Appendix F
Proposed Air Quality (E) Designations

Appendix F: Proposed Air Quality (E) Designations

A. INTRODUCTION

Under the proposed zoning, (E) Designations are proposed to avoid impacts on privately owned parcels on projected or potential development sites with respect to air quality (heating and hot water systems and potential industrial uses). A description of the requirements of those (E) Designations follows. A list of the sites, blocks, and lots affected by the (E) Designations is presented in **Tables F-1** through **F-2**.

B. PROPOSED (E) DESIGNATIONS

HEATING AND HOT WATER SYSTEM (E) DESIGNATIONS

Under the Proposed Actions, for each of the 84 projected and potential development sites (26 projected and 58 potential development sites) development sites that failed the heating and hot water system screening analysis, a refined analysis was performed utilizing the AERMOD dispersion model (see Chapter 15," Air Quality"). The results indicated that all but two of the 31 sites that failed the screening analysis for No. 2 oil also failed the refined analysis, and eight of 38 sites that failed the screening analysis for natural gas also failed the refined analysis.[1]

To preclude the potential for significant adverse air quality impacts on other projected and potential developments from the heating and hot water system emissions, an (E) Designation would be incorporated into the proposed rezoning for each of the affected sites. The descriptions and requirements of the proposed (E) Designations for these sites with respect to heating and hot water systems are presented in **Tables F-1 and F-2**.

Table F-1
(E) Designations for Projected Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
1	531	41, 42, 43, 44	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
3	522	41, 43	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.

[1] For the initial natural gas AERMOD runs some refinements were made for either stack locations or stack heights based upon the location and/or height of the receptor building.

Table F-1 (cont'd)
(E) Designations for Projected Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
6	227	6, 7	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 10 feet away from the lot line facing Grand Street, to avoid any potential significant air quality impacts.
7	227	1, 2	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
9	208	13, 19, 20	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water system stack(s) is located no greater than 47 feet away from the lot line facing Canal Street and at least 65 feet away from the lot line facing Centre Street, to avoid any potential significant air quality impacts.
15	510	33	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 30 feet away from the lot line facing Jersey Street, to avoid any potential significant air quality impacts.
22	476	1	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 223 feet above grade, and that heating and hot water system stack(s) is located at least 30 feet away from the lot line facing Watts Street, to avoid any potential significant air quality impacts.
23	475	61	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 98 feet above grade, to avoid any potential significant air quality impacts.
24	235	29	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
25	208	4	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 28 feet away from the lot line facing Centre Street, and ensure that heating and hot water system stack(s) is located at least 173 feet above grade, to avoid any potential significant air quality impacts.

Table F-1 (cont'd)
(E) Designations for Projected Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
26	208	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 165 feet above grade, to avoid any potential significant air quality impacts.
27	207	20	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
28	482	27, 28	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 113 feet above grade, to avoid any potential significant air quality impacts.
30	522	28	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 114 feet above grade, to avoid any potential significant air quality impacts.
31	496	40	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 40 feet away from the lot line facing Prince Street, and that heating and hot water systems stack(s) is located at least 125 feet above grade, to avoid any potential significant air quality impacts.
32	472	28	Any new residential and/or commercial development must ensure that heating and hot water stack(s) is located at least 93 feet above grade, to avoid any potential significant air quality impacts.

Table F-2
(E) Designations for Potential Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
AA	488	30	Any new residential and/or commercial development must be fitted with low NO_X (30ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water systems stack(s) is located at least 30 feet away from the lot line facing Thompson Street and at least 10 feet away from the lot line facing Broome Street, to avoid any potential significant air quality impacts.
B	515	7	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
BB	531	3	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
BBB	487	28, 29	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water system stack(s) is located at least 30 feet away from the lot line facing Broome Street, 10 feet away from the lot line facing West Broadway, and ensure that heating and hot water stack(s) is located at least 81 feet above grade, to avoid any potential significant air quality impacts.
CCC	475	1, 3, 4	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 10 feet away from the lot line facing Broome Street, and ensure that heating and hot water system stack(s) is located at least 95 feet above grade, to avoid any potential significant air quality impacts.
EE	516	34, 35	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water systems stack(s) is located at least 10 feet away from the lot line facing Prince Street, and ensure that heating and hot water stack(s) is located at least 103 feet above grade, to avoid any potential significant air quality impacts.
F	545	14	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water stack(s) is located at least 10 feet away from the lot line facing Astor Place, and ensure that heating and hot water stack(s) is located at least 165 feet above grade, to avoid any potential significant air quality impacts.
G	475	19	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.

Table F-2 (cont'd)
(E) Designations for Potential Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
GG	482	26	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems and ensure that heating and hot water stack(s) is located at least 15 feet away from the line facing Spring Street, to avoid any potential significant air quality impacts.
HH	499	6	Any new residential and/or commercial development must be fitted with low NOx (20 ppm) burners firing only natural gas for heating and hot water systems, **EITHER** ensure that the heating and hot water system stack(s) is located at least 21 feet away from the lot line facing Prince Street **OR** ensure that heating and hot water system stack(s) is located at least 168 feet above grade, to avoid any potential significant air quality impacts.
HHH	529	69	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, **EITHER** ensure that the heating and hot water system stack(s) is located at least 26 feet away from the lot line facing Broadway, and ensure that the heating and hot water system stack(s) is located at least 170 feet above grade **OR** ensure that heating and hot water system stack(s) is located at least 60 feet away from the lot line facing Broadway, and ensure that heating and hot water system stack(s) is located at least 165 feet above grade, to avoid any potential significant air quality impacts.
I	229	15	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
II	230	44	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems and ensure that heating and hot water stack(s) is located at least 10 feet away from the line facing Canal Street and at least 20 feet away from the line facing Greene Street, to avoid any potential significant air quality impacts.
JJ	513	33	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that the heating and hot water system stack(s) is located at least 10 feet from away the lot line facing Prince Street, and ensure that heating and hot water stack(s) is located at least 113 feet above grade, to avoid any potential significant air quality impacts.

Table F-2 (cont'd)
(E) Designations for Potential Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
K	514	4	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Prince Street, to avoid any potential significant air quality impacts.
MM	474	14	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Grand Street, and ensure that heating and hot water stack(s) is located at least 105 feet above grade, to avoid any potential significant air quality impacts.
N	530	31	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Bowery, to avoid any potential significant air quality impacts.
NN	514	24	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing West Houston Street, to avoid any potential significant air quality impacts.
O	474	7501	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Broome Street, and ensure that the heating and hot water system stack(s) is located at least 102 feet above grade, to avoid any potential significant air quality impacts.
OO	513	39	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 45 feet away from the lot line facing Mercer Street, and ensure that the heating and hot water system stack(s) is located at least 112 feet above grade, to avoid any potential significant air quality impacts.

Table F-2 (cont'd)
(E) Designations for Potential Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
P	514	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Prince Street, and ensure that the heating and hot water system stack(s) is located at least 100 feet above grade, to avoid any potential significant air quality impacts.
Q	516	36, 37	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing West Houston Street, and ensure that heating and hot water stack(s) is located at least 103 feet above grade, to avoid any potential significant air quality impacts.
QQ	474	19	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Broome Street to avoid any potential significant air quality impacts.
RR	501	32	Any new residential and/or commercial development must be fitted with low NOx (20 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 15 feet away from the lot line facing Prince Street and no more than 13 feet away from the lot line facing Wooster Street, to avoid any potential significant air quality impacts.
SS	475	22	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
U	473	5	Any new residential and/or commercial development must **EITHER** exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Broome Street, and ensure that heating and hot water stack(s) is located at least 169 feet above grade **OR** must be fitted with low NO_x (30 ppm) burners firing natural gas for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 166 feet above grade, and that heating and hot water system stack(s) is located at least 20 feet away from the lot line facing Broome Street, to avoid any potential significant air quality impacts.

Table F-2 (cont'd)
(E) Designations for Potential Development Sites
(Heating and Hot Water System Restrictions)

Development Site	Block	Lots	Proposed (E) Designation
UU	473	7	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Grand Street, and ensure that heating and hot water stack(s) is located at least 167 feet above grade, to avoid any potential significant air quality impacts.
V	228	111	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 133 feet above grade, to avoid any potential significant air quality impacts.
W	498	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 17 feet away from the lot line facing Broadway and at least 55 feet away from the lot line facing Spring Street, to avoid any potential significant air quality impacts.
WW	483	14	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that heating and hot water system stack(s) is located at least 40 feet away from the lot line facing Crosby Street, and ensure that heating and hot water stack(s) is located at least 173 feet above grade, to avoid any potential significant air quality impacts.
ZZ	230	3,4	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 10 feet away from the lot line facing Greene Street to avoid any potential significant air quality impacts.

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