Virginia School Zone Traffic Safety Field Observational Study 2026



When Kids Cross, Who Stops?

The first close look at driver behavior and pedestrian safety in Virgina school zones

Data collection
June 2026

Version
1.0

Prepared
July 2026

Study brought to you by:

Obvio

NoVA Families for Safe Streets

Virginia Municipal League

Produced by Obvio and Northern Virginia Families for Safe Streets in partnership with the Virginia Municipal League, traffic safety experts, advocates, and policymakers united against reckless driving

Table of contents

School zones are more dangerous than parents think — and the data proves it 1

Virginia school zone traffic safety study introduction 2

Study design and methodology 3

Why this study? Why now? 4

What the data tells us 5

Together we can fix this 6

Building a coalition to take action 7

Conclusion 8

About Obvio 9

Virginia school zone traffic safety study: Full data set & observations 10

- Section 1: Combined Crosswalk and Stop Sign Data 10
- Section 2: Stop Sign Violations 11
- Section 3: Crosswalk Violations 14

Appendix A: Data dictionary 16

Appendix B: Complete municipality table 17

Appendix C: Complete school / institution table 18

Appendix D: Complete site-level dataset 22

Appendix E: Full Methodology 33

School zones are more dangerous than parents think — and the data proves it

This study, the most comprehensive of its kind in Virginia, shines a light on driver behaviors that make the walk to and from school unsafe, and contribute to the growing number of pedestrian injuries and deaths statewide.

We focused on two of the most common and overlooked dangers: drivers running stop signs and failing to yield to pedestrians in crosswalks. Stop signs and crosswalks govern far more of the streets where people actually walk, and carry far more of the risk to pedestrians. Yet the majority of enforcement and study, historically, has focused on highways, speeding, and red lights.

This report details our findings, quantifies the problem, and shows why Virginia is better positioned than ever before to curb dangerous driving and save lives.

We hope this data prompts urgent action from residents, community leaders and officials, and helps inform solutions that make streets safer for every Virginian.



Virginia school zone traffic safety study introduction

Over a 30 day period we counted and analyzed stop and yield violations at 155 intersections and crosswalks in 20 Virginia municipalities for 30 minutes at a time during school hours.

What we found was a statewide pattern of driver disregard for kids in crosswalks and at stop sign intersections.

More than 5,300 drivers decided not to stop at a stop sign. And on day 1 our researchers witnessed a crosswalk collision involving a child minutes after leaving school.

76%
of drivers ran a stop sign

47
crosswalk violations at
1 intersection in 24 minutes

462/hr
peak violations observed,
1 every 8 seconds

Below are representative examples of dangerous driving frequency observed in individual school zones statewide during our 30 minute windows:

TOP 3 SCHOOLS BY VIOLATION RATE WITH > 100 VEHICLES

Alexandria: Lyles-Crouch Traditional Academy

206	258	84%
Violations	Vehicles	Violation rate

Charlottesville: Trailblazer Elementary School (formerly Venable)

123	160	76%
Violations	Vehicles	Violation rate

Falls Church: Oak Street Elementary School

159	241	75%
Violations	Vehicles	Violation rate

TOP 3 SCHOOLS BY TOTAL VIOLATIONS > 100 VEHICLES

Virginia Beach: W.T. Cooke Elementary School

288	447	66%
Violations	Vehicles	Violation rate

Manassas: Round Elementary School

245	444	62%
Violations	Vehicles	Violation rate

Alexandria: Lyles-Crouch Traditional Academy

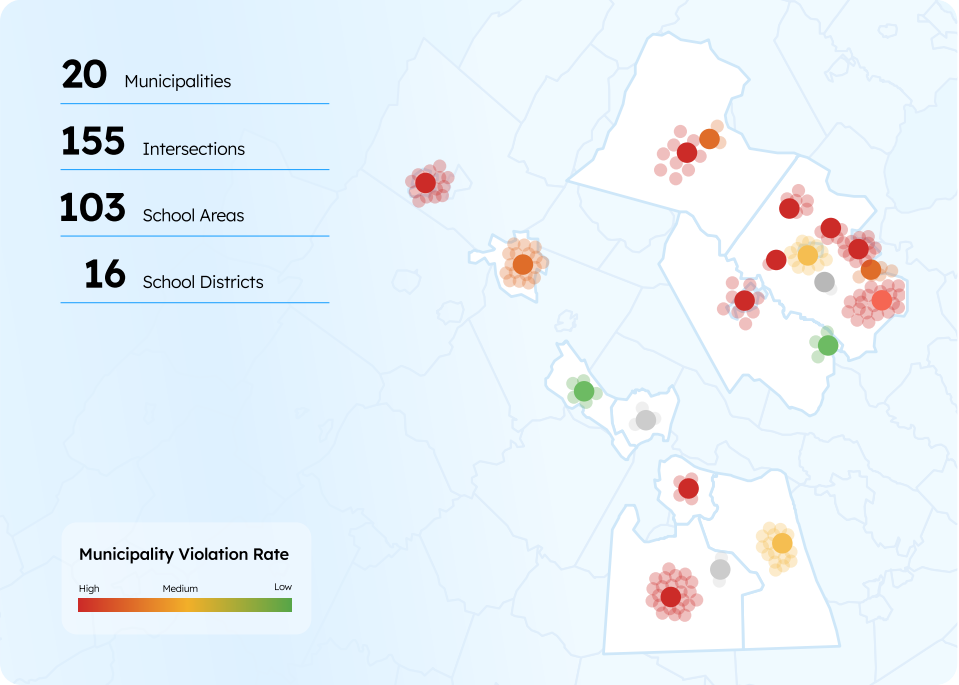
206	258	84%
Violations	Vehicles	Violation rate

Study design and methodology

We selected a diverse set of sites across Virginia: urban, suburban, and rural, with sufficient traffic volume and including locations where the community had flagged safety concerns. The list below shows the municipalities we visited. The map identifies the specific locations. For an interactive map go to: www.obvio.ai/virginia/trafficstudy

List of municipalities

Alexandria	Hampton
Arlington	Leesburg
Ashburn	Manassas
Burke	Newport News
Chantilly	Norfolk
Charlottesville	Reston
Chesapeake	Richmond
Fairfax	Vienna
Falls Church	Virginia Beach
Greenbriar	Woodbridge



Objectives

To measure how consistently drivers came to a complete stop at stop signs and yielded to pedestrians at crosswalks in Virginia school zones, and to characterize the geographic distribution of driver behavior. The purpose of this data collection was not to identify individual drivers for enforcement, but to develop a broader understanding of driving culture and compliance patterns.

Instrumentation

We recorded ~30 minutes of video at each location and our annotation team analyzed whether drivers complied with stop signs and crosswalks where pedestrians were present.

Methods

In June 2026, observations took place at 155 intersections, across 20 Virginia municipalities during 20 to 30 minute school start and dismissal periods when vehicle and pedestrian activity was highest. Researchers documented the behavior of more than 31,000 vehicles and roughly 3,000 pedestrians and cyclists. Vehicles, pedestrians, cyclists, yields, and stop sign violations were annotated per approach against pre-registered operational definitions and a three-level severity rubric, with a >98% quality-assurance sampling standard. Stop-sign compliance was analyzed on the approach facing each sign. (See Appendix, Table 2.1 for severity definitions.)

Why this study? Why now?

Pedestrian safety has become a defining problem of the current traffic-safety era. In 2025, Virginia pedestrian deaths rose 10%, even as the national rate fell nearly 11%, putting Virginia among the minority of states moving in the wrong direction while most of the country improved.

Drivers blow through stop signs and crosswalks because these spots rarely carry a consequence. Enforcement is challenging and inconsistent, limited by funding and staffing, and that absence can be interpreted as a signal that dangerous driving is tolerated.

Behavior at these unmonitored controls has never been measured at scale in Virginia school zones. This study closes that gap.

Pedestrian deaths rose by:

10%

in Virginia in 2025

National rate fell by:

~11%

yet Virginia's situation worsened

Policy context: Virginia's new pedestrian safety law

Effective July 1, 2026, Virginia's new Virginia Pedestrian Safety Law (SB84) makes it one of the first states to permit automated enforcement at stop signs and crosswalks in and around school zones. It sets clear requirements for signage, transparency, privacy, and how revenue is used. And it gives communities a practical tool aimed squarely at the behavior this study measured. Our findings, in turn, can directly inform how that law is put into practice.

> "Every one of these numbers is a driver who chose not to stop, where our kids walk to school. A driver hit me in a crosswalk, and it changed my family's life forever. It's happening all across Virginia, and we owe it to every kid to make our streets safer."



Mike Doyle
Founder and Executive Director of Northern Virginia Families for Safe Streets (NoVA FSS)



What the data tells us

Failure to stop is the norm, not the exception: This isn't a story about a few reckless drivers at a few bad intersections. Across 155 intersections and more than 31,000 vehicles, we recorded 5,812 violations, and every one of the 20 municipalities in the study had stop sign violations on camera. The same patterns appear in wealthy suburbs and small cities, from Northern Virginia to Hampton Roads, on quiet residential streets and outside elementary schools. That pattern points to a systemic problem, not a few problem intersections: without any expectation of enforcement, stopping and yielding have become optional. School zones were no exception. This matches what Obvio has found in similar studies nationwide, from Colorado to Maryland: failure to obey traffic laws is a systemic behavior problem.

76% of drivers approaching a stop sign did not come to a complete stop. While many people view this as a minor infraction, it is illegal and can be deadly, especially in areas with high pedestrian and bicyclist activity, where the consequences of noncompliance are most severe. Across all qualifying stop-sign sites in the primary direction, the median site violation rate was 78.3% and the average was 75.7%. At nearly 6 in 10 sites, more than three-quarters of drivers failed to stop. Most violations were rolling stops, but 340 vehicles passed a school zone stop sign at full speed.

Some intersections are even more dangerous than the averages suggest. Study-wide rates already signal a serious problem, but still understate the risk at the worst locations. At twenty-three intersections, every single driver failed to stop at the stop sign. At the busiest site, the observed rate works out to a violation every eight seconds, and at W.T. Cooke Elementary in Virginia Beach, we recorded 288 violations across just two intersections.

For pedestrians, the danger is relentless, not occasional: Failures to yield came in waves, not one-offs. Across 103 crosswalk sites, we logged 515 failures to yield, and roughly one in three was an active cut-off of a pedestrian already in the roadway. At one intersection, every pedestrian crossing over a 30-minute period was ignored by at least one driver, and in one case a single person navigated their crossing as six vehicles in a row rolled through or swerved around them. Group size made no difference: a lone walker and five people holding hands faced the same risk. Study-wide, the aggregate crosswalk failure-to-yield rate was 71%.

✳ **The complete raw dataset,** including all recorded violations and observation details, starts on page 10. We encourage you to use the data to support research, policy decisions, and safer streets.

Together we can fix this

There is significant evidence that consistent enforcement of traffic laws, with timely and meaningful consequences, changes driver behavior and saves lives.

And the positive impact of automated traffic enforcement programs is clear. After passing similar legislation, Maryland implemented stop sign programs in weeks and measured a significant drop in dangerous driving in a matter of months. Obvio is proud of the role we've played in that outcome as a leading partner for stop sign enforcement in Maryland.

70% ↓

reduction in unsafe behaviors within 4 months



"Our impact goes well beyond the double-digit violation reduction we've already achieved, which we wouldn't match even if I put a cop at every stop sign. It makes preventable bad endings go away - crashes, injuries, even deaths."



Chief Dan Franklin
Chief of Police, Morningside MD

"Initiatives like this usually take years. Maryland's new pedestrian safety programs were running within days, with results that came fast and keep improving. Finally the pace of the solution matches the urgency of the problem."



John Seng
Founder and Chair, SafeRoads MD

"We're seeing that automated pedestrian safety programs change dangerous driving behavior. That makes our roads safer and saves lives."



Wankia Fisher
Prince George's County Councilmember

Building a coalition to take action

We know this is a hard problem. Law enforcement is stretched thin, crossing guards can be expensive and hard to source. We also know that it will take a coalition of stakeholders beyond law enforcement to address this problem in Virginia. Below are a few of the actions key community leaders can take now.

- **City, Town and County Elected Officials:** Request a legislative briefing on Virginia Senate Bill 84 and what an enabling ordinance would look like for your locality.
- **Local Government Administrators and Managers:** Request a no-cost corridor assessment of the intersections creating the most concern in your community.
- **Law Enforcement:** Request a data briefing that walks through this study's methodology and how it could apply to your jurisdiction.
- **Public Works:** Request a technical review to help prioritize a High Injury Network for your streets.
- **VDOT / District Staff:** Request a briefing on how this data can support PSAP corridor prioritization or a SMART SCALE application.
- **School District Elected Officials, Administrators, and Safety Officers:** Request a traffic study at your schools to quantify violation rates.
- **All Stakeholders:** Request a deeper view of the full dataset and methodology behind this report and/or engage Northern Virginia Families for Safe Streets (NoVA FSS) or Obvio to speak at your local council or community event.

Conclusion

This study is evidence that driver non-compliance at stop signs and crosswalks in Virginia school zones is systemic, widespread, and of a magnitude that existing signage, street design, and traditional enforcement methods don't resolve on their own. Jurisdictions that have deployed automated stop sign enforcement demonstrate that the behavior is responsive to it and Virginia now has the legal framework to do the same. It is on us to move from insight to action.

An open invitation

This report reflects a limited but representative sample: one time window per intersection, concentrated in school hours, across a subset of Virginia's communities. It is enough to establish that a serious problem exists and that it is widespread. It's not a substitute for the kind of broader, site-specific measurement a community needs to make infrastructure and enforcement decisions.

Obvio will conduct a deeper, extended study in any Virginia community that wants one, at no cost. A longer observation window, more intersections, and time-of-day coverage beyond school hours can give local officials, law enforcement, and community leaders and traffic safety advocates a far more complete picture of exactly where and when your streets are most dangerous, before any enforcement decision is made.

Request a free traffic study at this link www.obvio.ai/virginia/

Request a deeper, **no-cost study** of stop signs and crossings your community is concerned about.

Review the **full dataset and methodology** behind this report.

Set up a working session with the Obvio team to **build your program.**

Schedule a **legal consultation** with one of our legislative experts to understand the new law and what your community can do next.

Request Obvio **speak at your local council** or community event.



About Obvio

We believe every crash is preventable. Obvio is the community-centered traffic safety platform focused on the simple principle that no death on our roads is acceptable, and none is inevitable.

Our LetsDrive Safer automated traffic enforcement (ATE) programs save lives, advancing Vision Zero by changing reckless driving behavior in weeks, not years. We bring together residents, officials, and law enforcement around a comprehensive program that combines innovative technology, education, transparency, supportive prevention, and fair enforcement.

Our partnerships with communities that have made protecting pedestrians, cyclists, and other vulnerable road users a priority work, reducing dangerous driving by as much as 70% in their first 3 months. We offer the only program built for crosswalk and stop-sign violations, as well as solutions for speed, red light, distracted driving, and more. Learn more at www.obvio.ai.

Acknowledgments

We would like to thank the co-sponsors of this study for their support and tireless dedication to curbing reckless driving and working toward zero pedestrian deaths.

References

1. Virginia General Assembly. Senate Bill 84, 2026 Regular Session. Virginia Legislative Information System.
2. Governors Highway Safety Association. Pedestrian Traffic Fatalities by State: 2024 Full-Year Data (2025) and 2025 Preliminary Data (January–June).
3. Virginia Department of Motor Vehicles. Pedestrian crash and fatality data.
4. City of College Park, Maryland. Automated stop-sign enforcement program reporting.
5. Obvio Research. Virginia School-Zone Stop-Sign & Crosswalk Compliance Study — field dataset, June 2026.

Virginia school zone traffic safety study: Full data set & observations

The sections above summarized what we found and why it matters. What follows is the complete dataset behind this report. Full tables, charts, and site-level detail supporting every finding above, presented for transparency and independent review.

Section 1: Combined Crosswalk and Stop Sign Data

1.1 Sample Description

Table 1: Study Sample and Observational totals

Measure	Value
Unique Intersections Observed	155
Municipalities	20
Counties (includes independent cities)	10
Regions	3 (Northern Virginia, Central Virginia, Hampton Roads)
School Areas	103
School Districts (includes private)	16
Vehicles (all approaches including cross traffic)	31,430
Pedestrians (all approaches)	2,638
Cyclists (all approaches)	339
Stop Sign Violations	5,297
Crosswalk Violations	515
Total Violations	5,812
Hours of Video	58

1.2 Severity distribution

Most stop sign violations, 5,297 total, were rolling stops rather than full-speed “clean runs,” but the tail is material. 340 vehicles passed a school zone stop sign at speed. Among crosswalk violations, 66% were drivers who failed to yield to a pedestrian on the curb, and roughly one in three was a high-severity active cut-off of a pedestrian already in the roadway.

Table 2: Severity distribution, qualifying sites by violation rate band

Control	High	Medium	Low	Grand Total
Crosswalk	168	342	5	515
Stop Sign	340	4,389	568	5,297

Table 2.1: Operational definitions of stop-sign and crosswalk violations Every violation was classified by type and assigned a severity level. Definitions were fixed prior to annotation (Table 2.1).

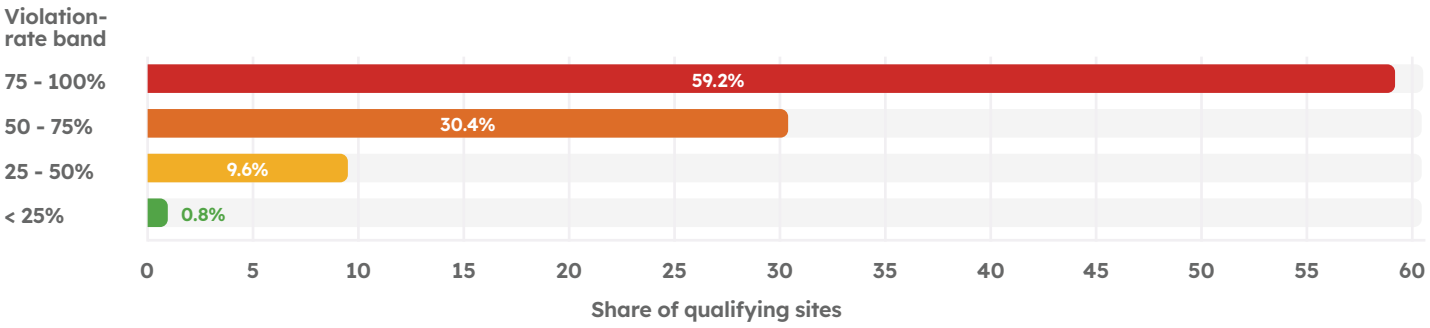
Control	Severity	Definition
Stop sign	High	"Clean run" — vehicle passes the sign at speed with no braking or intent to stop.
Stop sign	Medium	"Rolling stop" — vehicle slows significantly but wheels never fully stop before the line.
Stop sign	Low	"Over the line" — vehicle stops, but past the stop line or blocking the pedestrian path.
Crosswalk	High	Active cut-off — vehicle passes in front of a pedestrian in the crosswalk, forcing them to pause or step back.
Crosswalk	Medium	Failure to yield — pedestrian waits at the curb with clear intent; vehicle passes without stopping.
Crosswalk	Low	Blocking — vehicle comes to rest on the crosswalk markings, forcing pedestrians to divert.

Section 2: Stop Sign Violations

2.1 Overall stop sign compliance

Across qualifying stop-sign sites from all approaches, the median violation rate was **67.9%**, and average was **59.6%**. In the primary observed direction, the median violation rate average was 78.3 and the average was **75.7%**. Therefore at the typical qualifying intersection in the primary direction observed, roughly three in four drivers did not come to a complete stop. The distribution of site rates is not centered on compliance: more than half of qualifying sites exceeded a 75% violation rate (Figure 1)

Figure 1: Distribution of stop-sign violation rates in the primary direction across qualifying sites. Bars show the share of sites in each rate band.



2.2 City by city: Where the risk concentrates

The magnitude of violations varied across municipalities and sites. In three municipalities (Richmond, Fairfax, Virginia Beach), one or two very high volume sites with zero recorded violations pulls their citywide vehicle-weighted average down sharply, well below the median, and makes it look more favorable than the typical intersection actually is.

Table 3: Observation counts by municipality. (all 20), All statistics are across all approaches.

City	Schools Covered	Pedestrians	Vehicles	Stop Sign Violations	Crosswalk Violations
Alexandria	10	481	2,993	870	34
Arlington	3	63	631	88	19
Ashburn	2	10	475	163	0
Burke	1	101	372	11	29
Chantilly	1	6	18	13	0
Charlottesville	6	70	1,611	353	17
Chesapeake	16	98	4,602	407	60
Fairfax	5	128	5,128	370	94
Falls Church	5	164	702	288	19
Greenbriar	1	23	220	92	0
Hampton	4	54	552	61	0
Leesburg	5	198	2,245	153	6
Manassas	5	163	1,293	544	5
Newport News	3	106	924	111	23
Norfolk	4	25	545	28	21
Reston	4	246	715	394	11
Richmond	11	139	2,934	305	52
Vienna	3	25	872	343	0
Virginia Beach	12	516	4,051	526	115
Woodbridge	2	22	547	177	10
Total	**103**	**2,638**	**31,430**	**5,297**	**515**

2.3 Violation Rates

At the highest violation intersection, the measured rate, extrapolated to a full hour, corresponds to a stop sign violation approximately every eight seconds (Table 4)

Table 4: Ten highest stop-sign violation rates extrapolated to a full hourly violation count.

Intersection	Municipality	Vehicles Per Hour (Extrapolated)	SS Violations Per Hour (Extrapolated)	Violation Rate
Liberia Ave & Stonewall Rd	Manassas	704	462	65.7%
Norfolk Ave & Mediterranean Ave	Virginia Beach	634	442	69.7%
Clover Hill Rd & Hastings Dr	Manassas	842	420	49.8%
14 St NW & Gordon Ave	Charlottesville	471	362	76.9%
Taney Ave & N Pegram St	Alexandria	529	331	62.6%
Quarry Rd & Prescott Ave	Manassas	655	320	48.9%
Commonwealth Ave & W Bellefonte Ave	Alexandria	481	314	65.2%
Mediterranean Ave & 18th St	Virginia Beach	507	303	59.8%
North Shore Dr & Village Rd	Reston	517	294	56.9%
Hastings Dr & Lake Jackson Ave	Manassas	449	294	65.4%

2.4 School Zone Spotlight

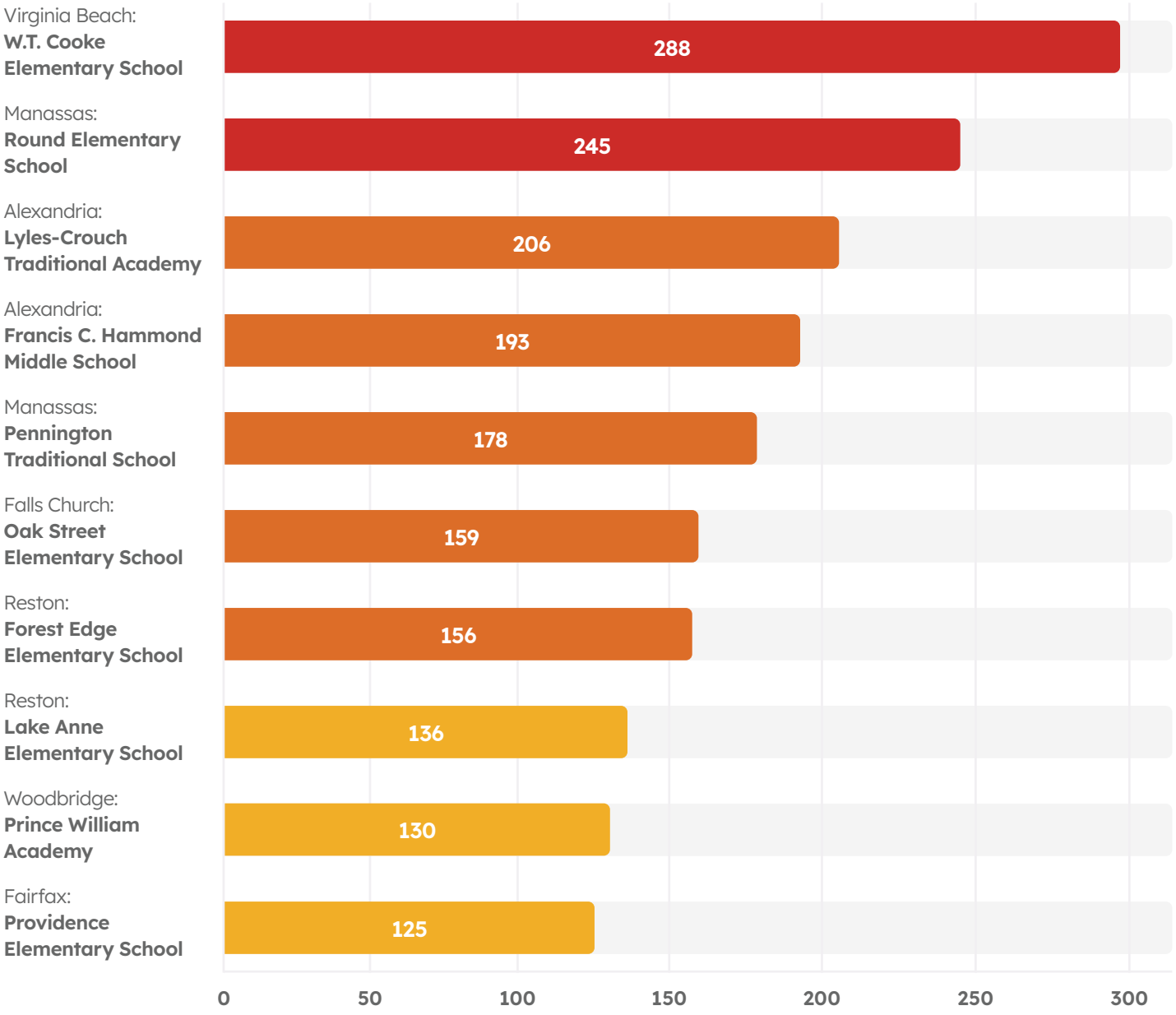
Ranking schools by the total stop-sign violations recorded across their studied intersections identifies the sites of greatest cumulative exposure - the places where the largest raw number of dangerous decisions were made closest to children (Figure 2).

The top two schools by violation count, W.T. Cooke Elementary School in Virginia Beach and Round Elementary School in Manassas had a violation every 20 seconds, with a violation rate of 66.4% and 62.3% respectively.

The Pennington Traditional School in Manassas has the most frequent violation rate captured at a violation every 16 seconds during the study period.

Other schools had higher violation rates, but fewer vehicles captured. There were 9 schools spread across the study that had violation rates of greater than 70%, though there was a wide range of vehicle and violation counts across them. The complete school table is provided as Appendix C.

Figure 2: Total stop sign violations by school, ten highest (across each school's primary studied intersections)



Section 3: Crosswalk Violations By City

3.1 Crosswalks tell a distinct story: a violation here requires a pedestrian and a car in the same place at the same moment, so it's a story about a specific, repeatable danger rather than a blanket rate.

Across 103 crosswalk sites, 724 cars approached a crosswalk when a pedestrian was present, and 515 times the drivers failed to yield. This figure includes where multiple drivers failed to yield to a single pedestrian.

The aggregate failure-to-yield rate was **14.6%**. Roughly one in seven pedestrians crossing met a driver who did not yield. Several met more than one. Failure-to-yield was concentrated in a subset of municipalities (Table 5); five municipalities recorded no crosswalk violations within their observed windows.

Table 5: Crosswalk violation rates by municipality. The Violation Rate was calculated based on the Crosswalk Violations divided by the Crosswalk Violations plus Cars that Yielded.

Municipality	Car to Pedestrian Interactions	Crosswalk Violations	Violation Rate
Norfolk	21	21	100.0%
Richmond	56	52	92.9%
Woodbridge	11	10	90.9%
Chesapeake	71	60	84.5%
Virginia Beach	143	115	80.4%
Fairfax	122	94	77.0%
Newport News	30	23	76.7%
Falls Church	27	19	70.4%
Leesburg	9	6	66.7%
Charlottesville	26	17	65.4%
Burke	47	29	61.7%
Reston	23	11	47.8%
Alexandria	74	34	45.9%
Arlington	45	19	42.2%
Manassas	14	5	35.7%
Ashburn	1	0	0.0%
Hampton	0	0	0.0%
Vienna	4	0	0.0%

One example that stands out

⚠ **Rena B Wright Primary School, Chesapeake**
During the observed time period, there were only **4 pedestrians.** However there were **37 crosswalk violations observed.** This is what school arrival and pickup looks like at an unprotected crosswalk.

The complete site, municipality, and school-level observations underlying the figures in this report are provided in the appendices.

Appendix A: Data dictionary

Table 6: Definitions of fields used in the appendix data tables.

Field	Definition
City / Intersection	Municipality and cross-streets identifying the site.
Nearest school	Closest school or institution to the site.
Type	Control studied: SS (stop sign), CW (crosswalk), SS+CW (both).
Vehicles	Motor vehicles observed (all approaches, summed across directions).
Pedestrians	Pedestrians crossing or attempting to cross.
Cyclists	Cyclists observed.
SS violations	Vehicles failing to fully stop at the stop sign.
CW violations	Vehicles failing to yield to a pedestrian in/entering the crosswalk.
Severity	High / Medium / Low, per Table 1.

Note on approach basis: appendix vehicle, pedestrian, and violation counts are summed across all observed approaches at each intersection and therefore represent the complete raw observation. Municipal median stop-sign rates (Table 5, Appendix B) are computed on the primary approach facing the sign, consistent with Section 2.1; for this reason a site's raw all-approach counts will not in general reproduce the primary-approach rate exactly.

Appendix B: Complete municipality table

Table 7: Observation counts by municipality. (all 20), All statistics are across all approaches.

City	Schools Covered	Pedestrians	Vehicles	Stop Sign Violations	Crosswalk Violations
Alexandria	10	481	2,993	870	34
Arlington	3	63	631	88	19
Ashburn	2	10	475	163	0
Burke	1	101	372	11	29
Chantilly	1	6	18	13	0
Charlottesville	6	70	1,611	353	17
Chesapeake	16	98	4,602	407	60
Fairfax	5	128	5,128	370	94
Falls Church	5	164	702	288	19
Greenbriar	1	23	220	92	0
Hampton	4	54	552	61	0
Leesburg	5	198	2,245	153	6
Manassas	5	163	1,293	544	5
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Richmond	11	139	2,934	305	52
Vienna	3	25	872	343	0
Virginia Beach	12	516	4,051	526	115
Woodbridge	2	22	547	177	10
Total	**103**	**2,638**	**31,430**	**5,297**	**515**

Appendix C: Complete school / institution table

Table 8: All 100 schools/institutions with observed data, ranked by total stop-sign violations. Counts summed across all approaches at each school's studied intersections.

Municipality	Closest School - Clean	Sites	Vehicles	Pedestrians	Stop Sign Violations	Crosswalk Violations
Alexandria	**Alexandria City High School – King Street Campus**	1	282	15	17	0
Alexandria	**Charles Barrett Elementary School**	1	106	83	73	0
Alexandria	**Cora Kelly School for Math/ Science/Tech**	2	369	69	105	11
Alexandria	**Ferdinand T. Day Elementary School**	2	205	27	15	5
Alexandria	**Francis C. Hammond Middle School**	2	769	25	193	0
Alexandria	**George Washington Middle School**	1	198	25	20	0
Alexandria	**James K Polk Elementary School**	1	179	24	112	0
Alexandria	**Jefferson-Houston PreK-8 IB School**	1	163	19	108	0
Alexandria	**Lyles-Crouch Traditional Academy**	3	258	43	206	1
Alexandria	**Mount Vernon Community School**	3	464	151	21	17
Arlington	**Nottingham Elementary School**	1	202	37	0	14
Arlington	**Thomas Jefferson Middle School**	1	270	16	80	1
Arlington	**Yorktown High School**	1	159	10	8	4
Ashburn	**Broad Run High School**	1	286	2	111	0
Ashburn	**Legacy Elementary School**	1	189	8	52	0
Burke	**White Oaks Elementary School**	1	372	101	11	29
Chantilly	**Brookfield Elementary School**	1	18	6	13	0
Charlottesville	**Charlottesville High School**	2	75	4	53	0
Charlottesville	**Charlottesville Middle School**	3	549	22	81	0
Charlottesville	**Jackson Via Elementary School**	2	281	14	8	13
Charlottesville	**Summit Elementary School (formerly Clark)**	2	386	19	23	2
Charlottesville	**Trailblazer Elementary School (formerly Venable)**	1	160	9	123	2
Charlottesville	**Walker Upper Elementary School**	2	160	2	65	0

Municipality	Closest School - Clean	Sites	Vehicles	Pedestrians	Stop Sign Violations	Crosswalk Violations
Chesapeake	**Butts Road Intermediate School**	2	339	2	15	0
Chesapeake	**Camelot Elementary School**	1	103	7	4	0
Chesapeake	**Cedar Road Elementary School**	1	85	2	14	0
Chesapeake	**Crestwood Intermediate School**	1	84	4	9	2
Chesapeake	**Deep Creek High School**	2	190	4	47	0
Chesapeake	**Georgetown Primary School**	1	306	4	6	0
Chesapeake	**Grassfield Elementary School**	1	71	0	51	0
Chesapeake	**Great Bridge Intermediate School**	2	782	2	73	3
Chesapeake	**Greenbrier Middle School**	1	164	2	0	12
Chesapeake	**Indian River High School**	1	582	14	7	5
Chesapeake	**Norfolk Highlands Primary School**	2	781	7	21	0
Chesapeake	**Rena B Wright Primary School**	1	198	4	15	37
Chesapeake	**Thurgood Marshall Elementary School**	1	69	1	36	0
Chesapeake	**Truitt Intermediate School**	2	190	1	29	0
Chesapeake	**Western Branch Intermediate School**	2	334	5	69	1
Chesapeake	**Western Branch Primary School**	2	324	39	11	0
Fairfax	**Daniels Run Elementary School**	3	827	14	99	0
Fairfax	**Fairfax High School**	3	996	62	78	23
Fairfax	**Frost Middle School**	5	2328	29	68	18
Fairfax	**Katherine Johnson Middle School**	1	713	13	0	53
Fairfax	**Providence Elementary School**	1	264	10	125	0
Falls Church	**Jessie Thackrey Preschool**	1	17	5	8	0
Falls Church	**Lemon Road Elementary School**	1	235	9	0	9
Falls Church	**Mary Ellen Henderson Middle School**	2	32	8	11	0
Falls Church	**Meridian High School**	1	177	110	110	9
Falls Church	**Oak Street Elementary School**	4	241	32	159	1
Greenbriar	**Greenbriar East Elementary School**	3	220	23	92	0
Hampton	**C. Alton Lindsay Middle School**	1	196	3	2	0

Municipality	Closest School - Clean	Sites	Vehicles	Pedestrians	Stop Sign Violations	Crosswalk Violations
Hampton	**Captain John Smith Elementary School**	1	150	20	34	0
Hampton	**Francis Asbury Elementary School**	1	151	30	1	0
Hampton	**The George P. Phenix School**	1	55	1	24	0
Leesburg	**Balls Bluff Elementary School**	3	332	79	30	2
Leesburg	**Cool Spring Elementary School**	1	304	2	39	1
Leesburg	**Frederick Douglass Elementary School**	4	1231	87	49	0
Leesburg	**John W. Tolbert Jr. Elementary School**	1	373	30	35	3
Leesburg	**Loudoun County High School**	1	5	0	0	0
Manassas	**Baldwin Elementary School**	1	223	8	109	0
Manassas	**Bennett Elementary School**	1	200	58	12	2
Manassas	**Lake Ridge Elementary School**	1	155	90	0	3
Manassas	**Pennington Traditional School**	1	271	4	178	0
Manassas	**Round Elementary School**	2	444	3	245	0
Newport News	**Achievable Dream Middle/High School**	1	95	25	0	6
Newport News	**B.T. Washington Middle School**	1	105	14	0	0
Newport News	**Menchville High School**	2	724	67	111	17
Norfolk	**Bay View Elementary School**	1	80	2	5	3
Norfolk	**Berkley-Campostella Early Childhood Center**	1	154	4	9	4
Norfolk	**Booker T. Washington High School**	1	295	11	7	14
Norfolk	**Larchmont Elementary School**	1	16	8	7	0
Reston	**Dogwood Elementary School**	1	116	6	69	0
Reston	**Forest Edge Elementary School**	2	305	112	156	9
Reston	**Lake Anne Elementary School**	1	239	114	136	1
Reston	**South Lakes High School**	1	55	14	33	1
Richmond	**Amelia Street School**	1	121	4	81	0
Richmond	**Barack Obama Elementary School**	1	22	4	19	0
Richmond	**Bellevue Elementary School**	1	33	10	23	0

Municipality	Closest School - Clean	Sites	Vehicles	Pedestrians	Stop Sign Violations	Crosswalk Violations
Richmond	**Frances W. McClenney Elementary School**	2	299	17	23	11
Richmond	**JH Blackwell Preschool**	2	554	8	36	19
Richmond	**Martin Luther King Jr. Preschool**	2	607	66	18	18
Richmond	**Maymont Preschool**	1	52	4	41	0
Richmond	**Richmond High School for the Arts**	2	566	5	41	0
Richmond	**Summer Hill School**	2	88	6	11	2
Richmond	**Swansboro Elementary School**	1	166	6	9	0
Richmond	**Thomas Jefferson High School**	2	426	9	3	2
Vienna	**Cunningham Park Elementary School**	2	333	11	117	0
Vienna	**Louise Archer Elementary School**	1	312	6	102	0
Vienna	**Vienna Elementary School**	1	227	8	124	0
Virginia Beach	**Bayside Middle School**	1	133	4	0	2
Virginia Beach	**Brandon Middle School**	1	196	11	62	0
Virginia Beach	**Fairfield Elementary School**	1	159	12	0	0
Virginia Beach	**Frank W. Cox High School**	1	1041	0	13	0
Virginia Beach	**Glenwood Elementary School**	1	95	26	12	1
Virginia Beach	**King's Grant Elementary School**	1	243	17	0	16
Virginia Beach	**Ocean Lakes High School**	1	342	15	81	12
Virginia Beach	**Pembroke Elementary School**	1	153	32	6	1
Virginia Beach	**Seaside School**	3	918	322	40	82
Virginia Beach	**Trantwood Elementary School**	1	169	0	0	0
Virginia Beach	**Virginia Beach Middle School**	1	155	29	24	1
Virginia Beach	**W.T. Cooke Elementary School**	2	447	48	288	0
Woodbridge	**Prince William Academy**	2	332	15	130	2
Woodbridge	**Springwoods Elementary School**	1	215	7	47	8
Grand Total		**155**	**31,430**	**2,638**	**5,297**	**515**

Appendix D: Complete site-level dataset

Every observed intersection (n = 155), with raw counts summed across primary and secondary approaches. Underlying observation set behind all figures in this report.

Table 9: Complete site-level observation dataset for all 155 intersections from one or more approaches.

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Alexandria	Commonwealth Ave & W Bellefonte Ave	Cora Kelly School for Math/ Science/Tech	SS+CW, Stop Sign	161	8	1	105	0
Alexandria	E Glendale & Mt Vernon	George Washington Middle School	SS+CW	198	25	6	20	0
Alexandria	Gibbon & Pitt St	Lyles-Crouch Traditional Academy	SS+CW, Stop Sign	156	16	2	116	1
Alexandria	Highview Ln & Mark Center Dr	Ferdinand T. Day Elementary School	Stop Sign, SS+CW	123	8	1	15	1
Alexandria	King St & Scroggins Rd	Alexandria City High School – King Street Campus	Stop Sign, Cross walk	282	15	5	17	0
Alexandria	Mt Vernon Ave & E Del Ray Ave	Mount Vernon Community School	SS+CW, Cross walk	168	74	5	7	7
Alexandria	Mt Vernon Ave & E Oxford Ave	Mount Vernon Community School	SS+CW, Cross walk	120	40	4	5	5
Alexandria	Mt Vernon Ave & E Raymond Ave	Mount Vernon Community School	SS+CW, Cross walk	176	37	7	9	5
Alexandria	Mt Vernon Ave between Russell Rd & W Reed Ave	Cora Kelly School for Math/ Science/Tech	Nothing, Cross walk	208	61	6	0	11
Alexandria	N Pegram St & N Pickett St	Francis C. Hammond Middle School	Stop Sign	148	8	4	114	0
Alexandria	Princess St & N. West St	Jefferson-Houston PreK-8 IB School	SS+CW, Stop Sign	163	19	2	108	0

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Alexandria	Rayburn Ave & Winston Ct	Ferdinand T. Day Elementary School	Nothing, Cross walk	82	19	0	0	4
Alexandria	S Lee St & Wilkes St	Lyles-Crouch Traditional Academy	SS+CW, Stop Sign	25	11	1	22	0
Alexandria	S Pitt St & Wolfe St	Lyles-Crouch Traditional Academy	Stop Sign, SS+CW	77	16	1	68	0
Alexandria	Seminary Rd & Kenmore Ave	Francis C. Hammond Middle School	Stop Sign, Nothing	621	17	4	79	0
Alexandria	Taney Ave & N Pegram St	James K Polk Elementary School	Stop Sign, SS+CW	179	24	2	112	0
Alexandria	Valley Dr & Martha Custis Dr	Charles Barrett Elementary School	SS+CW	106	83	1	73	0
Arlington	Nottingham & Little Falls Rd	Nottingham Elementary School	Cross walk	202	37	4	0	14
Arlington	S Irving St & 2nd St	Thomas Jefferson Middle School	SS+CW	270	16	8	80	1
Arlington	Yorktown & 30th	Yorktown High School	Stop Sign, Cross walk	159	10	1	8	4
Ashburn	Broadlands Blvd & State Rte 641	Broad Run High School	Stop Sign	286	2	0	111	0
Ashburn	Regal Wood Dr & Olympia Dr	Legacy Elementary School	SS+CW, Stop Sign	189	8	0	52	0
Burke	Shiplett Blvd & Virgo Ct	White Oaks Elementary School	Stop Sign, Cross walk	372	101	2	11	29
Chantilly	Elmwood St & Dallas St	Brookfield Elementary School	Stop Sign	18	6	3	13	0
Charlottesville	10th St SW & Cherry Ave	Charlottesville Middle School	Stop Sign, SS+CW	409	13	4	26	0
Charlottesville	14 St NW & Gordon Ave	Trailblazer Elementary School (formerly Venable)	SS+CW	160	9	1	123	2

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Charlottesville	9th St SW & 10th St SW	Charlottesville Middle School	Stop Sign	68	6	5	54	0
Charlottesville	Concord Dr & Grove Rd	Charlottesville High School	Stop Sign	39	2	2	23	0
Charlottesville	Dairy Rd & Gentry Ln	Walker Upper Elementary School	Stop Sign	75	1	0	56	0
Charlottesville	Forest Hill Ave & Baker St	Charlottesville Middle School	Stop Sign, Cross walk	72	3	1	1	0
Charlottesville	Gentry Ln & Dairy Rd	Walker Upper Elementary School	Stop Sign	85	1	3	9	0
Charlottesville	Harris Rd & Lodge Creek Cir	Jackson Via Elementary School	Stop Sign, SS+CW	156	5	3	3	3
Charlottesville	Melbourne Rd & Grover Ct	Charlottesville High School	Stop Sign	36	2	0	30	0
Charlottesville	Meridian St & Belmont Ave	Summit Elementary School (formerly Clark)	Stop Sign	22	8	1	17	0
Charlottesville	Monticello Ave & Meridian St	Summit Elementary School (formerly Clark)	Stop Sign, Cross walk	364	11	2	6	2
Charlottesville	Moseley Dr & Harris Rd	Jackson Via Elementary School	Stop Sign, Cross walk	125	9	3	5	10
Chesapeake	Averill Dr & Artisan Ave	Grassfield Elementary School	Stop Sign	71	0	0	51	0
Chesapeake	Bainbridge Blvd Park Ave	Rena B Wright Primary School	Stop Sign, SS+CW	198	4	2	15	37
Chesapeake	Camelot Blvd & Sir Gawaine Dr	Camelot Elementary School	Stop Sign	103	7	0	4	0
Chesapeake	Deep Creek Blvd & King Arthur Dr	Deep Creek High School	Stop Sign, Nothing	89	1	0	23	0
Chesapeake	Dominion Commons Way & Elementary Rd	Cedar Road Elementary School	Stop Sign, Nothing	85	2	0	14	0

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Chesapeake	Dunbarton @ Frye	Indian River High School	SS+CW, Crosswalk	582	14	0	7	5
Chesapeake	Edinburg Pkwy & Hanbury Rd W	Great Bridge Intermediate School	Stop Sign, SS+CW	245	1	0	10	3
Chesapeake	Elmhurst Ave & Prospect Dr	Butts Road Intermediate School	Stop Sign	25	1	0	8	0
Chesapeake	Executive Blvd & Greenbrier Pkwy	Greenbrier Middle School	Nothing, Crosswalk	164	2	1	0	12
Chesapeake	Galberry Rd & Margaret Booker Dr	Deep Creek High School	Stop Sign, Nothing	101	3	0	24	0
Chesapeake	Holly Ave & Bsinbridge Blvd	Truitt Intermediate School	Stop Sign, Nothing	147	0	3	8	0
Chesapeake	Indian River Rd & Myrtle Ave	Norfolk Highlands Primary School	Stop Sign, Nothing	527	5	2	16	0
Chesapeake	Lilac Ave & Indian River Rd	Norfolk Highlands Primary School	Stop Sign, Crosswalk	254	2	3	5	0
Chesapeake	Mt Pleasant Rd & School House Rd	Butts Road Intermediate School	SS+CW, Nothing	314	1	1	7	0
Chesapeake	Neal St & Great Bridge Blvd	Crestwood Intermediate School	Stop Sign, Crosswalk	84	4	0	9	2
Chesapeake	Providence Rd & Lloyd Dr	Georgetown Primary School	Stop Sign, Crosswalk	306	4	2	6	0
Chesapeake	Rodgers St	Truitt Intermediate School	Stop Sign	43	1	0	21	0
Chesapeake	Terry Dr & Brittany Way	Western Branch Intermediate School	Stop Sign	173	2	4	59	0
Chesapeake	Terry Dr & Tyre Neck Ave	Western Branch Intermediate School	Stop Sign, Crosswalk	161	3	0	10	1

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Chesapeake	Terry Dr @ West Crosswalk of Western Branch Primary	Western Branch Primary School	Nothing, Crosswalk	94	36	0	0	0
Chesapeake	Tyre Neck @ Oak	Western Branch Primary School	Stop Sign, Crosswalk	230	3	2	11	0
Chesapeake	Wildcat Pkwy & Handbury Rd W	Great Bridge Intermediate School	Stop Sign, Crosswalk	537	1	3	63	0
Chesapeake	Wingfield Ave & Border Rd	Thurgood Marshall Elementary School	Stop Sign	69	1	0	36	0
Fairfax	3730 Old Lee Highway	Daniels Run Elementary School	Crosswalk	684	2	1	0	0
Fairfax	Between Whitacre Rd & Laurel St	Frost Middle School	Stop Sign	53	1	0	44	0
Fairfax	Bevan Dr & Fairchester Dr	Daniels Run Elementary School	SS+CW	71	10	1	49	0
Fairfax	Bevan Dr & Warwick Ave	Daniels Run Elementary School	Stop Sign	72	2	2	50	0
Fairfax	Blenheim Blvd & Brookwood Dr	Fairfax High School	Crosswalk, Nothing	158	3	1	0	4
Fairfax	Jermantown Rd & Copper Lane	Katherine Johnson Middle School	Crosswalk	713	13	2	0	53
Fairfax	Lenheim Blvd & Ridge Ave	Fairfax High School	Stop Sign, Crosswalk	273	5	6	1	19
Fairfax	Lion Run & Blenheim Blvd (DISMISSAL ONLY)	Fairfax High School	SS+CW, Crosswalk	565	54	3	77	0
Fairfax	Orchard St & Bevan Dr	Providence Elementary School	Stop Sign	264	10	0	125	0
Fairfax	Pickett Rd & Starlit Ponds Dr	Frost Middle School	Stop Sign	63	3	1	13	0
Fairfax	Trapp Rd & Main St	Frost Middle School	Stop Sign, Crosswalk	2137	19	4	11	17

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Fairfax	Trapp Rd & Whitacre Rd	Frost Middle School	Nothing	23	0	0	0	0
Fairfax	Whitacre Rd & Laurel St	Frost Middle School	Crosswalk, Nothing	52	6	0	0	1
Falls Church	Falls Church Dr	Meridian High School	SS+CW, Stop Sign	177	110	0	110	9
Falls Church	Idylwood Rd & Montview Ct	Lemon Road Elementary School	Crosswalk	235	9	0	0	9
Falls Church	Jackson St & S Spring St	Oak Street Elementary School	SS+CW	35	12	3	31	1
Falls Church	Mustang Alley & Leesburg Pike	Mary Ellen Henderson Middle School	Nothing	0	0	0	0	0
Falls Church	N Cherry & E Jefferson St	Jessie Thackrey Preschool	Stop Sign, Crosswalk	17	5	0	8	0
Falls Church	N Cherry St & N Fairfax St	Oak Street Elementary School	Stop Sign, SS+CW	58	5	0	46	0
Falls Church	S Oak St & Park Ave	Oak Street Elementary School	Stop Sign	67	2	0	46	0
Falls Church	Seaton Ln & S Oak St	Oak Street Elementary School	Stop Sign	81	13	0	36	0
Falls Church	W Falls Station Blvd & Mustang Alley	Mary Ellen Henderson Middle School	SS+CW, Crosswalk	32	8	0	11	0
Greenbriar	Majestic Ln & Point Pleasant Dr	Greenbriar East Elementary School	Stop Sign, Nothing	71	8	0	17	0
Greenbriar	Middle Ridge Dr & Point Pleasant Dr	Greenbriar East Elementary School	Stop Sign	78	7	2	58	0
Greenbriar	Poplar Tree Rd & Majestic Ln	Greenbriar East Elementary School	Stop Sign, Nothing	71	8	0	17	0

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Hampton	Beach Rd Single Crosswalk	Francis Asbury Elementary School	Stop Sign, Crosswalk with Crossing Guard	151	30	3	1	0
Hampton	Glenrock @ Briarfield	C. Alton Lindsay Middle School	Stop Sign, Crosswalk	196	3	0	2	0
Hampton	Terrace Dr & Dresden Dr	The George P. Phenix School	Stop Sign	55	1	0	24	0
Hampton	Woodland @ Faulk	Captain John Smith Elementary School	Stop Sign, Cross walk	150	20	2	34	0
Leesburg	302 Parker Ct SE & Catoctin Cir SE	Frederick Douglass Elementary School	Stop Sign	16	2	0	16	0
Leesburg	Battlefield Pkwy NE & Balls Bluff Rd	Balls Bluff Elementary School	Stop Sign, Crosswalk	152	2	3	2	1
Leesburg	Battlefield Pkwy NE & Hunton Pl NE	Balls Bluff Elementary School	Stop Sign	4	55	2	3	0
Leesburg	Battlefield Pkwy NE & Smartts Ln NE	Balls Bluff Elementary School	Stop Sign, SS+CW	176	22	0	25	1
Leesburg	Battleheld Pkwy NE & Hunton Pl NE	John W. Tolbert Jr. Elementary School	SS+CW	373	30	0	35	3
Leesburg	Emerald Hill Dr NE & Vista Ridge Dr	Loudoun County High School	Stop Sign, Nothing	5	0	0	0	0
Leesburg	Foxridge Dr SW & Catoctin Cir SW	Frederick Douglass Elementary School	Stop Sign, Nothing	99	3	0	8	0
Leesburg	Plaza St SE & Sycolin Rd SE	Cool Spring Elementary School	SS+CW, Nothing	304	2	1	39	1
Leesburg	Somerset Park Dr & Tavistock Dr SE	Frederick Douglass Elementary School	SS+CW, Crosswalk	289	81	0	13	0

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Leesburg	Sycolin Rd SE & E Market St	Frederick Douglass Elementary School	Stop Sign, Nothing	827	1	2	12	0
Manassas	Calvert Oaks Way & Old Dominion Dr	Bennett Elementary School	Stop Sign, SS+CW	200	58	1	12	2
Manassas	Clover Hill Rd & Hastings Dr	Round Elementary School	Stop Sign	291	2	0	145	0
Manassas	Hastings Dr & Lake Jackson Ave	Round Elementary School	Stop Sign	153	1	1	100	0
Manassas	Hedges Run Dr & Flint Town Pl	Lake Ridge Elementary School	Crosswalk	155	90	2	0	3
Manassas	Liberia Ave & Stonewall Rd	Pennington Traditional School	Stop Sign, SS+CW	271	4	2	178	0
Manassas	Quarry Rd & Prescott Ave	Baldwin Elementary School	Stop Sign	223	8	0	109	0
Newport News	Chestnut @ 36th	B.T. Washington Middle School	Crosswalk	105	14	0	0	0
Newport News	Marshall @ Gloucester	Achievable Dream Middle/High School	Crosswalk	95	25	4	0	6
Newport News	Menchville Rd & Monarch Dr	Menchville High School	Stop Sign, SS+CW	342	45	7	40	16
Newport News	Youngs Rd @ East Exit	Menchville High School	SS+CW, Crosswalk	382	22	2	71	1
Norfolk	Cypress St & Wilson Rd	Berkley-Campostella Early Childhood Center	Stop Sign, SS+CW	154	4	3	9	4
Norfolk	Marshall Ave & E Princess Anne Rd	Booker T. Washington High School	Stop Sign, Crosswalk	295	11	3	7	14
Norfolk	Monroe Pl & Buckingham Ave	Larchmont Elementary School	Stop Sign	16	8	1	7	0

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Norfolk	Willow Terrace & E Bayview Blvd	Bay View Elementary School	Stop Sign, Crosswalk	80	2	3	5	3
Reston	Colts Neck Rd Mid Block (2312 Block)	Dogwood Elementary School	SS+CW, Stop Sign	116	6	3	69	0
Reston	Explorer St & Freedom Dr	Forest Edge Elementary School	SS+CW	178	42	4	39	6
Reston	Freedom Dr & Library St	Forest Edge Elementary School	SS+CW	127	70	2	117	3
Reston	North Shore Dr & Village Rd	Lake Anne Elementary School	Stop Sign, SS+CW	239	114	11	136	1
Reston	Ridge Heights Rd & Seahawks Dr	South Lakes High School	SS+CW	55	14	0	33	1
Richmond	Alexander Ave & Castlewood Rd	Summer Hill School	Stop Sign, Crosswalk	65	4	0	11	2
Richmond	Colorado Ave & S Allen Ave	Maymont Preschool	Stop Sign	52	4	1	41	0
Richmond	E 16th St & Stockton St	JH Blackwell Preschool	Stop Sign	40	1	0	36	0
Richmond	E 32nd St & Mid Lothian Tpke	Swansboro Elementary School	Stop Sign, Crosswalk	166	6	1	9	0
Richmond	E Grace St & N 23rd St	Bellevue Elementary School	Stop Sign	33	10	1	23	0
Richmond	Fendall Ave & W Crawford St	Barack Obama Elementary School	Stop Sign	22	4	1	19	0
Richmond	Lamberts Ave & Castlewood Rd	Summer Hill School	SS+CW, Crosswalk	23	2	0	0	0
Richmond	Malvern Ave & Augusta Ave	Thomas Jefferson High School	Stop Sign, Crosswalk	195	1	0	2	1
Richmond	Malvern Avenue & Cutshaw Ave	Thomas Jefferson High School	Stop Sign, Crosswalk	231	8	1	1	1
Richmond	Maury St & E 15th St	JH Blackwell Preschool	Crosswalk	514	7	1	0	19

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Richmond	Mosby St & R St	Martin Luther King Jr. Preschool	SS+CW	292	57	3	15	2
Richmond	Mosby St & R St	Martin Luther King Jr. Preschool	SS+CW	292	57	3	15	2
Richmond	North Ave & Old Brook Rd	Frances W. McClenney Elementary School	Stop Sign, Crosswalk	162	7	2	15	5
Richmond	North Avenue & Moss Side Ave	Frances W. McClenney Elementary School	Stop Sign, SS+CW	137	10	0	8	6
Richmond	P St & Mosby St	Martin Luther King Jr. Preschool	SS+CW, Crosswalk	315	9	3	3	16
Richmond	Roanoke St & Crutchfield St	Richmond High School for the Arts	SS+CW	166	4	0	9	0
Richmond	S Meadow St & Amelia St	Amelia Street School	Stop Sign	121	4	2	81	0
Richmond	Westover Hls Blvd N & Crutchfield St	Richmond High School for the Arts	Stop Sign, Nothing	400	1	1	32	0
Vienna	Church St NE & East St NE	Vienna Elementary School	Stop Sign	227	8	3	124	0
Vienna	Meadow Lane SW & Ware St SW	Cunningham Park Elementary School	Stop Sign	70	6	2	13	0
Vienna	Nutley & Malcom	Louise Archer Elementary School	SS+CW	312	6	3	102	0
Vienna	Tapawingo Rd SW & Cottage St SW	Cunningham Park Elementary School	Stop Sign	263	5	5	104	0
Virginia Beach	Albright Dr & Simon Ct	Brandon Middle School	Stop Sign, SS+CW	196	11	1	62	0
Virginia Beach	Atlantic Ave & 18th St (Oceanfront)	Seaside School	SS+CW	179	173	18	29	5
Virginia Beach	Atlantic Ave & 23rd St	Seaside School	Stop Sign, Crosswalk	132	105	11	5	8

Municipality	Intersection - Clean	Nearest School	Study Type	Vehicles	Pedestrians	Cyclists	Stop Sign Violations	Crosswalk Violations
Virginia Beach	Belford @ Aegean	Fairfield Elementary School	Stop Sign, Crosswalk	159	12	3	0	0
Virginia Beach	Creek View Dr & Belspring Dr	Glenwood Elementary School	Stop Sign, SS+CW	95	26	0	12	1
Virginia Beach	Great Neck @ Falcon Crescent	Frank W. Cox High School	Stop Sign	1041	0	2	13	0
Virginia Beach	Inlynnview Rd & Gen Jackson Dr	Trantwood Elementary School	Crosswalk, Stop Sign	169	0	1	0	0
Virginia Beach	Jericho Rd & Declaration Rd	Pembroke Elementary School	Stop Sign, SS+CW	153	32	8	6	1
Virginia Beach	Mediterranean Ave & 18th St	W.T. Cooke Elementary School	SS+CW	239	43	17	143	0
Virginia Beach	N Lynnhaven @ Congress	King's Grant Elementary School	Stop Sign, Crosswalk	243	17	5	0	16
Virginia Beach	Newtown @ Learning Circle, East-Most Intersection	Bayside Middle School	Nothing, Crosswalk	133	4	5	0	2
Virginia Beach	Norfolk Ave & Mediterranean Ave	W.T. Cooke Elementary School	Stop Sign, SS+CW	208	5	13	145	0
Virginia Beach	Old Dam Neck Rd & Da Vinci Dr	Ocean Lakes High School	SS+CW, Crosswalk	342	15	5	81	12
Virginia Beach	Pacific @ 18th	Seaside School	SS+CW, Crosswalk	607	44	6	6	69
Virginia Beach	Virginia Beach	Virginia Beach Middle School	Stop Sign, Crosswalk	155	29	6	24	1
Woodbridge	Harbor Dr Mid Block at McDonalds	Prince William Academy	Stop Sign, SS+CW	186	5	1	47	2
Woodbridge	Mohican Rd & Cotton Mill Dr	Prince William Academy	Stop Sign	146	10	1	83	0
Woodbridge	Springwoods Dr & Marquis Pl	Springwoods Elementary School	SS+CW	215	7	0	47	8
Grand Total				**31,430**	**2,638**	**339**	**5,297**	**515**

Appendix E: Full Methodology

Study design and site selection

The study is a cross-sectional field observational study. Sites were selected to prioritize stop-sign and crosswalk locations in and around school zones; 88% of observed intersections were school-zone sites, with a minority of non-school-zone sites retained for comparison. Coverage spanned three regions: Northern Virginia, Central Virginia, and Hampton Roads, and 20 municipalities, weighted toward the residential streets and arterials that carry children to school. Observation windows of approximately 20–30 minutes were timed to arrival and dismissal peaks, capturing the highest-exposure periods of the school day. Three site types were studied: stop-sign-only (compliance with the stop), crosswalk-only (yielding to pedestrians), and combined sites where both behaviors were measured simultaneously.

Metrics and statistical treatment

The stop-sign violation rate for a site is the number of stop-sign violations divided by qualifying vehicles; the crosswalk violation rate is the number of failure-to-yield events divided by pedestrian interactions. Three summary statistics are reported: the vehicle-weighted **aggregate** rate (total violations ÷ total vehicles), the **mean** of site rates, and the **median** of site rates. Because a small number of very-high-volume sites with strong compliance can dominate the vehicle-weighted aggregate, the **median site rate** is treated as the primary indicator of typical driver behavior. Per-hour violation counts are extrapolations from each site's observed rate and traffic volume and are not continuous counts.

Quality assurance

Annotation output was held to a quality-assurance standard exceeding 98% on sampled review; recordings failing sampling were returned for full re-review. Every violation was logged individually with a timestamp and a 5–8 second evidence window, producing an auditable violation log (5,812 entries) in addition to the site-level count tabulation. Every vehicle, pedestrian, and violation was reviewed and coded by trained annotators against a written rubric, with independent quality review requiring better than 98% accuracy before any data was accepted.

Limitations

Several limitations bound the interpretation of these results.
(i) Observation windows. Sampling was concentrated on arrival and dismissal peaks; rates describe the highest-exposure periods by design and should not be read as 24-hour averages. **(ii) Approach basis.** Stop-sign rates are computed on the primary approach facing each sign; secondary cross-traffic approaches, which often do not face the studied control, are excluded from rate denominators, and different approach definitions would yield different aggregates. **(iii) Comparison group.** The non-school-zone comparison sample is small and is offered only as directional context. **(iv) Low-count extremes.** A small number of sites exhibit violation-to-pedestrian ratios above 100%, reflecting multiple simultaneous failures against very few pedestrians. **(v) Extrapolated intensity.** Per-hour figures are extrapolations from observed rate and volume, not continuous counts.

Prepared by
Obvio Research

Date
July 2026

Contact
855-655-6621

Website
obvio.ai

Complete machine-readable data available on request