

Syracuse Metropolitan Transportation Council

2024-2025 Unified Planning Work Program

GREATER LIVERPOOL TRAFFIC STUDY

DRAFT TECHNICAL MEMORANDUM

February 13, 2025

Introduction

As part of the 2024-2025 Unified Planning Work Program, the SMTC agreed to complete this technical analysis for the Onondaga County Department of Transportation (OCDOT).

Over the last five years, much commercial development has occurred within the greater Liverpool area, most notably the opening of the Amazon warehouse on Morgan Road in the Town of Clay in spring 2022. During this same timeframe, community members have expressed frustration to the OCDOT about perceived increases in vehicular traffic – including increased truck traffic – in the southern part of the Town of Clay and in the Village of Liverpool.

The Village of Liverpool responded to the concerns about truck traffic by attempting to ban trucks. In July 2023, the village passed a local law banning tractor trailers and other trucks weighing 5 tons or more from all Liverpool streets unless making local deliveries.¹ The law took effect – with significant fines imposed on violators – in January 2024 after the village posted signage; however, the village found that they lacked the necessary truck scales to determine weight and enforce the fines, so a revised version of the law was passed in April 2024 with reduced fines that are not dependent on weight.² The latest iteration of the law bans semi-trailer trucks (18-wheelers) from passing through the village.³

In response to these changes, the OCDOT asked the SMTC to compile relevant current and historical traffic data – including heavy vehicle data – for County-owned road segments and intersections near the Village of Liverpool and to conduct a capacity analysis for the signalized intersections.

As a technical analysis, no public engagement was completed for this task. SMTC staff consulted with OCDOT staff during the study process.

¹ <https://www.syracuse.com/politics/cny/2023/07/liverpool-declares-war-on-big-trucks-sending-rigs-from-amazon-and-others-around-crowded-village.html>

² <https://www.syracuse.com/news/2024/01/liverpool-to-begin-imposing-hefty-fines-to-enforce-big-truck-ban.html>

³ <https://www.syracuse.com/news/2024/08/why-liverpool-tapped-the-brakes-on-hefty-fines-aimed-at-truckers-driving-through-the-village.html>

Study area

The general study area is bounded by John Glenn Boulevard and Buckley Road to the north, Henry Clay Boulevard to the east, 2nd Street to the south, and Route 57 to the west. This includes a total of 25 signalized intersections along Route 57, Morgan Road, Henry Clay Boulevard, Buckley Road, and 2nd Street.

There are 18 traffic signals owned by OCDOT within the study area and one privately-owned (permit) signal. Additionally, six signals within the Village of Liverpool that are owned by the New York State Department of Transportation were included in portions of this analysis.

Fifteen of the County-owned signals and two of the State-owned signals currently have Miovision cameras, which can provide continuous turning movement count data. See the map on page 3 for the location of the study area intersections, ownership, and presence of Miovision cameras.

Intersection traffic count comparison: Pre-Covid to current condition

“Pre-Covid” (prior to March 2020) traffic count data was available at all but six of the study area intersections. Intersection turning movement counts were used for most of the locations, with the actual count years varying from 2010 to 2019. There were four locations that had Miovision cameras functioning in early 2020, so that data was used for those locations. SMTC reviewed the available counts and determined the PM peak hour entering volume at each location. (NYSDOT historical monthly adjustment factors were applied to the manual counts.) The total daily entering volume at each location with a manual count was estimated based on the current percentage of total traffic occurring during the PM peak hour (9.12 percent). For Miovision data, the average of Tuesday-Wednesday-Thursday counts was used.

Current PM peak hour and daily entering volumes were obtained from the Miovision data for 15 County and two State locations with cameras. Daily averages for Tuesday-Wednesday-Thursday for all of 2023 were used for this historical comparison. Manual turning movement counts were conducted in September 2024 at the four County locations without cameras.

Table 1 summarizes the pre-Covid and current PM peak hour and daily entering traffic volume data. There are a total of 15 intersections (County and State) where pre-Covid and current count data can be compared.

- At the County locations, the change in PM peak hour entering traffic varies from a decline of 4.55 percent per year to an increase of 2.90 percent per year, with only three locations showing growth in traffic volume.
- Looking at total daily entering volumes, only two locations experienced growth; total daily entering volume changes ranged from a decline of 4.95 percent per year to an increase of 1.83 percent per year.
- The two State locations experienced declines in both PM peak hour and total daily entering traffic, ranging from about 2 to 6 percent per year decline.

Overall, the intersections in the study area experienced an average decline in traffic (PM peak and daily) of about 2 percent per year over the past 5 to fourteen years.

Greater Liverpool Area Traffic Study Intersections

Signal Ownership

- County signal*
- County signal with Miovision
- Private signal*
- Private signal with Miovision
- State signal
- State signal with Miovision

* Manual counts were conducted at locations without a camera in September 2024

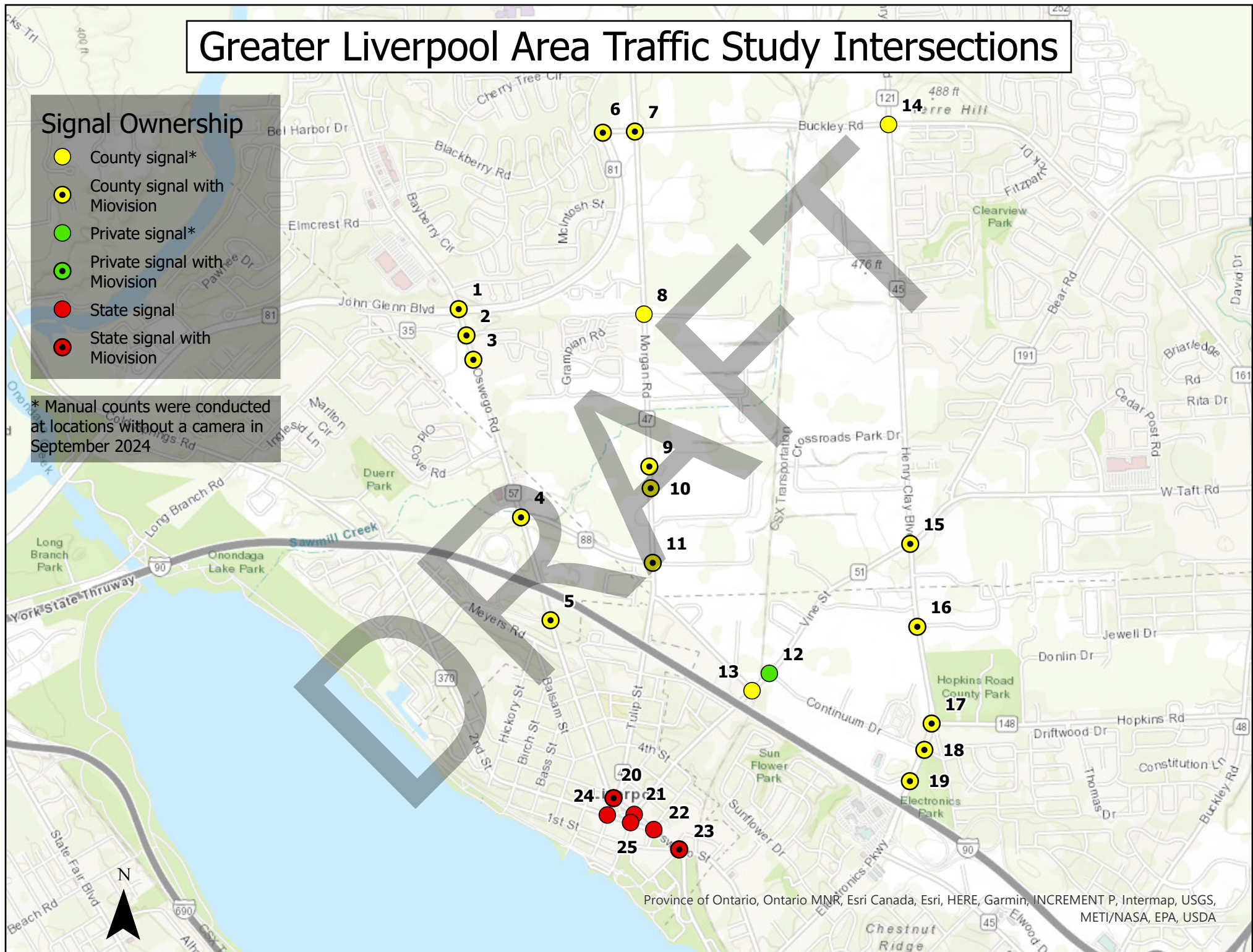


Table 1: PM peak hour and total daily entering volumes at study area intersections, pre-COVID (2010-2020) and current conditions (2024)

Location #	Street 1	Street 2	Owner	Miovision	Coordinated/ isolated	Pre-Covid count year	PM peak hour entering volume					Total daily entering volume				
							Pre-Covid	Current	Δ	% Δ	% Δ / yr	Pre-Covid	Current	Δ	% Δ	% Δ / yr
1	Oswego Road (Rt 57)	John Glenn Boulevard	County	yes	coord (Old Rt. 57)	2015	4,103	3,911	-192	-5%	-0.59%	44,987	41,492	-3,495	-8%	-0.97%
2	Oswego Road (Rt 57)	Belmont Drive/Long Branch Road	County	yes	coord (Old Rt. 57)	---		2,235	2,235	---	---	---	24,556	---	---	---
3	Oswego Road (Rt 57)	Plaza driveway	County	yes	coord (Old Rt. 57)	---		1,439	1,439	---	---	---	16,948	---	---	---
4	Oswego Road (Rt 57)	Liverpool Bypass	County	yes	coord (Old Rt. 57)	---		2,103	2,103	---	---	---	23,106	---	---	---
5	Oswego Road (Rt 57)	Thruway Exit	County	yes	coord (Old Rt. 57)	2016	2,113	1,456	-657	-31%	-4.44%	23,166	15,719	-7,446	-32%	-4.59%
6	John Glenn Boulevard	Blueberry Road/Buckley Road	County	yes	coord (Buckley)	2010	1,694	1,000	-694	-41%	-3.15%	18,568	14,915	-3,654	-20%	-1.51%
7	Morgan Road	Buckley Road	County	yes	coord (Buckley)	2020 (Mio)	2,703	2,699	-4	0%	-0.05%	31,823	28,382	-3,441	-11%	-3.60%
8	Morgan Road	Grampian Rd / Steelway Blvd N	County	no	isolated	---		1,534	1,534	---	---	---	16,822	---	---	---
9	Morgan Road	Amazon Warehouse (north)	County	yes	n/a	---		1,193	1,193	---	---	---	12,744	---	---	---
10	Morgan Road	Amazon Warehouse (south)	County	yes	n/a	---		1,166	1,166	---	---	---	11,919	---	---	---
11	Morgan Road	Liverpool Bypass / Crown Rd	County	yes	isolated	2016	1,890	1,470	-420	-22%	-3.17%	20,719	16,147	-4,572	-22%	-3.15%
12	Vine Street	Continuum Drive	Private	no	isolated	2013	1,195	1,179	-16	-1%	-0.12%	13,099	12,927	-172	-1%	-0.12%
13	Vine Street	Commerce Blvd	County	no	isolated	2010	1,285	1,221	-64	-5%	-0.36%	14,087	13,382	-705	-5%	-0.36%
14	Henry Clay Boulevard	Buckley Road	County	no	isolated	2019	2,443	2,575	131	5%	1.08%	26,788	28,230	1,441	5%	1.08%
15	Henry Clay Boulevard	Vine Street	County	yes	coord (Electronics/ Henry Clay)	2019	2,932	2,399	-533	-18%	-4.55%	32,150	25,778	-6,372	-20%	-4.95%
16	Henry Clay Boulevard	Metropolitan Park Drive	County	yes	coord (Electronics/ Henry Clay)	2010	2,138	1,681	-457	-21%	-1.64%	23,438	17,540	-5,898	-25%	-1.94%
17	Electronics Parkway / Henry Clay Boulevard	Hopkins Road	County	yes	coord (Electronics/ Henry Clay)	2020 (Mio)	1,855	1,739	-116	-6%	-2.09%	20,189	17,383	-2,806	-14%	-4.63%
18	Electronics Parkway	Limestone Drive	County	yes	coord (Electronics/ Henry Clay)	2020 (Mio)	1,719	1,868	149	9%	2.90%	21,279	18,714	-2,565	-12%	-4.02%
19	Electronics Parkway	Transistor Parkway	County	yes	coord (Electronics/ Henry Clay)	2020 (Mio)	1,778	1,783	5	0%	0.10%	17,240	18,189	949	6%	1.83%
20	Oswego Street (Rt 57)	Tulip Street	State	yes		2018	2,148	1,462	-686	-32%	-6.39%	26,213	19,509	-6,704	-26%	-5.12%
21	Oswego Street (Rt 57)	Vine Street	State	no		2012	1,156	---	---	---	---	13,649	---	---	---	---
22	Oswego Street (Rt 57)	Cypress Street	State	no		2018	2,836	---	---	---	---	33,548	---	---	---	---
23	Oswego Street (Rt 57)	Rt 370/ Willow Street/Old Liverpool Rd	State	yes		2018	3,071	2,699	-372	-12%	-2.42%	36,333	30,024	-6,309	-17%	-3.47%
24	Second Street (Rt 370)	Tulip Street	State	no		2012	1,110	---	---	---	---	13,101	---	---	---	---
25	Second Street (Rt 370)	Vine Street	State	no		2012	1,156	---	---	---	---	13,649	---	---	---	---

All locations are signalized.

Pre-Covid counts are manual turning movement counts, except where noted (Mio). These are all for PM peak hour. NYSDOT seasonal factors were applied.

Daily volumes were calculated as PM PH vol / 0.0912 for locations with turning movement counts.

Current counts are for 2023 for intersections with Miovision cameras, and for 2024 for locations without cameras (manual counts conducted September 2024)

All Miovision data are for Tues/Wed/Thurs average. For most locations, data for all of 2023 was used. Some locations had limited data due to camera installation date.

At locations 2, 4, and 11, only the total daily traffic was available from Miovision, so PM peak hour volumes were calculated based on average study area percentage of daily volume in PM peak hour (9.12%).

Heavy vehicle percentages at intersections: current conditions

Table 2 shows the existing heavy vehicle percentage for intersections in the study area with Miovision cameras overall, by approach, and by movement. Data for September and October 2024, Tuesday through Thursday daily average, were used for this analysis. The following conclusions are noted:

- Overall, heavy vehicles make up an average of 4.74 percent of total daily traffic entering these 17 intersections.
- Heavy vehicle percentages are slightly higher than the study area average on the northbound and southbound approaches (and primarily on the through movement) along Henry Clay Boulevard and Electronics Parkway.
- Heavy vehicles make up an even greater share of the traffic – more than 1.5 times the average (above 8 percent) – at the Amazon driveway intersections on Morgan Road, the intersections at both ends of the Liverpool Bypass, and the Thruway exit on Route 57.
- Some individual approaches and/or movements at these intersections have 20-40 percent heavy vehicles, though this is mostly movements to or from the Amazon warehouse or other industrial driveways.
- Overall, the highest heavy vehicle movements appear to be confined to Route 57 between the Thruway and Liverpool Bypass, the bypass itself, and Morgan Road between the bypass and the Amazon driveways.
- At the two intersections within the Village of Liverpool with Miovision cameras, heavy vehicles generally constitute less than two percent of the total entering traffic, well below the overall study area average. Similarly, locations farther north on Route 57 and on Morgan Road generally have heavy vehicle percentages below 3 percent.

Table 2: Heavy vehicles percentages at study area intersections (2024, Miovision locations only)

				% Heavy Vehicles																
Location #	Street 1	Street 2	Owner	Overall Intersection	By Approach				Southbound			Westbound			Northbound			Eastbound		
					SB	WB	NB	EB	L	T	R	L	T	R	L	T	R	L	T	R
1	Oswego Road (Rt 57)	John Glenn Boulevard	County	2.55%	1.62%	2.81%	2.70%	3.36%	0.40%	2.17%	0.27%	3.89%	2.76%	1.48%	3.84%	2.65%	1.46%	1.44%	5.42%	3.58%
2	Oswego Road (Rt 57)	Belmont Drive/Long Branch Road	County	2.82%	2.16%	1.46%	2.63%	5.64%	1.15%	2.27%		0.34%	5.35%	0.67%	6.43%	2.46%	0.39%	6.49%	3.26%	4.62%
3	Oswego Road (Rt 57)	Plaza driveway	County	2.49%	2.63%		2.74%	0.07%		2.79%						2.96%				0.17%
4	Oswego Road (Rt 57)	Liverpool Bypass	County	6.29%	2.22%	16.69%	6.87%		4.02%	1.69%		35.79%		4.89%		1.98%	35.93%			
5	Oswego Road (Rt 57)	Thruway Exit	County	4.61%	1.46%		1.78%	18.97%		1.46%					1.12%	1.85%		18.97%		
6	John Glenn Boulevard	Blueberry Road/Buckley Road	County	2.72%		3.23%	3.02%	0.55%				4.43%	1.26%		0.85%		3.15%		0.54%	0.68%
7	Morgan Road	Buckley Road	County	3.23%	3.03%	3.42%	3.75%	2.84%	4.06%	3.05%	2.33%	4.89%	2.79%	4.69%	5.25%	2.56%	5.93%	2.44%	2.33%	5.20%
9	Morgan Road	Amazon Warehouse (north)	County	8.52%	8.03%	31.76%	9.42%			8.61%	0.45%	31.76%			6.67%	9.21%	28.40%			
10	Morgan Road	Amazon Warehouse (south)	County	8.95%	9.31%		9.94%	1.32%		9.81%						10.84%		1.64%		1.14%
11	Morgan Road	Liverpool Bypass / Crown Rd	County	8.07%	7.44%	22.30%	3.51%	18.62%	7.07%	3.03%	27.92%	8.06%	39.00%	10.62%	4.39%	3.24%	5.26%	35.27%	43.25%	4.71%
15	Henry Clay Boulevard	Vine Street	County	4.01%	5.40%	1.87%	5.52%	2.26%	2.88%	6.71%	3.94%	1.38%	2.28%	1.62%	9.86%	6.19%	2.16%	4.23%	2.11%	0.38%
16	Henry Clay Boulevard	Metropolitan Park Drive	County	6.20%	6.39%	4.20%	6.24%		5.58%	6.43%		5.08%		3.14%		6.33%	4.17%			
17	Electronics Parkway / Henry Clay Boulevard	Hopkins Road	County	5.57%	5.35%	2.79%	6.49%	66.67%	1.96%	5.91%	2.70%	2.08%		3.33%		6.87%	0.39%			
18	Electronics Parkway	Limestone Drive	County	5.87%	6.83%	1.22%	6.41%	1.31%	1.10%	7.19%		1.81%		0.72%	1.25%	7.31%		0.53%	9.09%	1.54%
19	Electronics Parkway	Transistor Parkway	County	6.05%	6.19%		6.22%	2.19%		6.48%	2.51%				5.17%	6.29%		2.58%		1.02%
20	Oswego Street (Rt 57)	Tulip Street	State	1.26%	1.09%	1.32%	0.19%	1.52%	1.16%		3.37%		1.72%			0.21%	0.95%		1.62%	0.41%
23	Oswego Street (Rt 57)	Rt 370/ Willow Street/Old Liverpool Rd	State	1.35%	1.33%	2.41%	0.73%	0.42%	1.37%				2.04%	2.53%		0.75%			0.43%	

Data source: Miovision data for September-October 2024, Tuesday/Wednesday/Thursday daily average. (Locations without Miovision cameras are not included.)

Above study area average

Over 1.5x study area average

More than 20%

Traffic volumes on segments: overall AADT and heavy vehicles

Historical Average Annual Daily Traffic (AADT)

In addition to the intersection data, SMTc staff also examined AADT data for road segments within the study area. Since 2000, volumes have remained fairly flat or declined slightly for most of the study area locations. A few locations show a very slight uptick in traffic over the past few years but that is after a drop in 2020. Overall, it appears that the traffic volumes in and around the Greater Liverpool area are holding steady even with additional development in the area.

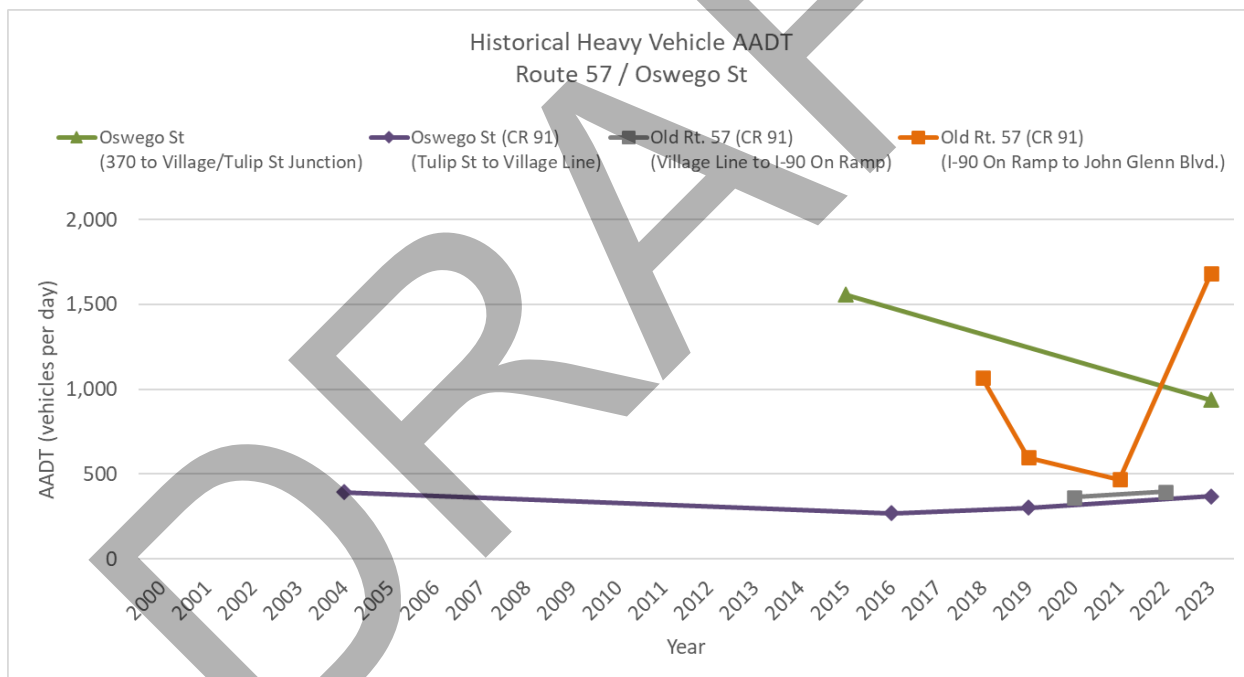
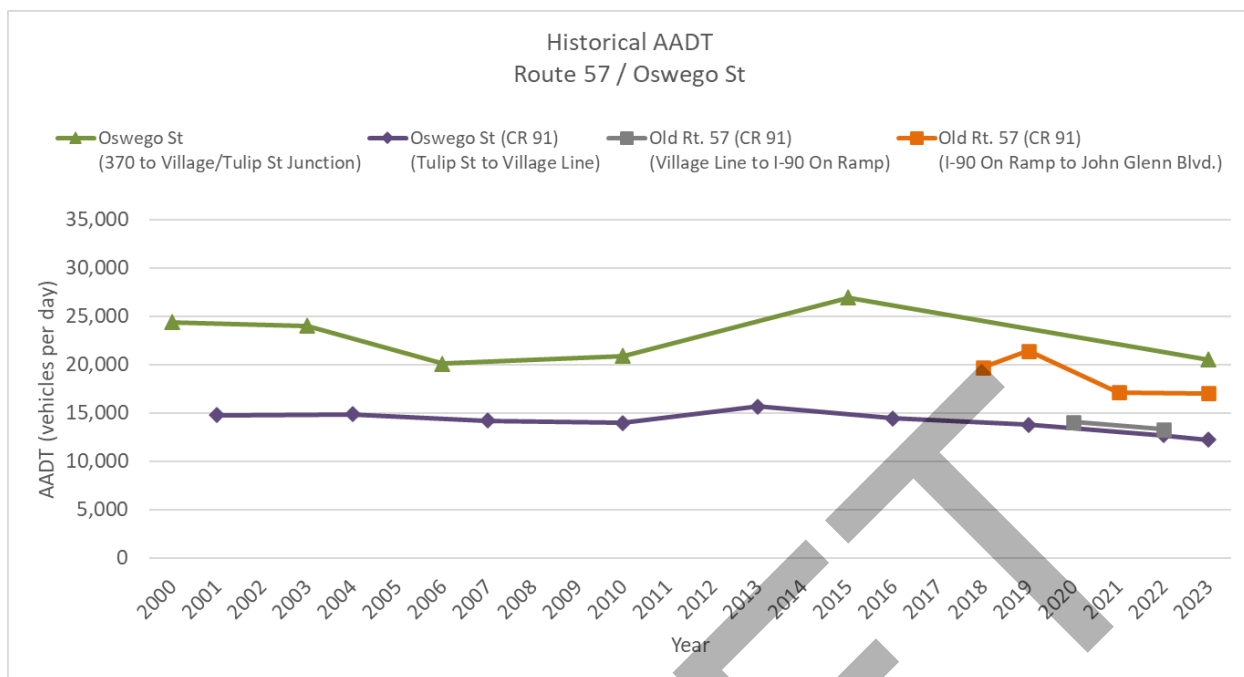
Heavy vehicle AADT

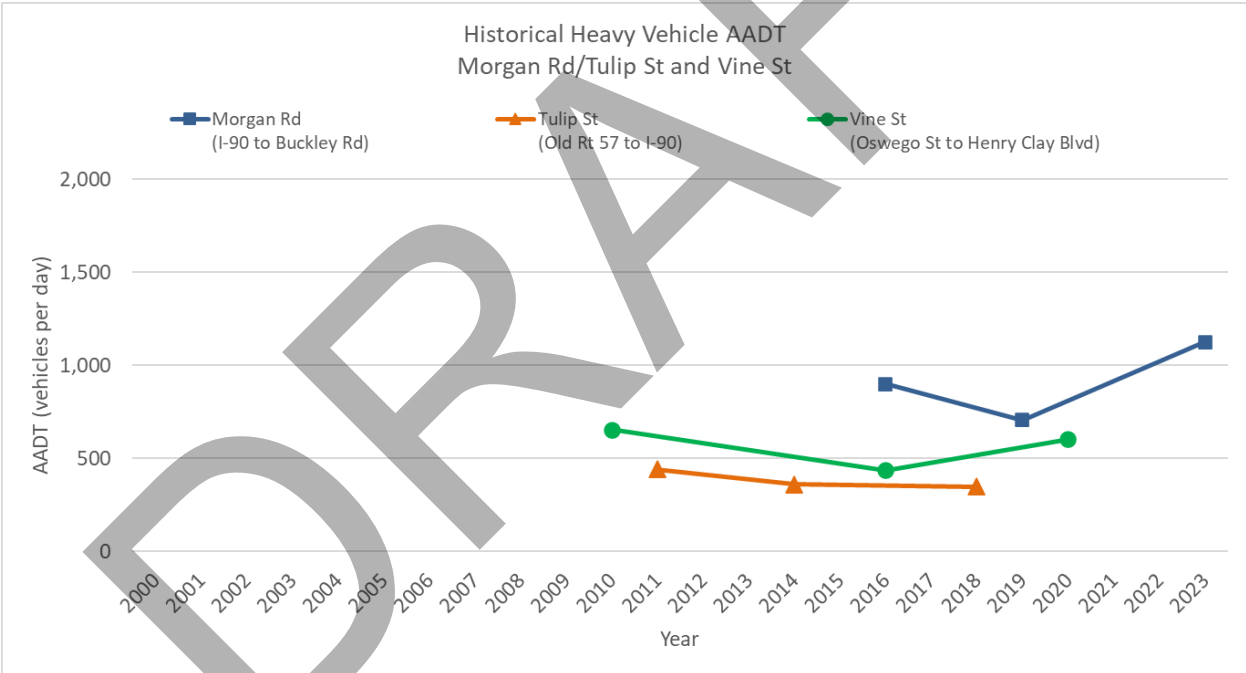
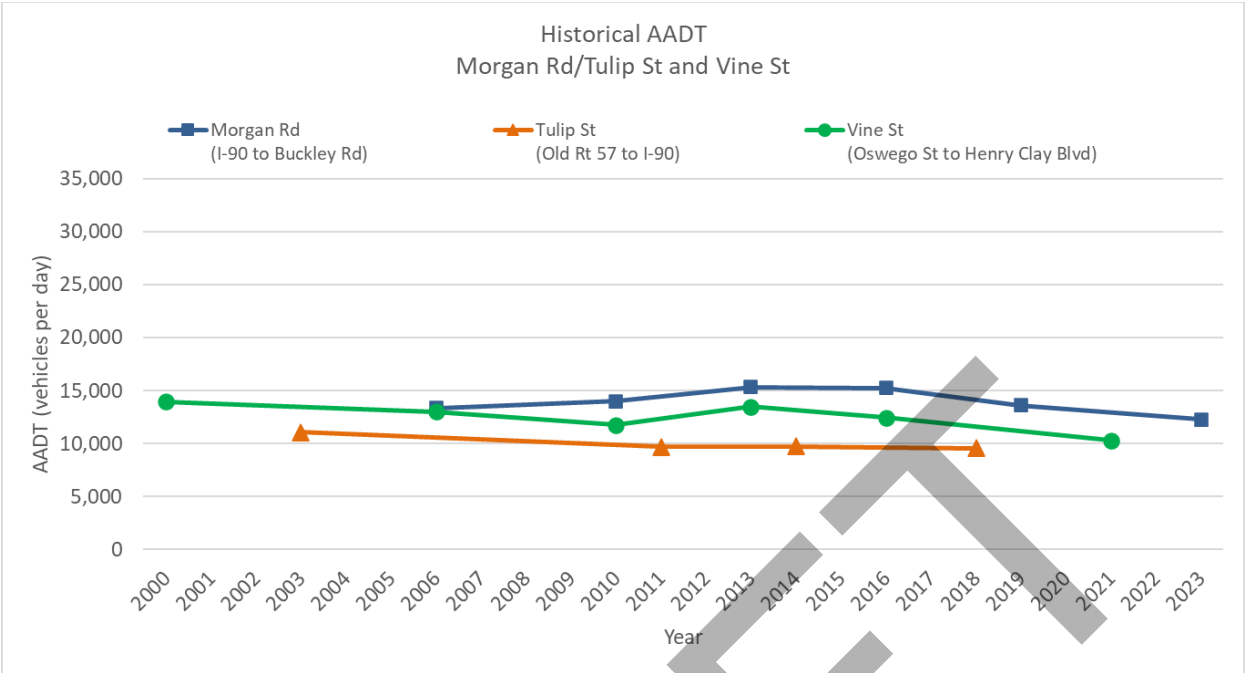
Historical heavy vehicle data were also examined. For most of the study area segments, the heavy vehicle trend follows the overall AADT trend, generally holding steady or with slight declines. However, there are a few segments that are notable for not following this trend:

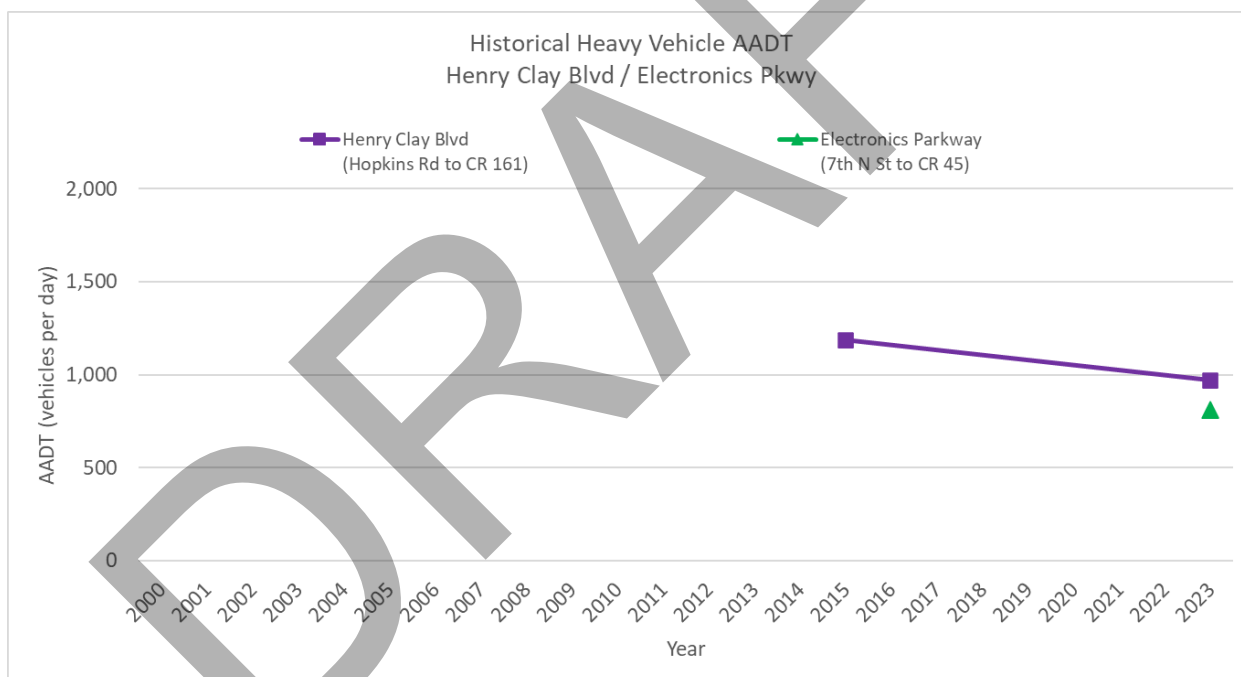
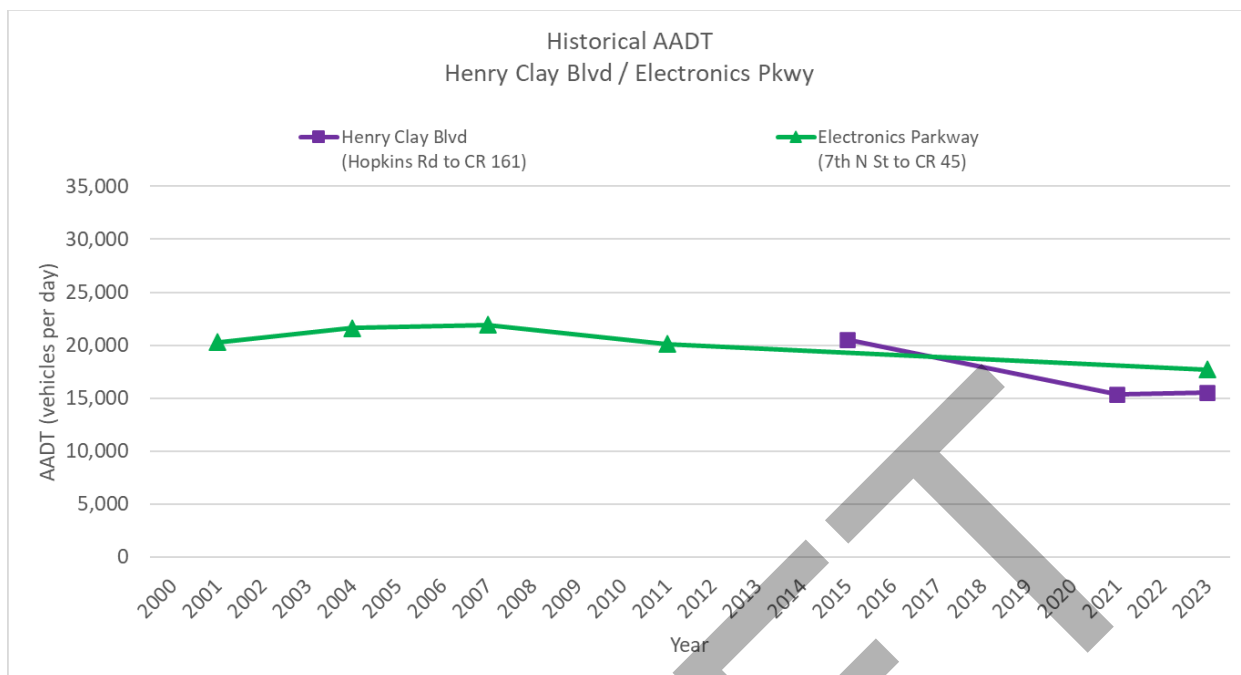
- Route 57 between I-90 and John Glenn Boulevard: heavy vehicles increased from 468 per day to 1,215 per day between 2021 and 2023, an increase of well over 200 percent in just two years.
- Morgan Road between I-90 and Buckley Road: heavy vehicles increased from 707 per day to 1,126 per day between 2019 and 2023, an increase of about 12 percent per year.
- Liverpool Bypass: heavy vehicles increased from 319 per day to 969 per day between 2020 and 2022, an increase of about 200 percent in two years.

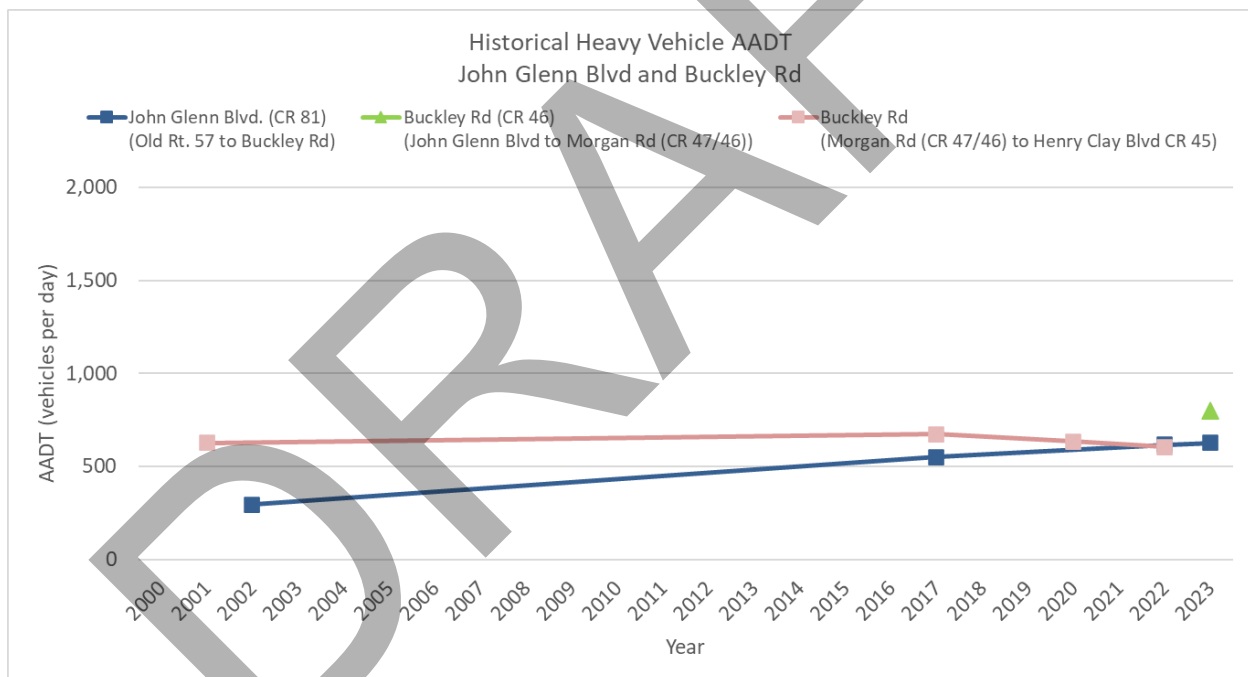
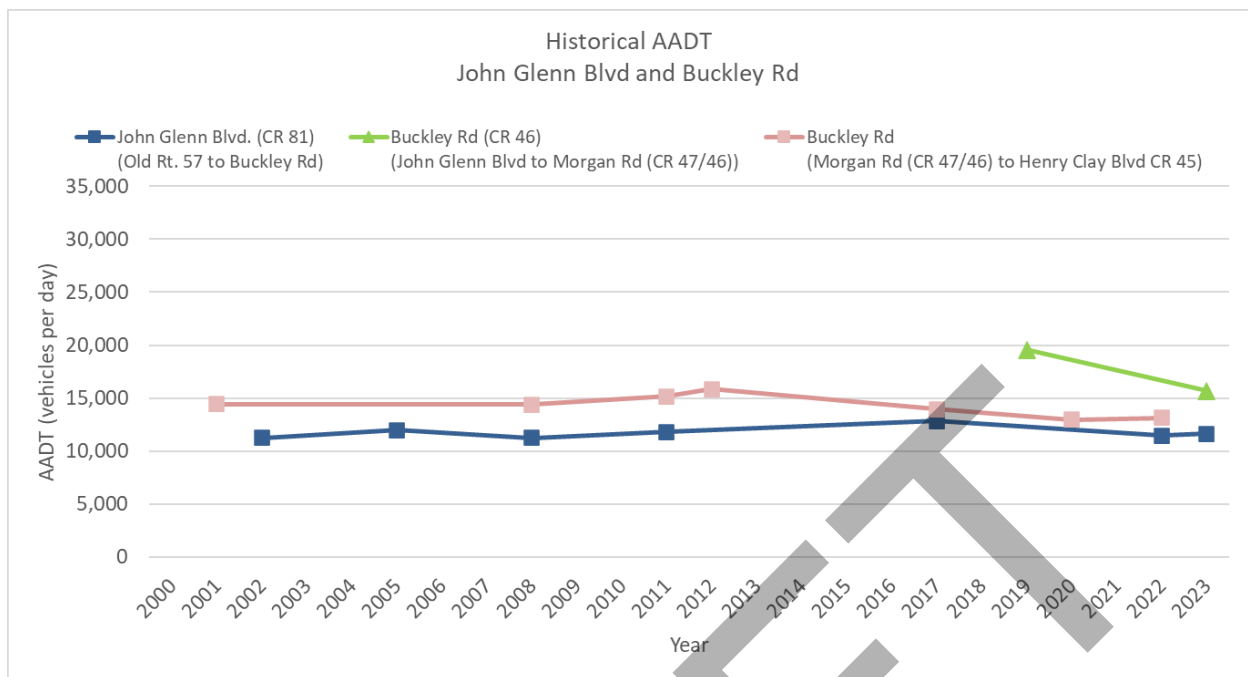
This aligns with the findings that the intersections along the southern part of Morgan Road and Route 57 currently experience much higher heavy vehicle percentages than other intersections in the study area. Since heavy vehicles are so noticeable within the traffic stream – they occupy more physical space and are slower to start moving than typical passenger vehicles – it is understandable that the impacts of more heavy vehicles, even if confined to a relatively small area, are felt in outsize proportion by the traveling public.

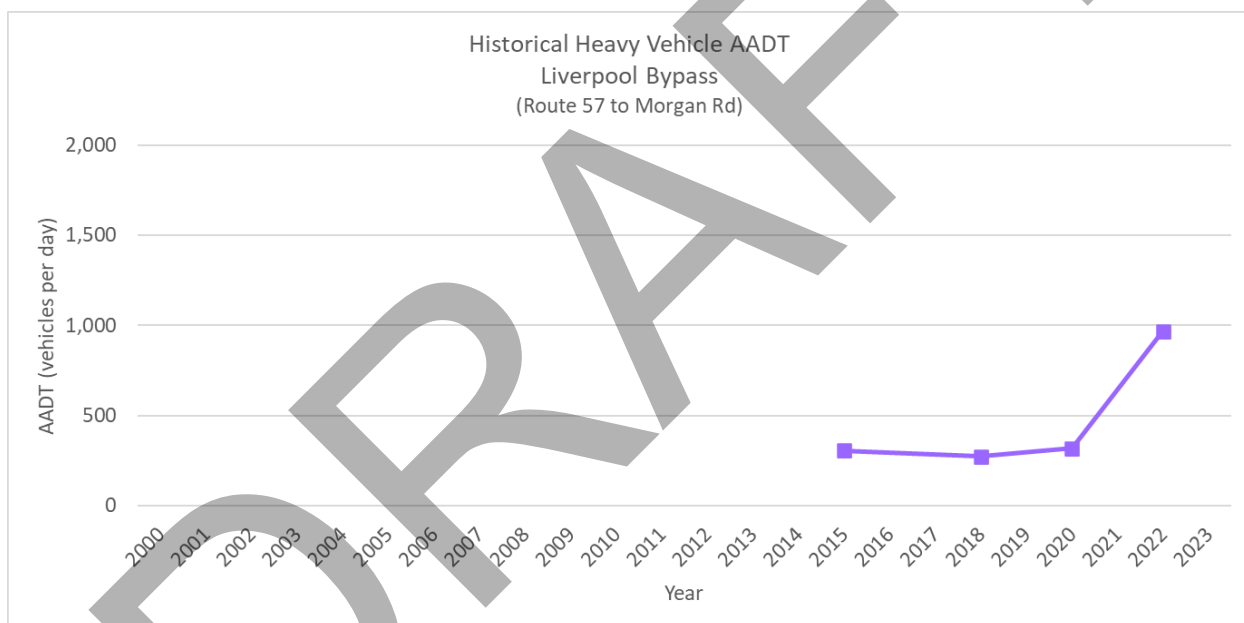
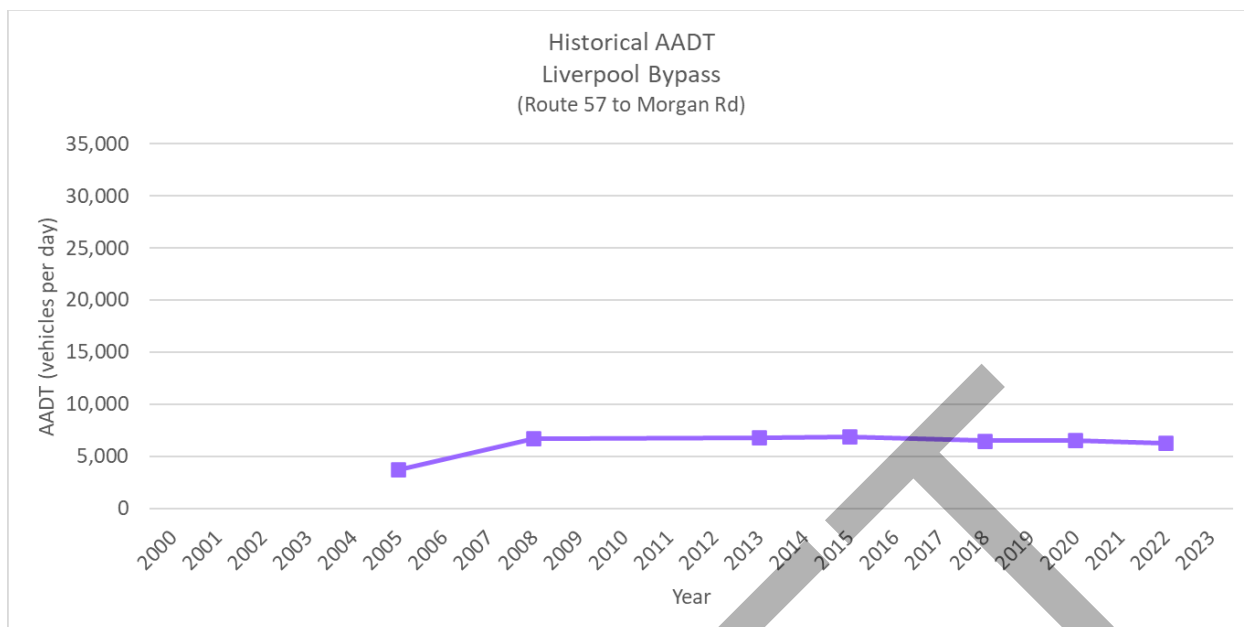
The following figures summarize the historical AADT data – overall and heavy vehicles – on road segments in the study area.

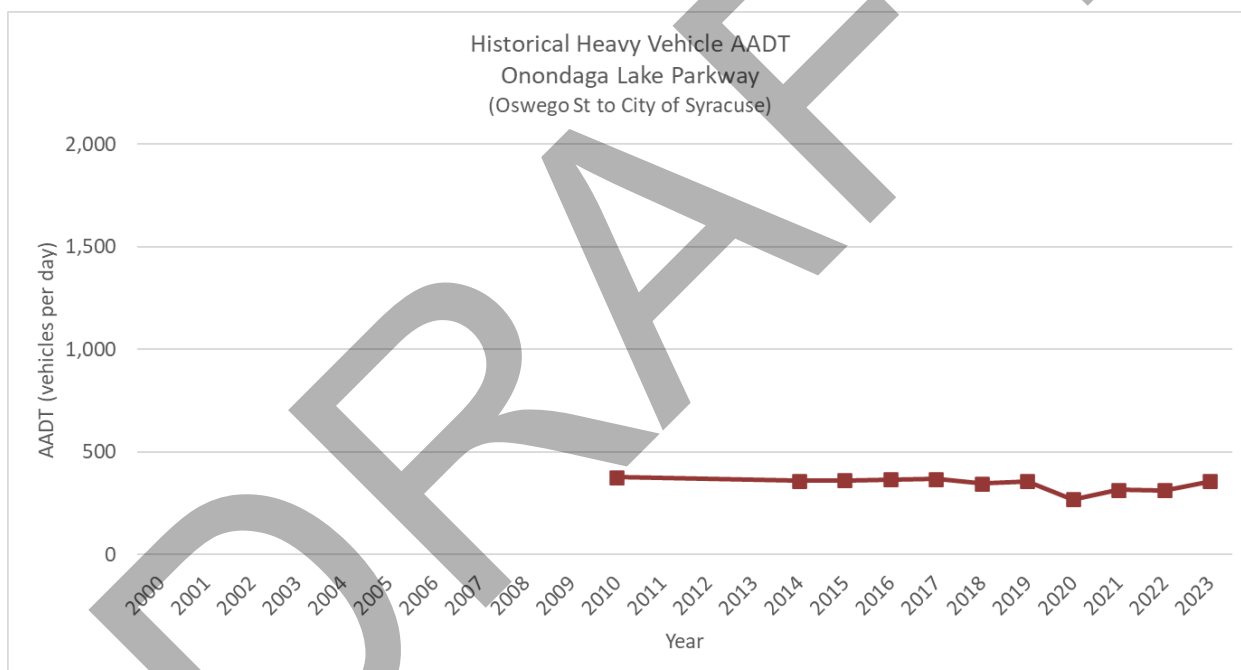
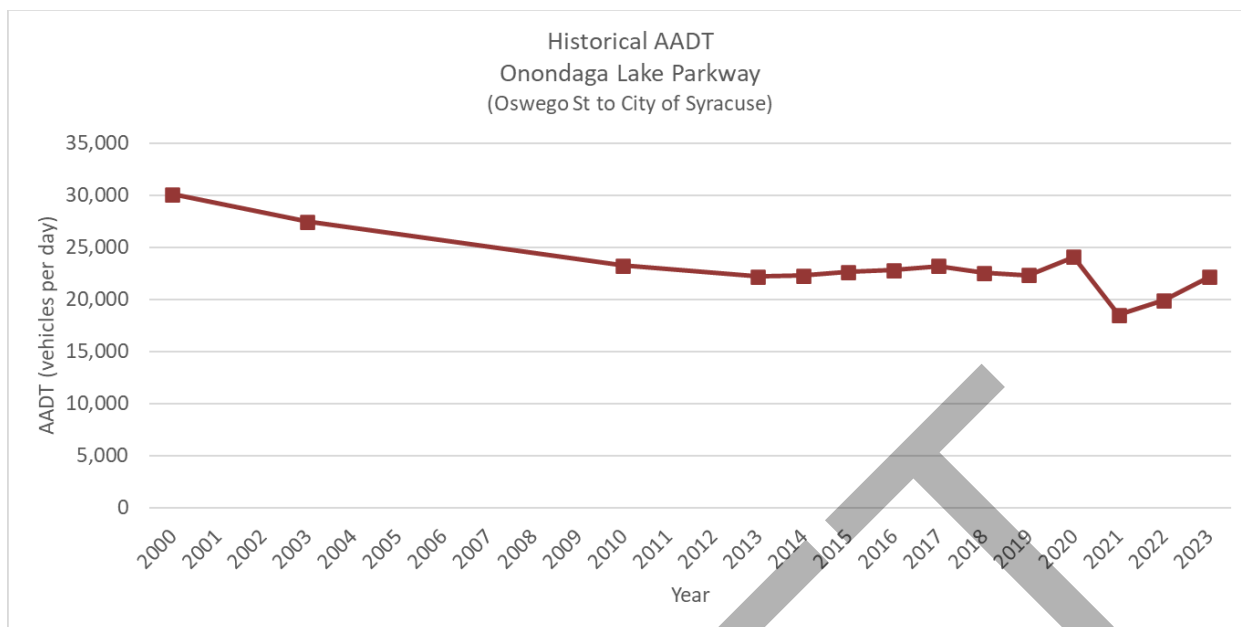












Capacity analysis

SMTC staff assessed current operating conditions at the study area intersections using Synchro analysis software. The capacity analysis was conducted for the current PM peak hour conditions using the Miovision volume data from September and October 2024, Tuesday through Thursday daily average, or the 2024 manual turning movement count data for locations without Miovision cameras. Signal timing information was obtained from various sources including some Synchro files provided by OCDOT plus previous files created by SMTC staff for previous studies (2018 Route 57 build-out impact analysis, 2019 Congestion Management process) and/or consultants for the Onondaga County Traffic Signal Optimization Projects, Phases 1-3 (completed in 2010, 2012, and 2014).

Level of service and average vehicle delay results are summarized in Table 3.

SMTC staff utilized the “optimize splits” feature in Synchro to determine if any improvement to LOS could be realized under the current cycle length. Additionally, SMTC examined a scenario with a Synchro-optimized cycle length, plus another scenario using the cycle lengths previously recommended by the Signal Optimization Projects. For most of the intersections, the current cycle length showed the best overall operations (i.e. overall lowest average delay), so no additional “optimized cycle length” results are shown. If one of the alternative cycle length options showed improved operations, that cycle length and the resulting LOS and delay are shown in the summary table.

Overall, intersections in the study area operate very well during the PM peak hour. Only three County-owned intersections currently operate at overall LOS D: Route 57/John Glenn Blvd, Morgan Rd/Buckley Rd, and Henry Clay Blvd/Vine St. There are also some individual movements at these three intersections that currently operate at LOS E or F (mostly left-turn movements). All other intersections in the study area currently operate at an overall LOS C or better (with many at overall LOS A or B).

The Signal Optimization project previously recommended a 110 second cycle length for the three coordinated Route 57 intersections at John Glenn Boulevard, Longbranch Rd, and Glenn Crossing Plaza. The current analysis shows a slight improvement in operations at these intersections by moving from the current 130 second (65 second at the plaza) cycle length to a consistent 110 second cycle. Two other intersections – Route 57/Liverpool bypass and Henry Clay Blvd/Vine St – also show slight improvements with cycle length adjustment recommended by the Signal Optimization project. Similarly minor decreases in overall delay were shown by the Synchro-optimized cycle length at five other intersections, as shown in Table 3.

Table 3: Level of Service and delay at study area intersections, PM peak hour

	Intersection	Approach	Movement	Existing	Optimized splits	Opt cycle length ⁴
1	CR 57/ John Glenn Blvd	Eastbound	Left	F(85)	F(85)	E(75)
			Through/right	D(49)	D(49)	D(47)
		Westbound	Left	E(71)	E(70)	E(61)
			Through/right	E(57)	E(57)	E(60)
		Northbound	Left	F(90)	F(87)	F(82)
			Through	C(34)	C(34)	C(22)
			Right	A(10)	A(9)	A(6)
		Southbound	Left	E(68)	E(68)	E(65)
			Through	D(45)	D(44)	D(38)
			Right	C(23)	C(23)	B(19)
		OVERALL		D(49)	D(49)	D(43)
		Cycle length		130	130	110
2	CR 57/ Longbranch Rd/ Belmont Dr	Eastbound	Left	D(49)	D(45)	D(39)
			Through/right	B(17)	B(15)	B(12)
		Westbound	Left	C(32)	C(31)	C(26)
			Through/right	D(48)	D(51)	D(38)
		Northbound	Left	E(75)	E(70)	E(63)
			Through/right	C(32)	C(30)	C(28)
		Southbound	Left	E(74)	E(74)	E(64)
			Through	B(16)	B(18)	B(16)
			Right	A(0)	A(0)	A(0)
		OVERALL		C(34)	C(32)	C(29)
		Cycle length		130	130	110
3	CR 57/ Glenn Crossing Plaza	Eastbound	Left/through	D(37)	D(36)	E(69)
			Right	A(5)	A(5)	A(9)
		Westbound	Left/through/right	B(14)	B(14)	C(23)
		Northbound	Left	A(4)	A(4)	A(4)
			Through/right	A(5)	A(5)	A(4)
		Southbound	Left/through/right	B(10)	A(7)	A(2)
		OVERALL		A(8)	A(7)	A(7)
		Cycle length		65	65	110

⁴ Where an alternative cycle length is shown, that cycle length was previously recommended by the Signal Optimization studies, except where noted by an asterisk. The asterisk denotes that the current Synchro-optimized cycle length is shown because the current analysis indicated improved operations with that cycle length as compared to the previous Signal Optimization study recommendation. Where no alternative cycle length results are shown, it is because the analysis indicated that the current cycle length is optimal.

	Intersection	Approach	Movement	Existing	Optimized splits	Opt cycle length ⁴
4	CR 57/ Liverpool Bypass	Eastbound	Left/through/right	C(22)	C(22)	B(15)
		Westbound	Left/through	D(41)	D(41)	C(29)
			Right	B(19)	B(19)	B(12)
		Northbound	Left	B(13)	B(13)	B(13)
			Through/right	B(16)	B(16)	B(18)
		Southbound	Left	A(8)	A(8)	A(7)
			Through/right	A(5)	A(5)	A(5)
		OVERALL		B(14)	B(14)	B(14)
		Cycle length		95	95	60
5	CR 57/ Thruway exit 38	Eastbound	Left	C(32)	C(34)	C(21)
			Right	A(0)	A(0)	A(0)
		Northbound	Left	A(5)	A(5)	A(5)
			Through	A(6)	A(5)	A(6)
		Southbound	Through	B(13)	B(12)	B(15)
			Right	A(0)	A(0)	A(0)
		OVERALL		B(14)	B(14)	B(12)
		Cycle length		90	90	60*
6	John Glenn Blvd/ Buckley Rd/ Blueberry Rd	Eastbound	Through	D(50)	D(49)	---
			Right	C(21)	C(21)	---
		Westbound	Left	B(17)	A(3)	---
			Through	A(2)	A(1)	---
		Northbound	Left	D(47)	D(47)	---
			Right	A(5)	A(5)	---
		OVERALL		B(15)	A(10)	---
		Cycle length		90	90	---
7	Morgan Rd/ Buckley Rd	Eastbound	Left	E(67)	E(58)	---
			Through/right	C(33)	B(19)	---
		Westbound	Left	D(48)	D(50)	---
			Through/right	F(82)	D(50)	---
		Northbound	Left	D(45)	E(60)	---
			Through/right	C(29)	D(36)	---
		Southbound	Left	E(68)	E(68)	---
			Through	C(32)	C(33)	---
			Right	A(3)	A(7)	---
		OVERALL		D(46)	D(39)	---
		Cycle length		90	90	---

	Intersection	Approach	Movement	Existing	Optimized splits	Opt cycle length ⁴
8	Morgan Rd/ Grampian Rd/ Steelway Blvd N	Eastbound	Left	C(26)	C(25)	---
			Through/right	A(10)	A(10)	---
		Westbound	Left/through/right	B(16)	B(16)	---
		Northbound	Left	A(4)	A(4)	---
			Through/right	A(4)	A(4)	---
		Southbound	Left	A(4)	A(4)	---
			Through	A(3)	A(3)	---
		OVERALL		A(6)	A(6)	---
		Cycle length		76	76	---
9	Morgan Rd/ Amazon Warehouse (north)	Eastbound	Left/through	B(14)	B(14)	---
			Right	A(3)	A(3)	---
		Westbound	Left/through/right	B(14)	B(14)	---
		Northbound	Left	A(4)	A(4)	---
			Through/right	A(3)	A(3)	---
		Southbound	Left	*	*	---
			Through/right	A(3)	A(3)	---
		OVERALL		A(3)	A(3)	---
		Cycle length		60	60	---
10	Morgan Rd/ Amazon Warehouse (south)	Eastbound	Left/through	B(11)	B(11)	---
			Right	A(4)	A(4)	---
		Westbound	Left/through	B(13)	B(13)	---
			Right	A(5)	A(5)	---
		Northbound	Left	A(6)	A(6)	---
			Through/right	A(6)	A(6)	---
		Southbound	Left	*	*	---
			Through/right	A(6)	A(6)	---
		OVERALL		A(6)	A(6)	---
		Cycle length		60	60	---
11	Morgan Rd/Liverpool Bypass/ Crown Rd	Eastbound	Left/through	C(33)	C(33)	C(21)
			Right	B(14)	B(14)	B(11)
		Westbound	Left/through/right	C(21)	C(21)	B(16)
		Northbound	Left	A(7)	A(6)	A(8)
			Through/right	A(4)	A(5)	A(6)
		Southbound	Left	B(12)	A(4)	A(4)
			Through/right	B(16)	B(16)	B(12)
		OVERALL		B(11)	B(12)	A(10)
		Cycle length		105	105	60*
12	Vine St / Continuum Dr	Eastbound	Left/right	B(13)	B(14)	B(17)
		Northbound	Through/right	A(8)	A(8)	A(7)
		Southbound	Left/through	B(12)	B(11)	A(9)
		OVERALL		B(10)	A(10)	A(9)
		Cycle length		40	40	45*

	Intersection	Approach	Movement	Existing	Optimized splits	Opt cycle length ⁴
13	Vine St / Commerce Blvd	Westbound	Left/right	E(77)	D(50)	---
		Northbound	Left/through	A(8)	B(12)	---
		Southbound	Through/right	C(24)	C(34)	---
		OVERALL		C(35)	C(34)	---
		Cycle length		90	90	---
14	Henry Clay Blvd/ Buckley Rd	Eastbound	Left	D(38)	D(40)	D(41)
			Through	C(24)	C(24)	C(22)
			Right	A(3)	A(3)	A(3)
		Westbound	Left	D(38)	D(38)	C(32)
			Through/right	C(33)	C(32)	C(34)
		Northbound	Left	D(38)	D(37)	C(32)
			Through/right	C(32)	C(32)	C(21)
		Southbound	Left	D(39)	D(39)	D(40)
			Through/right	C(30)	C(31)	C(23)
		OVERALL		C(30)	C(30)	C(26)
15	Henry Clay Blvd/ Vine St	Eastbound	Left	D(52)	D(52)	D(43)
			Through	D(54)	D(54)	D(47)
			Right	A(1)	A(1)	A(1)
		Westbound	Left	D(45)	D(45)	D(50)
			Through	C(27)	C(27)	C(24)
		Northbound	Left	E(55)	D(53)	E(58)
			Through	D(41)	D(43)	D(37)
			Right	A(7)	A(7)	A(6)
		Southbound	Left	E(56)	D(54)	D(54)
			Through/right	C(33)	C(34)	C(28)
16	Henry Clay Blvd/ Metropolitan Park Dr	OVERALL		D(37)	D(37)	C(34)
		Cycle length		100	100	80
		Westbound	Left/right	B(11)	B(10)	B(11)
		Northbound	Through/right	B(16)	B(12)	B(12)
		Southbound	Left/through	A(10)	B(12)	B(11)
17	Henry Clay Blvd/ Electronics Pkwy/ Hopkins Rd	OVERALL		B(13)	B(12)	B(12)
		Cycle length		35	35	40*
		Eastbound	Left/through/right	*	*	---
		Westbound	Left	C(31)	C(31)	---
			Through/right	B(11)	A(9)	---
		Northbound	Left	*	*	---
			Through/right	C(26)	A(8)	---
		Southbound	Left	D(38)	C(33)	---
			Through/right	A(7)	A(3)	---
		OVERALL		B(19)	A(8)	---
		Cycle length		70	70	---

	Intersection	Approach	Movement	Existing	Optimized splits	Opt cycle length ⁴
18	Electronics Pkwy/ Continuum Dr/ Limestone Dr	Eastbound	Left	C(31)	C(32)	---
			Through/right	B(14)	B(13)	---
		Westbound	Left	C(34)	C(34)	---
			Through/right	A(0)	A(0)	---
		Northbound	Left	D(44)	D(40)	---
			Through/right	A(5)	A(4)	---
		Southbound	Left	C(26)	C(32)	---
			Through/right	C(18)	A(8)	---
		OVERALL		B(14)	A(9)	---
		Cycle length		70	70	---
19	Electronic Pkwy/ Transistor Pkwy	Eastbound	Left/right	C(23)	C(23)	---
		Northbound	Left	D(46)	D(36)	---
			Through	A(1)	A(1)	---
		Southbound	Through/right	A(6)	A(8)	---
		OVERALL		A(5)	A(6)	---
		Cycle length		70	70	---

Summary of findings

SMTC analyzed current and historical traffic volume data for the study area intersections, including 18 locations with County-owned traffic signals. Most of the study area intersections have Miovision cameras, from which current traffic volume data was obtained. Staff also examined current and historical AADT data and heavy vehicle data in the study area. Overall, the intersections in the study area experienced an average decline in traffic (PM peak and daily) of about 2 percent per year over the past 5 to fourteen years and segment-based historical traffic volume data is generally holding steady even with additional development in the study area. The highest heavy vehicle movements (and the most substantial recent increases in heavy vehicle percentages) appear to be confined to Route 57 between the Thruway and Liverpool Bypass, the bypass itself, and Morgan Road between the bypass and the Amazon driveways.

Intersections in the study area are generally operating very well during the PM peak hour. Only three County-owned intersections currently operate at overall LOS D: Route 57/John Glenn Blvd, Morgan Rd/Buckley Rd, and Henry Clay Blvd/Vine St. There are also some individual movements at these three intersections that currently operate at LOS E or F (mostly left-turn movements). All other County-owned intersections in the study area currently operate at an overall LOS C or better (with many at overall LOS A or B). SMTC staff also analyzed scenarios with modified cycle lengths – both recommended from the previous Signal Optimization Projects and using Synchro optimization tools – and found little to no improvement in operations at most of the intersections. Where improvements were observed, the anticipated decreases in delay were relatively minor.