

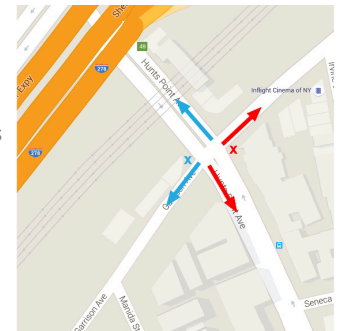
Traffic Tracking Guide

1. IDENTIFY GOAL

Begin by discussing your goal. For example, do you want to compare air pollution levels between road intersections? Do you want to establish what traffic levels are along a busy road in front of a neighborhood school? Do you want to know how many trucks are entering and exiting a last mile delivery warehouse? Knowing your goal, you can then select an appropriate location or locations and times of day and days of the week for monitoring air quality and counting vehicles.

2. CHOOSE LOCATION

Choose a designated location or locations where you'll count vehicles and record mobile AirCasting sessions. If required, get permission to be on the designated premises before hand. Once you've selected locations, you need to decide where you'll stand and count vehicles. Most road intersections require at least two people to get an accurate vehicle count (only one of whom needs to wear an AirBeam and collect air quality data). The included figure provides an example of where you might stand when counting traffic at an intersection. The red X marks the standing location of person 1. Person 1 will count traffic traveling in the direction of the red arrows. The blue X marks the standing location of person 2. Person 2 will count traffic traveling in the direction of the blue arrows. Note how vehicles are only counted as they exit the intersection.



Next, select times of day and days of the week for counting and monitoring. Depending on your goal, you may select the morning and evening rush-hours, school drop-off and dismissal times, or times during which trucking activity at the facility of interest peaks. Repeated sampling across time will be necessary to improve the representativeness of your traffic counts and air quality measurements.

3. SUPPLIES

Review your plan and equip yourself accordingly.

Vehicle Counting Checklist:	AirBeam Checklist:	Personal Checklist:
<ul style="list-style-type: none"> <input type="checkbox"/> Traffic Counting Sheet <input type="checkbox"/> Clipboard <input type="checkbox"/> Pencils <input type="checkbox"/> Stopwatch <input type="checkbox"/> Counting clicker (optional) 	<ul style="list-style-type: none"> <input type="checkbox"/> Fully charged AirBeam <input type="checkbox"/> Lanyard, clip, or carabiner (for hands free AirBeam operation) <input type="checkbox"/> Fully charged iOS or Android device 	<ul style="list-style-type: none"> <input type="checkbox"/> Jacket <input type="checkbox"/> Sunscreen <input type="checkbox"/> Hat <input type="checkbox"/> Folding Chair <input type="checkbox"/> Comfortable Shoes <input type="checkbox"/> Bottled Water

4. CALCULATING TRAFFIC COUNTS

Depending on your goal and the time you have available, you can crunch your traffic data myriad ways. If you want to calculate the number of vehicles traveling through an intersection per hour, simply add the count from Person 1 to the count from Person 2 for the designated hour. If you're only sampling for half an hour but want to generate hourly counts, you can extrapolate from the half hour data, multiplying it by 2. If you want to calculate the percentage of truck traffic to overall traffic you'll divide the truck count by the total traffic count for cars+trucks+buses. You may also elect to just count a single class of vehicles, like trucks, or a specific type of vehicle within the class, like garbage trucks.

If you'll be monitoring over multiple days or weeks, designate someone to collect the traffic counting sheets and enter them into a spreadsheet for analysis along with the AirBeam data. This will help you keep track of your data, perform calculations, and determine whether there is a correspondence between higher traffic counts and higher particle pollution levels.

5. LEARN MORE

To learn more about how community based organizations have used traffic counting combined with air quality monitoring to clean up the commercial waste sector in New York City [download and read this report from Transform Don't Trash NYC.](#)

Traffic Tracking Worksheet

Name: _____

Date: _____

Location: _____

Draw a map and label where you are recording data.

Draw and label the roadways. Use an "X" to mark the locations where the traffic counters are standing or sitting. Draw arrows that correspond to each lane of traffic and confirm that all your traffic counters understand which lanes of traffic they're counting. Remember, if you're counting vehicles at an intersection, only count a vehicle when it exits the intersection, not when it enters.

Track time while tallying vehicles.

Before you get started, fill in the Time Frame fields so you can breakdown the traffic count by the half-hour or hour. Use a stopwatch to remind yourself when it's time to move your count to the next row. Use tally marks to keep track of the vehicle count. When you're done, sum the tallies to a number and circle the number.

Time Frame (ex: 7:00 to 7:30)	Large Trucks (tractor trailer and freight trucks)	Buses (transportation buses)	Small Trucks (delivery trucks, step vans, box trucks)	Cars/SUVs (cars, SUVs, pick-up trucks)