

PALMER HIGH SCHOOL RENOVATION TRAFFIC STUDY

Prepared for:

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Table of Contents

Page

I. INTRODUCTION	I
II. EXISTING CONDITIONS.....	4
II.A Roadway Network.....	4
II.B Surrounding Land Use.....	4
II.C Traffic Volumes and Operations.....	4
III. FUTURE CONDITIONS.....	7
III.A Future Traffic Conditions – Boulder Street Open.....	7
III.B Boulder Street Closure.....	9
IV. OTHER CONSIDERATIONS.....	15
IV.A Platte Avenue and Nevada Avenue Intersection	15
IV.B Multimodal Considerations.....	18
IV.C School Operations.....	18
V. SUMMARY AND RECOMMENDATIONS	19

Appendices

Appendix A.	Traffic Counts
Appendix B.	Existing (2025) Level of Service Worksheets
Appendix C.	Future (2030) No Change Level of Service Worksheets
Appendix D.	Future (2030) Boulder Street Closure Level of Service Worksheets
Appendix E.	Platte Avenue and Nevada Avenue Intersection Level of Service Worksheets

List of Figures

	Page
Figure 1. Vicinity Map.....	2
Figure 2. Boulder Street Closure Proposal.....	3
Figure 3. Existing (2025) Traffic Conditions.....	6
Figure 4. Future (2030) No Change Traffic Conditions	8
Figure 5. Changes in Traffic Volumes Due to Boulder Street Closure	10
Figure 6. Future (2030) Boulder Street Closure Traffic Conditions	12
Figure 7. Platte Avenue and Nevada Avenue Intersection Alternatives	17

List of Tables

Table 1. Existing Intersection/Movement Level of Service	5
Table 2. 2030 No Change Intersection/Movement Level of Service.....	7
Table 3. Peak Hour Traffic Demand Increase on Parallel Roads Due to Boulder Street Closure (2030)	9
Table 4. 2030 Boulder Street Closure Scenario Intersection/Movement Level of Service	11
Table 5. 2030 Boulder Street Closure Scenario Intersection/Movement 95 th Percentile Queue Lengths	13
Table 6. Level of Service of Platte Avenue/Nevada Avenue Intersection Under Different Scenarios	16

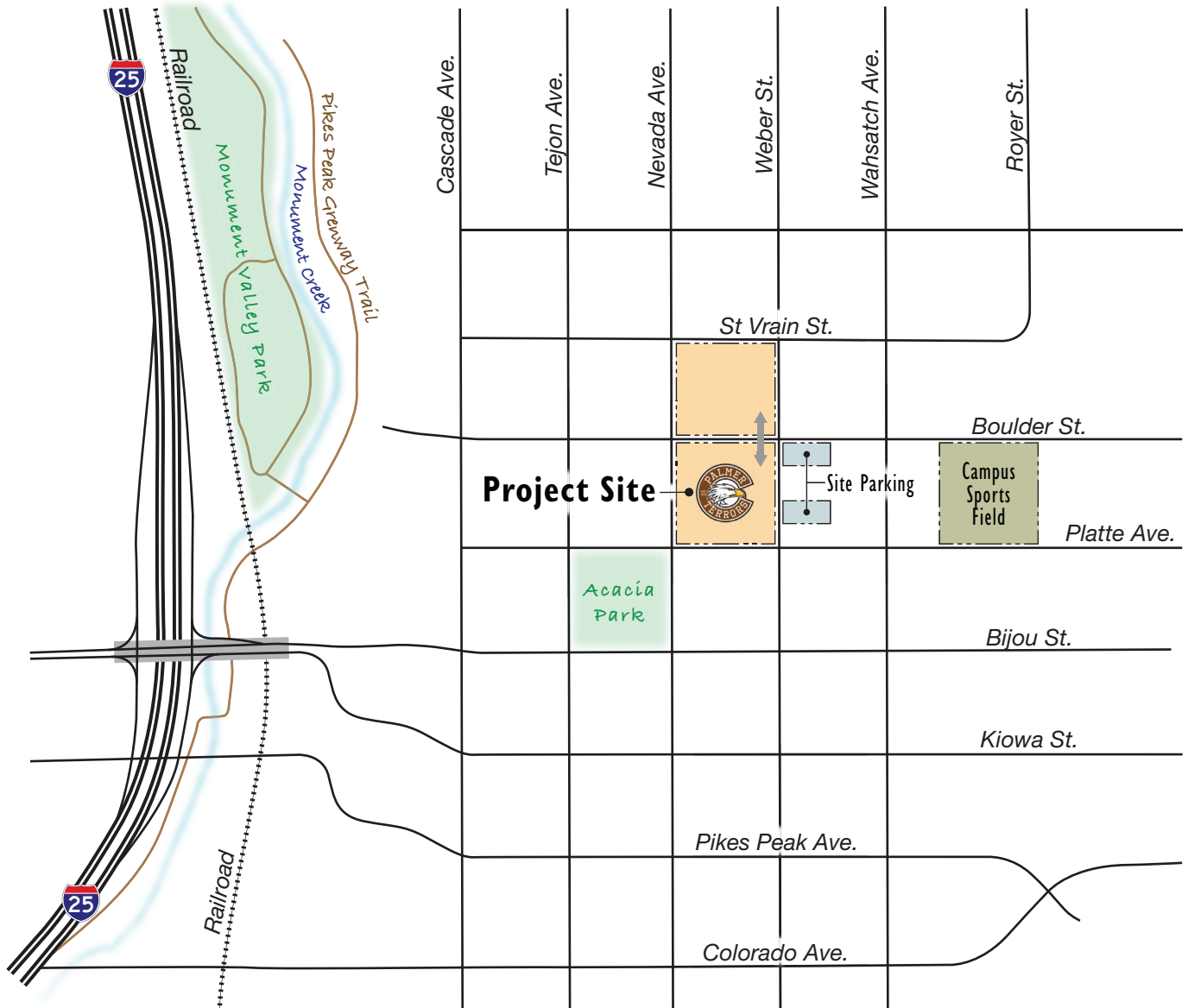
I. INTRODUCTION

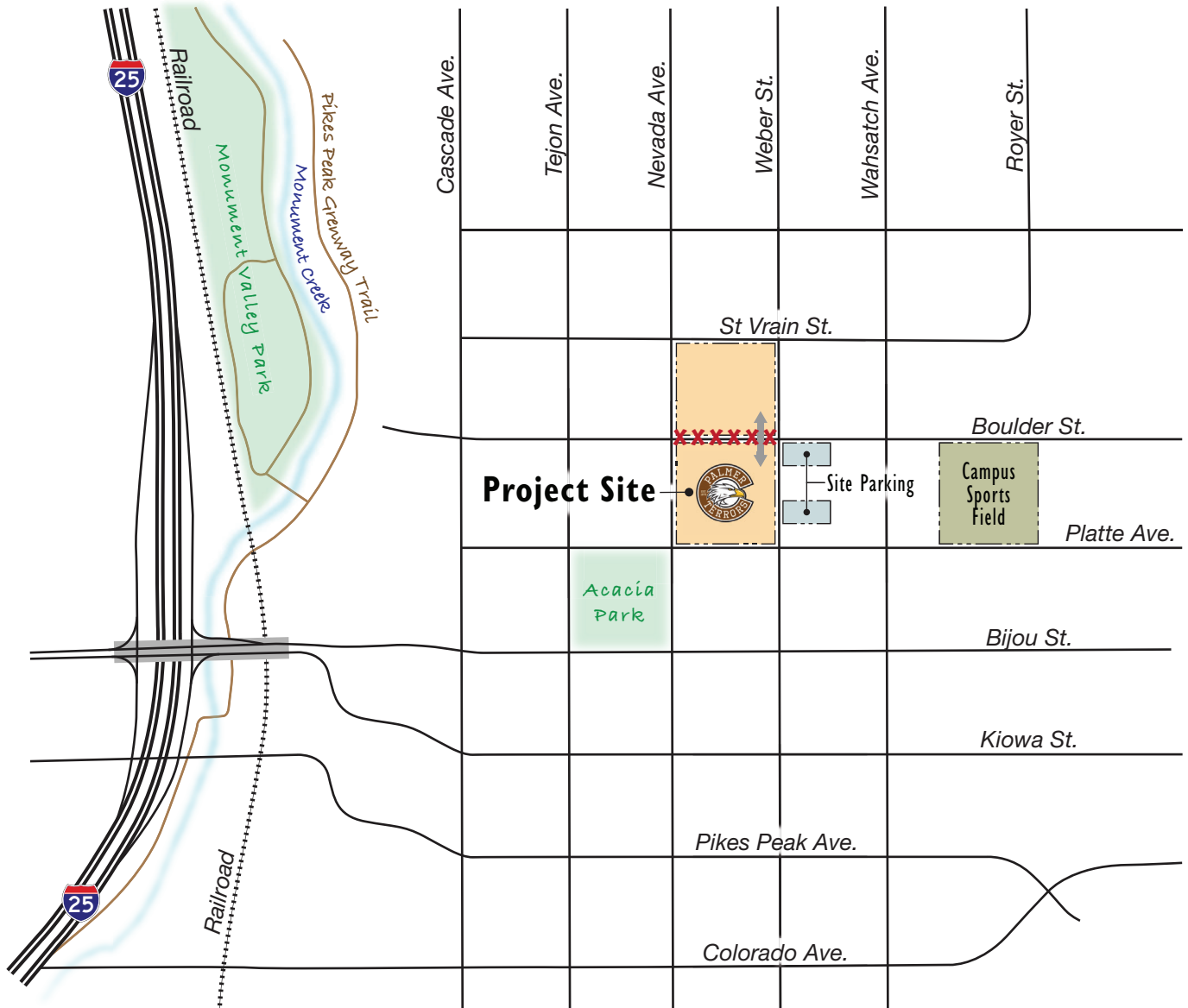
Located in downtown Colorado Springs and within the Colorado Springs School District 11, William J. Palmer High School spans two adjacent blocks between Platte Avenue and St. Vrain Street separated by Boulder Street. The southern block houses the main school building, while the northern block contains the athletic field and recreational center. Students and staff frequently cross Boulder Street to access both facilities, creating pedestrian safety concerns and potential traffic flow issues. **Figure 1** shows the location of the development and the primary roadway network.

As part of renovating Palmer High School, the design team is considering closing vehicular traffic to the section of Boulder Street between Weber Street and Nevada Avenue – the section that currently divides the campus. This closure would result in a change of travel patterns throughout a multiblock area surrounding the school. **Figure 2** presents the proposed closure location on a vicinity map overlaid on a satellite image, providing a spatial context for the development and its surrounding roadway network. Given the potential impacts, the City of Colorado Springs has requested that a traffic analysis be prepared to assess the feasibility of this closure and evaluate transportation outcomes. By analyzing current traffic conditions and projected traffic redirections, this study provides insight into whether the closure would cause operational concerns.

To address transportation outcomes in support of the renovation design process, the study contains:

- ▶ Existing traffic volumes recorded during February 2025 at eight intersections surrounding the proposed closure location, and operational analyses of all intersections to understand current Level of Service (LOS) conditions. Weekday AM and PM peak hour conditions are evaluated to capture higher traffic volume times of day.
- ▶ Development of Year 2030 forecasts with and without the Boulder Street closure and associated operational analyses to gauge the impact of the closure on traffic conditions.
- ▶ Evaluation of Platte Avenue/Nevada Avenue intersection with various intersection configuration options, including a roundabout and Platte Avenue lane reduction scenario. The Platte Avenue lane reduction scenario was included as a recommendation in the *Platte Avenue Corridor Study*, completed by Felsburg Holt & Ullevig in February 2024.
- ▶ Identification of other potential transportation implications of the proposed closure.





II. EXISTING CONDITIONS

II.A Roadway Network

The roadway facilities near Palmer High School are described as follows:

1. **St Vrain Street:** A local two lane east-west road that provides access to residential and commercial areas in the downtown district. St Vrain Street currently accommodates moderate traffic volumes with stop sign controlled intersections.
2. **Boulder Street:** A four lane east-west minor arterial that bisects the Palmer High School campus. It accommodates both vehicular and pedestrian traffic and is posted at 25 miles per hour (mph).
3. **Platte Avenue:** A major east-west arterial road that carries high traffic volumes and serves as a primary route for commuters traveling through downtown Colorado Springs. Platte Avenue is posted at 25 mph near the site.
4. **Nevada Avenue:** A major north-south arterial road posted at 25 mph that carries significant through traffic and provides direct access to commercial and institutional properties, including Palmer High School.
5. **Weber Street:** Bordering the high school's eastern edge and posted at 30 mph, Weber Street is a north-south, three lane minor arterial road with striped bike lanes (buffered south of Boulder Street) and on-street parking running parallel to Nevada Avenue, handling moderate traffic volumes, and serving as an alternative route for local access. Weber Street also grants access to the Palmer High School parking lot, just south of Boulder Street.
6. **Wahsatch Avenue:** Posted at 30 mph, Wahsatch Avenue is a four-lane divided north-south major arterial road that serves residential and commercial properties. Wahsatch Avenue is a block removed east from Palmer High School.

II.B Surrounding Land Use

Set in downtown Colorado Springs, the area surrounding Palmer High School consists of a mix of commercial land uses consistent with downtown Colorado Springs. Existing land uses near the site include small commercial and retail stores along Nevada and Platte avenues. Surrounding neighborhoods contain a mix of single-family and multi-family housing units. Downtown Colorado Springs hosts various civic buildings, including municipal offices and public services, that influence daily traffic flows. Several parking structures and street parking options exist nearby to support local businesses and school visitors.

II.C Traffic Volumes and Operations

Traffic counts were recorded on Thursday, February 13, 2025 (count data are included in **Appendix A**). Counts were conducted for a total of 6 hours (7–9 AM and 2:30–6:30 PM) to capture the ambient and school peak hours. The weekday AM and PM peak hours were observed to occur from 7:15–8:15 AM and 4:30–5:30 PM, respectively. Palmer High School's daily bell schedule runs from 7:30 AM–2:00 PM.

Traffic operations within the study area were evaluated according to techniques documented in the *Highway Capacity Manual, 6th Edition*, and executed using Trafficware's Synchro v.11 software. Operations were evaluated using the existing traffic volumes and intersection geometry. Level of Service (LOS) is a qualitative measure of traffic operational conditions based on roadway capacity and vehicle delay. LOS is described by a letter designation ranging from A to F, with LOS A representing almost free-flow travel, while LOS F represents congested conditions. For signalized intersections, LOS is reported as an average for the entire intersection. Roundabouts were specifically analyzed using SIDRA to assess their operational performance.

Traffic operations along eight intersections were analyzed in this study and listed as follows:

1. St Vrain Street and Nevada Avenue
2. Boulder Street and Nevada Avenue
3. Platte Avenue and Nevada Avenue
4. Platte Avenue and Weber Street
5. Boulder Street and Weber Street
6. St Vrain Street and Weber Street
7. Boulder Street and Wahsatch Avenue
8. Platte Avenue and Wahsatch Avenue

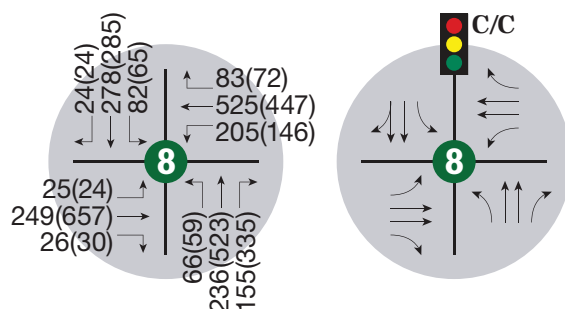
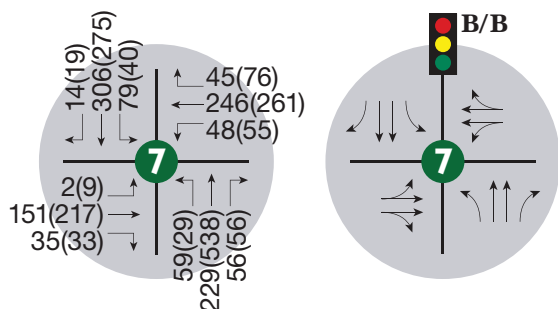
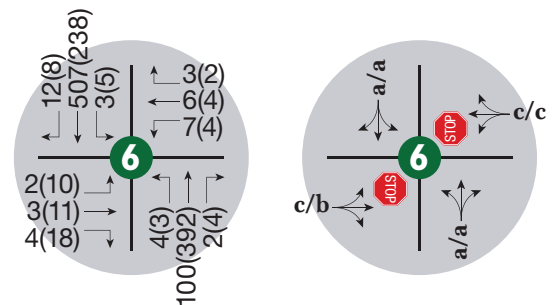
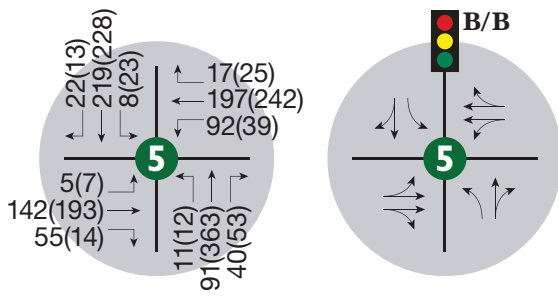
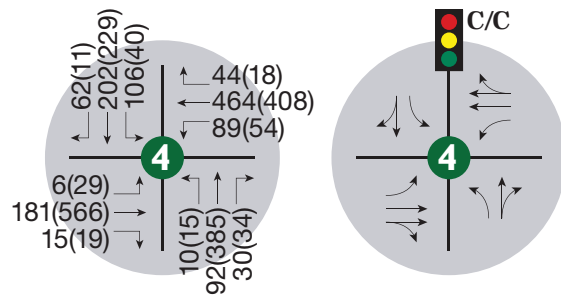
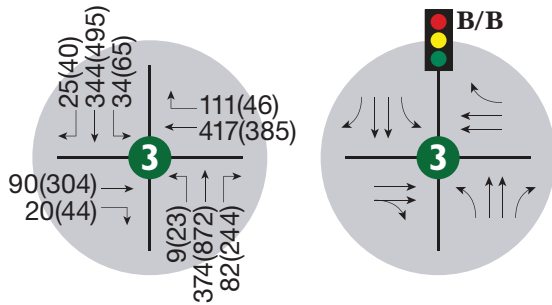
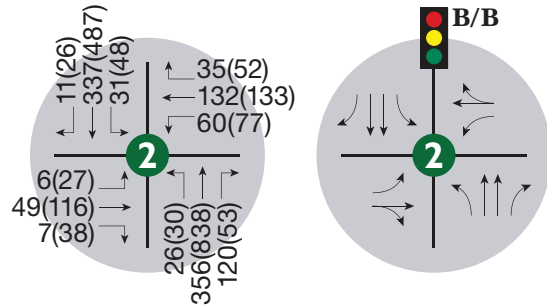
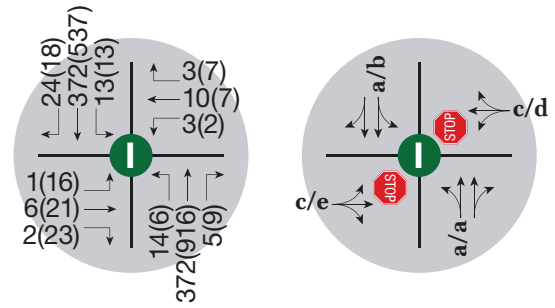
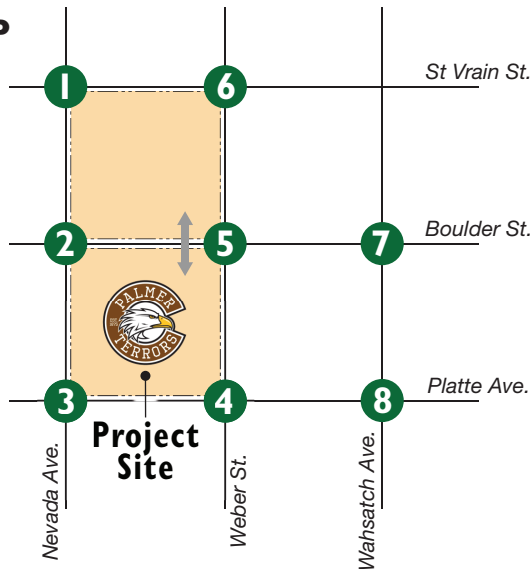
Figure 3 summarizes the existing traffic volumes, LOS, and lane geometry at all study area intersections, also summarized by movement in **Table I**. LOS worksheets are included in **Appendix B**

Table I. Existing Intersection/Movement Level of Service

Unsignalized Intersection	Movement	AM Peak Hour	PM Peak Hour
1 – St Vrain Street & Nevada Avenue	EBL	C	E
	WBL	C	D
	NBL	A	A
	SBL	A	B
6 – St Vrain Street & Weber Street	EBL	C	B
	WBL	C	C
	NBL	A	A
	SBL	A	A
Signalized Intersection		AM Peak Hour	PM Peak Hour
2 – Boulder Street & Nevada Avenue		B	B
3 – Platte Avenue & Nevada Avenue		B	B
4 – Platte Avenue & Weber Street		C	C
5 – Boulder Street & Weber Street		B	B
7 – Boulder Street & Wahsatch Avenue		B	B
8 – Platte Avenue & Wahsatch Avenue		C	C

As shown, all signalized intersections currently operate at LOS C or better. Side street left turns at unsignalized intersections along St Vrain Street all operate at LOS D or better, with the exception of the eastbound left turn at Nevada Avenue during the PM peak hour, which is projected to operate at LOS E. Based on the analysis findings, the eastbound left turn at St Vrain Street and Nevada Avenue showed a maximum 95th percentile queue length of 50 feet and a volume to capacity (v/c) ratio of 0.41. It is common for minor street left turn movements to suffer some delay at intersections with high conflicting volumes, and the poor side street LOS at the intersection of St Vrain Street with Nevada Avenue does not show a condition exceeding capacity or lengthy queues.

KEY MAP



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

X/X = AM/PM Peak Hour Signalized Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

STOP = Stop Sign

Traffic Signal

X = Study Intersection

III. FUTURE CONDITIONS

III.A Future Traffic Conditions – Boulder Street Open

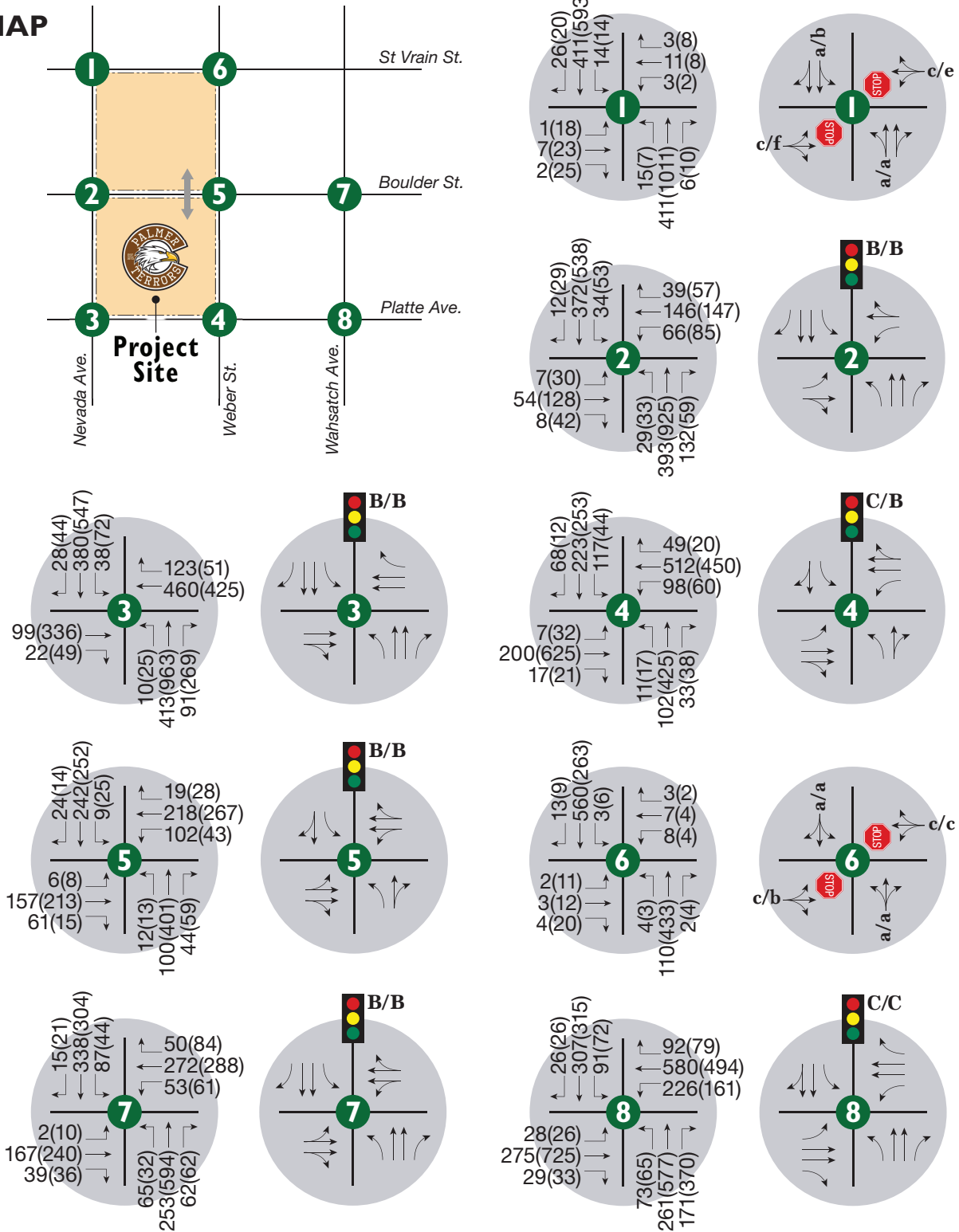
In collaboration with the city of Colorado Springs, the year 2030 was identified as an appropriate horizon for traffic analysis, as the renovation of Palmer High School is anticipated to be completed by then. Future traffic growth estimates from the Colorado Department of Transportation (CDOT) Online Transportation Information System (OTIS) indicate that Nevada Avenue is projected to experience approximately 2.25 percent growth in Colorado Springs. The *Platte Avenue Corridor Study, 2024*, projected Platte Avenue to experience 1.75 percent annual growth. Accordingly and for simplicity, all traffic volumes within the analyzed network were grown at a rate of 2 percent to estimate year 2030 traffic levels for the purpose of this analysis. **Figure 4** and **Table 2** show the 2030 traffic volumes and operations in a scenario where no road configuration changes are made. LOS worksheets are included in **Appendix C**.

Table 2. 2030 No Change Intersection/Movement Level of Service

Unsignalized Intersection	Movement	AM Peak Hour	PM Peak Hour
1 – St Vrain Street & Nevada Avenue	EBL	C	F
	WBL	C	E
	NBL	A	A
	SBL	A	B
6 – St Vrain Street & Weber Street	EBL	C	B
	WBL	C	C
	NBL	A	A
	SBL	A	A
Signalized Intersection		AM Peak Hour	PM Peak Hour
2 – Boulder Street & Nevada Avenue		B	B
3 – Platte Avenue & Nevada Avenue		B	B
4 – Platte Avenue & Weber Street		C	B
5 – Boulder Street & Weber Street		B	B
7 – Boulder Street & Wahsatch Avenue		B	B
8 – Platte Avenue & Wahsatch Avenue		C	C

As shown in **Table 2**, all signalized intersections would continue to operate at LOS C or better during peak hours. All unsignalized movements are expected to operate at LOS C or better, with the exception of the eastbound left and westbound left movements onto Nevada Avenue from St Vrain Street (intersection 1), which are expected to operate at LOS F and LOS E respectively. The analysis shows that the maximum 95th percentile queue length is 75 and 25 feet and has a volume to capacity (v/c) ratio of 0.57 and 0.18 for eastbound left and westbound left turns, respectively.

KEY MAP



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

X/X = AM/PM Peak Hour Signalized Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

STOP = Stop Sign

Traffic Signal

X = Study Intersection

III.B Boulder Street Closure

The potential closure of Boulder Street between Nevada Avenue and Weber Street is expected to create changes to traffic operations and patterns in the downtown Colorado Springs vicinity. Several movements will be eliminated as a result of the road closure and redistributed to other routes to complete trips.

Figure 5 shows the changes in traffic volumes anticipated due to the closing of Boulder Street.

To evaluate the impacts of the Boulder Street closure on traffic operations, affected movements eliminated by the closure were first identified. At the intersection of Nevada Avenue with Boulder Street, the closure would eliminate all westbound movements. At the intersection of Weber Street with Boulder Street, all eastbound movements would be eliminated. Using recorded traffic counts and an analysis of AM and PM peak traffic trends, these eliminated movements were traced back to their origins and destinations within the roadway network. The eliminated movements were then subtracted from the existing traffic network to establish a baseline.

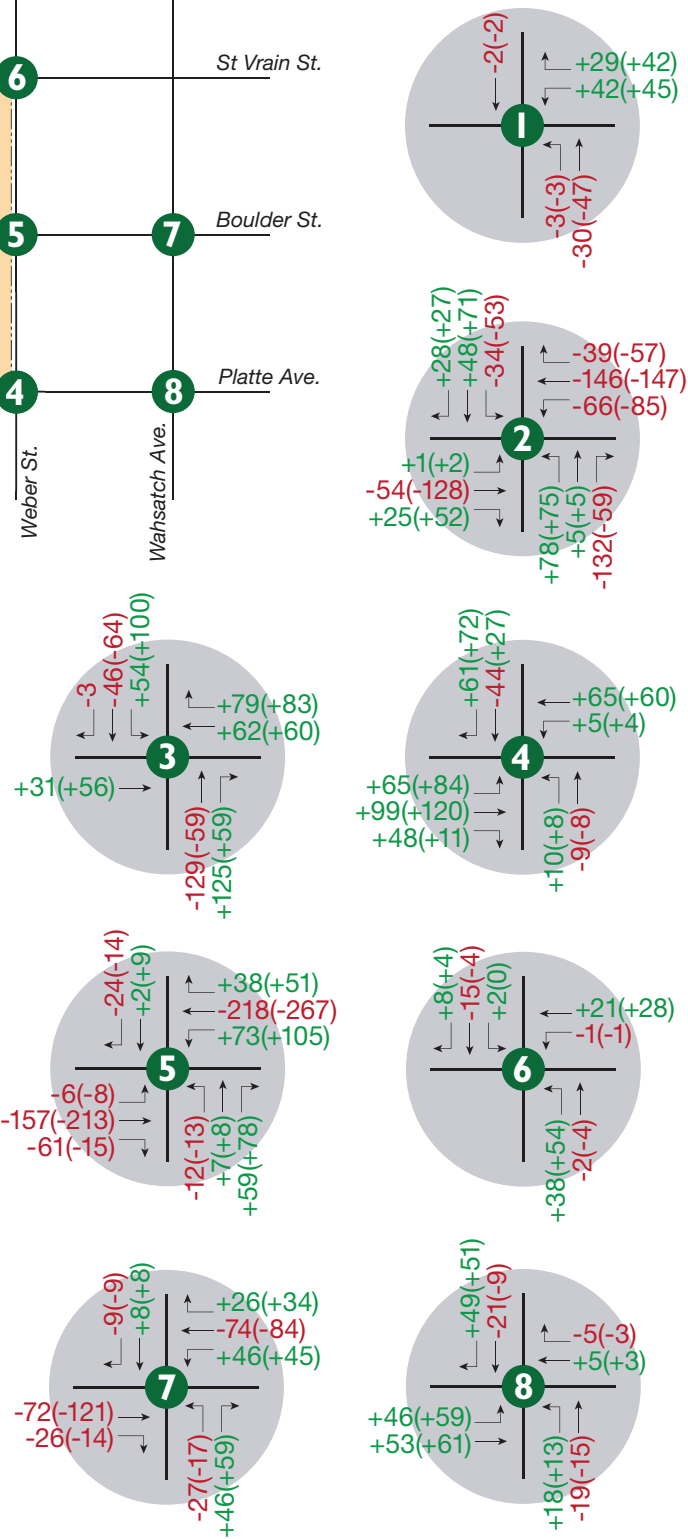
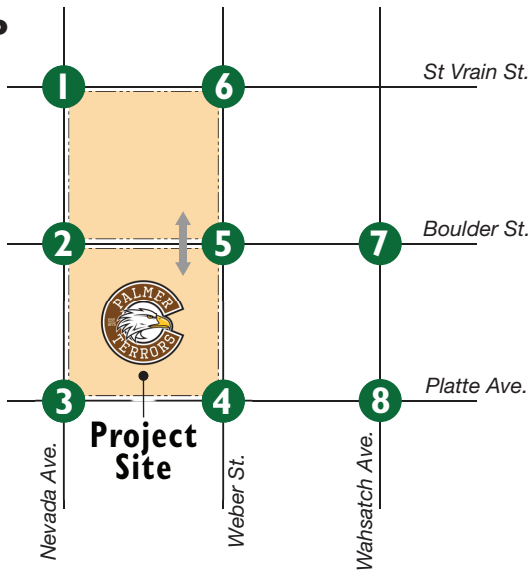
Next, traffic redistribution was assessed by estimating where trips would be rerouted based on logical alternative paths within the network. These reassigned volumes were added to the projected 2030 traffic volumes to reflect anticipated future conditions. Additionally, to account for potential trip reductions, a conservative assumption was made that 5 percent of the traffic from the six eliminated movements would be lost from the area, as some trips would divert to alternative routes outside the analyzed network.

Table 3 indicates that traffic demand increases along St Vrain Street between Nevada Avenue and Weber Street, as well as along Platte Avenue between Nevada Avenue and Weber Street, because of the Boulder Street closure.

Table 3. Peak Hour Traffic Demand Increase on Parallel Roads Due to Boulder Street Closure (2030)

Roadway Segment	Time Period	Pre-Closure	Post-Closure	Increase in Volume
St Vrain Street	AM	26	97	+273%
	PM	61	148	+143%
Platte Avenue	AM	819	1165	+42%
	PM	1156	1511	+31%

KEY MAP



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXX(XXX) = Reductions

XXX(XXX) = Increases

X = Study Intersection

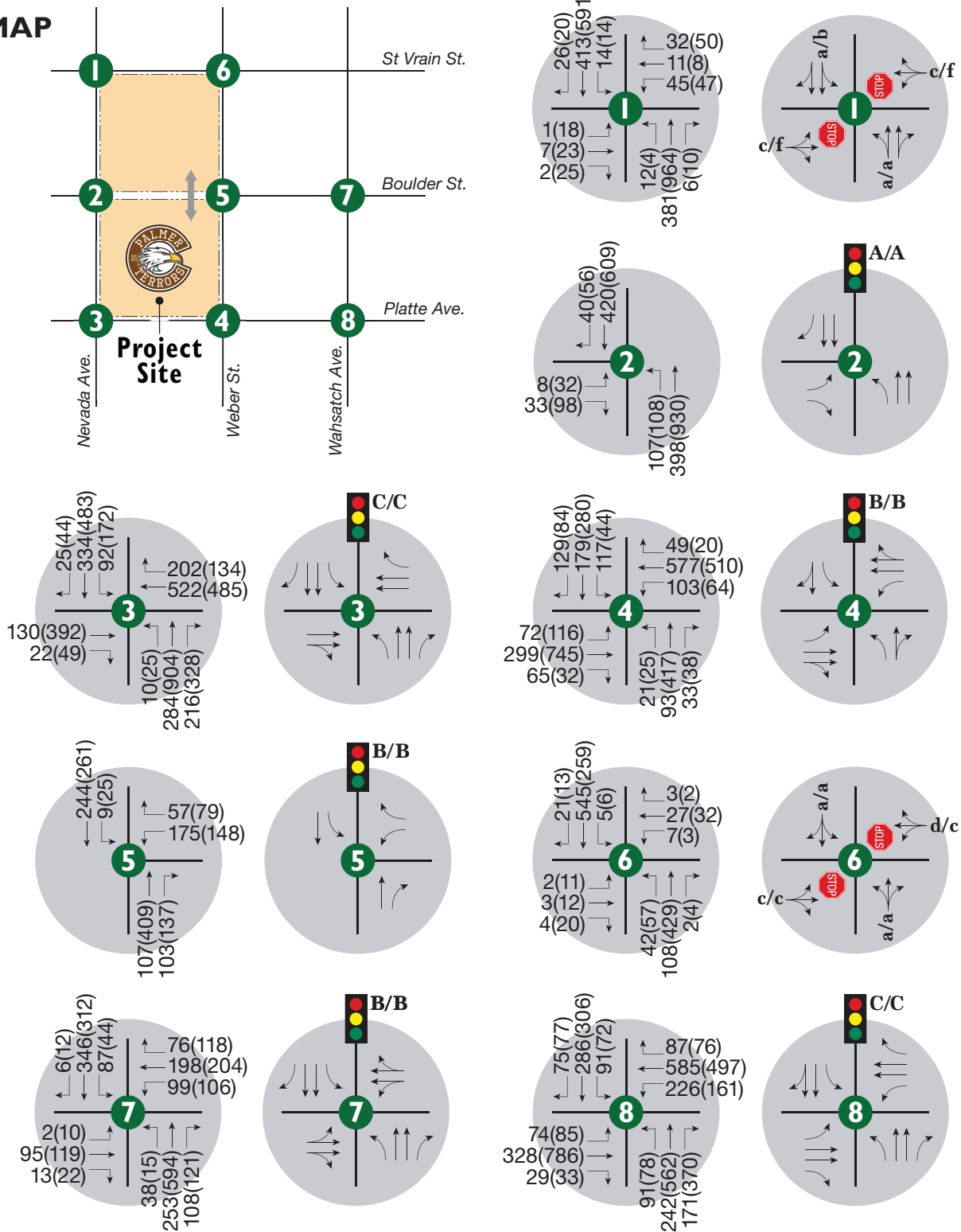
Figure 6 and **Table 4** show the 2030 anticipated traffic conditions in the event of Boulder Street closing from Nevada Avenue to Weber Street. Signal timing splits were optimized to accommodate new traffic volumes. **Appendix D** shows LOS worksheets.

**Table 4. 2030 Boulder Street Closure Scenario
Intersection/Movement Level of Service**

Unsignalized Intersection	Movement	AM Peak Hour	PM Peak Hour
1 – St Vrain Street & Nevada Avenue	EBL	C	F
	WBL	C	F
	NBL	A	A
	SBL	A	B
6 – St Vrain Street & Weber Street	EBL	C	C
	WBL	D	C
	NBL	A	A
	SBL	A	A
Signalized Intersection		AM Peak Hour	PM Peak Hour
2 – Boulder Street & Nevada Avenue		A	A
3 – Platte Avenue & Nevada Avenue		B	C
4 – Platte Avenue & Weber Street		B	B
5 – Boulder Street & Weber Street		B	B
7 – Boulder Street & Wahsatch Avenue		B	B
8 – Platte Avenue & Wahsatch Avenue		C	C

As shown in **Table 4**, the closure of Boulder Street from Nevada Avenue to Weber Street would minimally impact traffic operations at the study intersections. All signalized intersections would continue to operate at LOS C or better. All unsignalized movements would operate at LOS D or better, except for the eastbound left and westbound left movements onto Nevada Avenue from St Vrain Street (Intersection #1), which are both expected to operate at LOS F. The maximum 95th percentile queue length is 75 and 175 feet and has a volume to capacity (v/c) ratio of 0.53 and 0.97 for eastbound left and westbound left turns, respectively.

KEY MAP



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

X/X = AM/PM Peak Hour Signalized Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

STOP = Stop Sign

Traffic Signal

X = Study Intersection

Upon closure of Boulder Street, Intersections #2 (Boulder & Nevada) and #5 (Boulder & Weber) would transition into three-legged intersections. This change is expected to impact queue lengths due to the elimination of through movements and turning pockets associated with the closed segment. **Table 5** presents the projected 95th percentile queue lengths for these intersections under 2030 conditions with the closure.

**Table 5. 2030 Boulder Street Closure Scenario
Intersection/Movement 95th Percentile Queue Lengths**

Intersection	Movement	Existing Storage Length (ft)	Maximum Peak Hour Queue Length (ft)
2 – Boulder Street & Nevada Avenue	EBL	100	50
	EBR	N/A	175
	NBL	50	25
	NBT	N/A	25
	SBT	N/A	75
	SBR	100	125*
3 – Platte Avenue & Nevada Avenue	EBT	N/A	275
	EBR	N/A	300
	WBT	N/A	225
	WBR	50	175*
	NBL	50	25
	NBT	N/A	250
	NBR	50	200*
	SBL	50	275*
	SBT	N/A	275
	SBR	125	50
5 – Boulder Street & Weber Street	WBL	N/A	275
	WBR	N/A	125
	NBT	N/A	25
	NBR	50	25
	SBL	100	25
	SBT	N/A	100

*Queue length exceeds existing storage

The projected queue lengths at Intersections #2 and #5 indicate that most movements would operate within existing storage capacities, with some increases due to the closure of Boulder Street. At Intersection #2, the eastbound right-turn queue is projected to reach 175 feet, while the southbound right-turn queue is expected to extend to 125 feet. At Intersection #5, the westbound left-turn queue could reach 275 feet, and the westbound right-turn queue up to 125 feet, while all other movements are anticipated to remain at or below 100 feet. This suggests that while some queuing increases, overall traffic operations are expected to remain efficient. Given that existing eastbound and westbound blocks on Boulder stretch 400 feet in width, these queue lengths are not expected to cause spillback issues.

At Intersection #3, the Platte Avenue/Nevada Avenue intersection, the westbound right-turn queue length is expected to reach 175 feet, and the northbound right-turn queue up to 200 feet. While these queues would exceed the available storage length, this does not indicate they are caused by the Boulder Street closure as operational analyses of existing queue lengths for these movements indicates these already exceed the available storage lengths.

The southbound left-turn queue length, however, would be affected by the closure of Boulder Street as additional traffic is redirected to this movement. The queue length is anticipated to reach 275 feet during the PM peak hour, which would exceed the available 50 feet. There are limited options available for addressing this condition due to the presence of the William J. Palmer statue within the intersection. One possible option is to adjust signal phasing to allow for protected/permissive southbound left turn movements instead of the current permissive only phasing. With protected/permissive phasing implemented during the PM peak hour, the southbound left turn movement would improve to LOS B with a queue length of 100 feet.

The following recommendations are provided to support the conversion of the current 4-leg Boulder Street intersections with Nevada Avenue and Weber Street (intersections 2 and 5) to 3-leg intersections and accommodate intersection traffic flow upon implementation of the closure:

- ▶ Eliminate northbound right turn pocket on Nevada Avenue onto Boulder Street.
- ▶ Eliminate southbound left turn pocket on Nevada Avenue onto Boulder Street.
- ▶ Restripe eastbound movements onto Boulder Street at the Nevada intersection to be left turn and right turn only.
- ▶ Eliminate southbound right turn pocket on Weber Street onto Boulder Street.
- ▶ Eliminate northbound left turn pocket on Weber Street onto Boulder Street.
- ▶ Restripe westbound movements onto Boulder Street at the Weber intersection to be left turn and right turn only.
- ▶ Update signal timings on the intersections of Boulder and Nevada, and Boulder and Weber to accommodate protected left turn phases only.

IV. OTHER CONSIDERATIONS

IV.A Platte Avenue/Nevada Avenue Intersection

The intersection of Platte and Nevada Avenues (Intersection #3) currently operates as a signalized intersection, with a statue of General William Jackson Palmer in the center. Eastbound and westbound left turns are currently prohibited at this location. The complexity of this intersection presents operational challenges, leading the City of Colorado Springs to evaluate the feasibility of converting it into a roundabout while preserving the statue within the central island.

Traffic operations for the roundabout scenarios at Intersection #3 were evaluated using SIDRA, a software tool designed specifically for analyzing roundabouts and assessing capacity, delay, and Level of Service (LOS) under various traffic conditions. **Figure 7** presents a comparison of operational scenarios for this intersection, including:

1. Existing conditions
2. 2030 conditions with Boulder Street closed and the intersection remaining signalized.
3. 2030 signalized conditions with Boulder Street closed and Platte Avenue reduced to two lanes, based on recommendations within the *Platte Avenue Corridor Study (2024)*.
4. 2030 roundabout design with Nevada Avenue and Platte Avenue each operating with four lanes.
5. 2030 roundabout design with Platte Avenue reduced to two lanes, based on recommendations from the *Platte Avenue Corridor Study (2024)*.

A roundabout would reintroduce the currently restricted left turns from Platte Avenue onto Nevada Avenue in both eastbound and westbound directions. To accurately reflect future traffic patterns, left-turn volumes were obtained from the *Platte Avenue Corridor Study*. These counts were adjusted to estimate 2030 traffic conditions and incorporated into the roundabout analysis scenario.

If Boulder Street were to remain open, introducing a roundabout at the intersection of Platte and Nevada Avenues would result in LOS A/C conditions with a 4-lane Platte Avenue and LOS B/F conditions with a 2-lane Platte Avenue. With Boulder closed, the roundabout would operate at A/D with a 4-lane Platte Avenue and LOS B/F with a 2-lane Platte Avenue.

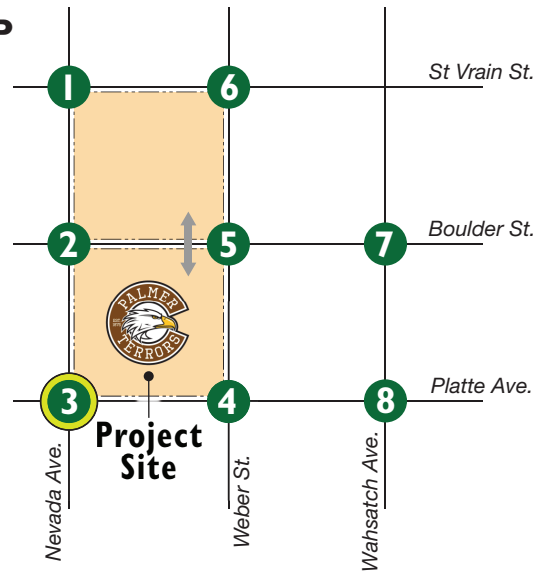
As shown in **Table 6**, the intersection would function acceptably (at LOS D or better) for all scenarios except for the roundabout with Platte Avenue lane reduction and the roundabout with Boulder Street open combined with the Platte Avenue lane reduction – both operating at LOS F during the PM peak hour. This indicates that the LOS F conditions at the roundabout are more likely due to the Platte Avenue lane reduction, rather than the Boulder Street closure alone. Therefore, the Platte Avenue lane reduction recommendation in the *Platte Avenue Corridor Study* should be carefully reconsidered in light of this finding.

Platte Avenue and Nevada Avenue Alternative Scenarios LOS worksheets can be found in **Appendix E**.

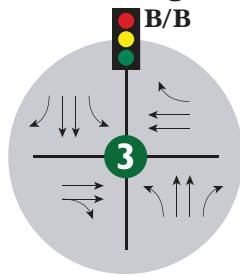
Table 6. Level of Service of Platte Avenue/Nevada Avenue Intersection Under Different Scenarios

Peak Hour	Movement	Traffic Control Scenarios					
		Signalized Control			Roundabout		
		2025	2030		2030		
		Existing Conditions	Boulder Closed	Boulder Closed, Platte Lane Reduction	Boulder Closed	Boulder Closed, Platte Lane Reduction	Boulder Open, Platte Lane Reduction
AM	EBL	N/A	N/A	N/A	A (6)	A (7)	A (6)
	EBT	D (39)	C (33)	C (27)	A (6)	A (7)	A (6)
	EBR	D (39)	C (33)	C (27)	A (5)	A (7)	A (6)
	WBL	N/A	N/A	N/A	A (9)	C (25)	C (23)
	WBT	C (33)	C (25)	B (19)	A (9)	C (25)	C (23)
	WBR	C (31)	C (25)	B (12)	A (9)	C (25)	C (23)
	NBL	A (6)	B (12)	B (19)	A (6)	A (6)	A (5)
	NBT	A (7)	A (10)	B (15)	A (6)	A (6)	A (5)
	NBR	A (7)	B (11)	B (17)	A (6)	A (6)	A (5)
	SBL	A (0)	B (20)	C (34)	A (10)	A (10)	A (9)
	SBT	A (0)	B (16)	C (28)	A (9)	A (9)	A (8)
	SBR	A (0)	B (14)	C (24)	A (9)	A (9)	A (8)
	Overall Intersection LOS	B (17)	B (20)	C (20)	A (8)	B (15)	B (13)
PM	EBL	N/A	N/A	N/A	B (12)	C (21)	C (16)
	EBT	D (49)	D (46)	D (52)	B (11)	C (21)	C (16)
	EBR	D (49)	D (46)	D (52)	B (11)	C (21)	C (16)
	WBL	N/A	N/A	N/A	D (28)	F (204)	F (215)
	WBT	D (37)	C (32)	D (37)	D (27)	F (204)	F (215)
	WBR	C (31)	C (30)	B (17)	D (26)	F (204)	F (215)
	NBL	A (6)	B (13)	B (19)	E (38)	E (38)	C (21)
	NBT	A (8)	A (10)	B (16)	E (37)	E (37)	C (21)
	NBR	A (7)	A (10)	B (15)	E (36)	E (36)	C (20)
	SBL	A (3)	E (61)	F (85)	B (12)	B (10)	A (9)
	SBT	A (0)	C (21)	C (26)	B (11)	A (9.6)	A (9)
	SBR	A (0)	B (17)	C (21)	B (11)	A (9)	A (9)
	Overall Intersection LOS	B (17)	C (25)	C (30)	D (25)	F (67)	F (62)

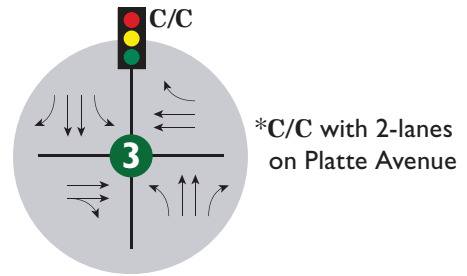
KEY MAP



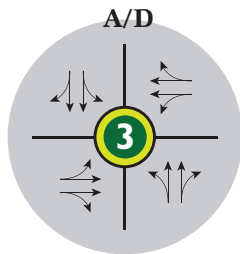
Existing



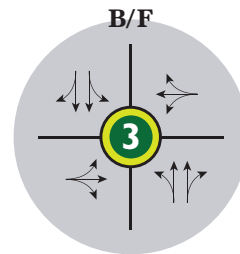
2030 Boulder Closure*



2030 Boulder Closure (with 4-lanes on Platte Avenue)



2030 Boulder Closure (with 2-lanes on Platte Avenue)



LEGEND

xxx(XXX) = AM(PM) Peak Hour Traffic Volumes

X/X = AM/PM Peak Hour Signalized
Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized
Intersection Level of Service

= Stop Sign

= Traffic Signal

= Study Intersection

= Roundabout

IV.B Multimodal Considerations

Based on the Mountain Metro Transit network, bus route 5 serves as a key connection between Boulder Street and the Citadel Transfer Center. Given that the route turns southbound onto Wahsatch Avenue, and continues south toward Kiowa Avenue, the proposed closure of Boulder Street between Nevada Avenue and Weber Street is not expected to impact the operation of this bus route. Given the existing transit network and available alternative routes, bus services are expected to continue operating without significant disruptions.

Furthermore, since the intersection is proposed to become a three-legged intersection, there is an opportunity to maximize green time for pedestrian crossings, improving safety and accessibility. Additionally, the closed section of Boulder Street should serve as a gateway for students and faculty of Palmer High School, ensuring a well-integrated and pedestrian-friendly connection to the campus.

IV.C School Operations

This traffic study does not consider school-related operations, including student drop-off and pick-up activities, school bus routing, and schedules, and does not account for how these factors may influence traffic patterns within the network upon implementation of a Boulder Street closure. With the renovation process, it is recommended that separate evaluations and planning occur to determine the appropriate school traffic circulation plan upon implementation.

V. SUMMARY AND RECOMMENDATIONS

This traffic analysis highlights the key impacts of the proposed closure of Boulder Street between Weber Street and Nevada Avenue, as well as potential modifications at the Platte Avenue and Nevada Avenue intersection. While closing Boulder Street will improve pedestrian safety for Palmer High School students and staff, it would result in a redistribution of vehicular traffic onto adjacent roadways.

Closure Traffic Operations

Traffic operations analyses of conditions without and with the closure for the 2030 horizon year demonstrate that the surrounding roadway network and intersections can accommodate the anticipated traffic volume shifts. Upon implementing the closure, all intersections and movements would continue to operate at acceptable levels of service during peak hours. The only exception would occur at the Nevada Avenue/St. Vrain Street intersection, where the left turn movements entering Nevada Avenue from St. Vrain Street show substandard LOS E with Boulder Street remaining open. These movements would operate at LOS E/F with the closure of Boulder Street based on calculated movement delay. However, these conditions are not expected to result in lengthy queue lengths and the traffic volume would remain within capacity.

Intersection modifications will be needed to support conversion of the current 4-leg Boulder Street intersections with Nevada Avenue and Weber Street (intersections 2 and 5) to 3-leg intersections and accommodate intersection traffic flow upon implementation of the closure, including adjustments to turn lanes and traffic signal timings/configuration.

Platte Avenue/Nevada Avenue Intersection

Based on the operational analyses in this report, the proposed Boulder Street Closure would introduce constraints on future flexibility and some operational concerns at the Platte Avenue/Nevada Avenue intersection.

The proposed closure would limit future flexibility for modifications to the Platte Avenue/Nevada Avenue intersection. Two potential modifications are the introduction of a roundabout and the reduction of Platte Avenue from 4 travel lanes to 2 travel lanes through the intersection. Operational analyses show that a roundabout could provide operational benefits in terms of reduced vehicle delay but would not operate acceptably with reduction of Platte Avenue to two travel lanes. A signalized intersection would operate acceptably with Platte Avenue reduced to 2 travel lanes and Boulder Street closed. It is recommended that the Platte Avenue lane reduction recommendation contained within the *Platte Avenue Corridor Study* should be carefully reconsidered in light of these constraints.

The southbound left-turn queue length would be affected by the closure of Boulder Street as additional traffic is redirected to this movement. Some improvement could be realized if signal phasing is adjusted to allow for protected/permissive southbound left turn movements instead of the current permissive only phasing. Further coordination with City Staff would provide clarity on the ability to implement this change.

These potential intersection issues should be considered within the decision process to close Boulder Street.

Next Steps

Overall, the proposed changes align with the goals of improving safety and connectivity for Palmer High School while maintaining reasonable traffic operations within downtown Colorado Springs. Additional community engagement and ongoing assessment and monitoring will be essential to refine implementation plans and address any unforeseen traffic concerns.

Appendix A. Traffic Counts



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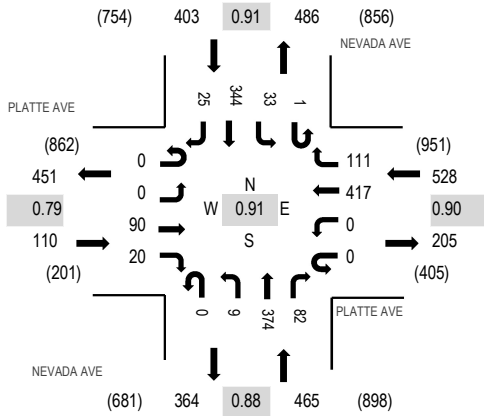
Location: 3 NEVADA AVE & PLATTE AVE AM

Date: Thursday, February 13, 2025

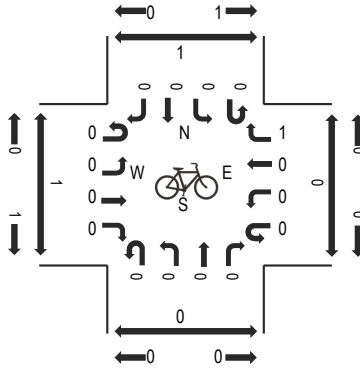
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

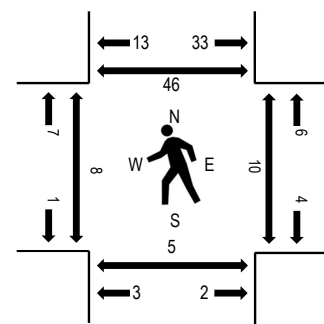
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				NEVADA AVE Northbound				NEVADA AVE 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	0	8	2	0	1	71	6	1	1	67	14	0	5	51	4	231	1,400	7	2	2	17
7:15 AM	0	0	17	3	0	0	87	40	0	2	105	25	1	6	70	3	359	1,506	2	1	1	17
7:30 AM	0	0	29	2	0	0	101	42	0	0	108	24	0	11	91	4	412	1,484	1	3	2	19
7:45 AM	0	0	20	6	0	0	127	19	0	3	90	19	0	7	96	11	398	1,382	3	4	1	6
8:00 AM	0	0	24	9	0	0	102	10	0	4	71	14	0	9	87	7	337	1,404	2	2	1	4
8:15 AM	0	0	20	2	0	0	104	7	0	3	97	14	0	9	77	4	337		4	2	1	3
8:30 AM	0	0	21	2	0	1	90	7	0	4	78	24	0	9	71	3	310		3	2	0	3
8:45 AM	0	0	33	3	0	1	119	16	1	4	91	34	1	9	104	4	420		3	1	2	6
Count Total	0	0	172	29	0	3	801	147	2	21	707	168	2	65	647	40	2,804		25	17	10	75
Peak Hour	0	0	90	20	0	0	417	111	0	9	374	82	1	33	344	25	1,506		8	10	5	46



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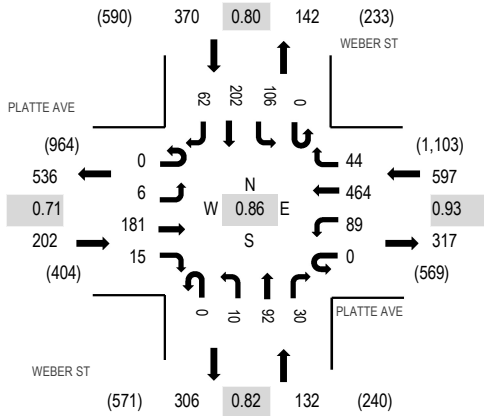
Location: 4 WEBER ST & PLATTE AVE AM

Date: Thursday, February 13, 2025

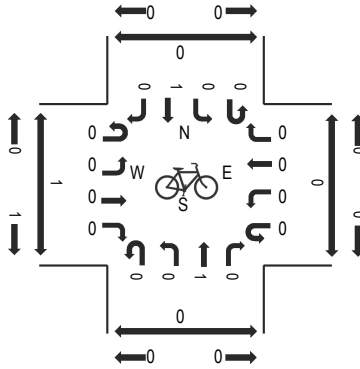
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

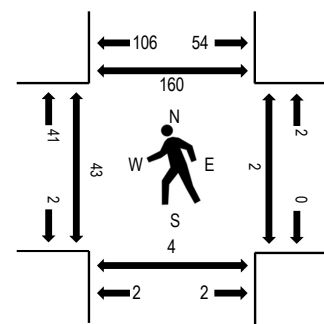
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				WEBER ST Northbound				WEBER ST 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	2	25	1	0	23	68	3	0	3	12	8	0	9	33	10	197	1,234	7	2	5	30
7:15 AM	0	4	37	4	0	16	114	14	0	1	19	7	0	39	56	21	332	1,301	18	0	1	68
7:30 AM	0	2	58	5	0	24	115	19	0	4	33	4	0	38	50	25	377	1,212	12	1	3	79
7:45 AM	0	0	43	3	0	29	127	5	0	1	18	12	0	17	60	13	328	1,089	8	1	0	8
8:00 AM	0	0	43	3	0	20	108	6	0	4	22	7	0	12	36	3	264	1,103	5	0	0	5
8:15 AM	0	0	43	2	0	19	101	5	0	0	18	12	0	10	28	5	243		1	1	3	3
8:30 AM	0	0	49	2	0	18	106	3	0	0	19	7	0	8	42	0	254		4	0	0	9
8:45 AM	0	2	64	12	0	19	134	7	0	0	20	9	0	8	66	1	342		2	1	3	6
Count Total	0	10	362	32	0	168	873	62	0	13	161	66	0	141	371	78	2,337		57	6	15	208
Peak Hour	0	6	181	15	0	89	464	44	0	10	92	30	0	106	202	62	1,301		43	2	4	160



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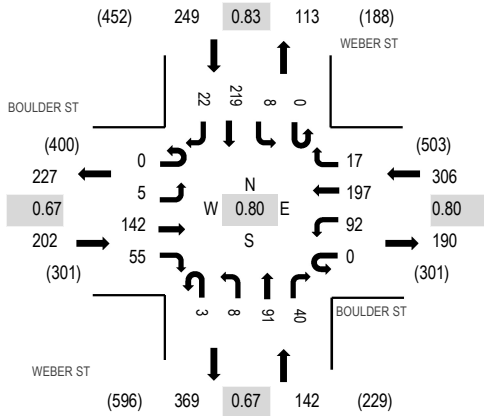
Location: 5 WEBER ST & BOULDER ST AM

Date: Thursday, February 13, 2025

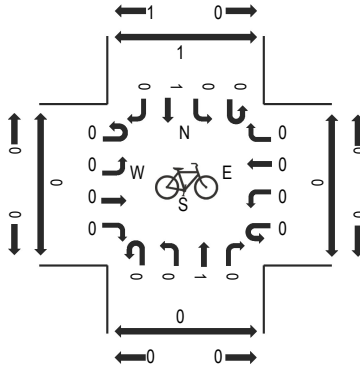
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

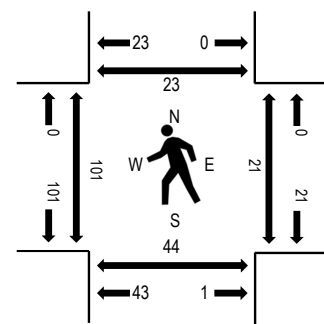
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BOULDER ST Eastbound				BOULDER ST Westbound				WEBER ST Northbound				WEBER ST 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	1	15	7	0	10	30	5	1	2	10	2	0	3	36	2	124	870	7	3	4	3
7:15 AM	0	1	46	28	0	31	28	5	1	4	18	15	0	1	57	10	245	899	52	10	24	10
7:30 AM	0	2	52	14	0	29	51	4	2	3	34	14	0	1	71	4	281	782	35	9	15	8
7:45 AM	0	2	23	10	0	19	73	4	0	0	14	9	0	1	61	4	220	647	9	2	4	3
8:00 AM	0	0	21	3	0	13	45	4	0	1	25	2	0	5	30	4	153	615	5	0	1	2
8:15 AM	0	0	22	3	0	4	34	2	0	1	18	3	0	5	36	0	128		5	0	2	4
8:30 AM	0	2	20	4	0	3	43	1	0	1	12	9	0	4	44	3	146		2	1	0	1
8:45 AM	0	0	19	6	0	12	49	4	1	4	20	3	0	6	60	4	188		3	1	5	1
Count Total	0	8	218	75	0	121	353	29	5	16	151	57	0	26	395	31	1,485		118	26	55	32
Peak Hour	0	5	142	55	0	92	197	17	3	8	91	40	0	8	219	22	899		101	21	44	23



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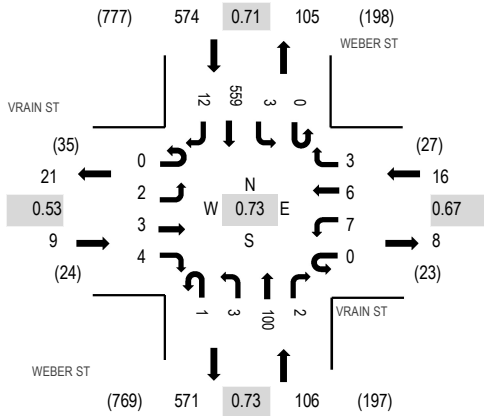
Location: 6 WEBER ST & VRAIN ST AM

Date: Thursday, February 13, 2025

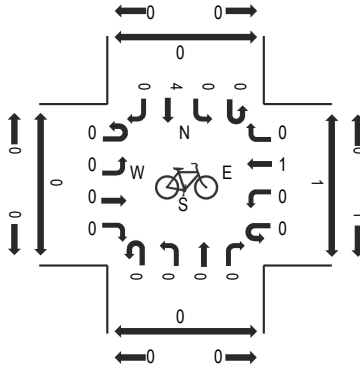
Peak Hour: 07:00 AM - 08:00 AM

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

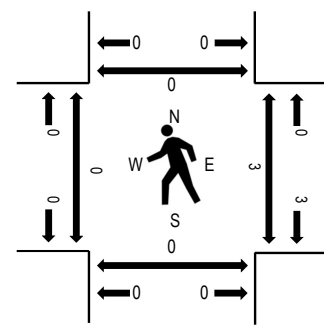
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	VRAIN ST Eastbound				VRAIN ST Westbound				WEBER ST Northbound				WEBER ST 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	0	0	0	0	2	1	0	0	0	15	1	0	0	88	2	109	705	0	0	0	0
7:15 AM	0	0	1	3	0	2	4	0	0	1	28	1	0	3	190	8	241	674	0	2	0	0
7:30 AM	0	1	2	1	0	3	0	1	1	2	38	0	0	0	154	0	203	500	0	0	0	0
7:45 AM	0	1	0	0	0	0	1	2	0	0	19	0	0	0	127	2	152	370	0	1	0	0
8:00 AM	0	2	6	0	0	0	1	0	0	1	28	1	0	2	36	1	78	320	2	0	1	0
8:15 AM	0	1	1	0	0	1	1	0	0	0	19	1	0	0	41	2	67		0	0	0	0
8:30 AM	0	0	1	1	0	1	2	1	0	1	17	0	0	1	48	0	73		0	0	0	0
8:45 AM	0	1	1	1	0	0	2	2	0	1	22	0	0	1	69	2	102		0	0	1	1
Count Total	0	6	12	6	0	9	12	6	1	6	186	4	0	7	753	17	1,025		2	3	2	1
Peak Hour	0	2	3	4	0	7	6	3	1	3	100	2	0	3	559	12	705		0	3	0	0



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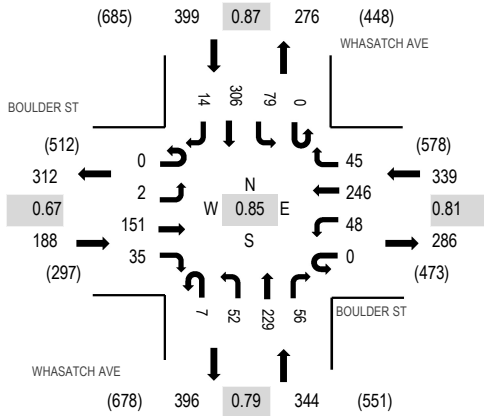
Location: 7 WHASATCH AVE & BOULDER ST AM

Date: Thursday, February 13, 2025

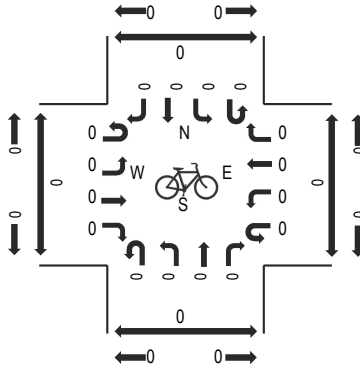
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

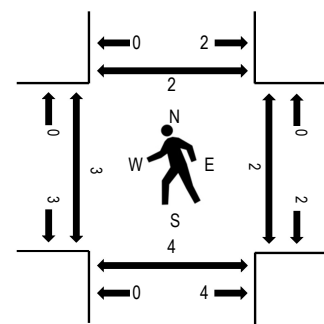
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BOULDER ST Eastbound				BOULDER ST Westbound				WHASATCH AVE Northbound				WHASATCH AVE 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	0	19	2	0	11	41	7	0	5	23	9	1	20	31	2	171	1,170	0	1	0	0
7:15 AM	0	1	47	12	0	10	48	8	1	15	50	15	0	21	59	3	290	1,270	0	0	0	0
7:30 AM	0	1	53	16	0	13	65	13	2	17	64	26	0	18	85	2	375	1,186	1	2	1	2
7:45 AM	0	0	28	3	0	12	79	13	3	14	59	8	0	20	90	5	334	1,044	0	0	1	0
8:00 AM	0	0	23	4	0	13	54	11	1	6	56	7	0	20	72	4	271	941	2	0	2	0
8:15 AM	0	0	24	2	0	9	30	9	2	6	35	11	0	13	62	3	206		1	1	1	3
8:30 AM	0	1	31	1	0	16	44	5	0	7	45	10	0	10	63	0	233		0	1	0	0
8:45 AM	0	1	23	5	0	11	50	6	1	7	39	7	0	10	66	5	231		0	0	0	1
Count Total	0	4	248	45	0	95	411	72	10	77	371	93	1	132	528	24	2,111		4	5	5	6
Peak Hour	0	2	151	35	0	48	246	45	7	52	229	56	0	79	306	14	1,270		3	2	4	2



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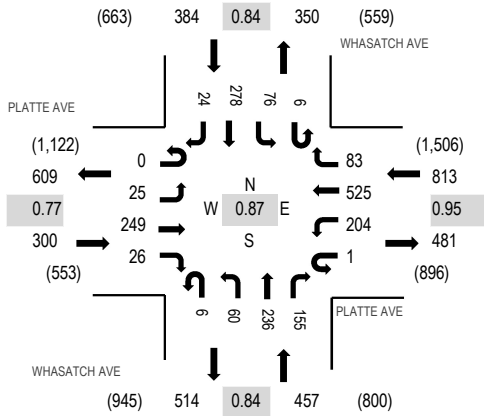
Location: 8 WHASATCH AVE & PLATTE AVE AM

Date: Thursday, February 13, 2025

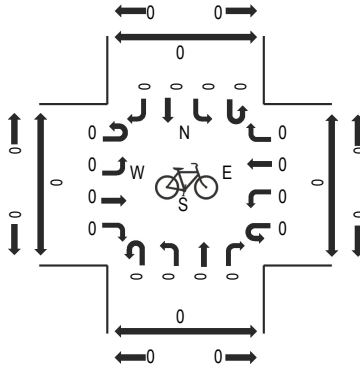
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

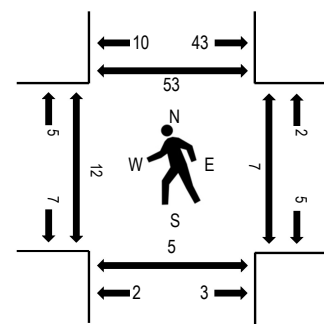
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				WHASATCH AVE Northbound				WHASATCH AVE 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	2	35	4	0	42	83	10	0	7	27	31	0	12	31	1	285	1,814	3	0	4	1
7:15 AM	0	8	58	8	0	44	137	27	0	11	49	53	1	16	52	7	471	1,954	0	1	1	11
7:30 AM	0	14	74	10	1	55	134	25	2	27	73	34	2	22	85	5	563	1,900	4	3	0	34
7:45 AM	0	3	63	5	0	53	132	17	2	12	59	39	2	21	78	9	495	1,745	5	2	1	6
8:00 AM	0	0	54	3	0	52	122	14	2	10	55	29	1	17	63	3	425	1,708	3	1	3	2
8:15 AM	0	1	60	5	0	50	113	15	2	15	38	44	1	8	62	3	417		4	0	2	1
8:30 AM	0	5	61	2	0	43	121	11	0	8	45	35	1	4	69	3	408		1	2	1	2
8:45 AM	0	2	68	8	0	48	142	15	3	14	36	38	0	19	62	3	458		0	1	0	1
Count Total	0	35	473	45	1	387	984	134	11	104	382	303	8	119	502	34	3,522		20	10	12	58
Peak Hour	0	25	249	26	1	204	525	83	6	60	236	155	6	76	278	24	1,954		12	7	5	53



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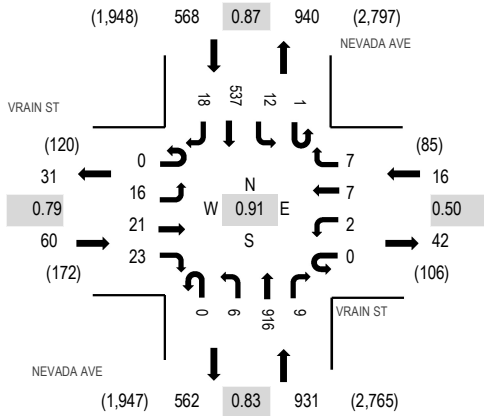
Location: 1 NEVADA AVE & VRAIN ST PM

Date: Thursday, February 13, 2025

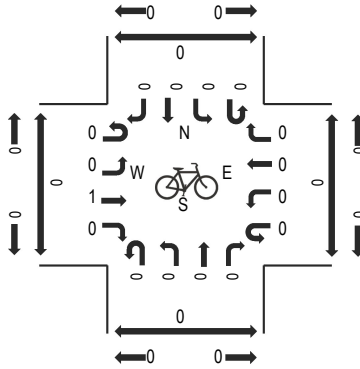
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

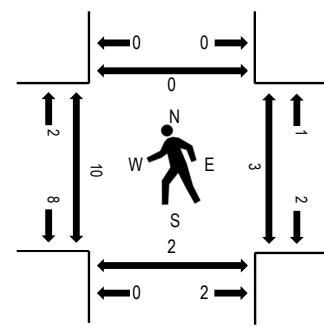
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	VRAIN ST Eastbound				VRAIN ST Westbound				NEVADA AVE Northbound				NEVADA AVE 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
2:30 PM	0	4	3	5	0	1	4	2	0	0	103	1	1	1	97	4	226	1,072	2	2	0	0
2:45 PM	0	3	4	2	0	3	1	2	0	3	110	4	0	2	113	3	250	1,147	1	0	0	0
3:00 PM	0	3	2	2	0	0	1	2	0	2	144	6	0	3	121	7	293	1,194	0	4	0	0
3:15 PM	0	2	1	6	0	2	4	14	0	4	156	2	0	2	107	3	303	1,250	5	2	1	1
3:30 PM	0	1	2	5	0	3	3	5	0	1	161	1	0	3	111	5	301	1,241	0	3	0	2
3:45 PM	0	4	4	5	0	2	1	1	1	3	150	1	0	0	120	5	297	1,263	0	1	0	0
4:00 PM	0	4	2	7	0	1	1	0	1	1	188	1	1	0	139	3	349	1,399	3	2	3	1
4:15 PM	0	6	0	2	0	0	0	0	0	4	168	2	0	2	106	4	294	1,485	0	2	2	0
4:30 PM	0	5	3	3	0	1	4	4	0	1	171	2	0	1	123	5	323	1,563	0	0	0	2
4:45 PM	0	2	4	6	0	1	3	1	0	1	278	2	0	4	124	7	433	1,575	2	0	0	0
5:00 PM	0	6	8	5	0	0	1	4	0	2	265	4	1	4	131	4	435	1,410	3	0	2	0
5:15 PM	0	4	4	4	0	0	2	0	0	0	192	3	0	2	159	2	372	1,261	2	1	0	0
5:30 PM	0	4	5	8	0	1	1	2	0	3	181	0	0	2	123	5	335	1,094	3	2	0	0
5:45 PM	0	2	1	4	0	0	1	0	2	1	160	1	1	0	95	0	268		0	0	0	1
6:00 PM	0	4	2	2	0	1	1	1	0	0	166	0	1	0	107	1	286		1	0	0	0
6:15 PM	0	3	1	3	0	1	2	0	2	2	104	4	0	0	79	4	205		0	1	0	0
Count Total	0	57	46	69	0	17	30	38	6	28	2,697	34	5	26	1,855	62	4,970		22	20	8	7
Peak Hour	0	16	21	23	0	2	7	7	0	6	916	9	1	12	537	18	1,575		10	3	2	0



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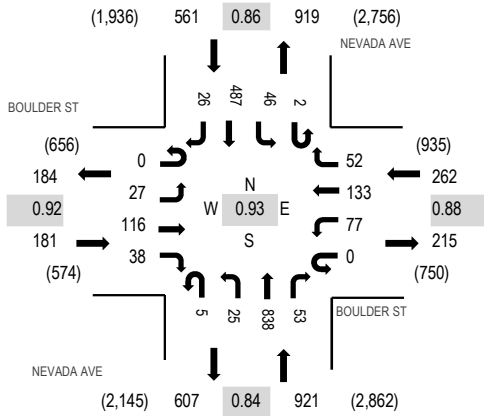
Location: 2 NEVADA AVE & BOULDER ST PM

Date: Thursday, February 13, 2025

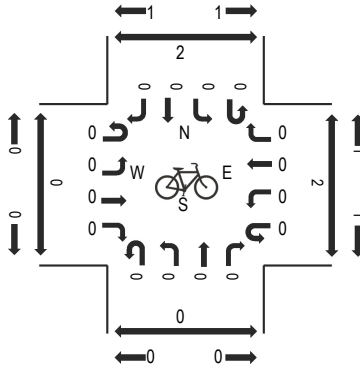
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

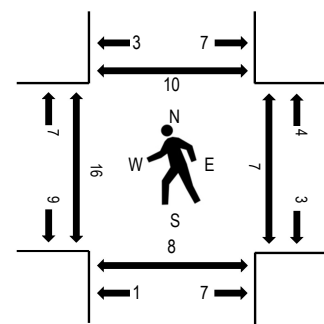
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BOULDER ST Eastbound				BOULDER ST Westbound				NEVADA AVE Northbound				NEVADA AVE 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
2:30 PM	0	1	18	9	0	14	27	9	2	6	92	15	0	8	87	6	294	1,452	3	2	1	1
2:45 PM	0	8	17	9	0	27	31	12	3	5	99	13	0	6	109	2	341	1,525	4	1	2	3
3:00 PM	0	4	29	5	0	17	36	19	1	9	130	35	1	9	114	2	411	1,569	0	22	2	5
3:15 PM	0	5	25	10	0	22	32	22	4	11	125	33	0	11	97	9	406	1,581	0	21	2	2
3:30 PM	0	6	16	1	0	20	22	8	1	3	149	21	0	6	108	6	367	1,546	1	8	3	1
3:45 PM	0	11	22	5	0	21	28	10	0	6	137	18	0	9	114	4	385	1,596	2	0	1	2
4:00 PM	0	10	17	6	0	12	37	7	0	5	175	11	0	10	128	5	423	1,728	5	2	2	2
4:15 PM	0	3	18	6	0	23	35	9	0	5	158	10	1	8	92	3	371	1,819	2	2	3	2
4:30 PM	0	6	32	11	0	18	21	14	1	11	160	10	0	7	119	7	417	1,925	5	3	1	1
4:45 PM	0	6	27	10	0	20	37	14	1	3	256	18	0	9	110	6	517	1,922	5	0	1	8
5:00 PM	0	6	30	6	0	19	37	15	2	2	247	11	1	14	120	4	514	1,749	3	4	2	0
5:15 PM	0	9	27	11	0	20	38	9	1	9	175	14	1	16	138	9	477	1,587	3	0	4	1
5:30 PM	1	3	24	10	0	12	30	6	1	10	172	17	0	8	117	3	414	1,384	2	2	0	1
5:45 PM	0	4	14	11	0	12	27	3	2	3	160	9	0	9	82	8	344		0	0	0	0
6:00 PM	0	7	15	8	0	18	22	5	0	3	154	11	0	7	94	8	352		1	4	0	0
6:15 PM	0	6	12	17	0	18	12	8	1	3	98	15	0	9	68	7	274		5	11	2	4
Count Total	1	95	343	135	0	293	472	170	20	94	2,487	261	4	146	1,697	89	6,307		41	82	26	33
Peak Hour	0	27	116	38	0	77	133	52	5	25	838	53	2	46	487	26	1,925		16	7	8	10



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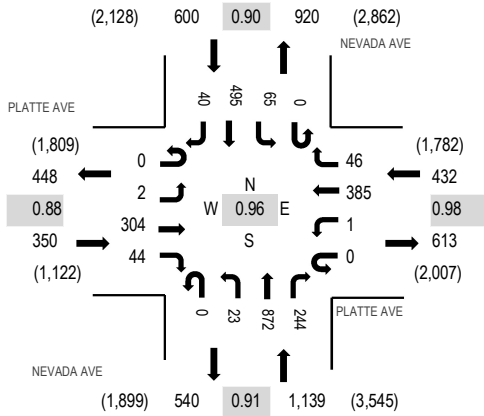
Location: 3 NEVADA AVE & PLATTE AVE PM

Date: Thursday, February 13, 2025

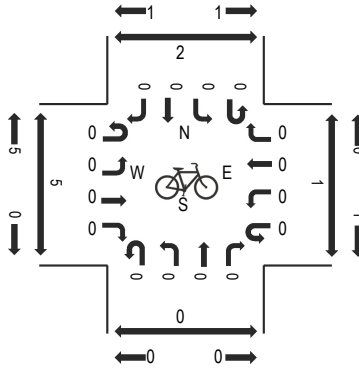
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

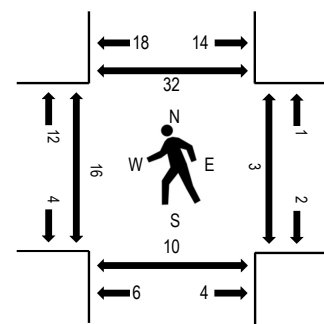
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				NEVADA AVE Northbound				NEVADA AVE 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
2:30 PM	0	1	50	7	0	0	93	11	1	7	107	34	0	13	85	13	422	1,932	4	3	1	5
2:45 PM	0	0	60	8	0	2	85	15	0	3	105	48	0	13	124	10	473	2,051	5	0	2	4
3:00 PM	0	0	54	4	0	0	113	15	0	4	158	46	0	11	114	8	527	2,119	7	19	2	39
3:15 PM	0	0	48	11	0	0	104	33	0	7	133	46	0	19	100	9	510	2,158	14	17	5	46
3:30 PM	0	0	49	10	0	0	118	17	0	9	149	56	0	13	111	9	541	2,213	1	6	5	10
3:45 PM	0	0	52	7	0	0	120	15	0	6	150	54	0	19	112	6	541	2,267	3	3	5	7
4:00 PM	0	0	61	10	0	0	107	10	0	3	174	54	0	18	118	11	566	2,355	5	2	4	4
4:15 PM	0	0	67	11	0	0	120	12	0	4	165	64	0	13	101	8	565	2,448	7	3	3	4
4:30 PM	0	0	74	13	0	1	107	11	0	1	176	68	0	18	119	7	595	2,521	9	2	4	15
4:45 PM	0	2	61	6	0	0	91	10	0	3	261	50	0	13	118	14	629	2,483	3	0	1	3
5:00 PM	0	0	83	11	0	0	102	15	0	5	244	54	0	16	123	6	659	2,324	2	1	2	3
5:15 PM	0	0	86	14	0	0	85	10	0	14	191	72	0	18	135	13	638	2,168	2	0	3	11
5:30 PM	0	0	60	12	0	0	90	12	0	9	189	43	0	10	118	14	557	1,911	8	6	4	3
5:45 PM	0	0	46	13	0	1	78	12	0	7	165	41	0	7	92	8	470		4	2	0	5
6:00 PM	0	1	61	15	0	0	76	15	0	3	163	51	1	12	94	11	503		5	4	2	5
6:15 PM	0	0	42	12	0	0	64	12	0	1	101	46	1	13	66	23	381		0	2	2	2
Count Total	0	4	954	164	0	4	1,553	225	1	86	2,631	827	2	226	1,730	170	8,577		79	70	45	166
Peak Hour	0	2	304	44	0	1	385	46	0	23	872	244	0	65	495	40	2,521		16	3	10	32



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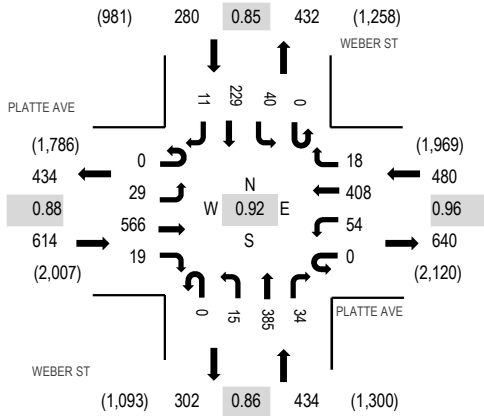
Location: 4 WEBER ST & PLATTE AVE PM

Date: Thursday, February 13, 2025

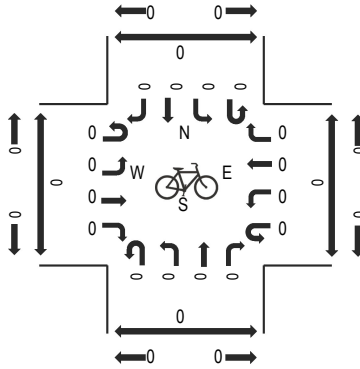
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

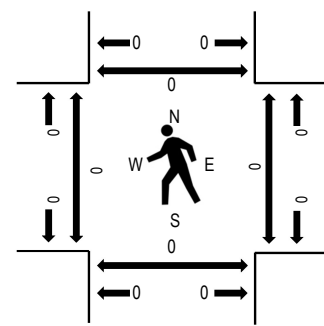
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				WEBER ST Northbound				WEBER ST 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
2:30 PM	0	2	92	3	0	14	99	3	0	2	38	7	0	9	38	2	309	1,527	0	0	0	0
2:45 PM	0	1	111	8	0	12	92	5	0	4	57	5	0	11	51	4	361	1,635	0	0	0	0
3:00 PM	0	3	102	4	0	10	126	6	0	3	42	12	0	12	71	3	394	1,675	0	0	0	0
3:15 PM	0	4	104	5	0	11	130	5	0	4	97	11	0	10	81	1	463	1,689	0	0	0	0
3:30 PM	0	2	107	7	0	15	133	4	0	2	66	13	0	8	59	1	417	1,630	0	0	0	0
3:45 PM	0	4	113	8	0	12	125	9	0	4	56	14	0	7	45	4	401	1,644	0	0	0	0
4:00 PM	0	5	125	6	0	14	116	3	0	1	79	9	0	9	39	2	408	1,654	0	0	0	0
4:15 PM	0	3	136	6	0	10	127	5	0	1	56	10	0	10	36	4	404	1,722	0	0	0	0
4:30 PM	0	9	143	7	0	9	115	7	0	3	70	12	0	12	41	3	431	1,808	0	0	0	0
4:45 PM	0	7	114	5	0	17	91	2	0	5	86	6	0	9	67	2	411	1,748	0	0	0	0
5:00 PM	0	7	144	3	0	13	113	4	0	2	114	8	0	11	53	4	476	1,652	0	0	0	0
5:15 PM	0	6	165	4	0	15	89	5	0	5	115	8	0	8	68	2	490	1,517	0	0	0	0
5:30 PM	0	4	109	2	0	16	98	3	0	4	81	7	0	8	38	1	371	1,292	0	0	0	0
5:45 PM	0	8	80	8	0	18	78	5	0	7	60	5	0	7	34	5	315		0	0	0	0
6:00 PM	0	9	109	5	0	14	80	7	0	9	53	3	0	5	44	3	341		0	0	0	0
6:15 PM	0	4	85	9	0	12	67	5	0	5	32	7	0	8	26	5	265		0	0	0	0
Count Total	0	78	1,839	90	0	212	1,679	78	0	61	1,102	137	0	144	791	46	6,257		0	0	0	0
Peak Hour	0	29	566	19	0	54	408	18	0	15	385	34	0	40	229	11	1,808		0	0	0	0



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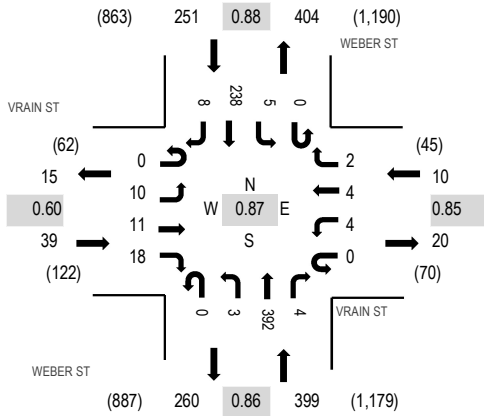
Location: 6 WEBER ST & VRAIN ST PM

Date: Thursday, February 13, 2025

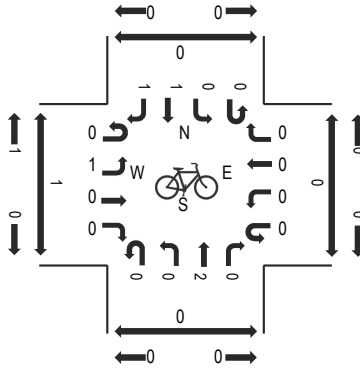
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

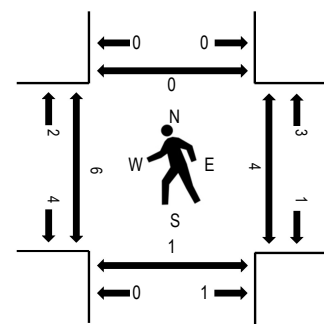
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	VRAIN ST Eastbound				VRAIN ST Westbound				WEBER ST Northbound				WEBER ST 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
2:30 PM	0	1	0	1	0	0	4	1	0	1	48	0	0	2	46	0	104	556	1	0	0	0
2:45 PM	0	4	4	3	0	1	2	2	0	1	53	0	0	1	59	1	131	584	2	0	0	0
3:00 PM	0	3	5	4	0	3	1	1	0	1	42	4	0	0	71	6	141	587	2	0	0	0
3:15 PM	0	10	2	9	0	1	1	0	0	2	98	8	0	0	46	3	180	596	6	4	0	1
3:30 PM	0	0	1	5	0	1	3	1	0	3	70	0	0	4	44	0	132	518	1	0	1	0
3:45 PM	0	2	3	2	0	0	1	2	0	1	66	3	0	1	53	0	134	527	0	1	0	0
4:00 PM	0	2	2	2	0	0	0	3	0	1	78	1	0	1	57	3	150	554	3	1	0	0
4:15 PM	0	1	1	3	0	1	0	0	0	1	49	1	0	1	44	0	102	605	1	1	0	1
4:30 PM	0	1	3	3	0	0	0	0	0	2	80	0	0	1	49	2	141	699	2	2	0	0
4:45 PM	0	2	2	3	0	2	2	0	0	1	83	2	0	0	63	1	161	699	2	1	0	0
5:00 PM	0	4	5	7	0	2	0	2	0	0	115	2	0	2	59	3	201	648	1	1	1	0
5:15 PM	0	3	1	5	0	0	2	0	0	0	114	0	0	2	67	2	196	548	1	0	0	0
5:30 PM	0	2	1	2	0	1	1	1	0	0	83	1	0	1	46	2	141	436	1	0	0	0
5:45 PM	0	1	0	2	0	0	0	0	0	0	66	0	0	0	40	1	110		0	1	0	0
6:00 PM	0	1	0	1	0	0	0	0	0	1	56	1	0	0	39	2	101		2	0	0	0
6:15 PM	0	0	1	2	0	2	1	0	0	1	39	0	0	0	36	2	84		0	0	0	0
Count Total	0	37	31	54	0	14	18	13	0	16	1,140	23	0	16	819	28	2,209		25	12	2	2
Peak Hour	0	10	11	18	0	4	4	2	0	3	392	4	0	5	238	8	699		6	4	1	0



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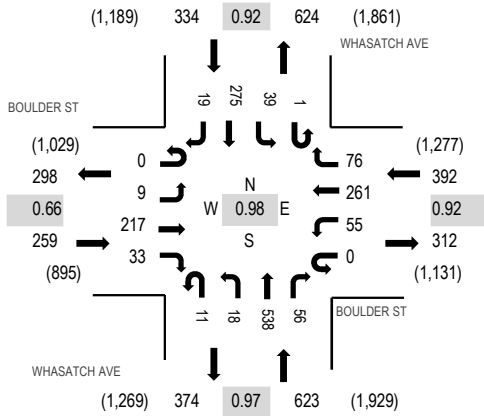
Location: 7 WHASATCH AVE & BOULDER ST PM

Date: Thursday, February 13, 2025

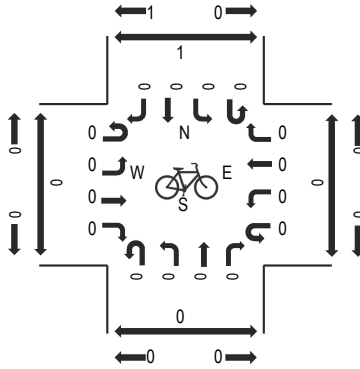
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

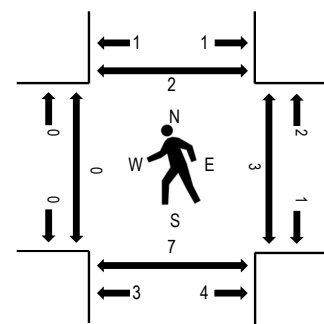
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BOULDER ST Eastbound				BOULDER ST Westbound				WHASATCH AVE Northbound				WHASATCH AVE 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
2:30 PM	0	5	37	6	0	11	61	11	3	6	71	12	1	10	47	1	282	1,309	2	1	1	3
2:45 PM	0	4	28	5	0	13	63	11	1	10	58	5	0	11	49	1	259	1,337	2	0	0	1
3:00 PM	0	9	47	10	0	14	67	15	3	13	80	14	0	10	63	6	351	1,397	2	2	5	3
3:15 PM	0	9	77	17	0	13	55	17	2	12	100	13	1	14	78	9	417	1,377	4	2	3	6
3:30 PM	0	3	39	8	0	15	50	18	1	5	95	13	0	12	51	0	310	1,307	2	2	3	1
3:45 PM	0	4	44	5	0	14	54	13	0	7	98	20	0	9	47	4	319	1,392	1	3	2	2
4:00 PM	0	2	44	3	0	11	40	19	1	6	99	14	0	11	74	7	331	1,468	1	2	1	3
4:15 PM	0	4	44	1	0	7	58	9	1	10	102	17	0	13	77	4	347	1,543	0	0	0	1
4:30 PM	0	1	48	5	0	15	66	17	3	5	129	14	0	16	72	4	395	1,608	0	0	1	0
4:45 PM	0	3	57	6	0	17	65	24	4	5	132	13	1	6	60	2	395	1,535	0	1	3	1
5:00 PM	0	4	54	9	0	16	63	18	2	5	135	16	0	9	69	6	406	1,412	0	2	1	1
5:15 PM	0	1	58	13	0	7	67	17	2	3	142	13	0	8	74	7	412	1,247	0	0	2	0
5:30 PM	0	4	46	6	0	12	46	9	3	3	113	16	0	10	52	2	322	1,066	0	0	2	0
5:45 PM	0	2	31	5	0	6	33	8	2	5	97	19	0	15	45	4	272		1	0	0	1
6:00 PM	0	4	38	6	0	13	38	6	1	4	65	11	0	13	39	3	241		0	0	0	0
6:15 PM	0	2	35	2	0	6	39	10	2	3	59	11	0	16	44	2	231		0	0	0	0
Count Total	0	61	727	107	0	190	865	222	31	102	1,575	221	3	183	941	62	5,290		15	15	24	23
Peak Hour	0	9	217	33	0	55	261	76	11	18	538	56	1	39	275	19	1,608		0	3	7	2



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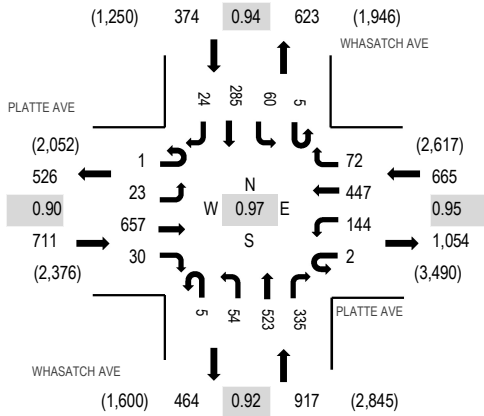
Location: 8 WHASATCH AVE & PLATTE AVE PM

Date: Thursday, February 13, 2025

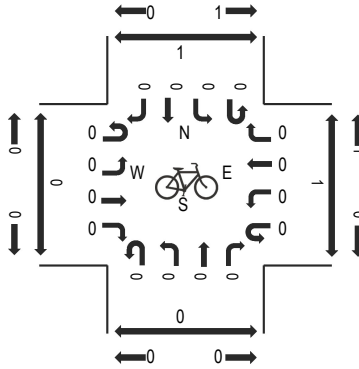
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

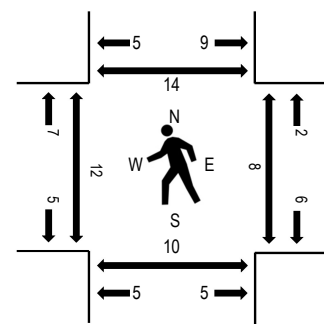
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	PLATTE AVE Eastbound				PLATTE AVE Westbound				WHASATCH AVE Northbound				WHASATCH AVE 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
2:30 PM	0	2	104	10	0	25	107	18	3	9	72	53	3	9	55	4	474	2,167	0	0	4	1
2:45 PM	0	6	117	3	1	29	111	16	1	16	56	54	0	19	43	2	474	2,275	5	0	5	2
3:00 PM	0	11	115	5	1	36	120	24	1	15	78	67	1	20	57	2	553	2,362	2	10	2	51
3:15 PM	0	17	144	9	0	39	131	26	4	12	86	73	1	31	85	8	666	2,413	7	12	6	72
3:30 PM	0	6	145	4	0	37	134	16	0	14	92	60	1	14	56	3	582	2,391	2	4	1	6
3:45 PM	0	5	130	6	0	35	134	14	1	10	105	56	1	10	48	6	561	2,459	3	6	2	3
4:00 PM	0	6	156	5	0	36	125	18	1	8	96	68	0	12	68	5	604	2,548	2	3	1	1
4:15 PM	0	4	153	5	0	35	127	22	0	12	104	100	1	11	62	8	644	2,625	3	4	0	4
4:30 PM	1	6	184	6	1	36	113	17	3	12	126	55	1	13	71	5	650	2,667	10	3	3	7
4:45 PM	0	5	134	12	1	44	112	18	1	11	129	94	3	9	71	6	650	2,551	0	1	2	1
5:00 PM	0	3	177	6	0	29	110	20	1	12	134	90	0	18	73	8	681	2,382	2	4	2	2
5:15 PM	0	9	162	6	0	35	112	17	0	19	134	96	1	20	70	5	686	2,160	0	0	3	4
5:30 PM	0	7	118	4	0	31	92	12	2	10	111	75	0	10	56	6	534	1,863	1	0	0	2
5:45 PM	0	8	105	5	0	31	92	23	2	14	96	51	0	7	42	5	481		2	1	2	3
6:00 PM	0	9	127	9	1	30	81	14	3	9	56	64	0	9	45	2	459		2	0	0	0
6:15 PM	0	6	90	9	2	29	82	15	3	6	55	44	3	10	31	4	389		0	1	0	1
Count Total	1	110	2,161	104	7	537	1,783	290	26	189	1,530	1,100	16	222	933	79	9,088		41	49	33	160
Peak Hour	1	23	657	30	2	144	447	72	5	54	523	335	5	60	285	24	2,667		12	8	10	14

Appendix B. Existing (2025) Level of Service Worksheets

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	6	2	3	10	3	14	372	5	13	372	24
Future Vol, veh/h	1	6	2	3	10	3	14	372	5	13	372	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	57	57	57	84	84	84	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	7	2	5	18	5	17	443	6	14	409	26
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	715	933	218	716	943	225	435	0	0	449	0	0
Stage 1	450	450	-	480	480	-	-	-	-	-	-	-
Stage 2	265	483	-	236	463	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	318	265	786	317	261	778	1121	-	-	1108	-	-
Stage 1	558	570	-	536	553	-	-	-	-	-	-	-
Stage 2	717	551	-	746	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	291	255	786	301	251	778	1121	-	-	1108	-	-
Mov Cap-2 Maneuver	291	255	-	301	251	-	-	-	-	-	-	-
Stage 1	547	560	-	525	542	-	-	-	-	-	-	-
Stage 2	675	540	-	722	552	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.2		18.3		0.4		0.4					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1121	-	-	305	298	1108	-	-				
HCM Lane V/C Ratio	0.015	-	-	0.036	0.094	0.013	-	-				
HCM Control Delay (s)	8.3	0.1	-	17.2	18.3	8.3	0.1	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-				

Timings

2: N Nevada Ave & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	6	49	60	132	26	356	120	31	337	11
Future Volume (vph)	6	49	60	132	26	356	120	31	337	11
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	44.5	44.5	44.5	44.5	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	23.6	23.6	23.6	23.6	78.4	78.4	78.4	78.4	78.4	78.4
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
v/c Ratio	0.05	0.19	0.29	0.58	0.05	0.19	0.14	0.05	0.15	0.01
Control Delay	34.0	33.4	52.6	56.1	5.0	4.7	0.9	7.2	6.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	33.4	52.6	56.1	5.0	4.7	0.9	7.2	6.8	0.5
LOS	C	C	D	E	A	A	A	A	A	A
Approach Delay		33.5		55.2		3.8			6.7	
Approach LOS		C		E		A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 37 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 17.1

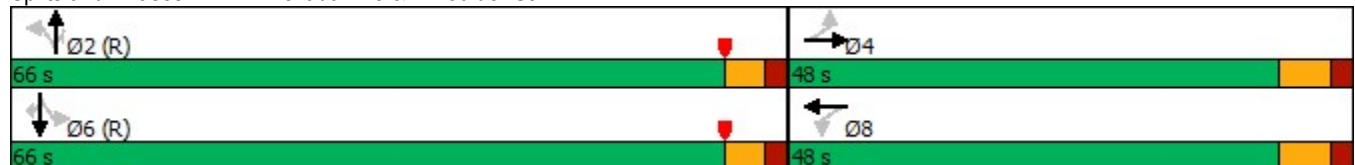
Intersection LOS: B

Intersection Capacity Utilization 64.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary

2: N Nevada Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	49	7	60	132	35	26	356	120	31	337	11
Future Volume (veh/h)	6	49	7	60	132	35	26	356	120	31	337	11
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	63	9	80	176	47	33	456	154	34	366	12
Peak Hour Factor	0.78	0.78	0.78	0.75	0.75	0.75	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	281	40	251	250	67	754	2556	1140	647	2556	1140
Arrive On Green	0.18	0.18	0.18	0.35	0.35	0.35	1.00	1.00	1.00	0.72	0.72	0.72
Sat Flow, veh/h	1158	1601	229	1328	1422	380	1005	3554	1585	811	3554	1585
Grp Volume(v), veh/h	8	0	72	80	0	223	33	456	154	34	366	12
Grp Sat Flow(s),veh/h/ln	1158	0	1829	1328	0	1802	1005	1777	1585	811	1777	1585
Q Serve(g_s), s	0.7	0.0	3.9	5.6	0.0	12.2	0.2	0.0	0.0	1.4	3.7	0.2
Cycle Q Clear(g_c), s	12.9	0.0	3.9	9.4	0.0	12.2	3.8	0.0	0.0	1.4	3.7	0.2
Prop In Lane	1.00		0.13	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	0	321	251	0	316	754	2556	1140	647	2556	1140
V/C Ratio(X)	0.06	0.00	0.22	0.32	0.00	0.71	0.04	0.18	0.14	0.05	0.14	0.01
Avail Cap(c_a), veh/h	361	0	666	502	0	656	754	2556	1140	647	2556	1140
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.71	0.00	0.71	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	0.0	40.3	35.1	0.0	34.5	0.1	0.0	0.0	4.7	5.0	4.5
Incr Delay (d2), s/veh	0.6	0.0	1.3	1.9	0.0	7.2	0.1	0.2	0.2	0.2	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	0.2	0.0	1.9	1.7	0.0	5.2	0.0	0.1	0.1	0.2	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	41.6	37.0	0.0	41.7	0.2	0.2	0.2	4.8	5.1	4.5
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	80			303			643			412		
Approach Delay, s/veh	42.5			40.4			0.2			5.1		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	87.5			26.5			87.5			26.5		
Change Period (Y+Rc), s	5.5			6.5			5.5			6.5		
Max Green Setting (Gmax), s	60.5			41.5			60.5			41.5		
Max Q Clear Time (g_c+I1), s	5.8			14.9			5.7			14.2		
Green Ext Time (p_c), s	15.7			0.9			10.1			4.2		
Intersection Summary												
HCM 6th Ctrl Delay	12.4											
HCM 6th LOS	B											

Timings

3: N Nevada Ave & E Platte Ave

04-23-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	90	417	111	9	374	82	34	344	25
Future Volume (vph)	90	417	111	9	374	82	34	344	25
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	50.0	50.0	50.0	64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	27.2	27.2	27.2	72.3	72.3	72.3	72.3	72.3	72.3
Actuated g/C Ratio	0.24	0.24	0.24	0.63	0.63	0.63	0.63	0.63	0.63
v/c Ratio	0.17	0.55	0.28	0.02	0.19	0.09	0.06	0.17	0.03
Control Delay	27.0	44.9	23.1	10.0	9.7	3.2	8.1	7.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	44.9	23.1	10.0	9.7	3.2	8.1	7.6	0.6
LOS	C	D	C	A	A	A	A	A	A
Approach Delay	27.0	40.3			8.5			7.2	
Approach LOS	C	D			A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 20.7

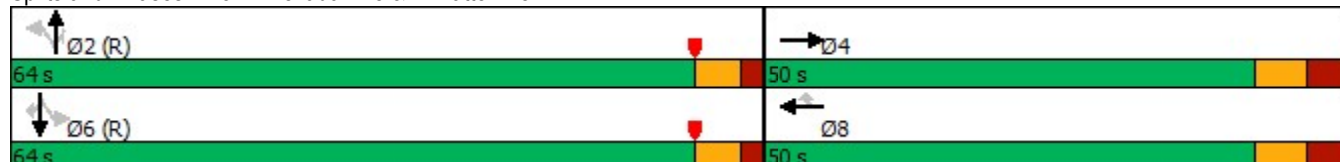
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

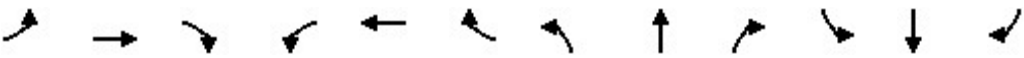
Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	90	20	0	417	111	9	374	82	34	344	25
Future Volume (veh/h)	0	90	20	0	417	111	9	374	82	34	344	25
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	114	25	0	463	123	10	425	93	37	378	27
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	590	126	0	720	321	720	2382	1062	616	2382	1062
Arrive On Green	0.00	0.20	0.20	0.00	0.41	0.41	0.67	0.67	0.67	1.00	1.00	1.00
Sat Flow, veh/h	0	3007	622	0	3647	1585	980	3554	1585	883	3554	1585
Grp Volume(v), veh/h	0	68	71	0	463	123	10	425	93	37	378	27
Grp Sat Flow(s),veh/h/ln	0	1777	1758	0	1777	1585	980	1777	1585	883	1777	1585
Q Serve(g_s), s	0.0	3.6	3.8	0.0	11.9	6.2	0.4	5.1	2.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.6	3.8	0.0	11.9	6.2	0.4	5.1	2.3	5.4	0.0	0.0
Prop In Lane	0.00		0.35	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	360	356	0	720	321	720	2382	1062	616	2382	1062
V/C Ratio(X)	0.00	0.19	0.20	0.00	0.64	0.38	0.01	0.18	0.09	0.06	0.16	0.03
Avail Cap(c_a), veh/h	0	647	640	0	1294	577	720	2382	1062	616	2382	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	37.7	37.8	0.0	30.6	28.9	6.3	7.0	6.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	1.0	0.0	2.6	2.1	0.0	0.2	0.2	0.2	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	0.0	1.7	1.8	0.0	4.6	2.4	0.1	1.9	0.8	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	38.6	38.7	0.0	33.2	31.0	6.3	7.2	6.7	0.4	0.1	0.0
LnGrp LOS	A	D	D	A	C	C	A	A	A	A	A	A
Approach Vol, veh/h		139			586			528			442	
Approach Delay, s/veh		38.7			32.8			7.1			0.2	
Approach LOS		D			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.4		31.6		82.4		31.6				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		58.0		41.5		58.0		41.5				
Max Q Clear Time (g_c+I1), s		7.1		5.8		7.4		13.9				
Green Ext Time (p_c), s		10.0		2.1		8.4		9.1				
Intersection Summary												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

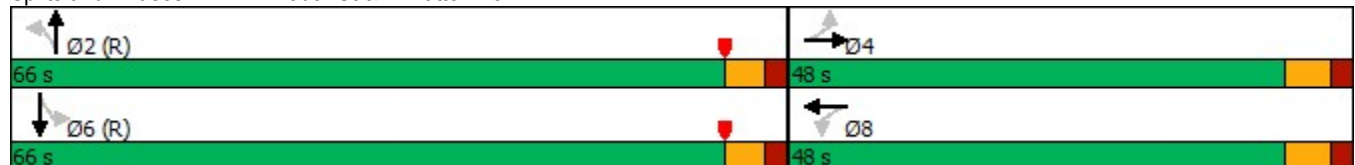
Timings

4: N Weber St & E Platte Ave

04-23-2025

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	6	181	89	464	10	92	106	202
Future Volume (vph)	6	181	89	464	10	92	106	202
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.4	28.4	28.4	28.4	74.1	74.1	74.1	74.1
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.65	0.65	0.65	0.65
v/c Ratio	0.06	0.31	0.38	0.62	0.02	0.13	0.17	0.28
Control Delay	26.3	27.7	37.3	35.6	9.3	7.8	9.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	27.7	37.3	35.6	9.3	7.8	9.0	9.2
LOS	C	C	D	D	A	A	A	A
Approach Delay		27.7		35.9		7.9		9.1
Approach LOS		C		D		A		A
Intersection Summary								
Cycle Length: 114								
Actuated Cycle Length: 114								
Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow								
Natural Cycle: 95								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.62								
Intersection Signal Delay: 23.5					Intersection LOS: C			
Intersection Capacity Utilization 85.8%					ICU Level of Service E			
Analysis Period (min) 15								

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

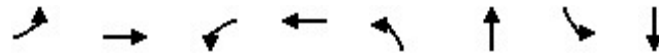
04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	181	15	89	464	44	10	92	30	106	202	62
Future Volume (veh/h)	6	181	15	89	464	44	10	92	30	106	202	62
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	255	21	96	499	47	12	112	37	132	252	78
Peak Hour Factor	0.71	0.71	0.71	0.93	0.93	0.93	0.82	0.82	0.82	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	755	62	259	746	70	769	904	299	859	921	285
Arrive On Green	0.45	0.45	0.45	0.15	0.15	0.15	0.67	0.67	0.67	1.00	1.00	1.00
Sat Flow, veh/h	861	3326	272	1103	3283	308	1050	1346	445	1239	1370	424
Grp Volume(v), veh/h	8	135	141	96	269	277	12	0	149	132	0	330
Grp Sat Flow(s),veh/h/ln	861	1777	1821	1103	1777	1815	1050	0	1790	1239	0	1794
Q Serve(g_s), s	0.9	5.6	5.7	9.3	16.3	16.4	0.4	0.0	3.4	0.6	0.0	0.0
Cycle Q Clear(g_c), s	17.3	5.6	5.7	15.0	16.3	16.4	0.4	0.0	3.4	4.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.17	1.00		0.25	1.00		0.24
Lane Grp Cap(c), veh/h	135	403	414	259	403	412	769	0	1203	859	0	1206
V/C Ratio(X)	0.06	0.34	0.34	0.37	0.67	0.67	0.02	0.00	0.12	0.15	0.00	0.27
Avail Cap(c_a), veh/h	256	655	671	415	655	669	769	0	1203	859	0	1206
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	35.7	25.6	25.6	46.4	44.3	44.3	6.2	0.0	6.7	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	1.0	1.0	1.7	3.6	3.6	0.0	0.0	0.2	0.4	0.0	0.6
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	0.2	2.3	2.4	2.8	7.9	8.1	0.1	0.0	1.3	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	26.6	26.6	48.0	47.9	47.9	6.2	0.0	6.9	0.5	0.0	0.6
LnGrp LOS	D	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h	284			642			161			462		
Approach Delay, s/veh	26.9			47.9			6.8			0.5		
Approach LOS	C			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	82.1			31.9			82.1			31.9		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	60.5			42.0			60.5			42.0		
Max Q Clear Time (g_c+I1), s	5.4			19.3			6.0			18.4		
Green Ext Time (p_c), s	2.0			3.1			6.0			7.5		
Intersection Summary												
HCM 6th Ctrl Delay	25.7											
HCM 6th LOS	C											

Timings

5: N Weber St & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔↔		↔↔	↔	↔	↔	↔
Traffic Volume (vph)	5	142	92	197	11	91	8	219
Future Volume (vph)	5	142	92	197	11	91	8	219
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	43.5	43.5	43.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		25.5		25.5	77.5	77.5	77.5	77.5
Actuated g/C Ratio		0.22		0.22	0.68	0.68	0.68	0.68
v/c Ratio		0.40		0.68	0.02	0.16	0.01	0.23
Control Delay		27.9		34.6	6.9	6.0	7.5	8.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		27.9		34.6	6.9	6.0	7.5	8.0
LOS		C		C	A	A	A	A
Approach Delay		27.9		34.6		6.0		8.0
Approach LOS		C		C		A		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 21.1

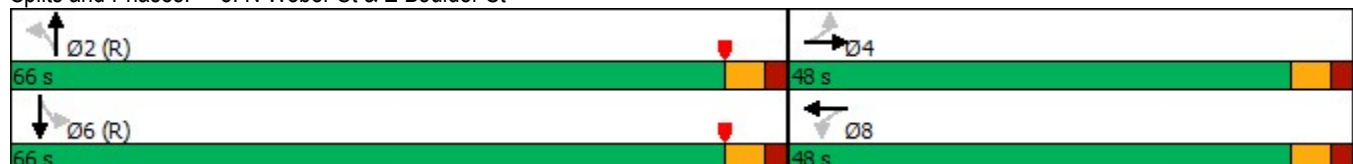
Intersection LOS: C

Intersection Capacity Utilization 63.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	142	55	92	197	17	11	91	40	8	219	22
Future Volume (veh/h)	5	142	55	92	197	17	11	91	40	8	219	22
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	212	82	115	246	21	16	136	60	10	264	27
Peak Hour Factor	0.67	0.67	0.67	0.80	0.80	0.80	0.67	0.67	0.67	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	565	208	191	435	40	730	829	366	863	1125	115
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	26	2460	905	607	1894	173	1088	1230	543	1187	1669	171
Grp Volume(v), veh/h	161	0	140	179	0	203	16	0	196	10	0	291
Grp Sat Flow(s),veh/h/ln	1852	0	1539	1003	0	1671	1088	0	1773	1187	0	1840
Q Serve(g_s), s	0.0	0.0	6.8	13.0	0.0	9.9	0.2	0.0	0.0	0.3	0.0	7.0
Cycle Q Clear(g_c), s	6.4	0.0	6.8	19.8	0.0	9.9	7.1	0.0	0.0	0.3	0.0	7.0
Prop In Lane	0.04		0.59	0.64		0.10	1.00		0.31	1.00		0.09
Lane Grp Cap(c), veh/h	458	0	353	282	0	384	730	0	1195	863	0	1240
V/C Ratio(X)	0.35	0.00	0.39	0.63	0.00	0.53	0.02	0.00	0.16	0.01	0.00	0.23
Avail Cap(c_a), veh/h	718	0	574	465	0	623	730	0	1195	863	0	1240
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.00	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	25.6	31.2	0.0	26.4	0.3	0.0	0.0	6.1	0.0	7.2
Incr Delay (d2), s/veh	1.0	0.0	1.5	3.9	0.0	1.9	0.1	0.0	0.3	0.0	0.0	0.4
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	2.4	4.0	0.0	3.6	0.0	0.0	0.1	0.1	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	0.0	27.1	35.1	0.0	28.3	0.4	0.0	0.3	6.1	0.0	7.6
LnGrp LOS	C	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		301			382			212			301	
Approach Delay, s/veh		26.8			31.5			0.3			7.6	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.3		31.7		82.3		31.7				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		60.5		42.5		60.5		42.5				
Max Q Clear Time (g_c+I1), s		9.1		8.8		9.0		21.8				
Green Ext Time (p_c), s		2.7		3.8		4.0		4.4				
Intersection Summary												
HCM 6th Ctrl Delay				18.8								
HCM 6th LOS				B								

HCM 6th TWSC
6: N Weber St & St Vrain St

04-23-2025

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	4	7	6	3	4	100	2	3	507	12
Future Vol, veh/h	2	3	4	7	6	3	4	100	2	3	507	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	53	53	53	67	67	67	73	73	73	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	6	8	10	9	4	5	137	3	4	714	17
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	886	881	723	887	888	139	731	0	0	140	0	0
Stage 1	731	731	-	149	149	-	-	-	-	-	-	-
Stage 2	155	150	-	738	739	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	265	285	426	265	283	909	873	-	-	1443	-	-
Stage 1	413	427	-	854	774	-	-	-	-	-	-	-
Stage 2	847	773	-	410	424	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	255	282	426	254	280	909	873	-	-	1443	-	-
Mov Cap-2 Maneuver	255	282	-	254	280	-	-	-	-	-	-	-
Stage 1	411	425	-	849	769	-	-	-	-	-	-	-
Stage 2	828	768	-	395	422	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	16.8		17.8			0.3			0			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	873	-	-	323	306	1443	-	-				
HCM Lane V/C Ratio	0.006	-	-	0.053	0.078	0.003	-	-				
HCM Control Delay (s)	9.2	0	-	16.8	17.8	7.5	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-				

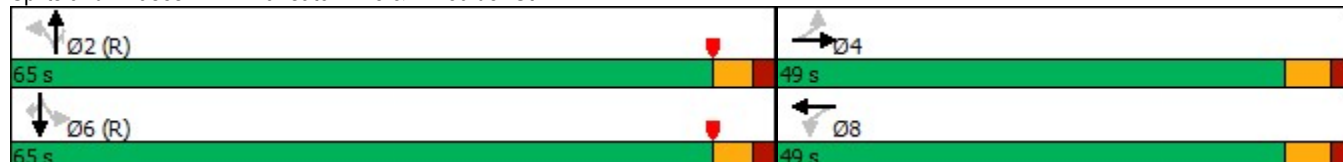
Timings

7: Wahsatch Ave & E Boulder St

04-23-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	151	48	246	59	229	56	79	306	14
Future Volume (vph)	2	151	48	246	59	229	56	79	306	14
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	49.0	49.0	49.0	49.0	65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	43.0%	43.0%	43.0%	43.0%	57.0%	57.0%	57.0%	57.0%	57.0%	57.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		24.5		24.5	78.0	78.0	78.0	78.0	78.0	78.0
Actuated g/C Ratio		0.21		0.21	0.68	0.68	0.68	0.68	0.68	0.68
v/c Ratio		0.39		0.68	0.11	0.12	0.06	0.12	0.15	0.01
Control Delay		24.8		44.8	4.1	3.6	0.3	7.6	7.0	1.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.8		44.8	4.1	3.6	0.3	7.6	7.0	1.4
LOS		C		D	A	A	A	A	A	A
Approach Delay		24.8		44.8		3.2			6.9	
Approach LOS		C		D		A			A	
Intersection Summary										
Cycle Length: 114										
Actuated Cycle Length: 114										
Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow										
Natural Cycle: 95										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.68										
Intersection Signal Delay: 19.0					Intersection LOS: B					
Intersection Capacity Utilization 85.8%					ICU Level of Service E					
Analysis Period (min) 15										

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	151	35	48	246	45	59	229	56	79	306	14
Future Volume (veh/h)	2	151	35	48	246	45	59	229	56	79	306	14
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	225	52	59	304	56	75	290	71	91	352	16
Peak Hour Factor	0.67	0.67	0.67	0.81	0.81	0.81	0.79	0.79	0.79	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	580	130	105	475	90	732	2463	1098	770	2463	1098
Arrive On Green	0.41	0.41	0.41	0.21	0.21	0.21	1.00	1.00	1.00	0.69	0.69	0.69
Sat Flow, veh/h	9	2812	631	314	2307	438	1014	3554	1585	1021	3554	1585
Grp Volume(v), veh/h	149	0	131	212	0	207	75	290	71	91	352	16
Grp Sat Flow(s),veh/h/ln	1863	0	1589	1436	0	1623	1014	1777	1585	1021	1777	1585
Q Serve(g_s), s	0.0	0.0	6.6	9.8	0.0	13.3	0.5	0.0	0.0	3.4	3.8	0.4
Cycle Q Clear(g_c), s	6.3	0.0	6.6	16.4	0.0	13.3	4.3	0.0	0.0	3.4	3.8	0.4
Prop In Lane	0.02		0.40	0.28		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	0	327	336	0	335	732	2463	1098	770	2463	1098
V/C Ratio(X)	0.36	0.00	0.40	0.63	0.00	0.62	0.10	0.12	0.06	0.12	0.14	0.01
Avail Cap(c_a), veh/h	731	0	599	604	0	612	732	2463	1098	770	2463	1098
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.00	0.93	1.00	0.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	28.5	42.6	0.0	41.2	0.1	0.0	0.0	5.9	6.0	5.4
Incr Delay (d2), s/veh	1.0	0.0	1.6	4.1	0.0	4.0	0.3	0.1	0.1	0.3	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	2.8	0.0	2.5	6.0	0.0	5.7	0.1	0.0	0.0	0.7	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	0.0	30.1	46.7	0.0	45.2	0.4	0.1	0.1	6.2	6.1	5.5
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		280			419			436			459	
Approach Delay, s/veh		29.8			46.0			0.1			6.1	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.5		29.5		84.5		29.5				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		59.5		43.0		59.5		43.0				
Max Q Clear Time (g_c+I1), s		6.3		8.6		5.8		18.4				
Green Ext Time (p_c), s		5.6		3.5		6.3		5.1				
Intersection Summary												
HCM 6th Ctrl Delay				19.1								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-23-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	25	249	26	205	525	83	66	236	155	82	278
Future Volume (vph)	25	249	26	205	525	83	66	236	155	82	278
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	23.0	41.5	41.5	9.5	41.5
Total Split (s)	18.0	38.0	38.0	18.0	38.0	38.0	16.0	42.0	42.0	16.0	42.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%	33.3%	14.0%	36.8%	36.8%	14.0%	36.8%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	31.3	24.8	24.8	43.2	35.4	35.4	55.1	47.4	47.4	57.4	49.9
Actuated g/C Ratio	0.27	0.22	0.22	0.38	0.31	0.31	0.48	0.42	0.42	0.50	0.44
v/c Ratio	0.12	0.42	0.08	0.54	0.50	0.15	0.15	0.19	0.24	0.17	0.23
Control Delay	18.0	29.4	0.6	29.2	33.8	2.0	15.8	23.4	5.8	12.6	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	29.4	0.6	29.2	33.8	2.0	15.8	23.4	5.8	12.6	20.3
LOS	B	C	A	C	C	A	B	C	A	B	C
Approach Delay		25.9			29.4			16.4			18.6
Approach LOS		C			C			B			B

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 23.4

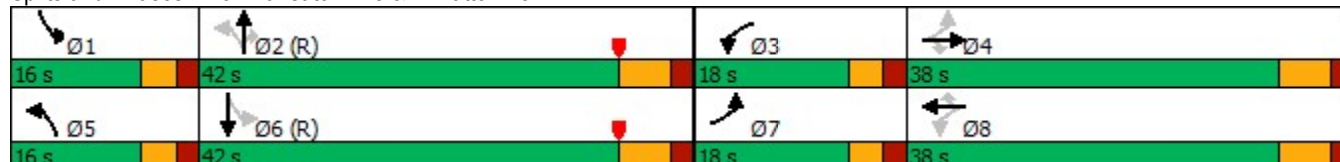
Intersection LOS: C

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	249	26	205	525	83	66	236	155	82	278	24
Future Volume (veh/h)	25	249	26	205	525	83	66	236	155	82	278	24
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	323	34	216	553	87	79	281	185	98	331	29
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	623	278	371	946	422	605	1653	737	531	1562	136
Arrive On Green	0.04	0.35	0.35	0.11	0.27	0.27	0.04	0.47	0.47	0.09	0.94	0.94
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3307	288
Grp Volume(v), veh/h	32	323	34	216	553	87	79	281	185	98	177	183
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1819
Q Serve(g_s), s	1.7	8.2	1.7	10.9	15.4	4.9	2.6	5.2	8.1	3.3	0.8	0.8
Cycle Q Clear(g_c), s	1.7	8.2	1.7	10.9	15.4	4.9	2.6	5.2	8.1	3.3	0.8	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	206	623	278	371	946	422	605	1653	737	531	839	859
V/C Ratio(X)	0.16	0.52	0.12	0.58	0.58	0.21	0.13	0.17	0.25	0.18	0.21	0.21
Avail Cap(c_a), veh/h	370	982	438	372	982	438	710	1653	737	624	839	859
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	36.6	33.2	31.0	31.8	36.3	32.5	14.8	17.7	18.5	14.0	1.7	1.7
Incr Delay (d2), s/veh	0.1	3.0	0.9	1.5	2.6	1.1	0.0	0.2	0.8	0.1	0.6	0.6
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	0.7	3.5	0.7	4.9	7.1	2.0	1.1	2.2	3.2	1.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	36.1	31.9	33.3	39.0	33.6	14.8	17.9	19.3	14.0	2.3	2.3
LnGrp LOS	D	D	C	C	D	C	B	B	B	B	A	A
Approach Vol, veh/h	389			856			545			458		
Approach Delay, s/veh	35.8			37.0			17.9			4.8		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	59.5	17.9	26.5	9.3	60.3	7.5	36.9				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	11.0	35.5	13.0	31.5	11.0	35.5	13.0	31.5				
Max Q Clear Time (g_c+I1), s	5.3	10.1	12.9	10.2	4.6	2.8	3.7	17.4				
Green Ext Time (p_c), s	0.0	6.3	0.0	5.9	0.0	5.7	0.0	7.9				
Intersection Summary												
HCM 6th Ctrl Delay	25.6											
HCM 6th LOS	C											

HCM 6th TWSC
1: N Nevada Ave & St Vrain St

04-23-2025

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	21	23	2	7	7	6	916	9	13	537	18
Future Vol, veh/h	16	21	23	2	7	7	6	916	9	13	537	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	23	25	2	8	8	7	996	10	14	584	20
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1138	1642	302	1347	1647	503	604	0	0	1006	0	0
Stage 1	622	622	-	1015	1015	-	-	-	-	-	-	-
Stage 2	516	1020	-	332	632	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	156	99	694	110	98	514	970	-	-	684	-	-
Stage 1	441	477	-	255	314	-	-	-	-	-	-	-
Stage 2	510	312	-	655	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	139	94	694	83	93	514	970	-	-	684	-	-
Mov Cap-2 Maneuver	139	94	-	83	93	-	-	-	-	-	-	-
Stage 1	434	462	-	251	309	-	-	-	-	-	-	-
Stage 2	482	307	-	582	457	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	41.8		33.9			0.2			0.4			
HCM LOS	E		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	970	-	-	161	142	684	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.405	0.122	0.021	-	-				
HCM Control Delay (s)	8.7	0.1	-	41.8	33.9	10.4	0.2	-				
HCM Lane LOS	A	A	-	E	D	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.8	0.4	0.1	-	-				

Timings

2: N Nevada Ave & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	→	←	→	←	→	←	←	→	→
Traffic Volume (vph)	27	116	77	133	30	838	53	48	487	26
Future Volume (vph)	27	116	77	133	30	838	53	48	487	26
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	44.5	44.5	44.5	44.5	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	22.4	22.4	22.4	22.4	79.6	79.6	79.6	79.6	79.6	79.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
v/c Ratio	0.16	0.46	0.41	0.55	0.06	0.37	0.05	0.14	0.21	0.03
Control Delay	39.0	40.2	51.1	48.2	3.7	3.8	1.2	7.6	6.7	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	39.0	40.2	51.1	48.2	3.7	3.8	1.2	7.6	6.7	2.0
LOS	D	D	D	D	A	A	A	A	A	A
Approach Delay		40.0		49.0		3.7			6.5	
Approach LOS		D		D		A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 37 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 14.1

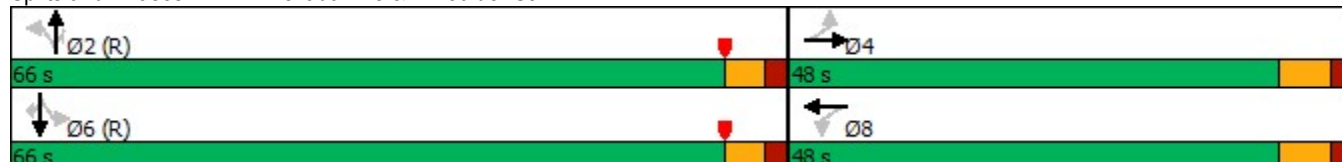
Intersection LOS: B

Intersection Capacity Utilization 88.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary

2: N Nevada Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	116	38	77	133	52	30	838	53	48	487	26
Future Volume (veh/h)	27	116	38	77	133	52	30	838	53	48	487	26
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	126	41	84	145	57	33	911	58	52	529	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	263	86	200	249	98	615	2487	1109	469	2487	1109
Arrive On Green	0.19	0.19	0.19	0.39	0.39	0.39	1.00	1.00	1.00	0.70	0.70	0.70
Sat Flow, veh/h	1180	1351	440	1218	1278	502	852	3554	1585	580	3554	1585
Grp Volume(v), veh/h	29	0	167	84	0	202	33	911	58	52	529	28
Grp Sat Flow(s),veh/h/ln	1180	0	1791	1218	0	1780	852	1777	1585	580	1777	1585
Q Serve(g_s), s	2.6	0.0	9.4	7.1	0.0	10.2	0.4	0.0	0.0	3.4	6.0	0.6
Cycle Q Clear(g_c), s	12.8	0.0	9.4	16.5	0.0	10.2	6.3	0.0	0.0	3.4	6.0	0.6
Prop In Lane	1.00		0.25	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	349	200	0	347	615	2487	1109	469	2487	1109
V/C Ratio(X)	0.15	0.00	0.48	0.42	0.00	0.58	0.05	0.37	0.05	0.11	0.21	0.03
Avail Cap(c_a), veh/h	387	0	652	406	0	648	615	2487	1109	469	2487	1109
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.82	0.00	0.82	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	40.7	37.3	0.0	31.1	0.2	0.0	0.0	5.6	6.0	5.2
Incr Delay (d2), s/veh	1.4	0.0	3.7	4.2	0.0	4.6	0.2	0.4	0.1	0.5	0.2	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	0.8	0.0	4.6	2.1	0.0	4.3	0.0	0.1	0.0	0.5	2.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	0.0	44.4	41.4	0.0	35.7	0.4	0.4	0.1	6.1	6.2	5.3
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	196			286			1002			609		
Approach Delay, s/veh	45.0			37.4			0.4			6.2		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	85.3			28.7			85.3			28.7		
Change Period (Y+Rc), s	5.5			6.5			5.5			6.5		
Max Green Setting (Gmax), s	60.5			41.5			60.5			41.5		
Max Q Clear Time (g_c+I1), s	8.3			14.8			8.0			18.5		
Green Ext Time (p_c), s	29.3			2.7			16.3			3.7		
Intersection Summary												
HCM 6th Ctrl Delay	11.3											
HCM 6th LOS	B											

Timings

3: N Nevada Ave & E Platte Ave

04-23-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	304	385	46	23	872	244	65	495	40
Future Volume (vph)	304	385	46	23	872	244	65	495	40
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	50.0	50.0	50.0	64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	24.7	24.7	24.7	74.8	74.8	74.8	74.8	74.8	74.8
Actuated g/C Ratio	0.22	0.22	0.22	0.66	0.66	0.66	0.66	0.66	0.66
v/c Ratio	0.49	0.55	0.14	0.05	0.41	0.25	0.22	0.23	0.04
Control Delay	39.1	53.5	32.9	8.6	10.4	5.9	8.6	6.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	53.5	32.9	8.6	10.4	5.9	8.6	6.7	0.9
LOS	D	D	C	A	B	A	A	A	A
Approach Delay	39.1	51.3			9.4			6.5	
Approach LOS	D	D			A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 20.0

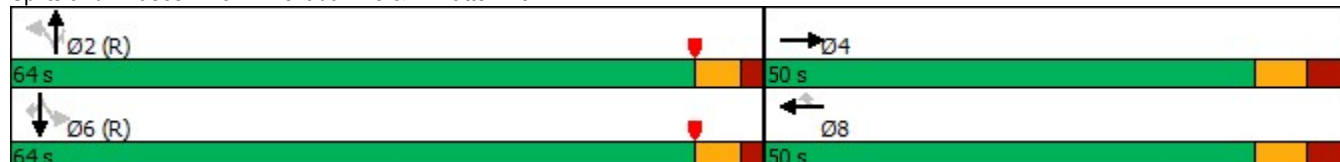
Intersection LOS: B

Intersection Capacity Utilization 74.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

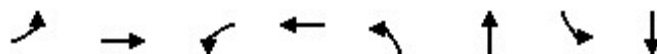
04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	304	44	0	385	46	23	872	244	65	495	40
Future Volume (veh/h)	0	304	44	0	385	46	23	872	244	65	495	40
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	330	48	0	418	50	25	948	265	71	538	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	566	82	0	646	288	639	2456	1095	330	2456	1095
Arrive On Green	0.00	0.18	0.18	0.00	0.36	0.36	0.69	0.69	0.69	1.00	1.00	1.00
Sat Flow, veh/h	0	3211	449	0	3647	1585	833	3554	1585	460	3554	1585
Grp Volume(v), veh/h	0	187	191	0	418	50	25	948	265	71	538	43
Grp Sat Flow(s),veh/h/ln	0	1777	1790	0	1777	1585	833	1777	1585	460	1777	1585
Q Serve(g_s), s	0.0	11.0	11.2	0.0	11.2	2.4	1.1	12.8	7.1	3.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.0	11.2	0.0	11.2	2.4	1.1	12.8	7.1	16.5	0.0	0.0
Prop In Lane	0.00		0.25	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	323	325	0	646	288	639	2456	1095	330	2456	1095
V/C Ratio(X)	0.00	0.58	0.59	0.00	0.65	0.17	0.04	0.39	0.24	0.22	0.22	0.04
Avail Cap(c_a), veh/h	0	647	651	0	1294	577	639	2456	1095	330	2456	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.88	0.88	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	0.0	42.7	42.7	0.0	33.3	30.5	5.6	7.4	6.5	1.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.8	6.0	0.0	3.5	0.9	0.1	0.5	0.5	1.5	0.2	0.1
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	0.0	5.4	5.5	0.0	4.5	1.0	0.2	4.8	2.4	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	48.5	48.8	0.0	36.7	31.4	5.7	7.9	7.1	2.8	0.2	0.1
LnGrp LOS	A	D	D	A	D	C	A	A	A	A	A	A
Approach Vol, veh/h		378			468			1238			652	
Approach Delay, s/veh		48.6			36.1			7.7			0.5	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.8		29.2		84.8		29.2				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		58.0		41.5		58.0		41.5				
Max Q Clear Time (g_c+I1), s		14.8		13.2		18.5		13.2				
Green Ext Time (p_c), s		26.3		5.9		13.5		7.5				
Intersection Summary												
HCM 6th Ctrl Delay				16.5								
HCM 6th LOS				B								

Timings

4: N Weber St & E Platte Ave

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	566	54	408	15	385	40	229
Future Volume (vph)	29	566	54	408	15	385	40	229
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	31.3	31.3	31.3	31.3	71.2	71.2	71.2	71.2
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.62	0.62	0.62	0.62
v/c Ratio	0.17	0.66	0.48	0.48	0.02	0.40	0.08	0.23
Control Delay	24.0	28.0	34.7	21.8	10.5	12.8	8.3	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	28.0	34.7	21.8	10.5	12.8	8.3	8.4
LOS	C	C	C	C	B	B	A	A
Approach Delay		27.9		23.3		12.8		8.4
Approach LOS		C		C		B		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 20.0

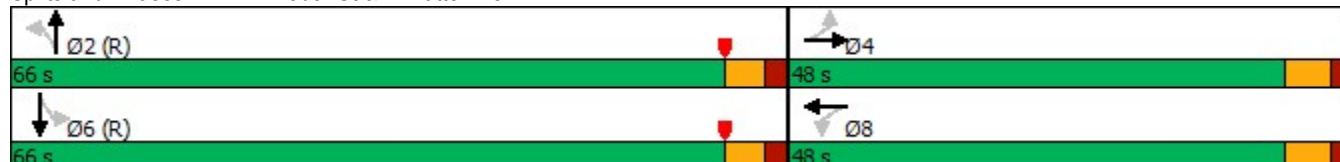
Intersection LOS: C

Intersection Capacity Utilization 81.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

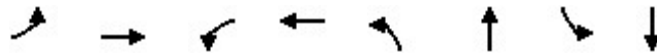
04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	566	19	54	408	18	15	385	34	40	229	11
Future Volume (veh/h)	29	566	19	54	408	18	15	385	34	40	229	11
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	615	21	59	443	20	16	418	37	43	249	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	921	31	169	909	41	775	1078	95	548	1127	54
Arrive On Green	0.53	0.53	0.53	0.26	0.26	0.26	0.64	0.64	0.64	1.00	1.00	1.00
Sat Flow, veh/h	929	3506	120	792	3463	156	1118	1693	150	936	1770	85
Grp Volume(v), veh/h	32	311	325	59	227	236	16	0	455	43	0	261
Grp Sat Flow(s),veh/h/ln	929	1777	1849	792	1777	1842	1118	0	1843	936	0	1855
Q Serve(g_s), s	2.9	14.6	14.6	7.9	12.3	12.4	0.6	0.0	13.6	1.1	0.0	0.0
Cycle Q Clear(g_c), s	15.3	14.6	14.6	22.6	12.3	12.4	0.6	0.0	13.6	14.6	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.08	1.00		0.05
Lane Grp Cap(c), veh/h	206	467	485	169	467	484	775	0	1173	548	0	1181
V/C Ratio(X)	0.16	0.67	0.67	0.35	0.49	0.49	0.02	0.00	0.39	0.08	0.00	0.22
Avail Cap(c_a), veh/h	305	655	681	253	655	679	775	0	1173	548	0	1181
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.93	0.93	0.93	0.94	0.94	0.94	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	28.2	23.4	23.4	46.2	35.5	35.6	7.6	0.0	10.0	1.4	0.0	0.0
Incr Delay (d2), s/veh	0.7	3.3	3.2	2.4	1.6	1.5	0.0	0.0	1.0	0.3	0.0	0.4
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	0.6	5.1	5.3	1.7	5.6	5.8	0.2	0.0	5.5	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	26.7	26.6	48.6	37.1	37.1	7.7	0.0	11.0	1.6	0.0	0.4
LnGrp LOS	C	C	C	D	D	D	A	A	B	A	A	A
Approach Vol, veh/h	668			522			471			304		
Approach Delay, s/veh	26.7			38.4			10.9			0.6		
Approach LOS	C			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.1			35.9			78.1			35.9		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	60.5			42.0			60.5			42.0		
Max Q Clear Time (g_c+I1), s	15.6			17.3			16.6			24.6		
Green Ext Time (p_c), s	6.9			8.3			3.9			5.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.0											
HCM 6th LOS	C											

Timings

5: N Weber St & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔↔		↔↔	↔	↔	↔	↔
Traffic Volume (vph)	7	193	39	242	12	363	23	228
Future Volume (vph)	7	193	39	242	12	363	23	228
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	43.5	43.5	43.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	48.0	48.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		21.5		21.5	81.5	81.5	81.5	81.5
Actuated g/C Ratio		0.19		0.19	0.71	0.71	0.71	0.71
v/c Ratio		0.37		0.57	0.02	0.35	0.04	0.20
Control Delay		28.8		48.7	2.9	3.5	5.6	6.0
Queue Delay		0.0		0.0	0.0	0.1	0.0	0.0
Total Delay		28.8		48.7	2.9	3.6	5.6	6.0
LOS		C		D	A	A	A	A
Approach Delay		28.8		48.7		3.6		6.0
Approach LOS		C		D		A		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 19.9

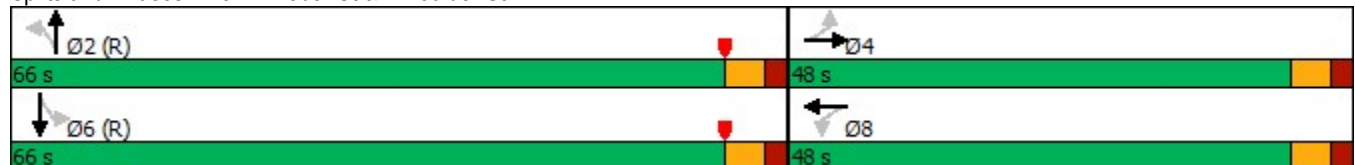
Intersection LOS: B

Intersection Capacity Utilization 69.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	193	14	39	242	25	12	363	53	23	228	13
Future Volume (veh/h)	7	193	14	39	242	25	12	363	53	23	228	13
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	210	15	42	263	27	13	395	58	25	248	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	567	40	89	474	49	827	1161	170	746	1277	72
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.73	0.73	0.73
Sat Flow, veh/h	44	3230	226	286	2699	277	1117	1594	234	938	1754	99
Grp Volume(v), veh/h	123	0	110	171	0	161	13	0	453	25	0	262
Grp Sat Flow(s),veh/h/ln	1839	0	1661	1610	0	1652	1117	0	1828	938	0	1853
Q Serve(g_s), s	0.0	0.0	5.7	4.4	0.0	9.0	0.1	0.0	0.0	0.8	0.0	5.1
Cycle Q Clear(g_c), s	5.6	0.0	5.7	10.1	0.0	9.0	5.2	0.0	0.0	0.8	0.0	5.1
Prop In Lane	0.07		0.14	0.25		0.17	1.00		0.13	1.00		0.05
Lane Grp Cap(c), veh/h	356	0	291	322	0	290	827	0	1331	746	0	1349
V/C Ratio(X)	0.34	0.00	0.38	0.53	0.00	0.56	0.02	0.00	0.34	0.03	0.00	0.19
Avail Cap(c_a), veh/h	709	0	619	642	0	616	827	0	1331	746	0	1349
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96	0.75	0.00	0.75	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	32.4	33.6	0.0	33.4	0.2	0.0	0.0	4.3	0.0	4.9
Incr Delay (d2), s/veh	1.2	0.0	1.7	2.2	0.0	2.7	0.0	0.0	0.6	0.1	0.0	0.3
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	0.0	2.3	3.6	0.0	3.4	0.0	0.0	0.2	0.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	34.0	35.8	0.0	36.1	0.2	0.0	0.6	4.4	0.0	5.2
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		233			332			466			287	
Approach Delay, s/veh		33.7			35.9			0.6			5.2	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.5		25.5		88.5		25.5				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		60.5		42.5		60.5		42.5				
Max Q Clear Time (g_c+I1), s		7.2		7.7		7.1		12.1				
Green Ext Time (p_c), s		7.0		2.9		3.8		4.2				
Intersection Summary												
HCM 6th Ctrl Delay				16.4								
HCM 6th LOS				B								

HCM 6th TWSC
6: N Weber St & St Vrain St

04-23-2025

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	11	18	4	4	2	3	392	4	5	238	8
Future Vol, veh/h	10	11	18	4	4	2	3	392	4	5	238	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	12	20	4	4	2	3	426	4	5	259	9
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	711	710	264	724	712	428	268	0	0	430	0	0
Stage 1	274	274	-	434	434	-	-	-	-	-	-	-
Stage 2	437	436	-	290	278	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	348	359	775	341	358	627	1296	-	-	1129	-	-
Stage 1	732	683	-	600	581	-	-	-	-	-	-	-
Stage 2	598	580	-	718	680	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	341	356	775	322	355	627	1296	-	-	1129	-	-
Mov Cap-2 Maneuver	341	356	-	322	355	-	-	-	-	-	-	-
Stage 1	730	680	-	598	579	-	-	-	-	-	-	-
Stage 2	590	578	-	684	677	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13.5		15		0.1		0.2					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1296	-	-	467	372	1129	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.091	0.029	0.005	-	-				
HCM Control Delay (s)	7.8	0	-	13.5	15	8.2	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-				

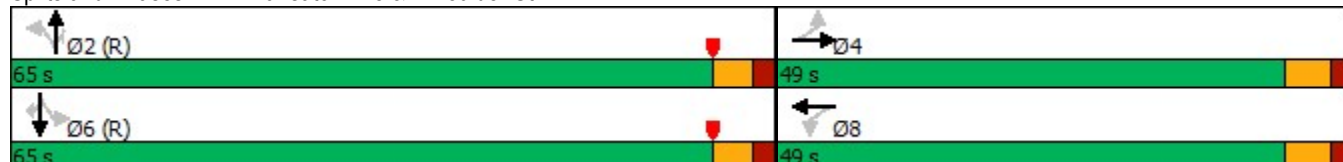
Timings

7: Wahsatch Ave & E Boulder St

04-23-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	9	217	55	261	29	538	56	40	275	19
Future Volume (vph)	9	217	55	261	29	538	56	40	275	19
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	49.0	49.0	49.0	49.0	65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	43.0%	43.0%	43.0%	43.0%	57.0%	57.0%	57.0%	57.0%	57.0%	57.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		24.6		24.6	77.9	77.9	77.9	77.9	77.9	77.9
Actuated g/C Ratio		0.22		0.22	0.68	0.68	0.68	0.68	0.68	0.68
v/c Ratio		0.40		0.69	0.04	0.24	0.06	0.08	0.12	0.02
Control Delay		34.7		43.8	2.2	2.2	0.2	7.7	6.9	2.1
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		34.7		43.8	2.2	2.2	0.2	7.7	6.9	2.1
LOS		C		D	A	A	A	A	A	A
Approach Delay		34.7		43.8		2.0			6.7	
Approach LOS		C		D		A			A	
Intersection Summary										
Cycle Length: 114										
Actuated Cycle Length: 114										
Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow										
Natural Cycle: 95										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.69										
Intersection Signal Delay: 18.4										
Intersection LOS: B										
Intersection Capacity Utilization 81.2%										
ICU Level of Service D										
Analysis Period (min) 15										

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	217	33	55	261	76	29	538	56	40	275	19
Future Volume (veh/h)	9	217	33	55	261	76	29	538	56	40	275	19
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	236	36	60	284	83	32	585	61	43	299	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	621	92	106	438	132	764	2452	1093	604	2452	1093
Arrive On Green	0.42	0.42	0.42	0.21	0.21	0.21	1.00	1.00	1.00	0.69	0.69	0.69
Sat Flow, veh/h	48	2966	439	315	2093	630	1060	3554	1585	785	3554	1585
Grp Volume(v), veh/h	149	0	133	218	0	209	32	585	61	43	299	21
Grp Sat Flow(s),veh/h/ln	1830	0	1623	1449	0	1589	1060	1777	1585	785	1777	1585
Q Serve(g_s), s	0.0	0.0	6.5	10.1	0.0	13.7	0.1	0.0	0.0	2.1	3.2	0.5
Cycle Q Clear(g_c), s	6.3	0.0	6.5	16.6	0.0	13.7	3.4	0.0	0.0	2.1	3.2	0.5
Prop In Lane	0.07		0.27	0.28		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	340	343	0	332	764	2452	1093	604	2452	1093
V/C Ratio(X)	0.36	0.00	0.39	0.63	0.00	0.63	0.04	0.24	0.06	0.07	0.12	0.02
Avail Cap(c_a), veh/h	714	0	612	607	0	599	764	2452	1093	604	2452	1093
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.95	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	28.1	42.4	0.0	41.1	0.1	0.0	0.0	5.8	6.0	5.6
Incr Delay (d2), s/veh	1.1	0.0	1.5	4.1	0.0	4.2	0.1	0.2	0.1	0.2	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	2.5	6.2	0.0	5.8	0.0	0.1	0.0	0.4	1.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	0.0	29.6	46.5	0.0	45.2	0.2	0.2	0.1	6.0	6.1	5.6
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		282			427			678			363	
Approach Delay, s/veh		29.3			45.9			0.2			6.1	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.1		29.9		84.1		29.9				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		59.5		43.0		59.5		43.0				
Max Q Clear Time (g_c+I1), s		5.4		8.5		5.2		18.6				
Green Ext Time (p_c), s		10.4		3.6		5.1		5.2				
Intersection Summary												
HCM 6th Ctrl Delay				17.3								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-23-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	24	657	30	146	447	72	59	523	335	65	285
Future Volume (vph)	24	657	30	146	447	72	59	523	335	65	285
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	9.5	41.5	41.5	9.5	41.5
Total Split (s)	18.0	38.0	38.0	18.0	38.0	38.0	16.0	42.0	42.0	16.0	42.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%	33.3%	14.0%	36.8%	36.8%	14.0%	36.8%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	38.6	32.5	32.5	48.7	41.2	41.2	51.0	44.5	44.5	51.5	44.8
Actuated g/C Ratio	0.34	0.29	0.29	0.43	0.36	0.36	0.45	0.39	0.39	0.45	0.39
v/c Ratio	0.08	0.71	0.06	0.58	0.38	0.12	0.13	0.41	0.51	0.20	0.24
Control Delay	6.8	14.7	0.2	28.8	28.4	1.2	17.6	27.9	18.0	15.6	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	14.7	0.2	28.8	28.4	1.2	17.6	27.9	18.0	15.6	23.3
LOS	A	B	A	C	C	A	B	C	B	B	C
Approach Delay		13.8			25.5			23.6			22.0
Approach LOS		B			C			C			C

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 21.3

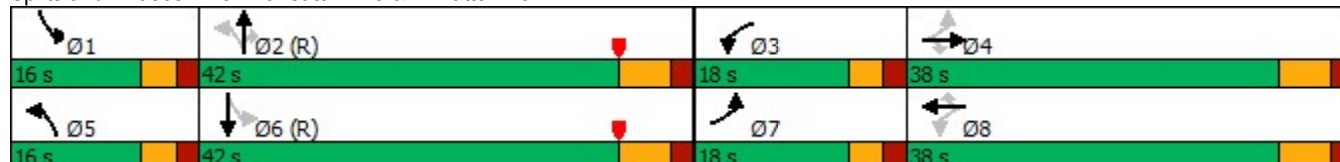
Intersection LOS: C

Intersection Capacity Utilization 65.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	657	30	146	447	72	59	523	335	65	285	24
Future Volume (veh/h)	24	657	30	146	447	72	59	523	335	65	285	24
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	714	33	159	486	78	64	568	364	71	310	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	882	393	264	1101	491	561	1540	687	322	1449	121
Arrive On Green	0.04	0.50	0.50	0.08	0.31	0.31	0.03	0.43	0.43	0.07	0.87	0.87
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3321	277
Grp Volume(v), veh/h	26	714	33	159	486	78	64	568	364	71	165	171
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1821
Q Serve(g_s), s	1.2	19.3	1.2	7.3	12.5	4.1	2.3	12.3	19.3	2.5	1.7	1.7
Cycle Q Clear(g_c), s	1.2	19.3	1.2	7.3	12.5	4.1	2.3	12.3	19.3	2.5	1.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	268	882	393	264	1101	491	561	1540	687	322	775	794
V/C Ratio(X)	0.10	0.81	0.08	0.60	0.44	0.16	0.11	0.37	0.53	0.22	0.21	0.22
Avail Cap(c_a), veh/h	436	982	438	323	1101	491	675	1540	687	430	775	794
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	26.4	21.9	29.2	31.5	28.6	16.9	21.8	23.8	16.9	4.2	4.2
Incr Delay (d2), s/veh	0.0	6.1	0.3	0.8	1.3	0.7	0.0	0.7	2.9	0.1	0.6	0.6
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	0.5	7.1	0.5	3.2	5.6	1.7	0.9	5.2	7.8	1.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	32.5	22.2	30.1	32.7	29.3	16.9	22.5	26.7	17.0	4.8	4.8
LnGrp LOS	C	C	C	C	C	C	B	C	C	B	A	A
Approach Vol, veh/h	773			723			996			407		
Approach Delay, s/veh	32.0			31.8			23.7			6.9		
Approach LOS	C			C			C			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	55.9	14.3	34.8	8.7	56.2	7.2	41.8				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	11.0	35.5	13.0	31.5	11.0	35.5	13.0	31.5				
Max Q Clear Time (g_c+I1), s	4.5	21.3	9.3	21.3	4.3	3.7	3.2	14.5				
Green Ext Time (p_c), s	0.0	8.9	0.0	7.0	0.0	5.2	0.0	8.1				
Intersection Summary												
HCM 6th Ctrl Delay	25.6											
HCM 6th LOS	C											

Appendix C. Future (2027) No Change Level of Service Worksheets

HCM 6th TWSC
1: N Nevada Ave & St Vrain St

04-23-2025

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	7	2	3	11	3	15	411	6	14	411	26
Future Vol, veh/h	1	7	2	3	11	3	15	411	6	14	411	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	57	57	57	84	84	84	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	8	2	5	19	5	18	489	7	15	452	29
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	787	1029	241	789	1040	248	481	0	0	496	0	0
Stage 1	497	497	-	529	529	-	-	-	-	-	-	-
Stage 2	290	532	-	260	511	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	282	232	760	281	229	752	1078	-	-	1064	-	-
Stage 1	523	543	-	501	525	-	-	-	-	-	-	-
Stage 2	694	524	-	722	535	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	253	222	760	263	219	752	1078	-	-	1064	-	-
Mov Cap-2 Maneuver	253	222	-	263	219	-	-	-	-	-	-	-
Stage 1	511	533	-	489	513	-	-	-	-	-	-	-
Stage 2	648	512	-	695	525	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	19.4		20.7			0.4			0.4			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1078	-	-	262	259	1064	-	-				
HCM Lane V/C Ratio	0.017	-	-	0.046	0.115	0.014	-	-				
HCM Control Delay (s)	8.4	0.1	-	19.4	20.7	8.4	0.1	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.4	0	-	-				

Timings

2: N Nevada Ave & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	7	54	66	146	29	393	132	34	372	12
Future Volume (vph)	7	54	66	146	29	393	132	34	372	12
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	44.5	44.5	44.5	44.5	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	55.0	55.0	55.0	55.0	59.0	59.0	59.0	59.0	59.0	59.0
Total Split (%)	48.2%	48.2%	48.2%	48.2%	51.8%	51.8%	51.8%	51.8%	51.8%	51.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	24.8	24.8	24.8	24.8	77.2	77.2	77.2	77.2	77.2	77.2
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.68	0.68	0.68	0.68	0.68	0.68
v/c Ratio	0.05	0.20	0.31	0.61	0.06	0.21	0.15	0.06	0.17	0.01
Control Delay	32.7	32.1	51.5	55.9	5.6	5.1	1.5	8.0	7.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	32.1	51.5	55.9	5.6	5.1	1.5	8.0	7.5	0.7
LOS	C	C	D	E	A	A	A	A	A	A
Approach Delay		32.2		54.8		4.3			7.4	
Approach LOS		C		D		A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 37 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 17.4

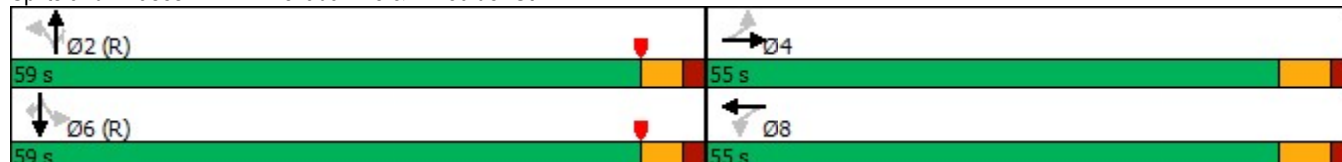
Intersection LOS: B

Intersection Capacity Utilization 64.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary

2: N Nevada Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	54	8	66	146	39	29	393	132	34	372	12
Future Volume (veh/h)	7	54	8	66	146	39	29	393	132	34	372	12
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	69	10	88	195	52	37	504	169	37	404	13
Peak Hour Factor	0.78	0.78	0.78	0.75	0.75	0.75	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	291	42	255	259	69	718	2533	1130	608	2533	1130
Arrive On Green	0.18	0.18	0.18	0.36	0.36	0.36	1.00	1.00	1.00	0.71	0.71	0.71
Sat Flow, veh/h	1133	1597	231	1320	1423	379	969	3554	1585	765	3554	1585
Grp Volume(v), veh/h	9	0	79	88	0	247	37	504	169	37	404	13
Grp Sat Flow(s),veh/h/ln	1133	0	1829	1320	0	1802	969	1777	1585	765	1777	1585
Q Serve(g_s), s	0.9	0.0	4.2	6.2	0.0	13.7	0.2	0.0	0.0	1.7	4.2	0.3
Cycle Q Clear(g_c), s	14.5	0.0	4.2	10.4	0.0	13.7	4.4	0.0	0.0	1.7	4.2	0.3
Prop In Lane	1.00		0.13	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	0	333	255	0	328	718	2533	1130	608	2533	1130
V/C Ratio(X)	0.07	0.00	0.24	0.35	0.00	0.75	0.05	0.20	0.15	0.06	0.16	0.01
Avail Cap(c_a), veh/h	409	0	778	576	0	767	718	2533	1130	608	2533	1130
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.67	0.00	0.67	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	39.9	34.7	0.0	34.0	0.1	0.0	0.0	4.9	5.3	4.7
Incr Delay (d2), s/veh	0.8	0.0	1.3	2.0	0.0	8.2	0.1	0.2	0.3	0.2	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	0.3	0.0	2.0	1.9	0.0	5.8	0.0	0.1	0.1	0.3	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	0.0	41.2	36.7	0.0	42.2	0.2	0.2	0.3	5.1	5.4	4.8
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	88			335			710			454		
Approach Delay, s/veh	42.2			40.8			0.2			5.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	86.8			27.2			86.8			27.2		
Change Period (Y+Rc), s	5.5			6.5			5.5			6.5		
Max Green Setting (Gmax), s	53.5			48.5			53.5			48.5		
Max Q Clear Time (g_c+I1), s	6.4			16.5			6.2			15.7		
Green Ext Time (p_c), s	16.9			1.1			11.0			5.1		
Intersection Summary												
HCM 6th Ctrl Delay	12.6											
HCM 6th LOS	B											

Timings

3: N Nevada Ave & E Platte Ave

04-23-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	99	460	123	10	413	91	38	380	28
Future Volume (vph)	99	460	123	10	413	91	38	380	28
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	58.0	58.0	58.0	56.0	56.0	56.0	56.0	56.0	56.0
Total Split (%)	50.9%	50.9%	50.9%	49.1%	49.1%	49.1%	49.1%	49.1%	49.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	29.9	29.9	29.9	69.6	69.6	69.6	69.6	69.6	69.6
Actuated g/C Ratio	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
v/c Ratio	0.17	0.55	0.29	0.02	0.22	0.10	0.08	0.19	0.03
Control Delay	25.1	47.5	24.7	11.5	11.2	4.9	9.1	8.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	47.5	24.7	11.5	11.2	4.9	9.1	8.5	0.7
LOS	C	D	C	B	B	A	A	A	A
Approach Delay	25.1	42.7			10.1			8.1	
Approach LOS	C	D			B			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 22.0

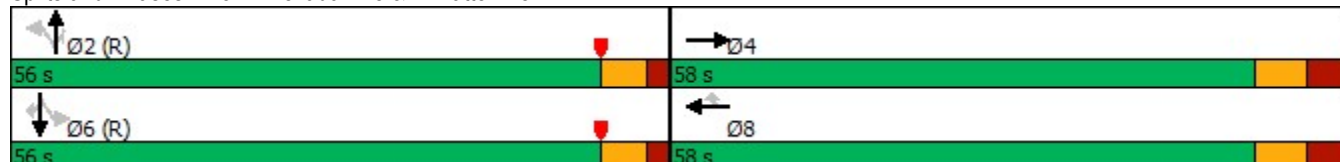
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

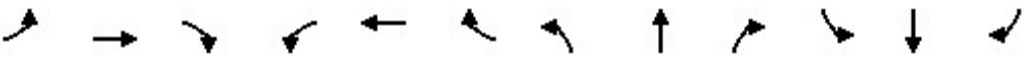
Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	99	22	0	460	123	10	413	91	38	380	28
Future Volume (veh/h)	0	99	22	0	460	123	10	413	91	38	380	28
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	125	28	0	511	137	11	469	103	42	418	31
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	658	144	0	806	360	671	2295	1024	561	2295	1024
Arrive On Green	0.00	0.23	0.23	0.00	0.45	0.45	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	0	2994	633	0	3647	1585	941	3554	1585	840	3554	1585
Grp Volume(v), veh/h	0	75	78	0	511	137	11	469	103	42	418	31
Grp Sat Flow(s),veh/h/ln	0	1777	1756	0	1777	1585	941	1777	1585	840	1777	1585
Q Serve(g_s), s	0.0	3.9	4.1	0.0	12.6	6.5	0.5	6.1	2.8	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.9	4.1	0.0	12.6	6.5	0.5	6.1	2.8	6.7	0.0	0.0
Prop In Lane	0.00		0.36	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	403	399	0	806	360	671	2295	1024	561	2295	1024
V/C Ratio(X)	0.00	0.19	0.20	0.00	0.63	0.38	0.02	0.20	0.10	0.07	0.18	0.03
Avail Cap(c_a), veh/h	0	772	763	0	1543	688	671	2295	1024	561	2295	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	35.6	35.6	0.0	27.5	25.8	7.2	8.2	7.6	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.9	0.0	2.3	1.8	0.0	0.2	0.2	0.3	0.2	0.1
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	0.0	1.8	1.9	0.0	4.6	2.4	0.1	2.4	1.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	36.4	36.5	0.0	29.8	27.7	7.3	8.4	7.8	0.5	0.2	0.1
LnGrp LOS	A	D	D	A	C	C	A	A	A	A	A	A
Approach Vol, veh/h		153			648			583			491	
Approach Delay, s/veh		36.4			29.3			8.3			0.2	
Approach LOS		D			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.6		34.4		79.6		34.4				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		50.0		49.5		50.0		49.5				
Max Q Clear Time (g_c+I1), s		8.1		6.1		8.7		14.6				
Green Ext Time (p_c), s		10.7		2.4		9.1		11.3				
Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

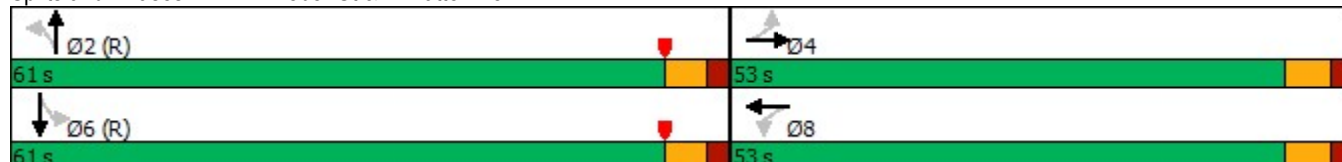
Timings

4: N Weber St & E Platte Ave

04-23-2025

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	7	200	98	512	11	102	117	223
Future Volume (vph)	7	200	98	512	11	102	117	223
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	53.0	53.0	53.0	53.0	61.0	61.0	61.0	61.0
Total Split (%)	46.5%	46.5%	46.5%	46.5%	53.5%	53.5%	53.5%	53.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	31.3	31.3	31.3	31.3	71.2	71.2	71.2	71.2
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.62	0.62	0.62	0.62
v/c Ratio	0.07	0.32	0.39	0.62	0.02	0.15	0.19	0.32
Control Delay	26.0	26.9	28.9	27.4	10.7	9.3	10.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	26.9	28.9	27.4	10.7	9.3	10.4	10.7
LOS	C	C	C	C	B	A	B	B
Approach Delay		26.9		27.7		9.4		10.6
Approach LOS		C		C		A		B
Intersection Summary								
Cycle Length: 114								
Actuated Cycle Length: 114								
Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow								
Natural Cycle: 95								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.62								
Intersection Signal Delay: 20.6				Intersection LOS: C				
Intersection Capacity Utilization 85.8%				ICU Level of Service E				
Analysis Period (min) 15								

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

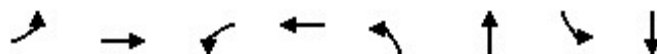
04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	200	17	98	512	49	11	102	33	117	223	68
Future Volume (veh/h)	7	200	17	98	512	49	11	102	33	117	223	68
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	282	24	105	551	53	13	124	40	146	279	85
Peak Hour Factor	0.71	0.71	0.71	0.93	0.93	0.93	0.82	0.82	0.82	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	809	68	268	799	77	730	888	286	821	901	275
Arrive On Green	0.49	0.49	0.49	0.32	0.32	0.32	0.66	0.66	0.66	1.00	1.00	1.00
Sat Flow, veh/h	816	3316	280	1073	3276	314	1018	1355	437	1222	1376	419
Grp Volume(v), veh/h	10	150	156	105	298	306	13	0	164	146	0	364
Grp Sat Flow(s),veh/h/ln	816	1777	1820	1073	1777	1814	1018	0	1792	1222	0	1795
Q Serve(g_s), s	1.2	5.9	6.0	9.6	16.6	16.7	0.5	0.0	4.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	17.9	5.9	6.0	15.6	16.6	16.7	0.5	0.0	4.0	4.8	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.17	1.00		0.24	1.00		0.23
Lane Grp Cap(c), veh/h	142	433	444	268	433	442	730	0	1174	821	0	1176
V/C Ratio(X)	0.07	0.35	0.35	0.39	0.69	0.69	0.02	0.00	0.14	0.18	0.00	0.31
Avail Cap(c_a), veh/h	280	733	750	449	733	748	730	0	1174	821	0	1176
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	33.6	23.6	23.6	37.0	34.7	34.8	6.9	0.0	7.5	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	1.0	1.0	1.6	3.4	3.4	0.0	0.0	0.2	0.5	0.0	0.7
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	0.2	2.4	2.5	2.5	7.3	7.4	0.1	0.0	1.5	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	24.6	24.6	38.6	38.2	38.2	6.9	0.0	7.7	0.6	0.0	0.7
LnGrp LOS	C	C	C	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h	316			709			177			510		
Approach Delay, s/veh	24.9			38.2			7.6			0.6		
Approach LOS	C			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	80.2			33.8			80.2			33.8		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	55.5			47.0			55.5			47.0		
Max Q Clear Time (g_c+I1), s	6.0			19.9			6.8			18.7		
Green Ext Time (p_c), s	2.2			3.7			6.7			9.1		
Intersection Summary												
HCM 6th Ctrl Delay	21.4											
HCM 6th LOS	C											

Timings

5: N Weber St & E Boulder St

04-23-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔↔		↔↔	↔	↔	↔	↔
Traffic Volume (vph)	6	157	102	218	12	100	9	242
Future Volume (vph)	6	157	102	218	12	100	9	242
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	43.5	43.5	43.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	54.0	54.0	54.0	54.0	60.0	60.0	60.0	60.0
Total Split (%)	47.4%	47.4%	47.4%	47.4%	52.6%	52.6%	52.6%	52.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		27.5		27.5	75.5	75.5	75.5	75.5
Actuated g/C Ratio		0.24		0.24	0.66	0.66	0.66	0.66
v/c Ratio		0.41		0.72	0.03	0.18	0.01	0.26
Control Delay		27.4		33.3	7.3	6.6	8.6	9.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		27.4		33.3	7.3	6.6	8.6	9.3
LOS		C		C	A	A	A	A
Approach Delay		27.4		33.3		6.6		9.2
Approach LOS		C		C		A		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 21.1

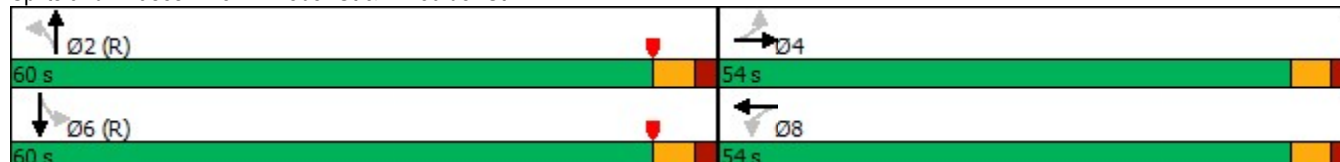
Intersection LOS: C

Intersection Capacity Utilization 63.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	157	61	102	218	19	12	100	44	9	242	24
Future Volume (veh/h)	6	157	61	102	218	19	12	100	44	9	242	24
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	234	91	128	272	24	18	149	66	11	292	29
Peak Hour Factor	0.67	0.67	0.67	0.80	0.80	0.80	0.67	0.67	0.67	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	624	231	209	474	45	671	797	353	820	1086	108
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	1.00	1.00	1.00	0.65	0.65	0.65
Sat Flow, veh/h	34	2446	906	617	1860	175	1059	1228	544	1166	1674	166
Grp Volume(v), veh/h	179	0	155	195	0	229	18	0	215	11	0	321
Grp Sat Flow(s),veh/h/ln	1846	0	1539	982	0	1670	1059	0	1772	1166	0	1840
Q Serve(g_s), s	0.0	0.0	7.0	14.7	0.0	10.5	0.2	0.0	0.0	0.4	0.0	8.5
Cycle Q Clear(g_c), s	6.6	0.0	7.0	21.7	0.0	10.5	8.7	0.0	0.0	0.4	0.0	8.5
Prop In Lane	0.05		0.59	0.65		0.11	1.00		0.31	1.00		0.09
Lane Grp Cap(c), veh/h	504	0	392	303	0	426	671	0	1149	820	0	1194
V/C Ratio(X)	0.36	0.00	0.39	0.65	0.00	0.54	0.03	0.00	0.19	0.01	0.00	0.27
Avail Cap(c_a), veh/h	811	0	655	514	0	711	671	0	1149	820	0	1194
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.99	0.77	0.00	0.77	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	22.5	28.5	0.0	23.4	0.5	0.0	0.0	7.1	0.0	8.5
Incr Delay (d2), s/veh	0.9	0.0	1.4	3.8	0.0	1.7	0.1	0.0	0.4	0.0	0.0	0.6
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	2.8	0.0	2.4	4.2	0.0	3.7	0.0	0.0	0.1	0.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	23.9	32.2	0.0	25.1	0.6	0.0	0.4	7.1	0.0	9.1
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		334			424			233			332	
Approach Delay, s/veh		23.6			28.4			0.4			9.0	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.4		34.6		79.4		34.6				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		54.5		48.5		54.5		48.5				
Max Q Clear Time (g_c+I1), s		10.7		9.0		10.5		23.7				
Green Ext Time (p_c), s		3.0		4.5		4.5		5.3				
Intersection Summary												
HCM 6th Ctrl Delay				17.4								
HCM 6th LOS				B								

HCM 6th TWSC
6: N Weber St & St Vrain St

04-23-2025

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	4	8	7	3	4	110	2	3	560	13
Future Vol, veh/h	2	3	4	8	7	3	4	110	2	3	560	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	53	53	53	67	67	67	73	73	73	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	6	8	12	10	4	5	151	3	4	789	18
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	976	970	798	976	978	153	807	0	0	154	0	0
Stage 1	806	806	-	163	163	-	-	-	-	-	-	-
Stage 2	170	164	-	813	815	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	230	253	386	230	250	893	818	-	-	1426	-	-
Stage 1	376	395	-	839	763	-	-	-	-	-	-	-
Stage 2	832	762	-	372	391	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	219	250	386	220	247	893	818	-	-	1426	-	-
Mov Cap-2 Maneuver	219	250	-	220	247	-	-	-	-	-	-	-
Stage 1	373	393	-	833	758	-	-	-	-	-	-	-
Stage 2	811	757	-	358	389	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18.4		20.2		0.3		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	818	-	-	286	264	1426	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.059	0.102	0.003	-	-				
HCM Control Delay (s)	9.4	0	-	18.4	20.2	7.5	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-				

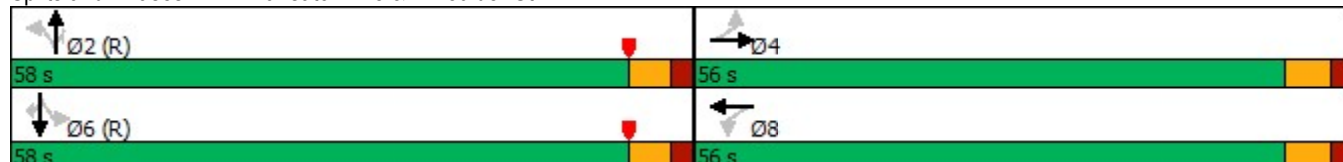
Timings

7: Wahsatch Ave & E Boulder St

04-23-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	167	53	272	65	253	62	87	338	15
Future Volume (vph)	2	167	53	272	65	253	62	87	338	15
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	56.0	56.0	56.0	56.0	58.0	58.0	58.0	58.0	58.0	58.0
Total Split (%)	49.1%	49.1%	49.1%	49.1%	50.9%	50.9%	50.9%	50.9%	50.9%	50.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		26.7		26.7	75.8	75.8	75.8	75.8	75.8	75.8
Actuated g/C Ratio		0.23		0.23	0.66	0.66	0.66	0.66	0.66	0.66
v/c Ratio		0.39		0.70	0.13	0.14	0.07	0.14	0.17	0.02
Control Delay		21.6		43.8	4.7	4.1	0.3	8.9	8.1	1.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		21.6		43.8	4.7	4.1	0.3	8.9	8.1	1.7
LOS		C		D	A	A	A	A	A	A
Approach Delay		21.6		43.8		3.6			8.0	
Approach LOS		C		D		A			A	
Intersection Summary										
Cycle Length: 114										
Actuated Cycle Length: 114										
Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow										
Natural Cycle: 95										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.70										
Intersection Signal Delay: 18.6					Intersection LOS: B					
Intersection Capacity Utilization 85.8%					ICU Level of Service E					
Analysis Period (min) 15										

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	167	39	53	272	50	65	253	62	87	338	15
Future Volume (veh/h)	2	167	39	53	272	50	65	253	62	87	338	15
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	249	58	65	336	62	82	320	78	100	389	17
Peak Hour Factor	0.67	0.67	0.67	0.81	0.81	0.81	0.79	0.79	0.79	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	644	146	114	526	100	679	2380	1061	724	2380	1061
Arrive On Green	0.46	0.46	0.46	0.23	0.23	0.23	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	8	2808	636	319	2291	437	979	3554	1585	987	3554	1585
Grp Volume(v), veh/h	165	0	145	233	0	230	82	320	78	100	389	17
Grp Sat Flow(s),veh/h/ln	1864	0	1588	1424	0	1623	979	1777	1585	987	1777	1585
Q Serve(g_s), s	0.0	0.0	6.9	11.1	0.0	14.5	0.7	0.0	0.0	4.2	4.6	0.4
Cycle Q Clear(g_c), s	6.6	0.0	6.9	18.0	0.0	14.5	5.3	0.0	0.0	4.2	4.6	0.4
Prop In Lane	0.02		0.40	0.28		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	460	0	364	367	0	373	679	2380	1061	724	2380	1061
V/C Ratio(X)	0.36	0.00	0.40	0.63	0.00	0.62	0.12	0.13	0.07	0.14	0.16	0.02
Avail Cap(c_a), veh/h	845	0	696	691	0	712	679	2380	1061	724	2380	1061
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.00	0.92	1.00	0.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	0.0	25.6	41.1	0.0	39.4	0.2	0.0	0.0	6.9	7.0	6.3
Incr Delay (d2), s/veh	0.9	0.0	1.4	3.8	0.0	3.5	0.4	0.1	0.1	0.4	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	2.8	0.0	2.5	6.5	0.0	6.2	0.1	0.0	0.0	0.9	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	0.0	27.0	44.9	0.0	43.0	0.5	0.1	0.1	7.3	7.1	6.3
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		310			463			480			506	
Approach Delay, s/veh		26.7			43.9			0.2			7.1	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.8		32.2		81.8		32.2				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		52.5		50.0		52.5		50.0				
Max Q Clear Time (g_c+I1), s		7.3		8.9		6.6		20.0				
Green Ext Time (p_c), s		6.2		4.1		7.0		6.1				
Intersection Summary												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-23-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	28	275	29	226	580	92	73	261	171	91	307
Future Volume (vph)	28	275	29	226	580	92	73	261	171	91	307
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	23.0	41.5	41.5	9.5	41.5
Total Split (s)	9.6	36.5	36.5	13.0	39.9	39.9	23.0	53.4	53.4	11.1	41.5
Total Split (%)	8.4%	32.0%	32.0%	11.4%	35.0%	35.0%	20.2%	46.8%	46.8%	9.7%	36.4%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	31.9	26.0	26.0	39.5	33.2	33.2	59.1	51.4	51.4	58.8	52.6
Actuated g/C Ratio	0.28	0.23	0.23	0.35	0.29	0.29	0.52	0.45	0.45	0.52	0.46
v/c Ratio	0.17	0.44	0.08	0.72	0.59	0.17	0.16	0.20	0.25	0.19	0.24
Control Delay	19.4	29.3	0.3	41.9	37.4	0.6	13.8	20.3	4.0	11.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	29.3	0.3	41.9	37.4	0.6	13.8	20.3	4.0	11.5	17.2
LOS	B	C	A	D	D	A	B	C	A	B	B
Approach Delay		25.9			34.8			13.8			15.9
Approach LOS		C			C			B			B

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.3

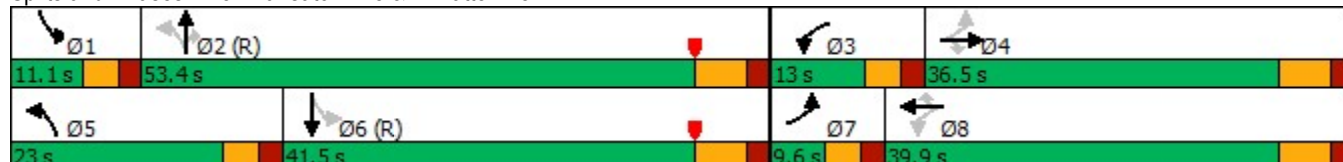
Intersection LOS: C

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	275	29	226	580	92	73	261	171	91	307	26
Future Volume (veh/h)	28	275	29	226	580	92	73	261	171	91	307	26
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	357	38	238	611	97	87	311	204	108	365	31
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	713	318	312	877	391	571	1709	762	528	1618	137
Arrive On Green	0.05	0.40	0.40	0.07	0.25	0.25	0.04	0.48	0.48	0.06	0.65	0.65
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3317	280
Grp Volume(v), veh/h	36	357	38	238	611	97	87	311	204	108	195	201
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1820
Q Serve(g_s), s	1.8	8.6	1.7	8.0	17.8	5.6	2.8	5.7	8.7	3.5	5.1	5.2
Cycle Q Clear(g_c), s	1.8	8.6	1.7	8.0	17.8	5.6	2.8	5.7	8.7	3.5	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	173	713	318	312	877	391	571	1709	762	528	867	888
V/C Ratio(X)	0.21	0.50	0.12	0.76	0.70	0.25	0.15	0.18	0.27	0.20	0.22	0.23
Avail Cap(c_a), veh/h	202	935	417	312	1041	464	782	1709	762	540	867	888
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	34.8	29.9	27.8	38.2	39.0	34.4	13.9	16.8	17.6	13.5	11.2	11.2
Incr Delay (d2), s/veh	0.2	2.4	0.7	9.6	4.6	1.5	0.0	0.2	0.9	0.1	0.6	0.6
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	0.8	3.5	0.7	3.5	8.4	2.4	1.1	2.4	3.4	1.4	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	32.3	28.5	47.7	43.6	35.9	13.9	17.1	18.5	13.6	11.7	11.8
LnGrp LOS	D	C	C	D	D	D	B	B	B	B	B	B
Approach Vol, veh/h	431			946			602			504		
Approach Delay, s/veh	32.2			43.9			17.1			12.1		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	61.3	13.0	29.4	9.5	62.1	7.7	34.6				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	6.1	46.9	8.0	30.0	18.0	35.0	4.6	33.4				
Max Q Clear Time (g_c+I1), s	5.5	10.7	10.0	10.6	4.8	7.2	3.8	19.8				
Green Ext Time (p_c), s	0.0	8.0	0.0	6.2	0.0	5.9	0.0	8.3				
Intersection Summary												
HCM 6th Ctrl Delay	28.9											
HCM 6th LOS	C											

HCM 6th TWSC
1: N Nevada Ave & St Vrain St

04-24-2025

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	23	25	2	8	8	7	1011	10	14	593	20
Future Vol, veh/h	18	23	25	2	8	8	7	1011	10	14	593	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	25	27	2	9	9	8	1099	11	15	645	22
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1256	1812	334	1486	1818	555	667	0	0	1110	0	0
Stage 1	686	686	-	1121	1121	-	-	-	-	-	-	-
Stage 2	570	1126	-	365	697	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	128	78	662	86	77	475	919	-	-	625	-	-
Stage 1	404	446	-	220	280	-	-	-	-	-	-	-
Stage 2	474	278	-	627	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	109	73	662	58	72	475	919	-	-	625	-	-
Mov Cap-2 Maneuver	109	73	-	58	72	-	-	-	-	-	-	-
Stage 1	395	429	-	215	274	-	-	-	-	-	-	-
Stage 2	440	272	-	545	424	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	65		44.2		0.2		0.4					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	919	-	-	127	111	625	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.565	0.176	0.024	-	-				
HCM Control Delay (s)	8.9	0.1	-	65	44.2	10.9	0.2	-				
HCM Lane LOS	A	A	-	F	E	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	2.8	0.6	0.1	-	-				

Timings

2: N Nevada Ave & E Boulder St

04-24-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	30	128	85	147	33	925	59	53	538	29
Future Volume (vph)	30	128	85	147	33	925	59	53	538	29
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	44.5	44.5	44.5	44.5	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	50.0	50.0	50.0	50.0	64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	43.9%	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	23.6	23.6	23.6	23.6	78.4	78.4	78.4	78.4	78.4	78.4
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
v/c Ratio	0.19	0.48	0.45	0.58	0.07	0.41	0.06	0.18	0.24	0.03
Control Delay	38.2	39.6	49.7	47.0	4.0	4.0	1.4	9.2	7.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	39.6	49.7	47.0	4.0	4.1	1.4	9.2	7.4	2.6
LOS	D	D	D	D	A	A	A	A	A	A
Approach Delay		39.4		47.8		3.9			7.3	
Approach LOS		D		D		A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 37 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 14.2

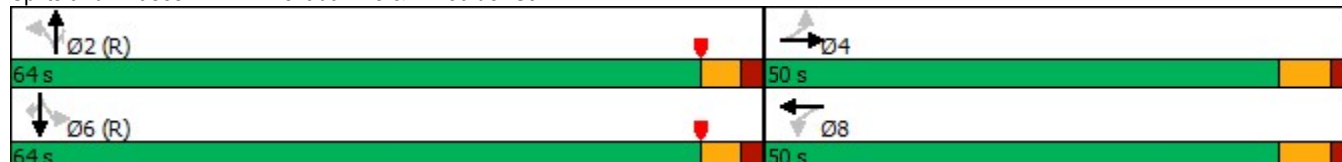
Intersection LOS: B

Intersection Capacity Utilization 92.8%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary

2: N Nevada Ave & E Boulder St

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	128	42	85	147	57	33	925	59	53	538	29
Future Volume (veh/h)	30	128	42	85	147	57	33	925	59	53	538	29
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	139	46	92	160	62	36	1005	64	58	585	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	287	95	210	274	106	562	2422	1080	423	2422	1080
Arrive On Green	0.21	0.21	0.21	0.43	0.43	0.43	1.00	1.00	1.00	0.68	0.68	0.68
Sat Flow, veh/h	1159	1345	445	1199	1283	497	806	3554	1585	528	3554	1585
Grp Volume(v), veh/h	33	0	185	92	0	222	36	1005	64	58	585	32
Grp Sat Flow(s),veh/h/ln	1159	0	1790	1199	0	1781	806	1777	1585	528	1777	1585
Q Serve(g_s), s	2.9	0.0	10.3	7.8	0.0	10.9	0.5	0.0	0.0	4.5	7.2	0.7
Cycle Q Clear(g_c), s	13.8	0.0	10.3	18.1	0.0	10.9	7.7	0.0	0.0	4.5	7.2	0.7
Prop In Lane	1.00		0.25	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	0	382	210	0	380	562	2422	1080	423	2422	1080
V/C Ratio(X)	0.17	0.00	0.48	0.44	0.00	0.58	0.06	0.41	0.06	0.14	0.24	0.03
Avail Cap(c_a), veh/h	395	0	683	412	0	680	562	2422	1080	423	2422	1080
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.77	0.00	0.77	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	39.3	35.5	0.0	28.8	0.4	0.0	0.0	6.5	6.9	5.9
Incr Delay (d2), s/veh	1.4	0.0	3.4	4.0	0.0	4.0	0.2	0.5	0.1	0.7	0.2	0.1
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	0.0	5.0	2.3	0.0	4.4	0.0	0.2	0.0	0.6	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	0.0	42.8	39.5	0.0	32.8	0.5	0.5	0.1	7.2	7.2	6.0
LnGrp LOS	D	A	D	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h	218			314			1105			675		
Approach Delay, s/veh	43.4			34.8			0.5			7.1		
Approach LOS	D			C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	83.2			30.8			83.2			30.8		
Change Period (Y+Rc), s	5.5			6.5			5.5			6.5		
Max Green Setting (Gmax), s	58.5			43.5			58.5			43.5		
Max Q Clear Time (g_c+I1), s	9.7			15.8			9.2			20.1		
Green Ext Time (p_c), s	31.4			3.1			18.3			4.2		
Intersection Summary												
HCM 6th Ctrl Delay	11.1											
HCM 6th LOS	B											

Timings

3: N Nevada Ave & E Platte Ave

04-24-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	336	425	51	25	963	269	72	547	44
Future Volume (vph)	336	425	51	25	963	269	72	547	44
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	49.0	49.0	49.0	65.0	65.0	65.0	65.0	65.0	65.0
Total Split (%)	43.0%	43.0%	43.0%	57.0%	57.0%	57.0%	57.0%	57.0%	57.0%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	26.1	26.1	26.1	73.4	73.4	73.4	73.4	73.4	73.4
Actuated g/C Ratio	0.23	0.23	0.23	0.64	0.64	0.64	0.64	0.64	0.64
v/c Ratio	0.52	0.57	0.14	0.05	0.46	0.28	0.28	0.26	0.05
Control Delay	38.5	55.0	35.2	9.5	11.8	6.9	10.5	7.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	55.0	35.2	9.5	11.8	6.9	10.5	7.2	1.1
LOS	D	D	D	A	B	A	B	A	A
Approach Delay	38.5	52.9			10.7			7.1	
Approach LOS	D	D			B			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 20.9

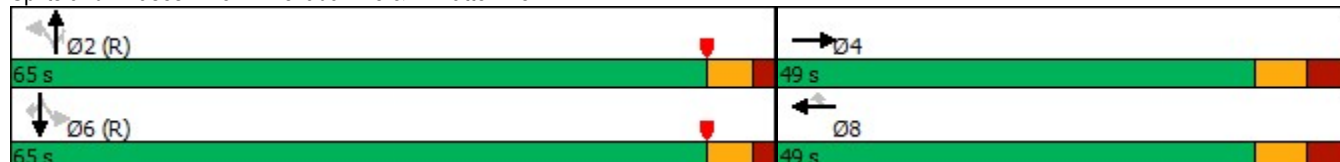
Intersection LOS: C

Intersection Capacity Utilization 77.0%

ICU Level of Service D

Analysis Period (min) 15

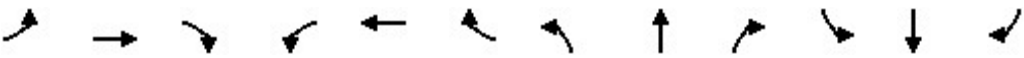
Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

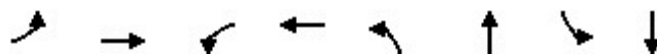
04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	336	49	0	425	51	25	963	269	72	547	44
Future Volume (veh/h)	0	336	49	0	425	51	25	963	269	72	547	44
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	365	53	0	462	55	27	1047	292	78	595	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	611	88	0	696	310	596	2406	1073	284	2406	1073
Arrive On Green	0.00	0.20	0.20	0.00	0.39	0.39	0.68	0.68	0.68	1.00	1.00	1.00
Sat Flow, veh/h	0	3211	449	0	3647	1585	787	3554	1585	408	3554	1585
Grp Volume(v), veh/h	0	207	211	0	462	55	27	1047	292	78	595	48
Grp Sat Flow(s),veh/h/ln	0	1777	1790	0	1777	1585	787	1777	1585	408	1777	1585
Q Serve(g_s), s	0.0	12.1	12.3	0.0	12.2	2.6	1.3	15.4	8.3	6.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.1	12.3	0.0	12.2	2.6	1.3	15.4	8.3	21.4	0.0	0.0
Prop In Lane	0.00		0.25	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	348	351	0	696	310	596	2406	1073	284	2406	1073
V/C Ratio(X)	0.00	0.59	0.60	0.00	0.66	0.18	0.05	0.44	0.27	0.27	0.25	0.04
Avail Cap(c_a), veh/h	0	631	636	0	1262	563	596	2406	1073	284	2406	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.88	0.88	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	0.0	41.7	41.8	0.0	31.6	28.7	6.2	8.4	7.3	2.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.8	5.9	0.0	3.5	0.9	0.1	0.6	0.6	2.3	0.2	0.1
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	0.0	5.9	6.0	0.0	4.8	1.0	0.2	5.8	2.9	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	47.5	47.7	0.0	35.0	29.5	6.3	9.0	7.9	4.4	0.2	0.1
LnGrp LOS	A	D	D	A	D	C	A	A	A	A	A	A
Approach Vol, veh/h		418			517			1366			721	
Approach Delay, s/veh		47.6			34.5			8.7			0.7	
Approach LOS		D			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.2		30.8		83.2		30.8				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		59.0		40.5		59.0		40.5				
Max Q Clear Time (g_c+I1), s		17.4		14.3		23.4		14.2				
Green Ext Time (p_c), s		28.5		6.4		14.8		8.1				
Intersection Summary												
HCM 6th Ctrl Delay				16.6								
HCM 6th LOS				B								

Timings

4: N Weber St & E Platte Ave

04-24-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	32	625	60	450	17	425	44	253
Future Volume (vph)	32	625	60	450	17	425	44	253
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	52.0	52.0	52.0	52.0	62.0	62.0	62.0	62.0
Total Split (%)	45.6%	45.6%	45.6%	45.6%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	34.4	34.4	34.4	34.4	68.1	68.1	68.1	68.1
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.60	0.60	0.60	0.60
v/c Ratio	0.17	0.66	0.52	0.48	0.03	0.46	0.11	0.26
Control Delay	22.8	26.6	33.4	19.7	12.1	15.5	9.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	26.6	33.4	19.7	12.1	15.5	9.7	10.0
LOS	C	C	C	B	B	B	A	A
Approach Delay		26.5		21.3		15.3		9.9
Approach LOS		C		C		B		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 19.9

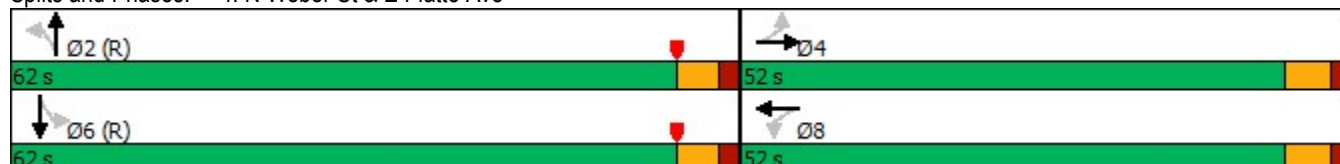
Intersection LOS: B

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

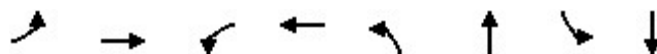
04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	625	21	60	450	20	17	425	38	44	253	12
Future Volume (veh/h)	32	625	21	60	450	20	17	425	38	44	253	12
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	679	23	65	489	22	18	462	41	48	275	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1006	34	177	994	45	731	1036	92	481	1084	51
Arrive On Green	0.57	0.57	0.57	0.38	0.38	0.38	0.61	0.61	0.61	1.00	1.00	1.00
Sat Flow, veh/h	889	3507	119	745	3464	156	1091	1693	150	896	1772	84
Grp Volume(v), veh/h	35	344	358	65	250	261	18	0	503	48	0	288
Grp Sat Flow(s),veh/h/ln	889	1777	1849	745	1777	1842	1091	0	1843	896	0	1855
Q Serve(g_s), s	3.1	15.3	15.4	9.0	12.2	12.3	0.7	0.0	16.6	1.6	0.0	0.0
Cycle Q Clear(g_c), s	15.4	15.3	15.4	24.3	12.2	12.3	0.7	0.0	16.6	18.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.08	1.00		0.05
Lane Grp Cap(c), veh/h	223	510	531	177	510	529	731	0	1128	481	0	1136
V/C Ratio(X)	0.16	0.67	0.67	0.37	0.49	0.49	0.02	0.00	0.45	0.10	0.00	0.25
Avail Cap(c_a), veh/h	326	717	746	263	717	743	731	0	1128	481	0	1136
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.92	0.92	0.92	0.94	0.94	0.94	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	24.9	20.6	20.6	39.6	28.9	28.9	8.7	0.0	11.8	2.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	3.0	2.9	2.6	1.5	1.4	0.1	0.0	1.3	0.4	0.0	0.5
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	0.6	5.1	5.2	1.7	5.2	5.4	0.2	0.0	6.9	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	23.6	23.5	42.1	30.4	30.4	8.8	0.0	13.1	2.6	0.0	0.5
LnGrp LOS	C	C	C	D	C	C	A	A	B	A	A	A
Approach Vol, veh/h	737			576			521			336		
Approach Delay, s/veh	23.7			31.7			12.9			0.8		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	75.3			38.7			75.3			38.7		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	56.5			46.0			56.5			46.0		
Max Q Clear Time (g_c+I1), s	18.6			17.4			20.2			26.3		
Green Ext Time (p_c), s	7.6			9.9			4.3			6.4		
Intersection Summary												
HCM 6th Ctrl Delay	19.7											
HCM 6th LOS	B											

Timings

5: N Weber St & E Boulder St

04-24-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔↔		↔↔	↔	↔	↔	↔
Traffic Volume (vph)	8	213	43	267	13	401	25	252
Future Volume (vph)	8	213	43	267	13	401	25	252
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	43.5	43.5	43.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	49.0	49.0	49.0	49.0	65.0	65.0	65.0	65.0
Total Split (%)	43.0%	43.0%	43.0%	43.0%	57.0%	57.0%	57.0%	57.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		22.5		22.5	80.5	80.5	80.5	80.5
Actuated g/C Ratio		0.20		0.20	0.71	0.71	0.71	0.71
v/c Ratio		0.39		0.62	0.02	0.39	0.05	0.22
Control Delay		27.7		48.9	3.1	3.7	6.1	6.6
Queue Delay		0.0		0.0	0.0	0.1	0.0	0.0
Total Delay		27.7		48.9	3.1	3.8	6.1	6.6
LOS		C		D	A	A	A	A
Approach Delay		27.7		48.9		3.8		6.6
Approach LOS		C		D		A		A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 20.0

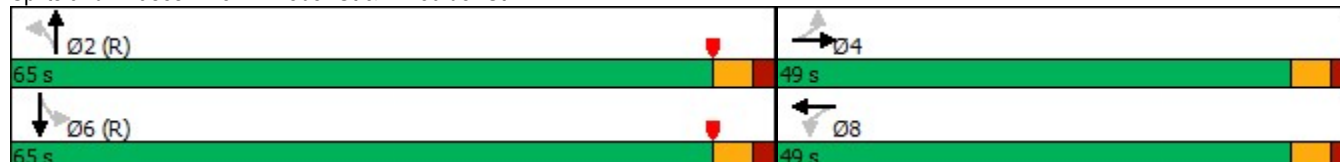
Intersection LOS: C

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	213	15	43	267	28	13	401	59	25	252	14
Future Volume (veh/h)	8	213	15	43	267	28	13	401	59	25	252	14
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	232	16	47	290	30	14	436	64	27	274	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	567	38	88	454	48	802	1161	170	717	1279	70
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	1.00	1.00	1.00	0.73	0.73	0.73
Sat Flow, veh/h	48	3231	218	277	2589	274	1090	1594	234	898	1757	96
Grp Volume(v), veh/h	135	0	122	186	0	181	14	0	500	27	0	289
Grp Sat Flow(s),veh/h/ln	1834	0	1663	1487	0	1653	1090	0	1828	898	0	1853
Q Serve(g_s), s	0.0	0.0	6.4	6.7	0.0	10.4	0.1	0.0	0.0	1.0	0.0	5.7
Cycle Q Clear(g_c), s	6.2	0.0	6.4	13.1	0.0	10.4	5.8	0.0	0.0	1.0	0.0	5.7
Prop In Lane	0.07		0.13	0.25		0.17	1.00		0.13	1.00		0.05
Lane Grp Cap(c), veh/h	355	0	292	300	0	290	802	0	1331	717	0	1349
V/C Ratio(X)	0.38	0.00	0.42	0.62	0.00	0.62	0.02	0.00	0.38	0.04	0.00	0.21
Avail Cap(c_a), veh/h	722	0	634	631	0	631	802	0	1331	717	0	1349
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.95	0.73	0.00	0.73	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	32.6	34.7	0.0	33.9	0.2	0.0	0.0	4.3	0.0	5.0
Incr Delay (d2), s/veh	1.4	0.0	1.9	3.2	0.0	3.4	0.0	0.0	0.7	0.1	0.0	0.4
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	2.8	0.0	2.5	4.2	0.0	3.9	0.0	0.0	0.3	0.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	0.0	34.5	38.0	0.0	37.3	0.2	0.0	0.7	4.4	0.0	5.4
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		257			367			514			316	
Approach Delay, s/veh		34.2			37.6			0.7			5.3	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.5		25.5		88.5		25.5				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		59.5		43.5		59.5		43.5				
Max Q Clear Time (g_c+I1), s		7.8		8.4		7.7		15.1				
Green Ext Time (p_c), s		8.0		3.2		4.3		4.6				
Intersection Summary												
HCM 6th Ctrl Delay				16.9								
HCM 6th LOS				B								

HCM 6th TWSC
6: N Weber St & St Vrain St

04-24-2025

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	12	20	4	4	2	3	433	4	6	263	9
Future Vol, veh/h	11	12	20	4	4	2	3	433	4	6	263	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	13	22	4	4	2	3	471	4	7	286	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	787	786	291	802	789	473	296	0	0	475	0	0
Stage 1	305	305	-	479	479	-	-	-	-	-	-	-
Stage 2	482	481	-	323	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	324	748	302	323	591	1265	-	-	1087	-	-
Stage 1	705	662	-	568	555	-	-	-	-	-	-	-
Stage 2	565	554	-	689	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	302	320	748	282	319	591	1265	-	-	1087	-	-
Mov Cap-2 Maneuver	302	320	-	282	319	-	-	-	-	-	-	-
Stage 1	703	657	-	566	553	-	-	-	-	-	-	-
Stage 2	557	552	-	650	654	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.5		16.2		0.1		0.2					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1265	-	-	427	332	1087	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.109	0.033	0.006	-	-				
HCM Control Delay (s)	7.9	0	-	14.5	16.2	8.3	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0	-	-				

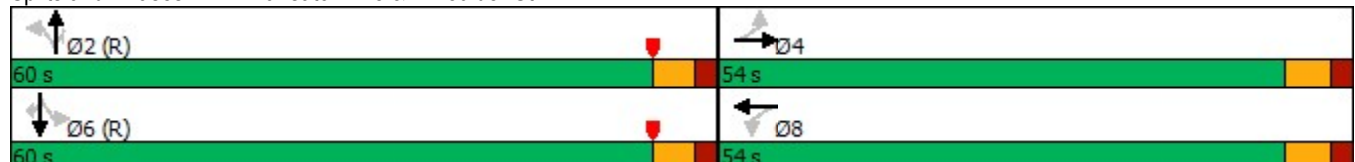
Timings

7: Wahsatch Ave & E Boulder St

04-24-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	10	240	61	288	32	594	62	44	304	21
Future Volume (vph)	10	240	61	288	32	594	62	44	304	21
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	54.0	54.0	54.0	54.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	47.4%	47.4%	47.4%	47.4%	52.6%	52.6%	52.6%	52.6%	52.6%	52.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		26.7		26.7	75.8	75.8	75.8	75.8	75.8	75.8
Actuated g/C Ratio		0.23		0.23	0.66	0.66	0.66	0.66	0.66	0.66
v/c Ratio		0.40		0.71	0.05	0.27	0.06	0.10	0.14	0.02
Control Delay		31.5		43.1	2.5	2.4	0.2	9.0	7.9	2.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		31.5		43.1	2.5	2.4	0.2	9.0	7.9	2.6
LOS		C		D	A	A	A	A	A	A
Approach Delay		31.5		43.1		2.2			7.7	
Approach LOS		C		D		A			A	
Intersection Summary										
Cycle Length: 114										
Actuated Cycle Length: 114										
Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow										
Natural Cycle: 95										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.71										
Intersection Signal Delay: 18.0					Intersection LOS: B					
Intersection Capacity Utilization 84.5%					ICU Level of Service E					
Analysis Period (min) 15										

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	240	36	61	288	84	32	594	62	44	304	21
Future Volume (veh/h)	10	240	36	61	288	84	32	594	62	44	304	21
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	261	39	66	313	91	35	646	67	48	330	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	688	100	114	481	145	715	2372	1058	555	2372	1058
Arrive On Green	0.46	0.46	0.46	0.23	0.23	0.23	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	49	2970	431	320	2079	625	1028	3554	1585	737	3554	1585
Grp Volume(v), veh/h	164	0	147	238	0	232	35	646	67	48	330	23
Grp Sat Flow(s),veh/h/ln	1826	0	1624	1434	0	1590	1028	1777	1585	737	1777	1585
Q Serve(g_s), s	0.0	0.0	6.8	11.5	0.0	14.9	0.2	0.0	0.0	2.6	3.9	0.6
Cycle Q Clear(g_c), s	6.5	0.0	6.8	18.3	0.0	14.9	4.1	0.0	0.0	2.6	3.9	0.6
Prop In Lane	0.07		0.27	0.28		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	0	376	372	0	368	715	2372	1058	555	2372	1058
V/C Ratio(X)	0.36	0.00	0.39	0.64	0.00	0.63	0.05	0.27	0.06	0.09	0.14	0.02
Avail Cap(c_a), veh/h	791	0	684	667	0	669	715	2372	1058	555	2372	1058
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.00	0.94	1.00	0.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	25.3	41.0	0.0	39.4	0.1	0.0	0.0	6.7	6.9	6.4
Incr Delay (d2), s/veh	1.0	0.0	1.3	3.9	0.0	3.8	0.1	0.3	0.1	0.3	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	2.8	0.0	2.5	6.7	0.0	6.3	0.0	0.1	0.0	0.4	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	26.7	44.9	0.0	43.2	0.2	0.3	0.1	7.0	7.1	6.4
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		311			470			748			401	
Approach Delay, s/veh		26.4			44.0			0.2			7.0	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.6		32.4		81.6		32.4				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		54.5		48.0		54.5		48.0				
Max Q Clear Time (g_c+I1), s		6.1		8.8		5.9		20.3				
Green Ext Time (p_c), s		11.6		4.1		5.7		6.1				
Intersection Summary												
HCM 6th Ctrl Delay				16.5								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-24-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	26	725	33	161	494	79	65	577	370	72	315
Future Volume (vph)	26	725	33	161	494	79	65	577	370	72	315
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	9.5	41.5	41.5	9.5	41.5
Total Split (s)	9.5	40.0	40.0	18.0	48.5	48.5	9.8	46.0	46.0	10.0	46.2
Total Split (%)	8.3%	35.1%	35.1%	15.8%	42.5%	42.5%	8.6%	40.4%	40.4%	8.8%	40.5%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	40.7	35.0	35.0	51.5	44.3	44.3	48.4	43.0	43.0	48.7	43.2
Actuated g/C Ratio	0.36	0.31	0.31	0.45	0.39	0.39	0.42	0.38	0.38	0.43	0.38
v/c Ratio	0.08	0.73	0.06	0.65	0.39	0.12	0.17	0.47	0.57	0.26	0.28
Control Delay	6.7	15.0	0.2	30.1	26.6	1.7	19.3	29.4	19.8	17.5	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	15.0	0.2	30.1	26.6	1.7	19.3	29.4	19.8	17.5	23.5
LOS	A	B	A	C	C	A	B	C	B	B	C
Approach Delay		14.1			24.6			25.2			22.5
Approach LOS		B			C			C			C

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 21.7

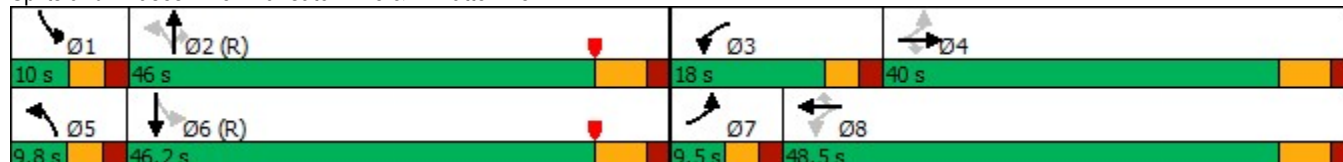
Intersection LOS: C

Intersection Capacity Utilization 68.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	725	33	161	494	79	65	577	370	72	315	26
Future Volume (veh/h)	26	725	33	161	494	79	65	577	370	72	315	26
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	788	36	175	537	86	71	627	402	78	342	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	956	426	272	1187	530	516	1436	640	285	1354	110
Arrive On Green	0.04	0.54	0.54	0.09	0.33	0.33	0.04	0.40	0.40	0.08	0.81	0.81
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3327	271
Grp Volume(v), veh/h	28	788	36	175	537	86	71	627	402	78	182	188
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1822
Q Serve(g_s), s	1.3	21.0	1.3	7.8	13.5	4.4	2.6	14.6	23.1	2.9	2.7	2.8
Cycle Q Clear(g_c), s	1.3	21.0	1.3	7.8	13.5	4.4	2.6	14.6	23.1	2.9	2.7	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	273	956	426	272	1187	530	516	1436	640	285	723	741
V/C Ratio(X)	0.10	0.82	0.08	0.64	0.45	0.16	0.14	0.44	0.63	0.27	0.25	0.25
Avail Cap(c_a), veh/h	306	1044	466	323	1309	584	526	1436	640	293	723	741
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	24.1	19.5	28.1	29.8	26.7	18.6	24.6	27.1	18.7	6.5	6.5
Incr Delay (d2), s/veh	0.0	6.1	0.3	1.9	1.2	0.7	0.0	1.0	4.6	0.2	0.8	0.8
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	0.6	7.4	0.5	3.5	6.0	1.8	1.1	6.3	9.5	1.2	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	30.2	19.8	29.9	31.0	27.4	18.7	25.6	31.7	18.9	7.4	7.4
LnGrp LOS	C	C	B	C	C	C	B	C	C	B	A	A
Approach Vol, veh/h	852			798			1100			448		
Approach Delay, s/veh	29.7			30.4			27.4			9.4		
Approach LOS	C			C			C			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	52.6	14.8	37.2	9.2	52.9	7.4	44.6				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	5.0	39.5	13.0	33.5	4.8	39.7	4.5	42.0				
Max Q Clear Time (g_c+I1), s	4.9	25.1	9.8	23.0	4.6	4.8	3.3	15.5				
Green Ext Time (p_c), s	0.0	9.7	0.0	7.7	0.0	6.0	0.0	11.7				
Intersection Summary												
HCM 6th Ctrl Delay	26.2											
HCM 6th LOS	C											

Appendix D. Future (2027) Boulder Street Closure Level of Service Worksheets

HCM 6th TWSC
1: N Nevada Ave & St Vrain St

04-25-2025

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	7	2	45	11	32	12	381	6	14	413	26
Future Vol, veh/h	1	7	2	45	11	32	12	381	6	14	413	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	57	57	57	84	84	84	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	8	2	79	19	56	14	454	7	15	454	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	764	988	242	747	999	231	483	0	0	461	0	0
Stage 1	499	499	-	486	486	-	-	-	-	-	-	-
Stage 2	265	489	-	261	513	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	293	246	759	301	242	771	1076	-	-	1096	-	-
Stage 1	522	542	-	531	549	-	-	-	-	-	-	-
Stage 2	717	548	-	721	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	247	237	759	284	233	771	1076	-	-	1096	-	-
Mov Cap-2 Maneuver	247	237	-	284	233	-	-	-	-	-	-	-
Stage 1	513	532	-	521	539	-	-	-	-	-	-	-
Stage 2	629	538	-	694	524	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18.6		22.6		0.3		0.3					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1076	-	-	276	356	1096	-	-				
HCM Lane V/C Ratio	0.013	-	-	0.044	0.434	0.014	-	-				
HCM Control Delay (s)	8.4	0.1	-	18.6	22.6	8.3	0.1	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	2.1	0	-	-				

Timings

2: N Nevada Ave & E Boulder St

04-25-2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	33	107	398	420	40
Future Volume (vph)	8	33	107	398	420	40
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	7			2	6	
Permitted Phases		7	2			6
Detector Phase	7	7	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	20.0	20.0	20.0	20.0
Minimum Split (s)	9.5	9.5	47.5	47.5	47.5	47.5
Total Split (s)	25.0	25.0	89.0	89.0	89.0	89.0
Total Split (%)	21.9%	21.9%	78.1%	78.1%	78.1%	78.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	6.5	6.5	100.6	100.6	100.6	100.6
Actuated g/C Ratio	0.06	0.06	0.88	0.88	0.88	0.88
v/c Ratio	0.10	0.32	0.17	0.16	0.15	0.03
Control Delay	52.1	21.9	3.3	2.4	1.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	21.9	3.3	2.4	1.4	0.5
LOS	D	C	A	A	A	A
Approach Delay	27.7			2.6	1.3	
Approach LOS	C			A	A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 3.1

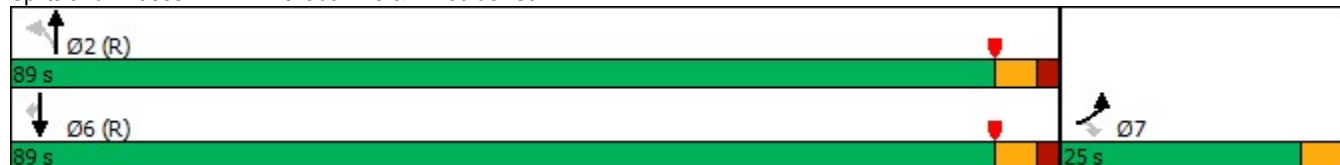
Intersection LOS: A

Intersection Capacity Utilization 50.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary 2: N Nevada Ave & E Boulder St

04-25-2025

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	33	107	398	420	40
Future Volume (veh/h)	8	33	107	398	420	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	42	137	510	457	43
Peak Hour Factor	0.78	0.78	0.78	0.78	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	64	57	834	3114	3114	1389
Arrive On Green	0.04	0.04	1.00	1.00	0.88	0.88
Sat Flow, veh/h	1781	1585	898	3647	3647	1585
Grp Volume(v), veh/h	10	42	137	510	457	43
Grp Sat Flow(s),veh/h/ln	1781	1585	898	1777	1777	1585
Q Serve(g_s), s	0.6	3.0	0.4	0.0	2.1	0.4
Cycle Q Clear(g_c), s	0.6	3.0	2.5	0.0	2.1	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	64	57	834	3114	3114	1389
V/C Ratio(X)	0.16	0.74	0.16	0.16	0.15	0.03
Avail Cap(c_a), veh/h	320	285	834	3114	3114	1389
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	53.3	54.4	0.0	0.0	1.0	0.9
Incr Delay (d2), s/veh	1.1	16.8	0.4	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	2.6	0.2	0.1	0.7	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.4	71.2	0.4	0.1	1.1	0.9
LnGrp LOS	D	E	A	A	A	A
Approach Vol, veh/h	52			647	500	
Approach Delay, s/veh	67.9			0.2	1.1	
Approach LOS	E			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	105.4		8.6		105.4	
Change Period (Y+Rc), s	5.5		4.5		5.5	
Max Green Setting (Gmax), s	83.5		20.5		83.5	
Max Q Clear Time (g_c+I1), s	4.5		5.0		4.1	
Green Ext Time (p_c), s	18.7		0.1		13.3	
Intersection Summary						
HCM 6th Ctrl Delay			3.5			
HCM 6th LOS			A			

Timings

3: N Nevada Ave & E Platte Ave

04-25-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	130	522	202	10	284	216	92	334	25
Future Volume (vph)	130	522	202	10	284	216	92	334	25
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	66.0	66.0	66.0	48.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	57.9%	57.9%	57.9%	42.1%	42.1%	42.1%	42.1%	42.1%	42.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	35.4	35.4	35.4	64.1	64.1	64.1	64.1	64.1	64.1
Actuated g/C Ratio	0.31	0.31	0.31	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.18	0.53	0.38	0.02	0.16	0.25	0.17	0.18	0.03
Control Delay	23.5	34.1	16.3	15.3	13.9	4.0	18.8	16.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	34.1	16.3	15.3	13.9	4.0	18.8	16.4	4.8
LOS	C	C	B	B	B	A	B	B	A
Approach Delay	23.5	29.1			9.7			16.2	
Approach LOS	C	C			A			B	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 20.1

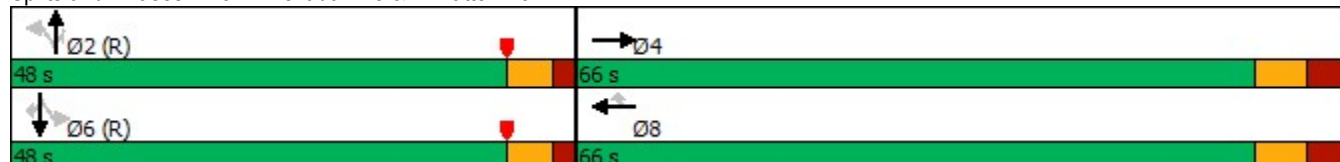
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

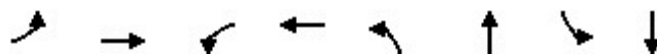
04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
Future Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	165	28	0	580	224	11	323	245	101	367	27
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	808	135	0	943	420	620	2159	963	542	2159	963
Arrive On Green	0.00	0.27	0.27	0.00	0.53	0.53	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	0	3142	508	0	3647	1585	990	3554	1585	843	3554	1585
Grp Volume(v), veh/h	0	95	98	0	580	224	11	323	245	101	367	27
Grp Sat Flow(s),veh/h/ln	0	1777	1779	0	1777	1585	990	1777	1585	843	1777	1585
Q Serve(g_s), s	0.0	4.7	4.9	0.0	13.0	10.5	0.6	4.5	8.2	6.7	5.2	0.8
Cycle Q Clear(g_c), s	0.0	4.7	4.9	0.0	13.0	10.5	5.7	4.5	8.2	11.2	5.2	0.8
Prop In Lane	0.00		0.29	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	471	472	0	943	420	620	2159	963	542	2159	963
V/C Ratio(X)	0.00	0.20	0.21	0.00	0.62	0.53	0.02	0.15	0.25	0.19	0.17	0.03
Avail Cap(c_a), veh/h	0	896	897	0	1792	799	620	2159	963	542	2159	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	32.5	32.6	0.0	22.7	22.1	11.0	9.7	10.4	12.1	9.8	8.9
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.8	2.9	0.1	0.1	0.6	0.7	0.2	0.1
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(95%),veh/ln	0.0	3.9	4.0	0.0	7.5	6.3	0.2	3.2	5.4	2.5	3.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	33.3	33.4	0.0	24.5	25.0	11.1	9.8	11.0	12.8	10.0	9.0
LnGrp LOS	A	C	C	A	C	C	B	A	B	B	A	A
Approach Vol, veh/h		193			804			579			495	
Approach Delay, s/veh		33.3			24.7			10.3			10.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.3		38.7		75.3		38.7				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		42.0		57.5		42.0		57.5				
Max Q Clear Time (g_c+I1), s		10.2		6.9		13.2		15.0				
Green Ext Time (p_c), s		8.8		3.2		8.1		15.3				
Intersection Summary												
HCM 6th Ctrl Delay				18.1								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

4: N Weber St & E Platte Ave

04-25-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	72	299	103	577	21	93	117	179
Future Volume (vph)	72	299	103	577	21	93	117	179
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	55.0	55.0	55.0	55.0	59.0	59.0	59.0	59.0
Total Split (%)	48.2%	48.2%	48.2%	48.2%	51.8%	51.8%	51.8%	51.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	34.7	34.7	34.7	34.7	67.8	67.8	67.8	67.8
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.59	0.59	0.59	0.59
v/c Ratio	0.74	0.48	0.55	0.63	0.05	0.14	0.20	0.37
Control Delay	62.1	28.1	37.5	34.9	12.8	10.7	14.6	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.1	28.1	37.5	34.9	12.8	10.7	14.6	15.3
LOS	E	C	D	C	B	B	B	B
Approach Delay		33.7		35.3		11.0		15.1
Approach LOS		C		D		B		B

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 27.7

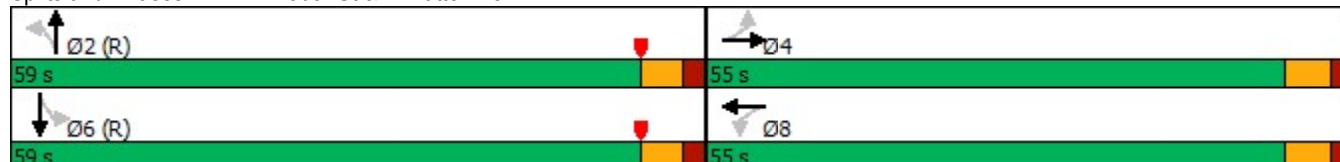
Intersection LOS: C

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	299	65	103	577	49	21	93	33	117	179	129
Future Volume (veh/h)	72	299	65	103	577	49	21	93	33	117	179	129
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	421	92	111	620	53	26	113	40	146	224	161
Peak Hour Factor	0.71	0.71	0.71	0.93	0.93	0.93	0.82	0.82	0.82	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	891	193	265	1017	87	651	781	277	747	599	431
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.59	0.59	0.59	0.99	0.99	0.99
Sat Flow, veh/h	765	2904	629	887	3313	283	998	1319	467	1234	1012	727
Grp Volume(v), veh/h	101	256	257	111	332	341	26	0	153	146	0	385
Grp Sat Flow(s),veh/h/ln	765	1777	1757	887	1777	1819	998	0	1786	1234	0	1739
Q Serve(g_s), s	12.6	8.9	9.1	10.4	13.1	13.2	1.3	0.0	4.4	1.3	0.0	0.4
Cycle Q Clear(g_c), s	25.8	8.9	9.1	19.5	13.1	13.2	1.7	0.0	4.4	5.6	0.0	0.4
Prop In Lane	1.00		0.36	1.00		0.16	1.00		0.26	1.00		0.42
Lane Grp Cap(c), veh/h	209	545	539	265	545	558	651	0	1058	747	0	1030
V/C Ratio(X)	0.48	0.47	0.48	0.42	0.61	0.61	0.04	0.00	0.14	0.20	0.00	0.37
Avail Cap(c_a), veh/h	303	764	755	374	764	782	651	0	1058	747	0	1030
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.99	0.99	0.99	0.77	0.77	0.77	1.00	0.00	1.00	0.92	0.00	0.92
Uniform Delay (d), s/veh	25.8	17.0	17.0	22.3	17.8	17.8	9.9	0.0	10.4	0.5	0.0	0.3
Incr Delay (d2), s/veh	3.6	1.3	1.4	1.7	1.8	1.8	0.1	0.0	0.3	0.5	0.0	1.0
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(95%),veh/ln	3.9	5.8	5.8	3.4	7.2	7.4	0.5	0.0	3.2	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	18.3	18.4	24.1	19.6	19.6	10.0	0.0	10.6	1.0	0.0	1.2
LnGrp LOS	C	B	B	C	B	B	B	A	B	A	A	A
Approach Vol, veh/h	614			784			179			531		
Approach Delay, s/veh	20.2			20.2			10.6			1.2		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	73.0			41.0			73.0			41.0		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	53.5			49.0			53.5			49.0		
Max Q Clear Time (g_c+I1), s	6.4			27.8			7.6			21.5		
Green Ext Time (p_c), s	2.2			7.1			7.1			10.3		
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											

Timings

5: N Weber St & E Boulder St

04-25-2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	175	57	107	103	9	244
Future Volume (vph)	175	57	107	103	9	244
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	9.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	51.0	51.0	63.0	63.0	63.0	63.0
Total Split (%)	44.7%	44.7%	55.3%	55.3%	55.3%	55.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	22.4	21.4	81.6	81.6	81.6	81.6
Actuated g/C Ratio	0.20	0.19	0.72	0.72	0.72	0.72
v/c Ratio	0.63	0.20	0.12	0.13	0.01	0.22
Control Delay	53.5	19.0	6.1	2.6	5.3	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	19.0	6.1	2.6	5.3	6.2
LOS	D	B	A	A	A	A
Approach Delay	45.1		4.4			6.2
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 18.0

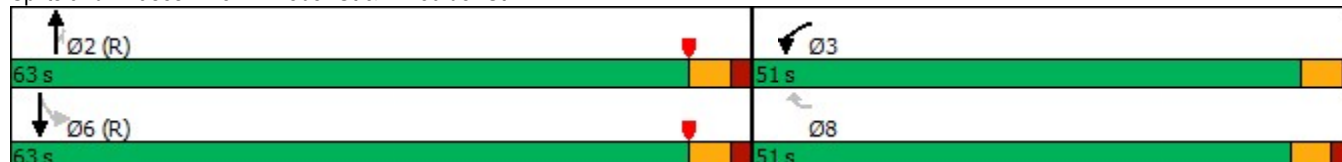
Intersection LOS: B

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-25-2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	175	57	107	103	9	244
Future Volume (veh/h)	175	57	107	103	9	244
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	71	160	154	11	294
Peak Hour Factor	0.80	0.80	0.67	0.67	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	259	230	1435	1216	880	1435
Arrive On Green	0.15	0.15	1.00	1.00	0.77	0.77
Sat Flow, veh/h	1781	1585	1870	1585	1066	1870
Grp Volume(v), veh/h	219	71	160	154	11	294
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1066	1870
Q Serve(g_s), s	13.7	4.6	0.0	0.0	0.3	5.0
Cycle Q Clear(g_c), s	13.7	4.6	0.0	0.0	0.3	5.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	259	230	1435	1216	880	1435
V/C Ratio(X)	0.85	0.31	0.11	0.13	0.01	0.20
Avail Cap(c_a), veh/h	727	647	1435	1216	880	1435
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	47.5	43.6	0.0	0.0	3.1	3.7
Incr Delay (d2), s/veh	5.8	0.6	0.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	3.3	0.1	0.1	0.1	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.3	44.2	0.1	0.2	3.2	4.0
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	290		314			305
Approach Delay, s/veh	51.0		0.2			4.0
Approach LOS	D		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	92.9		92.9		21.1	
Change Period (Y+Rc), s	5.5		5.5		4.5	
Max Green Setting (Gmax), s	57.5		57.5		46.5	
Max Q Clear Time (g_c+l1), s	2.0		7.0		15.7	
Green Ext Time (p_c), s	3.4		4.1		0.9	
Intersection Summary						
HCM 6th Ctrl Delay			17.7			
HCM 6th LOS			B			

HCM 6th TWSC
6: N Weber St & St Vrain St

04-25-2025

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	4	7	27	3	42	108	2	5	545	21
Future Vol, veh/h	2	3	4	7	27	3	42	108	2	5	545	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	53	53	53	67	67	67	73	73	73	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	6	8	10	40	4	58	148	3	7	768	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1085	1064	783	1070	1078	150	798	0	0	151	0	0
Stage 1	797	797	-	266	266	-	-	-	-	-	-	-
Stage 2	288	267	-	804	812	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	194	223	394	199	219	896	824	-	-	1430	-	-
Stage 1	380	399	-	739	689	-	-	-	-	-	-	-
Stage 2	720	688	-	377	392	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	153	204	394	179	200	896	824	-	-	1430	-	-
Mov Cap-2 Maneuver	153	204	-	179	200	-	-	-	-	-	-	-
Stage 1	351	395	-	682	636	-	-	-	-	-	-	-
Stage 2	619	635	-	361	388	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.4		28.3		2.7		0.1	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	824	-	-	237 209	1430	-	-
HCM Lane V/C Ratio	0.07	-	-	0.072 0.264	0.005	-	-
HCM Control Delay (s)	9.7	0	-	21.4 28.3	7.5	0	-
HCM Lane LOS	A	A	-	C D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2 1	0	-	-

Timings

7: Wahsatch Ave & E Boulder St

04-25-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	95	99	198	38	253	108	87	346	6
Future Volume (vph)	2	95	99	198	38	253	108	87	346	6
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	56.0	56.0	56.0	56.0	58.0	58.0	58.0	58.0	58.0	58.0
Total Split (%)	49.1%	49.1%	49.1%	49.1%	50.9%	50.9%	50.9%	50.9%	50.9%	50.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)		27.1		27.1	75.4	75.4	75.4	75.4	75.4	75.4
Actuated g/C Ratio		0.24		0.24	0.66	0.66	0.66	0.66	0.66	0.66
v/c Ratio		0.21		0.67	0.08	0.14	0.13	0.15	0.17	0.01
Control Delay		46.4		40.5	6.1	5.5	0.9	9.1	8.3	0.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		46.4		40.5	6.1	5.5	0.9	9.1	8.3	0.0
LOS		D		D	A	A	A	A	A	A
Approach Delay		46.4		40.5		4.3			8.3	
Approach LOS		D		D		A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 20.0

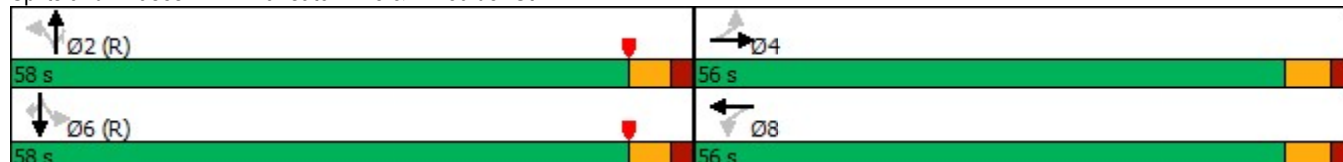
Intersection LOS: B

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	95	13	99	198	76	38	253	108	87	346	6
Future Volume (veh/h)	2	95	13	99	198	76	38	253	108	87	346	6
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	142	19	122	244	94	48	320	137	100	398	7
Peak Hour Factor	0.67	0.67	0.67	0.81	0.81	0.81	0.79	0.79	0.79	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	755	98	210	385	159	661	2322	1036	674	2322	1036
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	0.65	0.65	0.65
Sat Flow, veh/h	14	3076	399	657	1568	648	980	3554	1585	934	3554	1585
Grp Volume(v), veh/h	86	0	78	230	0	230	48	320	137	100	398	7
Grp Sat Flow(s),veh/h/ln	1859	0	1630	1287	0	1585	980	1777	1585	934	1777	1585
Q Serve(g_s), s	0.0	0.0	4.3	15.7	0.0	14.6	0.4	0.0	0.0	4.7	5.0	0.2
Cycle Q Clear(g_c), s	4.2	0.0	4.3	20.0	0.0	14.6	5.4	0.0	0.0	4.7	5.0	0.2
Prop In Lane	0.03		0.24	0.53		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	489	0	400	364	0	389	661	2322	1036	674	2322	1036
V/C Ratio(X)	0.18	0.00	0.19	0.63	0.00	0.59	0.07	0.14	0.13	0.15	0.17	0.01
Avail Cap(c_a), veh/h	841	0	715	647	0	695	661	2322	1036	674	2322	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	34.1	41.4	0.0	37.9	0.2	0.0	0.0	7.7	7.7	6.9
Incr Delay (d2), s/veh	0.4	0.0	0.5	3.8	0.0	3.0	0.2	0.1	0.3	0.5	0.2	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(95%),veh/ln	3.6	0.0	3.2	10.6	0.0	10.1	0.1	0.1	0.1	1.8	3.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.0	34.6	45.2	0.0	41.0	0.4	0.1	0.3	8.1	7.9	6.9
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		164			460			505			505	
Approach Delay, s/veh		34.5			43.1			0.2			7.9	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.0		34.0		80.0		34.0				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		52.5		50.0		52.5		50.0				
Max Q Clear Time (g_c+I1), s		7.4		6.3		7.0		22.0				
Green Ext Time (p_c), s		6.4		2.0		7.2		6.0				
Intersection Summary												
HCM 6th Ctrl Delay				18.1								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-25-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	74	328	29	226	585	87	91	242	171	91	286
Future Volume (vph)	74	328	29	226	585	87	91	242	171	91	286
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	23.0	41.5	41.5	9.5	41.5
Total Split (s)	11.8	36.5	36.5	13.0	37.7	37.7	23.0	53.4	53.4	11.1	41.5
Total Split (%)	10.4%	32.0%	32.0%	11.4%	33.1%	33.1%	20.2%	46.8%	46.8%	9.7%	36.4%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	36.1	28.3	28.3	39.5	30.0	30.0	57.5	49.0	49.0	54.9	47.7
Actuated g/C Ratio	0.32	0.25	0.25	0.35	0.26	0.26	0.50	0.43	0.43	0.48	0.42
v/c Ratio	0.42	0.49	0.07	0.75	0.66	0.17	0.22	0.19	0.26	0.20	0.30
Control Delay	21.5	23.7	0.3	43.5	41.2	0.7	14.9	21.2	3.8	13.0	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	23.7	0.3	43.5	41.2	0.7	14.9	21.2	3.8	13.0	19.6
LOS	C	C	A	D	D	A	B	C	A	B	B
Approach Delay		21.7			37.8			14.1			18.3
Approach LOS		C			D			B			B

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 25.1

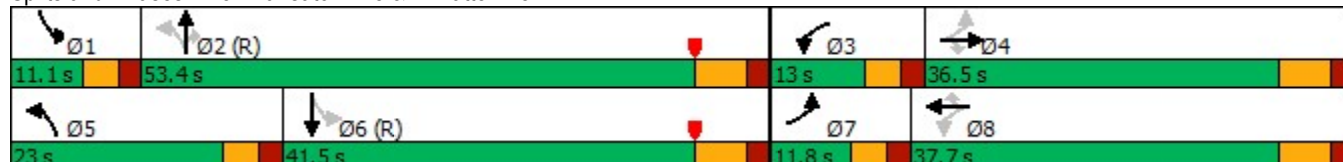
Intersection LOS: C

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	328	29	226	585	87	91	242	171	91	286	75
Future Volume (veh/h)	74	328	29	226	585	87	91	242	171	91	286	75
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	426	38	238	616	92	108	288	204	108	340	89
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	797	356	316	849	379	530	1619	722	518	1273	329
Arrive On Green	0.11	0.45	0.45	0.07	0.24	0.24	0.05	0.46	0.46	0.06	0.61	0.61
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	2796	722
Grp Volume(v), veh/h	96	426	38	238	616	92	108	288	204	108	214	215
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1740
Q Serve(g_s), s	4.7	9.9	1.6	8.0	18.2	5.3	3.7	5.5	9.2	3.7	6.5	6.6
Cycle Q Clear(g_c), s	4.7	9.9	1.6	8.0	18.2	5.3	3.7	5.5	9.2	3.7	6.5	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	221	797	356	316	849	379	530	1619	722	518	809	793
V/C Ratio(X)	0.43	0.53	0.11	0.75	0.73	0.24	0.20	0.18	0.28	0.21	0.26	0.27
Avail Cap(c_a), veh/h	228	935	417	316	973	434	725	1619	722	527	809	793
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	30.7	27.1	24.8	37.3	39.9	35.1	15.2	18.4	19.4	14.9	13.5	13.5
Incr Delay (d2), s/veh	0.5	2.3	0.6	8.8	5.4	1.5	0.1	0.2	1.0	0.1	0.8	0.8
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(95%),veh/ln	3.5	7.0	1.2	6.0	13.4	4.1	2.7	4.1	6.5	2.6	4.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	29.4	25.4	46.2	45.3	36.6	15.2	18.6	20.4	14.9	14.3	14.4
LnGrp LOS	C	C	C	D	D	D	B	B	C	B	B	B
Approach Vol, veh/h	560			946			600			537		
Approach Delay, s/veh	29.4			44.7			18.6			14.5		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	58.4	13.0	32.1	10.5	58.4	11.3	33.7				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	6.1	46.9	8.0	30.0	18.0	35.0	6.8	31.2				
Max Q Clear Time (g_c+I1), s	5.7	11.2	10.0	11.9	5.7	8.6	6.7	20.2				
Green Ext Time (p_c), s	0.0	7.5	0.0	7.1	0.0	6.4	0.0	7.0				
Intersection Summary												
HCM 6th Ctrl Delay	29.4											
HCM 6th LOS	C											

HCM 6th TWSC
1: N Nevada Ave & St Vrain St

04-25-2025

Intersection												
Int Delay, s/veh	10.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	23	25	47	8	50	4	964	10	14	591	20
Future Vol, veh/h	18	23	25	47	8	50	4	964	10	14	591	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	25	27	51	9	54	4	1048	11	15	642	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1220	1750	332	1426	1756	530	664	0	0	1059	0	0
Stage 1	683	683	-	1062	1062	-	-	-	-	-	-	-
Stage 2	537	1067	-	364	694	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	136	85	664	96	84	493	921	-	-	653	-	-
Stage 1	405	447	-	239	298	-	-	-	-	-	-	-
Stage 2	496	297	-	627	442	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	107	81	664	68	80	493	921	-	-	653	-	-
Mov Cap-2 Maneuver	107	81	-	68	80	-	-	-	-	-	-	-
Stage 1	401	430	-	236	295	-	-	-	-	-	-	-
Stage 2	424	294	-	545	426	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	58.5		143.6		0		0.4	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	921	-	-	135 118	653	-	-
HCM Lane V/C Ratio	0.005	-	-	0.531 0.967	0.023	-	-
HCM Control Delay (s)	8.9	0	-	58.5 143.6	10.6	0.2	-
HCM Lane LOS	A	A	-	F F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	2.6 6.3	0.1	-	-

Timings

2: N Nevada Ave & E Boulder St

04-25-2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	98	108	930	609	56
Future Volume (vph)	32	98	108	930	609	56
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	7			2	6	
Permitted Phases		7	2			6
Detector Phase	7	7	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	20.0	20.0	20.0	20.0
Minimum Split (s)	9.5	9.5	47.5	47.5	47.5	47.5
Total Split (s)	29.0	29.0	85.0	85.0	85.0	85.0
Total Split (%)	25.4%	25.4%	74.6%	74.6%	74.6%	74.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	7.9	7.9	96.1	96.1	96.1	96.1
Actuated g/C Ratio	0.07	0.07	0.84	0.84	0.84	0.84
v/c Ratio	0.28	0.51	0.19	0.34	0.22	0.05
Control Delay	55.4	18.4	4.4	4.1	2.0	0.6
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	55.4	18.4	4.4	4.3	2.0	0.6
LOS	E	B	A	A	A	A
Approach Delay	27.5			4.3	1.9	
Approach LOS	C			A	A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 5.1

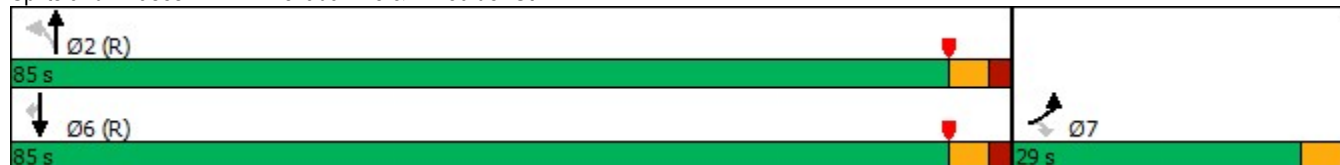
Intersection LOS: A

Intersection Capacity Utilization 50.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: N Nevada Ave & E Boulder St



HCM 6th Signalized Intersection Summary 2: N Nevada Ave & E Boulder St

04-25-2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↕↕	↕↕	↱
Traffic Volume (veh/h)	32	98	108	930	609	56
Future Volume (veh/h)	32	98	108	930	609	56
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	107	117	1011	662	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	153	136	638	2937	2937	1310
Arrive On Green	0.09	0.09	1.00	1.00	0.83	0.83
Sat Flow, veh/h	1781	1585	730	3647	3647	1585
Grp Volume(v), veh/h	35	107	117	1011	662	61
Grp Sat Flow(s),veh/h/ln	1781	1585	730	1777	1777	1585
Q Serve(g_s), s	2.1	7.5	1.1	0.0	4.5	0.8
Cycle Q Clear(g_c), s	2.1	7.5	5.6	0.0	4.5	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	153	136	638	2937	2937	1310
V/C Ratio(X)	0.23	0.79	0.18	0.34	0.23	0.05
Avail Cap(c_a), veh/h	383	341	638	2937	2937	1310
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	48.6	51.1	0.1	0.0	2.1	1.8
Incr Delay (d2), s/veh	0.8	9.6	0.6	0.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	6.1	0.2	0.2	2.2	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.4	60.7	0.7	0.3	2.3	1.9
LnGrp LOS	D	E	A	A	A	A
Approach Vol, veh/h	142			1128	723	
Approach Delay, s/veh	57.9			0.3	2.2	
Approach LOS	E			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	99.7		14.3		99.7	
Change Period (Y+Rc), s	5.5		4.5		5.5	
Max Green Setting (Gmax), s	79.5		24.5		79.5	
Max Q Clear Time (g_c+I1), s	7.6		9.5		6.5	
Green Ext Time (p_c), s	41.6		0.3		21.6	
Intersection Summary						
HCM 6th Ctrl Delay			5.1			
HCM 6th LOS			A			

Timings

3: N Nevada Ave & E Platte Ave

04-25-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	392	485	134	25	904	328	172	483	44
Future Volume (vph)	392	485	134	25	904	328	172	483	44
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	45.5	45.5	45.5	68.5	68.5	68.5	68.5	68.5	68.5
Total Split (%)	39.9%	39.9%	39.9%	60.1%	60.1%	60.1%	60.1%	60.1%	60.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	29.7	29.7	29.7	69.8	69.8	69.8	69.8	69.8	69.8
Actuated g/C Ratio	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
v/c Ratio	0.52	0.57	0.31	0.05	0.45	0.35	0.68	0.24	0.05
Control Delay	36.5	48.8	31.2	11.2	13.6	8.0	40.9	15.6	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	48.8	31.2	11.2	13.6	8.0	40.9	15.6	7.7
LOS	D	D	C	B	B	A	D	B	A
Approach Delay	36.5	45.0			12.1			21.4	
Approach LOS	D	D			B			C	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 24.5

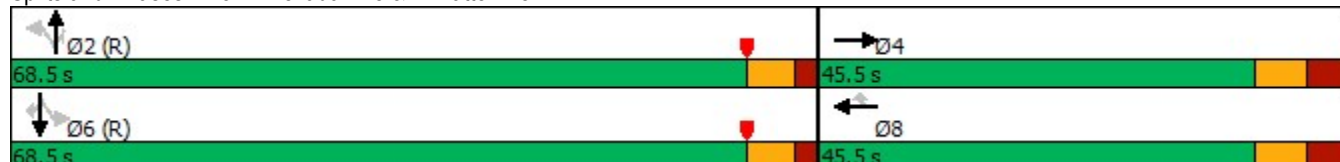
Intersection LOS: C

Intersection Capacity Utilization 75.4%

ICU Level of Service D

Analysis Period (min) 15

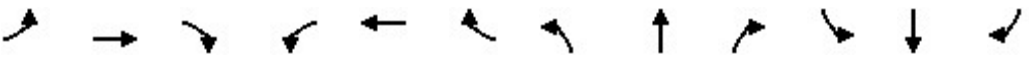
Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

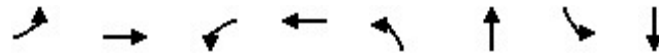
04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
Future Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	426	53	0	527	146	27	983	357	187	525	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	693	86	0	774	345	511	2328	1038	277	2328	1038
Arrive On Green	0.00	0.22	0.22	0.00	0.44	0.44	0.66	0.66	0.66	0.22	0.22	0.22
Sat Flow, veh/h	0	3276	394	0	3647	1585	839	3554	1585	408	3554	1585
Grp Volume(v), veh/h	0	237	242	0	527	146	27	983	357	187	525	48
Grp Sat Flow(s),veh/h/ln	0	1777	1799	0	1777	1585	839	1777	1585	408	1777	1585
Q Serve(g_s), s	0.0	13.7	13.9	0.0	13.6	7.3	1.8	15.0	11.4	50.9	13.9	2.7
Cycle Q Clear(g_c), s	0.0	13.7	13.9	0.0	13.6	7.3	15.6	15.0	11.4	66.0	13.9	2.7
Prop In Lane	0.00		0.22	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	387	392	0	774	345	511	2328	1038	277	2328	1038
V/C Ratio(X)	0.00	0.61	0.62	0.00	0.68	0.42	0.05	0.42	0.34	0.68	0.23	0.05
Avail Cap(c_a), veh/h	0	577	584	0	1153	514	511	2328	1038	277	2328	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.90	0.90	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	0.0	40.2	40.3	0.0	29.0	27.2	12.8	9.4	8.8	48.6	20.9	16.5
Incr Delay (d2), s/veh	0.0	5.6	5.7	0.0	3.4	2.7	0.2	0.6	0.9	12.2	0.2	0.1
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(95%),veh/ln	0.0	10.9	11.1	0.0	8.6	5.0	0.7	9.7	7.3	10.6	10.9	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	45.8	46.0	0.0	32.4	29.9	13.0	9.9	9.7	60.8	21.1	16.6
LnGrp LOS	A	D	D	A	C	C	B	A	A	E	C	B
Approach Vol, veh/h		479			673			1367			760	
Approach Delay, s/veh		45.9			31.9			9.9			30.6	
Approach LOS		D			C			A			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.7		33.3		80.7		33.3				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		62.5		37.0		62.5		37.0				
Max Q Clear Time (g_c+I1), s		17.6		15.9		68.0		15.6				
Green Ext Time (p_c), s		29.5		6.7		0.0		9.3				
Intersection Summary												
HCM 6th Ctrl Delay				24.5								
HCM 6th LOS				C								

Timings

4: N Weber St & E Platte Ave

04-25-2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	116	745	64	510	25	417	44	280
Future Volume (vph)	116	745	64	510	25	417	44	280
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5
Total Split (s)	53.0	53.0	53.0	53.0	61.0	61.0	61.0	61.0
Total Split (%)	46.5%	46.5%	46.5%	46.5%	53.5%	53.5%	53.5%	53.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	41.2	41.2	41.2	41.2	61.3	61.3	61.3	61.3
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.54
v/c Ratio	0.55	0.66	0.55	0.45	0.06	0.50	0.13	0.41
Control Delay	30.9	25.3	34.6	17.6	15.3	19.8	18.6	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	30.9	25.3	34.6	17.6	15.3	19.8	18.6	21.1
LOS	C	C	C	B	B	B	B	C
Approach Delay		26.1		19.5		19.6		20.8
Approach LOS		C		B		B		C

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 22.2

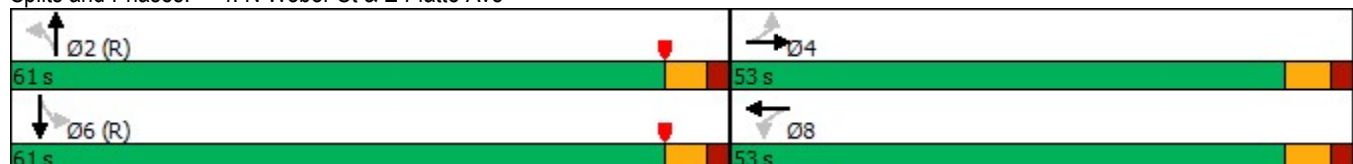
Intersection LOS: C

Intersection Capacity Utilization 89.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: N Weber St & E Platte Ave



HCM 6th Signalized Intersection Summary

4: N Weber St & E Platte Ave

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	116	745	32	64	510	20	25	417	38	44	280	84
Future Volume (veh/h)	116	745	32	64	510	20	25	417	38	44	280	84
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	810	35	70	554	22	27	453	41	48	304	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	1120	48	172	1124	45	633	974	88	444	797	238
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.58	0.58	0.58	1.00	1.00	1.00
Sat Flow, veh/h	837	3470	150	652	3484	138	989	1690	153	903	1382	414
Grp Volume(v), veh/h	126	415	430	70	282	294	27	0	494	48	0	395
Grp Sat Flow(s),veh/h/ln	837	1777	1843	652	1777	1845	989	0	1843	903	0	1796
Q Serve(g_s), s	12.8	17.7	17.7	10.4	9.4	9.4	1.4	0.0	17.7	1.8	0.0	0.0
Cycle Q Clear(g_c), s	22.2	17.7	17.7	28.1	9.4	9.4	1.4	0.0	17.7	19.5	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.07	1.00		0.08	1.00		0.23
Lane Grp Cap(c), veh/h	264	573	595	172	573	596	633	0	1062	444	0	1035
V/C Ratio(X)	0.48	0.72	0.72	0.41	0.49	0.49	0.04	0.00	0.47	0.11	0.00	0.38
Avail Cap(c_a), veh/h	339	733	760	231	733	761	633	0	1062	444	0	1035
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.86	0.86	0.86	0.92	0.92	0.92	1.00	0.00	1.00	0.96	0.00	0.96
Uniform Delay (d), s/veh	21.1	16.8	16.8	26.2	15.4	15.4	10.5	0.0	14.0	2.6	0.0	0.0
Incr Delay (d2), s/veh	2.4	3.7	3.5	3.0	1.3	1.2	0.1	0.0	1.5	0.5	0.0	1.0
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(95%),veh/ln	3.9	8.7	8.9	2.8	5.8	6.0	0.6	0.0	12.0	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	20.5	20.4	29.2	16.6	16.6	10.6	0.0	15.4	3.1	0.0	1.0
LnGrp LOS	C	C	C	C	B	B	B	A	B	A	A	A
Approach Vol, veh/h	971			646			521			443		
Approach Delay, s/veh	20.8			18.0			15.2			1.3		
Approach LOS	C			B			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	71.2			42.8			71.2			42.8		
Change Period (Y+Rc), s	5.5			6.0			5.5			6.0		
Max Green Setting (Gmax), s	55.5			47.0			55.5			47.0		
Max Q Clear Time (g_c+I1), s	19.7			24.2			21.5			30.1		
Green Ext Time (p_c), s	7.5			11.9			6.0			6.7		
Intersection Summary												
HCM 6th Ctrl Delay	15.6											
HCM 6th LOS	B											

Timings

5: N Weber St & E Boulder St

04-25-2025

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑	↘	↙	↓
Traffic Volume (vph)	148	79	409	137	25	261
Future Volume (vph)	148	79	409	137	25	261
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases		8		2	6	
Detector Phase	3	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	9.5	43.5	47.5	47.5	47.5	47.5
Total Split (s)	48.0	48.0	66.0	66.0	66.0	66.0
Total Split (%)	42.1%	42.1%	57.9%	57.9%	57.9%	57.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	21.1	20.1	82.9	82.9	82.9	82.9
Actuated g/C Ratio	0.19	0.18	0.73	0.73	0.73	0.73
v/c Ratio	0.49	0.25	0.33	0.13	0.04	0.21
Control Delay	55.2	24.2	4.1	1.4	4.6	5.4
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	55.2	24.2	4.2	1.4	4.6	5.4
LOS	E	C	A	A	A	A
Approach Delay	44.4		3.5			5.4
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 39 (34%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 12.8

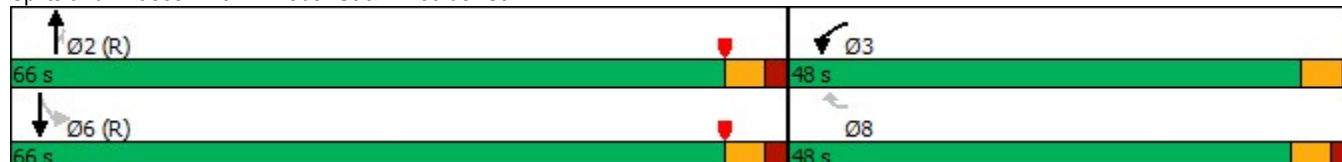
Intersection LOS: B

Intersection Capacity Utilization 47.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: N Weber St & E Boulder St



HCM 6th Signalized Intersection Summary

5: N Weber St & E Boulder St

04-25-2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	79	409	137	25	261
Future Volume (veh/h)	148	79	409	137	25	261
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	86	445	149	27	284
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	200	178	1496	1268	722	1496
Arrive On Green	0.11	0.11	1.00	1.00	0.80	0.80
Sat Flow, veh/h	1781	1585	1870	1585	823	1870
Grp Volume(v), veh/h	161	86	445	149	27	284
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	823	1870
Q Serve(g_s), s	10.1	5.8	0.0	0.0	0.8	4.1
Cycle Q Clear(g_c), s	10.1	5.8	0.0	0.0	0.8	4.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	200	178	1496	1268	722	1496
V/C Ratio(X)	0.80	0.48	0.30	0.12	0.04	0.19
Avail Cap(c_a), veh/h	680	605	1496	1268	722	1496
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	49.4	47.5	0.0	0.0	2.4	2.7
Incr Delay (d2), s/veh	5.5	1.5	0.4	0.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	4.3	0.3	0.1	0.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.8	49.0	0.4	0.2	2.5	3.0
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	247		594			311
Approach Delay, s/veh	52.8		0.4			2.9
Approach LOS	D		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	96.7		96.7		17.3	
Change Period (Y+Rc), s	5.5		5.5		4.5	
Max Green Setting (Gmax), s	60.5		60.5		43.5	
Max Q Clear Time (g_c+I1), s	2.0		6.1		12.1	
Green Ext Time (p_c), s	8.3		4.2		0.8	
Intersection Summary						
HCM 6th Ctrl Delay			12.3			
HCM 6th LOS			B			

HCM 6th TWSC
6: N Weber St & St Vrain St

04-25-2025

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	12	20	3	32	2	57	429	4	6	259	13
Future Vol, veh/h	11	12	20	3	32	2	57	429	4	6	259	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	13	22	3	35	2	62	466	4	7	282	14
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	914	897	289	913	902	468	296	0	0	470	0	0
Stage 1	303	303	-	592	592	-	-	-	-	-	-	-
Stage 2	611	594	-	321	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	254	279	750	254	277	595	1265	-	-	1092	-	-
Stage 1	706	664	-	493	494	-	-	-	-	-	-	-
Stage 2	481	493	-	691	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	214	259	750	224	257	595	1265	-	-	1092	-	-
Mov Cap-2 Maneuver	214	259	-	224	257	-	-	-	-	-	-	-
Stage 1	659	659	-	460	461	-	-	-	-	-	-	-
Stage 2	414	460	-	652	654	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17		21.2		0.9		0.2					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1265	-	-	346	262	1092	-	-				
HCM Lane V/C Ratio	0.049	-	-	0.135	0.154	0.006	-	-				
HCM Control Delay (s)	8	0	-	17	21.2	8.3	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.5	0	-	-				

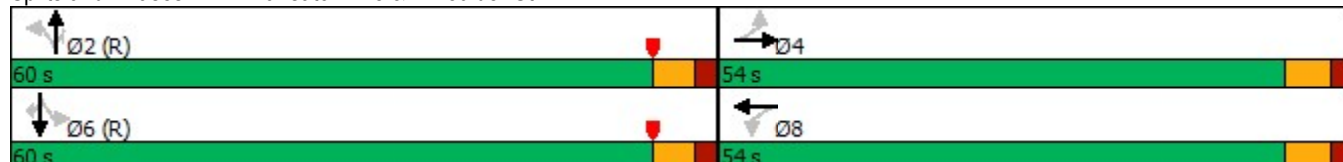
Timings

7: Wahsatch Ave & E Boulder St

04-25-2025

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	10	119	106	204	15	594	121	44	312	12
Future Volume (vph)	10	119	106	204	15	594	121	44	312	12
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.0	45.0	45.0	45.0	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	54.0	54.0	54.0	54.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	47.4%	47.4%	47.4%	47.4%	52.6%	52.6%	52.6%	52.6%	52.6%	52.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		26.5		26.5	76.0	76.0	76.0	76.0	76.0	76.0
Actuated g/C Ratio		0.23		0.23	0.67	0.67	0.67	0.67	0.67	0.67
v/c Ratio		0.22		0.67	0.02	0.27	0.12	0.10	0.14	0.01
Control Delay		34.5		38.9	3.1	2.9	0.4	8.9	7.9	1.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		34.5		38.9	3.1	2.9	0.4	8.9	7.9	1.2
LOS		C		D	A	A	A	A	A	A
Approach Delay		34.5		38.9		2.5			7.8	
Approach LOS		C		D		A			A	
Intersection Summary										
Cycle Length: 114										
Actuated Cycle Length: 114										
Offset: 39 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow										
Natural Cycle: 95										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.67										
Intersection Signal Delay: 15.8					Intersection LOS: B					
Intersection Capacity Utilization 84.5%					ICU Level of Service E					
Analysis Period (min) 15										

Splits and Phases: 7: Wahsatch Ave & E Boulder St



HCM 6th Signalized Intersection Summary

7: Wahsatch Ave & E Boulder St

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	119	22	106	204	118	15	594	121	44	312	12
Future Volume (veh/h)	10	119	22	106	204	118	15	594	121	44	312	12
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	129	24	115	222	128	16	646	132	48	339	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	630	116	196	341	212	699	2324	1036	517	2324	1036
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	0.65	0.65	0.65
Sat Flow, veh/h	105	2570	475	610	1391	863	1029	3554	1585	694	3554	1585
Grp Volume(v), veh/h	82	0	82	236	0	229	16	646	132	48	339	13
Grp Sat Flow(s),veh/h/ln	1533	0	1617	1317	0	1547	1029	1777	1585	694	1777	1585
Q Serve(g_s), s	0.2	0.0	4.6	15.5	0.0	15.0	0.1	0.0	0.0	2.9	4.2	0.3
Cycle Q Clear(g_c), s	15.2	0.0	4.6	20.0	0.0	15.0	4.3	0.0	0.0	2.9	4.2	0.3
Prop In Lane	0.13		0.29	0.49		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	0	396	370	0	379	699	2324	1036	517	2324	1036
V/C Ratio(X)	0.20	0.00	0.21	0.64	0.00	0.60	0.02	0.28	0.13	0.09	0.15	0.01
Avail Cap(c_a), veh/h	708	0	681	633	0	651	699	2324	1036	517	2324	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	34.2	41.3	0.0	38.1	0.1	0.0	0.0	7.3	7.5	6.9
Incr Delay (d2), s/veh	0.5	0.0	0.5	3.9	0.0	3.3	0.1	0.3	0.2	0.4	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(95%),veh/ln	3.4	0.0	3.4	10.8	0.0	10.1	0.0	0.2	0.1	0.8	2.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	34.7	45.2	0.0	41.4	0.2	0.3	0.2	7.7	7.7	6.9
LnGrp LOS	C	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		164			465			794			400	
Approach Delay, s/veh		34.6			43.3			0.3			7.7	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.0		34.0		80.0		34.0				
Change Period (Y+Rc), s		5.5		6.0		5.5		6.0				
Max Green Setting (Gmax), s		54.5		48.0		54.5		48.0				
Max Q Clear Time (g_c+I1), s		6.3		17.2		6.2		22.0				
Green Ext Time (p_c), s		12.2		1.9		5.8		5.9				
Intersection Summary												
HCM 6th Ctrl Delay				16.0								
HCM 6th LOS				B								

Timings

8: Wahsatch Ave & E Platte Ave

04-25-2025

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	85	786	33	161	497	76	78	562	370	72	306
Future Volume (vph)	85	786	33	161	497	76	78	562	370	72	306
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4		3	8		5	2		1	6
Permitted Phases	4		4	8		8	2		2	6	
Detector Phase	7	4	4	3	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5	36.5	9.5	41.5	41.5	9.5	41.5
Total Split (s)	10.9	41.0	41.0	18.0	48.1	48.1	10.0	45.0	45.0	10.0	45.0
Total Split (%)	9.6%	36.0%	36.0%	15.8%	42.2%	42.2%	8.8%	39.5%	39.5%	8.8%	39.5%
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	43.3	36.3	36.3	51.6	40.7	40.7	47.3	41.8	41.8	47.3	41.8
Actuated g/C Ratio	0.38	0.32	0.32	0.45	0.36	0.36	0.41	0.37	0.37	0.41	0.37
v/c Ratio	0.27	0.76	0.06	0.71	0.43	0.13	0.22	0.47	0.58	0.26	0.33
Control Delay	7.7	15.3	0.2	34.2	28.9	1.5	20.6	30.2	20.3	19.3	25.0
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	15.4	0.2	34.2	28.9	1.5	20.6	30.2	20.3	19.3	25.0
LOS	A	B	A	C	C	A	C	C	C	B	C
Approach Delay		14.1			27.2			25.8			24.1
Approach LOS		B			C			C			C

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 30 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 22.5

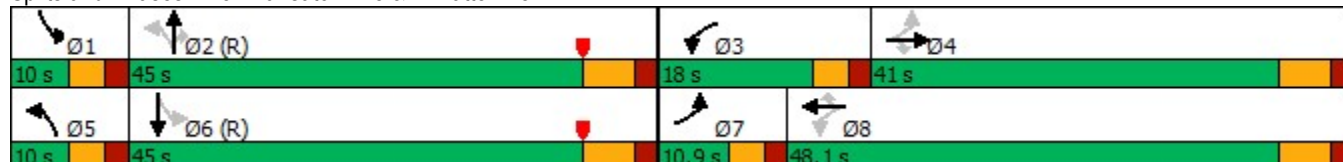
Intersection LOS: C

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Wahsatch Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

8: Wahsatch Ave & E Platte Ave

04-25-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	786	33	161	497	76	78	562	370	72	306	77
Future Volume (veh/h)	85	786	33	161	497	76	78	562	370	72	306	77
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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	854	36	175	540	83	85	611	402	78	333	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	1007	449	267	1129	504	480	1383	617	281	1090	271
Arrive On Green	0.10	0.57	0.57	0.09	0.32	0.32	0.04	0.39	0.39	0.08	0.77	0.77
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	2820	701
Grp Volume(v), veh/h	92	854	36	175	540	83	85	611	402	78	208	209
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1744
Q Serve(g_s), s	4.1	22.9	1.2	7.7	13.9	4.3	3.3	14.5	23.7	3.0	4.0	4.1
Cycle Q Clear(g_c), s	4.1	22.9	1.2	7.7	13.9	4.3	3.3	14.5	23.7	3.0	4.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	311	1007	449	267	1129	504	480	1383	617	281	687	674
V/C Ratio(X)	0.30	0.85	0.08	0.66	0.48	0.16	0.18	0.44	0.65	0.28	0.30	0.31
Avail Cap(c_a), veh/h	312	1075	480	318	1297	578	481	1383	617	287	687	674
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	25.7	22.6	17.9	28.0	31.3	28.0	19.6	25.7	28.5	19.7	8.4	8.4
Incr Delay (d2), s/veh	0.1	6.6	0.3	2.2	1.5	0.7	0.1	1.0	5.3	0.2	1.1	1.2
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(95%),veh/ln	3.0	11.7	0.9	6.2	10.4	3.2	2.4	10.4	15.0	2.2	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	29.3	18.2	30.2	32.7	28.7	19.6	26.7	33.8	19.9	9.5	9.6
LnGrp LOS	C	C	B	C	C	C	B	C	C	B	A	A
Approach Vol, veh/h	982			798			1098			495		
Approach Delay, s/veh	28.5			31.7			28.7			11.2		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	50.9	14.7	38.8	9.9	50.6	10.8	42.7				
Change Period (Y+Rc), s	5.0	6.5	5.0	6.5	5.0	6.5	5.0	6.5				
Max Green Setting (Gmax), s	5.0	38.5	13.0	34.5	5.0	38.5	5.9	41.6				
Max Q Clear Time (g_c+I1), s	5.0	25.7	9.7	24.9	5.3	6.1	6.1	15.9				
Green Ext Time (p_c), s	0.0	8.7	0.0	7.5	0.0	6.7	0.0	11.5				
Intersection Summary												
HCM 6th Ctrl Delay	26.8											
HCM 6th LOS	C											

Appendix E. Platte Avenue and Nevada Avenue Intersection Level of Service Worksheets

Timings

3: N Nevada Ave & E Platte Ave

04-23-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	90	417	111	9	374	82	34	344	25
Future Volume (vph)	90	417	111	9	374	82	34	344	25
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	50.0	50.0	50.0	64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	27.2	27.2	27.2	72.3	72.3	72.3	72.3	72.3	72.3
Actuated g/C Ratio	0.24	0.24	0.24	0.63	0.63	0.63	0.63	0.63	0.63
v/c Ratio	0.17	0.55	0.28	0.02	0.19	0.09	0.06	0.17	0.03
Control Delay	27.0	44.9	23.1	10.0	9.7	3.2	8.1	7.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	44.9	23.1	10.0	9.7	3.2	8.1	7.6	0.6
LOS	C	D	C	A	A	A	A	A	A
Approach Delay	27.0	40.3			8.5			7.2	
Approach LOS	C	D			A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 20.7

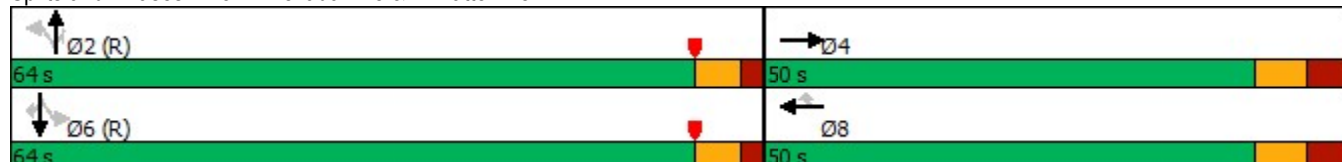
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

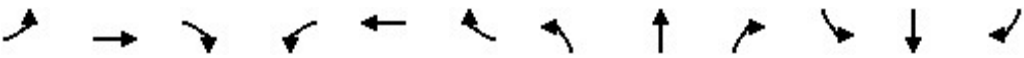
Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	90	20	0	417	111	9	374	82	34	344	25
Future Volume (veh/h)	0	90	20	0	417	111	9	374	82	34	344	25
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	114	25	0	463	123	10	425	93	37	378	27
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	590	126	0	720	321	720	2382	1062	616	2382	1062
Arrive On Green	0.00	0.20	0.20	0.00	0.41	0.41	0.67	0.67	0.67	1.00	1.00	1.00
Sat Flow, veh/h	0	3007	622	0	3647	1585	980	3554	1585	883	3554	1585
Grp Volume(v), veh/h	0	68	71	0	463	123	10	425	93	37	378	27
Grp Sat Flow(s),veh/h/ln	0	1777	1758	0	1777	1585	980	1777	1585	883	1777	1585
Q Serve(g_s), s	0.0	3.6	3.8	0.0	11.9	6.2	0.4	5.1	2.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.6	3.8	0.0	11.9	6.2	0.4	5.1	2.3	5.4	0.0	0.0
Prop In Lane	0.00		0.35	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	360	356	0	720	321	720	2382	1062	616	2382	1062
V/C Ratio(X)	0.00	0.19	0.20	0.00	0.64	0.38	0.01	0.18	0.09	0.06	0.16	0.03
Avail Cap(c_a), veh/h	0	647	640	0	1294	577	720	2382	1062	616	2382	1062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	37.7	37.8	0.0	30.6	28.9	6.3	7.0	6.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	1.0	0.0	2.6	2.1	0.0	0.2	0.2	0.2	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	0.0	1.7	1.8	0.0	4.6	2.4	0.1	1.9	0.8	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	38.6	38.7	0.0	33.2	31.0	6.3	7.2	6.7	0.4	0.1	0.0
LnGrp LOS	A	D	D	A	C	C	A	A	A	A	A	A
Approach Vol, veh/h		139			586			528			442	
Approach Delay, s/veh		38.7			32.8			7.1			0.2	
Approach LOS		D			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.4		31.6		82.4		31.6				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		58.0		41.5		58.0		41.5				
Max Q Clear Time (g_c+l1), s		7.1		5.8		7.4		13.9				
Green Ext Time (p_c), s		10.0		2.1		8.4		9.1				
Intersection Summary												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

3: N Nevada Ave & E Platte Ave

04-23-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	304	385	46	23	872	244	65	495	40
Future Volume (vph)	304	385	46	23	872	244	65	495	40
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	50.0	50.0	50.0	64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	24.7	24.7	24.7	74.8	74.8	74.8	74.8	74.8	74.8
Actuated g/C Ratio	0.22	0.22	0.22	0.66	0.66	0.66	0.66	0.66	0.66
v/c Ratio	0.49	0.55	0.14	0.05	0.41	0.25	0.22	0.23	0.04
Control Delay	39.1	53.5	32.9	8.6	10.4	5.9	8.6	6.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	53.5	32.9	8.6	10.4	5.9	8.6	6.7	0.9
LOS	D	D	C	A	B	A	A	A	A
Approach Delay	39.1	51.3			9.4			6.5	
Approach LOS	D	D			A			A	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 20.0

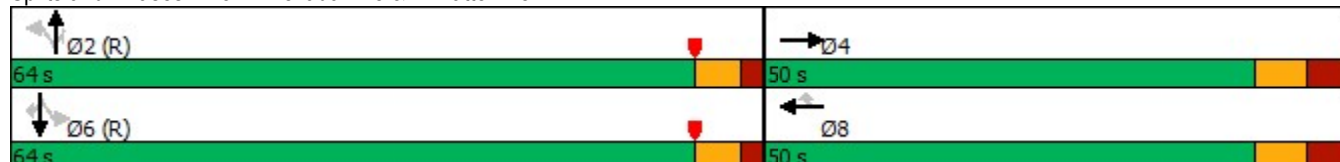
Intersection LOS: B

Intersection Capacity Utilization 74.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-23-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	304	44	0	385	46	23	872	244	65	495	40
Future Volume (veh/h)	0	304	44	0	385	46	23	872	244	65	495	40
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	330	48	0	418	50	25	948	265	71	538	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	566	82	0	646	288	639	2456	1095	330	2456	1095
Arrive On Green	0.00	0.18	0.18	0.00	0.36	0.36	0.69	0.69	0.69	1.00	1.00	1.00
Sat Flow, veh/h	0	3211	449	0	3647	1585	833	3554	1585	460	3554	1585
Grp Volume(v), veh/h	0	187	191	0	418	50	25	948	265	71	538	43
Grp Sat Flow(s),veh/h/ln	0	1777	1790	0	1777	1585	833	1777	1585	460	1777	1585
Q Serve(g_s), s	0.0	11.0	11.2	0.0	11.2	2.4	1.1	12.8	7.1	3.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.0	11.2	0.0	11.2	2.4	1.1	12.8	7.1	16.5	0.0	0.0
Prop In Lane	0.00		0.25	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	323	325	0	646	288	639	2456	1095	330	2456	1095
V/C Ratio(X)	0.00	0.58	0.59	0.00	0.65	0.17	0.04	0.39	0.24	0.22	0.22	0.04
Avail Cap(c_a), veh/h	0	647	651	0	1294	577	639	2456	1095	330	2456	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.88	0.88	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	0.0	42.7	42.7	0.0	33.3	30.5	5.6	7.4	6.5	1.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.8	6.0	0.0	3.5	0.9	0.1	0.5	0.5	1.5	0.2	0.1
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	0.0	5.4	5.5	0.0	4.5	1.0	0.2	4.8	2.4	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	48.5	48.8	0.0	36.7	31.4	5.7	7.9	7.1	2.8	0.2	0.1
LnGrp LOS	A	D	D	A	D	C	A	A	A	A	A	A
Approach Vol, veh/h		378			468			1238			652	
Approach Delay, s/veh		48.6			36.1			7.7			0.5	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.8		29.2		84.8		29.2				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		58.0		41.5		58.0		41.5				
Max Q Clear Time (g_c+I1), s		14.8		13.2		18.5		13.2				
Green Ext Time (p_c), s		26.3		5.9		13.5		7.5				
Intersection Summary												
HCM 6th Ctrl Delay				16.5								
HCM 6th LOS				B								

Timings

3: N Nevada Ave & E Platte Ave

04-24-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	130	522	202	10	284	216	92	334	25
Future Volume (vph)	130	522	202	10	284	216	92	334	25
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	66.0	66.0	66.0	48.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	57.9%	57.9%	57.9%	42.1%	42.1%	42.1%	42.1%	42.1%	42.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	35.4	35.4	35.4	64.1	64.1	64.1	64.1	64.1	64.1
Actuated g/C Ratio	0.31	0.31	0.31	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.18	0.53	0.38	0.02	0.16	0.25	0.17	0.18	0.03
Control Delay	23.5	34.1	16.3	15.3	13.9	4.0	20.1	17.5	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	34.1	16.3	15.3	13.9	4.0	20.1	17.5	5.5
LOS	C	C	B	B	B	A	C	B	A
Approach Delay	23.5	29.1			9.7			17.3	
Approach LOS	C	C			A			B	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 20.4

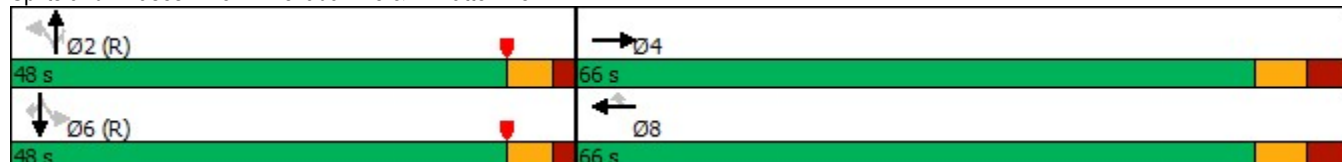
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
Future Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	165	28	0	580	224	11	323	245	101	367	27
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	808	135	0	943	420	600	2159	963	542	2159	963
Arrive On Green	0.00	0.27	0.27	0.00	0.53	0.53	0.61	0.61	0.61	0.41	0.41	0.41
Sat Flow, veh/h	0	3142	508	0	3647	1585	990	3554	1585	843	3554	1585
Grp Volume(v), veh/h	0	95	98	0	580	224	11	323	245	101	367	27
Grp Sat Flow(s),veh/h/ln	0	1777	1779	0	1777	1585	990	1777	1585	843	1777	1585
Q Serve(g_s), s	0.0	4.7	4.9	0.0	13.0	10.5	0.6	4.5	8.2	9.2	7.5	1.2
Cycle Q Clear(g_c), s	0.0	4.7	4.9	0.0	13.0	10.5	8.1	4.5	8.2	13.7	7.5	1.2
Prop In Lane	0.00		0.29	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	471	472	0	943	420	600	2159	963	542	2159	963
V/C Ratio(X)	0.00	0.20	0.21	0.00	0.62	0.53	0.02	0.15	0.25	0.19	0.17	0.03
Avail Cap(c_a), veh/h	0	896	897	0	1792	799	600	2159	963	542	2159	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.76	0.76	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	32.5	32.6	0.0	22.7	22.1	12.1	9.7	10.4	18.8	15.5	13.6
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.8	2.9	0.1	0.1	0.6	0.7	0.2	0.1
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	0.0	2.2	2.2	0.0	4.5	3.6	0.1	1.8	3.0	2.1	3.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	33.3	33.4	0.0	24.5	25.0	12.2	9.8	11.0	19.6	15.7	13.7
LnGrp LOS	A	C	C	A	C	C	B	A	B	B	B	B
Approach Vol, veh/h		193			804			579			495	
Approach Delay, s/veh		33.3			24.7			10.4			16.3	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.3		38.7		75.3		38.7				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		42.0		57.5		42.0		57.5				
Max Q Clear Time (g_c+I1), s		10.2		6.9		15.7		15.0				
Green Ext Time (p_c), s		8.8		3.2		7.8		15.3				
Intersection Summary												
HCM 6th Ctrl Delay				19.5								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

3: N Nevada Ave & E Platte Ave

04-24-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (vph)	392	485	134	25	904	328	172	483	44
Future Volume (vph)	392	485	134	25	904	328	172	483	44
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	45.5	45.5	45.5	68.5	68.5	68.5	68.5	68.5	68.5
Total Split (%)	39.9%	39.9%	39.9%	60.1%	60.1%	60.1%	60.1%	60.1%	60.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	29.7	29.7	29.7	69.8	69.8	69.8	69.8	69.8	69.8
Actuated g/C Ratio	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
v/c Ratio	0.52	0.57	0.31	0.05	0.45	0.35	0.68	0.24	0.05
Control Delay	36.5	48.8	31.2	11.2	13.6	8.0	40.0	15.5	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	48.8	31.2	11.2	13.6	8.0	40.0	15.5	8.0
LOS	D	D	C	B	B	A	D	B	A
Approach Delay	36.5	45.0			12.1			21.1	
Approach LOS	D	D			B			C	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 24.5

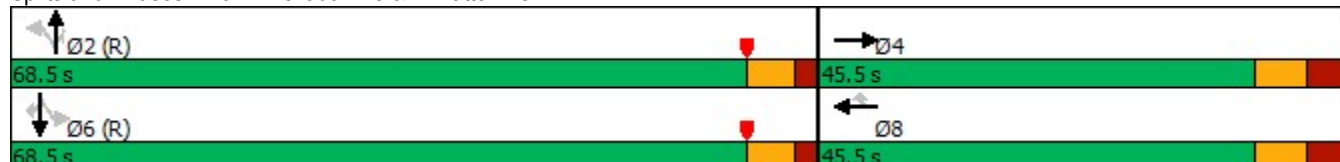
Intersection LOS: C

Intersection Capacity Utilization 75.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
Future Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	426	53	0	527	146	27	983	357	187	525	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	693	86	0	774	345	511	2328	1038	277	2328	1038
Arrive On Green	0.00	0.22	0.22	0.00	0.44	0.44	0.66	0.66	0.66	0.22	0.22	0.22
Sat Flow, veh/h	0	3276	394	0	3647	1585	839	3554	1585	408	3554	1585
Grp Volume(v), veh/h	0	237	242	0	527	146	27	983	357	187	525	48
Grp Sat Flow(s),veh/h/ln	0	1777	1799	0	1777	1585	839	1777	1585	408	1777	1585
Q Serve(g_s), s	0.0	13.7	13.9	0.0	13.6	7.3	1.8	15.0	11.4	50.9	13.9	2.7
Cycle Q Clear(g_c), s	0.0	13.7	13.9	0.0	13.6	7.3	15.6	15.0	11.4	66.0	13.9	2.7
Prop In Lane	0.00		0.22	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	387	392	0	774	345	511	2328	1038	277	2328	1038
V/C Ratio(X)	0.00	0.61	0.62	0.00	0.68	0.42	0.05	0.42	0.34	0.68	0.23	0.05
Avail Cap(c_a), veh/h	0	577	584	0	1153	514	511	2328	1038	277	2328	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.90	0.90	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	0.0	40.2	40.3	0.0	29.0	27.2	12.8	9.4	8.8	48.6	20.9	16.5
Incr Delay (d2), s/veh	0.0	5.6	5.7	0.0	3.4	2.7	0.2	0.6	0.9	12.3	0.2	0.1
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	0.0	6.6	6.8	0.0	5.1	2.8	0.4	5.8	4.1	6.5	6.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	45.8	46.0	0.0	32.4	29.9	13.0	9.9	9.7	60.9	21.1	16.6
LnGrp LOS	A	D	D	A	C	C	B	A	A	E	C	B
Approach Vol, veh/h		479			673			1367			760	
Approach Delay, s/veh		45.9			31.9			9.9			30.6	
Approach LOS		D			C			A			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.7		33.3		80.7		33.3				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		62.5		37.0		62.5		37.0				
Max Q Clear Time (g_c+I1), s		17.6		15.9		68.0		15.6				
Green Ext Time (p_c), s		29.5		6.7		0.0		9.3				
Intersection Summary												
HCM 6th Ctrl Delay				24.5								
HCM 6th LOS				C								

Timings

3: N Nevada Ave & E Platte Ave

04-24-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	130	522	202	10	284	216	92	334	25
Future Volume (vph)	130	522	202	10	284	216	92	334	25
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	66.0	66.0	66.0	48.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	57.9%	57.9%	57.9%	42.1%	42.1%	42.1%	42.1%	42.1%	42.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	48.8	48.8	48.8	50.7	50.7	50.7	50.7	50.7	50.7
Actuated g/C Ratio	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44
v/c Ratio	0.25	0.73	0.31	0.03	0.21	0.30	0.22	0.23	0.04
Control Delay	19.0	28.1	14.3	22.3	21.4	5.7	28.8	25.6	6.4
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	28.5	14.3	22.3	21.4	5.7	28.8	25.6	6.4
LOS	B	C	B	C	C	A	C	C	A
Approach Delay	19.0	24.6			14.8			25.2	
Approach LOS	B	C			B			C	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 21.5

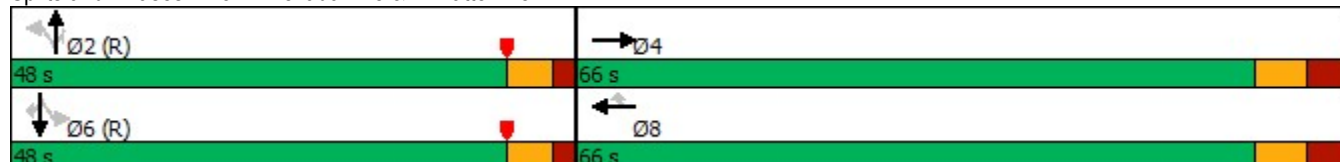
Intersection LOS: C

Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
Future Volume (veh/h)	0	130	22	0	522	202	10	284	216	92	334	25
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	165	28	0	580	224	11	323	245	101	367	27
Peak Hour Factor	0.79	0.79	0.79	0.90	0.90	0.90	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	564	96	0	677	573	481	1816	810	453	1816	810
Arrive On Green	0.00	0.36	0.36	0.00	0.72	0.72	0.51	0.51	0.51	0.17	0.17	0.17
Sat Flow, veh/h	0	1558	264	0	1870	1585	990	3554	1585	843	3554	1585
Grp Volume(v), veh/h	0	0	193	0	580	224	11	323	245	101	367	27
Grp Sat Flow(s),veh/h/ln	0	0	1823	0	1870	1585	990	1777	1585	843	1777	1585
Q Serve(g_s), s	0.0	0.0	8.6	0.0	25.7	6.2	0.7	5.6	10.2	12.0	10.1	1.6
Cycle Q Clear(g_c), s	0.0	0.0	8.6	0.0	25.7	6.2	10.9	5.6	10.2	17.6	10.1	1.6
Prop In Lane	0.00		0.15	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	0	659	0	677	573	481	1816	810	453	1816	810
V/C Ratio(X)	0.00	0.00	0.29	0.00	0.86	0.39	0.02	0.18	0.30	0.22	0.20	0.03
Avail Cap(c_a), veh/h	0	0	919	0	943	799	481	1816	810	453	1816	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.43	0.43	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	0.0	0.0	26.0	0.0	13.6	10.9	19.2	15.0	16.1	33.0	27.4	23.8
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.0	5.3	0.7	0.1	0.2	1.0	1.1	0.2	0.1
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	0.0	0.0	3.9	0.0	6.2	1.9	0.2	2.3	3.9	2.9	4.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	26.9	0.0	18.9	11.6	19.3	15.2	17.1	34.1	27.6	23.9
LnGrp LOS	A	A	C	A	B	B	B	B	B	C	C	C
Approach Vol, veh/h		193			804			579			495	
Approach Delay, s/veh		26.9			16.9			16.1			28.7	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.3		49.7		64.3		49.7				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		42.0		57.5		42.0		57.5				
Max Q Clear Time (g_c+I1), s		12.9		10.6		19.6		27.7				
Green Ext Time (p_c), s		8.5		3.3		7.2		13.5				
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

3: N Nevada Ave & E Platte Ave

04-24-2025



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	392	485	134	25	904	328	172	483	44
Future Volume (vph)	392	485	134	25	904	328	172	483	44
Turn Type	NA	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8			2			6	
Permitted Phases			8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	45.5	45.5	45.5	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (s)	45.5	45.5	45.5	68.5	68.5	68.5	68.5	68.5	68.5
Total Split (%)	39.9%	39.9%	39.9%	60.1%	60.1%	60.1%	60.1%	60.1%	60.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	36.2	36.2	36.2	63.3	63.3	63.3	63.3	63.3	63.3
Actuated g/C Ratio	0.32	0.32	0.32	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.82	0.89	0.28	0.06	0.50	0.38	0.81	0.27	0.05
Control Delay	48.0	58.1	30.2	12.6	16.9	9.5	57.3	18.3	8.2
Queue Delay	54.2	0.6	0.0	0.0	0.0	0.1	2.1	0.0	0.0
Total Delay	102.1	58.8	30.2	12.6	16.9	9.6	59.5	18.3	8.2
LOS	F	E	C	B	B	A	E	B	A
Approach Delay	102.1	52.6			14.9			27.8	
Approach LOS	F	D			B			C	

Intersection Summary

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 34 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 38.4

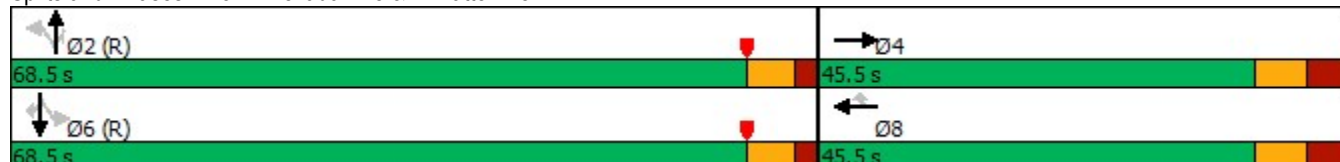
Intersection LOS: D

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: N Nevada Ave & E Platte Ave



HCM 6th Signalized Intersection Summary

3: N Nevada Ave & E Platte Ave

04-24-2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
Future Volume (veh/h)	0	392	49	0	485	134	25	904	328	172	483	44
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	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	426	53	0	527	146	27	983	357	187	525	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	495	62	0	568	481	435	2023	902	228	2023	902
Arrive On Green	0.00	0.30	0.30	0.00	0.61	0.61	0.57	0.57	0.57	0.19	0.19	0.19
Sat Flow, veh/h	0	1631	203	0	1870	1585	839	3554	1585	408	3554	1585
Grp Volume(v), veh/h	0	0	479	0	527	146	27	983	357	187	525	48
Grp Sat Flow(s),veh/h/ln	0	0	1834	0	1870	1585	839	1777	1585	408	1777	1585
Q Serve(g_s), s	0.0	0.0	28.1	0.0	28.9	5.1	2.1	18.8	14.3	46.1	14.4	2.8
Cycle Q Clear(g_c), s	0.0	0.0	28.1	0.0	28.9	5.1	16.5	18.8	14.3	64.9	14.4	2.8
Prop In Lane	0.00		0.11	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	0	557	0	568	481	435	2023	902	228	2023	902
V/C Ratio(X)	0.00	0.00	0.86	0.00	0.93	0.30	0.06	0.49	0.40	0.82	0.26	0.05
Avail Cap(c_a), veh/h	0	0	595	0	607	514	435	2023	902	228	2023	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.62	0.62	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	0.0	0.0	37.4	0.0	21.3	16.6	18.3	14.6	13.6	58.4	25.8	21.1
Incr Delay (d2), s/veh	0.0	0.0	14.8	0.0	16.1	0.8	0.3	0.8	1.3	26.5	0.3	0.1
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	0.0	0.0	14.9	0.0	11.1	1.8	0.5	7.7	5.4	7.4	6.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	52.2	0.0	37.3	17.4	18.5	15.5	14.9	84.8	26.1	21.2
LnGrp LOS	A	A	D	A	D	B	B	B	B	F	C	C
Approach Vol, veh/h		479			673			1367			760	
Approach Delay, s/veh		52.2			33.0			15.4			40.2	
Approach LOS		D			C			B			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.9		43.1		70.9		43.1				
Change Period (Y+Rc), s		6.0		8.5		6.0		8.5				
Max Green Setting (Gmax), s		62.5		37.0		62.5		37.0				
Max Q Clear Time (g_c+I1), s		20.8		30.1		66.9		30.9				
Green Ext Time (p_c), s		28.1		3.3		0.0		3.7				
Intersection Summary												
HCM 6th Ctrl Delay			30.1									
HCM 6th LOS			C									

MOVEMENT SUMMARY

 **Site: 101 [Nevada & Platte 2030 AM Vols Boulder Closure (4-lane) (Site Folder: General)]**

2027 AM

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	10	3.0	11	3.0	0.260	6.0	LOS A	1.1	29.1	0.42	0.32	0.42	34.7
8	T1	284	3.0	309	3.0	0.260	6.0	LOS A	1.1	29.1	0.42	0.31	0.42	34.6
18	R2	216	3.0	235	3.0	0.260	5.7	LOS A	1.1	28.6	0.40	0.30	0.40	33.7
Approach		510	3.0	554	3.0	0.260	5.9	LOS A	1.1	29.1	0.41	0.31	0.41	34.2
East: Platte Avenue														
1	L2	87	3.0	95	3.0	0.445	9.0	LOS A	2.3	59.0	0.56	0.50	0.57	32.8
6	T1	522	3.0	567	3.0	0.445	8.8	LOS A	2.3	59.0	0.55	0.48	0.56	33.0
16	R2	202	3.0	220	3.0	0.445	8.5	LOS A	2.2	57.0	0.54	0.46	0.54	32.4
Approach		811	3.0	882	3.0	0.445	8.7	LOS A	2.3	59.0	0.55	0.48	0.55	32.8
North: Nevada Avenue														
7	L2	92	3.0	100	3.0	0.336	9.5	LOS A	1.4	36.6	0.64	0.66	0.70	32.0
4	T1	334	3.0	363	3.0	0.336	9.0	LOS A	1.4	36.6	0.62	0.64	0.67	32.8
14	R2	25	3.0	27	3.0	0.336	8.8	LOS A	1.4	36.0	0.62	0.63	0.66	32.3
Approach		451	3.0	490	3.0	0.336	9.1	LOS A	1.4	36.6	0.63	0.64	0.68	32.6
West: Platte Avenue														
5	L2	14	3.0	15	3.0	0.111	5.8	LOS A	0.4	10.3	0.52	0.47	0.52	34.4
2	T1	130	3.0	141	3.0	0.111	5.6	LOS A	0.4	10.3	0.51	0.46	0.51	34.7
12	R2	22	3.0	24	3.0	0.111	5.3	LOS A	0.4	10.2	0.50	0.45	0.50	33.9
Approach		166	3.0	180	3.0	0.111	5.6	LOS A	0.4	10.3	0.51	0.46	0.51	34.6
All Vehicles		1938	3.0	2107	3.0	0.445	7.8	LOS A	2.3	59.0	0.53	0.47	0.54	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: I:\125061-01 Palmer HS COS\08_TRF\Analysis\SIDRA\Nevada & Platte.sip9

MOVEMENT SUMMARY

 **Site: 101 [Nevada & Platte 2030 PM Boulder Closure (4-lane)**
(Site Folder: General)]

Existing AM
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	25	3.0	27	3.0	0.905	38.2	LOS E	17.1	438.4	0.99	1.70	3.09	23.3
8	T1	904	3.0	983	3.0	0.905	37.3	LOS E	18.1	463.6	0.99	1.71	3.09	23.5
18	R2	328	3.0	357	3.0	0.905	35.8	LOS E	18.1	463.6	0.99	1.72	3.11	23.2
Approach		1257	3.0	1366	3.0	0.905	37.0	LOS E	18.1	463.6	0.99	1.71	3.10	23.4
East: Platte Avenue														
1	L2	94	3.0	102	3.0	0.734	28.4	LOS D	5.5	139.7	0.85	1.15	1.87	25.6
6	T1	485	3.0	527	3.0	0.734	27.1	LOS D	5.7	145.5	0.84	1.14	1.87	26.1
16	R2	134	3.0	146	3.0	0.734	25.7	LOS D	5.7	145.5	0.84	1.14	1.86	26.0
Approach		713	3.0	775	3.0	0.734	27.0	LOS D	5.7	145.5	0.84	1.14	1.87	26.0
North: Nevada Avenue														
7	L2	176	3.0	191	3.0	0.516	13.0	LOS B	3.3	83.3	0.71	0.84	1.10	30.3
4	T1	483	3.0	525	3.0	0.516	12.4	LOS B	3.3	84.3	0.70	0.83	1.08	31.3
14	R2	44	3.0	48	3.0	0.516	12.1	LOS B	3.3	84.3	0.70	0.82	1.07	30.9
Approach		703	3.0	764	3.0	0.516	12.5	LOS B	3.3	84.3	0.70	0.83	1.08	31.0
West: Platte Avenue														
5	L2	16	3.0	17	3.0	0.389	11.7	LOS B	1.8	45.9	0.69	0.75	0.89	31.9
2	T1	392	3.0	426	3.0	0.389	11.2	LOS B	1.8	45.9	0.68	0.74	0.88	32.1
12	R2	49	3.0	53	3.0	0.389	10.7	LOS B	1.8	45.9	0.67	0.73	0.87	31.4
Approach		457	3.0	497	3.0	0.389	11.1	LOS B	1.8	45.9	0.68	0.74	0.88	32.0
All Vehicles		3130	3.0	3402	3.0	0.905	25.4	LOS D	18.1	463.6	0.85	1.24	2.04	26.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: 101 [Nevada & Platte 2030 AM Vols Boulder Closure (2-lane) (Site Folder: General)]

2027 AM

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	10	3.0	11	3.0	0.260	6.0	LOS A	1.1	29.1	0.42	0.32	0.42	34.7
8	T1	284	3.0	309	3.0	0.260	6.0	LOS A	1.1	29.1	0.42	0.31	0.42	34.6
18	R2	216	3.0	235	3.0	0.260	5.7	LOS A	1.1	28.6	0.40	0.30	0.40	33.7
Approach		510	3.0	554	3.0	0.260	5.9	LOS A	1.1	29.1	0.41	0.31	0.41	34.2
East: Platte Avenue														
1	L2	87	3.0	95	3.0	0.857	24.5	LOS C	22.7	580.3	0.96	1.47	2.31	27.0
6	T1	522	3.0	567	3.0	0.857	24.5	LOS C	22.7	580.3	0.96	1.47	2.31	26.9
16	R2	202	3.0	220	3.0	0.857	24.5	LOS C	22.7	580.3	0.96	1.47	2.31	26.3
Approach		811	3.0	882	3.0	0.857	24.5	LOS C	22.7	580.3	0.96	1.47	2.31	26.8
North: Nevada Avenue														
7	L2	92	3.0	100	3.0	0.336	9.5	LOS A	1.4	36.6	0.64	0.66	0.70	32.0
4	T1	334	3.0	363	3.0	0.336	9.0	LOS A	1.4	36.6	0.62	0.64	0.67	32.8
14	R2	25	3.0	27	3.0	0.336	8.8	LOS A	1.4	36.0	0.62	0.63	0.66	32.3
Approach		451	3.0	490	3.0	0.336	9.1	LOS A	1.4	36.6	0.63	0.64	0.68	32.6
West: Platte Avenue														
5	L2	14	3.0	15	3.0	0.213	6.5	LOS A	0.8	20.8	0.53	0.51	0.53	34.4
2	T1	130	3.0	141	3.0	0.213	6.5	LOS A	0.8	20.8	0.53	0.51	0.53	34.3
12	R2	22	3.0	24	3.0	0.213	6.5	LOS A	0.8	20.8	0.53	0.51	0.53	33.2
Approach		166	3.0	180	3.0	0.213	6.5	LOS A	0.8	20.8	0.53	0.51	0.53	34.1
All Vehicles		1938	3.0	2107	3.0	0.857	14.5	LOS B	22.7	580.3	0.70	0.89	1.28	30.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [Nevada & Platte 2030 PM Boulder Closure (2-lane)**
(Site Folder: General)]

Existing AM
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	25	3.0	27	3.0	0.905	38.2	LOS E	17.1	438.4	0.99	1.70	3.09	23.3
8	T1	904	3.0	983	3.0	0.905	37.3	LOS E	18.1	463.6	0.99	1.71	3.09	23.5
18	R2	328	3.0	357	3.0	0.905	35.8	LOS E	18.1	463.6	0.99	1.72	3.11	23.2
Approach		1257	3.0	1366	3.0	0.905	37.0	LOS E	18.1	463.6	0.99	1.71	3.10	23.4
East: Platte Avenue														
1	L2	94	3.0	102	3.0	1.382	203.9	LOS F	78.9	2019.8	1.00	4.45	12.72	8.6
6	T1	485	3.0	527	3.0	1.382	203.9	LOS F	78.9	2019.8	1.00	4.45	12.72	8.6
16	R2	134	3.0	146	3.0	1.382	203.9	LOS F	78.9	2019.8	1.00	4.45	12.72	8.6
Approach		713	3.0	775	3.0	1.382	203.9	LOS F	78.9	2019.8	1.00	4.45	12.72	8.6
North: Nevada Avenue														
7	L2	176	3.0	191	3.0	0.445	10.0	LOS B	2.5	64.2	0.63	0.68	0.79	31.6
4	T1	483	3.0	525	3.0	0.445	9.6	LOS A	2.5	64.2	0.61	0.66	0.76	32.5
14	R2	44	3.0	48	3.0	0.445	9.4	LOS A	2.5	63.4	0.61	0.65	0.75	32.0
Approach		703	3.0	764	3.0	0.445	9.7	LOS A	2.5	64.2	0.62	0.66	0.77	32.2
West: Platte Avenue														
5	L2	16	3.0	17	3.0	0.721	21.1	LOS C	6.5	167.7	0.83	1.13	1.76	28.2
2	T1	392	3.0	426	3.0	0.721	21.1	LOS C	6.5	167.7	0.83	1.13	1.76	28.2
12	R2	49	3.0	53	3.0	0.721	21.1	LOS C	6.5	167.7	0.83	1.13	1.76	27.5
Approach		457	3.0	497	3.0	0.721	21.1	LOS C	6.5	167.7	0.83	1.13	1.76	28.1
All Vehicles		3130	3.0	3402	3.0	1.382	66.6	LOS F	78.9	2019.8	0.89	2.01	4.57	17.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [Nevada & Platte 2030 AM Boulder Open, 4-lane Platte (Site Folder: General)]**

2027 AM
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	10	3.0	11	3.0	0.241	5.4	LOS A	1.1	27.4	0.33	0.21	0.33	35.0
8	T1	413	3.0	449	3.0	0.241	5.3	LOS A	1.1	27.4	0.32	0.20	0.32	35.0
18	R2	91	3.0	99	3.0	0.241	5.2	LOS A	1.0	26.7	0.32	0.20	0.32	34.0
Approach		514	3.0	559	3.0	0.241	5.3	LOS A	1.1	27.4	0.32	0.20	0.32	34.8
East: Platte Avenue														
1	L2	95	3.0	103	3.0	0.423	9.5	LOS A	2.3	57.8	0.61	0.65	0.73	32.3
6	T1	460	3.0	500	3.0	0.423	9.2	LOS A	2.3	57.8	0.60	0.63	0.71	32.7
16	R2	123	3.0	134	3.0	0.423	8.9	LOS A	2.2	56.6	0.59	0.61	0.69	32.2
Approach		678	3.0	737	3.0	0.423	9.2	LOS A	2.3	57.8	0.60	0.63	0.71	32.6
North: Nevada Avenue														
7	L2	38	3.0	41	3.0	0.315	8.7	LOS A	1.3	32.8	0.61	0.61	0.61	33.0
4	T1	380	3.0	413	3.0	0.315	8.4	LOS A	1.3	32.8	0.60	0.60	0.60	33.3
14	R2	28	3.0	30	3.0	0.315	8.1	LOS A	1.3	32.5	0.59	0.59	0.59	32.6
Approach		446	3.0	485	3.0	0.315	8.4	LOS A	1.3	32.8	0.60	0.60	0.60	33.2
West: Platte Avenue														
5	L2	15	3.0	16	3.0	0.091	5.6	LOS A	0.3	8.4	0.51	0.46	0.51	34.4
2	T1	99	3.0	108	3.0	0.091	5.4	LOS A	0.3	8.4	0.50	0.44	0.50	34.7
12	R2	22	3.0	24	3.0	0.091	5.1	LOS A	0.3	8.2	0.49	0.43	0.49	34.0
Approach		136	3.0	148	3.0	0.091	5.4	LOS A	0.3	8.4	0.50	0.44	0.50	34.6
All Vehicles		1774	3.0	1928	3.0	0.423	7.6	LOS A	2.3	57.8	0.51	0.48	0.55	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: 101 [Nevada & Platte 2030 PM Boulder Open. 4-lane Platte
(Site Folder: General)]

2027 PM No Change
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	25	3.0	27	3.0	0.774	21.0	LOS C	11.6	296.9	0.87	1.26	1.89	28.3
8	T1	963	3.0	1047	3.0	0.774	20.5	LOS C	12.0	307.4	0.86	1.25	1.88	28.4
18	R2	269	3.0	292	3.0	0.774	19.7	LOS C	12.0	307.4	0.86	1.25	1.87	27.9
Approach		1257	3.0	1366	3.0	0.774	20.4	LOS C	12.0	307.4	0.86	1.25	1.88	28.3
East: Platte Avenue														
1	L2	102	3.0	111	3.0	0.748	31.1	LOS D	5.5	140.1	0.87	1.18	1.95	24.8
6	T1	460	3.0	500	3.0	0.748	29.5	LOS D	5.7	146.1	0.86	1.17	1.95	25.4
16	R2	123	3.0	134	3.0	0.748	28.0	LOS D	5.7	146.1	0.85	1.17	1.94	25.3
Approach		685	3.0	745	3.0	0.748	29.4	LOS D	5.7	146.1	0.86	1.17	1.95	25.3
North: Nevada Avenue														
7	L2	72	3.0	78	3.0	0.479	12.0	LOS B	2.8	72.2	0.69	0.79	1.00	31.4
4	T1	547	3.0	595	3.0	0.479	11.5	LOS B	2.8	72.6	0.68	0.78	0.98	31.8
14	R2	44	3.0	48	3.0	0.479	11.1	LOS B	2.8	72.6	0.67	0.77	0.97	31.3
Approach		663	3.0	721	3.0	0.479	11.5	LOS B	2.8	72.6	0.68	0.78	0.98	31.7
West: Platte Avenue														
5	L2	17	3.0	18	3.0	0.332	10.3	LOS B	1.4	35.4	0.66	0.69	0.75	32.5
2	T1	336	3.0	365	3.0	0.332	9.8	LOS A	1.4	35.4	0.65	0.68	0.74	32.7
12	R2	49	3.0	53	3.0	0.332	9.4	LOS A	1.4	35.1	0.64	0.67	0.72	32.0
Approach		402	3.0	437	3.0	0.332	9.8	LOS A	1.4	35.4	0.65	0.68	0.74	32.6
All Vehicles		3007	3.0	3268	3.0	0.774	19.1	LOS C	12.0	307.4	0.79	1.05	1.54	28.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: 101 [Nevada & Platte 2030 AM Boulder Open, 2-lane Platte
(Site Folder: General)]

2027 AM
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
						v/c	sec							mph
South: Nevada Avenue														
3	L2	10	3.0	11	3.0	0.241	5.4	LOS A	1.1	27.4	0.33	0.21	0.33	35.0
8	T1	413	3.0	449	3.0	0.241	5.3	LOS A	1.1	27.4	0.32	0.20	0.32	35.0
18	R2	91	3.0	99	3.0	0.241	5.2	LOS A	1.0	26.7	0.32	0.20	0.32	34.0
Approach		514	3.0	559	3.0	0.241	5.3	LOS A	1.1	27.4	0.32	0.20	0.32	34.8
East: Platte Avenue														
1	L2	95	3.0	103	3.0	0.811	22.5	LOS C	14.1	360.6	0.90	1.37	2.12	27.6
6	T1	460	3.0	500	3.0	0.811	22.5	LOS C	14.1	360.6	0.90	1.37	2.12	27.5
16	R2	123	3.0	134	3.0	0.811	22.5	LOS C	14.1	360.6	0.90	1.37	2.12	26.8
Approach		678	3.0	737	3.0	0.811	22.5	LOS C	14.1	360.6	0.90	1.37	2.12	27.4
North: Nevada Avenue														
7	L2	38	3.0	41	3.0	0.315	8.7	LOS A	1.3	32.8	0.61	0.61	0.61	33.0
4	T1	380	3.0	413	3.0	0.315	8.4	LOS A	1.3	32.8	0.60	0.60	0.60	33.3
14	R2	28	3.0	30	3.0	0.315	8.1	LOS A	1.3	32.5	0.59	0.59	0.59	32.6
Approach		446	3.0	485	3.0	0.315	8.4	LOS A	1.3	32.8	0.60	0.60	0.60	33.2
West: Platte Avenue														
5	L2	15	3.0	16	3.0	0.175	6.0	LOS A	0.6	16.6	0.52	0.49	0.52	34.5
2	T1	99	3.0	108	3.0	0.175	6.0	LOS A	0.6	16.6	0.52	0.49	0.52	34.4
12	R2	22	3.0	24	3.0	0.175	6.0	LOS A	0.6	16.6	0.52	0.49	0.52	33.4
Approach		136	3.0	148	3.0	0.175	6.0	LOS A	0.6	16.6	0.52	0.49	0.52	34.3
All Vehicles		1774	3.0	1928	3.0	0.811	12.7	LOS B	14.1	360.6	0.63	0.77	1.10	31.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: 101 [Nevada & Platte 2030 PM Boulder Open. 2-lane Platte (Site Folder: General)]

2027 PM No Change
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Nevada Avenue														
3	L2	25	3.0	27	3.0	0.774	21.0	LOS C	11.6	296.9	0.87	1.26	1.89	28.3
8	T1	963	3.0	1047	3.0	0.774	20.5	LOS C	12.0	307.4	0.86	1.25	1.88	28.4
18	R2	269	3.0	292	3.0	0.774	19.7	LOS C	12.0	307.4	0.86	1.25	1.87	27.9
Approach		1257	3.0	1366	3.0	0.774	20.4	LOS C	12.0	307.4	0.86	1.25	1.88	28.3
East: Platte Avenue														
1	L2	102	3.0	111	3.0	1.405	215.3	LOS F	78.4	2007.4	1.00	4.46	13.01	8.3
6	T1	460	3.0	500	3.0	1.405	215.3	LOS F	78.4	2007.4	1.00	4.46	13.01	8.3
16	R2	123	3.0	134	3.0	1.405	215.3	LOS F	78.4	2007.4	1.00	4.46	13.01	8.2
Approach		685	3.0	745	3.0	1.405	215.3	LOS F	78.4	2007.4	1.00	4.46	13.01	8.3
North: Nevada Avenue														
7	L2	72	3.0	78	3.0	0.412	9.3	LOS A	2.1	53.5	0.60	0.62	0.68	32.6
4	T1	547	3.0	595	3.0	0.412	9.0	LOS A	2.1	53.5	0.59	0.60	0.66	33.0
14	R2	44	3.0	48	3.0	0.412	8.7	LOS A	2.0	52.2	0.58	0.58	0.64	32.3
Approach		663	3.0	721	3.0	0.412	9.0	LOS A	2.1	53.5	0.59	0.60	0.66	32.9
West: Platte Avenue														
5	L2	17	3.0	18	3.0	0.613	15.8	LOS C	4.5	115.1	0.76	0.96	1.37	30.2
2	T1	336	3.0	365	3.0	0.613	15.8	LOS C	4.5	115.1	0.76	0.96	1.37	30.1
12	R2	49	3.0	53	3.0	0.613	15.8	LOS C	4.5	115.1	0.76	0.96	1.37	29.4
Approach		402	3.0	437	3.0	0.613	15.8	LOS C	4.5	115.1	0.76	0.96	1.37	30.1
All Vehicles		3007	3.0	3268	3.0	1.405	61.7	LOS F	78.4	2007.4	0.82	1.80	4.08	18.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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