



Safe Routes to School Arrival/Dismissal Observations

Fox Hill Elementary School
Fox Hill Road, Burlington, MA 01803

April 2022

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Arrival/Dismissal Details

Dates: April 5 and 6, 2022

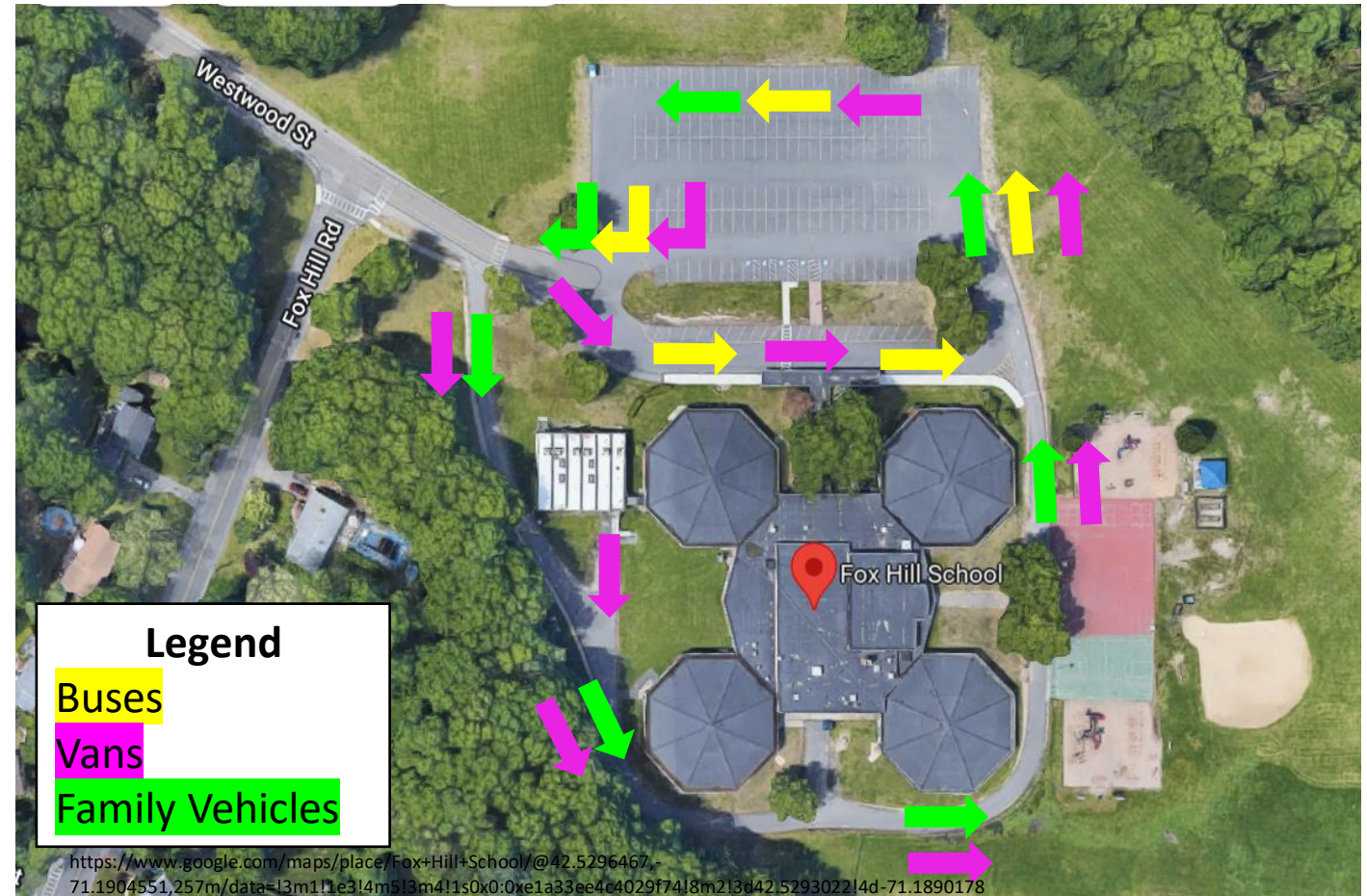
Observations: 7:30 a.m. and 1:20 p.m.

Weather: Sunny and rainy, 39-55 degrees Fahrenheit

Grades: K-5

Enrollment: 478

Building opened: 1967 **Renovated:** 2007



Legend

- Buses
- Vans
- Family Vehicles

<https://www.google.com/maps/place/Fox+Hill+School/@42.5296467,-71.1904551,257m/data=!3m1!1e3!4m5!3m4!1s0x0:0xe1a33ee4c4029f74:18m2!3d42.5293022!4d-71.1890178>

Current Arrival/Dismissal Procedures

- Walkers approach from Fox Hill Road and Westwood Street.
- Bike racks are located near the front entrance.
- School buses use the school's front entrance. Vans use the rear of the LABB wing for arrival and the front of the LABB building for dismissal.
- Family vehicles use the school's rear driveway that circumvents the building to approach the designated drop-off/pick-up area. Staff help with valet service and some family vehicles park in the staff lot.
- One Crossing Guard mans the Westwood crosswalks closest to the school that are located just past the Westwood/Fox Hill intersection.
- Multiple metal signs form the school zone signage and are located on Fox Hill Road and Westwood Street.

See specific arrival and dismissal observational data in Appendix A and B.

Observations: General



The school supports bike racks and benches in the front of the building.



Solar glare occurs in the morning as one approaches the school from Westwood Street.



The intersection of Westwood Street, the school's front driveway, and the parking lot is a wide expanse of undesignated asphalt.

Observations: General



Numerous groups of families are observed walking together to and from school. The school supports one Crossing Guard on Westview Street.



Metal school zone signage composed of four signs is located on Fox Hill Road and Westwood Street.



Faded, doubled crosswalk signage on Fox Hill Road as one approaches Westwood Street uses a utility pole. There is no crosswalk in this location. The signage should read "CROSSWALK AHEAD."



Fox Hill Road is a long, straight road that supports five permanent speed bumps.

Observations: Signage



A faded informational sign for student drop-off leans against the front of the LABBB building.



A canopy and cement sidewalks protect pedestrians at the school entrance. These are designated for school bus use and is identified with a non-regulatory sign.



NO IDLING signage shares a pole with dog information on the school's rear driveway.



ONE-WAY signage is used to indicate direction on the school's rear driveway that circumvents the building.

Observations: Signage



There are multiple signs as one approaches the loading/unloading area on the school's rear driveway where it meets the front parking lot. The stop line is faded. There is a significant worn goat path from pedestrian use where there is no sidewalk along most of the rear driveway.



A four-signed pole indicates "STOP" and "NO LEFT TURN" on the school's rear driveway side and "DO NOT ENTER" and dog information when approaching from the parking lot. The school playground is in the foreground.



Faded pavement arrows and informational signage indicate the circulation pattern for exiting family vehicle and school bus traffic in the parking lot.



A "DO NOT ENTER" sign is posted on a tree at the far end of the parking lot so that exiting rear school driveway and bus traffic does not use the first driving lane.

Observations: Infrastructure



The cement sidewalk at the Westwood/Fox Hill Road crosswalk has tire marks.



The entrance to the school's rear driveway at Westwood Street uses a rope to bar entrance during school hours. There is no crosswalk or identifying signage.

Observations: Vans at Arrival



Multiple vans use the rear entrance to the LABBB building at arrival. They queue on the short driveway extension in single file by going into reverse. The rear school driveway is on the right.



Some family vehicles also drop off at the LABBB's rear entrance by joining the van queue or by parking on the lawn. There is a worn goat path from where students have exited the vehicles to travel to the building. Rear driveway through traffic is on the left.

Observations: Vans at Dismissal



Vans and some family vehicles queue in front of the LABBB entrance, beginning just beyond the school's bus canopy and ending at the school's rear driveway entrance. The vehicle in the mouth of the parking lot on the right uses this unmarked area as a regular parking space.



One van parks perpendicularly in the parking lot's handicapped spots for student pick-up. These students exited from the school's front entrance.



Many vans make U-turns using the mouth of the parking lot to exit the school at dismissal, instead of following the designated circulation pattern.

Observations: School Buses and Family Vehicles



School buses use the front entrance for both arrival and dismissal.



Some families use the bus lane at arrival after the buses had departed when the rear driveway was open.



At dismissal, family vehicles queue on Fox Hill Road and some families wait at the intersection of Fox Hill Road and Westwood Street. A bus and a few family vehicles drive on the wrong side of the road in order to exit this queue.

Observations: Family Vehicles



Staff control the loading of family traffic into the school's rear driveway from Westwood Street at dismissal. Staff did not wear reflective clothing or use a STOP paddle. Some families wait for their students in the grassy area to the right of the school.



Staff manage the family vehicle queue entering the rear driveway from Westwood Street. Vehicles regularly queued on the crosswalk.



The arrival queue approaching the valet area on the school's rear driveway includes exiting vans. A worn goat path is evident.

Observations: Family Vehicles



Exiting family vehicles from the school parking lot wait for the Crossing Guard's directions to proceed. The family vehicles queue on Westwood Street can also be seen.



The family vehicle queue on Westwood Street. Some vehicles queued on the crosswalk. This is the only crosswalk in the school zone with reflective signage.

Observations: School Zone Crosswalks



From north to south, the school has five crosswalks in its school zone. There is no crosswalk crossing the school's rear driveway at Westwood Street.

Approximate Arrival & Dismissal Modal Counts

* After queuing on Westwood and Fox Hill Road during dismissal, these family vehicles used the rear driveway for student pick-up

ARRIVAL						DISMISSAL					
Family vehicles using Fox Hill Road	Family vehicles using Westwood Street	Family vehicles using the rear driveway	Family vehicles using parking lot or bus lane	Walkers	Bikers	Family vehicles using Fox Hill Road	Family vehicles using Westwood Street	Family vehicles using the rear driveway*	Family vehicles using parking lot or bus lane	Walkers	Bikers
0	0	90	21			(40*)	(29*)	69	12		
111				44	4	81				61	5

School-Specific Recommendations: Summary

- 1. Separation of transportation modes on school property** - While the school does a good job separating most modes of student transportation, there are a few areas of overlap. It is important for walkers, bikers, and bussers to be able to navigate their way safely within the school zone.
 - Consider using the school's front driveway for all buses, vans, and those needing extra assistance only. All buses should use the same area for both arrival and dismissal.
 - Consider providing those families who need extra assistance for arrival and dismissal school-issued placards for use on their vehicle's dashboard as identification.
 - Vans should use the same front area for both arrival and dismissal. This could continue to be in front of the LABBB building as seen at dismissal or at the school's main front door with its canopy. This will allow the vans to more safely load/unload and to be able to circumvent the arrival/dismissal family vehicle queue.
 - All vans need to use their flashing lights when loading/unloading their vehicles.
 - All vans need to use the designated circulation route when departing. No U-turns should be allowed.
 - Consider removing a few parking spaces on the corners of the parking lot in order to better accommodate the bus turning radius.
 - Consider creating Park, Walk, and Roll locations to lessen family vehicle congestion in the school zone.
 - Consider creating an inviting pedestrian plaza which families can use for arrival and dismissal. Family members currently stand in several locations, including congesting the sidewalks and grassy areas to the right of the school. Consider identifying these areas with signage.
 - Perhaps a student poster contest can help educate families and students.
 - Sandwich boards can also be used.
 - Consider enlisting the PTA to install benches and planters.
 - Consider not allowing queuing on Westwood and Fox Hill Roads for this action causes lane restrictions.

School-Specific Recommendations: Summary

2. **Consider improving signage on school property** - Consider improved regulatory and informational signage to identify where each mode of transportation is expected.
 - Consider installing regulatory signage to identify the bus lane and other authorized vehicles. Painting the curbing yellow will also make this area stand out.
 - Consider using informational signage to identify areas for family vehicle valet drop-off on the rear driveway and at the driveway entrance. Replace faded signage and pavement markings. This includes directional arrows and stop lines, school zone and crosswalk signage.
 - Consider installing reflective crosswalk signage.
 - Consider installing “NO DOGS ALLOWED ON SCHOOL PROPERTY” signage to replace the current informational signage and remove the “DOG WASTE STATION” sign near the playground.
 - Consider improving the interface between the parking lot and the front school driveway with pavement markings, signage (“NO LEFT TURN” and “STOP”) and tactical urbanism techniques to better define the space. This intersection is nondescript of vehicle right of way for two-way traffic.

3. **Consider improving pedestrian safety**
 - Consider having all staff that are working arrival and dismissal wear reflective vests.
 - Consider installing a crosswalk along the school’s rear driveway at Westwood Street for general school use and at the stop sign for safe playground access.
 - Consider installing a sidewalk or colored fog line for the valet area on the rear driveway near the playground.
 - Consider eliminating either the Westwood Street crosswalk at Fox Hill Road that is not ADA compliant or the one nearest to the rear driveway entrance. There are too many crosswalks within a very short distance and the Crossing Guard can not control them all.
 - Consider installing “NO PARKING HERE TO CROSSWALK” or by painting shark’s teeth along all crosswalks in the school zone. This will improve line-of-sight. As a temporary measure, consider placing two cones abutting all school crosswalks in order to prohibit queuing in these locations.

School-Specific Recommendations: Summary

3. Consider improving pedestrian safety (continued)

- Consider a “Rules Apply to Everyone” campaign for families and students who continue to use the parking lot and side grassy area for drop-off and pick-up.
- Consider installing a more visible gate mechanism or chain across the entrance of the rear driveway. Couple this with informational signage.
- Consider forming Walking School Buses and Bike Trains.
- Consider installing a fog line on Fox Hill Road. In some places, the sidewalk berm is almost flush with the sidewalk.
- Consider having Safe Routes to School conduct DESE-approved pedestrian and bicycle safety instruction.

4. Parent/Guardian education - While families appear to follow the school’s arrival and dismissal procedure, it was observed that school rules did not apply to everyone.

- “NO IDLING” signage and education is suggested along the entire school building, rear driveway, and parking areas.
- Develop an arrival/dismissal plan that describes what is expected for each transportation mode and communicate it with families through newsletters and the school website.
- Distribute Safe Routes to School Driver Awareness <https://www.mass.gov/info-details/safe-routes-to-school-education#driver-education-> and Arrival Dismissal fliers <https://www.mass.gov/info-details/safe-routes-to-school-education#student-safety-during-arrival-dismissal-> to parents/guardians. Each are available in nine languages.
- Consider educating families on dogs on school property, using the designated circulation pattern to exit the rear driveway, parking only in designated areas, seat belt use, student front seat use, cell phone use, jaywalking by students and staff, closing vehicle doors before advancing, and the proper side to egress a vehicle.
- Consider educating families on the proper use of pedestrian plazas and not to block school sidewalks and entrances.
- Consider educating students and families not to cut across the grassy area to the right of the school. By doing so, the Crossing Guard and crosswalks are not used, and many students walk between the queued vehicles.

Recommendations

Engineering

1. M.U.T.C.D. “NO IDLING” signage is suggested throughout as most family vehicles idled. Consider joining the MassDEP Green Team to qualify for free signage: <https://thegreenteam.org/>
2. Consider removing the non-ADA crosswalk on Westwood Street.
3. Consider installing reflective crosswalk signage on Westwood and Fox Hill Road. Fox Hill Road signage should read “CROSSWALK AHEAD.”
4. Consider adding a crosswalk across the rear driveway entrance.
5. Consider adding informational (“PICK UP/DROP AREA AHEAD”) and regulatory (“ONE WAY”) signage to the rear driveway entrance and valet area (“PICK UP/DROP OFF AREA”).
6. Consider installing a sidewalk or fog line for the valet area on the rear driveway near the playground. The fog line could be a signature color identifying this area.
7. Consider installing a more visible gate mechanism or chain across the entrance of the rear driveway. Couple this with informational signage.
8. Consider installing a crosswalk at the end of the rear driveway for playground access.
9. Consider using regulatory signage, such as “BUSES ONLY DURING X HOURS,” to identify the bus lane and van area on the front school driveway. Signage should be placed such that access is open to the parking lot but not the bus/van area. Painting the curbing yellow will also make these areas stand out.
10. If the vans continue to drop off in the rear of the LABBB building, appropriate signage is needed to identify this area.
11. Consider removing a few parking spaces on the corners of the parking lot in order to better accommodate the bus turning radius.
12. Consider installing “NO DOGS ALLOWED ON SCHOOL PROPERTY” signage to replace the current informational signage and remove the “DOG WASTE STATION” sign near the playground.
13. Consider replacing all faded signage, pavement markings, and empty poles.

Recommendations

Engineering

14. Consider replacing signage that includes both informational and regulatory directives.
15. Consider installing updated school zone signage.
16. Consider improving the interface between the parking lot and the front school driveway with pavement markings, signage (“NO LEFT TURN” and “STOP”) and tactical urbanism techniques to better define the space. This intersection is nondescript of vehicle right of way for two-way traffic.
17. Consider installing “NO PARKING HERE TO CROSSWALK” or by painting shark’s teeth along all crosswalks in the school zone. This will improve pedestrian line-of-sight and crosswalk encroachment. As a temporary measure, consider placing two cones abutting all school crosswalks in order to prohibit queuing in these locations.
18. Consider installing a fog line on Fox Hill Road. In some places, the sidewalk berm is almost flush with the sidewalk.

SRTS Program Recommendations

Education

1. Require all staff working arrival dismissal to wear reflective vests
2. Offer pedestrian and bike safety training.
3. Integrate pedestrian and bike safety lesson plans into the school curriculum.
4. Incorporate SRTS-provided information about walking and biking to school in communications with parents/guardians.
5. Distribute SRTS safe driving and arrival dismissal information.
6. Add SRTS policy language to existing wellness and/or transportation policies.

Engagement

1. Develop an arrival dismissal plan that includes a map, text, and school hours. Include it on the school website.
2. Provide crossing guards with SRTS training guide, Stop Paddles, and video resources.
3. Facilities staff can receive free “No Idling” signs via the MassDEP Green Team.
4. Consult MA Complete Streets website for strategies to improve accessibility for all modes.
5. Ensure that all bus drivers follow the rules of the road and use of school bus flashing lights.
6. Request periodic police checks to enforce posted regulatory signage.

Evaluation

1. Conduct Arrival/Dismissal Observation to gain overview of current school conditions and travel mode split.
2. Conduct a Parent/Guardian Travel Survey to gauge how and where students travel to/from school.
3. Request a walkshed map based on spreadsheet of (anonymous) student addresses and zip codes. This is a useful step in selecting potential walking/biking routes.

Equity

1. Incorporate resources and opportunities for students of all abilities to participate in MA SRTS.
2. Provide SRTS resources in different languages.
3. Reach out to key municipal, parent/guardian, community, and school stakeholders to create sustainable change.
4. Review the SRTS Sustainability and Equity documents for ways to make your SRTS program more equitable and sustainable.

Encouragement

1. Participate in annual flagship events.
2. Create unique activities to get students walking and biking (e.g., Walking Wednesdays, Walking School Buses, Park and Walk). Students can record their progress using the SRTS-provided Walk Across America and Walk Across Massachusetts maps.
3. Establish a frequent walker/bicyclist program that rewards students who walk/bike to school a certain number of times. Rewards may be stickers or extra recess.
4. Support student participation in the SRTS Annual Yard Sign Contest.
5. Establish a SRTS Task Force.

Engineering

1. Review the “Pop-Up Projects for Safe Routes to School” <https://www.mass.gov/info-details/safe-routes-to-school-education#pop-up-projects-for-safe-routes-to-school> guide for ideas on quick build low-cost and no-cost tactical urbanism projects.
2. Apply for a “Signs and Lines” project grant (when available) to help improve signage and pavement markings on and around your school campus.
3. Apply for a SRTS Infrastructure Grant (when available) to support larger projects (\$100,000 to \$1,000,000) including sidewalks, signage, and pavement markings to improve active transportation safety.

Resources

Massachusetts Safe Routes to School

<https://www.mass.gov/safe-routes-to-school>

Safe Routes to School National Partnership

The Safe Routes Partnership is a national nonprofit organization working to advance safe walking and rolling to and from schools and in everyday life, improving the health and well-being of people of all races, income levels, and abilities, and building healthy, thriving communities for everyone.

<https://www.saferoutespartnership.org/>

MassDOT Municipal Resource Guide for Walkability

MassDOT created this Guide to help municipalities address some of the most common questions and challenges regarding walkability.

https://www.mass.gov/files/documents/2018/09/17/MunicipalResourcesGuideForWalkability_2018-08-24.pdf

MassDOT Complete Streets Program

The MassDOT Complete Streets Funding Program provides technical assistance and construction funding to eligible municipalities. Eligible municipalities must pass a Complete Streets Policy and develop a Prioritization Plan. All Program news, guidance, and registration information are available through an online Portal.

<https://www.mass.gov/complete-streets-funding-program>

Manual on Uniform Traffic Control Devices

The Federal Highway Administration's guide to traffic control devices for all public streets, highways, bikeways, and private roads open to public travel.

<https://mutcd.fhwa.dot.gov/>

Traffic Safety Grants

<https://www.mass.gov/service-details/traffic-safety-grants>

Mass DEP Green Team

THE GREEN TEAM is an interactive educational program that empowers students and teachers to help the environment through waste reduction, recycling, composting, energy conservation and pollution prevention. Participating classes receive certificates of recognition and are eligible to win awards.

<https://thegreenteam.org/>

Massachusetts Anti-Idling Law

This state law outlines that any vehicle idling for more than five minutes is excessive. Many Massachusetts communities have stricter local by-laws.

<https://malegislature.gov/laws/generallaws/parti/titlexiv/chapter90/section16a>

Massachusetts Handsfree Law

<https://malegislature.gov/laws/generallaws/parti/titlexiv/chapter90/section12a>

Massachusetts Bicycle Laws

These laws require following rules of the road and helmet use for youth aged 16 or younger.

<https://www.mass.gov/info-details/massachusetts-law-about-bicycles#massachusetts-laws->

Massachusetts School Zone Law

The school zone is defined as a 300-foot radius of the real property comprising a school property.

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXV/Chapter94c/Section32j>

MassTrails Grants

MassTrails provides matching grants to communities, public entities and non-profit organizations to design, create, and maintain the diverse network of trails, trail systems, and trails experiences used and enjoyed by Massachusetts residents and visitors. Applications are accepted annually for a variety of well-planned trail projects benefiting communities across the state.

<https://www.mass.gov/guides/masstrails-grants>

Appendix A: Arrival Observations

- 7:30 a.m. - Seven family vehicles dropped off on the school's front driveway and rear driveway. Students exited from both sides of their vehicles.
- 7:37 a.m. - The first family vehicle queued at the valet end of the rear driveway.
- 7:40 a.m. - Four family vehicles queued in the school's rear driveway. Most vehicles idled excessively. Two bikers wearing helmets approached from across the grassy space to the right of the school.
- 7:45 a.m. - Seven family vehicles queued in the school's rear driveway. One van unloaded at the PreK entrance without its flashers. Solar glare was observed as one approached the school on Westwood Street. One vehicle drove through the bus lane to the parking lot, circled the lot to the Westwood queue, left the driveway queue, and circled through the bus lane again before departing.
- 7:50 a.m. - Eleven family vehicles queued in the school's rear driveway and three vans queued to the rear of the LABBB building. Two buses unloaded at the school's front entrance. The Crossing Guard arrived on Westwood Street. Two walkers arrived. One family member walked a student's bike and helmet to the bike rack.
- 7:55 a.m. - Fifteen family vehicles queued in the school's rear driveway. Staff began the valet service and man the entrance to the rear driveway but did not wear reflective vests. Four family vehicles parked in the parking lot and 22 walkers arrived. One dog was observed.
- 8 a.m. - Twenty-eight family vehicles queued in the school's rear driveway. One van and two family vehicles dropped off to the rear of the LABBB building. One of these family vehicles was left running as the driver entered the building. Four family vehicles parked in the parking lot and 14 walkers arrived.
- 8:05 a.m. - Twenty-three family vehicles queued in the school's rear driveway. Six walkers, two bikers, and one van arrived. A school bus used its flashers to pick up a passenger at the intersection of Fox Hill Road and Westwood Street. Three family vehicles parked in the parking lot.
- 8:10 a.m. - Staff closed the rear school driveway entrance with a rope. One van dropped off in the front of the LABBB building without student supervision and exited by making a U-Turn, halting oncoming traffic. The valet staff left once the last vehicle departs. Two family vehicles dropped off at the front entrance with both students egressing from the driver's side of their vehicles.
- 8:17 a.m. – The last van arrived in the front of the LABBB building, unloaded with student supervision, and made a U-Turn to exit. One family vehicle parked in the lot and walked their student into the building.

Appendix B: Dismissal Observations

- 1:30 p.m. - Two vans queued in front of the LABBB building. Seven family vehicles queued on Westwood Street and four on Fox Hill Road. All vehicles excessively idled. The entrance to the rear driveway is closed.
- 1:40 p.m. - One family vehicle queued on Westwood Street and two on Fox Hill Road. Four family vehicles picked up students at the front entrance and none followed the circulation pattern to exit. Two family vehicles parked in handicapped spots without placards. Some family vehicles park in non-designated parking areas.
- 1:45 p.m. - Three family vehicles queued on Westwood Street and two on Fox Hill Road.
- 1:50 p.m. - Two vans loaded without using their flashing lights and performed U-Turns to exit. Another van arrived.
- 1:55 p.m. - One van queued in front of the LABBB building. Most vans went into reverse in order to get closer to the curb.
- 2 p.m. - Two vans and two family vehicles queued in front of the LABBB building. Six family vehicles queued on Westwood Street and eight on Fox Hill Road. The Westwood Street queue extended past the trail sign. All departing vans made U-Turns with two needing to make a three-point turn to exit.
- 2:05 p.m. - Four family vehicles queued on Westwood Street and six on Fox Hill Road. The Westwood queue extended past the line of sight and the Fox Hill Road extended past Summer Street. Five walking families arrived and waited near the rear driveway entrance. Two family vehicles leave the Westwood Street queue and parked in the parking lot. Staff arrived without reflective vests and opened the rear driveway for the family vehicle queue. Staff acted as both a Crossing Guard for passage across the rear driveway entrance at Westwood Street and to control the quantity of vehicles in the rear driveway queue. One van used the opposite side of the street to pass the Fox Hill Road queue. Two vans queued in the school bus lane at the front entrance.
- 2:09 p.m. - The rear driveway was full of family vehicles. This queue continued to spill onto Westwood Street, reaching Fox Hill Road.
- 2:10 p.m. – One bus sat in the Westwood Street queue while another used the opposite side of the street to pass the Fox Hill Road queue. The Crossing Guard arrived. One family vehicle entered the queue on Fox Hill Road. Family vehicles began to leave after having picked up their students from the rear driveway valet area.

Appendix B: Dismissal Observations

- 2:14 p.m. - Sixty-one walkers were dismissed, with most staying on the Westwood Street sidewalk and some cutting across the grassy area to the right of the school to reach Fox Hill Road. Most walkers headed for the Fox Hill Road neighborhood.
- 2:15 p.m. - Four buses arrived. Staff used walkie talkies to announce the bus numbers. Some family vehicles cut through the parking lot instead of following the perimeter designated path to exit the valet area. Buses loaded using their flashers.
- 2:20 p.m. - Eight family vehicles queued on Westwood Street and seventeen on Fox Hill Road. Two buses arrived.
- 2:22 p.m. - The last family vehicle entered the rear driveway. One student ran across the bus lane to reach the parking lot. One van parallel parked in the handicapped spots, students used the crosswalk to reach the van, and it loaded without using its flashers.
- 2:25 p.m. - The last bus arrived, and the last family vehicle and all buses departed. The Crossing Guard departed.