

**HOUSE . . . . . No. 2230**

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**The Commonwealth of Massachusetts**

PRESENTED BY:

***Christine P. Barber and Mike Connolly***

*To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:*

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act to improve outdoor and indoor air quality for communities burdened by transportation pollution.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	DATE ADDED:
<i>Christine P. Barber</i>	<i>34th Middlesex</i>	<i>2/18/2021</i>
<i>Mike Connolly</i>	<i>26th Middlesex</i>	<i>2/18/2021</i>
<i>David M. Rogers</i>	<i>24th Middlesex</i>	<i>2/26/2021</i>
<i>Michelle M. DuBois</i>	<i>10th Plymouth</i>	<i>2/26/2021</i>
<i>Steven C. Owens</i>	<i>29th Middlesex</i>	<i>2/26/2021</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	<i>3/1/2021</i>
<i>Carmine Lawrence Gentile</i>	<i>13th Middlesex</i>	<i>3/1/2021</i>
<i>Ruth B. Balsler</i>	<i>12th Middlesex</i>	<i>3/3/2021</i>
<i>Alice Hanlon Peisch</i>	<i>14th Norfolk</i>	<i>3/4/2021</i>
<i>Lindsay N. Sabadosa</i>	<i>1st Hampshire</i>	<i>3/4/2021</i>
<i>Edward F. Coppinger</i>	<i>10th Suffolk</i>	<i>3/6/2021</i>
<i>Erika Uytterhoeven</i>	<i>27th Middlesex</i>	<i>3/8/2021</i>
<i>Frank A. Moran</i>	<i>17th Essex</i>	<i>3/16/2021</i>
<i>William J. Driscoll, Jr.</i>	<i>7th Norfolk</i>	<i>3/16/2021</i>
<i>Jay D. Livingstone</i>	<i>8th Suffolk</i>	<i>3/16/2021</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>	<i>3/16/2021</i>
<i>Patrick M. O'Connor</i>	<i>Plymouth and Norfolk</i>	<i>3/16/2021</i>

<i>Adrian C. Madaro</i>	<i>1st Suffolk</i>	<i>3/21/2021</i>
<i>Jack Patrick Lewis</i>	<i>7th Middlesex</i>	<i>3/21/2021</i>
<i>Jessica Ann Giannino</i>	<i>16th Suffolk</i>	<i>3/25/2021</i>
<i>Tommy Vitolo</i>	<i>15th Norfolk</i>	<i>4/1/2021</i>
<i>Michelle L. Ciccolo</i>	<i>15th Middlesex</i>	<i>4/1/2021</i>
<i>Thomas M. Stanley</i>	<i>9th Middlesex</i>	<i>4/1/2021</i>
<i>Edward R. Philips</i>	<i>8th Norfolk</i>	<i>4/8/2021</i>

**HOUSE . . . . . No. 2230**

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By Representatives Barber of Somerville and Connolly of Cambridge, a petition (accompanied by bill, House, No. 2230) of Christine P. Barber, Mike Connolly and others for legislation to improve outdoor and indoor air quality for communities exposed to transportation pollution. Public Health.

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**The Commonwealth of Massachusetts**

**In the One Hundred and Ninety-Second General Court  
(2021-2022)**

An Act to improve outdoor and indoor air quality for communities burdened by transportation pollution.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

1 SECTION 1.

2 Chapter 111 of the Massachusetts General Laws is hereby amended by adding the  
3 following definitions in section 1:-

4 “black carbon” shall mean those fine particles less than or equal to 2.5 micrometers in  
5 diameter (also known as soot).

6 “environmental justice population” shall mean the populations defined in section 62 of  
7 chapter 30.

8 “HEPA filtration” shall mean a high efficiency particulate arrestance filtration system  
9 that removes at least 99 percent of dust, pollen, mold, bacteria, and any airborne particles with a

10 size of 0.3-10.0 microns and is equivalent to a MERV 17, MERV 18, MERV 19, or MERV 20  
11 filter.

12 “MERV 16 filter” shall mean a minimum efficiency reporting value filtration system that  
13 removes at least 95 percent of dust, pollen, mold, bacteria, and any airborne particles with a size  
14 of 0.3-10.0 microns.

15 “particulate matter” or “particulates” shall mean a broad class of chemically and  
16 physically diverse substances that exist as discrete particles in air, including coarse, fine, and  
17 ultrafine particles.

18 “fine particulate matter” or “fine particulates” shall mean particulate matter less than or  
19 equal to 2.5 micrometers in diameter

20 “ultrafine particulate matter” or “ultrafine particulates” shall mean particulate matter less  
21 than or equal to .1 micrometers in diameter (.1 micrometers is equivalent to 100 nanometers)

## 22 SECTION 2.

23 Chapter 21A of the General Laws, as appearing in the 2016 Official Edition, is hereby  
24 amended by inserting after section 18A, as Section 18B, the following section:-

25 The department of environmental protection, in consultation with the executive office of  
26 energy and environmental affairs and department of environmental health, shall convene a  
27 technical advisory committee comprised of: residents of environmental justice populations living  
28 adjacent to major highways; academics with expertise in air monitoring, environmental health,  
29 air toxics, and air pollution; and labor representatives; for the purpose of identifying  
30 communities with high cumulative exposure burdens for toxic air contaminants and criteria

31 pollutants. The department shall convene the technical advisory committee by December 1,  
32 2021. The technical advisory committee shall identify the likely air pollution hotspots due to  
33 high concentrations of traffic-related air pollution throughout the Commonwealth that should be  
34 equipped with new or expanded air monitors and establish a definition of “air quality” and “air  
35 quality target pollutants” that includes, but is not limited to, consideration of criteria pollutants,  
36 black carbon, and ultrafine particulate matter.

37 By June 30, 2022, the department of environmental protection shall install and operate air  
38 monitors in at least eight air pollution hotspots that measure for at least one of the following  
39 pollutants: black carbon, nitrogen oxides, ultrafine particulate matter. By December 31, 2022, the  
40 department of environmental protection shall establish baseline air quality in air pollution  
41 hotspots. Data from the air monitors shall be publicly accessible and provide near-time  
42 information. The department of environmental protection shall work with residents of  
43 environmental justice populations to conduct participatory action research where residents can  
44 use mobile air sensors to expand the number of locations where residents can track air quality.

45 Once those hotspots are determined and the baseline data is established, the department  
46 of environmental protection shall set annual targets to decrease air quality target pollutants  
47 between 2023 and 2035 to improve the air quality in that location. Air monitoring data shall be  
48 collected every three years between 2023 and 2035 to measure progress toward achieving air  
49 quality target pollutants reduction targets and make such data publicly available. By December  
50 31, 2030, the department of environmental protection shall ensure that air pollution hotspots will  
51 have achieved air quality target pollutant concentrations that are at least 50 percent below the  
52 baseline in each hotspot and certify as such by publicly reporting compliance. By December 31,  
53 2035, the department of environmental protection shall ensure that air quality target pollutants

54 concentrations in hotspots are at least 75 percent below the baseline in each hotspot and certify  
55 as such by publicly reporting compliance.

56 The department of environmental protection, in consultation with the department of  
57 public health, shall promulgate regulations for conducting indoor/outdoor assessments  
58 monitoring exposure to ultrafine particulate matter and black carbon particulate matter  
59 concentrations present in the indoor air of existing and proposed buildings, based on the best  
60 available science about the health risks associated with ultrafine particulate matter and black  
61 carbon. The department of environmental protection's regulations shall at minimum set forth  
62 standard procedures for conducting air dispersion modeling, managing air pollution, monitoring  
63 ultrafine particulate matter, and estimating exposure.

64 The provisions of this chapter may be enforced by means of an action in the superior  
65 court seeking either injunctive relief, a declaratory judgment, a writ of mandamus or any  
66 combination thereof. No such action may be commenced without the plaintiff providing written  
67 notice of the violations of this chapter to defendants at least sixty (60) days prior to filing a legal  
68 action in superior court. All persons shall have standing to commence such enforcement actions.  
69 Reasonable attorneys' fees shall be recoverable by all substantially prevailing plaintiffs who seek  
70 relief under this section.

71 SECTION 3.

72 Section 26 of Chapter 111 shall be amended by adding the following section after the  
73 first paragraph:-

74 Boards of health shall require the installation of air filtration in eligible buildings located  
75 within 200 meters of a class 1, class 2 or class 3 roadway, marine terminal, airport, or a train

76 station or train yard serving diesel locomotives. Eligible buildings include: (i) existing residential  
77 public housing; (ii) existing residential private multifamily housing with more than two tenant-  
78 occupied units; (iii) existing public schools serving students of any age in grades kindergarten  
79 through twelfth grade; (iv) existing private schools schools serving students of any age in grades  
80 kindergarten through twelfth grade; (v) existing charter schools serving students of any age in  
81 grades kindergarten through twelfth grade; (vi) existing college and university buildings with one  
82 or more classrooms; (vii) existing commercial buildings with businesses that have five or more  
83 full-time employees; and (viii) existing correctional facilities, including prisons and jails. Boards  
84 of health shall require that air filtration be maintained throughout the building operation.

85           The department of environmental protection, in consultation with the department of  
86 public health, department of elementary and secondary education, and executive office of  
87 administration and finance, shall identify funding sources to provide incentives for eligible  
88 buildings that are schools, private housing, and public housing to cover the cost of installing air  
89 filtration equipment.

90           Air filtration equipment installed in eligible buildings that are schools, commercial  
91 buildings greater than 20,000 square feet, and residential buildings with more than 10 units shall  
92 be MERV 16 or other equipment that removes at least the same amount of ultrafine particulate  
93 matter as a MERV 16 filter.

94           SECTION 4.

95           Section 4A of chapter 15D of the General Laws, as so appearing, is hereby amended by  
96 adding the following paragraph:-

97 (e) The department of early education and care shall issue a new original license for a  
98 school age child care program, day care center, family day care system, group care facility or  
99 temporary shelter facility, family day care home or large family day care home which is not a  
100 part of a family day care system, as defined in section 1A of chapter 15D of the General Laws,  
101 only after the applicant has:

102 (1) carried out the indoor/outdoor assessment described in section 18B of chapter  
103 21A of the General Laws and the assessment results indicate the concentration of fine, ultrafine,  
104 and black carbon particles in indoor air is or will be mitigated to at least 80 percent below  
105 outdoor air concentrations; or

106 (2) installed a MERV 16 filter in mechanical ventilation system or standalone HEPA  
107 filtration or acceptable mitigation to be determined by the department.

108 (f) No license shall be issued until acceptable mitigation has been installed and is  
109 functioning.

## 110 SECTION 5.

111 Section 1A of chapter 40A of the General Laws, as so appearing is hereby amended by  
112 inserting before the definition of “permit granting authority” the following definitions:-

113 “construction” shall mean new construction or rehabilitation up to 50 percent of  
114 assessed value.

115 “hospital” shall mean any institution in the Commonwealth of Massachusetts,  
116 however named, whether conducted for charity or for profit, which is advertised, announced,  
117 established or maintained for the purpose of caring for persons admitted thereto and staying



118 overnight for diagnosis or medical, surgical or restorative treatment which is rendered within  
119 said institution; but shall not include clinics, day surgery centers, dialysis centers, or other such  
120 health care facilities which do not admit patients overnight.

121 “long-term care facility” shall mean any institution whether conducted for charity  
122 or profit which is advertised, announced or maintained for the express or implied purpose of  
123 providing three or more individuals admitted thereto with long-term resident, nursing,  
124 convalescent or rehabilitative care; supervision and care incident to old age for ambulatory  
125 persons; or retirement home care for elderly persons. Long-term care facility shall include  
126 convalescent or nursing homes, rest homes, and charitable homes for the aged.

127 “particulate matter mitigation” shall mean strategies, structural and nonstructural,  
128 that verifiably reduce indoor ultrafine particle levels by 80 percent, relative to outdoor levels.

129 “publicly funded” shall mean any entity or institution which receives federal, state  
130 or municipal monies, grants, and/or subsidies.

131 “publicly subsidized” shall mean any project receiving any form of direct funding,  
132 loan, loan guarantee, tax credit, TIF funding, publicly bonded funds, or property tax incentives,  
133 issued or granted by any public or quasi-public entity.

134 “school” shall mean any public or private institution primarily engaged in the  
135 education of persons aged 18 years and younger. This definition does not include institutions of  
136 higher education.

137 SECTION 6.

138 Section 94 of chapter 143 of the General Laws, as so appearing, is hereby amended by  
139 inserting the following paragraphs after section (r):-

140 (s) No permit granting authority shall grant a building permit for any proposed  
141 residential development, hospital, school, long-term care facility, school aged child care  
142 program, day care center, family day care home or large family day care home which is not a  
143 part of a family day care system, family day care system, or group care facility or temporary  
144 shelter facility as defined in section 1A of chapter 15D of the General Laws unless:

145 (a) the owner or applicant carries out an indoor/outdoor particulates assessment  
146 consistent with the regulations adopted pursuant to section 18B of chapter 21A of the General  
147 Laws, and the assessment results indicate that the concentration of ultrafine particulate matter  
148 and black carbon is or will be mitigated to at least 80 percent below outdoor concentrations; or

149 (b) the owner or applicant has installed a MERV 16 filter in the building's mechanical  
150 ventilation system.

## 151 SECTION 7.

152 Subsection a of section 6 of chapter 70B of the General Laws, as so appearing, is hereby  
153 amended by inserting after subparagraph (6) the following paragraph:-

154 (7) If the school project includes structures, apart from parking structures and accessory  
155 structures, as defined in Section 21 of Chapter 17 of the General Laws or a train station or train  
156 yard serving diesel locomotives, the applicant shall:

157 (a) carry out the indoor/outdoor particulates assessment described in section 18B of  
158 chapter 21A of the General Laws and the assessment results indicate that the concentration of

159 ultrafine particulate matter and black carbon is or will be mitigated to at least 80 percent below  
160 outdoor concentrations; or

161 (b) install a MERV 16 filter in the building's mechanical ventilation system.

162 SECTION 8.

163 Section 51 of Chapter 111 of the General Laws, as so appearing, is hereby amended by  
164 inserting after the second paragraph the following paragraph:-

165 No original license shall be issued to establish a hospital so as to place structures  
166 inhabited by patients unless the developer

167 (1) has carried out the indoor/outdoor particulates assessment described in section  
168 18B of chapter 21A of the General Laws and the assessment results indicate that indoor ultrafine  
169 particulate matter and black carbon levels are or will be mitigated to at least 80 percent below  
170 that of outdoor levels. In the case of a facility previously licensed as a hospital in which there is  
171 only a change in ownership, no such particulates assessment shall be required, in the absence of  
172 expansions or new construction; or

173 (2) has installed a MERV 16 filter in the building's mechanical ventilation system.

174 SECTION 9:

175 Section 71 of Chapter 111 of the General Laws, as so appearing, is hereby amended by  
176 inserting after the second paragraph the following paragraph:-

177 No original license shall be issued to establish a convalescent or nursing home,  
178 rest home or charitable home for the aged so as to place residential structures unless the  
179 developer:

180 (1) has carried out the particulates assessment described in section 18B of chapter  
181 21A of the General Laws and the assessment results indicate indoor ultrafine particulate matter  
182 and black carbon levels are or will be mitigated to at least 80 percent below those of outdoor  
183 levels. In the case of a facility previously licensed in which there is only a change in ownership,  
184 no such health risk assessment shall be required, in the absence of expansion or new  
185 construction; or

186 (2) has installed a MERV 16 filter in the building's mechanical ventilation system.

187 SECTION 10.

188 Section 127A of chapter 111 shall be amended to add the following section after the  
189 second paragraph:-

190 The department shall amend the state sanitary code to require mold remediation in  
191 residential buildings and school buildings with one or more classrooms for the purpose of  
192 eliminating moisture and airborne mold spores that have the potential to contribute to public  
193 health impacts for building occupants. Mold remediation shall be required if mold is detected in  
194 the interior or exterior of buildings or on structures located throughout a property containing  
195 residential buildings or school buildings with one or more classrooms.

196 Within 365 days of the effective date, the department shall modify its regulations  
197 establishing that the minimum standards of health for human habitation require an environment

198 free of mold. Local boards of health shall have the authority to enforce said code against  
199 building owners that fail to remove moisture and remove airborne mold spores. Local boards of  
200 health may use equipment, such as mold monitors, to detect the presence of moisture or mold.

201 SECTION 11.

202 (1) Notwithstanding any special or general law, rule or regulation to the contrary the  
203 board of building regulations and standards shall, commencing with the next edition of the  
204 International Energy Conservation Code adopted after January 1, 2022 under section 94 of  
205 chapter 143 of the General Laws, adopt, approve, codify, and publish mandatory building  
206 standards:

207 (a) for mandatory building standards for the installation of air filtration systems at a  
208 minimum of MERV 16; and

209 (b) do not permit the installation of gas stoves for use in residential construction.

210 (2) In proposing and adopting standards and regulations under this section, the Board of  
211 Building Regulations and Standards shall actively consult with interested parties, including, but  
212 not limited to, the Department of Public Health and the Department of Energy Resources.