

WHEREAS: Collisions with large vehicles are disproportionately likely to result in bicycle and pedestrian fatalities¹; and

WHEREAS: Researchers from the U.S. Department of Transportation's Volpe Center in Kendall Square recently worked with the cities of Boston and Cambridge, among others, to identify effective mechanisms for deploying enhanced safety measures such as truck side guards and blind-spot mirrors to reduce cyclist and pedestrian fatalities²; and

WHEREAS: Both Boston and Cambridge have recently implemented programs to expand the deployment of such enhanced safety measures³; and

WHEREAS: A mandatory side guard program in the United Kingdom resulted in a 61 percent reduction in cyclist fatalities and a 20 percent reduction in pedestrian fatalities in side-impact collisions with trucks⁴; and

WHEREAS: It is in the interests of the City of Somerville to establish clear and effective requirements for the installation of enhanced safety measures on certain city vehicles and vehicles used by vendors contracting with the city; **NOW THEREFORE BE IT**

ORDERED: That the following “Ordinance to Safeguard Vulnerable Road Users” is established to increase bicycle and pedestrian safety.

¹ http://ntl.bts.gov/lib/59000/59300/59356/Cambridge-Volpe_Safer_Truck_2016.pdf and http://ntl.bts.gov/lib/54000/54700/54711/Truck_Sideguards_NYC.pdf

² Id.

³ <http://www.cityofboston.gov/news/default.aspx?id=14853> and <https://www.bostonglobe.com/metro/2015/05/22/cambridge-install-side-guards-city-trucks/S3GBYqJWkwkeZisQwfaeLJ/story.html>

⁴ <https://www.volpe.dot.gov/our-work/truck-side-guards-resource-page>

Ordinance To Safeguard Vulnerable Road Users

1. Purpose

Vehicles covered by this ordinance shall be so constructed and/or equipped as to offer effective protection to vulnerable road users against the risk of falling under the sides of the vehicle and being caught under the wheels, and against the risk of being struck due to limited visibility from the operator's viewpoint and the lack of side-visible turn signals.

2. Definitions

The words defined in this ordinance shall have the meanings set forth below whenever they appear in this section unless the context in which they are used clearly requires a different meaning, or a different definition is prescribed for a particular paragraph or provision.

- (i) *Approval of a vehicle* means the approval of a complete vehicle type with regard to its lateral protection.
- (ii) *City* means the City of Somerville.
- (iii) *Conventional cab* means a large vehicle configuration in which at least more than half of the engine length is forward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length.
- (iv) *Convex mirrors* mean door-mounted, wide-angle mirrors that enable the operator to see objects along the left and right sides of the truck in accordance with Section 5(b).
- (v) *Cross over mirrors* and *cross-view mirrors* are equivalent terms that mean either fender- or hood-mounted mirrors that enable the operator to see objects in the area immediately in front of a conventional cab hood in accordance with Section 5(c) and optionally also on the left and right sides of the truck cab.
- (vi) *Department(s)* shall mean those City of Somerville Departments, Authorities, Agencies, Commissions and any other instrumentality acting on behalf of another ("Awarding Authorities") under the supervision of the Mayor or persons appointed by him/her.
- (vii) *Contract* means the contract between a Vendor and a Department to do any work or to make any purchase.
- (viii) *Gross vehicle weight rating (GVWR)* means the gross vehicle weight rating established by a manufacturer when applied to a motor vehicle, trailer, semi-trailer or semi-trailer unit, including the gross combination weight rating, if any, when applied to a semi-trailer unit or to a tractor-trailer combination, pursuant to MGL Chapter 90, Section 1.
- (ix) *Large vehicle* means any Class 3 or above motor vehicle, trailer, semi-trailer or semi-trailer unit, with a gross vehicle weight rating (GVWR) exceeding 10,000 pounds, except an ambulance, fire apparatus, low-speed vehicle with maximum speed under 15 mph, or agricultural tractor.

- (x) *Lateral protective device, side underride guard, and side guard* are equivalent terms that mean an apparatus installed on large vehicles between the front and rear wheels to help prevent injuries to vulnerable road users, particularly from falling underneath the vehicle.
- (xi) *Mayor* shall mean the Mayor or persons designated by him/her.
- (xii) *Otherwise qualified* means any Vendor that meets all other criteria for the award of a Contract.
- (xiii) *Vulnerable road users* mean pedestrians, bicyclists, wheelchair users, moped riders, motorcyclists, maintenance, utility, police, and emergency first responder workers, or other persons using the road in such a way that they are liable to fall under the sides of the vehicle or to be caught under the wheels.
- (xiv) *Vendor* means any firm, vendor, contractor, or supplier of goods and/or services to the City of Somerville, and any of its agents or subcontractors.

3. Requirements

When any officer or board in charge of a Department or other awarding agency of the City issues requests for proposals or other invitations for bids to do any work or make any purchase, such request for proposal or other invitation for bids must require any response to contain a representation acknowledging that a prospective Vendor has installed (or will install prior to commencing work for the Contract) side guards, crossover mirrors, convex mirrors, side-visible turn signals, and appropriate warning signage, in accordance with this ordinance, on all large vehicles it uses or will use within the City of Somerville in connection with the Contract.

4. Policy implementation

Every Large Vehicle used by a Vendor in connection with a Contract must be equipped with convex mirrors, side-visible turn-signals, decals, and side guards affixed to the sides of such vehicles in a manner consistent with this section and with rules and regulations further promulgated by the Somerville Inspectional Services Department, the Somerville Police Department, and the Office of Strategic Planning and Community Development. Every Large Vehicle with a conventional cab configuration used by a Vendor in connection with a Contract shall furthermore be equipped with cross over mirrors. As future technical innovations to improve safety for vulnerable road users become available, the City will make efforts to test and update these requirements.

5. Technical specifications

(a) Lateral Protective Devices

Large vehicles must be constructed or equipped in such a way as to offer, throughout their length, effective protection to vulnerable road users against the risk of falling under the side of the vehicle and being caught under the wheels. This requirement will be considered satisfied either

1. If the vehicle is equipped with side guards in accordance with the requirements of the US Department of Transportation Volpe Side Guard Standard (the "Volpe Side Guard Standard," as further defined below);

2. If the vehicle is so designed and/or equipped at the side that, by virtue of its shape and characteristics, its component parts can be incorporated and/or regarded as replacing the side guards in accordance with the Volpe Side Guard Standard.

Components whose combined function satisfies the above requirements are considered to form a lateral protective device.

The Volpe Side Guard Standard is published by the US Department of Transportation as US DOT Standard DOT-VNTSC-OSTR-16-05 and is available at http://ntl.bts.gov/lib/60000/60000/60063/Volpe_USDOT_side_guard_specification_final.pdf. It establishes that side guards shall allow for a maximum thirteen-point-eight (13.8) inch ground clearance, maximum thirteen-point-eight (13.8) inch top clearance; be up to four (4) feet in height; and have a minimum impact strength of four hundred and forty (440) pounds; achieve a smooth and continuous longitudinal (forward to backward) impact surface flush with the vehicle sidewall. Side guards may include rail style guards, provided that such rails shall be no less than four (4) inches tall and no more than eleven-point-eight (11.8) inches apart; and may incorporate other vehicle features such as tool boxes and ladders.

(b) Convex Mirrors

Large vehicles must be equipped with convex mirrors to enable the operator of the large vehicle to see all points on an imaginary horizontal line which:

1. Is three feet above the road.
2. Is one foot directly forward from the midpoint upon the longitudinal axis of the front of such large vehicle; and extends the full width of such large vehicle

(c) Cross-Over Mirrors

Large vehicles must be equipped with at least one crossover mirror on the front of the vehicle to enable the operator of any large vehicle with a conventional cab to see:

1. Any person or object at least three feet tall passing one foot in front of the vehicle.
2. The area from the front bumper to where direct vision is possible.

(d) Side-Visible Turn Signals

Large vehicles must be equipped with at least one turn signal lamp on each of the left and right vehicle sides that is visible from any point to the left and right of such large vehicle along the vehicle's full length.

(e) Safety Decals

Large vehicles must be equipped with a minimum of three (3) reflective safety decals on the rear and sides that warn pedestrians and cyclists of blind spots:

1. Decals should be "safety yellow" in color.
2. Decals should include language or images warning of the blind spot locations on the vehicle. The signage should warn of the hazard and advise other road users to take appropriate action, for example "Blind spot – Take Care".

3. Decals should be placed, when possible, on or near the side guards.

6. Compliance and enforcement

(a) Non-compliance with the provisions of this section by a Vendor shall be grounds for

- i. A fine of \$200 for the first offense on a Contract, escalating to \$500 for the second offense, and \$1000 for the third offense.
- ii. Termination of the Contract.

(b) This section shall be enforced by the Inspectional Services Departments Weights and Measures Division and the Somerville Police Department. The Somerville Police Department and The Inspectional Services Department shall determine non-compliance with the provisions of this section and any applicable regulations and may make recommendations, if any, to the contracting Department

(c) The Inspectional Services Department shall issue, for a Vendor's large vehicles, a compliance certification through a vehicle inspection of convex mirrors, crossover mirrors, lateral protective devices, side-visible turn signals, and decals prior to the date Vendor begins work on a Contract. A fee to cover the costs associated with inspection will be determined by the Commissioner of the Inspectional Services Department and passed on to the Vendor.

(d) Vehicle compliance will be certified with a sticker denoting the year of inspection. Inspections must be updated Biennially. Non-compliant vehicles must be re-inspected prior to being used by a Vendor in connection with a Contract.

(e) Inspectional Services Department shall issue an annual report to be filed with the Mayor and the City Clerk and transmitted by the Clerk to the Board of Aldermen on the actions undertaken by the Inspectional Services Department on enforcement of this ordinance no later than May 31st of each year. The annual written report shall include, but not be limited to, the following items for the twelve (12) month period prior to the report's due date:

- i. The number of vehicles this ordinance applied to
- ii. The total number of inspections performed by inspectors and any subsequent violations of this ordinance
- iii. Evaluation of safety performance on equipped vehicles from Somerville PD reports of incidents.

7. Severability

The provisions of this section are severable and if any provision, or portion thereof, should be held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such unconstitutionality or invalidity shall not affect the remaining provisions, which shall remain in full force and effect.

8. Effective date

(a) This ordinance shall take effect one hundred and eighty days after passage and shall apply to all new Contracts awarded and to all renewal terms of existing Contracts executed after that date, and this ordinance further applies to any subcontractors under such Contracts.

(b) City of Somerville fleet vehicles that are Large Vehicles as defined herein will be required to comply with the provisions of this section.

(c) The Inspectional Services Department, Somerville Police Department, and the Office of Strategic Planning and Community Development shall issue rules and regulations to implement the provisions of this section within ninety days of the date it takes effect.