

MEMORANDUM

TO: Jennifer Hotaling, Colorado Springs School District 11

CC: Brian Calhoun, RTA Architects
Todd Frisbie, City of Colorado Springs
Zaker Alazzeh, City of Colorado Springs

FROM: Omar Aboughazala, FHU
Lyle DeVries, FHU

DATE: September 19, 2025

SUBJECT: Palmer High School Renovation Traffic Study (FHU Reference Number 125061-01)

In April 2025, FHU submitted a Traffic Study to the City of Colorado Springs in support of the potential renovation of Palmer High School. The study evaluated the closure of Boulder Street between Nevada Avenue and Weber Street, which bisects the Palmer high school campus. Existing traffic counts were collected on February 13, 2025. The traffic study analyzed several scenarios, including existing conditions, projected 2030 traffic operations with Boulder Street open, and projected 2030 traffic operations with Boulder Street closed.

As of August 2025, the section of Boulder Street between Nevada Avenue and Weber Street was closed for construction. In response, the City of Colorado Springs requested that FHU prepare a memorandum to compare actual observed traffic conditions during the closure with the February 2025 traffic counts and projections for the Boulder Street closure scenario developed in the April 2025 traffic study.

Accordingly, new traffic counts were collected on Wednesday, August 20, 2025 at three intersections along Platte Avenue. This memorandum focuses on these three intersections, comparing February 2025 conditions, August 2025 conditions with Boulder Street closed, and the projected 2030 closure estimated traffic conditions, with a focus on traffic volumes, intersection level of service (LOS), and vehicle queue lengths. August 2025 traffic counts are provided as **Attachment A**.

Supplemental to the analysis prepared in April 2025, this memorandum incorporates a traffic operations review based on the August 2025 counts.:

- February 2025 existing conditions (Boulder Street open)
- August 2025 observed conditions (Boulder Street closed)
- 2030 projected conditions (Boulder Street closed)

Traffic Volume Comparison

Figure 1 shows the change in traffic volumes between February and August 2025, providing more insight into how the Boulder Street closure has affected AM and PM travel patterns differently. At Platte & Nevada, all movement volumes increased during the AM peak, reflecting additional demand being shifted onto Platte Avenue. In contrast, during the PM peak, some significant decreases were observed — particularly the eastbound through and southbound through movements — suggesting that drivers may have adjusted routes differently in the afternoon. Across the network, the closure led to higher overall traffic activity on Platte

during the AM, while PM volumes reflected more variability, with both increases and decreases depending on the movement. These results highlight that the impacts of the closure are not uniform across time periods and that travel behavior may differ by peak hour. Also of note, simply collecting traffic volume data on two distinct days can show natural variability.

When comparing August 2025 observed volumes with the 2030 projected closure conditions developed in the April 2025 study, the volumes are generally close to the estimates but with lesser recorded increases than projected levels. For example, the 2030 projections showed the southbound left turn movement at Platte & Nevada increasing to 92(172) AM(PM) peak hour vehicles per hour and recorded levels were 57(78). The 2% annual growth rate included in the 2030 projections accounts for some of these differences but recorded volume shifts to the Platte Avenue intersections still appear generally less than projected. This could also suggest that some traffic has shifted away from the immediate study area and utilized alternative routes during closure of Boulder Street. There are some exceptions to this finding. At Platte & Nevada, the AM peak hour northbound through and southbound through movements were underestimated in the study relative to what was observed in August. Similarly, at Platte & Wahsatch, southbound through volumes during the AM peak were higher than projected.

Level of Service Comparison

Figure 2 shows the comparison of traffic volumes and Levels of Service (LOS) across these scenarios. At Platte & Weber, conditions actually improved during the AM peak, with LOS improving from C in February to B in August. One reason for this improvement is that additional green time was allocated upon optimization to the east–west direction on Platte Avenue to accommodate higher volumes, which helped balance operations at the intersection.

These findings suggest that through movements along Platte are more heavily utilized than previously expected, although the overall intersection LOS remained acceptable (LOS B or C).

Table 1 presents traffic conditions at the three study intersections along Platte Avenue (Platte & Nevada, Platte & Weber, and Platte & Wahsatch) and compares them across three scenarios during both AM and PM peak hours. LOS findings based on recorded traffic volumes are equivalent to or better than projected conditions evaluated in the April 2025 study.

Table 1. Intersection Level of Service Comparison

Intersection	February 2025 (Existing, Boulder Open)		August 2025 (Observed, Boulder Closed)		2030 Projected (Boulder Closed)	
	AM	PM	AM	PM	AM	PM
Platte Ave & Nevada Ave	B	B	B	B	C	C
Platte Ave & Weber St	C	C	B	C	B	B
Plate Ave & Wahsatch Ave	C	C	C	C	C	C

Platte and Nevada Queuing Analysis

The prior study findings for queue lengths at the Platte & Nevada intersection were reevaluated based on recorded August 2025 traffic volumes to identify any changes to prior findings. Several movements at Platte Avenue & Nevada Avenue experienced queues that exceeded their existing storage lengths. The westbound right (WBR) movement reached a maximum queue of 150 feet compared to the available 50 feet of storage, and the northbound right (NBR) movement reached 125 feet compared to 50 feet of storage. These

exceedances indicate a need to consider expanding storage capacity for these approaches to better accommodate peak-hour demand. For all movements at Platte & Nevada, the observed August 2025 queues were consistent with or less than the projected queue lengths for 2030, demonstrating that the April 2025 study provided conservative forecasts.

Of particular note, the southbound left (SBL) queue was observed at only 75 feet in August, which suggests that the prior 2030 projection of 275 feet may be overstated, and this movement may not experience the significant growth previously anticipated upon closure of Boulder Street. Overall, the observed queuing patterns reinforce the accuracy of the study’s projections while highlighting specific areas, such as the NBR and WBR movements, where targeted storage length improvements could be considered. The table below compares existing storage lengths, observed August 2025 maximum queues, and projected 2030 maximum queues for each movement at Platte & Nevada.

Movement	Existing Storage Length	August 2025 Observed Maximum Peak Hour Queue Length (ft)	2030 Projected Maximum Peak Hour Queue Length (ft)
EBT	N/A	175	275
EBR	N/A	175	300
WBT	N/A	225	225
WBR	50	150*	175*
NBL	50	25	25
NBT	N/A	250	250
NBR	50	125*	200*
SBL	75	75**	275*
SBT	N/A	125	275
SBR	125	25	50

*Queue length exceeds existing storage

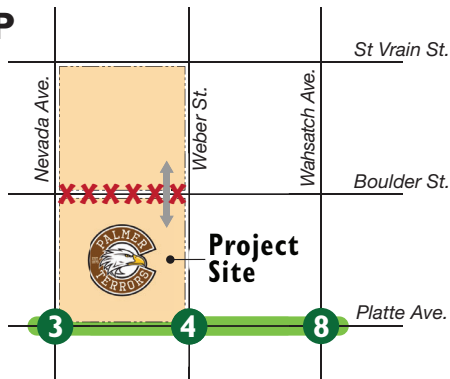
**This length was previously reported at 50', but was remeasured at 75'

Conclusion

The analysis indicates that the August 2025 observed conditions with Boulder Street closed were generally consistent with the projections from the April 2025 study. Traffic volumes and LOS remained close to estimated conditions, with projections slightly more conservative overall. The most notable differences were higher than expected through volumes at Platte & Nevada and Platte & Wahsatch. Despite these variances, LOS remained acceptable, suggesting the network can continue to accommodate the closure impacts. Of particular note, recorded traffic conditions indicate that the potential need to increase available storage length for the southbound left turn movement at Platte & Nevada is less likely than previously projected.

Continued monitoring is recommended to confirm long-term impacts. The recommendations in the April 2025 report are conservative compared to what was observed in August 2025 following the Boulder Street closure, and there is no foreseen need to update the analysis in the report.

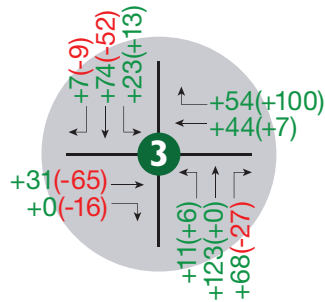
KEY MAP



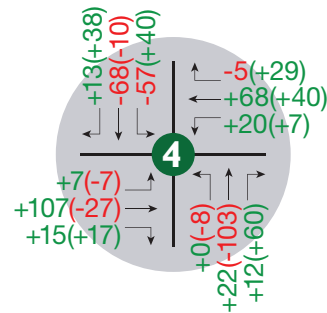
LEGEND

- XXX(XXX) = AM(PM) Peak Hour Traffic Volumes
- XXX(XXX) = Reductions
- XXX(XXX) = Increases
- ⊗ = Study Intersection
- XXX = Boulder Street Closure
- = Study Corridor

Platte Avenue/
Nevada Avenue



Platte Avenue/
Weber Street



Platte Avenue/
Wahsatch Avenue

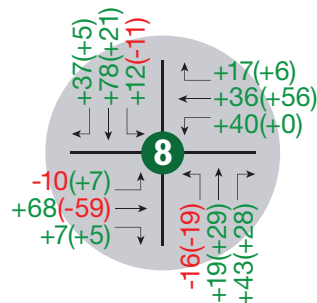
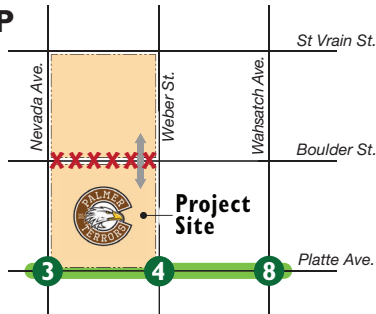


FIGURE I

**Change in Traffic Volumes
Due to Boulder Street Closure
(February 2025 to August 2025)**

KEY MAP



LEGEND

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

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

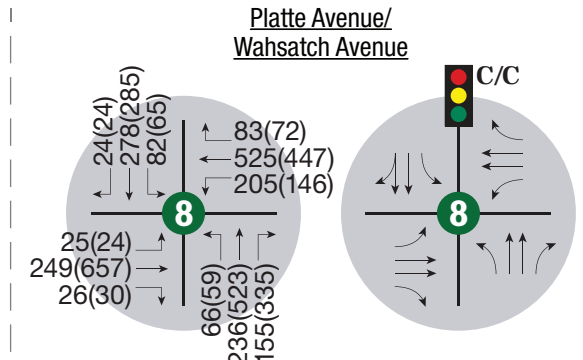
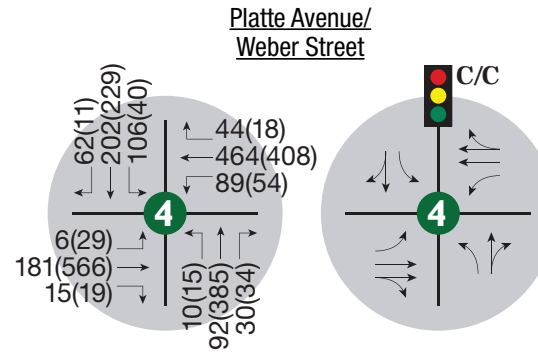
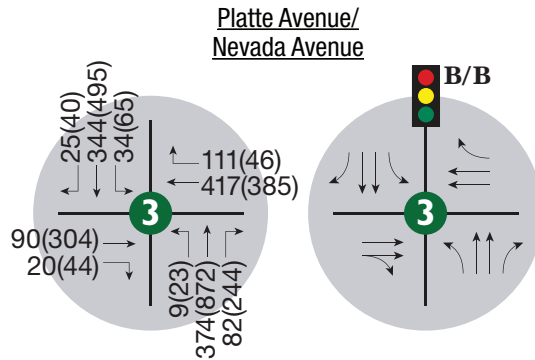
= Traffic Signal

= Study Intersection

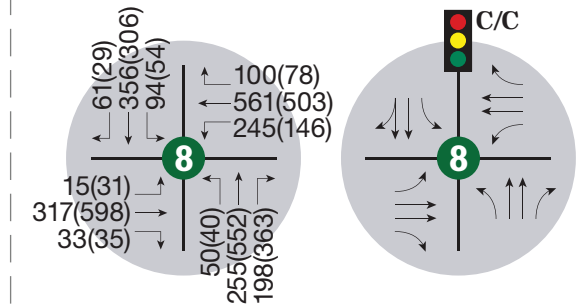
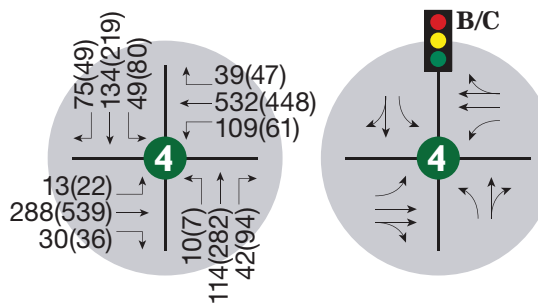
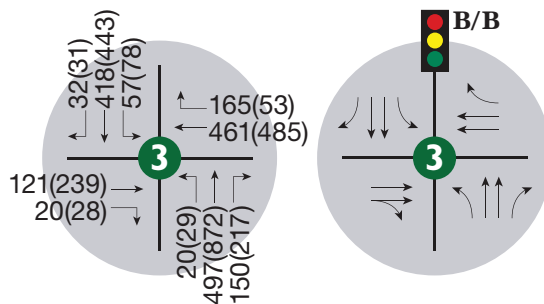
= Boulder Street Closure

= Study Corridor

February 2025
(Existing,
Boulder Open)



August 2025
(Observed,
Boulder Closed)



Projected 2030
(Boulder Closed)

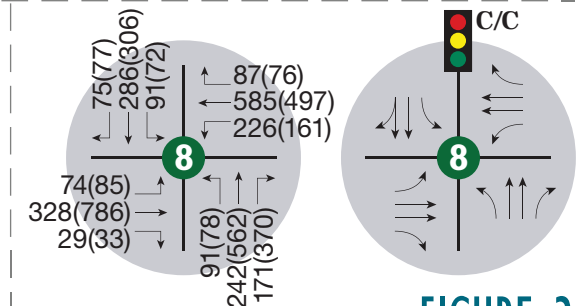
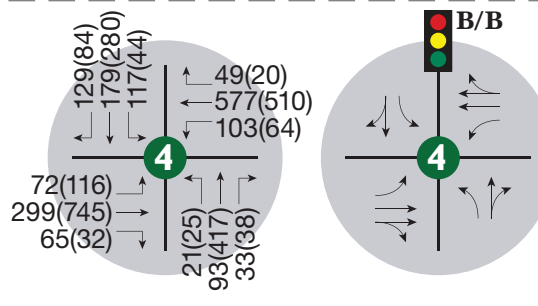
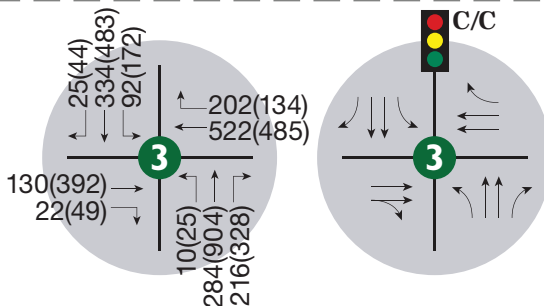


FIGURE 2
Traffic Volume and LOS Comparison at
Platte Avenue Intersections

ATTACHMENT A: AUGUST 2025 TRAFFIC COUNTS



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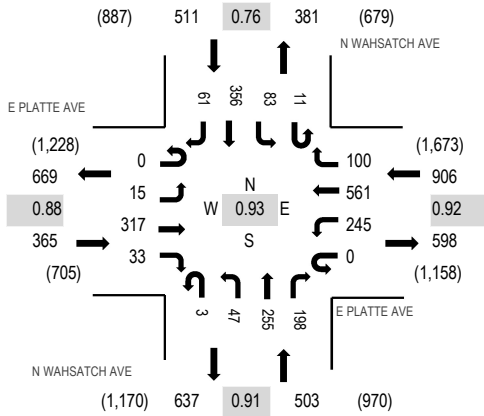
Location: 3 N WAHSATCH AVE & E PLATTE AVE AM

Date: Wednesday, August 20, 2025

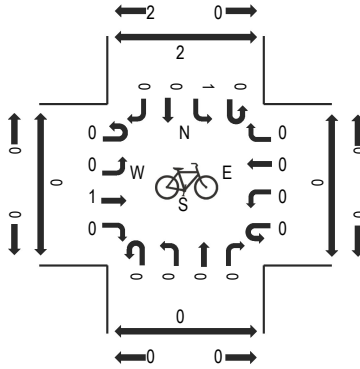
Peak Hour: 07:15 AM - 08:15 AM

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

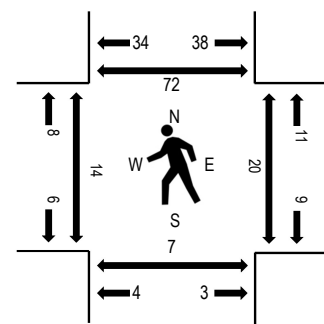
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E PLATTE AVE Eastbound				E PLATTE AVE Westbound				N WAHSATCH AVE Northbound				N WAHSATCH AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	4	77	6	0	52	130	8	0	9	35	43	2	14	48	3	431	2,207	2	2	2	7
7:15 AM	0	7	85	16	0	53	155	39	0	18	57	56	6	21	86	12	611	2,285	4	7	3	34
7:30 AM	0	1	94	9	0	57	144	25	0	12	67	59	4	21	79	19	591	2,183	8	8	3	27
7:45 AM	0	5	73	4	0	58	143	13	0	9	52	50	1	23	124	19	574	2,108	1	5	1	10
8:00 AM	0	2	65	4	0	77	119	23	3	8	79	33	0	18	67	11	509	2,028	1	0	0	1
8:15 AM	0	3	69	6	0	59	126	16	1	13	65	47	2	20	78	4	509		0	1	0	2
8:30 AM	0	6	64	6	0	54	124	20	2	12	72	50	0	18	80	8	516		1	0	2	0
8:45 AM	0	2	92	5	0	55	112	11	2	9	52	55	0	11	79	9	494		2	1	0	0
Count Total	0	30	619	56	0	465	1,053	155	8	90	479	393	15	146	641	85	4,235		19	24	11	81
Peak Hour	0	15	317	33	0	245	561	100	3	47	255	198	11	83	356	61	2,285		14	20	7	72



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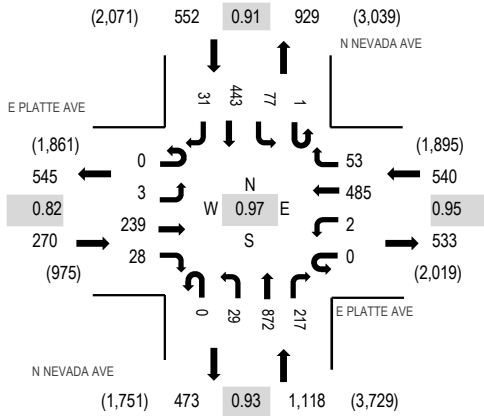
Location: 1 N NEVADA AVE & E PLATTE AVE PM

Date: Wednesday, August 20, 2025

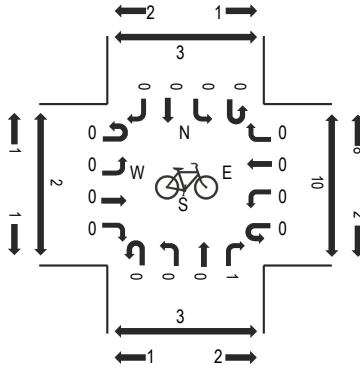
Peak Hour: 04:15 PM - 05:15 PM

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

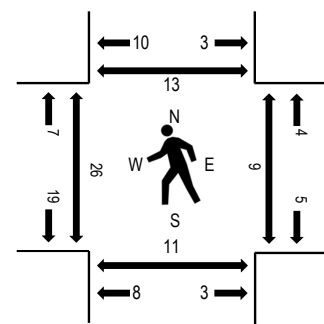
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E PLATTE AVE Eastbound				E PLATTE AVE Westbound				N NEVADA AVE Northbound				N NEVADA AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
2:30 PM	0	0	40	6	0	0	95	20	0	8	192	54	2	21	98	15	551	2,193	2	1	4	1
2:45 PM	0	0	39	7	0	0	102	25	0	12	155	53	0	15	82	11	501	2,241	3	5	4	6
3:00 PM	0	0	47	3	0	0	88	18	0	8	185	49	1	17	102	12	530	2,326	17	45	12	65
3:15 PM	0	0	83	8	0	0	99	32	0	9	154	64	0	30	116	16	611	2,394	21	35	12	52
3:30 PM	0	0	61	7	0	0	100	26	0	6	189	64	0	21	118	7	599	2,413	11	11	6	12
3:45 PM	0	0	68	7	0	0	112	22	0	16	177	57	0	13	108	6	586	2,453	3	5	6	6
4:00 PM	0	0	57	6	0	0	103	22	0	4	199	51	0	20	127	9	598	2,460	6	0	3	5
4:15 PM	0	2	48	4	0	0	123	14	0	6	244	49	0	22	107	11	630	2,480	8	1	5	4
4:30 PM	0	0	64	6	0	1	126	15	0	9	220	51	0	14	123	10	639	2,418	1	2	1	3
4:45 PM	0	1	57	8	0	0	116	11	0	8	208	56	0	24	98	6	593	2,333	13	4	5	4
5:00 PM	0	0	70	10	0	1	120	13	0	6	200	61	1	17	115	4	618	2,158	4	2	0	2
5:15 PM	0	0	68	10	0	0	89	5	0	10	209	62	0	16	91	8	568	1,923	6	1	5	7
5:30 PM	0	0	54	12	0	0	112	11	0	3	150	69	0	24	112	7	554	1,646	9	3	3	3
5:45 PM	0	0	36	7	0	0	73	20	0	1	100	58	0	19	94	10	418		6	2	1	4
6:00 PM	0	0	37	5	0	0	83	14	0	4	97	35	0	13	91	4	383		11	1	6	8
6:15 PM	0	0	27	10	0	0	71	13	0	1	72	34	0	10	51	2	291		5	0	3	6
Count Total	0	3	856	116	0	2	1,612	281	0	111	2,751	867	4	296	1,633	138	8,670		126	118	76	188
Peak Hour	0	3	239	28	0	2	485	53	0	29	872	217	1	77	443	31	2,480		26	9	11	13



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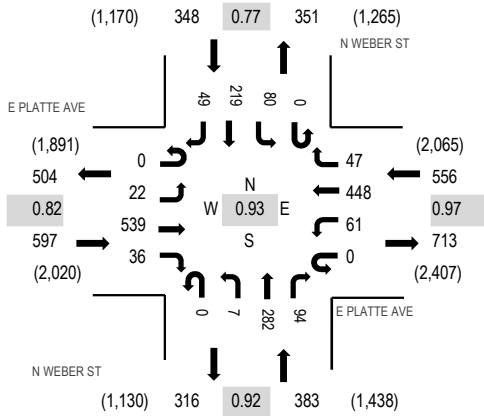
Location: 2 N WEBER ST & E PLATTE AVE PM

Date: Wednesday, August 20, 2025

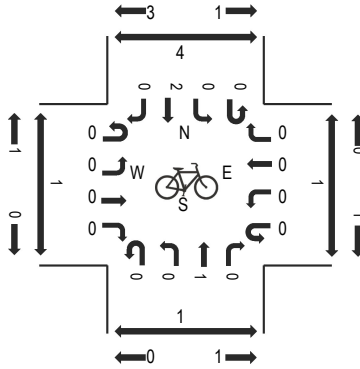
Peak Hour: 03:15 PM - 04:15 PM

Peak 15-Minutes: 03:15 PM - 03:30 PM

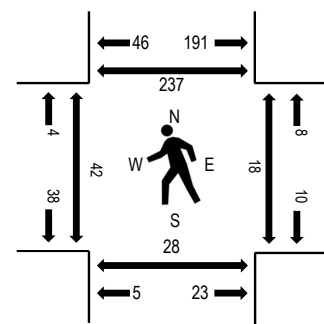
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E PLATTE AVE Eastbound				E PLATTE AVE Westbound				N WEBER ST Northbound				N WEBER ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
2:30 PM	0	5	106	4	0	15	104	11	0	0	52	27	0	6	42	7	379	1,675	1	0	1	0
2:45 PM	0	2	101	2	0	10	104	11	0	1	47	18	0	9	45	16	366	1,735	0	5	0	8
3:00 PM	0	3	106	5	0	25	99	15	0	2	61	18	0	16	52	24	426	1,829	37	5	8	157
3:15 PM	0	4	159	18	0	12	108	17	0	3	50	18	0	28	78	9	504	1,884	32	6	19	175
3:30 PM	0	4	136	5	0	17	104	10	0	1	69	20	0	18	40	15	439	1,839	3	6	0	38
3:45 PM	0	9	127	9	0	18	117	13	0	2	70	21	0	16	41	17	460	1,866	5	3	6	16
4:00 PM	0	5	117	4	0	14	119	7	0	1	93	35	0	18	60	8	481	1,881	2	3	3	8
4:15 PM	0	4	119	3	0	14	118	6	0	2	89	21	0	18	55	10	459	1,875	0	3	0	7
4:30 PM	0	3	125	5	0	12	127	7	0	1	83	31	0	14	49	9	466	1,853	0	3	1	11
4:45 PM	0	8	120	4	0	20	116	8	0	3	83	31	0	11	59	12	475	1,787	0	3	1	4
5:00 PM	0	5	136	4	0	17	116	6	0	4	95	20	0	11	48	13	475	1,679	1	5	3	3
5:15 PM	0	8	128	1	0	15	81	5	0	2	81	33	0	5	70	8	437	1,515	0	3	0	3
5:30 PM	0	4	140	2	0	10	115	7	0	3	51	21	0	5	35	7	400	1,326	0	2	1	6
5:45 PM	0	4	95	17	0	13	92	7	0	2	55	15	0	6	53	8	367		0	0	1	14
6:00 PM	0	1	76	2	0	19	89	7	0	0	42	11	0	11	44	9	311		2	3	0	8
6:15 PM	0	0	69	6	0	11	75	2	0	4	36	10	0	5	26	4	248		2	1	4	6
Count Total	0	69	1,860	91	0	242	1,684	139	0	31	1,057	350	0	197	797	176	6,693		85	51	48	464
Peak Hour	0	22	539	36	0	61	448	47	0	7	282	94	0	80	219	49	1,884		42	18	28	237



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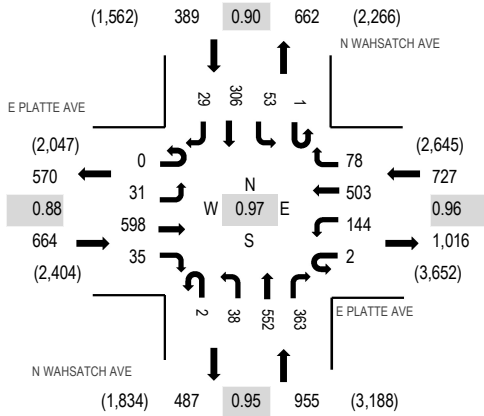
Location: 3 N WAHSATCH AVE & E PLATTE AVE PM

Date: Wednesday, August 20, 2025

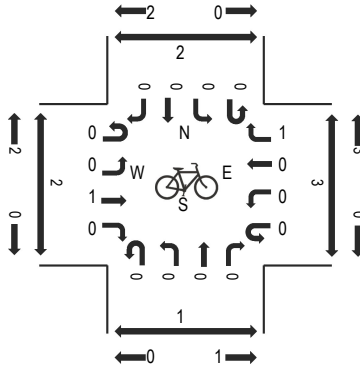
Peak Hour: 04:15 PM - 05:15 PM

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

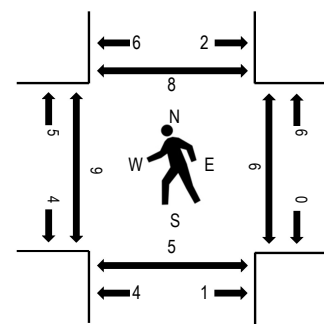
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E PLATTE AVE Eastbound				E PLATTE AVE Westbound				N WAHSATCH AVE Northbound				N WAHSATCH AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
2:30 PM	0	4	126	7	0	27	100	16	2	15	113	78	2	11	51	10	562	2,429	5	3	2	1
2:45 PM	0	10	113	3	0	30	104	15	0	17	89	79	0	11	52	15	538	2,552	6	1	2	1
3:00 PM	0	11	122	5	0	33	117	17	3	12	105	79	4	15	83	19	625	2,668	5	3	3	57
3:15 PM	0	10	180	14	0	42	100	31	3	14	98	86	7	25	83	11	704	2,726	17	14	10	132
3:30 PM	1	3	164	8	0	35	107	32	0	8	129	82	2	24	79	11	685	2,718	5	5	0	4
3:45 PM	0	11	144	8	0	44	129	14	2	10	120	75	3	15	76	3	654	2,702	5	1	3	0
4:00 PM	0	10	158	5	1	32	118	17	3	12	126	71	2	20	105	3	683	2,711	3	6	1	4
4:15 PM	0	7	142	3	1	33	132	22	2	12	135	100	0	14	87	6	696	2,735	3	4	2	1
4:30 PM	0	8	154	9	0	38	118	14	0	16	121	88	1	15	78	9	669	2,675	0	1	0	1
4:45 PM	0	8	149	15	0	41	128	21	0	5	137	87	0	6	58	8	663	2,599	4	1	0	3
5:00 PM	0	8	153	8	1	32	125	21	0	5	159	88	0	18	83	6	707	2,447	2	0	3	3
5:15 PM	0	13	141	7	0	35	90	18	0	5	136	83	0	19	82	7	636	2,200	3	2	1	0
5:30 PM	0	8	135	6	0	35	108	24	0	8	98	75	0	17	70	9	593	1,977	4	0	1	1
5:45 PM	0	8	105	3	0	34	102	28	0	7	71	60	1	14	71	7	511		2	0	0	16
6:00 PM	0	8	93	2	0	27	93	26	0	14	66	63	5	5	53	5	460		1	4	0	10
6:15 PM	0	4	86	4	0	29	69	39	0	13	49	54	1	7	54	4	413		2	3	1	3
Count Total	1	131	2,165	107	3	547	1,740	355	15	173	1,752	1,248	28	236	1,165	133	9,799		67	48	29	237
Peak Hour	0	31	598	35	2	144	503	78	2	38	552	363	1	53	306	29	2,735		9	6	5	8