MASSACHUSETTS Safe Routes to School
Mass.gov/MassDOT/SafeRoutes

massDOT
Massachusetts Department of Transportation

MASafeRoutesSurvey.org
Survey Report
Melrose - Melrose High
June 12, 2017

Introduction

This report will help your school plan safe transportation options for all students. It contains the results of a survey conducted at Melrose - Melrose High in May 2017. Participating parents provided information about how students travel to school and their approximate home location. If your school is interested in

- reducing traffic congestion,
- encouraging walking and biking,
- increasing safety, or
- tracking progress towards community goals,

then this information can help you identify the right strategies and best opportunities for new projects and investments.

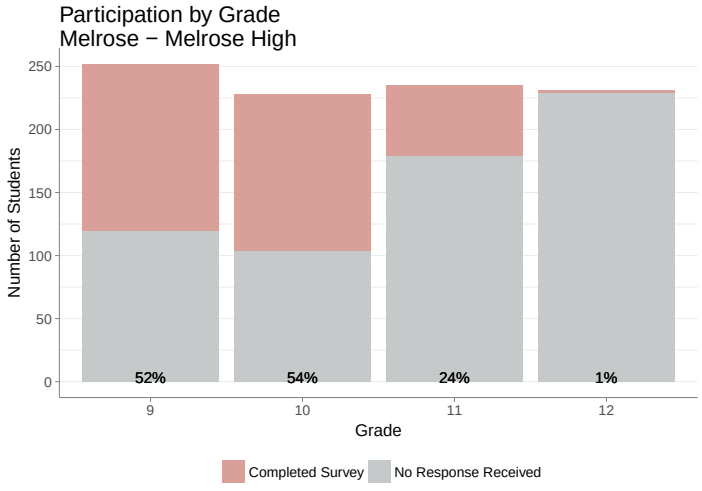
How to Read This Report

This report measures distance to school in terms of walksheds and bikesheds. A *walkshed* includes all the homes within a certain distance to school, based on mapped sidewalks, pedestrian paths, and low volume roadways. We define walksheds for 0.5, 1.0, and 1.5 mile walking distances to school. A *bikeshed* of 2.0 miles also includes multi-use paths and on-road cycle facilities, where mapped. For a map of the walksheds and bikesheds, see the last page of the report. Where "walkshed" is used alone, it always includes the bikeshed of the same distance.

Survey Statistics

- Survey Dates: 2017-05-24 to 2017-06-12
- Responses Received: 314
- School-wide Participation Rate: 33%

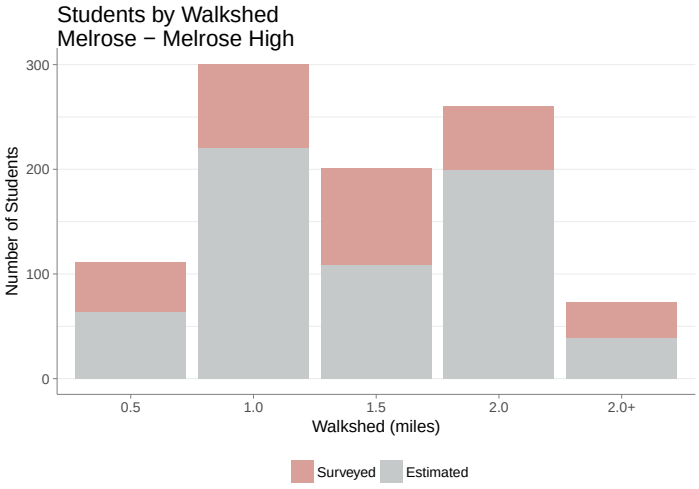
The figure below shows the survey participation rate for each grade. Total enrollment is based on the 2015-2016 school year, per Department of Elementary and Secondary Education. Survey responses from each grade were used to estimate the distance and travel choice for the entire grade.The higher the participation rate, the more reliable the survey results are.



Student Proximity

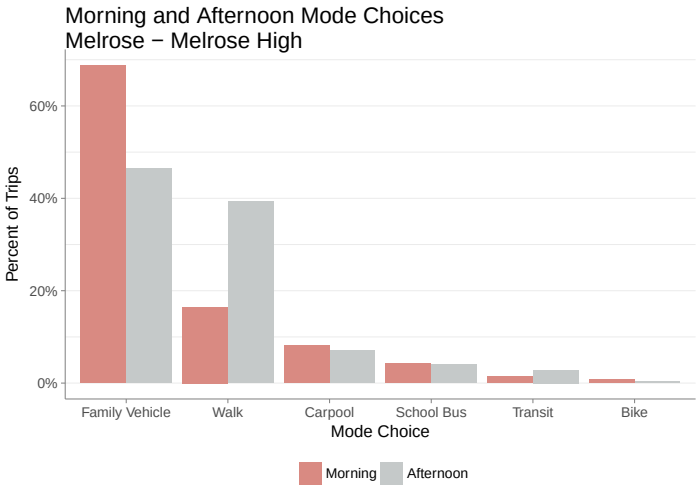
- Average Distance to School: 1.9 miles
- Within 1.0 Mile Walkshed: 44%
- Within 2.0 Mile Bikeshed: 92%

The chart and table below show the number of students surveyed and the total estimated students by walkshed. Student totals by walkshed are estimated assuming that the proportion of surveyed students within each walkshed and grade is proportional to the enrolled students within each walkshed and grade.

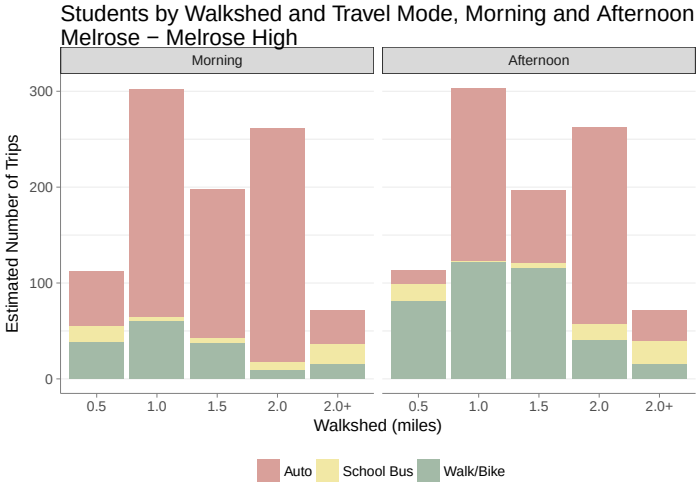


Students By Walkshed

Students	0.5	1.0	1.5	2.0	2.0+
Estimated	111	301	200	260	73
Surveyed	47	80	92	61	34
Percent	12%	32%	21%	28%	8%



Walk share is 17.3% in the morning and 39.7% in the afternoon. The auto share is lower in the afternoon, indicating that as many as 30.6% of those who are driven to school in the morning get home by other means in the afternoon.



Student Travel Choices

- Walk\Bike Trips Within One Mile: 36%
- Walk\Bike Trips Overall: 29%
- Family Vehicle\Carpool Trips Overall: 65%
- School Bus Trips Beyond One Mile: 7%

The chart below shows what percent of trips are made by each travel mode in the morning and afternoon.

Travel Mode, Morning and Afternoon

	0.5	1.0	1.5	2.0	2.0+
Morning					
Auto	57	237	155	243	35
School Bus	16	4	4	9	21
Walk	39	61	38	10	16
Afternoon					
Auto	14	179	76	205	32
School Bus	18	2	4	16	25
Walk	81	122	117	41	15

Greenhouse Gas Emissions (GHG)

- Per-student GHGs within 1 mile: 117 kg
- Per-student GHGs beyond 1 mile: 303 kg

Transportation generates more than one-third of the total greenhouse gas (GHG) emissions produced in Massachusetts. Increasing the number of trips made by walking or biking is a critical step toward achieving state goals for GHG reduction. The following table shows the estimated annual GHG emissions (in kilograms of CO2) for students being driven to school, by walkshed. (It does not include emissions from school buses.) For comparison, the average Massachusetts household drives about 19,000 miles per year, generating approximately 8,000 kg of GHG emissions.

Buffer	Total (kg)	Per Student	Percent
0.5	5938	42	3%
1.0	38993	162	18%
1.5	80926	292	38%
2.0	89628	487	42%
2.0+	0	0	0%

How Your School Compares

The table below compares your school's actual walk \bike share to an expected value reflecting average walking and biking rates across Massachusetts. The expected value accounts for student grade levels and proximity to school, and is based on more than 6,000 surveys collected statewide since 2011.

Actual and Expected Walk\Bike Share

	0.5	**1.0**	**1.5**	**2.0**	**2.0+**
Actual	53%	30%	39%	10%	22%
Expected	58%	40%	15%	4%	10%

Benefits of Walking and Biking

Shifting some school commutes from auto to walking or biking can create real benefits for your community. This section estimates the traffic, physical activity, and GHG benefits that might result from increasing walking and biking. It can help you make the case for investing in Safe Routes to School programs and to track your progress over time.

If your school achieved the "expected" values described above based on grade specific averages for each walkshed, it would:

- Reduce number of daily car trips to and from school by 69.
- Provide an additional 28 minutes of physical activity for each newly participating student.
- Reduce annual auto-generated GHG emissions from between 5,838 kg to 9,899 kg, or 2.7% to 4.6%.