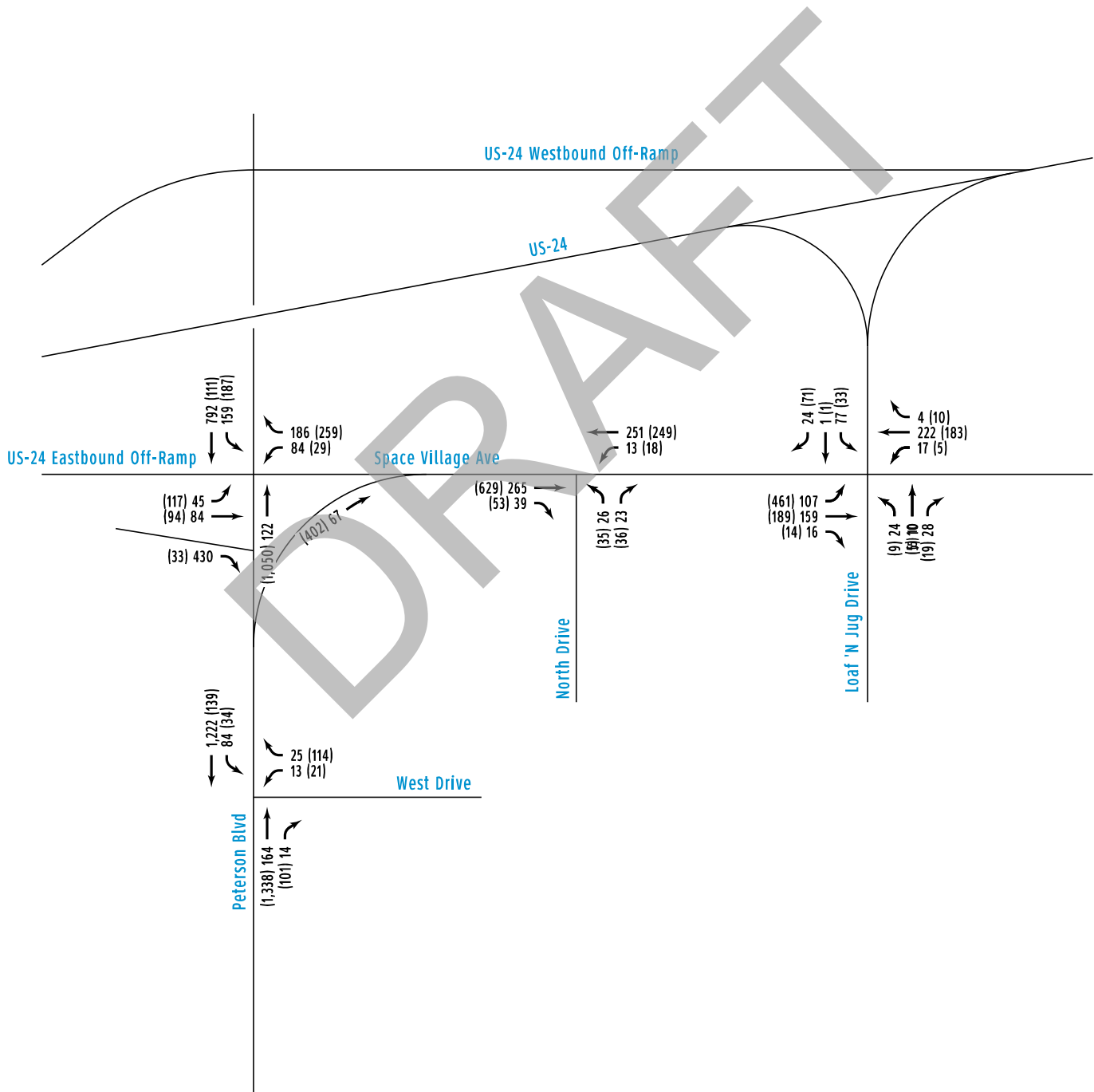


FIGURE 11

2040 Base plus Site Peak Hour Traffic Volumes

Kum & Go #692
Colorado Springs, CO

LEGEND

AM (PM) Peak Hour Volume

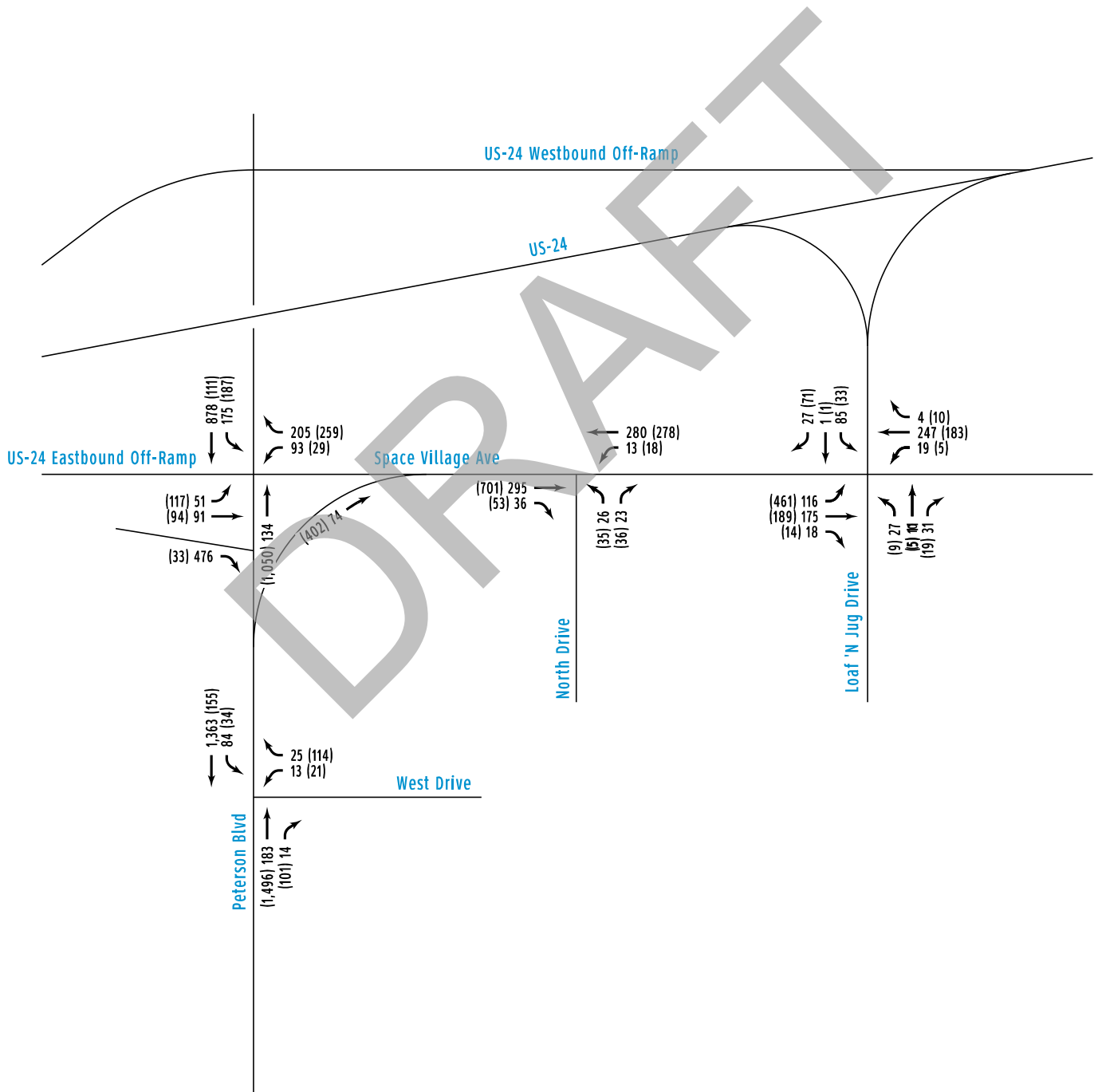


FIGURE 12

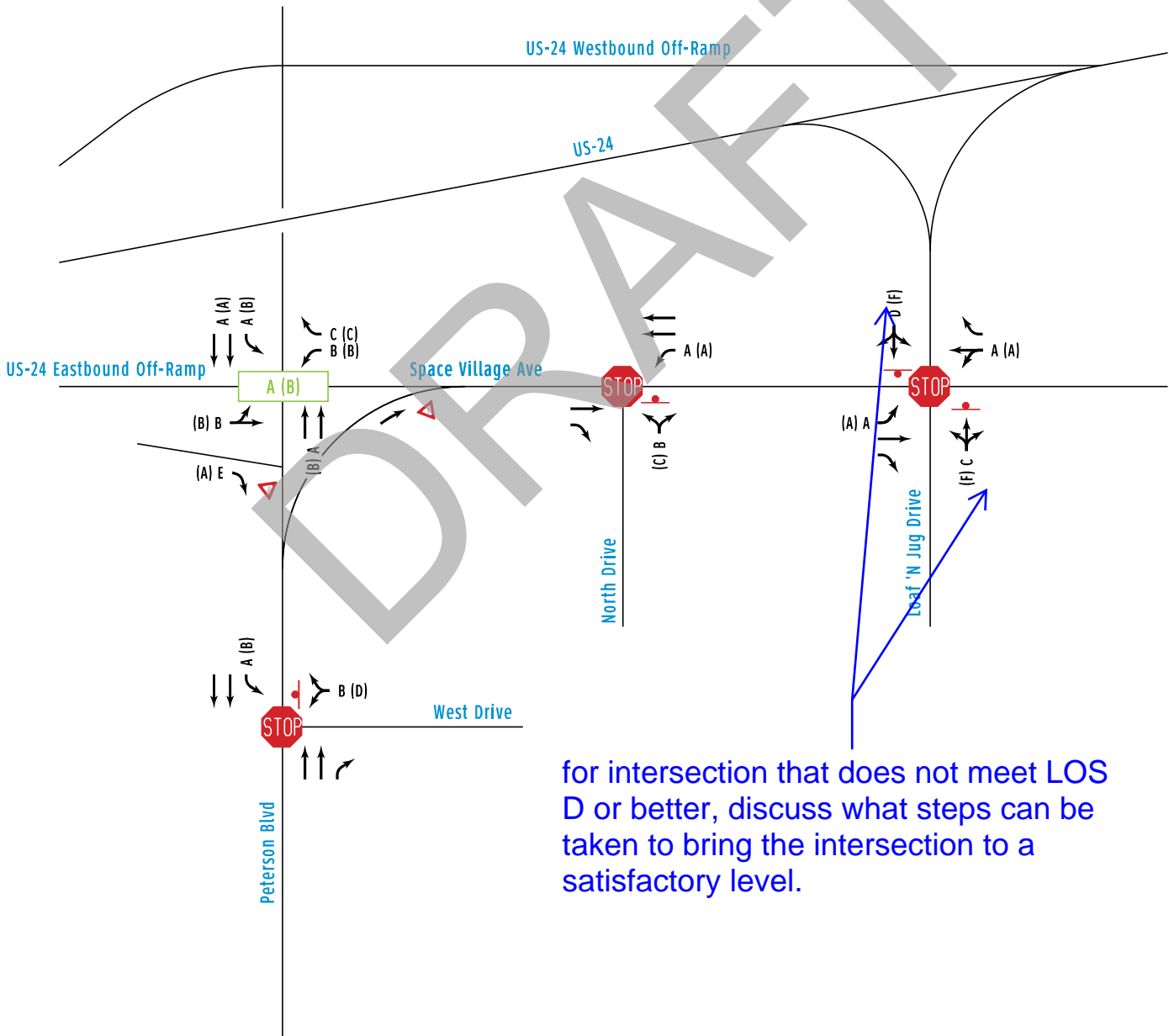
2019 Base plus Site Conditions Capacity Analysis Summary

Kum & Go #692
Colorado Springs, CO

LEGEND



- | | |
|---|---------------|
| AM (PM) Signalized Intersection LOS | Stop Sign |
| AM (PM) Movement LOS | Lane Geometry |
| Stop Controlled Intersection | Yield Sign |



for intersection that does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level.

6.2 2040 Base plus Site Capacity Analysis

Results of the 2040 Base plus Site capacity analysis indicate the signalized intersection of Peterson Boulevard & Space Village Avenue is expected to operate at LOS C or better in both peak hours. All individual movements are expected to operate at LOS D or better in both peak hours. Again, the 95th percentile queue lengths for all turn movements are expected to be contained within existing storage lengths with the exception of the northbound through movement.

The eastbound right-turning movement is expected to operate at LOS F in the AM peak hour with a queue of approximately 15 vehicles. Again, this movement is expected to have improved operations under the proposed yield control but should be monitored as traffic volumes increase.

Most individual movements at unsignalized intersections are expected to operate at LOS D or better in both peak hours. The exceptions are the westbound movements at Peterson Boulevard & West Drive, and northbound and southbound movements at Loaf 'N Jug Drive & Space Village Avenue. The 95th percentile queue length for the southbound movements are expected to be approximately 10 vehicles, or 250 feet. This will nearly queue back through the horizontal curve portion of the off-ramp.

Figure 13 illustrates the 2040 Base plus Site capacity analysis summary. Detailed results may be found in **Appendix F**.

FIGURE 13

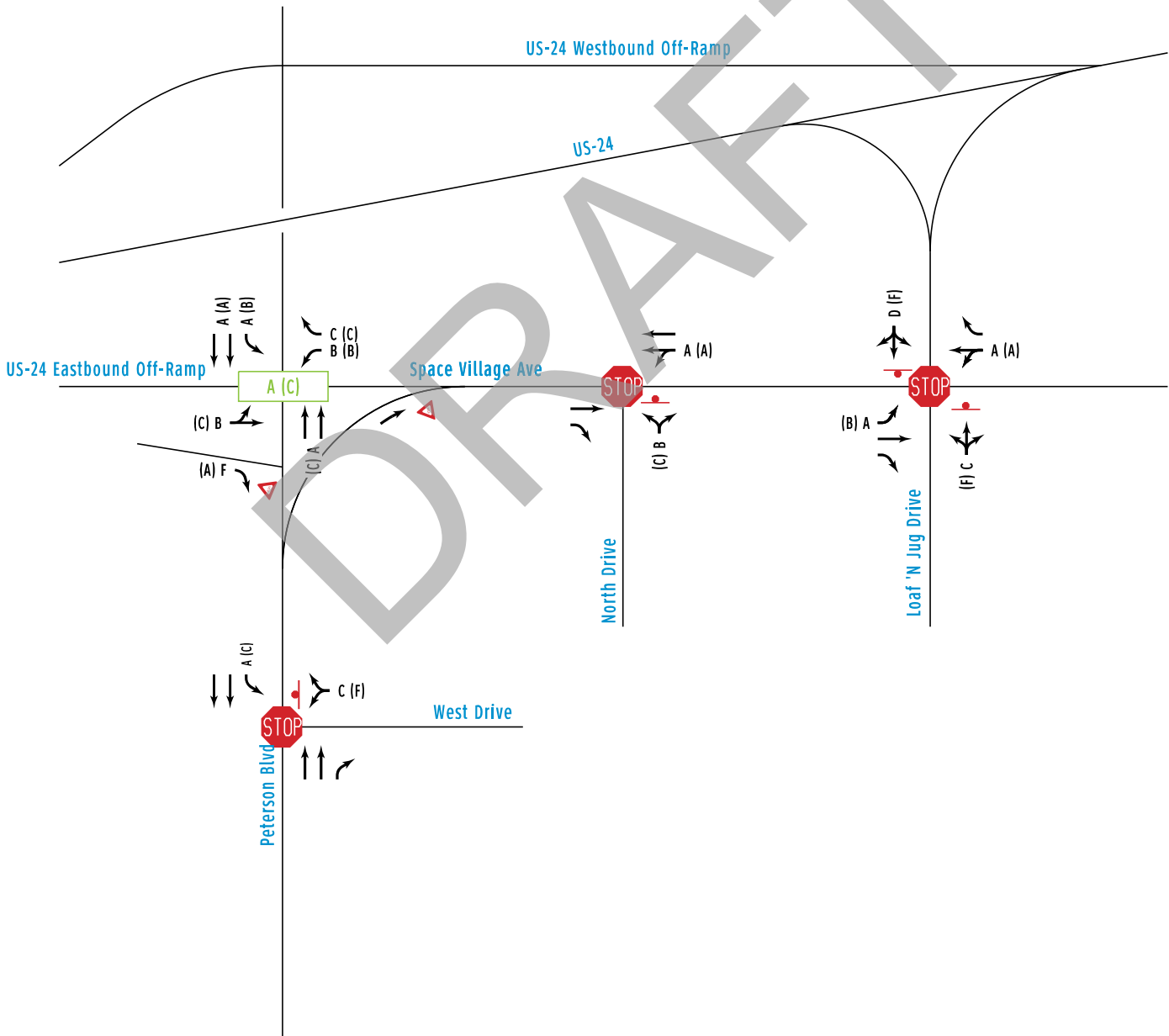
2040 Base plus Site Conditions Capacity Analysis Summary

Kum & Go #692
Colorado Springs, CO

LEGEND



- | | |
|---|---------------|
| AM (PM) Signalized Intersection LOS | Stop Sign |
| AM (PM) Movement LOS | Lane Geometry |
| Stop Controlled Intersection | Yield Sign |



Coordinate with both CDOT and the City of Colorado Springs regarding these proposed modification and keep the Planning & Community Development review team informed regarding the outcome. Peterson Blvd is under the City's jurisdiction.

The purpose of this study was to identify the traffic and transportation related impacts for a proposed Kum & Go store. The property being evaluated is proposed to be served by two full access drives, one along Peterson Boulevard (West Drive) and one along Space Village Avenue (North Drive).

A capacity analysis was performed at study intersections based on one year after opening day of the site (2019) and at a 20-year horizon year (2040). After a review of access spacing at both site drives, improvements are recommended below and were included in the capacity analysis:

West Drive at Peterson Boulevard (Full Access)

- Construct a southbound left-turn lane along Peterson Boulevard.
- Modify the existing channelized free right-turn lane to intersect Peterson Boulevard with yield control just south of Space Village Avenue.

North Drive at Space Village Avenue (Full Access)

- Restripe the eastbound left-turn lane onto US-24 to provide 50 feet of two-way left-turn lane.
- Remove merge portion of US-24 off-ramp to reroute traffic to the stop-control portion of the off-ramp.

Based on the capacity analysis, most notably, the southbound left-turn lane at Space Village Avenue (section 5.0) will accommodate up to 10 vehicles. The portion of the off-ramp

1. Coordinate with CDOT regarding both recommendations.
2. Section 5.0 (pg 12) discussed providing a westbound left turn lane. Include this as a bullet point item.

A summary of the recommended improvements is illustrated in **Figure 14**.







1. State whether the Major Transportation Corridors Plan (MTCP) or other approved corridor study calls for the construction of improvements in the immediate area.
2. State whether or not any improvements affected by the project are reimbursable under the current MTCP.
3. State what the current applicable Transportation Impact Fees are and what option the developer will be selecting for payment. If the site is in a special district, so state and summarize the applicable fees.
4. State what the sight distance is for every affected access and whether it can be met. If it can't be met, state the required modifications so that it can be met.
5. List the ECM criteria for stacking, storage, and taper for every affected auxiliary lane and access and state whether these criteria can be met. If it cannot be met, state the required modification so that it can be met.

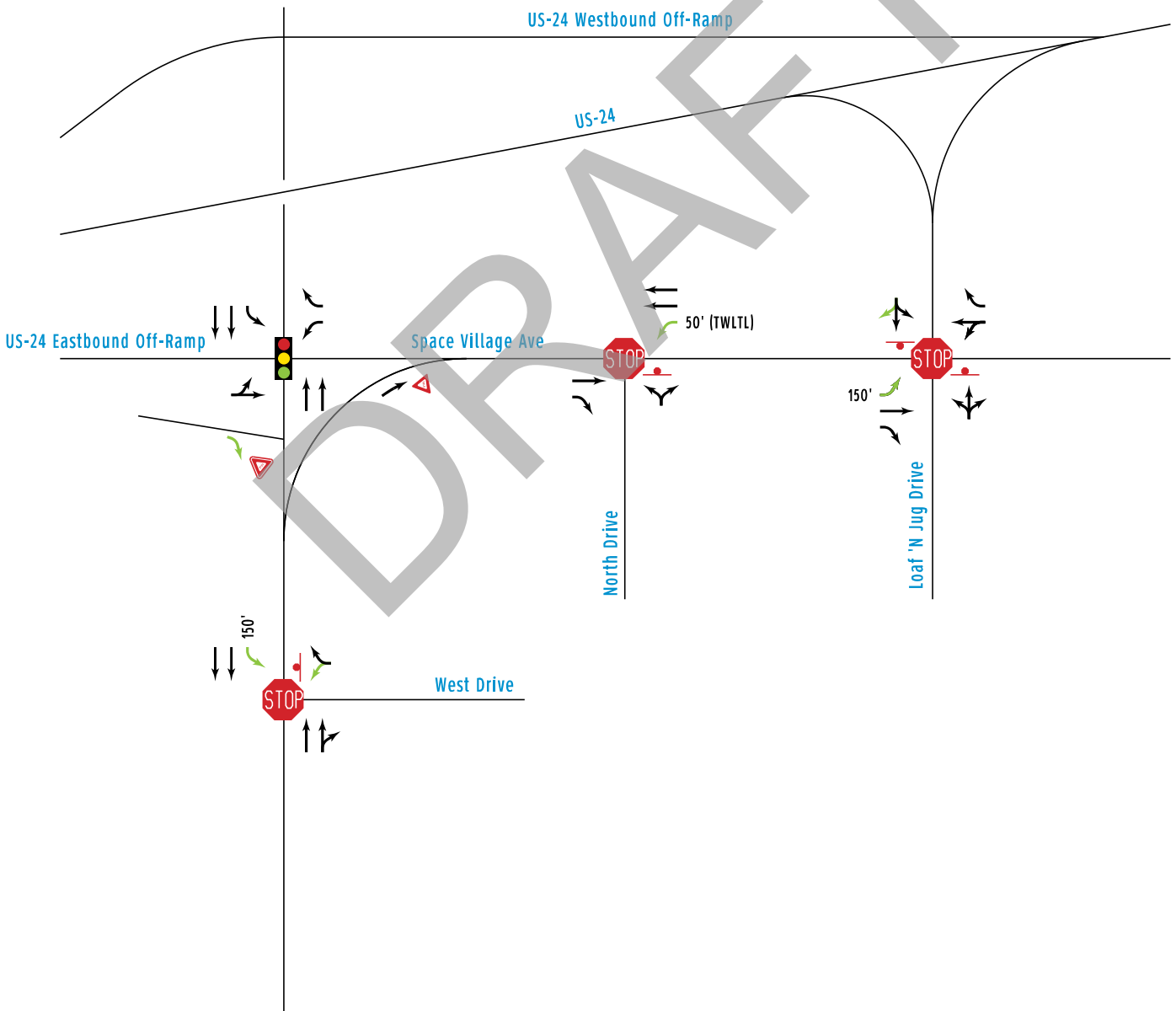
FIGURE 14

Recommended Improvements

Kum & Go #692
 Colorado Springs, CO

LEGEND

-  Existing Signalized Intersection
-  Recommended Lane Configuration & Storage Length
-  Stop Controlled Intersection
-  Stop Sign
-  Yield Sign
-  Recommended Yield Sign





APPENDIX A

COUNT DATA

DRAFT



(303) 216-2439
www.alltrafficdata.net

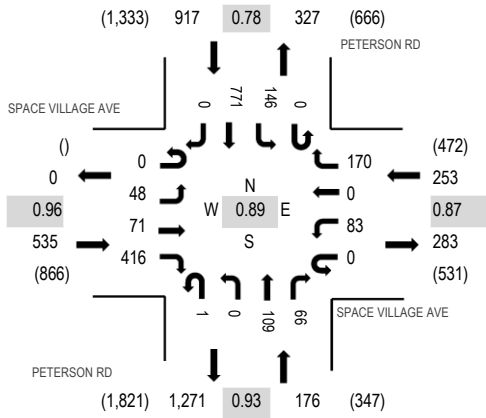
Location: 1 PETERSON RD & SPACE VILLAGE AVE AM

Date and Start Time: Tuesday, August 01, 2017

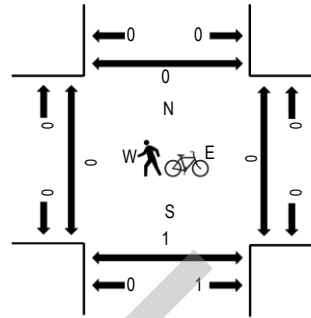
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				PETERSON RD Northbound				PETERSON RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	10	11	119	0	23	0	25	0	0	24	19	0	36	257	0	524	1,881	0	0	0	0
7:15 AM	0	8	18	112	0	28	0	47	1	0	38	10	0	42	222	0	526	1,680	0	0	0	0
7:30 AM	0	14	18	86	0	13	0	49	0	0	19	12	0	27	152	0	390	1,467	0	0	0	0
7:45 AM	0	16	24	99	0	19	0	49	0	0	28	25	0	41	140	0	441	1,349	0	0	1	0
8:00 AM	0	7	24	63	0	12	0	43	1	0	36	16	0	34	87	0	323	1,137	0	0	0	0
8:15 AM	0	9	12	60	0	13	0	58	0	0	35	8	0	31	87	0	313		0	0	0	0
8:30 AM	0	14	19	53	0	9	0	38	0	0	31	17	0	31	60	0	272		0	0	0	0
8:45 AM	0	9	22	39	0	7	0	39	1	0	20	6	0	28	58	0	229		2	0	2	0
Count Total	0	87	148	631	0	124	0	348	3	0	231	113	0	270	1,063	0	3,018		2	0	3	0
Peak Hour	0	48	71	416	0	83	0	170	1	0	109	66	0	146	771	0	1,881		0	0	1	0



(303) 216-2439
www.alltrafficdata.net

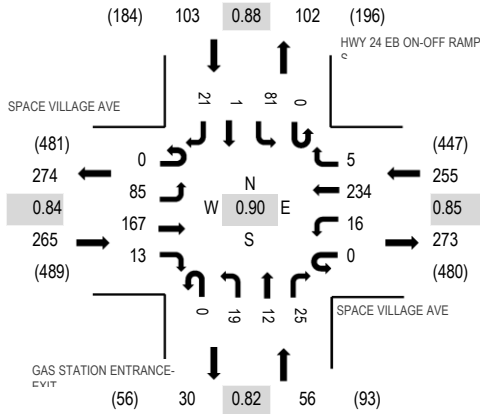
Location: 2 GAS STATION ENTRANCE-EXIT & SPACE VILLAGE AVE AM

Date and Start Time: Tuesday, August 01, 2017

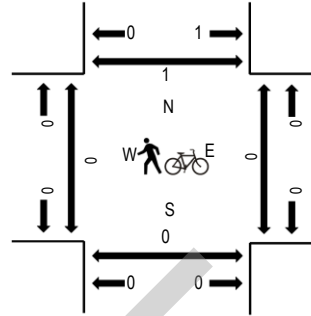
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				GAS STATION ENTRANCE- HWY 24 EB ON-OFF RAMP Northbound				GAS STATION ENTRANCE- HWY 24 EB ON-OFF RAMP Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	24	32	3	0	3	38	0	0	7	2	6	0	18	0	9	142	660	0	0	0	0
7:15 AM	0	13	46	4	0	6	68	1	0	6	4	4	0	18	0	2	172	679	0	0	0	0
7:30 AM	0	22	33	2	0	8	49	2	0	5	3	6	0	20	1	6	157	646	0	0	0	0
7:45 AM	0	28	44	7	0	0	64	1	0	6	1	12	0	20	0	6	189	619	0	0	0	0
8:00 AM	0	22	44	0	0	2	53	1	0	2	4	3	0	23	0	7	161	553	0	0	0	1
8:15 AM	0	18	27	5	0	3	56	3	0	3	1	0	0	17	0	6	139		0	0	0	0
8:30 AM	0	23	35	5	0	1	39	2	0	3	3	3	0	15	0	1	130		0	0	0	0
8:45 AM	0	12	38	2	0	4	39	4	0	4	2	3	0	13	0	2	123		0	0	0	0
Count Total	0	162	299	28	0	27	406	14	0	36	20	37	0	144	1	39	1,213		0	0	0	1
Peak Hour	0	85	167	13	0	16	234	5	0	19	12	25	0	81	1	21	679		0	0	0	1



(303) 216-2439
www.alltrafficdata.net

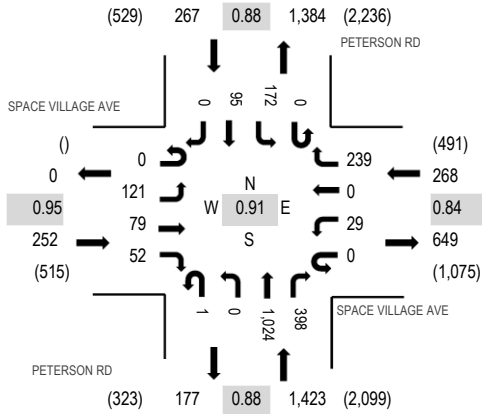
Location: 1 PETERSON RD & SPACE VILLAGE AVE PM

Date and Start Time: Tuesday, August 01, 2017

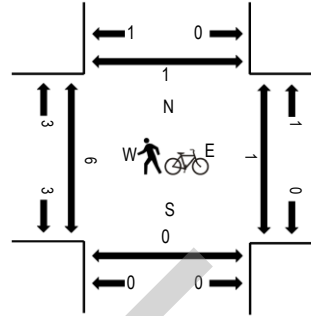
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				PETERSON RD Northbound			PETERSON RD Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South	North
4:00 PM	0	36	18	11	0	4	0	60	0	0	295	107	0	41	23	0	595	2,210	0	0	0	0
4:15 PM	0	27	22	19	0	8	0	77	1	0	225	78	0	36	26	0	519	2,087	0	1	0	1
4:30 PM	0	26	19	12	0	8	0	55	0	0	277	129	0	58	22	0	606	1,936	2	0	0	0
4:45 PM	0	32	20	10	0	9	0	47	0	0	227	84	0	37	24	0	490	1,655	4	0	0	0
5:00 PM	0	37	20	12	0	9	0	77	0	0	174	66	0	47	30	0	472	1,424	4	0	0	0
5:15 PM	0	36	16	15	0	2	0	63	1	0	119	57	0	35	24	0	368		2	0	0	0
5:30 PM	0	36	17	11	0	0	0	34	0	0	120	31	0	59	17	0	325		0	1	0	0
5:45 PM	0	38	17	8	0	0	0	38	1	0	80	27	0	34	16	0	259		0	0	0	0
Count Total	0	268	149	98	0	40	0	451	3	0	1,517	579	0	347	182	0	3,634		12	2	0	1
Peak Hour	0	121	79	52	0	29	0	239	1	0	1,024	398	0	172	95	0	2,210		6	1	0	1



(303) 216-2439
www.alltrafficdata.net

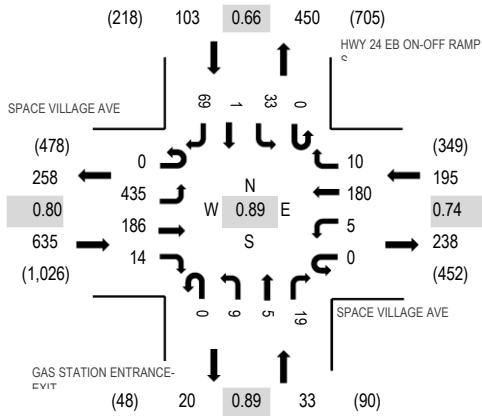
Location: 2 GAS STATION ENTRANCE-EXIT & SPACE VILLAGE AVE PM

Date and Start Time: Tuesday, August 01, 2017

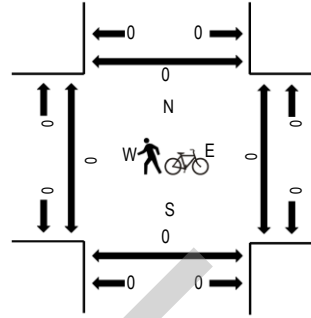
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				GAS STATION ENTRANCE- HWY 24 EB ON-OFF RAMP Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	116	45	4	0	3	53	2	0	2	0	5	0	5	0	13	248	966	0	0	0	0
4:15 PM	0	78	46	2	0	2	50	3	0	4	1	7	0	10	1	26	230	955	0	0	0	0
4:30 PM	0	137	57	5	0	0	41	2	0	2	1	3	0	8	0	15	271	926	0	0	0	0
4:45 PM	0	104	38	3	0	0	36	3	0	1	3	4	0	10	0	15	217	798	0	0	0	0
5:00 PM	0	84	36	3	0	4	61	5	0	4	4	8	0	10	0	18	237	717	0	0	0	0
5:15 PM	0	66	35	4	0	2	33	1	0	0	5	9	0	13	0	33	201		0	0	0	0
5:30 PM	0	42	35	10	0	0	21	2	0	3	4	7	0	8	1	10	143		0	0	0	0
5:45 PM	0	36	38	2	0	2	22	1	0	2	5	6	0	9	0	13	136		0	0	0	0
Count Total	0	663	330	33	0	13	317	19	0	18	23	49	0	73	2	143	1,683		0	0	0	0
Peak Hour	0	435	186	14	0	5	180	10	0	9	5	19	0	33	1	69	966		0	0	0	0

All Traffic Data Services, Inc
Wheat Ridge, CO 80033

1CLASS
Date Start: 28-Jun-17
Date End: 28-Jun-17

PETERSON BLVD S/O SPACE VILLAGE AVE

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/28/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	3	7	0	1	0	0	0	0	0	0	0	0	11
06:00	0	56	15	0	7	0	0	0	0	0	0	0	0	78
07:00	1	109	36	1	24	1	0	1	0	0	0	0	0	173
08:00	2	112	48	0	21	0	0	2	0	0	0	0	0	185
09:00	4	130	43	1	21	0	0	4	0	0	0	0	0	203
10:00	1	185	64	0	34	0	0	1	1	0	0	0	0	286
11:00	11	312	120	0	68	1	0	7	0	0	0	0	0	519
12 PM	6	228	103	0	39	0	0	4	0	0	0	0	0	380
13:00	3	194	76	0	42	0	0	4	0	0	0	0	0	319
14:00	11	296	95	3	63	0	0	7	0	0	0	0	0	475
15:00	19	577	175	2	120	1	0	17	0	2	0	0	0	913
16:00	30	847	253	0	153	3	0	30	1	2	1	2	0	1322
17:00	13	416	125	0	70	1	0	8	0	0	0	0	0	633
18:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10
19:00	0	7	2	0	1	0	0	0	0	0	0	0	0	10
20:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10
22:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
23:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
Day Total	101	3496	1167	8	664	7	0	85	2	4	1	2	0	5537
Percent	1.8%	63.1%	21.1%	0.1%	12.0%	0.1%	0.0%	1.5%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	07:00	11:00	07:00		11:00	10:00					11:00
Vol.	11	312	120	1	68	1		7	1					519
PM Peak	16:00	16:00	16:00	14:00	16:00	16:00		16:00	16:00	15:00	16:00	16:00		16:00
Vol.	30	847	253	3	153	3		30	1	2	1	2		1322
Grand Total	101	3496	1167	8	664	7	0	85	2	4	1	2	0	5537
Percent	1.8%	63.1%	21.1%	0.1%	12.0%	0.1%	0.0%	1.5%	0.0%	0.1%	0.0%	0.0%	0.0%	

All Traffic Data Services, Inc
Wheat Ridge, CO 80033

1CLASS
Date Start: 28-Jun-17
Date End: 28-Jun-17

PETERSON BLVD S/O SPACE VILLAGE AVE

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/28/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	26	5	0	4	0	0	0	0	0	0	1	0	36
06:00	39	549	174	0	100	5	2	23	0	7	0	1	0	900
07:00	50	755	181	2	86	10	3	18	0	3	1	2	0	1111
08:00	10	331	123	0	59	1	0	9	0	1	0	0	0	534
09:00	2	199	77	0	28	0	0	4	0	0	0	0	0	310
10:00	0	170	57	0	25	0	0	1	0	0	0	0	0	253
11:00	7	185	75	0	29	0	1	0	0	0	0	0	0	297
12 PM	6	255	90	0	32	0	1	0	0	0	0	0	0	384
13:00	3	212	81	0	35	0	0	4	0	0	0	0	0	335
14:00	5	148	49	0	20	0	0	1	0	0	0	0	0	223
15:00	2	113	41	0	19	0	0	0	0	0	0	0	0	175
16:00	1	135	43	0	19	0	0	1	0	0	0	0	0	199
17:00	5	89	33	0	14	0	0	0	0	0	0	0	0	141
18:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
19:00	0	7	2	0	1	0	0	0	0	0	0	0	0	10
20:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
21:00	0	7	4	0	0	0	0	0	0	0	0	0	0	11
22:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
23:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
Day Total	130	3201	1037	3	471	16	7	61	0	11	1	4	0	4942
Percent	2.6%	64.8%	21.0%	0.1%	9.5%	0.3%	0.1%	1.2%	0.0%	0.2%	0.0%	0.1%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	06:00	07:00	07:00	06:00		06:00	07:00	07:00		07:00
Vol.	50	755	181	2	100	10	3	23		7	1	2		1111
PM Peak	12:00	12:00	12:00	23:00	13:00		12:00	13:00						12:00
Vol.	6	255	90	1	35		1	4						384
Grand Total	130	3201	1037	3	471	16	7	61	0	11	1	4	0	4942
Percent	2.6%	64.8%	21.0%	0.1%	9.5%	0.3%	0.1%	1.2%	0.0%	0.2%	0.0%	0.1%	0.0%	

All Traffic Data Services, Inc
Wheat Ridge, CO 80033

2CLASS
Date Start: 28-Jun-17
Date End: 28-Jun-17

SPACE VILLAGE AVE E/O PETERSON BLVD

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/28/17	0	10	10	0	2	0	0	0	0	0	0	0	0	22
01:00	0	6	3	0	1	0	0	0	1	0	0	0	0	11
02:00	0	5	3	0	2	0	0	0	1	0	0	0	0	11
03:00	0	6	1	1	0	0	0	1	0	0	0	0	0	9
04:00	1	13	6	0	7	0	1	0	0	0	0	0	0	28
05:00	6	47	16	0	11	0	0	1	0	0	0	0	0	81
06:00	19	117	47	2	22	3	0	3	3	0	0	0	0	216
07:00	12	114	52	3	36	0	1	9	1	0	0	0	0	228
08:00	21	120	61	0	39	3	0	9	1	0	0	0	0	254
09:00	17	125	41	4	37	3	0	5	1	0	0	0	0	233
10:00	26	108	62	1	43	2	0	7	0	0	0	0	0	249
11:00	10	152	61	2	49	2	0	6	1	0	0	0	0	283
12 PM	42	161	59	3	47	6	0	9	3	0	0	0	0	330
13:00	28	106	82	2	40	2	0	5	1	0	0	0	0	266
14:00	22	161	52	4	41	0	1	3	5	0	0	0	0	289
15:00	37	291	122	5	84	4	0	6	0	0	0	0	0	549
16:00	43	370	137	1	106	1	0	8	1	0	0	0	0	667
17:00	27	231	80	0	66	0	0	1	0	0	0	0	0	405
18:00	25	98	24	1	21	0	0	1	0	0	0	0	0	170
19:00	19	88	28	0	13	0	0	0	0	0	1	0	0	149
20:00	10	64	19	0	12	0	0	1	0	0	0	0	0	106
21:00	8	54	11	0	7	2	0	0	0	0	0	0	0	82
22:00	0	29	9	0	4	0	0	1	0	0	0	0	0	43
23:00	0	22	6	0	2	0	0	0	0	0	0	0	0	30
Day Total	373	2498	992	29	692	28	3	76	19	0	1	0	0	4711
Percent	7.9%	53.0%	21.1%	0.6%	14.7%	0.6%	0.1%	1.6%	0.4%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	10:00	09:00	11:00	06:00	04:00	07:00	06:00					11:00
Vol.	26	152	62	4	49	3	1	9	3					283
PM Peak	16:00	16:00	16:00	15:00	16:00	12:00	14:00	12:00	14:00		19:00			16:00
Vol.	43	370	137	5	106	6	1	9	5		1			667
Grand Total	373	2498	992	29	692	28	3	76	19	0	1	0	0	4711
Percent	7.9%	53.0%	21.1%	0.6%	14.7%	0.6%	0.1%	1.6%	0.4%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services, Inc
Wheat Ridge, CO 80033

2CLASS
Date Start: 28-Jun-17
Date End: 28-Jun-17

SPACE VILLAGE AVE E/O PETERSON BLVD

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/28/17	0	9	6	0	0	0	0	0	0	0	0	0	0	15
01:00	0	3	4	0	1	0	0	1	0	0	0	0	0	9
02:00	0	6	2	0	3	0	0	0	0	0	0	0	0	11
03:00	0	0	2	0	2	0	0	0	0	0	0	0	0	4
04:00	0	8	5	0	5	0	0	1	0	0	0	0	0	19
05:00	0	27	18	0	11	0	1	1	0	0	0	0	0	58
06:00	2	60	47	2	37	4	0	3	1	0	0	0	0	156
07:00	4	101	67	4	57	4	0	4	0	0	0	0	0	241
08:00	4	69	50	9	42	3	0	10	1	0	0	0	0	188
09:00	5	72	45	3	47	5	0	11	0	0	0	0	0	188
10:00	4	56	37	5	37	7	0	6	1	0	0	0	0	153
11:00	2	63	50	4	40	6	0	5	0	0	0	0	0	170
12 PM	2	89	74	3	44	8	0	7	1	0	0	0	0	228
13:00	0	99	41	3	32	2	0	2	0	0	0	0	0	179
14:00	2	80	54	3	44	6	0	13	0	0	0	0	0	202
15:00	6	95	73	4	43	5	0	3	0	0	0	0	0	229
16:00	6	127	80	5	60	5	0	8	1	0	0	0	0	292
17:00	1	112	69	2	32	0	0	3	0	0	0	0	0	219
18:00	4	65	33	0	23	0	1	2	0	0	0	0	0	128
19:00	3	27	23	0	9	0	0	0	1	0	0	0	0	63
20:00	0	34	16	1	8	1	0	0	0	0	0	0	0	60
21:00	2	22	16	0	9	1	0	1	1	0	0	0	0	52
22:00	0	8	7	0	2	0	0	0	1	0	0	0	0	18
23:00	0	12	5	0	2	0	0	0	0	0	0	0	0	19
Day Total	47	1244	824	48	590	57	2	81	8	0	0	0	0	2901
Percent	1.6%	42.9%	28.4%	1.7%	20.3%	2.0%	0.1%	2.8%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	07:00	07:00	08:00	07:00	10:00	05:00	09:00	06:00					07:00
Vol.	5	101	67	9	57	7	1	11	1					241
PM Peak	15:00	16:00	16:00	16:00	16:00	12:00	18:00	14:00	12:00					16:00
Vol.	6	127	80	5	60	8	1	13	1					292
Grand Total	47	1244	824	48	590	57	2	81	8	0	0	0	0	2901
Percent	1.6%	42.9%	28.4%	1.7%	20.3%	2.0%	0.1%	2.8%	0.3%	0.0%	0.0%	0.0%	0.0%	



APPENDIX B
EXISTING CAPACITY ANALYSIS REPORTS

DRAFT

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	433	95	195	117	71	187	990
v/c Ratio	0.44	0.28	0.44	0.45	0.06	0.04	0.23	0.41
Control Delay	23.4	0.4	25.0	7.1	10.0	0.0	5.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	0.4	25.0	7.1	10.0	0.0	5.1	5.4
Queue Length 50th (ft)	33	0	26	0	10	0	18	62
Queue Length 95th (ft)	72	0	58	37	25	0	41	100
Internal Link Dist (ft)	774		1		432			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	547	1568	423	656	1887	1599	806	2421
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.28	0.22	0.30	0.06	0.04	0.23	0.41
Intersection Summary								

DRAFT

HCM 6th Signalized Intersection Summary
 3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕↕	↗	↘	↕↕	
Traffic Volume (veh/h)	48	71	416	83	0	170	0	109	66	146	772	0
Future Volume (veh/h)	48	71	416	83	0	170	0	109	66	146	772	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	50	74	0	95	0	195	0	117	0	187	990	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	178	208		392	0	266	0	1658		879	2306	0
Arrive On Green	0.18	0.18	0.00	0.18	0.00	0.18	0.00	0.46	0.00	0.09	0.64	0.00
Sat Flow, veh/h	436	1169	1572	1400	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	124	0	0	95	0	195	0	117	0	187	990	0
Grp Sat Flow(s),veh/h/ln	1605	0	1572	1400	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	6.2	0.0	0.9	0.0	2.4	6.9	0.0
Cycle Q Clear(g_c), s	3.1	0.0	0.0	2.5	0.0	6.2	0.0	0.9	0.0	2.4	6.9	0.0
Prop In Lane	0.40		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	386	0		392	0	266	0	1658		879	2306	0
V/C Ratio(X)	0.32	0.00		0.24	0.00	0.73	0.00	0.07		0.21	0.43	0.00
Avail Cap(c_a), veh/h	670	0		628	0	549	0	1658		952	2306	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.3	0.0	0.0	18.1	0.0	19.6	0.0	7.5	0.0	4.7	4.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.3	0.0	3.9	0.0	0.1	0.0	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.8	0.0	2.1	0.0	0.3	0.0	0.6	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	0.0	0.0	18.4	0.0	23.5	0.0	7.6	0.0	4.9	5.0	0.0
LnGrp LOS	B	A		B	A	C	A	A		A	A	A
Approach Vol, veh/h		124	A		290			117	A		1177	
Approach Delay, s/veh		18.8			21.8			7.6			5.0	
Approach LOS		B			C			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.1	27.9		13.5		37.0		13.5				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	6.7	21.3		18.5		32.5		18.5				
Max Q Clear Time (g_c+I1), s	4.4	2.9		5.1		8.9		8.2				
Green Ext Time (p_c), s	0.1	0.6		0.5		7.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔		↔	↔		↔			↔	↔
Traffic Vol, veh/h	87	155	16	17	219	4	24	10	28	76	1	23
Future Vol, veh/h	87	155	16	17	219	4	24	10	28	76	1	23
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	-	-	Free
Storage Length	340	-	390	-	-	100	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	106	189	20	21	274	5	29	12	34	82	1	25
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	279	0	0	209	0	0	720	722	189	750	737	-
Stage 1	-	-	-	-	-	-	401	401	-	316	316	-
Stage 2	-	-	-	-	-	-	319	321	-	434	421	-
Critical Hdwy	4.17	-	-	4.22	-	-	7.16	6.56	6.26	7.24	6.64	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Follow-up Hdwy	2.263	-	-	2.308	-	-	3.554	4.054	3.354	3.626	4.126	-
Pot Cap-1 Maneuver	1255	-	-	1304	-	-	338	348	843	313	332	0
Stage 1	-	-	-	-	-	-	618	594	-	670	634	0
Stage 2	-	-	-	-	-	-	684	645	-	578	569	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1255	-	-	1304	-	-	311	313	843	269	298	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	313	-	269	298	-
Stage 1	-	-	-	-	-	-	566	544	-	614	622	-
Stage 2	-	-	-	-	-	-	670	633	-	496	521	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.7			0.6			15			24.2		
HCM LOS	C			C			C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	436	1255	-	-	1304	-	-	269	-			
HCM Lane V/C Ratio	0.173	0.085	-	-	0.016	-	-	0.308	-			
HCM Control Delay (s)	15	8.1	-	-	7.8	0	-	24.2	0			
HCM Lane LOS	C	A	-	-	A	A	-	C	A			
HCM 95th %tile Q(veh)	0.6	0.3	-	-	0.1	-	-	1.3	-			

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

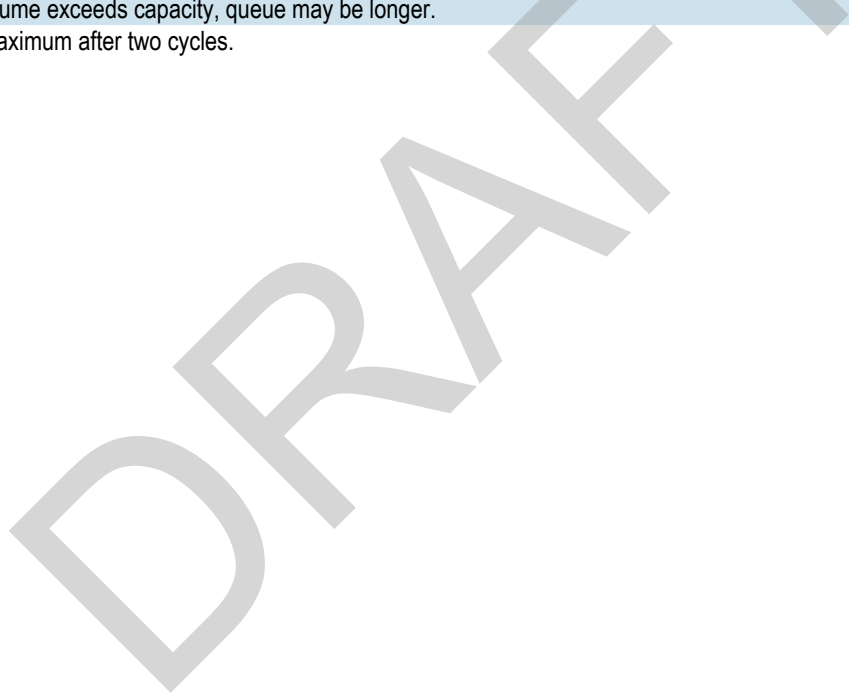
08/24/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	210	22	35	285	1164	452	195	109
v/c Ratio	0.61	0.01	0.15	0.54	0.76	0.28	0.65	0.05
Control Delay	26.9	0.0	17.6	9.1	19.0	0.4	20.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	0.0	17.6	9.1	19.0	0.4	20.3	5.5
Queue Length 50th (ft)	61	0	9	16	161	0	24	6
Queue Length 95th (ft)	117	0	25	56	#268	0	#103	17
Internal Link Dist (ft)	774		649		432			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	493	1599	346	662	1522	1615	298	2030
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.01	0.10	0.43	0.76	0.28	0.65	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 6th Signalized Intersection Summary

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↕	↗	↘	↕	
Traffic Volume (veh/h)	121	79	21	29	0	239	0	1024	398	172	96	0
Future Volume (veh/h)	121	79	21	29	0	239	0	1024	398	172	96	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1841	1841	0	1900	1900	1841	1841	0
Adj Flow Rate, veh/h	127	83	0	35	0	285	0	1164	0	195	109	0
Peak Hour Factor	0.95	0.95	0.95	0.84	0.84	0.84	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	1	4	4	4	0	0	0	4	4	0
Cap, veh/h	267	138		420	0	347	0	1589		369	2137	0
Arrive On Green	0.22	0.22	0.00	0.22	0.00	0.22	0.00	0.44	0.00	0.09	0.61	0.00
Sat Flow, veh/h	720	621	1598	1291	0	1560	0	3705	1610	1753	3589	0
Grp Volume(v), veh/h	210	0	0	35	0	285	0	1164	0	195	109	0
Grp Sat Flow(s),veh/h/ln	1341	0	1598	1291	0	1560	0	1805	1610	1753	1749	0
Q Serve(g_s), s	6.5	0.0	0.0	0.0	0.0	9.4	0.0	14.4	0.0	2.9	0.7	0.0
Cycle Q Clear(g_c), s	7.7	0.0	0.0	1.2	0.0	9.4	0.0	14.4	0.0	2.9	0.7	0.0
Prop In Lane	0.60		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	405	0		420	0	347	0	1589		369	2137	0
V/C Ratio(X)	0.52	0.00		0.08	0.00	0.82	0.00	0.73		0.53	0.05	0.00
Avail Cap(c_a), veh/h	552	0		564	0	520	0	1589		394	2137	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	16.8	0.0	20.0	0.0	12.5	0.0	9.9	4.2	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	6.5	0.0	3.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.3	0.0	3.4	0.0	5.4	0.0	0.9	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	0.0	16.9	0.0	26.4	0.0	15.5	0.0	11.1	4.3	0.0
LnGrp LOS	C	A		B	A	C	A	B		B	A	A
Approach Vol, veh/h		210	A		320			1164	A		304	
Approach Delay, s/veh		20.3			25.4			15.5			8.6	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.2	28.3		16.5		37.5		16.5				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.5	23.0		18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s	4.9	16.4		9.7		2.7		11.4				
Green Ext Time (p_c), s	0.0	4.1		0.7		0.6		0.6				

Intersection Summary

HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 17.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↔			↖	↗
Traffic Vol, veh/h	435	186	14	5	180	10	9	5	19	33	1	69
Future Vol, veh/h	435	186	14	5	180	10	9	5	19	33	1	69
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	-	-	Free
Storage Length	340	-	390	-	-	100	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	74	74	74	89	89	89	66	66	66
Heavy Vehicles, %	2	2	2	6	6	6	0	0	0	2	2	2
Mvmt Flow	544	233	18	7	243	14	10	6	21	50	2	105

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	257	0	0	251
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.16
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.254
Pot Cap-1 Maneuver	1308	-	-	1291
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1308	-	-	1291
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.6	0.2	44.2	247.8
HCM LOS	E	E	E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	128	1308	-	-	1291	-	-	52	-
HCM Lane V/C Ratio	0.29	0.416	-	-	0.005	-	-	0.991	-
HCM Control Delay (s)	44.2	9.7	-	-	7.8	0	-	247.8	0
HCM Lane LOS	E	A	-	-	A	A	-	F	A
HCM 95th %tile Q(veh)	1.1	2.1	-	-	0	-	-	4.4	-



APPENDIX C
2040 PROJECTED VOLUMES

DRAFT

Projected Volumes

<u>Approach of Peterson and Space Village Intersection</u>	<u>Existing ADT</u>	<u>Growth Rate</u>	<u>2040 ADT</u>
Northbound	9,600	0.50%	10,800
Eastbound	3,800	0.50%	4,300
Southbound	11,800	0.50%	13,200
Westbound	6,900	0.50%	7,700

DRAFT



APPENDIX D
2040 BASE CAPACITY ANALYSIS SUMMARY

DRAFT

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Lane Group	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	77	173	493	100	197	131	80	210	1110
v/c Ratio	0.31	0.48	0.31	0.45	0.44	0.09	0.05	0.29	0.51
Control Delay	20.8	22.8	0.5	24.9	6.7	10.9	0.1	5.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	22.8	0.5	24.9	6.7	10.9	0.1	5.9	6.8
Queue Length 50th (ft)	20	47	0	27	0	12	0	22	77
Queue Length 95th (ft)	49	92	0	60	36	30	0	47	121
Internal Link Dist (ft)		774		1		432			234
Turn Bay Length (ft)	550				550		242		
Base Capacity (vph)	457	660	1568	404	657	1444	1599	735	2173
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.26	0.31	0.25	0.30	0.09	0.05	0.29	0.51

Intersection Summary



HCM 6th Signalized Intersection Summary

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↑↑	↗	↖	↑↑	
Traffic Volume (veh/h)	74	166	473	87	0	171	0	122	74	164	866	0
Future Volume (veh/h)	74	166	473	87	0	171	0	122	74	164	866	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	77	173	0	100	0	197	0	131	0	210	1110	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	253	483		339	0	389	0	1445		783	2075	0
Arrive On Green	0.26	0.26	0.00	0.26	0.00	0.26	0.00	0.40	0.00	0.10	0.58	0.00
Sat Flow, veh/h	1176	1856	1572	811	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	77	173	0	100	0	197	0	131	0	210	1110	0
Grp Sat Flow(s),veh/h/ln	1176	1856	1572	811	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	3.5	4.3	0.0	4.4	0.0	6.3	0.0	1.3	0.0	3.5	10.6	0.0
Cycle Q Clear(g_c), s	12.1	4.3	0.0	8.6	0.0	6.3	0.0	1.3	0.0	3.5	10.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	253	483		339	0	389	0	1445		783	2075	0
V/C Ratio(X)	0.30	0.36		0.29	0.00	0.51	0.00	0.09		0.27	0.53	0.00
Avail Cap(c_a), veh/h	335	612		419	0	494	0	1445		852	2075	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.0	16.9	0.0	20.4	0.0	17.7	0.0	10.4	0.0	7.0	7.2	0.0
Incr Delay (d2), s/veh	0.7	0.4	0.0	0.5	0.0	1.0	0.0	0.1	0.0	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.7	0.0	1.0	0.0	1.9	0.0	0.5	0.0	1.1	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	17.4	0.0	20.9	0.0	18.7	0.0	10.5	0.0	7.2	8.2	0.0
LnGrp LOS	C	B		C	A	B	A	B		A	A	A
Approach Vol, veh/h		250	A		297			131	A		1320	
Approach Delay, s/veh		19.6			19.4			10.5			8.0	
Approach LOS		B			B			B			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.9	27.1		19.1		37.0		19.1				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	7.5	20.5		18.5		32.5		18.5				
Max Q Clear Time (g_c+I1), s	5.5	3.3		14.1		12.6		10.6				
Green Ext Time (p_c), s	0.1	0.6		0.4		8.2		0.7				

Intersection Summary

HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖	↗		↔				
Traffic Vol, veh/h	98	259	19	19	246	4	27	11	31	0	0	0
Future Vol, veh/h	98	259	19	19	246	4	27	11	31	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	340	-	390	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	120	316	23	24	308	5	33	13	38	0	0	0

Major/Minor

	Major1		Major2		Minor1				
Conflicting Flow All	313	0	0	339	0	0	915	917	316
Stage 1	-	-	-	-	-	-	556	556	-
Stage 2	-	-	-	-	-	-	359	361	-
Critical Hdwy	4.17	-	-	4.22	-	-	6.46	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	5.46	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.46	5.56	-
Follow-up Hdwy	2.263	-	-	2.308	-	-	3.554	4.054	3.354
Pot Cap-1 Maneuver	1220	-	-	1166	-	-	298	268	715
Stage 1	-	-	-	-	-	-	566	506	-
Stage 2	-	-	-	-	-	-	698	619	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1220	-	-	1166	-	-	262	0	715
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	0	-
Stage 1	-	-	-	-	-	-	498	0	-
Stage 2	-	-	-	-	-	-	698	0	-

Approach

	EB	WB	NB
HCM Control Delay, s	2.2	0.6	16.5
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	396	1220	-	-	1166	-	-
HCM Lane V/C Ratio	0.212	0.098	-	-	0.02	-	-
HCM Control Delay (s)	16.5	8.3	-	-	8.2	0	-
HCM Lane LOS	C	A	-	-	A	A	-
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0.1	-	-

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

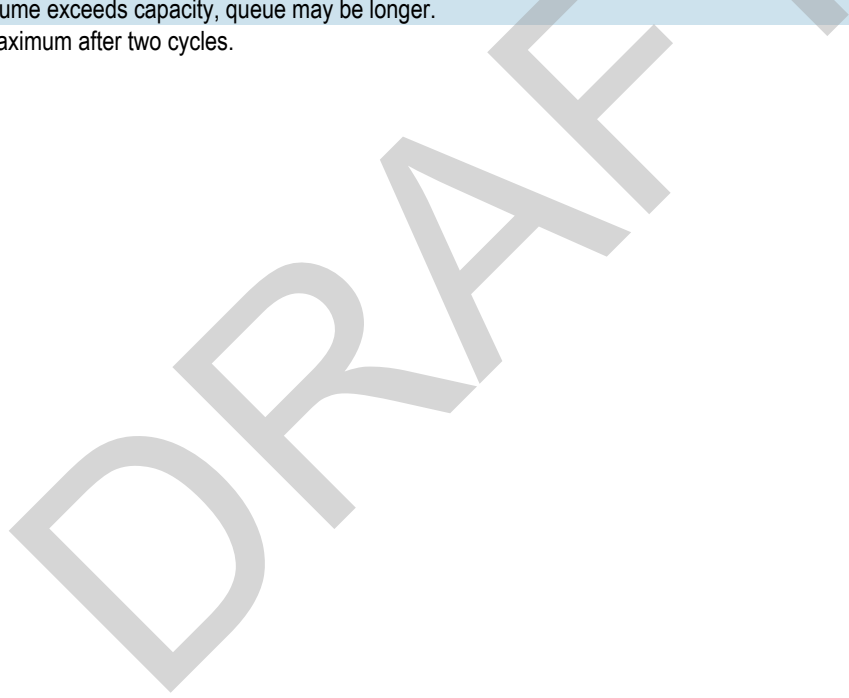
08/24/2017



Lane Group	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	204	132	43	18	239	1234	480	247	138
v/c Ratio	0.64	0.31	0.03	0.07	0.45	0.84	0.30	0.78	0.07
Control Delay	28.3	18.9	0.0	16.1	6.0	22.6	0.5	29.2	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	18.9	0.0	16.1	6.0	22.6	0.5	29.2	5.6
Queue Length 50th (ft)	60	36	0	5	1	183	0	33	8
Queue Length 95th (ft)	116	72	0	17	40	#344	0	#110	18
Internal Link Dist (ft)		774		1		432			234
Turn Bay Length (ft)	550				550		242		
Base Capacity (vph)	451	605	1568	385	645	1473	1599	318	2080
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.22	0.03	0.05	0.37	0.84	0.30	0.78	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 6th Signalized Intersection Summary

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↑↑	↗	↖	↑↑	
Traffic Volume (veh/h)	196	127	41	16	0	208	0	1148	446	193	108	0
Future Volume (veh/h)	196	127	41	16	0	208	0	1148	446	193	108	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	204	132	0	18	0	239	0	1234	0	247	138	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	364	519		390	0	419	0	1388		335	2027	0
Arrive On Green	0.28	0.28	0.00	0.28	0.00	0.28	0.00	0.39	0.00	0.10	0.57	0.00
Sat Flow, veh/h	1132	1856	1572	954	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	204	132	0	18	0	239	0	1234	0	247	138	0
Grp Sat Flow(s),veh/h/ln	1132	1856	1572	954	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	10.1	3.2	0.0	0.7	0.0	8.0	0.0	18.8	0.0	4.4	1.0	0.0
Cycle Q Clear(g_c), s	14.0	3.2	0.0	3.9	0.0	8.0	0.0	18.8	0.0	4.4	1.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	364	519		390	0	419	0	1388		335	2027	0
V/C Ratio(X)	0.56	0.25		0.05	0.00	0.57	0.00	0.89		0.74	0.07	0.00
Avail Cap(c_a), veh/h	397	573		425	0	462	0	1388		335	2027	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.0	16.3	0.0	17.8	0.0	18.0	0.0	16.7	0.0	12.6	5.7	0.0
Incr Delay (d2), s/veh	1.5	0.3	0.0	0.0	0.0	1.4	0.0	8.8	0.0	8.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.3	0.0	0.2	0.0	2.5	0.0	8.3	0.0	2.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	16.5	0.0	17.8	0.0	19.4	0.0	25.5	0.0	20.9	5.8	0.0
LnGrp LOS	C	B		B	A	B	A	C		C	A	A
Approach Vol, veh/h		336	A		257			1234	A		385	
Approach Delay, s/veh		20.8			19.3			25.5			15.5	
Approach LOS		C			B			C			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.4	27.1		20.8		37.5		20.8				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.9	22.6		18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s	6.4	20.8		16.0		3.0		10.0				
Green Ext Time (p_c), s	0.0	1.4		0.3		0.8		0.5				

Intersection Summary

HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗		↘	↗		↔				
Traffic Vol, veh/h	488	246	17	6	202	11	10	6	21	0	0	0
Future Vol, veh/h	488	246	17	6	202	11	10	6	21	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	340	-	390	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	595	300	21	8	253	14	12	7	26	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	267	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.17	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.263	-	-
Pot Cap-1 Maneuver	1268	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1268	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	6.7	0.2	47.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	128	1268	-	-	1185	-	-
HCM Lane V/C Ratio	0.353	0.469	-	-	0.006	-	-
HCM Control Delay (s)	47.7	10.3	-	-	8.1	0	-
HCM Lane LOS	E	B	-	-	A	A	-
HCM 95th %tile Q(veh)	1.4	2.6	-	-	0	-	-



APPENDIX E
2019 BASE PLUS SITE CAPACITY ANALYSIS SUMMARY

DRAFT

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	448	97	214	131	72	204	1015
v/c Ratio	0.45	0.29	0.43	0.47	0.09	0.05	0.28	0.46
Control Delay	23.1	0.5	24.4	6.9	10.8	0.1	5.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	0.5	24.4	6.9	10.8	0.1	5.7	6.3
Queue Length 50th (ft)	36	0	26	0	12	0	20	65
Queue Length 95th (ft)	76	0	59	38	30	0	47	111
Internal Link Dist (ft)	774		1		287			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	567	1568	421	670	1457	1599	740	2188
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.29	0.23	0.32	0.09	0.05	0.28	0.46
Intersection Summary								

DRAFT

HCM 6th Signalized Intersection Summary
 3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/24/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↕	↗	↘	↕	
Traffic Volume (veh/h)	45	84	430	84	0	186	0	122	67	159	792	0
Future Volume (veh/h)	45	84	430	84	0	186	0	122	67	159	792	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	47	88	0	97	0	214	0	131	0	204	1015	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	165	240		404	0	284	0	1627		856	2272	0
Arrive On Green	0.19	0.19	0.00	0.19	0.00	0.19	0.00	0.45	0.00	0.09	0.63	0.00
Sat Flow, veh/h	368	1266	1572	1388	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	135	0	0	97	0	214	0	131	0	204	1015	0
Grp Sat Flow(s),veh/h/ln	1634	0	1572	1388	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	6.9	0.0	1.1	0.0	2.7	7.4	0.0
Cycle Q Clear(g_c), s	3.3	0.0	0.0	2.5	0.0	6.9	0.0	1.1	0.0	2.7	7.4	0.0
Prop In Lane	0.35		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	405	0		404	0	284	0	1627		856	2272	0
V/C Ratio(X)	0.33	0.00		0.24	0.00	0.75	0.00	0.08		0.24	0.45	0.00
Avail Cap(c_a), veh/h	668	0		616	0	541	0	1627		954	2272	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.1	0.0	0.0	17.8	0.0	19.6	0.0	7.9	0.0	5.1	4.8	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.3	0.0	4.0	0.0	0.1	0.0	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.9	0.0	2.3	0.0	0.4	0.0	0.7	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	18.1	0.0	23.6	0.0	8.0	0.0	5.2	5.4	0.0
LnGrp LOS	B	A		B	A	C	A	A		A	A	A
Approach Vol, veh/h		135	A		311			131	A		1219	
Approach Delay, s/veh		18.6			21.9			8.0			5.4	
Approach LOS		B			C			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.2	27.8		14.2		37.0		14.2				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	7.5	20.5		18.5		32.5		18.5				
Max Q Clear Time (g_c+I1), s	4.7	3.1		5.3		9.4		8.9				
Green Ext Time (p_c), s	0.1	0.6		0.5		7.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↔			↔	
Traffic Vol, veh/h	107	158	16	17	222	4	24	10	28	77	1	24
Future Vol, veh/h	107	158	16	17	222	4	24	10	28	77	1	24
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	150	-	0	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	130	193	20	21	278	5	29	12	34	83	1	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	283	0	0	213	0	0	789	778	193	806	793	278
Stage 1	-	-	-	-	-	-	453	453	-	320	320	-
Stage 2	-	-	-	-	-	-	336	325	-	486	473	-
Critical Hdwy	4.17	-	-	4.22	-	-	7.16	6.56	6.26	7.24	6.64	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Follow-up Hdwy	2.263	-	-	2.308	-	-	3.554	4.054	3.354	3.626	4.126	3.426
Pot Cap-1 Maneuver	1251	-	-	1300	-	-	304	323	838	287	308	733
Stage 1	-	-	-	-	-	-	579	563	-	667	631	-
Stage 2	-	-	-	-	-	-	670	642	-	541	539	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1251	-	-	1300	-	-	265	284	838	242	271	733
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	284	-	242	271	-
Stage 1	-	-	-	-	-	-	519	504	-	598	619	-
Stage 2	-	-	-	-	-	-	633	630	-	454	483	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.1			0.5			16.5			25		
HCM LOS	C			C			C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	389	1251	-	-	1300	-	-	288				
HCM Lane V/C Ratio	0.194	0.104	-	-	0.016	-	-	0.381				
HCM Control Delay (s)	16.5	8.2	-	-	7.8	0	-	25				
HCM Lane LOS	C	A	-	-	A	A	-	D				
HCM 95th %tile Q(veh)	0.7	0.3	-	-	0.1	-	-	1.7				

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑	↑	↑	↑↑
Traffic Vol, veh/h	13	25	164	14	84	1222
Future Vol, veh/h	13	25	164	14	84	1222
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	27	178	15	91	1328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1024	89	0	0	193	0
Stage 1	178	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	231	951	-	-	1378	-
Stage 1	835	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	216	951	-	-	1378	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	14.1		0		0.5
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	439	1378
HCM Lane V/C Ratio	-	-	0.094	0.066
HCM Control Delay (s)	-	-	14.1	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2

Intersection							
Int Delay, s/veh	1.1						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑	↑	↑	↑↑	↑		
Traffic Vol, veh/h	265	39	13	251	26	23	
Future Vol, veh/h	265	39	13	251	26	23	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	75	50	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	288	42	14	273	28	25	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	330	0	453	288	
Stage 1	-	-	-	-	288	-	
Stage 2	-	-	-	-	165	-	
Critical Hdwy	-	-	4.13	-	6.63	6.23	
Critical Hdwy Stg 1	-	-	-	-	5.43	-	
Critical Hdwy Stg 2	-	-	-	-	5.83	-	
Follow-up Hdwy	-	-	2.219	-	3.519	3.319	
Pot Cap-1 Maneuver	-	-	1228	-	550	750	
Stage 1	-	-	-	-	760	-	
Stage 2	-	-	-	-	848	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	1228	-	544	750	
Mov Cap-2 Maneuver	-	-	-	-	544	-	
Stage 1	-	-	-	-	752	-	
Stage 2	-	-	-	-	848	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.4		11.3		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	625	-	-	1228	-		
HCM Lane V/C Ratio	0.085	-	-	0.012	-		
HCM Control Delay (s)	11.3	-	-	8	-		
HCM Lane LOS	B	-	-	A	-		
HCM 95th %tile Q(veh)	0.3	-	-	0	-		

HCM 6th TWSC
 14: Peterson Blvd & US-24 Off-Ramp Right-Turn

08/24/2017

Intersection						
Int Delay, s/veh	12.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑↑	↑↑	
Traffic Vol, veh/h	0	430	0	189	876	0
Future Vol, veh/h	0	430	0	189	876	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	467	0	205	952	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	476	-	0	-	0
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	535	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	535	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	42.1	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	535	-			
HCM Lane V/C Ratio	-	0.874	-			
HCM Control Delay (s)	-	42.1	-			
HCM Lane LOS	-	E	-			
HCM 95th %tile Q(veh)	-	9.7	-			

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

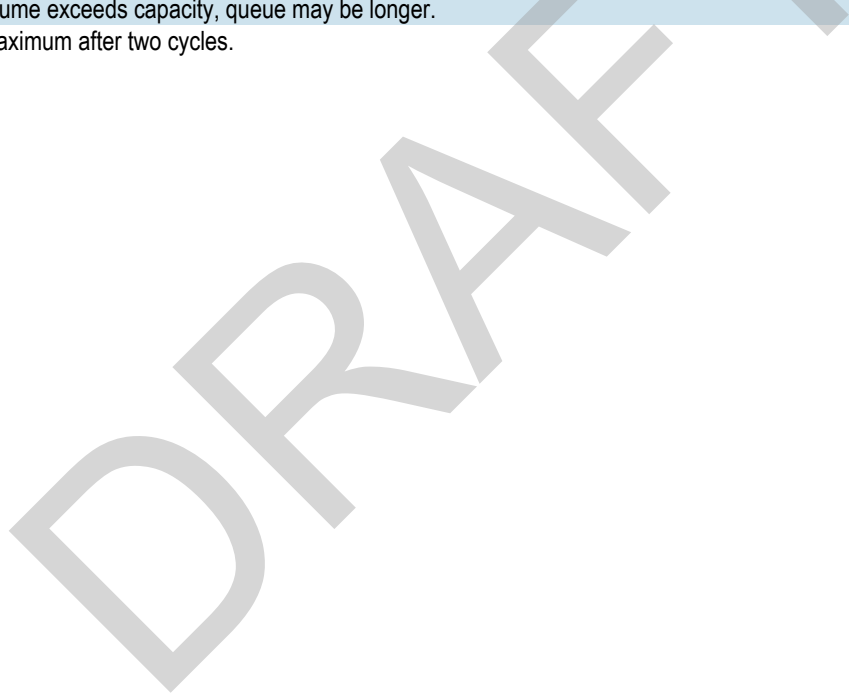
08/25/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	220	34	33	298	1129	432	240	142
v/c Ratio	0.63	0.02	0.15	0.55	0.79	0.27	0.71	0.07
Control Delay	27.4	0.0	17.7	8.1	20.8	0.4	23.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	0.0	17.7	8.1	20.8	0.4	23.1	5.5
Queue Length 50th (ft)	65	0	9	10	163	0	31	8
Queue Length 95th (ft)	122	0	25	55	#305	0	#96	18
Internal Link Dist (ft)	774		1		287			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	489	1568	317	661	1434	1599	336	2079
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.02	0.10	0.45	0.79	0.27	0.71	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 6th Signalized Intersection Summary

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/25/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↕	↗	↘	↕	
Traffic Volume (veh/h)	117	94	33	29	0	259	0	1050	402	187	111	0
Future Volume (veh/h)	117	94	33	29	0	259	0	1050	402	187	111	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	122	98	0	33	0	298	0	1129	0	240	142	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	258	169		415	0	354	0	1485		390	2149	0
Arrive On Green	0.24	0.24	0.00	0.24	0.00	0.24	0.00	0.41	0.00	0.10	0.60	0.00
Sat Flow, veh/h	661	713	1572	1202	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	220	0	0	33	0	298	0	1129	0	240	142	0
Grp Sat Flow(s),veh/h/ln	1373	0	1572	1202	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	6.5	0.0	0.0	0.0	0.0	10.4	0.0	14.8	0.0	3.8	0.9	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	1.2	0.0	10.4	0.0	14.8	0.0	3.8	0.9	0.0
Prop In Lane	0.55		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	427	0		415	0	354	0	1485		390	2149	0
V/C Ratio(X)	0.52	0.00		0.08	0.00	0.84	0.00	0.76		0.62	0.07	0.00
Avail Cap(c_a), veh/h	546	0		526	0	490	0	1485		416	2149	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	0.0	0.0	16.5	0.0	20.0	0.0	13.8	0.0	10.7	4.6	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	9.2	0.0	3.7	0.0	2.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.3	0.0	3.9	0.0	5.8	0.0	1.3	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	0.0	0.0	16.6	0.0	29.2	0.0	17.5	0.0	13.1	4.6	0.0
LnGrp LOS	B	A		B	A	C	A	B		B	A	A
Approach Vol, veh/h		220	A		331			1129	A		382	
Approach Delay, s/veh		19.8			28.0			17.5			10.0	
Approach LOS		B			C			B			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.2	27.3		17.5		37.5		17.5				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	6.5	22.0		18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s	5.8	16.8		9.8		2.9		12.4				
Green Ext Time (p_c), s	0.1	3.3		0.8		0.9		0.6				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	17.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↔			↔	
Traffic Vol, veh/h	461	189	14	5	183	10	9	5	19	33	1	71
Future Vol, veh/h	461	189	14	5	183	10	9	5	19	33	1	71
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	150	-	0	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	562	230	17	6	229	13	11	6	23	35	1	76
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	247	0	0	1640	1608	230	1618	1612	229
Stage 1	-	-	-	-	-	-	1354	1354	-	241	241	-
Stage 2	-	-	-	-	-	-	286	254	-	1377	1371	-
Critical Hdwy	4.17	-	-	4.22	-	-	7.16	6.56	6.26	7.24	6.64	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Follow-up Hdwy	2.263	-	-	2.308	-	-	3.554	4.054	3.354	3.626	4.126	3.426
Pot Cap-1 Maneuver	1296	-	-	1263	-	-	78	103	799	78	98	781
Stage 1	-	-	-	-	-	-	181	214	-	736	685	-
Stage 2	-	-	-	-	-	-	713	690	-	169	202	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1296	-	-	1263	-	-	46	58	799	46	55	781
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	58	-	46	55	-
Stage 1	-	-	-	-	-	-	102	121	-	417	682	-
Stage 2	-	-	-	-	-	-	639	687	-	88	114	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	6.9			0.2			56.9			117.8		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	108	1296	-	-	1263	-	-	127				
HCM Lane V/C Ratio	0.373	0.434	-	-	0.005	-	-	0.889				
HCM Control Delay (s)	56.9	9.9	-	-	7.9	0	-	117.8				
HCM Lane LOS	F	A	-	-	A	A	-	F				
HCM 95th %tile Q(veh)	1.5	2.2	-	-	0	-	-	5.7				

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑	↑	↑	↑↑
Traffic Vol, veh/h	21	114	1338	101	34	139
Future Vol, veh/h	21	114	1338	101	34	139
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	124	1454	110	37	151
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1604	727	0	0	1564	0
Stage 1	1454	-	-	-	-	-
Stage 2	150	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	96	366	-	-	418	-
Stage 1	181	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	87	366	-	-	418	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	39.8		0		2.8	
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 244	418	-		
HCM Lane V/C Ratio	-	- 0.601	0.088	-		
HCM Control Delay (s)	-	- 39.8	14.4	-		
HCM Lane LOS	-	- E	B	-		
HCM 95th %tile Q(veh)	-	- 3.5	0.3	-		

Intersection							
Int Delay, s/veh	1.4						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑	↑	↑	↑↑	↑		
Traffic Vol, veh/h	629	53	18	249	35	36	
Future Vol, veh/h	629	53	18	249	35	36	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	75	50	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	684	58	20	271	38	39	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	742	0	860	684	
Stage 1	-	-	-	-	684	-	
Stage 2	-	-	-	-	176	-	
Critical Hdwy	-	-	4.13	-	6.63	6.23	
Critical Hdwy Stg 1	-	-	-	-	5.43	-	
Critical Hdwy Stg 2	-	-	-	-	5.83	-	
Follow-up Hdwy	-	-	2.219	-	3.519	3.319	
Pot Cap-1 Maneuver	-	-	863	-	310	448	
Stage 1	-	-	-	-	500	-	
Stage 2	-	-	-	-	837	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	863	-	303	448	
Mov Cap-2 Maneuver	-	-	-	-	303	-	
Stage 1	-	-	-	-	489	-	
Stage 2	-	-	-	-	837	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.6		17.6		
HCM LOS					C		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	362	-	-	863	-		
HCM Lane V/C Ratio	0.213	-	-	0.023	-		
HCM Control Delay (s)	17.6	-	-	9.3	-		
HCM Lane LOS	C	-	-	A	-		
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-		

HCM 6th TWSC
 14: Peterson Blvd & US-24 Off-Ramp Right-Turn

08/25/2017

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑↑	↑↑	
Traffic Vol, veh/h	0	33	0	1452	140	0
Future Vol, veh/h	0	33	0	1452	140	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	0	1578	152	0
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	76	-	0	-	0
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	970	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	970	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	970	-			
HCM Lane V/C Ratio	-	0.037	-			
HCM Control Delay (s)	-	8.9	-			
HCM Lane LOS	-	A	-			
HCM 95th %tile Q(veh)	-	0.1	-			



APPENDIX F
2040 BASE PLUS SITE CAPACITY ANALYSIS SUMMARY

DRAFT

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/25/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	148	496	107	236	144	80	224	1126
v/c Ratio	0.48	0.32	0.47	0.49	0.10	0.05	0.31	0.52
Control Delay	23.5	0.5	25.0	6.8	11.4	0.1	6.2	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	0.5	25.0	6.8	11.4	0.1	6.2	7.1
Queue Length 50th (ft)	40	0	29	0	13	0	23	78
Queue Length 95th (ft)	82	0	63	39	33	0	54	132
Internal Link Dist (ft)	774		1		287			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	556	1568	412	680	1422	1599	732	2167
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.32	0.26	0.35	0.10	0.05	0.31	0.52

Intersection Summary



HCM 6th Signalized Intersection Summary
 3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/25/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↕	↔	↔	↕	↕
Traffic Volume (veh/h)	51	91	476	93	0	205	0	134	74	175	878	0
Future Volume (veh/h)	51	91	476	93	0	205	0	134	74	175	878	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	53	95	0	107	0	236	0	144	0	224	1126	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	172	251		421	0	306	0	1572		835	2232	0
Arrive On Green	0.20	0.20	0.00	0.20	0.00	0.20	0.00	0.44	0.00	0.10	0.62	0.00
Sat Flow, veh/h	382	1231	1572	1387	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	148	0	0	107	0	236	0	144	0	224	1126	0
Grp Sat Flow(s),veh/h/ln	1613	0	1572	1387	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	7.8	0.0	1.2	0.0	3.2	9.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	2.8	0.0	7.8	0.0	1.2	0.0	3.2	9.0	0.0
Prop In Lane	0.36		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	423	0		421	0	306	0	1572		835	2232	0
V/C Ratio(X)	0.35	0.00		0.25	0.00	0.77	0.00	0.09		0.27	0.50	0.00
Avail Cap(c_a), veh/h	651	0		606	0	531	0	1572		931	2232	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	0.0	17.6	0.0	19.6	0.0	8.6	0.0	5.5	5.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.3	0.0	4.1	0.0	0.1	0.0	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.9	0.0	2.6	0.0	0.4	0.0	0.9	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	0.0	17.9	0.0	23.7	0.0	8.7	0.0	5.7	6.2	0.0
LnGrp LOS	B	A		B	A	C	A	A		A	A	A
Approach Vol, veh/h		148	A		343			144	A		1350	
Approach Delay, s/veh		18.4			21.9			8.7			6.1	
Approach LOS		B			C			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.6	27.4		15.1		37.0		15.1				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	7.9	20.1		18.5		32.5		18.5				
Max Q Clear Time (g_c+I1), s	5.2	3.2		5.7		11.0		9.8				
Green Ext Time (p_c), s	0.2	0.7		0.6		8.7		0.9				

Intersection Summary

HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗		↖	↗		↕			↕	
Traffic Vol, veh/h	116	175	18	19	247	4	27	11	31	85	1	27
Future Vol, veh/h	116	175	18	19	247	4	27	11	31	85	1	27
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	150	-	0	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	141	213	22	24	309	5	33	13	38	91	1	29

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	314	0	0	235	0	0	870	857	213	889	874	309
Stage 1	-	-	-	-	-	-	495	495	-	357	357	-
Stage 2	-	-	-	-	-	-	375	362	-	532	517	-
Critical Hdwy	4.17	-	-	4.22	-	-	7.16	6.56	6.26	7.24	6.64	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.24	5.64	-
Follow-up Hdwy	2.263	-	-	2.308	-	-	3.554	4.054	3.354	3.626	4.126	3.426
Pot Cap-1 Maneuver	1218	-	-	1276	-	-	268	290	817	251	276	704
Stage 1	-	-	-	-	-	-	549	539	-	637	608	-
Stage 2	-	-	-	-	-	-	638	618	-	510	514	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1218	-	-	1276	-	-	229	251	817	206	238	704
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	251	-	206	238	-
Stage 1	-	-	-	-	-	-	485	476	-	563	594	-
Stage 2	-	-	-	-	-	-	597	604	-	418	454	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	0.6	18.7	32.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	346	1218	-	-	1276	-	-	248
HCM Lane V/C Ratio	0.243	0.116	-	-	0.019	-	-	0.49
HCM Control Delay (s)	18.7	8.3	-	-	7.9	0	-	32.7
HCM Lane LOS	C	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	0.9	0.4	-	-	0.1	-	-	2.5

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑	↑	↑	↑↑
Traffic Vol, veh/h	13	25	183	14	84	1363
Future Vol, veh/h	13	25	183	14	84	1363
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	27	199	15	91	1482
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1122	100	0	0	214	0
Stage 1	199	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	200	936	-	-	1353	-
Stage 1	815	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	187	936	-	-	1353	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	15.2		0		0.5	
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 395	1353	-		
HCM Lane V/C Ratio	-	- 0.105	0.067	-		
HCM Control Delay (s)	-	- 15.2	7.9	-		
HCM Lane LOS	-	- C	A	-		
HCM 95th %tile Q(veh)	-	- 0.3	0.2	-		

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑↑	↑	
Traffic Vol, veh/h	295	36	13	280	26	23
Future Vol, veh/h	295	36	13	280	26	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	75	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	321	39	14	304	28	25

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	360	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1197	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1197	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	589	-	-	1197	-
HCM Lane V/C Ratio	0.09	-	-	0.012	-
HCM Control Delay (s)	11.7	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
 14: Peterson Blvd & US-24 Off-Ramp Right-Turn

08/25/2017

Intersection

Int Delay, s/veh 23.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑↑	↑↑	
Traffic Vol, veh/h	0	476	0	208	971	0
Future Vol, veh/h	0	476	0	208	971	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	517	0	226	1055	0

Major/Minor

	Minor2	Major1	Major2
Conflicting Flow All	-	528	0
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	~ 495	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	~ 495	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	81.8	0	0
HCM LOS	F		

Minor Lane/Major Mvmt

	NBT	EBLn1	SBT
Capacity (veh/h)	-	495	-
HCM Lane V/C Ratio	-	1.045	-
HCM Control Delay (s)	-	81.8	-
HCM Lane LOS	-	F	-
HCM 95th %tile Q(veh)	-	15.4	-

Notes

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

Queues

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

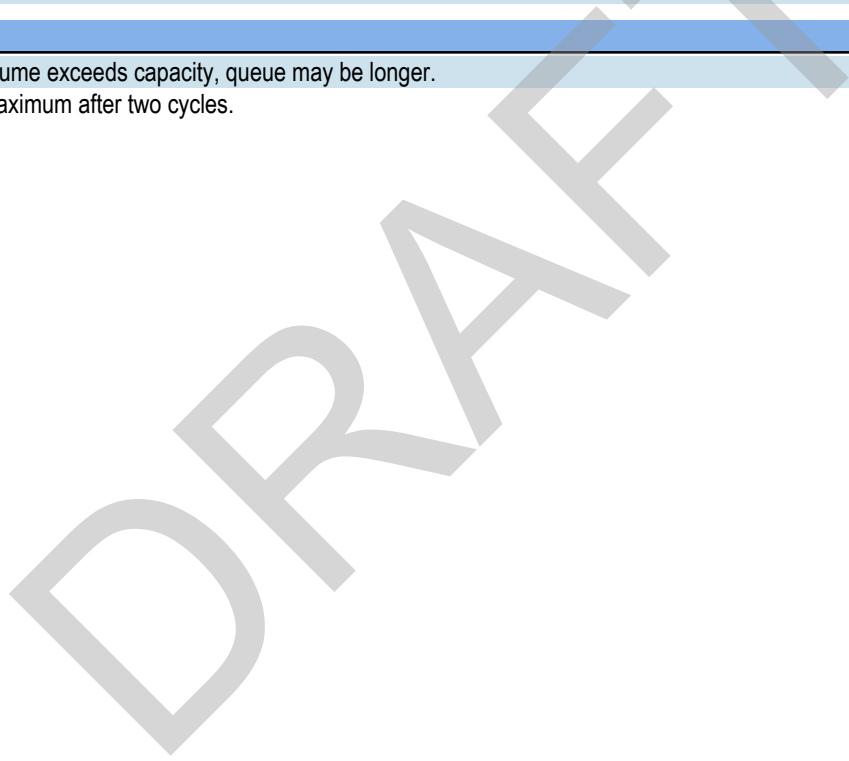
08/25/2017



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	243	36	38	328	1252	480	264	155
v/c Ratio	0.67	0.02	0.17	0.59	0.88	0.30	0.80	0.08
Control Delay	28.7	0.0	18.1	9.9	26.5	0.5	31.4	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.0	18.1	9.9	26.5	0.5	31.4	5.8
Queue Length 50th (ft)	73	0	10	20	197	0	37	10
Queue Length 95th (ft)	136	0	29	71	#358	0	#118	20
Internal Link Dist (ft)	774		1		287			234
Turn Bay Length (ft)						242		
Base Capacity (vph)	480	1568	290	650	1420	1599	329	2051
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.02	0.13	0.50	0.88	0.30	0.80	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 6th Signalized Intersection Summary

3: Peterson Blvd & US-24 Eastbound Off-Ramp/Space Village Ave

08/25/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕↕	↗	↘	↕↕	
Traffic Volume (veh/h)	131	103	35	33	0	285	0	1164	446	206	121	0
Future Volume (veh/h)	131	103	35	33	0	285	0	1164	446	206	121	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1767	1767	1767	0	1885	1885	1885	1885	0
Adj Flow Rate, veh/h	136	107	0	38	0	328	0	1252	0	264	155	0
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	3	3	3	9	9	9	0	1	1	1	1	0
Cap, veh/h	265	168		420	0	381	0	1409		360	2099	0
Arrive On Green	0.25	0.25	0.00	0.25	0.00	0.25	0.00	0.39	0.00	0.11	0.59	0.00
Sat Flow, veh/h	649	659	1572	1150	0	1497	0	3676	1598	1795	3676	0
Grp Volume(v), veh/h	243	0	0	38	0	328	0	1252	0	264	155	0
Grp Sat Flow(s),veh/h/ln	1308	0	1572	1150	0	1497	0	1791	1598	1795	1791	0
Q Serve(g_s), s	8.0	0.0	0.0	0.0	0.0	11.8	0.0	18.4	0.0	4.5	1.1	0.0
Cycle Q Clear(g_c), s	9.5	0.0	0.0	1.5	0.0	11.8	0.0	18.4	0.0	4.5	1.1	0.0
Prop In Lane	0.56		1.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0		420	0	381	0	1409		360	2099	0
V/C Ratio(X)	0.56	0.00		0.09	0.00	0.86	0.00	0.89		0.73	0.07	0.00
Avail Cap(c_a), veh/h	517	0		500	0	478	0	1409		362	2099	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.1	0.0	0.0	16.2	0.0	20.1	0.0	15.9	0.0	11.9	5.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.1	0.0	12.4	0.0	8.7	0.0	7.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.3	0.0	4.7	0.0	8.0	0.0	2.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	0.0	16.3	0.0	32.5	0.0	24.6	0.0	19.3	5.1	0.0
LnGrp LOS	C	A		B	A	C	A	C		B	A	A
Approach Vol, veh/h		243	A		366			1252	A		419	
Approach Delay, s/veh		20.3			30.8			24.6			14.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.8	26.7		18.8		37.5		18.8				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	6.4	22.1		18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s	6.5	20.4		11.5		3.1		13.8				
Green Ext Time (p_c), s	0.0	1.3		0.8		1.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 41.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↖	↘		↔			↔	
Traffic Vol, veh/h	509	210	16	6	203	11	10	6	21	37	1	78
Future Vol, veh/h	509	210	16	6	203	11	10	6	21	37	1	78
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	150	-	0	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	80	80	80	82	82	82	93	93	93
Heavy Vehicles, %	7	7	7	12	12	12	6	6	6	14	14	14
Mvmt Flow	621	256	20	8	254	14	12	7	26	40	1	84

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	268	0	0	276
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.17	-	-	4.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.263	-	-	2.308
Pot Cap-1 Maneuver	1267	-	-	1231
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1267	-	-	1231
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.3	0.2	111	\$ 350.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	74	1267	-	-	1231	-	-	85
HCM Lane V/C Ratio	0.61	0.49	-	-	0.006	-	-	1.467
HCM Control Delay (s)	111	10.5	-	-	7.9	0	-	\$ 350.1
HCM Lane LOS	F	B	-	-	A	A	-	F
HCM 95th %tile Q(veh)	2.7	2.8	-	-	0	-	-	9.8

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

Intersection

Int Delay, s/veh 4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑	↑	↑	↑↑
Traffic Vol, veh/h	21	114	1496	101	34	155
Future Vol, veh/h	21	114	1496	101	34	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	124	1626	110	37	168

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1784	813	0	0	1736	0
Stage 1	1626	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	73	322	-	-	359	-
Stage 1	146	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	65	322	-	-	359	-
Mov Cap-2 Maneuver	65	-	-	-	-	-
Stage 1	131	-	-	-	-	-
Stage 2	854	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	61.4		0		2.9
HCM LOS	F				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 199	359	-
HCM Lane V/C Ratio	-	- 0.737	0.103	-
HCM Control Delay (s)	-	- 61.4	16.2	-
HCM Lane LOS	-	- F	C	-
HCM 95th %tile Q(veh)	-	- 4.8	0.3	-

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑↑	↑	
Traffic Vol, veh/h	701	53	18	278	35	36
Future Vol, veh/h	701	53	18	278	35	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	75	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	762	58	20	302	38	39

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	820	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	807	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	807	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	19.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	321	-	-	807	-
HCM Lane V/C Ratio	0.24	-	-	0.024	-
HCM Control Delay (s)	19.7	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

HCM 6th TWSC
 14: Peterson Blvd & US-24 Off-Ramp Right-Turn

08/25/2017

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑↑	↑↑	
Traffic Vol, veh/h	0	35	0	1610	154	0
Future Vol, veh/h	0	35	0	1610	154	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	0	1750	167	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	84	-	0	-	0
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	958	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	958	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	958	-			
HCM Lane V/C Ratio	-	0.04	-			
HCM Control Delay (s)	-	8.9	-			
HCM Lane LOS	-	A	-			
HCM 95th %tile Q(veh)	-	0.1	-			



Subject: Text Box
Page Label: 1
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:16 AM
Color: ■

After the cover sheet add a page with the following signature blocks:

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

[Name, P.E. # _____]
Date

Developer's Statement

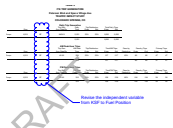
I, the Developer, have read and will comply with all commitments made on my behalf within this report.

[Name, Title]
Date
[Business Name]
[Address]



Subject: Callout
Page Label: 11
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:18 AM
Color: ■

At a minimum the growth rate must be 2.0%.



Subject: Cloud+
Page Label: 18
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:19 AM
Color: ■

Revise the independent variable from KSF to Fuel Position



Subject: Text Box
Page Label: 21
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:20 AM
Color: ■

Include the traffic impacts generated by the proposed Colorado Military Academy on the base traffic volumes. Add a statement noting that the traffic impact from the Colorado Military Academy has been incorporated or considered.

Traffic Study for the Colorado Military Academy is available at <https://epcdevplanreview.com>. File Number PPR-17-012.



Subject: Callout
Page Label: 24
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:23 AM
Color: ■

for intersection that does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level.



Subject: Callout
Page Label: 27
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:24 AM
Color: ■

1. Coordinate with CDOT regarding both recommendation.
2. Section 5.0 (pg 12) discussed providing a westbound left turn lane. Include this as a bullet point item.



Subject: Text Box
Page Label: 27
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:25 AM
Color: ■

1. State whether the Major Transportation Corridors Plan (MTCP) or other approved corridor study calls for the construction of improvements in the immediate area.
2. State whether or not any improvements affected by the project are reimbursable under the current MTCP.
3. State what the current applicable Transportation Impact Fees are and what option the develop will be selecting for payment. If the site is in a special district, so state and summarize the applicable fees.
4. State what the sight distance is for every affected access and whether it can be met. If it can't be met, state the required modifications so that it can be met.
5. List the ECM criteria for stacking, storage, and taper for every affected auxiliary lane and access and state whether these criteria can be met. If it cannot be met, state the required modification so that it can be met.



Subject: Cloud+
Page Label: 27
Lock: Locked
Status:
Checkmark: Unchecked
Author: dsdlaforce
Date: 10/23/2017 9:15:24 AM
Color: ■

Coordinate with both CDOT and the City of Colorado Springs regarding these proposed modification and keep the Planning & Community Development review team informed regarding the outcome. Peterson Blvd is under the City's jurisdiction.