

DRAFT**MEMORANDUM**

To: David Thompson, PE
Boulder County Public Works - Engineering

From: Steve Tuttle, PE, PTOE

Date: August 13, 2026

Project: South Boulder Road Reconstruction

Subject: Traffic Analysis

The Fox Tuttle Transportation Group has completed a traffic analysis in support of the South Boulder Road Reconstruction project in Boulder County. The project proposes the reconstruction of South Boulder Road from east of Manhattan Street to east of Cherryvale Road to include multimodal and transit stop improvements as well as replacement of the existing pedestrian underpass structure with a wider, improved structure. The scope of the traffic analysis performed by Fox Tuttle includes documentation of existing traffic volumes, evaluation of baseline traffic conditions, calculation of projected segment and intersection turning movement design volumes for the year 2045, determination of future intersection control needs (specifically traffic signal safety and multimodal improvements vs. a multilane roundabout at the Cherryvale Road intersection), evaluation of future intersection delay and queue performance, and potential at-grade pedestrian crossing improvements at 55th Street. This memorandum summarizes all data, analysis, and findings.

Background

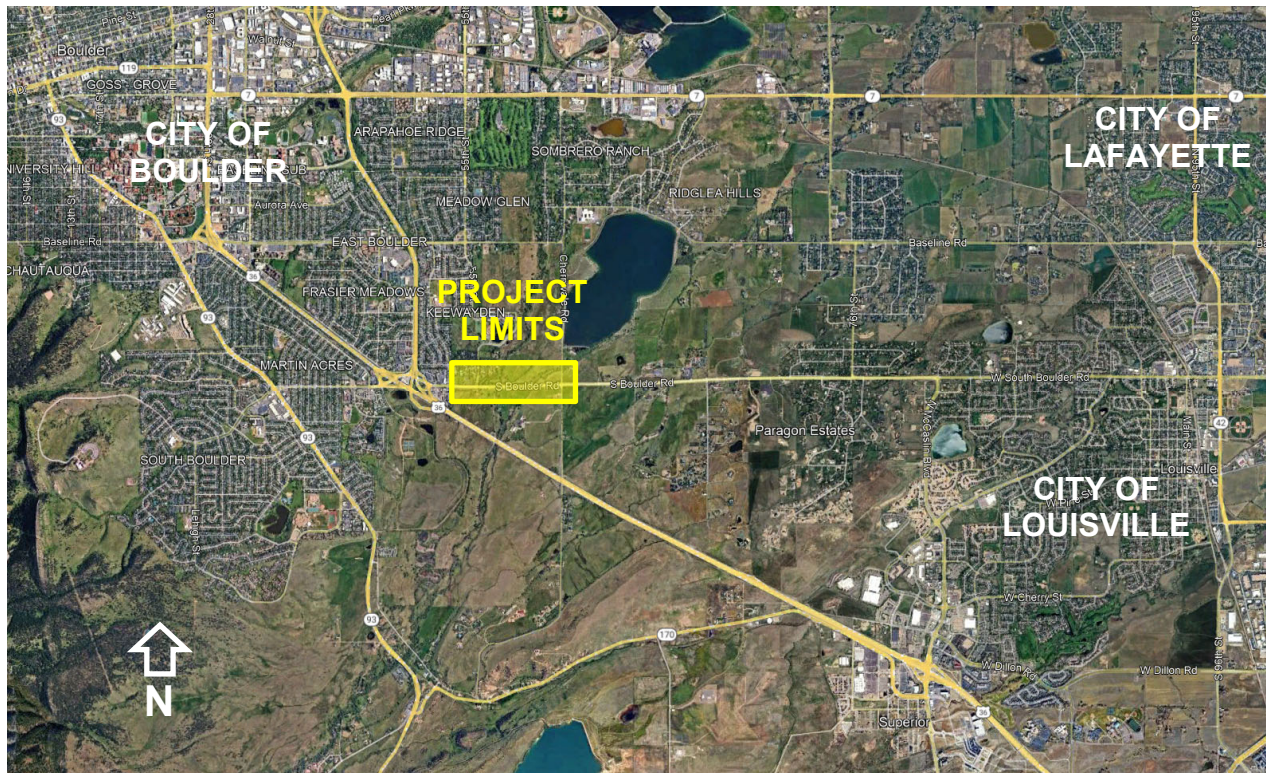
South Boulder Road is classified as a principal arterial roadway and provides east-west access through Boulder County from the City of Boulder (to the west of the project) to N. 120th Street in Lafayette (to the east). South Boulder Road has a four-lane cross-section (two lanes in each direction) with 8' shoulders and a 14' center raised median. At Cherryvale Road, which is controlled with an existing traffic signal, there are separate left-turn and right-turn lanes eastbound and westbound, with separate left-turn and right-turn lanes on the southbound Cherryvale Road approach and a separate left-turn lane on the northbound approach. At 55th Street, which is controlled with a side-street stop sign, there exists an eastbound left-turn lane on South Boulder Road.

There are no sidewalks or on-street bicycle facilities on South Boulder Road through the project corridor; there is a 10' wide, off-street, gravel-surface trail along the south side of the roadway. This connects to the existing pedestrian underpass that is approximately 1,000' west of Cherryvale

Road. There are transit stops located on both sides of South Boulder Road at 55th Street and at Cherryvale Road with service for the DASH route which runs between downtown Boulder and the Lafayette Park-n-Ride at South Public Road.

The posted speed limit is 45 miles per hour (mph) east of 55th Street and it drops to 35 mph near the 55th Street intersection heading into/from the City of Boulder limits. The project corridor is shown on **Figure 1**.

Figure 1 – Project Corridor



Existing Traffic Data

Traffic counts were collected for this project in late January 2025 with schools in session. The data collection included the following:

- 24-hour directional volume, speed, and classification along South Boulder Road just east of 55th Street
- Weekday AM and PM peak hour turning movement, vehicle, bicycle, and pedestrian counts at both the South Boulder Road/55th Street and South Boulder Road/Cherryvale Road intersections

The existing traffic data, lane configurations, and speed limits are summarized on **Figure 2**, attached. Traffic count data sheets are included in the Appendix.

The traffic data shows that South Boulder Road is servicing approximately 14,100 vehicles per day (vpd) within the study area with less than 1% heavy trucks (FHWA class 7 or greater). The speed data shows that eastbound 85th-percentile speed is approximately 60 mph and westbound 85th-percentile speed is approximately 53 mph.

Existing Levels of Service and Queues

Analysis of existing traffic operations for weekday AM and PM peak hour conditions was conducted using Highway Capacity Manual (HCM) and Synchro (v12) software. Existing signal timing data was incorporated. Delays are represented in seconds of average delay. The results of the operational analysis for existing conditions are summarized in **Table 1**.

Table 1 – Existing Level of Service and Queue Summary

Int.	Lane	Existing Storage	Existing Conditions					
			AM Peak			PM Peak		
			Delay (s)	LOS	Queue ⁽¹⁾	Delay (s)	LOS	Queue ⁽¹⁾
S. Boulder Rd & Cherryvale Rd	<i>Overall (Signalized)</i>	-	19.5	B	-	22.1	C	-
	EB LT	165'	16	B	41'	13	B	41'
	EB TH	-	16	B	104'	21	C	274'
	EB RT	170'	14	B	0'	14	B	0'
	WB LT	115'	13	B	36'	17	B	22'
	WB TH	-	20	B	271'	17	B	116'
	WB RT	170'	19	B	50'	16	B	19'
	NB LT	85'	21	C	55'	30	C	84'
	NB TH+RT	-	24	C	177'	23	C	90'
	SB LT	115'	28	C	44'	38	D	184'
	SB TH	-	20	B	34'	24	C	153'
	SB RT	115'	19	B	0'	20	B	0'
S. Boulder Rd & 55th St	EB LT	100'	11	B	5'	9	A	8'
	EB TH	-	0	A	0'	0	A	0'
	WB TH+RT	-	0	A	0'	0	A	0'
	SB LT+RT	-	19	C	20'	20	C	33'

Note: Delay represented in average seconds per vehicle. Delay and queues calculated using Synchro v12 and HCM7 methodology.

Red queue indicates storage failure (peak queue is calculated to exceed available storage)

Red delay indicates LOS F

As shown on **Table 1**, there are no existing capacity deficiencies, and all intersections and movements operate at acceptable Levels of Service (D or better). The southbound left-turn lane 95th-percentile queue is shown to exceed the existing storage distance during the busiest periods of the weekday PM peak hour.

Crash Data Analysis

A 7-year crash data history (2018 through 2024) within the project corridor was reviewed using data provided by Boulder County. This data is summarized as follows:

- There were thirteen (13) non-intersection crashes within the project corridor, five (5) involving injuries; the most common crash type involved a vehicle hitting a deer in the roadway (4).
- There were twenty-seven (27) crashes at the South Boulder Road & Cherryvale Road intersection, eight (8) involving injuries; the most common crash type was a broadside crash (10); there were two (2) crashes involving a bicyclist.
- There was one (1) crash at the South Boulder Road & 55th Street intersection; this involved an injury, broadside crash with a southbound vehicle hit by a westbound vehicle.

Traffic Growth and Future Volumes

In order to determine potential future traffic growth, historical count data compiled for the Boulder Valley Count Program was reviewed. This data includes annual counts along South Boulder Road at a location approximately two miles east of the project area from 1993 to 2022. This historic data shows that traffic volumes along South Boulder Road have not increased significantly during this time and that the average per year growth rate for all Boulder Valley Roadways studies since the start of the program in 1993 is approximately 0.5% per year. This annual growth rate was thus applied to the existing traffic volumes using a factor of 1.105 to estimate 20-year, Year 2045 design volumes for the project. The Year 2045 design-year volumes are shown on **Figure 3**.

Year 2045 Levels of Service and Queues - “No Build” Scenario

Analysis of Year 2045 design year volumes was performed for a “no build” scenario in which the existing laneage and traffic controls is maintained. The HCM methodology previously discussed for Level of Service was applied. The results of the capacity and queue analysis are summarized on **Table 2**. The LOS results show that with the 0.5% annual traffic growth, Year 2045 operations are similar to existing operations, with minor degradation in delays and longer queues, but no failures.

**Table 2 – Year 2045 Design Year “No Build” Scenario
Level of Service and Queue Summary**

Int.	Lane	Existing Storage	Year 2045 No Build					
			AM Peak			PM Peak		
			Delay (s)	LOS	Queue ⁽¹⁾	Delay (s)	LOS	Queue ⁽¹⁾
S. Boulder Rd & Cherryvale Rd	Overall (Signalized)	-	21	C	-	24	C	-
	EB LT	165'	17	B	44'	14	B	45'
	EB TH	-	16	B	115'	23	C	311'
	EB RT	170'	15	B	0'	14	B	0'
	WB LT	115'	14	B	39'	18	B	24'
	WB TH	-	21	C	306'	17	B	128'
	WB RT	170'	21	C	52'	16	B	22'
	NB LT	85'	22	C	59'	32	C	93'
	NB TH+RT	-	25	C	196'	23	C	101'
	SB LT	115'	30	C	47'	45	D	215'
	SB TH	-	20	B	37'	25	C	168'
	SB RT	115'	20	B	0'	20	B	0'
S. Boulder Rd & 55th St	EB LT	100'	12	B	8'	9	A	8'
	EB TH	-	0	A	0'	0	A	0'
	WB TH+RT	-	0	A	0'	0	A	0'
	SB LT+RT	-	22	C	25'	25	C	48'

Note: Delay represented in average seconds per vehicle. Delay and queues calculated using Synchro v12 and HCM7 methodology.

Red queue indicates storage failure (peak queue is calculated to exceed available storage)

Red delay indicates LOS F

Potential Traffic Signal Improvements at Cherryvale Road

An initial assessment of potential improvements along the project corridor identified potential left-turn phasing modifications at the existing traffic signal at Cherryvale Road to improve safety related to vehicular left-turns and potential vehicular conflicts with pedestrians and bicyclists. The existing eastbound and westbound left-turn movements operate in a protected-permissive phase. The northbound and southbound left-turns currently operate with permitted phasing. In order to assess the need for left turn phasing modifications, criteria developed by Fox Tuttle for the City of Boulder Traffic Signal Practices Manual was applied. This criteria establishes recommended left-turn phasing type (permitted, protected-permitted, or protected-only operation) based on physical/geometric, volume, speed, delay and crash data.

Using this criteria, it was determined that none of the left-turn movements would warrant a change to a more restrictive left-turn operation (ie: permitted to protected-permitted, or protected-permitted to protected-only), as none of these movements meet the minimum “cross-product” of left-turn volume multiplied by the opposing through movement volume. However, for the purpose of this analysis and assessing potential safety-related improvements and tradeoffs, delay and queue calculations were performed for Year 2045 design volumes assuming protected-only phasing for all left-turn movements.

Year 2045 Levels of Service and Queues - “Protected Lefts” Scenario

Analysis of Year 2045 design year volumes was performed for the “protected lefts” scenario in which the existing laneage and traffic controls is maintained but the signal at Cherryvale Road is operated with protected-only left-turns on all approaches. The HCM methodology previously discussed for Level of Service was applied. The results of the capacity and queue analysis are summarized on **Table 3**. Signal timing and cycle lengths were optimized to mitigated potential delays.

Table 3 – Year 2045 Design Year with Protected Left-Turns

Int.	Lane	Existing Storage	Existing Conditions					
			AM Peak			PM Peak		
			Delay (s)	LOS	Queue ⁽¹⁾	Delay (s)	LOS	Queue ⁽¹⁾
S. Boulder Rd & Cherryvale Rd	<i>Overall (Signalized)</i>	-	34.8	C	-	61	E	-
	EB LT	165'	69	E	141'	178	F	172'
	EB TH	-	23	C	139'	59	E	471'
	EB RT	170'	20	B	0'	24	C	0'
	WB LT	115'	71	E	127'	74	E	68'
	WB TH	-	32	C	379'	29	C	182'
	WB RT	170'	31	C	105'	27	C	7'
	NB LT	85'	60	E	84'	60	E	127'
	NB TH+RT	-	34	C	227'	36	D	141'
	SB LT	115'	83	F	81'	139	F	332'
	SB TH	-	26	C	44'	31	C	209'
	SB RT	115'	26	C	0'	25	C	0'

Note: Delay represented in average seconds per vehicle. Delay and queues calculated using Synchro v12 and HCM7 methodology.

Red queue indicates storage failure (peak queue is calculated to exceed available storage)

Red delay indicates LOS F

As shown on **Table 3**, with all-protected left-turn operation, the overall intersection Level of Service is anticipated to be LOS E overall in the PM peak, with several movements at LOS E/F and exceeding existing queue storage lengths during the busiest periods of the peak hours.

Pedestrian Crossing Treatment at 55th Street

Potential pedestrian crossing treatments at 55th Street to facilitate pedestrians crossing South Boulder Road between the transit stops on the north and south sides of the roadway could potentially involve a signed/marked crosswalk, an enhanced crosswalk with Rectangular Rapid Flash Beacons (RRFBs), median refuge island (depending on where it would be located), or a more active control such as a pedestrian hybrid beacon (PHB) or pedestrian traffic signal. Local, state and federal guidance for crossing treatment installation are consistent in only recommending PHBs or pedestrian traffic signals for locations at high speed locations (above 40-45 mph), due to the potential severity of a pedestrian crash, which would be expected to be fatal at these higher speeds. Based on the high vehicular traffic speeds collected along South Boulder Road (exceeding 60 mph eastbound and approximately 53 mph southbound), only a PHB or traffic signal would be recommended to allow pedestrians to cross South Boulder Road in the vicinity of 55th Street. Note that the sidestreet vehicular volumes on 55th Street are not high enough to warrant a traffic signal on vehicular delay needs, and this location does not meet MUTCD criteria to warrant a PHB or signal based on pedestrian crossing volumes.

In determining the ideal location for a potential PHB or signal, the following factors were considered: 1) the transit stops are located on the west leg of the intersection, where there is also a sidewalk existing to the north along the west side of 55th Street for access to residential areas and the South Boulder Recreation Center, and 2) locating a PHB or signal crossing on the east leg of the intersection allows for potential creation of a median refuge area with the existing raised median; however, this location is difficult to access for pedestrians due to the guardrail, grading, and existing drainage structure. Given these factors, it is recommended to install a PHB on the west leg of the intersection. To mitigate potential southbound right-turn conflicts with the pedestrian crossing while the PHB is in operation, it is also recommended that a “no right-turn” LED blankout sign be installed that is visible to southbound traffic on 55th Street at the intersection to prohibit right-turns during the pedestrian walk and clearance intervals. The blankout sign would be dark when the PHB is also dark (not activated).

Potential Roundabout at Cherryvale Road

At the direction of Boulder County staff, this analysis also includes an assessment of a potential roundabout at the Cherryvale Road intersection vs. the existing traffic signal control. A multilane roundabout can be a superior alternative to a traditional traffic signal on an arterial roadway, particularly when considering overall safety, operational efficiency, and multimodal accommodations. Roundabouts have been proven to reduce severe crashes by eliminating conflict

points associated with right-angle and head-on collisions, which are more prevalent at signalized intersections. There are 32 vehicle-vehicle conflict points at a four-leg, signalized intersection, along with 24 vehicle-pedestrian conflict points (56 total). These are reduced to 16 vehicle-vehicle conflict points and 8 vehicle-pedestrian conflict points (24 total) with a roundabout. By forcing vehicles to slow down as they navigate through the circular design, roundabouts significantly lower the likelihood of high-speed and high-energy crashes, reducing both the severity and frequency of accidents. Studies by the Federal Highway Administration (FHWA) indicate that converting a signalized intersection to a roundabout can reduce serious injury and fatal crashes by up to 78%.

While installation costs can be significantly higher, a roundabout eliminates the need for signal maintenance and power consumption, reducing long-term operational expenses. A roundabout also promotes continuous traffic flow, minimizing congestion and lowering vehicle emissions caused by idling at a traffic signal. Need for adding street lighting with a roundabout, and associated costs and impacts, should be considered.

With respect to multimodal safety and operations, multilane roundabouts have pros and cons to be considered:

- Pros: lower vehicle speeds reduce crash severity; shorter crossing distances and staged crossings with raised refuge islands; no risk of left-turn conflict; while bike lane ramps are recommended to be provided to allow bicyclists to exit the roadway to travel through or cross at the intersection, bicyclists have the option to remain on-street (acting as a vehicle) through the roundabout
- Cons: No dedicated “walk” signal, meaning pedestrians must judge gaps in traffic and be yielded to by approaching traffic; multilane approaches create a “multi-threat” scenario where a car in the nearest lane may yield but block the view of the pedestrian from the second lane of traffic; drivers may be focused on navigating the roundabout and may be less attentive to pedestrians.

Current Public Right-of-Way Accessibility Guidelines (PROWAG) recommendations for crosswalk treatments should be considered. These state that additional treatments are required to alert motorists and assist pedestrians. Per PROWAG, these treatments can include traffic control signals with pedestrian heads, pedestrian hybrid beacons, RRFBs, and/or raised crossings. It is our recommendation that RRFBs be considered for application for multilane roundabout crosswalks at this location due to the high cost of signalizing the roundabout, relatively low pedestrian use, and unintended operational and safety impacts of raised crossings creating a slowing condition on entering and exiting a roundabout for all vehicles using the roundabout, whether or not a pedestrian is present.

Operational Analysis of a Multilane Roundabout at Cherryvale Road

Potential geometric layout of a roundabout at the South Boulder Road & Cherryvale Road intersection was considered using federal roundabout design guidance contained in the National Cooperative Highway Research Program (NCHRP) Report 1043 (FHWA, 2023) and using SIDRA roundabout capacity modeling software. Based on this information, a multilane roundabout with ~165' inscribed diameter was modeled, which is large enough to accommodate large trucks (given that South Boulder Road is an arterial roadway) while maintaining a relatively compact size to increase the safety and lower operating speeds within the roundabout.

Analysis was initially performed with a roundabout with two-lane approaches eastbound and westbound on South Boulder Road and single-lane approaches northbound and southbound on Cherryvale Road. However, as shown below on **Table 4**, the northbound and southbound approaches would exceed capacity and operate at a poor LOS. Thus, a second analysis was performed assuming that a relatively short, second entry lane would be created for the northbound and southbound approaches, with the inside lane signed/marked as a left-turn only lane. The northbound and southbound approaches could still operate as a single-lane, avoiding the need to widen the departures of the roadway northbound and southbound. The subsequent LOS and queue analysis is shown on **Table 5**, for that scenario.

**Table 4 – Year 2045 Design Year Roundabout
with Single-Lane NB/SB Approaches**

Int.	Approach	Year 2045 w/Single Lane NB & SB Approaches					
		AM Peak			PM Peak		
		Delay (s)	LOS	Queue ⁽¹⁾	Delay (s)	LOS	Queue ⁽¹⁾
S. Boulder Rd & Cherryvale Rd	Overall (Roundabout)	-	B	-	-	D	-
	Eastbound	5	A	28'	35	D	448'
	Westbound	19	C	346'	6	A	34'
	Northbound	10	A	56'	57	F	160'
	Southbound	12	B	30'	21	C	226'

Note: Delay represented in average seconds per vehicle. Delay and queues calculated using SIDRA software.

Red delay indicates LOS F

**Table 5 – Year 2045 Design Year Roundabout
with Two-Lane NB/SB Approaches**

Int.	Approach	Year 2045 w/Two-Lane NB & SB Approaches					
		AM Peak			PM Peak		
		Delay (s)	LOS	Queue ⁽¹⁾	Delay (s)	LOS	Queue ⁽¹⁾
S. Boulder Rd & Cherryvale Rd	<i>Overall (Roundabout)</i>	-	B	-	-	C	-
	Eastbound	5	A	28'	35	D	448'
	Westbound	19	C	346'	6	A	34'
	Northbound	8	A	36'	26	C	160'
	Southbound	11	B	14'	10	A	226'

Note: Delay represented in average seconds per vehicle. Delay and queues calculated using SIDRA software.

Red delay indicates LOS F

As shown on **Table 5** above, adding the second approach lane northbound and southbound (designated as a left-turn only lane), mitigates the northbound and southbound delay and queue issues. Note that the eastbound vehicular 95th-percentile queue (448') in the 2045 PM peak hour exceeds the 311' modeled in the 2045 "no build" scenario but is less than the 471' queue modeled in the 2045 scenario with protected left-turns.

Design considerations for a roundabout concept at this location should include:

- High-speed entry design eastbound and westbound on South Boulder Road to slow traffic approaching the roundabout; step-down speed limit signing should also be used in no more than 10 mph increments (i.e.: step down from 45 mph to 35 mph speed limit signing and then 25 mph warning upon entry at the roundabout)
- Accommodation in the design for bus and fire trucks to navigate the roundabout without use of the truck apron or any mountable surfaces; for infrequent, large trucks such as a WB-67s, using a mountable truck apron and/or mountable exterior surfaces is acceptable.
- Fastest path calculations to ensure entry, circulatory, and exit speeds (and differentials between them) meet NCHRP 1043 criteria and recommendations

Design fastest path exhibits and truck turning templates were evaluated using TORUS software based on the 30% preliminary roundabout design and are attached for reference. The fastest path speeds are presented in **Table 6**. These illustrate that the 30% design speeds are generally consistent with the criteria and recommendations of NCHRP Report 1043. Calculated entry speeds range from approximately 28 to 30 mph, with the north-leg entry representing the highest calculated entry speed at approximately 30 mph. Speed differentials between entering and

conflicting circulating traffic are generally within the recommended range, with no differential exceeding approximately 15 mph. Although the theoretical fastest-path exit speeds (V3) are high, current roundabout design practice favors near-tangential exits, particularly for multilane roundabouts, to provide natural lane alignment and minimize exit path overlap; this flatter exit geometry results in large calculated V3 speeds, but those values overstate actual operating speeds because vehicles have insufficient distance to accelerate to the radius-based speed before exiting the roundabout.

Table 6 – 30% Design Fastest Path Calculations Summary

	ENTRY LEG	V1	V1a	V2	V3	V3a	V4	V5
		[mph]	[mph]	[mph]	[mph]	[mph]	[mph]	[mph]
1	West Leg	27.58	27.47	27.54	51.72	27.42	15.79	25.82
2	South Leg	28.97	21.35	21.45	28.86	21.30	15.79	24.27
3	East Leg	28.02	28.90	28.97	90.19	28.86	15.79	25.46
4	North Leg	30.42	21.51	21.60	31.41	21.45	15.79	25.10
	Accel(ft/sec ²)		-4.2			6.9		
	SE(%)	2.00		-2.00	2.00		-2.00	2.00

Calculated circulating and acceleration-adjusted exit speeds are generally in the low-20-mph range for the north and south legs and the upper-20-mph range for the east and west legs. This speed profile is consistent with the hybrid two-lane configuration, which provides two-lane operations along South Boulder Road while transitioning to single-lane northbound and southbound exits. Right-turn fastest-path speeds are approximately 24 to 26 mph. All speed elements will continue to be reviewed as the design is refined, particularly in conjunction with pedestrian crossing locations and the need to balance speed control with accommodation of buses, fire apparatus, and larger design vehicle. Subsequent design refinement should continue to check entry deflection, lane alignment, and curb geometry while verifying fastest-path speed consistency, multilane path overlap, sight distance, and design-vehicle accommodation in accordance with NCHRP Report 1043.

Truck templates for the largest design vehicle (WB-67, a 67' tractor trailer) were included to illustrate that the design, with a center mountable truck apron to allow trucks additional turning area, effectively can accommodate heavy trucks, buses, fire trucks and other vehicles that would be frequent on an arterial roadway. WB-67 trucks would be expected to utilize both circulating lanes through the roundabout, consistent with NCHRP 1043 guidance, to provide adequate accommodation for these infrequent large vehicles while maintaining appropriate operating speeds for typical passenger vehicles.

I hope the contents of this memorandum are helpful in informing design decisions for this project. If you have any questions or would like to discuss our analysis and findings in more detail, please let me know

/SGT

Attachments:

Figure 2 – Existing Traffic Data

Figure 3 – Year 2045 Design Year Volumes

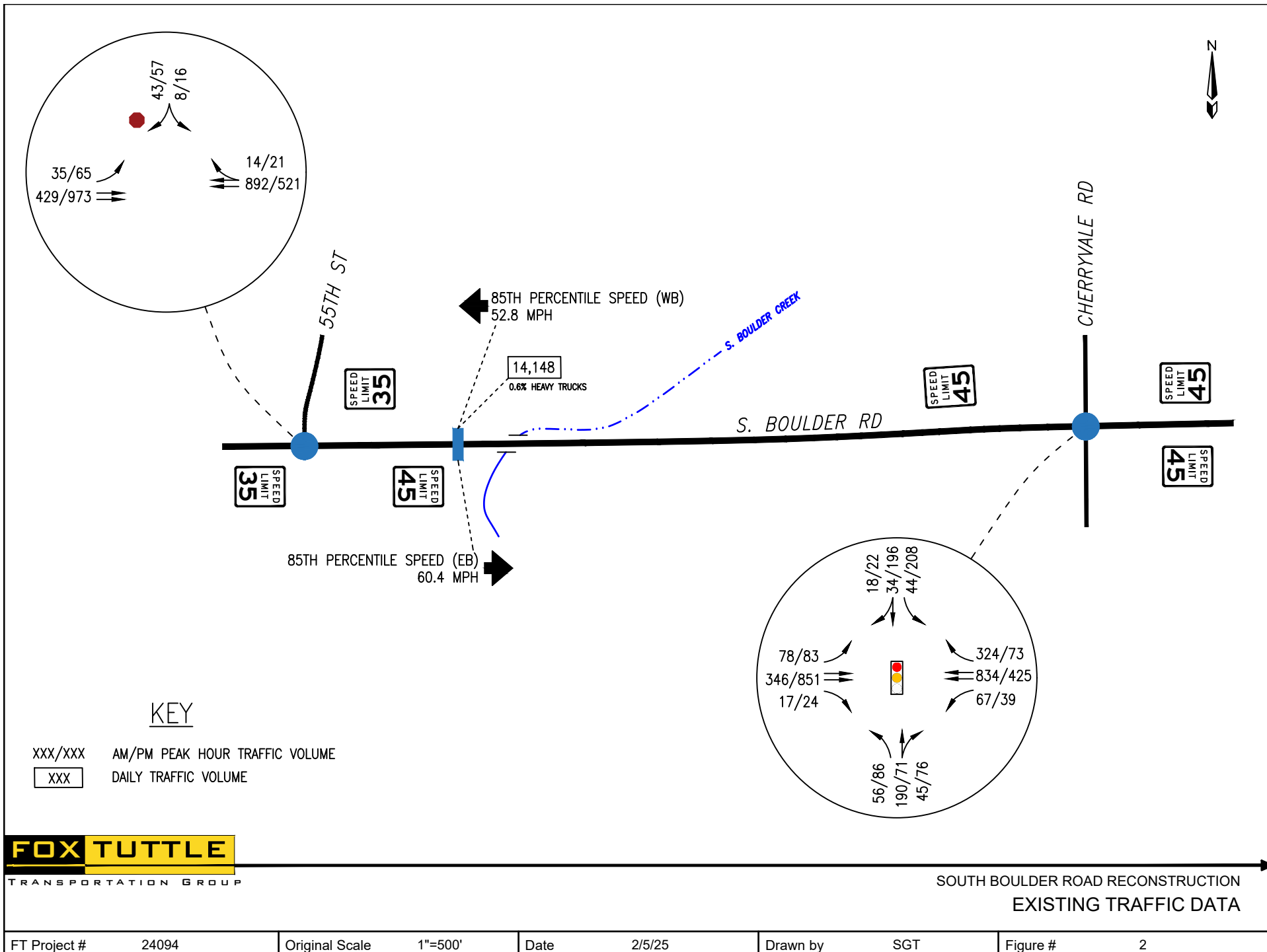
Figure 4 – 30% Design Fastest Path Exhibit

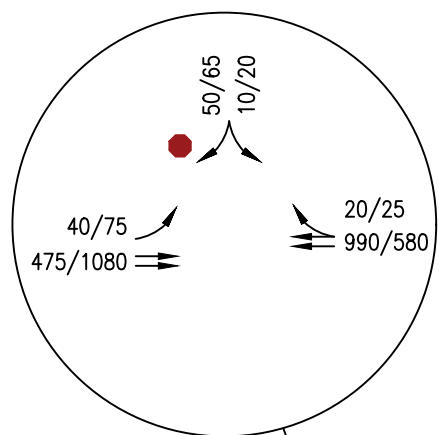
Figure 5– 30% WB-67 Exhibits

Traffic Count Sheets

Synchro and RODEL Reports

Boulder Valley Count Program Data





55TH ST

16,635

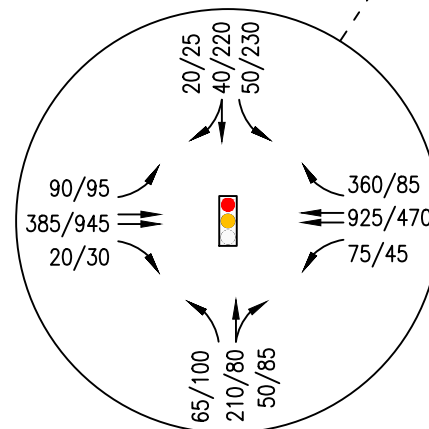
S. BOULDER CREEK

S. BOULDER RD

CHERRYVALE RD

KEY

XXX/XXX AM/PM PEAK HOUR TRAFFIC VOLUME
XXX DAILY TRAFFIC VOLUME



FOX TUTTLE
TRANSPORTATION GROUP

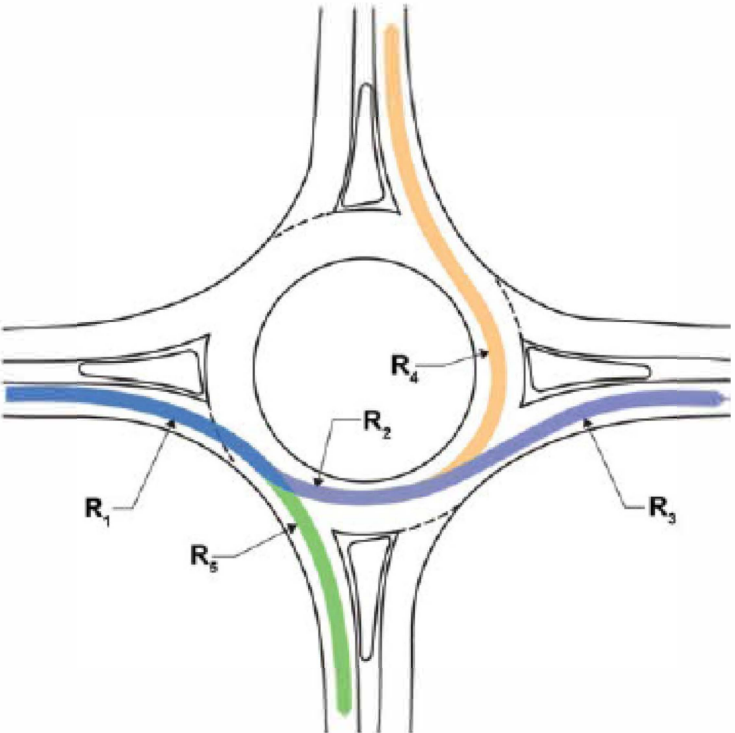
SOUTH BOULDER ROAD RECONSTRUCTION
YEAR 2045 DESIGN VOLUMES

FT Project #	24094	Original Scale	1"=500'	Date	3/8/25	Drawn by	SGT	Figure #	3
--------------	-------	----------------	---------	------	--------	----------	-----	----------	---



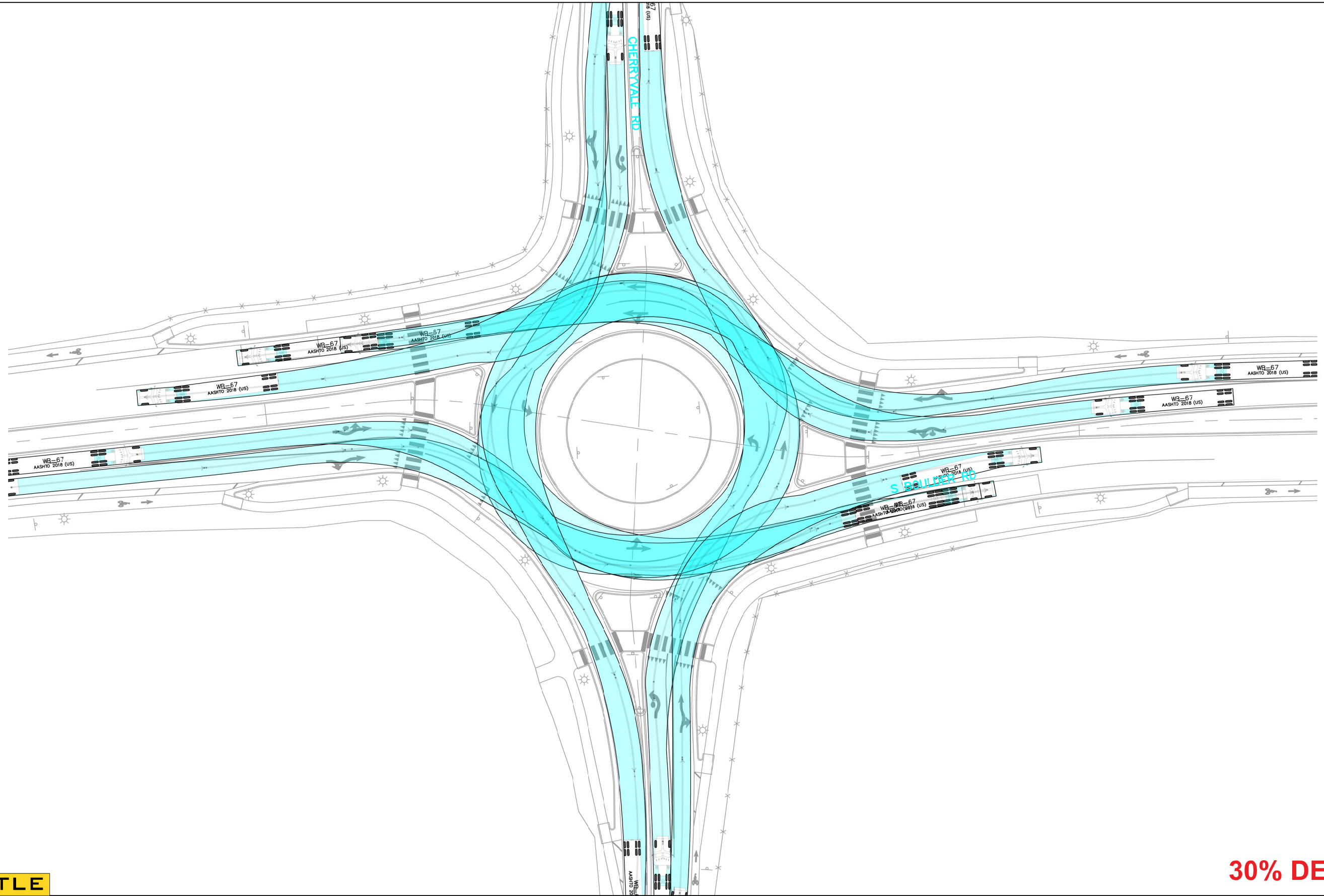
ENTRY LEG	V1	V1a	V2	V3	V3a	V4	V5
	[mph]	[mph]	[mph]	[mph]	[mph]	[mph]	[mph]
1 West Leg	27.58	27.47	27.54	51.72	27.42	15.79	25.82
2 South Leg	28.97	21.35	21.45	28.86	21.30	15.79	24.27
3 East Leg	28.02	28.90	28.97	90.19	28.86	15.79	25.46
4 North Leg	30.42	21.51	21.60	31.41	21.45	15.79	25.10
Accel(ft/sec ²)		-4.2			6.9		
SE(%)	2.00		-2.00	2.00		-2.00	2.00

Exhibit 9.5. Vehicle path radii.



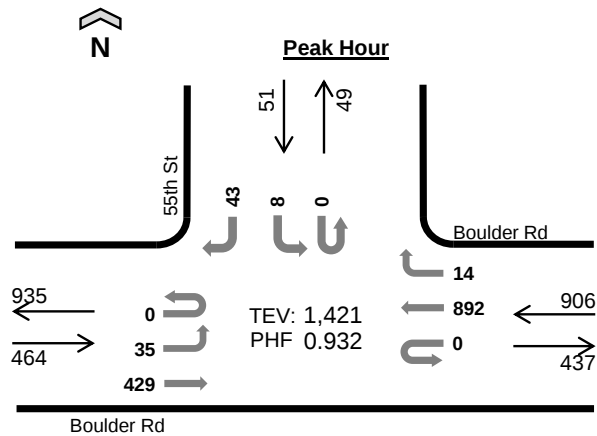
SOURCE: Adapted from NCHRP Report 672 (2).

30% DESIGN

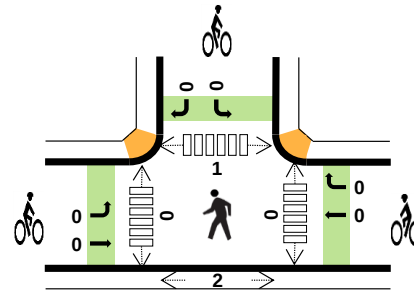


30% DESIGN

55th St Boulder Rd



Date: 1/22/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV%	PHF
EB	3%	0.79
WB	1%	0.86
NB	--	--
SB	0%	0.75
TOTAL	2%	0.93

Peak Hour Count Summaries

Peak Hour Interval Start		Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	6	89	0	0	0	201	3	0	0	0	0	0	3	0	14	316	0
8:15 AM		0	7	110	0	0	0	227	5	0	0	0	0	0	3	0	11	363	0
8:30 AM		0	6	100	0	0	0	262	2	0	0	0	0	0	1	0	10	381	0
8:45 AM		0	16	130	0	0	0	202	4	0	0	0	0	0	1	0	8	361	1,421
Pk Hr	All	0	35	429	0	0	0	892	14	0	0	0	0	0	8	0	43	1,421	
	HV	0	1	13	0	0	0	11	1	0	0	0	0	0	0	0	0	26	
	HV%	-	3%	3%	-	-	-	1%	7%	-	-	-	-	-	0%	-	0%	2%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	4	6	0	0	10	0	0	0	0	0	0	0	0	1	1
8:30 AM	2	3	0	0	5	0	0	0	0	0	0	0	0	1	1
8:45 AM	7	1	0	0	8	0	0	0	0	0	0	0	1	0	1
Peak Hour	14	12	0	0	26	0	0	0	0	0	0	0	1	2	3

Count Summaries - All Vehicles

Interval Start		Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	50	0	0	0	69	4	0	0	0	0	0	3	0	7	135	0
7:15 AM		0	9	83	0	0	0	87	0	0	0	0	0	0	3	0	8	190	0
7:30 AM		0	4	77	0	0	0	142	3	0	0	0	0	0	4	0	12	242	0
7:45 AM		0	6	95	0	0	0	167	0	0	0	0	0	0	3	0	10	281	848
8:00 AM		0	6	89	0	0	0	201	3	0	0	0	0	0	3	0	14	316	1,029
8:15 AM		0	7	110	0	0	0	227	5	0	0	0	0	0	3	0	11	363	1,202
8:30 AM		0	6	100	0	0	0	262	2	0	0	0	0	0	1	0	10	381	1,341
8:45 AM		0	16	130	0	0	0	202	4	0	0	0	0	0	1	0	8	361	1,421
Count Total		0	56	734	0	0	0	1,357	21	0	0	0	0	0	21	0	80	2,269	
Pk Hr	All	0	35	429	0	0	0	892	14	0	0	0	0	0	8	0	43	1,421	
	HV	0	1	13	0	0	0	11	1	0	0	0	0	0	0	0	0	26	
	HV%	-	3%	3%	-	-	-	1%	7%	-	-	-	-	-	0%	-	0%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	1	3	0	2	6	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	5	0	1	6	0	0	0	0	0	0	0	0	0	0
7:45 AM	5	1	0	0	6	0	1	0	0	1	0	0	0	0	0
8:00 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	4	6	0	0	10	0	0	0	0	0	0	0	0	1	1
8:30 AM	2	3	0	0	5	0	0	0	0	0	0	0	0	1	1
8:45 AM	7	1	0	0	8	0	0	0	0	0	0	0	1	0	1
Count Total	22	23	0	3	48	0	1	0	0	1	0	0	1	2	3
Peak Hour	14	12	0	0	26	0	0	0	0	0	0	0	1	2	3

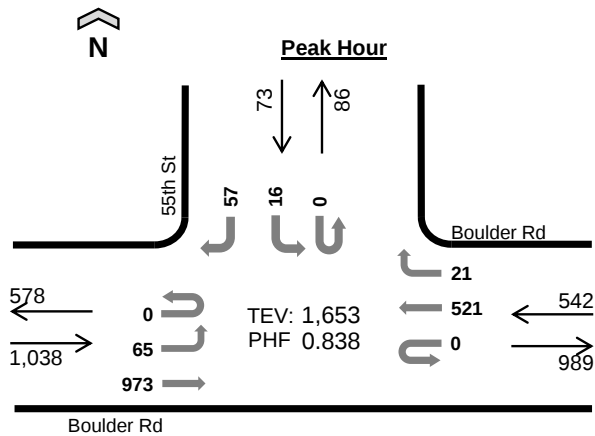
Count Summaries - Heavy Vehicles

Interval Start	Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	2	6	0
7:15 AM	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
7:30 AM	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	1	6	0
7:45 AM	0	1	4	0	0	0	1	0	0	0	0	0	0	0	0	0	6	22
8:00 AM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	19
8:15 AM	0	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	10	25
8:30 AM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5	24
8:45 AM	0	0	7	0	0	0	0	1	0	0	0	0	0	0	0	0	8	26
Count Total	0	3	19	0	0	0	22	1	0	0	0	0	0	0	0	3	48	
Pk Hr Heavy	0	1	13	0	0	0	11	1	0	0	0	0	0	0	0	0	26	

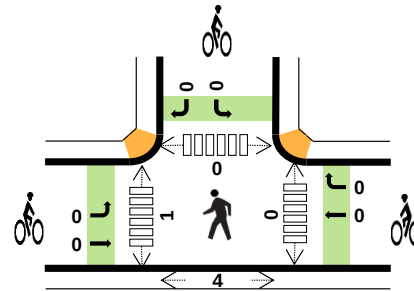
Count Summaries - Bikes

Interval Start	Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

55th St Boulder Rd



Date: 1/22/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV%	PHF
EB	2%	0.77
WB	1%	0.95
NB	--	--
SB	0%	0.65
TOTAL	1%	0.84

Peak Hour Count Summaries

Peak Hour Interval Start		Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	11	229	0	0	0	135	7	0	0	0	0	0	4	0	9	395	0
4:15 PM		0	23	314	0	0	0	133	4	0	0	0	0	0	4	0	15	493	0
4:30 PM		0	17	231	0	0	0	128	6	0	0	0	0	0	3	0	10	395	0
4:45 PM		0	14	199	0	0	0	125	4	0	0	0	0	0	5	0	23	370	1,653
Pk Hr	All	0	65	973	0	0	0	521	21	0	0	0	0	0	16	0	57	1,653	
	HV	0	1	16	0	0	0	3	0	0	0	0	0	0	0	0	0	20	
	HV%	-	2%	2%	-	-	-	1%	0%	-	-	-	-	-	0%	-	0%	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	6	0	0	0	6	0	0	0	0	0	0	0	0	2	2
4:15 PM	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	2	0	0	4	0	0	0	0	0	0	1	0	1	2
4:45 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	1	1
Peak Hour	17	3	0	0	20	0	0	0	0	0	0	1	0	4	5

Count Summaries - All Vehicles

Interval Start		Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	11	229	0	0	0	135	7	0	0	0	0	0	4	0	9	395	0
4:15 PM		0	23	314	0	0	0	133	4	0	0	0	0	0	4	0	15	493	0
4:30 PM		0	17	231	0	0	0	128	6	0	0	0	0	0	3	0	10	395	0
4:45 PM		0	14	199	0	0	0	125	4	0	0	0	0	0	5	0	23	370	1,653
5:00 PM		0	14	197	0	0	0	108	1	0	0	0	0	0	2	0	21	343	1,601
5:15 PM		0	10	181	0	0	0	135	2	0	0	0	0	0	6	0	17	351	1,459
5:30 PM		0	14	212	0	0	0	116	3	0	0	0	0	0	1	0	5	351	1,415
5:45 PM		0	12	187	0	0	0	107	3	0	0	0	0	0	2	0	11	322	1,367
Count Total		0	115	1,750	0	0	0	987	30	0	0	0	0	0	27	0	111	3,020	
Pk Hr	All	0	65	973	0	0	0	521	21	0	0	0	0	0	16	0	57	1,653	
	HV	0	1	16	0	0	0	3	0	0	0	0	0	0	0	0	0	20	
	HV%	-	2%	2%	-	-	-	1%	0%	-	-	-	-	-	0%	-	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	6	0	0	0	6	0	0	0	0	0	0	0	0	2	2
4:15 PM	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	2	0	0	4	0	0	0	0	0	0	1	0	1	2
4:45 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	2	2
5:30 PM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0
5:45 PM	3	1	0	1	5	0	0	0	0	0	0	0	0	0	0
Count Total	24	9	0	1	34	0	0	0	0	0	0	1	0	6	7
Peak Hour	17	3	0	0	20	0	0	0	0	0	0	1	0	4	5

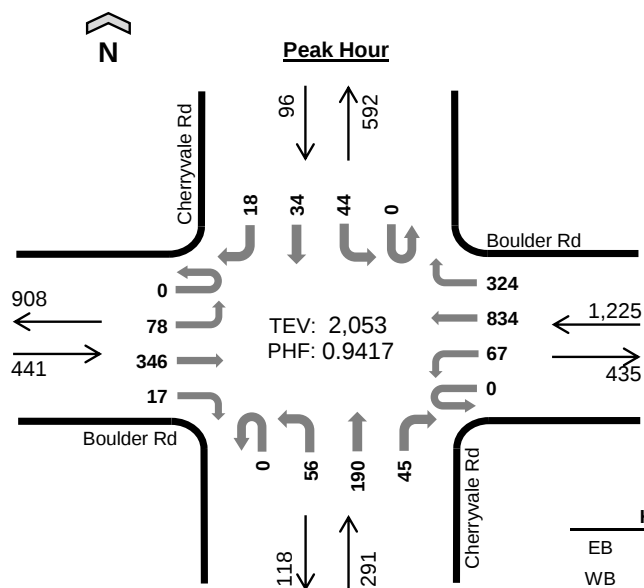
Count Summaries - Heavy Vehicles

Interval Start	Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
4:15 PM	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0
4:30 PM	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20
5:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	17
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12
5:30 PM	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	5	13
5:45 PM	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	1	5	14
Count Total	0	3	21	0	0	0	9	0	0	0	0	0	0	0	0	1	34	
Pk Hr Heavy	0	1	16	0	0	0	3	0	0	0	0	0	0	0	0	0	20	

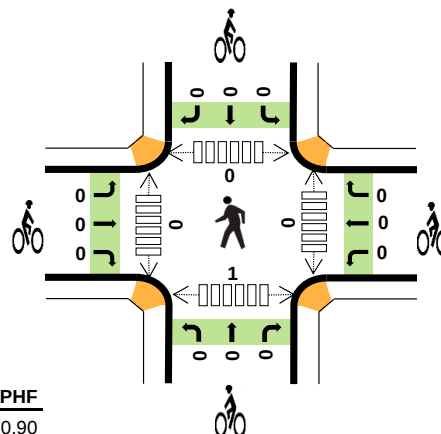
Count Summaries - Bikes

Interval Start	Boulder Rd				Boulder Rd				n/a				55th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Cherryvale Rd Boulder Rd



Date: 1/22/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV%	PHF
EB	3%	0.90
WB	1%	0.91
NB	2%	0.93
SB	5%	0.67
TOTAL	2%	0.94

Peak Hour Count Summaries

Peak Hour Interval Start		Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	23	64	8	0	17	181	63	0	15	46	11	0	6	5	6	445	0
8:15 AM		0	10	104	4	0	16	214	83	0	20	48	10	0	19	12	5	545	0
8:30 AM		0	15	89	1	0	17	237	81	0	10	40	14	0	8	10	4	526	0
8:45 AM		0	30	89	4	0	17	202	97	0	11	56	10	0	11	7	3	537	2,053
Pk Hr	All	0	78	346	17	0	67	834	324	0	56	190	45	0	44	34	18	2,053	
	HV	0	2	10	0	0	0	8	1	0	2	3	2	0	1	2	2	33	
	HV%	-	3%	3%	0%	-	0%	1%	0%	-	4%	2%	4%	-	2%	6%	11%	2%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	0	1	3	2	6	0	0	0	0	0	0	0	0	0	0
8:15 AM	3	4	2	1	10	0	0	0	0	0	0	0	0	0	0
8:30 AM	3	3	2	1	9	0	0	0	0	0	0	0	0	1	1
8:45 AM	6	1	0	1	8	0	0	0	0	0	0	0	0	0	0
Peak Hour	12	9	7	5	33	0	0	0	0	0	0	0	0	1	1

Count Summaries - All Vehicles

Interval Start		Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	13	38	4	0	6	69	20	0	2	18	7	0	1	7	4	189	0
7:15 AM		0	15	67	2	0	5	81	28	0	7	19	1	0	6	7	1	239	0
7:30 AM		0	19	48	5	0	14	128	53	0	6	46	8	0	4	2	3	336	0
7:45 AM		0	26	70	5	0	10	162	63	0	6	45	5	0	12	7	4	415	1,179
8:00 AM		0	23	64	8	0	17	181	63	0	15	46	11	0	6	5	6	445	1,435
8:15 AM		0	10	104	4	0	16	214	83	0	20	48	10	0	19	12	5	545	1,741
8:30 AM		0	15	89	1	0	17	237	81	0	10	40	14	0	8	10	4	526	1,931
8:45 AM		0	30	89	4	0	17	202	97	0	11	56	10	0	11	7	3	537	2,053
Count Total		0	151	569	33	0	102	1,274	488	0	77	318	66	0	67	57	30	3,232	
Pk Hr	All	0	78	346	17	0	67	834	324	0	56	190	45	0	44	34	18	2,053	
	HV	0	2	10	0	0	0	8	1	0	2	3	2	0	1	2	2	33	
	HV%	-	3%	3%	0%	-	0%	1%	0%	-	4%	2%	4%	-	2%	6%	11%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	2	3	0	1	6	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	5	3	0	8	0	1	0	0	1	0	0	0	0	0
7:45 AM	4	1	1	0	6	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	3	2	6	0	0	0	0	0	0	0	0	0	0
8:15 AM	3	4	2	1	10	0	0	0	0	0	0	0	0	0	0
8:30 AM	3	3	2	1	9	0	0	0	0	0	0	0	0	1	1
8:45 AM	6	1	0	1	8	0	0	0	0	0	0	0	0	0	0
Count Total	19	19	12	6	56	0	1	0	0	1	0	0	0	1	1
Peak Hour	12	9	7	5	33	0	0	0	0	0	0	0	0	1	1

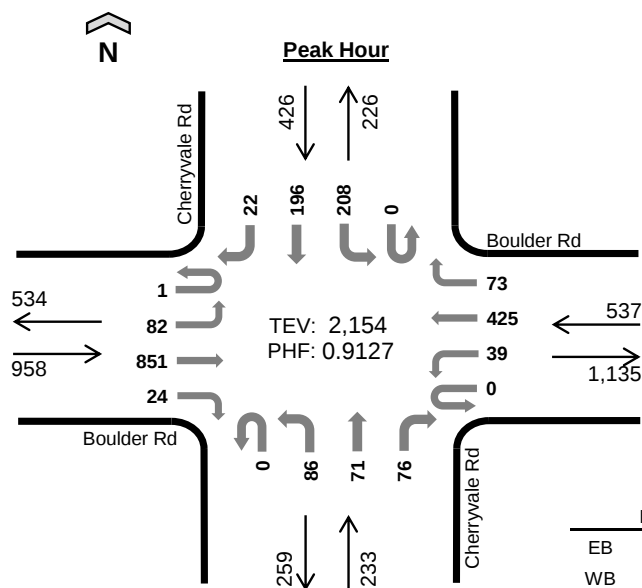
Count Summaries - Heavy Vehicles

Interval Start	Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	1	0	0	0	3	0	0	0	0	0	0	0	0	1	0	6	0
7:15 AM	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0
7:30 AM	0	0	0	0	0	1	4	0	0	1	2	0	0	0	0	0	0	8	0
7:45 AM	0	2	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6	23
8:00 AM	0	0	0	0	0	0	1	0	0	2	1	0	0	1	1	0	0	6	23
8:15 AM	0	0	3	0	0	0	4	0	0	0	1	1	0	0	0	1	1	10	30
8:30 AM	0	1	2	0	0	0	3	0	0	0	1	1	0	0	1	0	0	9	31
8:45 AM	0	1	5	0	0	0	0	1	0	0	0	0	0	0	0	1	1	8	33
Count Total	0	5	14	0	0	1	17	1	0	4	6	2	0	1	3	2	2	56	
Pk Hr Heavy	0	2	10	0	0	0	8	1	0	2	3	2	0	1	2	2	2	33	

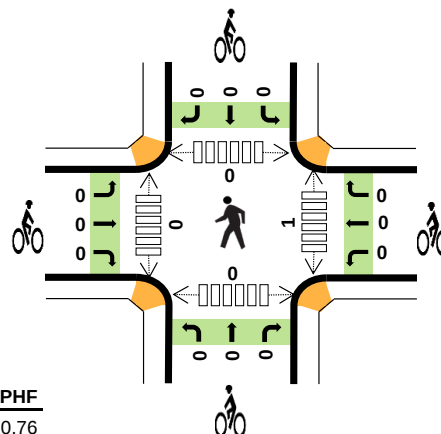
Count Summaries - Bikes

Interval Start	Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Cherryvale Rd Boulder Rd



Date: 1/22/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV%	PHF
EB	2%	0.76
WB	1%	0.99
NB	1%	0.91
SB	0%	0.78
TOTAL	1%	0.91

Peak Hour Count Summaries

Peak Hour Interval Start		Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		1	19	195	4	0	8	102	24	0	27	12	25	0	48	38	4	507	0
4:15 PM		0	33	276	6	0	6	111	18	0	26	17	20	0	41	30	6	590	0
4:30 PM		0	15	207	7	0	14	106	16	0	18	17	12	0	61	56	5	534	0
4:45 PM		0	15	173	7	0	11	106	15	0	15	25	19	0	58	72	7	523	2,154
Pk Hr	All	1	82	851	24	0	39	425	73	0	86	71	76	0	208	196	22	2,154	
	HV	0	5	11	0	0	0	2	1	0	0	2	1	0	0	0	1	23	
	HV%	0%	6%	1%	0%	-	0%	0%	1%	-	0%	3%	1%	-	0%	0%	5%	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0
4:15 PM	8	1	1	0	10	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	2	1	1	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1
Peak Hour	16	3	3	1	23	0	0	0	0	0	1	0	0	0	1

Count Summaries - All Vehicles

Interval Start		Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		1	19	195	4	0	8	102	24	0	27	12	25	0	48	38	4	507	0
4:15 PM		0	33	276	6	0	6	111	18	0	26	17	20	0	41	30	6	590	0
4:30 PM		0	15	207	7	0	14	106	16	0	18	17	12	0	61	56	5	534	0
4:45 PM		0	15	173	7	0	11	106	15	0	15	25	19	0	58	72	7	523	2,154
5:00 PM		1	12	190	9	0	15	87	25	0	15	17	18	0	53	52	7	501	2,148
5:15 PM		0	10	164	8	1	11	115	20	0	12	10	16	0	68	50	4	489	2,047
5:30 PM		0	10	215	8	0	6	108	14	0	17	12	23	0	44	44	3	504	2,017
5:45 PM		0	17	167	10	0	4	106	9	0	8	6	15	0	42	30	2	416	1,910
Count Total		2	131	1,587	59	1	75	841	141	0	138	116	148	0	415	372	38	4,064	
Pk Hr	All	1	82	851	24	0	39	425	73	0	86	71	76	0	208	196	22	2,154	
	HV	0	5	11	0	0	0	2	1	0	0	2	1	0	0	0	1	23	
	HV%	0%	6%	1%	0%	-	0%	0%	1%	-	0%	3%	1%	-	0%	0%	5%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0
4:15 PM	8	1	1	0	10	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	2	1	1	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1
5:00 PM	1	2	3	0	6	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	3	1	1	0	5	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Count Total	21	8	7	1	37	0	0	0	0	0	1	0	0	0	1
Peak Hour	16	3	3	1	23	0	0	0	0	0	1	0	0	0	1

Count Summaries - Heavy Vehicles

Interval Start	Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	6	0
4:15 PM	0	5	3	0	0	0	1	0	0	0	1	0	0	0	0	0	10	0
4:30 PM	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	1	5	0
4:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	23
5:00 PM	0	0	1	0	0	0	2	0	0	1	1	1	0	0	0	0	6	23
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	14
5:30 PM	0	2	1	0	0	0	1	0	0	1	0	0	0	0	0	0	5	14
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	14
Count Total	0	7	14	0	0	1	6	1	0	2	3	2	0	0	0	1	37	
Pk Hr Heavy	0	5	11	0	0	0	2	1	0	0	2	1	0	0	0	1	23	

Count Summaries - Bikes

Interval Start	Boulder Rd				Boulder Rd				Cherryvale Rd				Cherryvale Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Vehicle Classification Report Summary

Location: Boulder Rd E/O 55th St
Count Direction: Eastbound / Westbound
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Eastbound	7	11,363	8,220	256	1,345	80	0	119	9	1	0	0	2	21,402
	0.0%	53.1%	38.4%	1.2%	6.3%	0.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Westbound	11	17,052	3,113	191	367	163	0	99	25	6	2	0	12	21,041
	0.1%	81.0%	14.8%	0.9%	1.7%	0.8%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.1%	
Total	18	28,415	11,333	447	1,712	243	0	218	34	7	2	0	14	42,443
	0.0%	66.9%	26.7%	1.1%	4.0%	0.6%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Tuesday, January 28, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	3	1	1	0	0	0	0	0	0	0	0	12
1:00 AM	0	3	3	1	0	0	0	0	1	0	0	0	0	8
2:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	2	9	0	1	0	0	0	0	0	0	0	0	12
5:00 AM	0	20	9	0	2	0	0	0	0	0	0	0	0	31
6:00 AM	0	44	42	3	10	2	0	0	0	1	0	0	0	102
7:00 AM	0	151	153	7	17	3	0	0	1	0	0	0	0	332
8:00 AM	0	259	261	7	54	1	0	4	2	0	0	0	0	588
9:00 AM	0	186	117	10	33	1	0	2	0	0	0	0	0	349
10:00 AM	0	192	102	4	25	0	0	0	0	0	0	0	0	323
11:00 AM	0	215	110	9	33	1	0	1	0	0	0	0	0	369
12:00 PM	0	242	118	7	24	0	0	2	0	0	0	0	0	393
1:00 PM	0	266	127	8	37	1	0	2	0	0	0	0	0	441
2:00 PM	0	277	140	6	27	0	0	1	0	0	0	0	0	451
3:00 PM	1	471	273	3	39	2	0	4	0	0	0	0	0	793
4:00 PM	0	525	274	9	53	1	0	9	0	0	0	0	0	871
5:00 PM	0	375	312	5	31	3	0	11	0	0	0	0	0	737
6:00 PM	0	258	211	4	25	1	0	4	0	0	0	0	0	503
7:00 PM	0	137	137	4	10	1	0	1	0	0	0	0	0	290
8:00 PM	0	106	121	2	8	0	0	0	0	0	0	0	0	237
9:00 PM	0	94	122	1	6	0	0	1	0	0	0	0	0	224
10:00 PM	0	48	38	1	8	1	0	0	0	0	0	0	0	96
11:00 PM	0	17	19	1	1	0	0	0	0	0	0	0	0	38
Total	1	3,899	2,707	93	445	18	0	42	4	1	0	0	0	7,210
	0.0%	54.1%	37.5%	1.3%	6.2%	0.2%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Tuesday, January 28, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	6	0	0	0	0	0	0	1	0	0	0	0	7
2:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	16	0	0	0	1	0	0	0	0	0	0	0	17
5:00 AM	0	69	14	1	2	0	0	1	0	0	0	0	0	87
6:00 AM	0	163	18	3	0	1	0	2	0	0	0	0	1	188
7:00 AM	4	461	77	5	8	10	0	4	2	2	0	0	3	576
8:00 AM	0	780	153	6	12	5	0	8	1	0	1	0	1	967
9:00 AM	0	445	83	8	15	2	0	5	1	0	0	0	2	561
10:00 AM	0	333	57	6	6	3	0	3	0	0	0	0	0	408
11:00 AM	0	316	66	9	11	7	0	0	0	0	0	0	0	409
12:00 PM	0	328	70	2	11	2	0	1	0	0	0	0	0	414
1:00 PM	0	321	76	4	17	1	0	2	0	0	0	0	0	421
2:00 PM	0	347	65	8	7	4	0	2	1	0	0	0	0	434
3:00 PM	1	480	89	6	10	2	0	2	1	1	0	0	0	592
4:00 PM	0	413	81	2	10	3	0	1	1	0	0	0	0	511
5:00 PM	0	389	71	2	5	4	0	3	2	0	0	0	0	476
6:00 PM	0	332	48	2	2	4	0	1	0	0	0	0	0	389
7:00 PM	1	163	25	1	1	4	0	3	0	0	0	0	0	198
8:00 PM	0	140	23	1	0	3	0	0	0	0	0	0	0	167
9:00 PM	0	161	29	2	0	3	0	0	1	1	0	0	0	197
10:00 PM	0	54	6	1	1	0	0	0	0	0	0	0	0	62
11:00 PM	0	26	5	1	0	0	0	0	0	0	0	0	0	32
Total	6	5,761	1,060	70	118	59	0	38	11	4	1	0	7	7,135
	0.1%	80.7%	14.9%	1.0%	1.7%	0.8%	0.0%	0.5%	0.2%	0.1%	0.0%	0.0%	0.1%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Wednesday, January 29, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	7	1	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	3	6	0	1	0	0	0	1	0	0	0	0	11
2:00 AM	0	6	2	1	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	6	4	0	1	0	0	0	0	0	0	0	0	11
4:00 AM	0	4	9	1	0	1	0	0	0	0	0	0	0	15
5:00 AM	0	15	9	0	4	1	0	1	0	0	0	0	0	30
6:00 AM	0	33	56	4	15	2	0	0	0	0	0	0	0	110
7:00 AM	0	123	148	3	17	3	0	2	1	0	0	0	0	297
8:00 AM	0	185	189	5	38	1	0	2	0	0	0	0	0	420
9:00 AM	0	263	204	11	51	1	0	3	0	0	0	0	0	533
10:00 AM	0	193	102	6	29	3	0	0	0	0	0	0	0	333
11:00 AM	0	183	137	5	35	4	0	0	0	0	0	0	0	364
12:00 PM	0	239	125	3	29	2	0	2	0	0	0	0	0	400
1:00 PM	0	261	128	5	19	2	0	1	0	0	0	0	0	416
2:00 PM	0	268	152	6	27	0	0	3	0	0	0	0	0	456
3:00 PM	1	414	261	6	39	4	0	1	1	0	0	0	0	727
4:00 PM	0	512	317	6	59	2	0	10	0	0	0	0	1	907
5:00 PM	0	417	282	5	36	1	0	10	0	0	0	0	0	751
6:00 PM	0	250	213	2	10	2	0	3	0	0	0	0	0	480
7:00 PM	0	137	96	6	14	0	0	0	0	0	0	0	0	253
8:00 PM	0	124	122	2	11	0	0	0	0	0	0	0	0	259
9:00 PM	0	71	55	1	7	0	0	0	0	0	0	0	0	134
10:00 PM	0	33	37	1	2	0	0	0	0	0	0	0	0	73
11:00 PM	0	22	18	1	2	0	0	0	0	0	0	0	0	43
Total	1	3,771	2,679	81	446	29	0	38	3	0	0	0	1	7,049
	0.0%	53.5%	38.0%	1.1%	6.3%	0.4%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Wednesday, January 29, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	1	0	0	0	0	6
1:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	5
4:00 AM	0	14	1	0	3	0	0	0	0	0	0	0	0	18
5:00 AM	0	62	6	1	1	0	0	0	0	0	0	0	0	70
6:00 AM	0	148	28	2	2	1	0	1	1	0	0	0	0	183
7:00 AM	0	360	69	2	7	2	0	1	0	2	0	0	0	443
8:00 AM	0	670	132	5	15	7	0	4	1	0	0	0	1	835
9:00 AM	0	500	89	5	16	2	0	2	1	0	0	0	0	615
10:00 AM	0	385	74	9	10	4	0	2	1	0	0	0	0	485
11:00 AM	1	377	66	4	16	3	0	2	0	0	0	0	0	469
12:00 PM	0	335	63	2	8	2	0	0	0	0	0	0	0	410
1:00 PM	0	337	62	4	9	1	0	0	0	0	0	0	0	413
2:00 PM	0	359	65	7	6	3	0	2	0	0	0	0	0	442
3:00 PM	0	477	88	2	4	4	0	4	0	0	0	0	0	579
4:00 PM	0	434	81	4	7	1	0	2	0	0	0	0	0	529
5:00 PM	0	388	79	2	4	6	0	2	1	0	1	0	0	483
6:00 PM	0	304	45	2	4	1	0	0	1	0	0	0	0	357
7:00 PM	0	190	24	1	1	1	0	0	0	0	0	0	0	217
8:00 PM	0	143	14	1	2	1	0	1	0	0	0	0	0	162
9:00 PM	0	110	19	3	0	3	0	0	0	0	0	0	0	135
10:00 PM	0	58	7	1	0	0	0	0	0	0	0	0	0	66
11:00 PM	1	26	2	1	0	0	0	0	0	0	0	0	0	30
Total	2	5,695	1,017	58	115	43	0	23	7	2	1	0	1	6,964
	0.0%	81.8%	14.6%	0.8%	1.7%	0.6%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Thursday, January 30, 2025
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	7	1	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	1	8	0	1	0	0	0	0	0	0	0	0	10
2:00 AM	0	4	4	0	0	0	0	0	1	0	0	0	0	9
3:00 AM	0	3	5	1	1	0	0	0	0	0	0	0	0	10
4:00 AM	0	6	9	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	16	14	1	4	1	0	0	0	0	0	0	0	36
6:00 AM	0	57	43	2	14	0	0	0	0	0	0	0	0	116
7:00 AM	0	124	148	7	26	4	0	1	0	0	0	0	0	310
8:00 AM	0	226	282	10	38	3	0	2	0	0	0	0	0	561
9:00 AM	0	195	144	6	28	4	0	1	0	0	0	0	0	378
10:00 AM	0	184	106	6	22	5	0	1	0	0	0	0	0	324
11:00 AM	1	200	120	6	27	4	0	4	0	0	0	0	0	362
12:00 PM	2	249	138	4	43	4	0	0	0	0	0	0	0	440
1:00 PM	0	229	159	2	24	2	0	2	1	0	0	0	0	419
2:00 PM	0	280	165	6	37	2	0	3	0	0	0	0	0	493
3:00 PM	1	390	265	7	32	1	0	7	0	0	0	0	0	703
4:00 PM	0	546	312	5	70	2	0	5	0	0	0	0	1	941
5:00 PM	1	386	301	4	38	1	0	7	0	0	0	0	0	738
6:00 PM	0	248	185	6	21	0	0	1	0	0	0	0	0	461
7:00 PM	0	137	151	4	13	0	0	3	0	0	0	0	0	308
8:00 PM	0	95	119	1	8	0	0	1	0	0	0	0	0	224
9:00 PM	0	65	87	1	2	0	0	1	0	0	0	0	0	156
10:00 PM	0	37	37	1	4	0	0	0	0	0	0	0	0	79
11:00 PM	0	10	25	1	1	0	0	0	0	0	0	0	0	37
Total	5	3,693	2,834	82	454	33	0	39	2	0	0	0	1	7,143
	0.1%	51.7%	39.7%	1.1%	6.4%	0.5%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Thursday, January 30, 2025
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	3
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	18	3	0	1	0	0	0	0	0	0	0	0	22
5:00 AM	0	60	11	1	2	2	0	0	0	0	0	0	0	76
6:00 AM	0	146	34	3	2	4	0	0	0	0	0	0	0	189
7:00 AM	0	434	88	4	5	10	0	4	0	0	0	0	1	546
8:00 AM	3	677	133	7	20	8	0	8	2	0	0	0	1	859
9:00 AM	0	467	89	5	14	9	0	5	3	0	0	0	1	593
10:00 AM	0	325	64	4	13	5	0	3	0	0	0	0	0	414
11:00 AM	0	316	66	5	12	2	0	3	0	0	0	0	0	404
12:00 PM	0	329	65	4	12	2	0	1	0	0	0	0	0	413
1:00 PM	0	301	55	3	12	4	0	3	0	0	0	0	0	378
2:00 PM	0	349	67	9	15	2	0	0	0	0	0	0	0	442
3:00 PM	0	482	93	6	8	0	0	4	0	0	0	0	0	593
4:00 PM	0	455	77	3	5	2	0	3	1	0	0	0	0	546
5:00 PM	0	383	68	2	8	0	0	1	0	0	0	0	0	462
6:00 PM	0	302	49	2	2	5	0	2	0	0	0	0	0	362
7:00 PM	0	185	27	1	1	0	0	0	1	0	0	0	0	215
8:00 PM	0	131	19	0	0	1	0	0	0	0	0	0	1	152
9:00 PM	0	131	10	1	1	1	0	1	0	0	0	0	0	145
10:00 PM	0	60	8	2	1	2	0	0	0	0	0	0	0	73
11:00 PM	0	20	7	1	0	1	0	0	0	0	0	0	0	29
Total	3	5,596	1,036	63	134	61	0	38	7	0	0	0	4	6,942
	0.0%	80.6%	14.9%	0.9%	1.9%	0.9%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.1%	

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



**Total Study Average
Eastbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	6	1	0	0	0	0	0	0	0	0	0	14
1:00 AM	0	2	6	0	1	0	0	0	1	0	0	0	0	10
2:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	3	4	0	1	0	0	0	0	0	0	0	0	8
4:00 AM	0	4	9	0	0	0	0	0	0	0	0	0	0	13
5:00 AM	0	17	11	0	3	1	0	0	0	0	0	0	0	32
6:00 AM	0	45	47	3	13	1	0	0	0	0	0	0	0	109
7:00 AM	0	133	150	6	20	3	0	1	1	0	0	0	0	314
8:00 AM	0	223	244	7	43	2	0	3	1	0	0	0	0	523
9:00 AM	0	215	155	9	37	2	0	2	0	0	0	0	0	420
10:00 AM	0	190	103	5	25	3	0	0	0	0	0	0	0	326
11:00 AM	0	199	122	7	32	3	0	2	0	0	0	0	0	365
12:00 PM	1	243	127	5	32	2	0	1	0	0	0	0	0	411
1:00 PM	0	252	138	5	27	2	0	2	0	0	0	0	0	426
2:00 PM	0	275	152	6	30	1	0	2	0	0	0	0	0	466
3:00 PM	1	425	266	5	37	2	0	4	0	0	0	0	0	740
4:00 PM	0	528	301	7	61	2	0	8	0	0	0	0	1	908
5:00 PM	0	393	298	5	35	2	0	9	0	0	0	0	0	742
6:00 PM	0	252	203	4	19	1	0	3	0	0	0	0	0	482
7:00 PM	0	137	128	5	12	0	0	1	0	0	0	0	0	283
8:00 PM	0	108	121	2	9	0	0	0	0	0	0	0	0	240
9:00 PM	0	77	88	1	5	0	0	1	0	0	0	0	0	172
10:00 PM	0	39	37	1	5	0	0	0	0	0	0	0	0	82
11:00 PM	0	16	21	1	1	0	0	0	0	0	0	0	0	39
Total	2	3,788	2,740	85	448	27	0	39	3	0	0	0	1	7,133
	0.0%	53.1%	38.4%	1.2%	6.3%	0.4%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



**Total Study Average
Westbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	16	1	0	1	0	0	0	0	0	0	0	0	18
5:00 AM	0	64	10	1	2	1	0	0	0	0	0	0	0	78
6:00 AM	0	152	27	3	1	2	0	1	0	0	0	0	0	186
7:00 AM	1	418	78	4	7	7	0	3	1	1	0	0	1	521
8:00 AM	1	709	139	6	16	7	0	7	1	0	0	0	1	887
9:00 AM	0	471	87	6	15	4	0	4	2	0	0	0	1	590
10:00 AM	0	348	65	6	10	4	0	3	0	0	0	0	0	436
11:00 AM	0	336	66	6	13	4	0	2	0	0	0	0	0	427
12:00 PM	0	331	66	3	10	2	0	1	0	0	0	0	0	413
1:00 PM	0	320	64	4	13	2	0	2	0	0	0	0	0	405
2:00 PM	0	352	66	8	9	3	0	1	0	0	0	0	0	439
3:00 PM	0	480	90	5	7	2	0	3	0	0	0	0	0	587
4:00 PM	0	434	80	3	7	2	0	2	1	0	0	0	0	529
5:00 PM	0	387	73	2	6	3	0	2	1	0	0	0	0	474
6:00 PM	0	313	47	2	3	3	0	1	0	0	0	0	0	369
7:00 PM	0	179	25	1	1	2	0	1	0	0	0	0	0	209
8:00 PM	0	138	19	1	1	2	0	0	0	0	0	0	0	161
9:00 PM	0	134	19	2	0	2	0	0	0	0	0	0	0	157
10:00 PM	0	57	7	1	1	1	0	0	0	0	0	0	0	67
11:00 PM	0	24	5	1	0	0	0	0	0	0	0	0	0	30
Total	2	5,686	1,037	65	123	53	0	33	6	1	0	0	3	7,009
	0.0%	81.1%	14.8%	0.9%	1.8%	0.8%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Vehicle Speed Report Summary



Location: Boulder Rd E/O 55th St
Direction: Eastbound / Westbound
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01

Direction	Speed Range (mph)																		Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +		
Eastbound	0	1	6	9	6	13	100	541	2,632	7,366	7,175	2,734	642	133	44	0	0	21,402	
	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	2.5%	12.3%	34.4%	33.5%	12.8%	3.0%	0.6%	0.2%	0.0%	0.0%		
Westbound	65	1	6	1	12	155	1,506	5,351	7,880	4,387	1,343	259	54	12	9	0	0	21,041	
	0.3%	0.0%	0.0%	0.0%	0.1%	0.7%	7.2%	25.4%	37.5%	20.8%	6.4%	1.2%	0.3%	0.1%	0.0%	0.0%	0.0%		
Total	65	2	12	10	18	168	1,606	5,892	10,512	11,753	8,518	2,993	696	145	53	0	0	42,443	
	0.2%	0.0%	0.0%	0.0%	0.0%	0.4%	3.8%	13.9%	24.8%	27.7%	20.1%	7.1%	1.6%	0.3%	0.1%	0.0%	0.0%		

Total Study Percentile Speed Summary				Total Study Speed Statistics			
Eastbound				Eastbound			
50th Percentile (Median)		55.0	mph	Mean (Average) Speed		55.1	mph
85th Percentile		60.4	mph	10 mph Pace		49.9 - 59.9	mph
95th Percentile		64.1	mph	Percent in Pace		67.8	%
Westbound				Westbound			
50th Percentile (Median)		47.1	mph	Mean (Average) Speed		47.2	mph
85th Percentile		52.8	mph	10 mph Pace		42.2 - 52.2	mph
95th Percentile		56.5	mph	Percent in Pace		65.5	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Tuesday, January 28, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	5	4	1	2	0	0	0	0	12
1:00 AM	0	0	0	0	0	0	0	2	1	0	3	1	0	1	0	0	0	8
2:00 AM	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	6
3:00 AM	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	0	0	1	1	4	5	1	0	0	0	0	0	12
5:00 AM	0	0	0	0	0	0	0	4	9	9	7	2	0	0	0	0	0	31
6:00 AM	0	0	0	0	0	2	0	4	10	29	32	12	10	2	1	0	0	102
7:00 AM	0	0	0	0	0	0	0	7	35	114	113	49	12	2	0	0	0	332
8:00 AM	0	0	0	0	0	1	3	16	75	203	203	71	14	1	1	0	0	588
9:00 AM	0	0	0	0	0	1	0	18	51	102	118	47	11	1	0	0	0	349
10:00 AM	0	0	0	0	1	0	3	10	46	112	113	36	2	0	0	0	0	323
11:00 AM	0	0	0	1	0	0	0	15	61	148	108	31	4	1	0	0	0	369
12:00 PM	0	0	0	0	0	0	2	13	56	127	133	52	8	1	1	0	0	393
1:00 PM	0	0	0	0	0	0	2	25	95	163	102	40	10	4	0	0	0	441
2:00 PM	0	0	0	0	1	0	2	16	69	177	129	46	9	2	0	0	0	451
3:00 PM	0	0	0	2	0	0	1	6	79	270	286	107	32	8	2	0	0	793
4:00 PM	0	0	0	1	1	0	4	9	95	314	322	93	25	7	0	0	0	871
5:00 PM	0	0	0	0	0	0	0	8	60	242	292	109	23	2	1	0	0	737
6:00 PM	0	0	0	0	0	0	4	16	77	195	130	67	10	4	0	0	0	503
7:00 PM	0	0	0	0	0	0	2	9	35	116	87	32	5	3	1	0	0	290
8:00 PM	0	0	0	0	0	0	1	5	46	71	77	30	6	1	0	0	0	237
9:00 PM	0	0	0	0	0	0	0	4	29	88	67	28	6	2	0	0	0	224
10:00 PM	0	0	0	0	0	0	1	3	8	36	23	19	4	1	1	0	0	96
11:00 PM	0	0	0	0	0	0	0	0	5	10	14	8	0	1	0	0	0	38
Total	0	0	0	4	3	4	25	191	943	2,539	2,371	885	193	44	8	0	0	7,210
	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.3%	2.6%	13.1%	35.2%	32.9%	12.3%	2.7%	0.6%	0.1%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	54.8	mph	Mean (Average) Speed	54.9	mph
85th Percentile	60.2	mph	10 mph Pace	49.7 - 59.7	mph
95th Percentile	63.8	mph	Percent in Pace	68.3	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Tuesday, January 28, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	2	2	3	0	0	0	0	0	0	0	0	7
2:00 AM	1	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	7
3:00 AM	0	0	0	0	0	0	3	4	3	0	0	0	0	0	0	0	0	10
4:00 AM	1	0	0	0	0	1	2	4	7	1	1	0	0	0	0	0	0	17
5:00 AM	1	0	0	0	0	5	21	28	20	6	2	3	1	0	0	0	0	87
6:00 AM	5	0	0	0	0	2	17	50	85	22	6	1	0	0	0	0	0	188
7:00 AM	7	0	0	0	0	10	42	146	260	92	16	3	0	0	0	0	0	576
8:00 AM	0	0	0	0	2	8	96	269	386	145	56	5	0	0	0	0	0	967
9:00 AM	0	0	0	0	0	1	34	122	221	146	31	6	0	0	0	0	0	561
10:00 AM	3	0	0	0	0	2	21	113	148	76	35	10	0	0	0	0	0	408
11:00 AM	0	0	1	0	0	12	34	110	130	95	22	5	0	0	0	0	0	409
12:00 PM	1	0	0	0	1	2	21	91	157	106	27	7	0	1	0	0	0	414
1:00 PM	2	0	1	0	0	1	26	111	149	97	29	4	1	0	0	0	0	421
2:00 PM	0	0	0	0	0	1	23	96	171	106	31	5	1	0	0	0	0	434
3:00 PM	1	0	1	1	2	2	28	150	211	143	44	9	0	0	0	0	0	592
4:00 PM	4	0	0	0	0	3	20	121	203	114	37	9	0	0	0	0	0	511
5:00 PM	1	0	0	0	0	1	51	137	172	89	22	3	0	0	0	0	0	476
6:00 PM	1	0	0	0	1	4	39	110	152	71	9	1	0	1	0	0	0	389
7:00 PM	2	0	0	0	0	2	17	43	84	44	3	3	0	0	0	0	0	198
8:00 PM	1	0	0	0	0	2	16	47	69	24	7	1	0	0	0	0	0	167
9:00 PM	1	0	0	0	0	2	19	61	84	18	6	4	2	0	0	0	0	197
10:00 PM	0	0	0	0	0	3	4	13	24	7	8	2	0	1	0	0	0	62
11:00 PM	0	0	0	0	0	2	3	9	8	7	3	0	0	0	0	0	0	32
Total	33	0	3	1	6	66	539	1,840	2,749	1,412	397	81	5	3	0	0	0	7,135
	0.5%	0.0%	0.0%	0.0%	0.1%	0.9%	7.6%	25.8%	38.5%	19.8%	5.6%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	46.9	mph	Mean (Average) Speed	46.8	mph
85th Percentile	52.5	mph	10 mph Pace	41.3 - 51.3	mph
95th Percentile	55.9	mph	Percent in Pace	66.1	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Wednesday, January 29, 2025
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	1	0	1	5	6	4	0	0	0	0	0	17
1:00 AM	0	0	0	0	0	0	0	0	2	5	3	0	1	0	0	0	0	11
2:00 AM	0	0	0	0	0	0	1	0	2	3	3	0	0	0	0	0	0	9
3:00 AM	0	0	0	0	0	0	1	1	1	3	3	2	0	0	0	0	0	11
4:00 AM	0	0	0	0	0	0	0	0	2	3	5	3	2	0	0	0	0	15
5:00 AM	0	0	0	0	0	0	1	1	7	5	10	5	1	0	0	0	0	30
6:00 AM	0	0	0	0	0	0	1	4	9	27	32	28	6	2	1	0	0	110
7:00 AM	0	0	0	0	0	0	0	14	27	76	89	59	29	2	1	0	0	297
8:00 AM	0	0	0	0	0	0	1	8	32	138	143	72	20	5	1	0	0	420
9:00 AM	0	0	0	0	0	0	2	10	59	166	198	77	18	3	0	0	0	533
10:00 AM	0	0	0	0	0	1	6	10	56	128	87	32	12	0	1	0	0	333
11:00 AM	0	0	0	0	1	1	2	17	67	131	117	22	6	0	0	0	0	364
12:00 PM	0	0	0	0	0	0	1	11	41	143	131	55	11	6	1	0	0	400
1:00 PM	0	0	0	0	0	0	4	10	50	145	138	54	13	2	0	0	0	416
2:00 PM	0	1	1	1	0	1	3	12	48	168	141	62	14	2	2	0	0	456
3:00 PM	0	0	0	1	0	1	0	9	88	257	269	76	25	0	1	0	0	727
4:00 PM	0	0	0	0	0	0	1	11	98	320	322	115	25	9	6	0	0	907
5:00 PM	0	0	0	0	0	0	1	11	89	275	273	79	18	4	1	0	0	751
6:00 PM	0	0	0	0	0	0	3	14	45	175	161	69	11	1	1	0	0	480
7:00 PM	0	0	0	0	0	0	2	5	30	75	88	34	12	4	3	0	0	253
8:00 PM	0	0	0	0	0	0	3	11	30	86	78	42	8	1	0	0	0	259
9:00 PM	0	0	0	0	0	0	0	11	22	40	42	15	2	2	0	0	0	134
10:00 PM	0	0	0	0	0	0	1	1	11	21	23	12	3	0	1	0	0	73
11:00 PM	0	0	0	0	0	0	0	3	4	11	18	5	1	1	0	0	0	43
Total	0	1	1	2	1	4	35	174	821	2,406	2,380	922	238	44	20	0	0	7,049
	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	2.5%	11.6%	34.1%	33.8%	13.1%	3.4%	0.6%	0.3%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	55.1	mph	Mean (Average) Speed	55.3	mph
85th Percentile	60.5	mph	10 mph Pace	50.3 - 60.3	mph
95th Percentile	64.5	mph	Percent in Pace	67.9	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Wednesday, January 29, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	1	2	2	2	0	0	0	0	0	0	0	0	7
3:00 AM	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	0	5
4:00 AM	0	0	0	0	0	1	1	3	8	3	2	0	0	0	0	0	0	18
5:00 AM	0	0	0	0	0	2	6	19	20	10	8	0	3	1	1	0	0	70
6:00 AM	2	0	0	0	0	1	11	40	75	44	8	2	0	0	0	0	0	183
7:00 AM	1	0	0	0	0	3	20	92	188	106	25	5	3	0	0	0	0	443
8:00 AM	1	0	0	0	0	9	62	251	272	166	60	9	4	0	1	0	0	835
9:00 AM	2	0	0	0	1	1	21	143	211	168	56	10	1	1	0	0	0	615
10:00 AM	1	0	1	0	0	0	23	123	196	102	31	6	1	1	0	0	0	485
11:00 AM	1	0	1	0	0	6	39	129	169	94	24	5	0	0	1	0	0	469
12:00 PM	1	0	0	0	0	0	16	89	141	114	43	3	2	1	0	0	0	410
1:00 PM	0	0	0	0	0	2	17	85	161	102	37	7	0	0	2	0	0	413
2:00 PM	0	0	0	0	0	2	28	107	168	93	34	8	1	1	0	0	0	442
3:00 PM	0	0	0	0	0	1	31	144	236	111	40	9	5	0	2	0	0	579
4:00 PM	1	0	0	0	0	2	24	123	189	123	51	11	5	0	0	0	0	529
5:00 PM	1	0	0	0	0	5	39	128	193	93	16	8	0	0	0	0	0	483
6:00 PM	1	0	0	0	0	2	38	103	124	70	15	4	0	0	0	0	0	357
7:00 PM	0	0	0	0	0	4	22	65	74	36	13	2	1	0	0	0	0	217
8:00 PM	0	0	0	0	1	0	8	51	66	27	7	1	0	1	0	0	0	162
9:00 PM	0	0	0	0	0	2	14	38	46	24	11	0	0	0	0	0	0	135
10:00 PM	0	0	0	0	0	2	6	12	29	12	4	0	0	0	1	0	0	66
11:00 PM	0	0	0	0	0	0	3	10	7	6	2	0	2	0	0	0	0	30
Total	12	0	2	0	2	46	432	1,759	2,585	1,506	488	90	28	6	8	0	0	6,964
	0.2%	0.0%	0.0%	0.0%	0.0%	0.7%	6.2%	25.3%	37.1%	21.6%	7.0%	1.3%	0.4%	0.1%	0.1%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	47.2	mph	Mean (Average) Speed	47.5	mph
85th Percentile	53.2	mph	10 mph Pace	42.1 - 52.1	mph
95th Percentile	56.8	mph	Percent in Pace	65.72	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Thursday, January 30, 2025
Eastbound

Time	Speed Range (mph)																		Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +		
12:00 AM	0	0	0	0	0	0	0	1	2	7	2	1	0	0	0	0	0	13	
1:00 AM	0	0	0	0	0	0	0	0	0	3	2	2	2	1	0	0	0	10	
2:00 AM	0	0	0	0	0	0	0	0	1	3	4	1	0	0	0	0	0	9	
3:00 AM	0	0	0	0	0	0	0	0	2	1	6	1	0	0	0	0	0	10	
4:00 AM	0	0	0	0	0	0	1	0	1	7	5	1	0	0	0	0	0	15	
5:00 AM	0	0	0	0	0	0	0	1	2	11	12	7	2	1	0	0	0	36	
6:00 AM	0	0	0	0	1	1	2	2	13	37	28	23	7	1	1	0	0	116	
7:00 AM	0	0	1	0	0	1	0	7	29	80	114	55	19	3	1	0	0	310	
8:00 AM	0	0	0	0	0	0	3	7	60	180	212	77	20	2	0	0	0	561	
9:00 AM	0	0	0	1	0	0	5	18	51	116	132	41	13	1	0	0	0	378	
10:00 AM	0	0	0	1	0	0	3	24	72	109	83	21	10	1	0	0	0	324	
11:00 AM	0	0	1	0	0	1	0	14	48	129	112	42	11	4	0	0	0	362	
12:00 PM	0	0	2	0	0	2	5	16	53	141	127	64	22	5	3	0	0	440	
1:00 PM	0	0	0	0	0	0	4	10	36	153	148	57	8	2	1	0	0	419	
2:00 PM	0	0	0	0	0	0	3	12	55	170	172	68	9	3	1	0	0	493	
3:00 PM	0	0	1	1	0	0	1	17	89	242	258	79	12	3	0	0	0	703	
4:00 PM	0	0	0	0	1	0	3	12	112	314	333	141	19	5	1	0	0	941	
5:00 PM	0	0	0	0	0	0	4	11	78	265	252	96	25	5	2	0	0	738	
6:00 PM	0	0	0	0	0	0	0	11	49	165	163	58	13	2	0	0	0	461	
7:00 PM	0	0	0	0	0	0	2	5	46	119	83	40	10	2	1	0	0	308	
8:00 PM	0	0	0	0	0	0	0	2	32	73	92	16	4	2	3	0	0	224	
9:00 PM	0	0	0	0	0	0	2	3	27	50	50	18	4	1	1	0	0	156	
10:00 PM	0	0	0	0	0	0	2	2	3	34	24	12	0	1	1	0	0	79	
11:00 PM	0	0	0	0	0	0	0	1	7	12	10	6	1	0	0	0	0	37	
Total	0	0	5	3	2	5	40	176	868	2,421	2,424	927	211	45	16	0	0	7,143	
	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.6%	2.5%	12.2%	33.9%	33.9%	13.0%	3.0%	0.6%	0.2%	0.0%	0.0%		

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	55.1	mph	Mean (Average) Speed	55.1	mph
85th Percentile	60.4	mph	10 mph Pace	49.9 - 59.9	mph
95th Percentile	64.2	mph	Percent in Pace	67.8	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



Thursday, January 30, 2025
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	2	3	5	2	0	1	0	0	0	0	0	13
1:00 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	1	2	1	0	2	0	0	0	0	0	6
3:00 AM	0	0	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	0	0	3	5	11	3	0	0	0	0	0	0	0	22
5:00 AM	0	0	0	0	0	3	6	11	30	13	7	2	3	1	0	0	0	76
6:00 AM	0	0	0	0	1	0	2	43	76	50	10	4	2	1	0	0	0	189
7:00 AM	3	0	0	0	1	0	32	144	191	132	37	5	1	0	0	0	0	546
8:00 AM	2	0	0	0	0	11	78	232	314	173	42	5	2	0	0	0	0	859
9:00 AM	1	0	1	0	1	4	37	128	212	142	54	9	4	0	0	0	0	593
10:00 AM	0	0	0	0	1	2	32	99	158	88	26	8	0	0	0	0	0	414
11:00 AM	0	0	0	0	0	2	31	73	161	97	33	4	3	0	0	0	0	404
12:00 PM	4	1	0	0	0	2	35	102	147	87	31	3	1	0	0	0	0	413
1:00 PM	0	0	0	0	0	0	42	83	132	81	34	6	0	0	0	0	0	378
2:00 PM	0	0	0	0	0	2	33	105	159	104	34	5	0	0	0	0	0	442
3:00 PM	1	0	0	0	0	2	51	159	221	115	38	5	1	0	0	0	0	593
4:00 PM	4	0	0	0	0	5	33	152	196	107	39	7	3	0	0	0	0	546
5:00 PM	0	0	0	0	0	1	33	125	177	93	27	6	0	0	0	0	0	462
6:00 PM	3	0	0	0	0	2	30	100	131	72	16	8	0	0	0	0	0	362
7:00 PM	1	0	0	0	0	0	21	53	81	46	10	1	0	1	1	0	0	215
8:00 PM	0	0	0	0	0	2	9	55	52	22	8	4	0	0	0	0	0	152
9:00 PM	0	0	0	0	0	2	12	48	47	26	7	2	1	0	0	0	0	145
10:00 PM	1	0	0	0	0	2	10	18	25	12	4	1	0	0	0	0	0	73
11:00 PM	0	0	0	0	0	1	2	9	13	3	1	0	0	0	0	0	0	29
Total	20	1	1	0	4	43	535	1,752	2,546	1,469	458	88	21	3	1	0	0	6,942
	0.3%	0.0%	0.0%	0.0%	0.1%	0.6%	7.7%	25.2%	36.7%	21.2%	6.6%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	47.2	mph	Mean (Average) Speed	47.2	mph
85th Percentile	52.8	mph	10 mph Pace	41.8 - 51.8	mph
95th Percentile	56.5	mph	Percent in Pace	65.14	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



**Total Study Average
Eastbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	1	6	4	2	1	0	0	0	0	14
1:00 AM	0	0	0	0	0	0	0	1	1	3	3	1	1	1	0	0	0	11
2:00 AM	0	0	0	0	0	0	0	0	1	3	3	1	0	0	0	0	0	8
3:00 AM	0	0	0	0	0	0	0	0	1	2	3	1	0	0	0	0	0	7
4:00 AM	0	0	0	0	0	0	0	0	1	5	5	2	1	0	0	0	0	14
5:00 AM	0	0	0	0	0	0	0	2	6	8	10	5	1	0	0	0	0	32
6:00 AM	0	0	0	0	0	1	1	3	11	31	31	21	8	2	1	0	0	110
7:00 AM	0	0	0	0	0	0	0	9	30	90	105	54	20	2	1	0	0	311
8:00 AM	0	0	0	0	0	0	2	10	56	174	186	73	18	3	1	0	0	523
9:00 AM	0	0	0	0	0	0	2	15	54	128	149	55	14	2	0	0	0	419
10:00 AM	0	0	0	0	0	0	4	15	58	116	94	30	8	0	0	0	0	325
11:00 AM	0	0	0	0	0	1	1	15	59	136	112	32	7	2	0	0	0	365
12:00 PM	0	0	1	0	0	1	3	13	50	137	130	57	14	4	2	0	0	412
1:00 PM	0	0	0	0	0	0	3	15	60	154	129	50	10	3	0	0	0	424
2:00 PM	0	0	0	0	0	0	3	13	57	172	147	59	11	2	1	0	0	465
3:00 PM	0	0	0	1	0	0	1	11	85	256	271	87	23	4	1	0	0	740
4:00 PM	0	0	0	0	1	0	3	11	102	316	326	116	23	7	2	0	0	907
5:00 PM	0	0	0	0	0	0	2	10	76	261	272	95	22	4	1	0	0	743
6:00 PM	0	0	0	0	0	0	2	14	57	178	151	65	11	2	0	0	0	480
7:00 PM	0	0	0	0	0	0	2	6	37	103	86	35	9	3	2	0	0	283
8:00 PM	0	0	0	0	0	0	1	6	36	77	82	29	6	1	1	0	0	239
9:00 PM	0	0	0	0	0	0	1	6	26	59	53	20	4	2	0	0	0	171
10:00 PM	0	0	0	0	0	0	1	2	7	30	23	14	2	1	1	0	0	81
11:00 PM	0	0	0	0	0	0	0	1	5	11	14	6	1	1	0	0	0	39
Total	0	0	1	1	1	3	32	178	877	2,456	2,389	910	215	46	14	0	0	7,123
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	2.5%	12.3%	34.5%	33.5%	12.8%	3.0%	0.6%	0.2%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	55.0	mph	Mean (Average) Speed	55.1	mph
85th Percentile	60.4	mph	10 mph Pace	49.9 - 59.9	mph
95th Percentile	64.1	mph	Percent in Pace	67.8	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 to 1/30/2025
Site Code: 01



**Total Study Average
Westbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	7
1:00 AM	0	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	0	1	2	2	1	0	1	0	0	0	0	0	7
3:00 AM	0	0	0	0	0	0	2	2	3	0	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	0	1	2	4	9	2	1	0	0	0	0	0	0	19
5:00 AM	0	0	0	0	0	3	11	19	23	10	6	2	2	1	0	0	0	77
6:00 AM	2	0	0	0	0	1	10	44	79	39	8	2	1	0	0	0	0	186
7:00 AM	4	0	0	0	0	4	31	127	213	110	26	4	1	0	0	0	0	520
8:00 AM	1	0	0	0	1	9	79	251	324	161	53	6	2	0	0	0	0	887
9:00 AM	1	0	0	0	1	2	31	131	215	152	47	8	2	0	0	0	0	590
10:00 AM	1	0	0	0	0	1	25	112	167	89	31	8	0	0	0	0	0	434
11:00 AM	0	0	1	0	0	7	35	104	153	95	26	5	1	0	0	0	0	427
12:00 PM	2	0	0	0	0	1	24	94	148	102	34	4	1	1	0	0	0	411
1:00 PM	1	0	0	0	0	1	28	93	147	93	33	6	0	0	1	0	0	403
2:00 PM	0	0	0	0	0	2	28	103	166	101	33	6	1	0	0	0	0	440
3:00 PM	1	0	0	0	1	2	37	151	223	123	41	8	2	0	1	0	0	590
4:00 PM	3	0	0	0	0	3	26	132	196	115	42	9	3	0	0	0	0	529
5:00 PM	1	0	0	0	0	2	41	130	181	92	22	6	0	0	0	0	0	475
6:00 PM	2	0	0	0	0	3	36	104	136	71	13	4	0	0	0	0	0	369
7:00 PM	1	0	0	0	0	2	20	54	80	42	9	2	0	0	0	0	0	210
8:00 PM	0	0	0	0	0	1	11	51	62	24	7	2	0	0	0	0	0	158
9:00 PM	0	0	0	0	0	2	15	49	59	23	8	2	1	0	0	0	0	159
10:00 PM	0	0	0	0	0	2	7	14	26	10	5	1	0	0	0	0	0	65
11:00 PM	0	0	0	0	0	1	3	9	9	5	2	0	1	0	0	0	0	30
Total	20	0	1	0	3	50	505	1,783	2,626	1,461	448	86	18	2	2	0	0	7,005
	0.3%	0.0%	0.0%	0.0%	0.0%	0.7%	7.2%	25.5%	37.5%	20.9%	6.4%	1.2%	0.3%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	47.1	mph	Mean (Average) Speed	47.2	mph
85th Percentile	52.8	mph	10 mph Pace	42.2 - 52.2	mph
95th Percentile	56.5	mph	Percent in Pace	65.5	%

Location: Boulder Rd E/O 55th St
Date Range: 1/28/2025 - 2/3/2025
Site Code: 01

Time	Tuesday 1/28/2025			Wednesday 1/29/2025			Thursday 1/30/2025			Friday 1/31/2025			Saturday 2/1/2025			Sunday 2/2/2025			Monday 2/3/2025			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	12	5	17	17	6	23	13	13	26	-	-	-	-	-	-	-	-	-	-	-	-	14	8	22
1:00 AM	8	7	15	11	5	16	10	3	13	-	-	-	-	-	-	-	-	-	-	-	-	10	5	15
2:00 AM	6	7	13	9	7	16	9	6	15	-	-	-	-	-	-	-	-	-	-	-	-	8	7	15
3:00 AM	4	10	14	11	5	16	10	7	17	-	-	-	-	-	-	-	-	-	-	-	-	8	7	16
4:00 AM	12	17	29	15	18	33	15	22	37	-	-	-	-	-	-	-	-	-	-	-	-	14	19	33
5:00 AM	31	87	118	30	70	100	36	76	112	-	-	-	-	-	-	-	-	-	-	-	-	32	78	110
6:00 AM	102	188	290	110	183	293	116	189	305	-	-	-	-	-	-	-	-	-	-	-	-	109	187	296
7:00 AM	332	576	908	297	443	740	310	546	856	-	-	-	-	-	-	-	-	-	-	-	-	313	522	835
8:00 AM	588	967	1,555	420	835	1,255	561	859	1,420	-	-	-	-	-	-	-	-	-	-	-	-	523	887	1,410
9:00 AM	349	561	910	533	615	1,148	378	593	971	-	-	-	-	-	-	-	-	-	-	-	-	420	590	1,010
10:00 AM	323	408	731	333	485	818	324	414	738	-	-	-	-	-	-	-	-	-	-	-	-	327	436	762
11:00 AM	369	409	778	364	469	833	362	404	766	-	-	-	-	-	-	-	-	-	-	-	-	365	427	792
12:00 PM	393	414	807	400	410	810	440	413	853	-	-	-	-	-	-	-	-	-	-	-	-	411	412	823
1:00 PM	441	421	862	416	413	829	419	378	797	-	-	-	-	-	-	-	-	-	-	-	-	425	404	829
2:00 PM	451	434	885	456	442	898	493	442	935	-	-	-	-	-	-	-	-	-	-	-	-	467	439	906
3:00 PM	793	592	1,385	727	579	1,306	703	593	1,296	-	-	-	-	-	-	-	-	-	-	-	-	741	588	1,329
4:00 PM	871	511	1,382	907	529	1,436	941	546	1,487	-	-	-	-	-	-	-	-	-	-	-	-	906	529	1,435
5:00 PM	737	476	1,213	751	483	1,234	738	462	1,200	-	-	-	-	-	-	-	-	-	-	-	-	742	474	1,216
6:00 PM	503	389	892	480	357	837	461	362	823	-	-	-	-	-	-	-	-	-	-	-	-	481	369	851
7:00 PM	290	198	488	253	217	470	308	215	523	-	-	-	-	-	-	-	-	-	-	-	-	284	210	494
8:00 PM	237	167	404	259	162	421	224	152	376	-	-	-	-	-	-	-	-	-	-	-	-	240	160	400
9:00 PM	224	197	421	134	135	269	156	145	301	-	-	-	-	-	-	-	-	-	-	-	-	171	159	330
10:00 PM	96	62	158	73	66	139	79	73	152	-	-	-	-	-	-	-	-	-	-	-	-	83	67	150
11:00 PM	38	32	70	43	30	73	37	29	66	-	-	-	-	-	-	-	-	-	-	-	-	39	30	70
Total	7,210	7,135	14,345	7,049	6,964	14,013	7,143	6,942	14,085	-	-	-	-	-	-	-	-	-	-	-	-	7,134	7,014	14,148
Percent	50%	50%		50%	50%		51%	49%		-	-	-	-	-	-	-	-	-	-	-	-	50%	50%	
AM Peak	08:00	08:00	08:00	09:00	08:00	08:00	08:00	08:00	08:00	-	-	-	-	-	-	-	-	-	-	-	-	08:00	08:00	08:00
Vol.	588	967	1,555	533	835	1,255	561	859	1,420	-	-	-	-	-	-	-	-	-	-	-	-	523	887	1,410
PM Peak	16:00	15:00	15:00	16:00	15:00	16:00	16:00	15:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	16:00	15:00	16:00
Vol.	871	592	1,385	907	579	1,436	941	593	1,487	-	-	-	-	-	-	-	-	-	-	-	-	906	588	1,435

1. Mid-week average includes data between Tuesday and Thursday.

Timings

Existing

1: Cherryvale Rd. & S. Boulder Rd.

AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Future Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Lane Group Flow (vph)	87	384	19	74	916	356	60	252	66	51	27
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			4		8	
Permitted Phases	6		6	2		2	4		8		8
Detector Phase	1	6	6	5	2	2	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	34.0	34.0	24.0	24.0	24.0
Total Split (s)	11.0	45.0	45.0	11.0	45.0	45.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	12.2%	50.0%	50.0%	12.2%	50.0%	50.0%	37.8%	37.8%	37.8%	37.8%	37.8%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
v/c Ratio	0.29	0.26	0.03	0.13	0.62	0.41	0.14	0.42	0.20	0.08	0.05
Control Delay (s/veh)	11.6	17.3	0.1	9.6	22.3	3.5	22.7	24.5	24.3	21.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.6	17.3	0.1	9.6	22.3	3.5	22.7	24.5	24.3	21.7	0.2
Queue Length 50th (ft)	21	72	0	17	207	0	23	101	26	19	0
Queue Length 95th (ft)	41	104	0	36	271	50	55	177	44	34	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	304	1580	741	554	1580	903	444	604	323	612	590
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.24	0.03	0.13	0.58	0.39	0.14	0.42	0.20	0.08	0.05

Intersection Summary

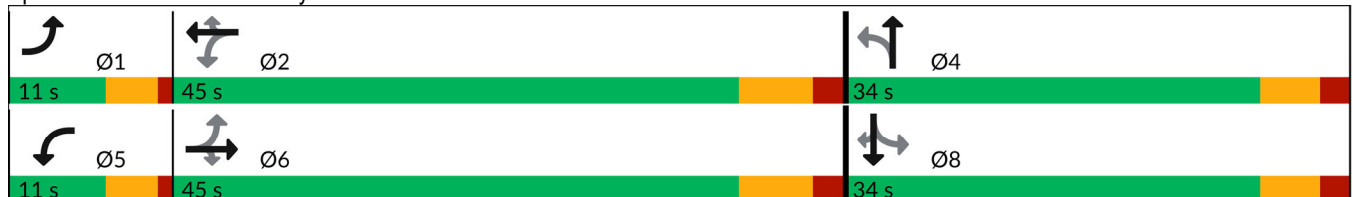
Cycle Length: 90

Actuated Cycle Length: 85.4

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.



HCM 7th Signalized Intersection Summary

1: Cherryvale Rd. & S. Boulder Rd.

Existing

AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Future Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	87	384	19	74	916	356	60	204	48	66	51	27
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.93	0.93	0.93	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1496	666	500	1475	657	499	486	114	338	621	526
Arrive On Green	0.05	0.42	0.42	0.04	0.42	0.42	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1321	1464	344	1128	1870	1585
Grp Volume(v), veh/h	87	384	19	74	916	356	60	0	252	66	51	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1321	0	1808	1128	1870	1585
Q Serve(g_s), s	2.3	5.9	0.6	2.0	17.1	14.3	2.8	0.0	9.1	4.1	1.6	1.0
Cycle Q Clear(g_c), s	2.3	5.9	0.6	2.0	17.1	14.3	4.3	0.0	9.1	13.2	1.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	258	1496	666	500	1475	657	499	0	601	338	621	526
V/C Ratio(X)	0.34	0.26	0.03	0.15	0.62	0.54	0.12	0.00	0.42	0.20	0.08	0.05
Avail Cap(c_a), veh/h	315	1602	714	567	1602	714	499	0	601	338	621	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	15.8	14.3	13.3	19.4	18.6	20.8	0.0	21.8	27.0	19.3	19.1
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.1	0.7	0.7	0.5	0.0	2.1	1.3	0.3	0.2
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(50%),veh/ln	0.9	2.2	0.2	0.7	6.4	4.8	0.9	0.0	4.0	1.2	0.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.8	15.9	14.3	13.4	20.1	19.3	21.3	0.0	24.0	28.2	19.6	19.3
LnGrp LOS	B	B	B	B	C	B	C		C	C	B	B
Approach Vol, veh/h	490			1346			312			144		
Approach Delay, s/veh	15.9			19.5			23.5			23.5		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	42.0		34.0	7.8	42.5		34.0				
Change Period (Y+Rc), s	4.5	7.0		6.0	4.5	7.0		6.0				
Max Green Setting (Gmax), s	6.5	38.0		28.0	6.5	38.0		28.0				
Max Q Clear Time (g_c+I1), s	4.3	19.1		11.1	4.0	7.9		15.2				
Green Ext Time (p_c), s	0.0	7.1		1.4	0.0	2.4		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.5								
HCM 7th LOS				B								

HCM 7th TWSC
2: S. Boulder Rd. & 55th St.

Existing
AM

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	429	892	14	8	43
Future Vol, veh/h	35	429	892	14	8	43
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	86	86	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	543	1037	16	11	57
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1054	0	-	0	1407	528
Stage 1	-	-	-	-	1046	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	656	-	-	-	130	495
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	655	-	-	-	121	495
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	675	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.82	0		18.56		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	655	-	-	-	333	
HCM Lane V/C Ratio	0.068	-	-	-	0.204	
HCM Control Delay (s/veh)	10.9	-	-	-	18.6	
HCM Lane LOS	B	-	-	-	C	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8	

Timings

Existing

1: Cherryvale Rd. & S. Boulder Rd.

PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Future Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Lane Group Flow (vph)	109	1120	32	39	429	74	95	162	267	251	28
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			4		8	
Permitted Phases	6		6	2		2	4		8		8
Detector Phase	1	6	6	5	2	2	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	34.0	34.0	24.0	24.0	24.0
Total Split (s)	11.0	45.0	45.0	11.0	45.0	45.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	12.2%	50.0%	50.0%	12.2%	50.0%	50.0%	37.8%	37.8%	37.8%	37.8%	37.8%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
v/c Ratio	0.21	0.71	0.04	0.16	0.29	0.10	0.30	0.27	0.67	0.41	0.05
Control Delay (s/veh)	10.1	23.0	0.1	10.2	17.5	3.0	26.3	15.4	36.2	26.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.1	23.0	0.1	10.2	17.5	3.0	26.3	15.4	36.2	26.1	0.1
Queue Length 50th (ft)	26	274	0	9	82	0	39	39	126	107	0
Queue Length 95th (ft)	41	274	0	22	116	19	84	90	184	153	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	532	1635	780	253	1569	752	319	600	397	608	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.69	0.04	0.15	0.27	0.10	0.30	0.27	0.67	0.41	0.05

Intersection Summary

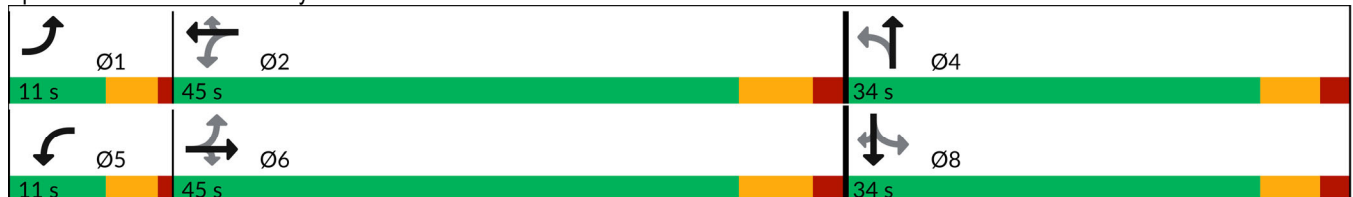
Cycle Length: 90

Actuated Cycle Length: 86

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.



HCM 7th Signalized Intersection Summary

1: Cherryvale Rd. & S. Boulder Rd.

Existing

PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Future Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	109	1120	32	39	429	74	95	78	84	267	251	28
Peak Hour Factor	0.76	0.76	0.76	0.99	0.99	0.99	0.91	0.91	0.91	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	1576	703	215	1462	652	332	271	292	401	615	521
Arrive On Green	0.05	0.44	0.44	0.02	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1100	823	887	1223	1870	1584
Grp Volume(v), veh/h	109	1120	32	39	429	74	95	0	162	267	251	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1100	0	1710	1223	1870	1584
Q Serve(g_s), s	2.9	21.8	1.0	1.1	6.9	2.5	6.2	0.0	6.0	17.6	8.9	1.0
Cycle Q Clear(g_c), s	2.9	21.8	1.0	1.1	6.9	2.5	15.1	0.0	6.0	23.6	8.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	477	1576	703	215	1462	652	332	0	563	401	615	521
V/C Ratio(X)	0.23	0.71	0.05	0.18	0.29	0.11	0.29	0.00	0.29	0.67	0.41	0.05
Avail Cap(c_a), veh/h	517	1587	708	312	1587	708	332	0	563	401	615	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	19.2	13.5	16.3	16.8	15.5	28.0	0.0	21.2	29.9	22.1	19.5
Incr Delay (d2), s/veh	0.2	1.5	0.0	0.4	0.1	0.1	2.2	0.0	1.3	8.5	2.0	0.2
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(50%),veh/ln	1.1	8.2	0.3	0.4	2.5	0.8	1.8	0.0	2.4	5.8	4.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.4	20.7	13.5	16.7	16.9	15.5	30.1	0.0	22.5	38.4	24.1	19.7
LnGrp LOS	B	C	B	B	B	B	C		C	D	C	B
Approach Vol, veh/h	1261			542			257			546		
Approach Delay, s/veh	19.9			16.7			25.3			30.9		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	42.0		34.0	6.4	44.7		34.0				
Change Period (Y+Rc), s	4.5	7.0		6.0	4.5	7.0		6.0				
Max Green Setting (Gmax), s	6.5	38.0		28.0	6.5	38.0		28.0				
Max Q Clear Time (g_c+l1), s	4.9	8.9		17.1	3.1	23.8		25.6				
Green Ext Time (p_c), s	0.0	2.9		0.9	0.0	6.4		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh				22.1								
HCM 7th LOS				C								

HCM 7th TWSC
2: S. Boulder Rd. & 55th St.

Existing
PM

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	973	521	21	16	57
Future Vol, veh/h	65	973	521	21	16	57
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	95	95	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	1264	548	22	25	88

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	571	0	-	0	1360 286
Stage 1	-	-	-	-	559 -
Stage 2	-	-	-	-	801 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	998	-	-	-	140 711
Stage 1	-	-	-	-	536 -
Stage 2	-	-	-	-	402 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	998	-	-	-	128 710
Mov Cap-2 Maneuver	-	-	-	-	128 -
Stage 1	-	-	-	-	490 -
Stage 2	-	-	-	-	402 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.56	0	19.76
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	998	-	-	-	355
HCM Lane V/C Ratio	0.085	-	-	-	0.316
HCM Control Delay (s/veh)	8.9	-	-	-	19.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Timings

Year 2045 No Build

1: Cherryvale Rd. & S. Boulder Rd.

AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Future Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Lane Group Flow (vph)	95	423	21	81	1008	392	66	278	72	56	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			4		8	
Permitted Phases	6		6	2		2	4		8		8
Detector Phase	1	6	6	5	2	2	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	34.0	34.0	24.0	24.0	24.0
Total Split (s)	11.0	45.0	45.0	11.0	45.0	45.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	12.2%	50.0%	50.0%	12.2%	50.0%	50.0%	37.8%	37.8%	37.8%	37.8%	37.8%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
v/c Ratio	0.35	0.28	0.03	0.15	0.68	0.45	0.15	0.46	0.24	0.09	0.05
Control Delay (s/veh)	12.7	17.4	0.1	9.6	23.4	3.7	23.3	25.8	25.6	22.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.7	17.4	0.1	9.6	23.4	3.7	23.3	25.8	25.6	22.3	0.2
Queue Length 50th (ft)	23	81	0	19	236	0	26	114	29	21	0
Queue Length 95th (ft)	44	115	0	39	306	52	59	196	47	37	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	274	1569	730	538	1569	897	435	598	296	608	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.27	0.03	0.15	0.64	0.44	0.15	0.46	0.24	0.09	0.05

Intersection Summary

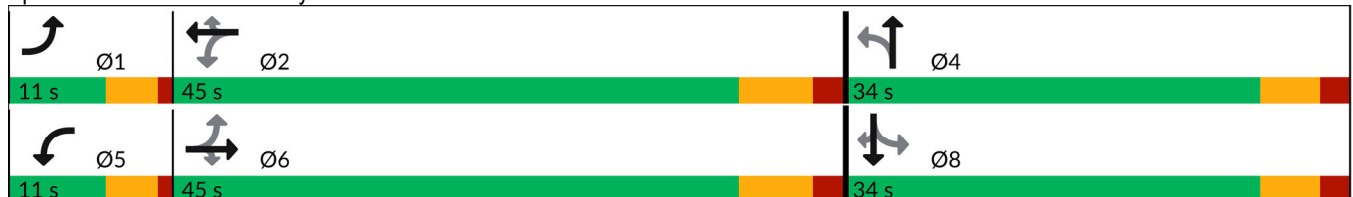
Cycle Length: 90

Actuated Cycle Length: 86

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.



HCM 7th Signalized Intersection Summary

Year 2045 No Build

1: Cherryvale Rd. & S. Boulder Rd.

AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Future Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	95	423	21	81	1008	392	66	225	53	72	56	30
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.93	0.93	0.93	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	1492	661	483	1470	652	491	484	114	315	619	522
Arrive On Green	0.05	0.42	0.42	0.04	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1576	1781	3554	1575	1307	1462	344	1098	1870	1578
Grp Volume(v), veh/h	95	423	21	81	1008	392	66	0	278	72	56	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1575	1307	0	1807	1098	1870	1578
Q Serve(g_s), s	2.6	6.6	0.7	2.2	19.6	16.4	3.1	0.0	10.3	4.7	1.7	1.1
Cycle Q Clear(g_c), s	2.6	6.6	0.7	2.2	19.6	16.4	4.9	0.0	10.3	15.0	1.7	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	241	1492	661	483	1470	652	491	0	598	315	619	522
V/C Ratio(X)	0.39	0.28	0.03	0.17	0.69	0.60	0.13	0.00	0.46	0.23	0.09	0.06
Avail Cap(c_a), veh/h	292	1596	708	544	1596	708	491	0	598	315	619	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	16.2	14.4	13.3	20.3	19.4	21.2	0.0	22.4	28.3	19.5	19.3
Incr Delay (d2), s/veh	1.0	0.1	0.0	0.2	1.1	1.2	0.6	0.0	2.6	1.7	0.3	0.2
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(50%),veh/ln	1.0	2.4	0.2	0.8	7.4	5.6	1.0	0.0	4.5	1.3	0.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.0	16.3	14.5	13.5	21.4	20.6	21.8	0.0	25.0	30.0	19.8	19.5
LnGrp LOS	B	B	B	B	C	C	C		C	C	B	B
Approach Vol, veh/h	539			1481			344			158		
Approach Delay, s/veh	16.3			20.8			24.4			24.4		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	42.0		34.0	8.1	42.5		34.0				
Change Period (Y+Rc), s	4.5	7.0		6.0	4.5	7.0		6.0				
Max Green Setting (Gmax), s	6.5	38.0		28.0	6.5	38.0		28.0				
Max Q Clear Time (g_c+I1), s	4.6	21.6		12.3	4.2	8.6		17.0				
Green Ext Time (p_c), s	0.0	7.4		1.5	0.0	2.7		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				20.5								
HCM 7th LOS				C								

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	429	892	14	8	43
Future Vol, veh/h	35	429	892	14	8	43
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	86	86	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	597	1141	18	12	63

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1160	0	0 1548 580
Stage 1	-	-	- 1151 -
Stage 2	-	-	- 397 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	598	-	- 105 457
Stage 1	-	-	- 263 -
Stage 2	-	-	- 648 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	598	-	- 96 457
Mov Cap-2 Maneuver	-	-	- 96 -
Stage 1	-	-	- 242 -
Stage 2	-	-	- 647 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.87	0	21.87
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	598	-	-	-	288
HCM Lane V/C Ratio	0.082	-	-	-	0.26
HCM Control Delay (s/veh)	11.6	-	-	-	21.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1

Timings

Year 2045 No Build

1: Cherryvale Rd. & S. Boulder Rd.

PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Future Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Lane Group Flow (vph)	120	1232	35	43	472	81	104	178	293	276	31
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		5	2			4		8	
Permitted Phases	6		6	2		2	4		8		8
Detector Phase	1	6	6	5	2	2	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	34.0	34.0	24.0	24.0	24.0
Total Split (s)	11.0	45.0	45.0	11.0	45.0	45.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	12.2%	50.0%	50.0%	12.2%	50.0%	50.0%	37.8%	37.8%	37.8%	37.8%	37.8%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
v/c Ratio	0.24	0.75	0.05	0.19	0.32	0.12	0.37	0.31	0.80	0.47	0.06
Control Delay (s/veh)	10.3	24.2	0.1	10.7	18.3	3.6	28.8	16.7	46.8	27.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.3	24.2	0.1	10.7	18.3	3.6	28.8	16.7	46.8	27.9	0.2
Queue Length 50th (ft)	29	317	0	10	91	0	46	48	153	126	0
Queue Length 95th (ft)	45	311	0	24	128	22	93	101	#214	168	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	502	1643	760	228	1516	708	279	580	366	588	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.75	0.05	0.19	0.31	0.11	0.37	0.31	0.80	0.47	0.06

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 88.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.

	Ø1		Ø2		Ø4
11 s		45 s		34 s	
	Ø5		Ø6		Ø8
11 s		45 s		34 s	

HCM 7th Signalized Intersection Summary

Year 2045 No Build

1: Cherryvale Rd. & S. Boulder Rd.

PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Future Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	120	1232	35	43	472	81	104	86	92	293	276	31
Peak Hour Factor	0.76	0.76	0.76	0.99	0.99	0.99	0.91	0.91	0.91	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	460	1577	699	192	1455	645	310	270	289	384	613	517
Arrive On Green	0.06	0.44	0.44	0.02	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1576	1781	3554	1575	1071	825	882	1203	1870	1578
Grp Volume(v), veh/h	120	1232	35	43	472	81	104	0	178	293	276	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1575	1071	0	1707	1203	1870	1578
Q Serve(g_s), s	3.3	25.2	1.1	1.2	7.7	2.7	7.3	0.0	6.7	20.7	10.0	1.2
Cycle Q Clear(g_c), s	3.3	25.2	1.1	1.2	7.7	2.7	17.2	0.0	6.7	27.4	10.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	460	1577	699	192	1455	645	310	0	559	384	613	517
V/C Ratio(X)	0.26	0.78	0.05	0.22	0.32	0.13	0.34	0.00	0.32	0.76	0.45	0.06
Avail Cap(c_a), veh/h	492	1580	701	285	1580	700	310	0	559	384	613	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	20.2	13.5	17.3	17.2	15.7	29.5	0.0	21.6	31.8	22.7	19.7
Incr Delay (d2), s/veh	0.3	2.6	0.0	0.6	0.1	0.1	2.9	0.0	1.5	13.4	2.4	0.2
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(50%),veh/ln	1.2	9.7	0.4	0.5	2.9	0.9	2.0	0.0	2.7	7.0	4.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.5	22.9	13.6	17.9	17.3	15.8	32.4	0.0	23.1	45.3	25.1	19.9
LnGrp LOS	B	C	B	B	B	B	C		C	D	C	B
Approach Vol, veh/h	1387			596			282			600		
Approach Delay, s/veh	21.8			17.2			26.5			34.7		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	42.0		34.0	6.6	44.9		34.0				
Change Period (Y+Rc), s	4.5	7.0		6.0	4.5	7.0		6.0				
Max Green Setting (Gmax), s	6.5	38.0		28.0	6.5	38.0		28.0				
Max Q Clear Time (g_c+I1), s	5.3	9.7		19.2	3.2	27.2		29.4				
Green Ext Time (p_c), s	0.0	3.2		0.9	0.0	5.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				24.0								
HCM 7th LOS				C								

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	973	521	21	16	57
Future Vol, veh/h	65	973	521	21	16	57
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	95	95	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	1390	603	24	27	96

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	628	0	0 1497 314
Stage 1	-	-	- 615 -
Stage 2	-	-	- 882 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	950	-	- 113 682
Stage 1	-	-	- 502 -
Stage 2	-	-	- 365 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	950	-	- 102 682
Mov Cap-2 Maneuver	-	-	- 102 -
Stage 1	-	-	- 453 -
Stage 2	-	-	- 365 -

Approach	EB	WB	SB
HCM Control Delay, s/v 0.58		0	24.72
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	950	-	-	-	304
HCM Lane V/C Ratio	0.098	-	-	-	0.406
HCM Control Delay (s/veh)	9.2	-	-	-	24.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.9

Timings

Year 2045 w/Protected Left-Turns

1: Cherryvale Rd. & S. Boulder Rd.

AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Future Volume (vph)	78	346	17	67	834	324	56	190	44	34	18
Lane Group Flow (vph)	95	423	21	81	1008	392	66	278	72	56	30
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	34.0	11.0	24.0	24.0
Total Split (s)	12.0	44.0	44.0	11.0	43.0	43.0	15.0	34.0	11.0	30.0	30.0
Total Split (%)	12.0%	44.0%	44.0%	11.0%	43.0%	43.0%	15.0%	34.0%	11.0%	30.0%	30.0%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.73	0.31	0.03	0.70	0.80	0.52	0.46	0.54	0.82	0.11	0.06
Control Delay (s/veh)	75.6	22.5	0.1	77.3	34.4	7.7	54.2	33.6	103.4	30.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.6	22.5	0.1	77.3	34.4	7.7	54.2	33.6	103.4	30.5	0.2
Queue Length 50th (ft)	60	100	0	52	298	29	41	144	46	28	0
Queue Length 95th (ft)	#141	139	0	#127	379	105	84	227	#81	44	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	133	1384	687	115	1280	760	160	515	88	511	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.31	0.03	0.70	0.79	0.52	0.41	0.54	0.82	0.11	0.06

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 99.5

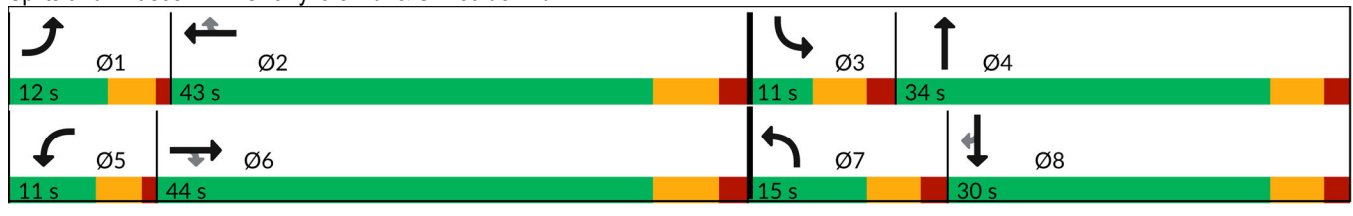
Natural Cycle: 100

Control Type: Semi Act-Uncoord

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.



HCM 7th Signalized Intersection Summary

Year 2045 w/Protected Left-Turns

1: Cherryvale Rd. & S. Boulder Rd.

AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Future Volume (veh/h)	78	346	17	67	834	324	56	190	45	44	34	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	95	423	21	81	1008	392	66	225	53	72	56	30
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.93	0.93	0.93	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1301	576	103	1268	561	85	417	98	91	540	455
Arrive On Green	0.07	0.37	0.37	0.06	0.36	0.36	0.05	0.29	0.29	0.05	0.29	0.29
Sat Flow, veh/h	1781	3554	1574	1781	3554	1574	1781	1462	344	1781	1870	1577
Grp Volume(v), veh/h	95	423	21	81	1008	392	66	0	278	72	56	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1574	1781	0	1806	1781	1870	1577
Q Serve(g_s), s	5.2	8.4	0.8	4.4	25.0	20.9	3.6	0.0	12.8	3.9	2.2	1.4
Cycle Q Clear(g_c), s	5.2	8.4	0.8	4.4	25.0	20.9	3.6	0.0	12.8	3.9	2.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	120	1301	576	103	1268	561	85	0	515	91	540	455
V/C Ratio(X)	0.79	0.33	0.04	0.78	0.80	0.70	0.77	0.00	0.54	0.79	0.10	0.07
Avail Cap(c_a), veh/h	136	1340	594	118	1304	577	163	0	515	91	540	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	22.4	20.0	45.6	28.3	27.0	46.2	0.0	29.6	46.1	25.6	25.3
Incr Delay (d2), s/veh	23.7	0.1	0.0	25.3	3.4	3.6	13.8	0.0	4.0	36.8	0.4	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	3.0	3.3	0.3	2.6	10.4	8.0	1.9	0.0	5.9	2.6	1.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.8	22.5	20.0	70.9	31.8	30.6	60.0	0.0	33.6	82.9	26.0	25.6
LnGrp LOS	E	C	C	E	C	C	E		C	F	C	C
Approach Vol, veh/h	539			1481			344			158		
Approach Delay, s/veh	30.6			33.6			38.7			51.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	42.0	11.0	34.0	10.2	42.9	10.7	34.3				
Change Period (Y+Rc), s	4.5	7.0	6.0	6.0	4.5	7.0	6.0	6.0				
Max Green Setting (Gmax), s	7.5	36.0	5.0	28.0	6.5	37.0	9.0	24.0				
Max Q Clear Time (g_c+I1), s	7.2	27.0	5.9	14.8	6.4	10.4	5.6	4.2				
Green Ext Time (p_c), s	0.0	5.1	0.0	1.2	0.0	2.6	0.0	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	34.8											
HCM 7th LOS	C											

Timings

Year 2045 w/Protected Left-Turns

1: Cherryvale Rd. & S. Boulder Rd.

PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Future Volume (vph)	83	851	24	39	425	73	86	71	208	196	22
Lane Group Flow (vph)	120	1232	35	43	472	81	104	178	293	276	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4	3	8	
Permitted Phases			6			2					8
Detector Phase	1	6	6	5	2	2	7	4	3	8	8
Switch Phase											
Minimum Initial (s)	3.0	35.0	35.0	3.0	35.0	35.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	34.0	11.0	24.0	24.0
Total Split (s)	11.0	43.0	43.0	11.0	43.0	43.0	19.0	34.0	22.0	37.0	37.0
Total Split (%)	10.0%	39.1%	39.1%	10.0%	39.1%	39.1%	17.3%	30.9%	20.0%	33.6%	33.6%
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	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)	4.5	7.0	7.0	4.5	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	1.15	0.95	0.05	0.43	0.41	0.14	0.59	0.38	1.14	0.49	0.05
Control Delay (s/veh)	180.5	51.5	0.1	63.1	30.1	1.3	60.7	27.3	141.0	35.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	180.5	51.5	0.1	63.1	30.1	1.3	60.7	27.3	141.0	35.7	0.2
Queue Length 50th (ft)	~100	~506	0	30	135	0	71	75	~242	162	0
Queue Length 95th (ft)	#172	#471	0	68	182	7	127	141	#332	209	0
Internal Link Dist (ft)		983			2129			1378		1203	
Turn Bay Length (ft)	165		170	115		170	85		115		115
Base Capacity (vph)	104	1292	643	104	1162	592	210	470	258	562	568
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.95	0.05	0.41	0.41	0.14	0.50	0.38	1.14	0.49	0.05

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 109.6

Natural Cycle: 110

Control Type: Semi Act-Uncoord

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Cherryvale Rd. & S. Boulder Rd.



HCM 7th Signalized Intersection Summary

Year 2045 w/Protected Left-Turns

1: Cherryvale Rd. & S. Boulder Rd.

PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Future Volume (veh/h)	83	851	24	39	425	73	86	71	76	208	196	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	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	120	1232	35	43	472	81	104	86	92	293	276	31
Peak Hour Factor	0.76	0.76	0.76	0.99	0.99	0.99	0.91	0.91	0.91	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1243	551	55	1141	505	131	212	226	261	618	521
Arrive On Green	0.06	0.35	0.35	0.03	0.32	0.32	0.07	0.26	0.26	0.15	0.33	0.33
Sat Flow, veh/h	1781	3554	1574	1781	3554	1573	1781	824	882	1781	1870	1578
Grp Volume(v), veh/h	120	1232	35	43	472	81	104	0	178	293	276	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1573	1781	0	1706	1781	1870	1578
Q Serve(g_s), s	6.5	37.6	1.6	2.6	11.3	4.0	6.3	0.0	9.4	16.0	12.6	1.5
Cycle Q Clear(g_c), s	6.5	37.6	1.6	2.6	11.3	4.0	6.3	0.0	9.4	16.0	12.6	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	106	1243	551	55	1141	505	131	0	438	261	618	521
V/C Ratio(X)	1.13	0.99	0.06	0.78	0.41	0.16	0.80	0.00	0.41	1.12	0.45	0.06
Avail Cap(c_a), veh/h	106	1243	551	106	1174	519	212	0	438	261	618	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	35.3	23.6	52.5	29.0	26.5	49.7	0.0	33.6	46.5	28.7	24.9
Incr Delay (d2), s/veh	126.5	23.3	0.0	20.9	0.2	0.1	10.5	0.0	2.8	92.0	2.3	0.2
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(50%),veh/ln	6.5	19.2	0.6	1.5	4.7	1.5	3.1	0.0	4.1	13.6	5.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	177.7	58.5	23.6	73.4	29.2	26.6	60.2	0.0	36.4	138.5	31.0	25.1
LnGrp LOS	F	E	C	E	C	C	E		D	F	C	C
Approach Vol, veh/h	1387			596			282			600		
Approach Delay, s/veh	68.0			32.0			45.2			83.2		
Approach LOS	E			C			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	42.0	22.0	34.0	7.9	45.1	14.0	42.0				
Change Period (Y+Rc), s	4.5	7.0	6.0	6.0	4.5	7.0	6.0	6.0				
Max Green Setting (Gmax), s	6.5	36.0	16.0	28.0	6.5	36.0	13.0	31.0				
Max Q Clear Time (g_c+l1), s	8.5	13.3	18.0	11.4	4.6	39.6	8.3	14.6				
Green Ext Time (p_c), s	0.0	3.1	0.0	0.8	0.0	0.0	0.1	1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	61.4											
HCM 7th LOS	E											

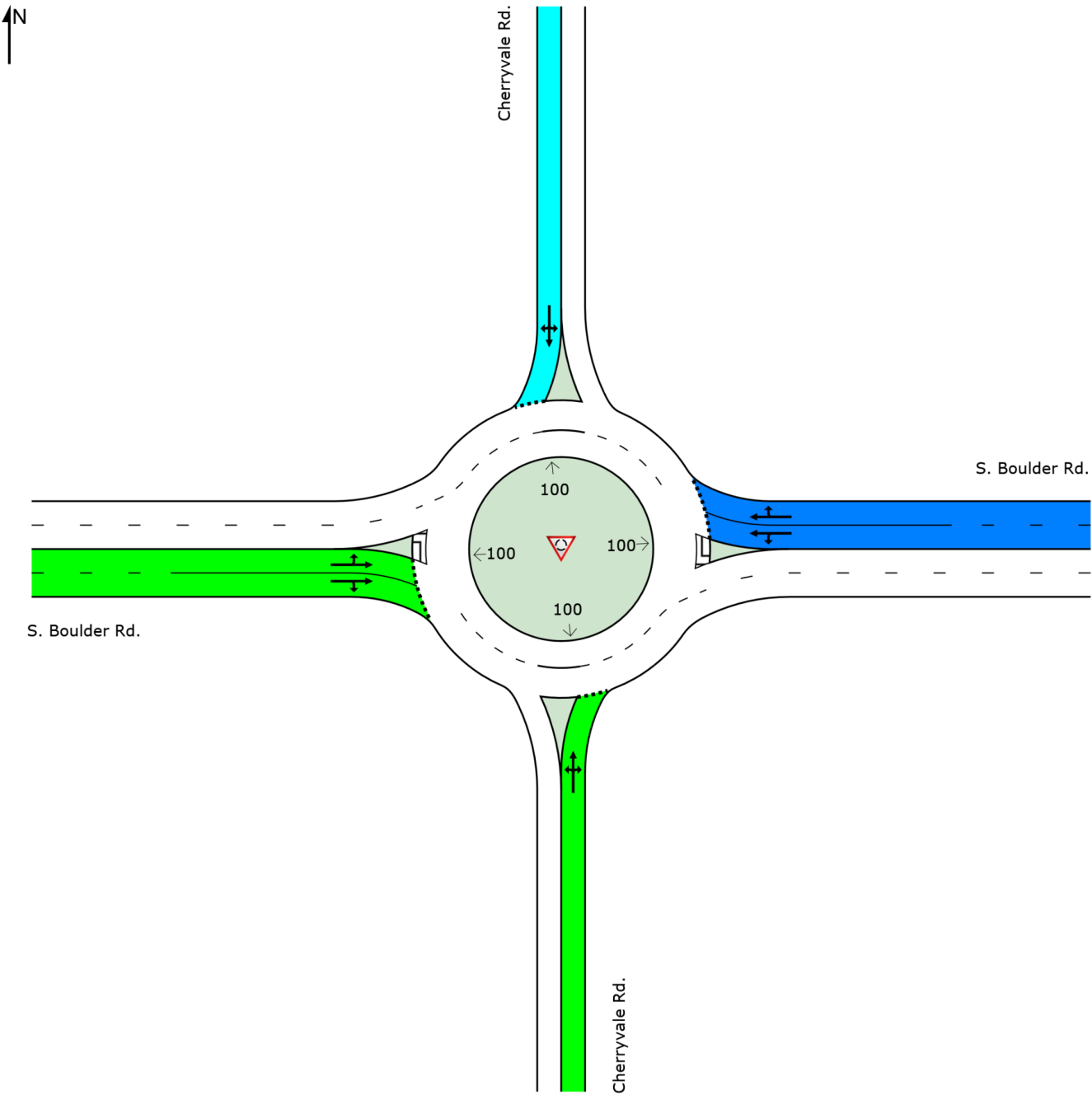
LEVEL OF SERVICE

Lane Level of Service

 **Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site Folder: Year 2045 Design Volumes)]**

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	C	B	A	B



DELAY (CONTROL)

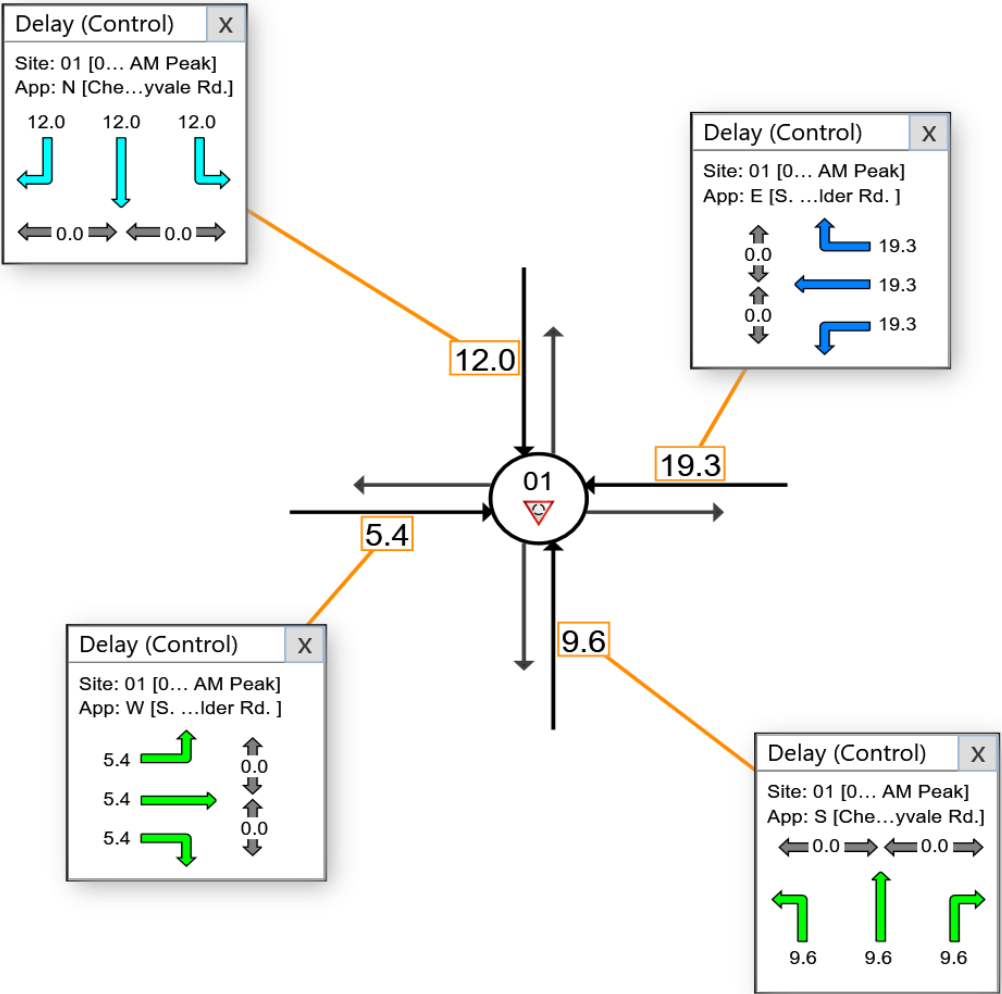
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site Folder: Year 2045 Design Volumes)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



QUEUE DISTANCE (PERCENTILE)

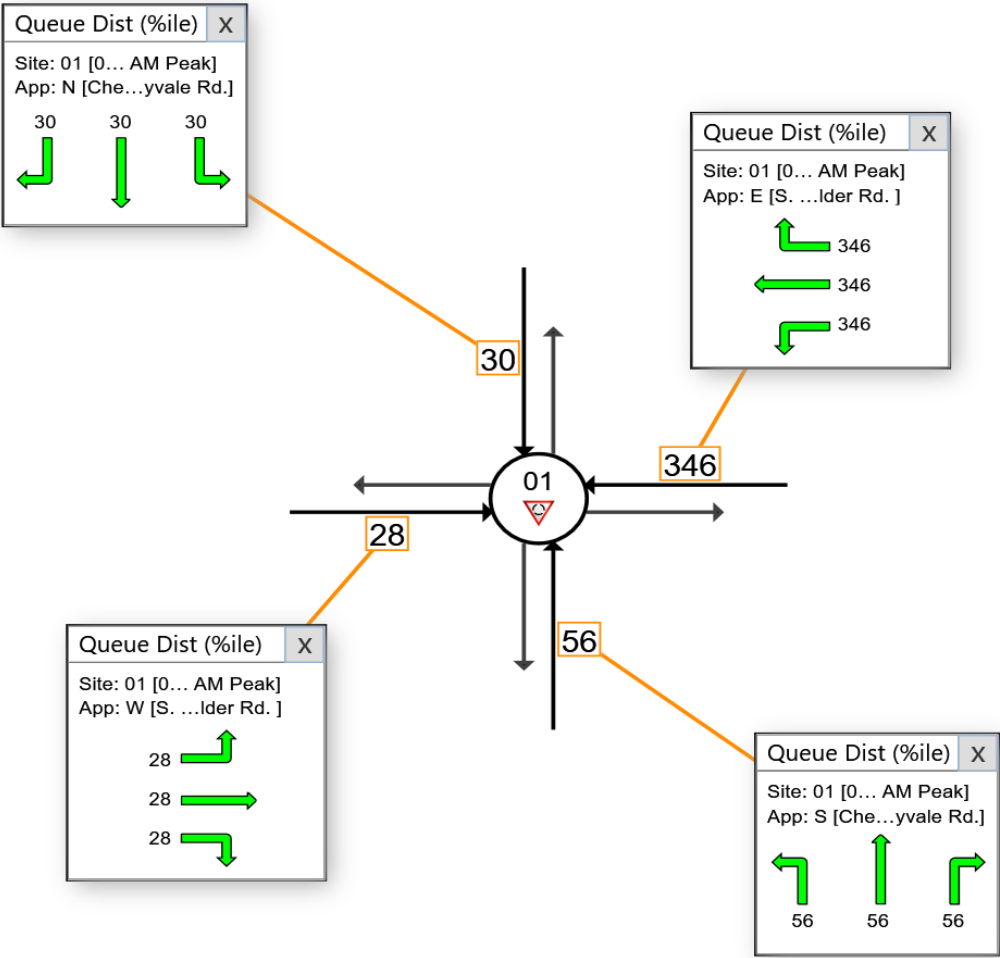
Largest 95% Back of Queue Distance for any lane used by the vehicle movement (feet)

 **Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site Folder: Year 2045 Design Volumes)]**

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



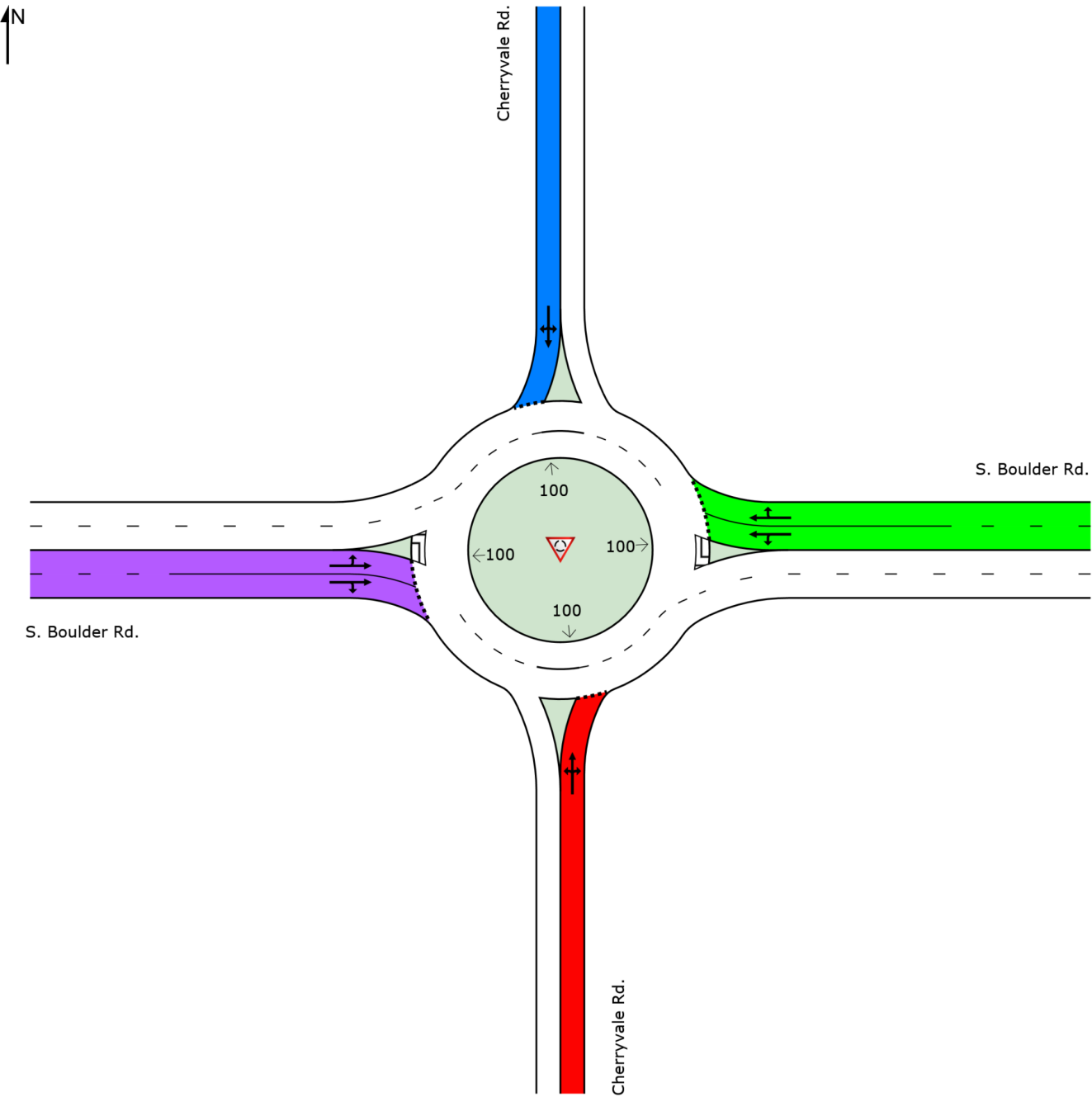
LEVEL OF SERVICE

Lane Level of Service

 **Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site Folder: Year 2045 Design Volumes)]**

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	F	A	C	D	D



DELAY (CONTROL)

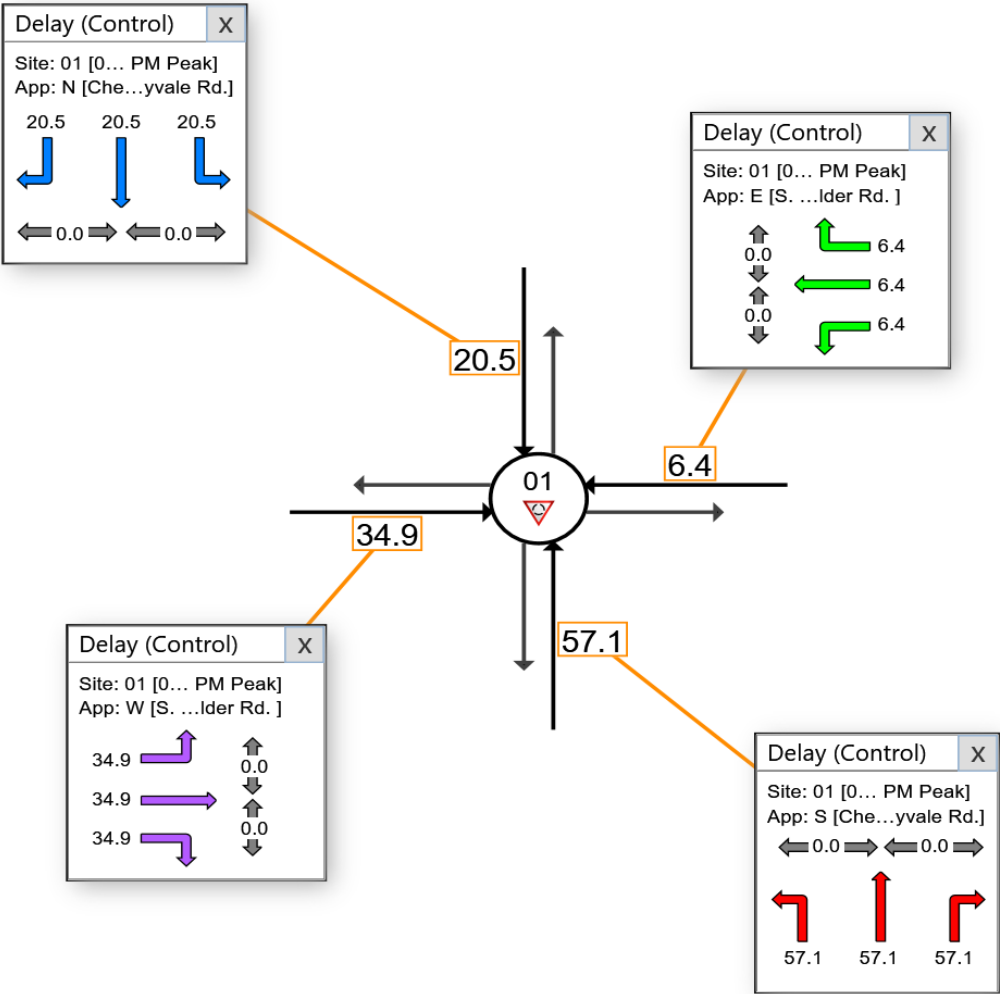
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site Folder: Year 2045 Design Volumes)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



QUEUE DISTANCE (PERCENTILE)

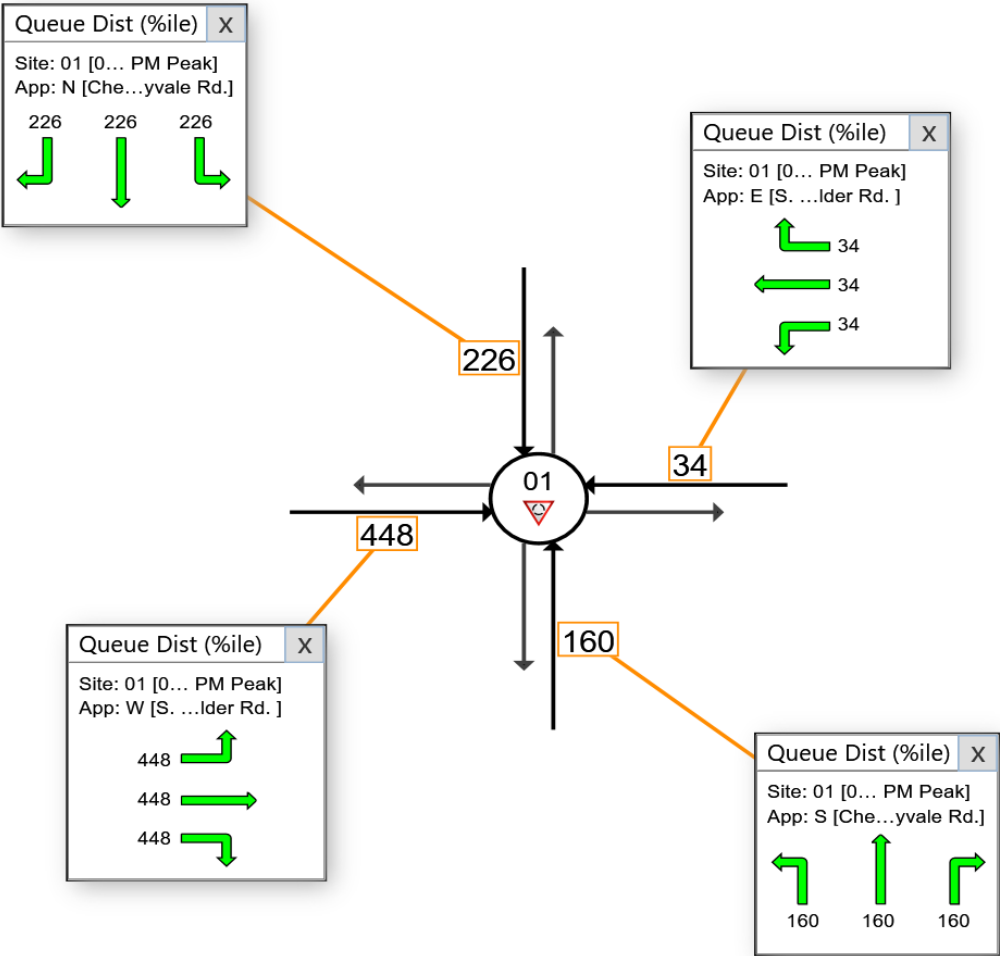
Largest 95% Back of Queue Distance for any lane used by the vehicle movement (feet)

Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site Folder: Year 2045 Design Volumes)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



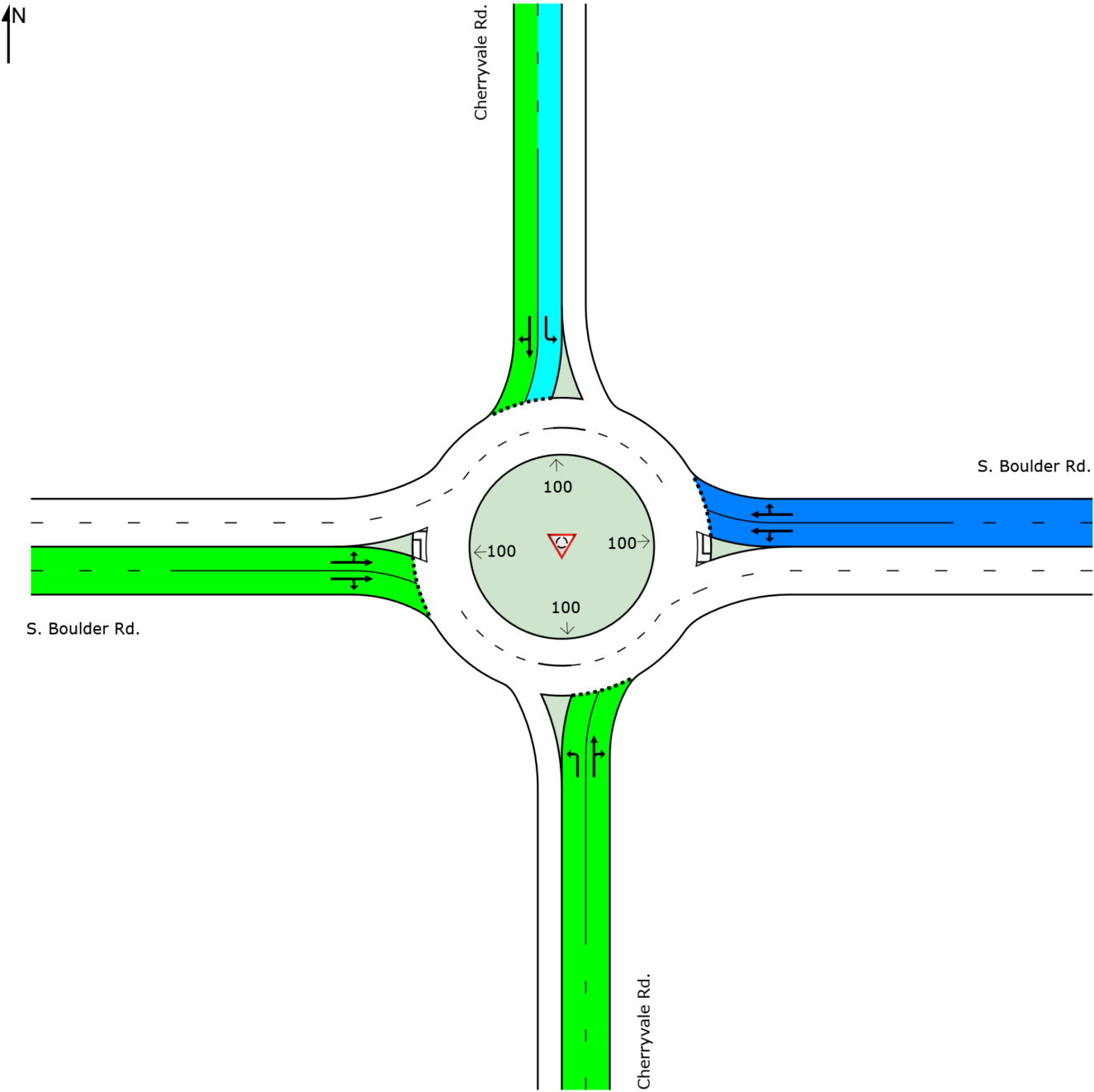
LEVEL OF SERVICE

Lane Level of Service

 Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site
Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	C	B	A	B



DELAY (CONTROL)

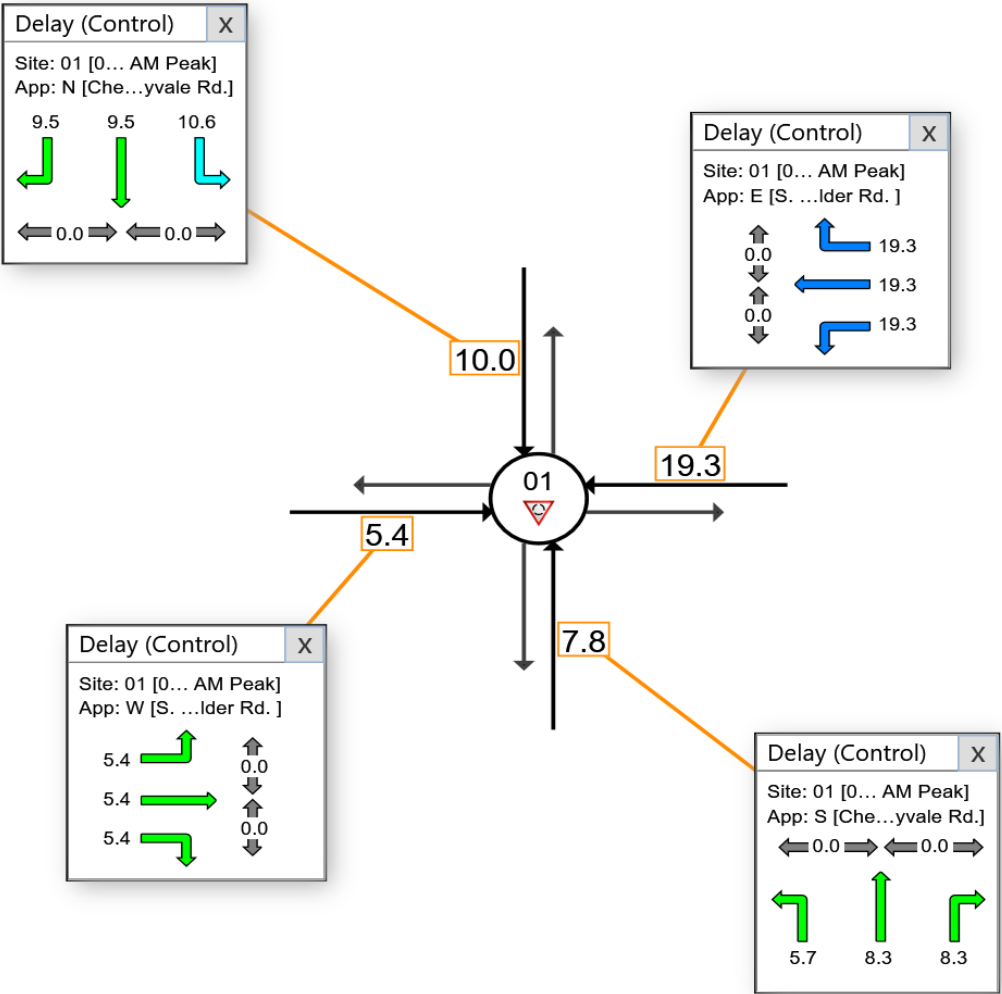
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site
Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



QUEUE DISTANCE (PERCENTILE)

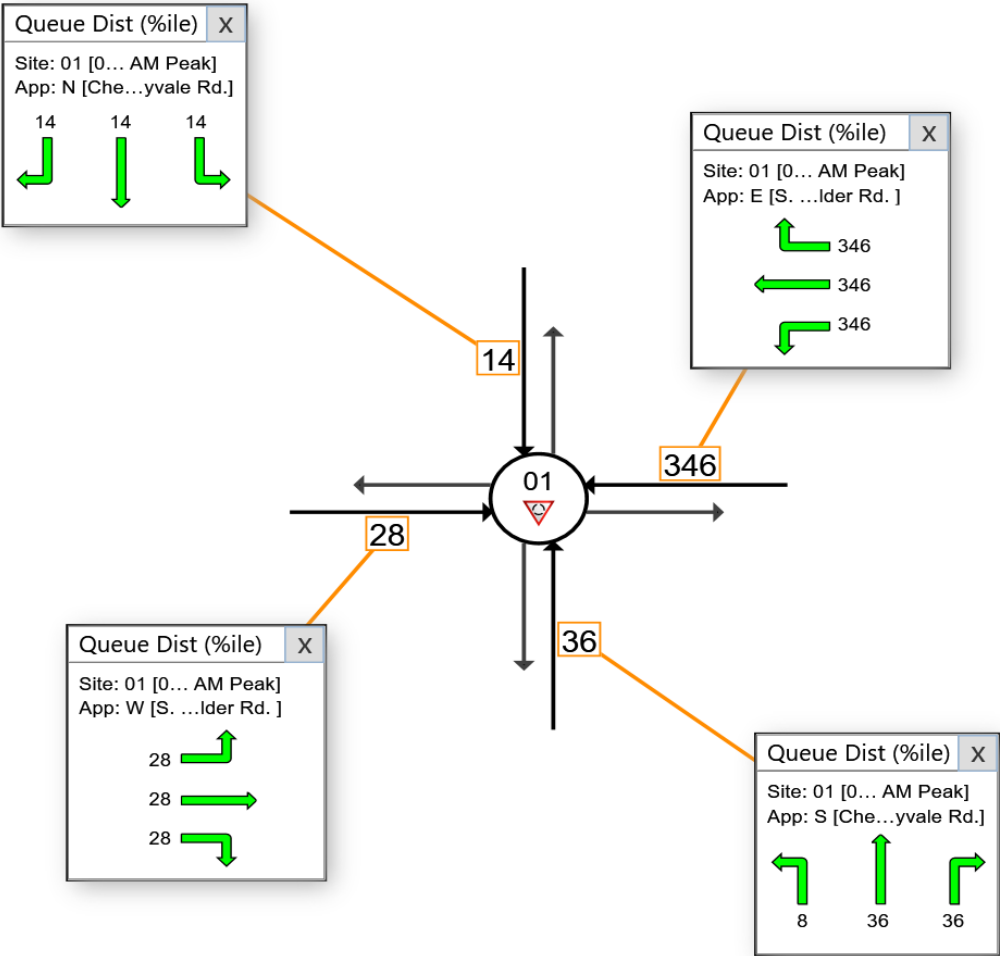
Largest 95% Back of Queue Distance for any lane used by the vehicle movement (feet)

 Site: 01 [01-S. Boulder Rd. & Cherryvale Rd. AM Peak (Site Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



LEVEL OF SERVICE

Lane Level of Service

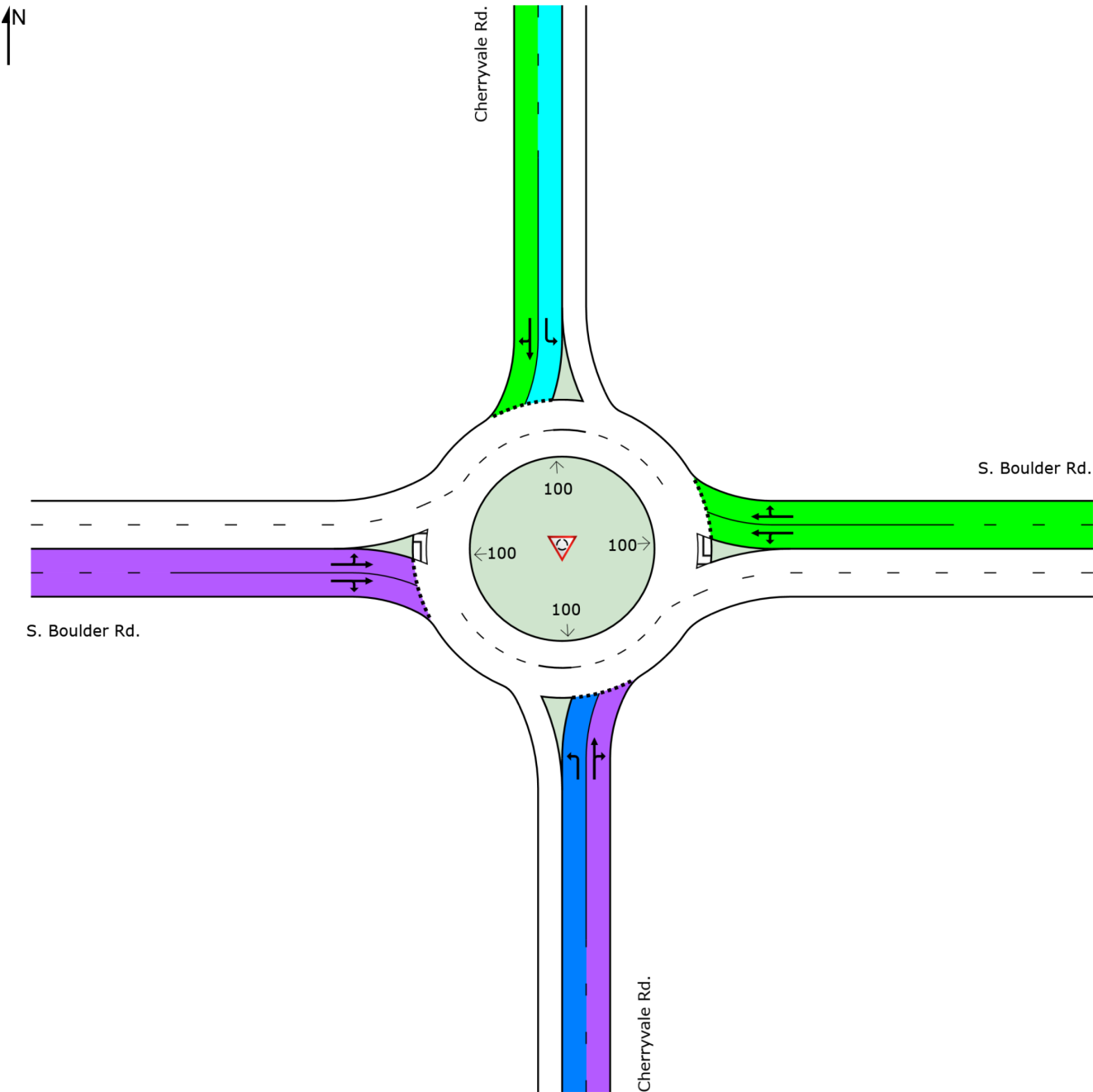
 **Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]**

Year 2045 Design Volumes - AM Peak Hour

Site Category: (None)

Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	C	A	A	D	C



DELAY (CONTROL)

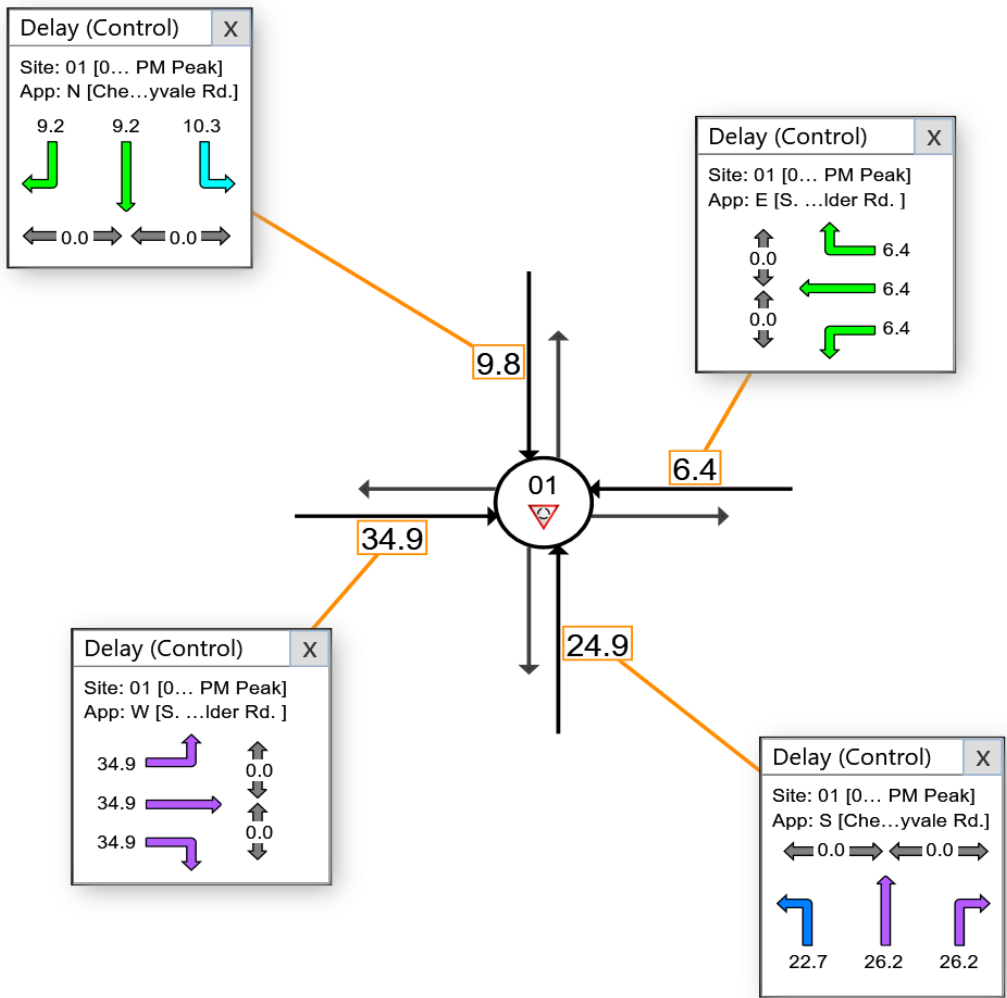
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site
Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



QUEUE DISTANCE (PERCENTILE)

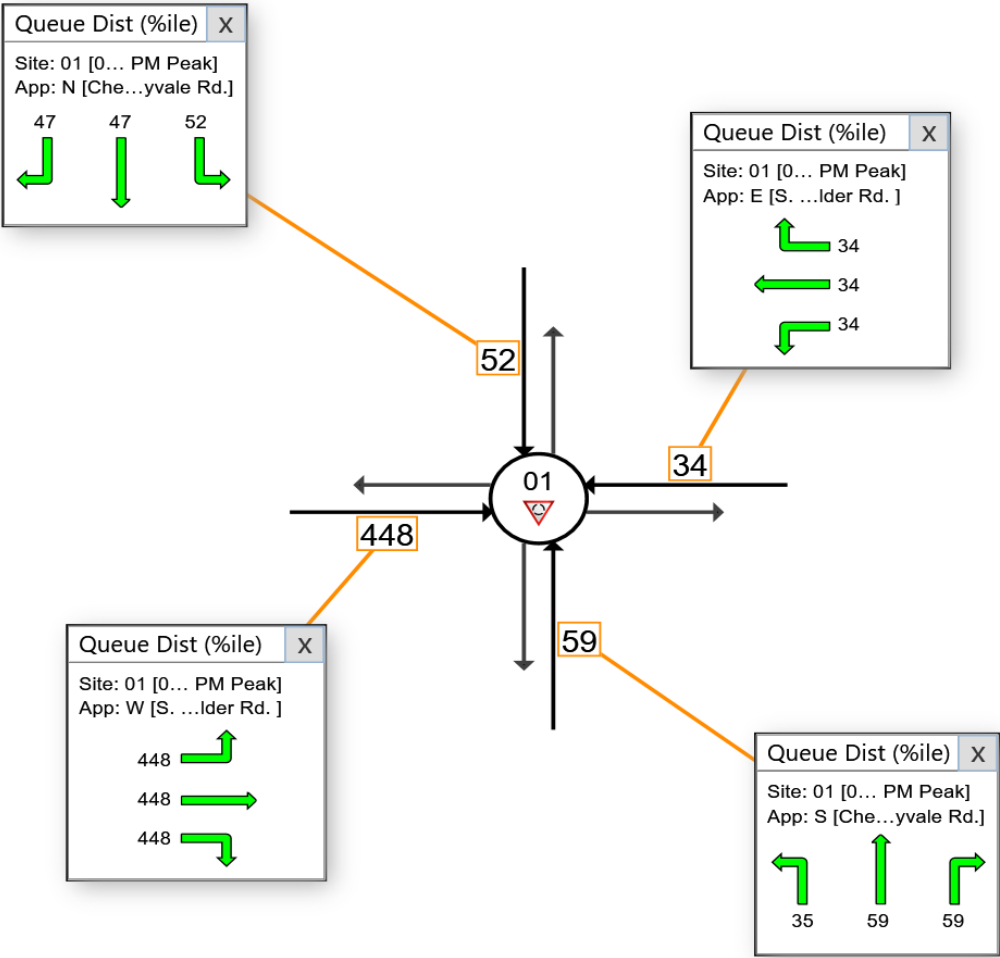
Largest 95% Back of Queue Distance for any lane used by the vehicle movement (feet)

Site: 01 [02-S. Boulder Rd. & Cherryvale Rd. PM Peak (Site Folder: Year 2045 -TWO Lane NB&SB - SL EXITS)]

Year 2045 Design Volumes - AM Peak Hour
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



2022 Boulder Valley Yearly Count Program -- Annual Average Weekday Travel (AAWDT)																		
Sta.	Ref. #	Location	2022		2021		2020		2019		2018		2017		2016		2015	
			fctr.	vpd	fctr.	vpd	fctr.	vpd	fctr.	vpd	fctr.	vpd	fctr.	vpd	fctr.	vpd	fctr.	vpd
1.	2401	Arapahoe e.o. 75th	0.97	18,999	0.93	16,672	COVID-19 Traffic Data Not Collected	0.99	19,452	0.99	22,058	0.99	19,568	1.00	19,532	1.01	19,048	
2.	2402	Baseline Rd e.o. 76th St	0.97	7,159	0.93	7,867		0.99	9,994	0.99	10,624	0.99	9,587	1.00	9,805	1.01	9,982	
3.	2403	Boulder Canyon w.o. Arapahoe	1.02	7,714	0.93	7,294		*	9,321	0.98	9,321	0.99	8,854	1.00	9,734	0.97	8,447	
4.	2404	Broadway s.o. City Limits	0.96	17,180	0.93	15,127		0.98	22,095	1.00	20,258	0.99	21,487	0.98	21,605	0.97	20,274	
5.	2405	U.S. 36 n.o. Broadway	0.94	13,198	0.92	12,782		0.99	12,800	0.99	12,627	1.01	13,360	1.00	12,143	1.00	13,923	
6.	2406	Diagonal Hwy n.o. Monarch Rd	0.96	37,369	0.98	40,497		0.99	44,529	1.00	44,036	0.99	43,157	*	42,054	0.97	42,054	
7.	2407	Lookout Rd e.o. 75th St	0.97	8,413	0.93	7,852		0.99	9,985	0.98	11,098	0.99	9,742	1.00	9,478	1.00	9,668	
8.	2408	S Boulder Rd e.o. Paragon Dr	0.96	19,410	0.98	20,434		0.99	26,181	0.98	25,186	1.00	26,653	1.00	25,029	0.97	25,652	
9.	2409	S.H. 52 e.o. 71st	0.94	7,830	0.92	7,665		0.99	11,207	0.98	10,838	0.99	11,322	1.00	11,080	0.97	10,644	
10.	2410	U.S. 36 s.o. Foothills Pkwy	0.96	76,489	0.98	80,262		0.99	94,314	1.00	95,031	0.99	89,124	0.97	84,025	0.97	76,900	
11.	2411	Valmont e.o. 75th	0.97	5,965	0.92	7,665		0.99	7,258	1.00	7,271	0.99	6,773	1.00	6,591	0.97	6,678	
12.	2412	Cherryvale Rd s.o. South Boulder Rd	0.94	4,268	0.93	4,139		0.99	4,782	1.00	4,605	0.99	4,268	1.00	4,180	1.00	3,566	
13.	2413	63rd St n.o. Monarch Rd	0.97	5,009	0.92	4,636		0.99	6,680	1.00	7,566	0.99	6,592	1.00	6,092	0.97	5,558	
14.	2414	Lee Hill Rd w.o. 4th St	0.96	4,265	0.92	4,278		0.98	4,517	0.99	4,386	0.99	4,168	1.00	4,298	1.04	3,995	
15.	2415	Linden Ave w.o. Spring Valley Rd	0.94	3,030	0.92	2,691		0.99	3,204	0.98	3,366	0.99	3,025	1.00	2,999	1.01	2,863	
16.	2416	Mapleton Ave e.o. Green Rock Dr	0.95	2,753	0.93	2,661		0.99	3,476	0.98	2,834	1.01	2,882	0.99	2,836	1.01	2,716	
17.	2417	Baseline Rd w.o. Gregory Canyon	0.95	2,480	0.93	2,390		0.99	2,806	0.98	2,258	1.01	2,216	0.99	2,070	1.04	1,681	
18.	2418	51st Street n.o. Boulder Reservoir	e	290	e	290		e	290	e	290	e	290	e	290	e	290	
Totals: Planning Area Screen Line																		
			241,822		245,204			292,891		293,653		283,069		273,840		263,936		
Yearly Growth Rate ----->			-1.4%		-16.3%			-0.3%		3.7%		3.4%		3.8%		1.5%		
Average per Year Growth Rate -----> (since start of program in 1993)			0.5%		0.5%			1.4%		1.5%		1.3%		1.2%		1.1%		
+/- from 2003 peak travel levels			-14.3%		-13.1%			3.8%		4.0%		0.3%		-3.0%		-6.5%		

fctr. = Annual Average Weekday Daily Traffic (AAWDT) monthly adjustment factor

e = estimated data

* = previous year volume (see notes)

= Annual Average Weekday Travel (AAWDT).

Notes

Station 2401 -- Arapahoe e.o. 75th -- 2012, 2013, 2006 under construction

Station 2410 -- U.S. 36 s.o. Foothills Pkwy -- 2011 data used for 2012

Station 2416 -- Mapleton Ave. e.o. Green Rock Dr -- 2014 data used for 2015

Station 2406 -- Diagonal Hwy n.o. Monarch Rd -- 2015 data used for 2016

2022 Boulder Valley Yearly Count Program -- Annual Average Weekday Travel (AAWDT)																				
Sta.	Ref. #	Location	2014		2013		2012		2011		2010		2009		2008		2007		2006	
			fctr.	vpd	fctr.	vpd	fctr.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd
1.	2401	Arapahoe e.o. 75th	1.02	20,224	0.99	16,281	0.98	16,261	3	18,913	3	20,765	9/10	20,235	4	19,302	9	18,553	9	14,669
2.	2402	Baseline Rd e.o. 76th St	0.98	9,284	0.99	9,575	0.98	9,282	3	7,569	3	7,366	4	7,731	9	7,976	3	8,197	9	9,043
3.	2403	Boulder Canyon w.o. Arapahoe	0.97	8,180	0.98	8,313	0.98	8,366	4	8,423	3	9,205	4	8,383	3	9,363	3	9,815	4	9,231
4.	2404	Broadway s.o. City Limits	0.98	18,824	1.02	18,623	1.02	19,148	4	18,771	4	20,761	4	18,725	9	17,679	3	18,120	9	18,425
5.	2405	U.S. 36 n.o. Broadway	0.97	9,894	0.99	12,310	0.98	11,341	4	11,058	4	11,351	10	12,836	9	14,112	3	12,094	4	12,273
6.	2406	Diagonal Hwy n.o. Monarch Rd	0.98	42,037	0.98	42,841	1.02	44,287	4	41,709	9/10	44,907	10	40,717	4	41,824	9	44,736	9	48,173
7.	2407	Lookout Rd e.o. 75th St	1.02	10,142	0.98	10,907	1.02	9,526	2	9,915	3	9,268	10	11,092	9	7,838	9	9,828	9	9,535
8.	2408	S Boulder Rd e.o. Paragon Dr	0.98	24,265	0.99	23,560	0.98	23,524	2	22,704	3	22,997	9/10	23,960	4	24,106	9	24,852	4	26,931
9.	2409	S.H. 52 e.o. 71st	0.98	10,900	0.99	10,437	0.98	10,043	4	9,705	9/10	9,876	3	10,150	4	10,926	3	10,567	9	10,682
10.	2410	U.S. 36 s.o. Foothills Pkwy	1.02	80,540	0.99	78,052	*	77,150	4	77,150	3	78,705	9	80,851	4/9	79,010	9	88,511	9	84,954
11.	2411	Valmont e.o. 75th	0.98	6,061	0.99	6,303	0.98	6,012	2	5,724	3	5,715	3	5,388	9	5,061	9	6,524	9	7,257
12.	2412	Cherryvale Rd s.o. South Boulder Rd	0.98	3,385	0.99	3,341	0.98	3,170	2	3,138	3/4	3,281	10	3,108	4	2,984	3	3,366	4	3,747
13.	2413	63rd St n.o. Monarch Rd	0.98	5,344	0.99	4,974	0.98	3,626	2	5,069	3	4,681	3	4,374	9	4,638	3	5,516	3	5,384
14.	2414	Lee Hill Rd w.o. 4th St	0.97	3,730	0.99	3,926	0.98	4,027	3	4,021	3	3,847	3	4,195	9	4,533	3	4,663	4	4,834
15.	2415	Linden Ave w.o. Spring Valley Rd	0.97	2,715	0.99	2,943	1.02	2,557	4	2,502	3	2,292	10	2,320	9	2,739	3	2,620	4	2,818
16.	2416	Mapleton Ave e.o. Green Rock Dr	0.97	2,626	0.99	2,457	0.98	2,574	4	2,412	4	2,681	4	2,860	9	2,961	3	2,852	4	3,050
17.	2417	Baseline Rd w.o. Gregory Canyon	0.97	1,477	0.99	1,789	0.98	1,759	4	1,767	3	1,982	9/10	1,710	3	1,662	3	2,077	4	2,250
18.	2418	51st Street n.o. Boulder Reservoir	e	290	e	290	e	290	e	290	e	290	e	290	e	290	e	290	e	290
Totals: Planning Area Screen Line				259,917		256,922		252,944		250,840		259,969		258,924		257,005		273,183		273,546
Yearly Growth Rate ----->				1.2%		1.6%		0.8%		-3.5%		0.4%		0.7%		-5.9%		-0.1%		3.7%
Average per Year Growth Rate -----> (since start of program in 1993)				1.0%		1.0%		1.0%		1.0%		1.3%		1.3%		1.3%		2.0%		2.1%
+/- from 2003 peak travel levels				-7.9%		-9.0%		-10.4%		-11.1%		-7.9%		-8.3%		-8.9%		-3.2%		-3.1%

fctr. = Annual Average Weekday Daily Traffic (AAWDT) monthly adjustment factor

e = estimated data

* = previous year volume (see notes)

= Annual Average Weekday Travel (AAWDT).

Notes

Station 2401 -- Arapahoe e.o. 75th -- 2012, 2013, 2006 under construction

Station 2410 -- U.S. 36 s.o. Foothills Pkwy -- 2011 data used for 2012

Station 2416 -- Mapleton Ave. e.o. Green Rock Dr -- 2014 data used for 2015

Station 2406 -- Diagonal Hwy n.o. Monarch Rd -- 2015 data used for 2016

2022 Boulder Valley Yearly Count Program -- Annual Average Weekday Travel (AAWDT)																				
Sta.	Ref. #	Location	2005		2004		2003		2002		2001		2000		1999		1998		1997	
			mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd
1.	2401	Arapahoe e.o. 75th	2/3	17,360	3	17,928	4	17,034	3	17,404	3	17,464	10	17,023	3	14,406	4	13,458	5	13,526
2.	2402	Baseline Rd e.o. 76th St	2/3	7,865	3	7,950	4	8,505	3	8,691	3	8,534	10	8,922	3	7,754	4	8,039	5	7,312
3.	2403	Boulder Canyon w.o. Arapahoe	3	9,042	5	10,066	4	9,741	3	11,459	3	9,946	10	10,678	3	9,731	5	9,970	5	9,722
4.	2404	Broadway s.o. City Limits	9	17,987	4	17,728	4	18,115	4	18,706	3	20,030	10	18,061	3	15,912	5	16,324	5	16,704
5.	2405	U.S. 36 n.o. Broadway	3	11,688	3	12,172	4	12,486	3	11,307	3	12,717	10	12,471	3	11,048	5	11,728	5	12,093
6.	2406	Diagonal Hwy n.o. Monarch Rd	3	45,186	3	48,868	4	46,692	10	41,659	3	43,316	10	42,093	4	39,824	5	38,652	5	36,633
7.	2407	Lookout Rd e.o. 75th St	3/4	8,936	5	9,206	4	8,639	3	9,555	3	10,040	10	9,647	3	8,541	5	8,400	5	8,199
8.	2408	S Boulder Rd e.o. Paragon Dr	2/3	27,116	4	26,960	4	27,236	3	26,528	3	25,110	10	29,735	3	26,898	4	26,311	5	24,675
9.	2409	S.H. 52 e.o. 71st	3	10,028	3	10,661	9	11,718	4	12,778	3	12,623	10	12,497	3	11,200	5	10,534	5	9,531
10.	2410	U.S. 36 s.o. Foothills Pkwy	9	82,191	4	93,005	4/11	94,255	10	86,255	4	81,066	10	73,727	3	76,254	5	75,903	5	73,067
11.	2411	Valmont e.o.75th	2/3	5,921	3	5,876	4	6,096	3	5,859	3	6,729	10	6,561	3	5,072	4	4,796	5	5,013
12.	2412	Cherryvale Rd s.o. South Boulder Rd	2/3	3,359	4	2,859	4	3,398	3	3,285	3	3,019	10	3,269	3	2,311	4	2,638	5	2,136
13.	2413	63rd St n.o. Monarch Rd	3	5,229	3	5,685	4	5,884	3	5,633	3	5,922	10	6,212	3	5,095	5	5,675	5	5,377
14.	2414	Lee Hill Rd w.o. 4th St	3	4,629	3	4,653	4	4,522	10	4,767	3	4,895	10	4,857	3	4,833	5	4,816	5	4,784
15.	2415	Linden Ave w.o. Spring Valley Rd	3	2,693	3	2,700	4	2,820	4	2,936	3	3,001	10	3,043	3	2,764	5	2,985	5	3,017
16.	2416	Mapleton Ave e.o. Green Rock Dr	3/4	2,636	3	2,964	4	2,879	4	3,341	3	3,196	10	2,956	4	2,881	5	3,119	5	3,229
17.	2417	Baseline Rd w.o. Gregory Canyon	2/3	1,638	4	1,748	4	1,916	4	2,444	3	2,168	10	2,073	3	1,784	5	1,593	5	2,225
18.	2418	51st Street n.o. Boulder Reservoir	e	290	e	290	e	290	e	290	e	290	e	290	e	290	e	290	e	290
Totals: Planning Area Screen Line			263,795		281,319		282,223		272,895		270,063		264,115		246,598		245,231		237,533	
Yearly Growth Rate ----->			-6.2%		-0.3%		3.4%		1.0%		2.3%		7.1%		0.6%		3.2%		2.5%	
Average per Year Growth Rate -----> (since start of program in 1993)			1.9%		2.9%		3.2%		3.1%		3.3%		3.4%		2.5%		2.9%		2.8%	
+/- from 2003 peak travel levels			-6.5%		-0.3%		0.0%													

fctr. = Annual Average Weekday Daily Traffic (AAWDT) monthly adjustment factor

e = estimated data

* = previous year volume (see notes)

■ = Annual Average Weekday Travel (AAWDT).

Notes

Station 2401 -- Arapahoe e.o. 75th -- 2012, 2013, 2006 under construction

Station 2410 -- U.S. 36 s.o. Foothills Pkwy -- 2011 data used for 2012

Station 2416 -- Mapleton Ave. e.o. Green Rock Dr -- 2014 data used for 2015

Station 2406 -- Diagonal Hwy n.o. Monarch Rd -- 2015 data used for 2016

2022 Boulder Valley Yearly Count Program -- Annual Average Weekday Travel (AAWDT)										
			1996		1995		1994		1993	
Sta. Ref. #	Location		mon.	vpd	mon.	vpd	mon.	vpd	mon.	vpd
1.	2401	Arapahoe e.o. 75th	10	13,348	5	13,418	7	13,155	5	12,497
2.	2402	Baseline Rd e.o. 76th St	10	6,491		5,806	6	5,440		5,710
3.	2403	Boulder Canyon w.o. Arapahoe	4	9,760		9,993	5	9,984		9,608
4.	2404	Broadway s.o. City Limits	5	17,065	8	18,218		17,100		17,305
5.	2405	U.S. 36 n.o. Broadway	5	11,508	5	10,519		11,105		10,896
6.	2406	Diagonal Hwy n.o. Monarch Rd	5	35,747		35,667		32,542		31,741
7.	2407	Lookout Rd e.o. 75th St	5	7,264		7,696		7,636		7,123
8.	2408	S Boulder Rd e.o. Paragon Dr	5	23,783		26,323		23,480		23,286
9.	2409	S.H. 52 e.o. 71st	5	8,204		7,479		6,913		6,555
10.	2410	U.S. 36 s.o. Foothills Pkwy	5	73,391		69,058		65,490		65,209
11.	2411	Valmont e.o. 75th	5	4,086		3,561		3,801		3,364
12.	2412	Cherryvale Rd s.o. South Boulder Rd	5	2,279		2,112		2,147		1,918
13.	2413	63rd St n.o. Monarch Rd	5	5,712		5,987		5,890		5,971
14.	2414	Lee Hill Rd w.o. 4th St	5	4,839		4,634		4,993		5,161
15.	2415	Linden Ave w.o. Spring Valley Rd	5	3,201		2,664		2,823		2,608
16.	2416	Mapleton Ave e.o. Green Rock Dr	4	2,899		2,475		2,863		2,717
17.	2417	Baseline Rd w.o. Gregory Canyon	4	1,985		1,842		2,577		1,981
18.	2418	51st Street n.o. Boulder Reservoir	e	290	e	290	e	290	e	290
Totals: Planning Area Screen Line			231,852		227,742		#####		213,940	
Yearly Growth Rate ----->			1.8%		4.4%		2.0%			
Average per Year Growth Rate -----> (since start of program in 1993)			2.8%		3.2%		2.0%			
+/- from 2003 peak travel levels										

fctr. = Annual Average Weekday Daily Traffic (AAWDT) monthly adjustment fact

e = estimated data

* = previous year volume (see notes)

 = Annual Average Weekday Travel (AAWDT).

Notes

Station 2401 -- Arapahoe e.o. 75th -- 2012, 2013, 2006 under construction

Station 2410 -- U.S. 36 s.o. Foothills Pkwy -- 2011 data used for 2012

Station 2416 -- Mapleton Ave. e.o. Green Rock Dr -- 2014 data used for 2015

Station 2406 -- Diagonal Hwy n.o. Monarch Rd -- 2015 data used for 2016