BUILDING EMISSIONS REDUCTION AND DISCLOSURE ORDINANCE

Draft Phase 1 Regulations

December 20, 2021

This package of materials includes:

- An overview of the regulations development process for Boston's Building Emissions Reduction and Disclosure Ordinance (<u>iump to this section</u>)
- Additional information about guidance documents and support for building owners that will be provided. (jump to this section)

The following can be found at the end of this document and can be downloaded as separate documents from <u>boston.gov/berdo</u>:

- Draft Phase 1 Regulations on data reporting and verification.
- The final language of the ordinance to reference while reviewing the draft regulations (download here).

Any feedback or questions on the draft regulations or the overall regulations process can be submitted through <u>this form</u>. We will also be hosting a virtual listening session to gather verbal feedback on Friday, January 7 from 12:00 - 1:30 P.M. <u>Registration is required</u>.

Feedback received will inform revisions to the regulations and guidance. We thank you for taking the time to review the draft regulations and provide your input.

1. REGULATIONS DEVELOPMENT

Regulations are the rules created to implement the BERDO ordinance passed in October 2021. These regulations will not change the requirements specified in the ordinance. Updates on the regulations process will be shared on boston.gov/berdo and through the BERDO email newsletter. You can sign up for the newsletter at boston.gov/berdo.

I. PHASE 1 - WINTER 2022

The following topics will be covered in Phase 1 regulations:

- Reporting Requirements
- Third-Party Data Verification Requirements
- Preservation of Records

Proposed Schedule for Phase 1:

The following proposed schedule presents a pathway to adopt Phase 1 Regulations in time to enable reporting in Spring 2022.

All dates are subject to change at the discretion of the APCC.

- Informal Public Comment Period December 20th January 14th
 - January 7, 2022 from 12:00 1:30pm: Listening Session on draft Phase 1 Regulations. <u>Registration required</u>.
 - January 14, 2022: Informal comment period closed
 - January 19, 2022 (Time TBD): Special Air Pollution Control Commission (APCC) Meeting on draft Phase 1 Regulations.
- A subsequent formal public comment period will be scheduled by the APCC.

Please provide any feedback or questions on draft Phase 1 regulations through this form.



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II. FUTURE PHASES: SPRING 2022 - WINTER 2023

Following the Phase 1 regulations process, the APCC will initiate additional phases of regulations development. There will be ample opportunities for stakeholder engagement in the development of future regulations.

Topics addressed after Phase 1 will include:

- Review Board Regulations (including nomination process)
- Emissions Requirements
 - Energy Use Exempt from Emissions Requirements
 - Hardship Compliance Plan Alternative emissions reduction targets and/or timelines.
 - Individual Compliance Schedules Alternative timeline for complying with the emissions standards.
 - Standard emissions factors and process to request use of custom emissions factors
 - Additional Compliance Mechanisms Municipal Aggregation, Renewable Energy Certificates, Power Purchase Agreements, Alternative Compliance Payments
- Equitable Emissions Investment Fund
- Additional regulations as needed



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2. PLANNED GUIDANCE AND ADDITIONAL SUPPORT

In addition to the Phase 1 regulations, there will be additional guidance to clarify how buildings can comply with BERDO. Guidance documents will be published early in 2022 and will be updated as needed. Additional guidance and support will be provided to align with future regulations phases, especially to support building owners in meeting emissions standards.

Please provide any feedback or questions on draft Phase 1 regulations or the regulations development process through this form.

GUIDANCE DOCUMENTS WILL DETAIL

HOW TO OBTAIN ENERGY AND WATER DATA

Guidance documents will provide specific guidance on how to request usage data from utilities, including but not limited to:

- How to request Whole Building usage data from Eversource, National Grid, Vicinity, and Boston Water and Sewer, including for multiple utility account holders, tenants, or condo owners.
- Data release authorization forms for tenants in buildings with very few tenants or account holders.
- How renewable energy purchased through Boston's Community Choice Electricity program will be accounted for in BERDO.

REPORTING INSTRUCTIONS

- The Environment Department will issue step-by-step instructions to report through <u>ENERGY STAR Portfolio Manager</u> and through a supplemental reporting form. Please refer to the <u>2021 How-To Guide</u> to get a sense of the detail of instructions for reporting. A new How-To Guide will be created for 2022 and will be released in February 2022.
- In 2022, building owners will need to report through ENERGY STAR Portfolio Manager and through a new supplemental reporting form provided by the City. The supplemental reporting form will be shared along with all reporting guidance and will include detailed instructions. As a preview, please refer to

Appendix A for a draft of the supplemental reporting questions. At a minimum, the final form will collect data on:

- Contact information
- Renewable energy purchases
- o Exempt energy uses: backup generation and electric vehicle charging
- Alternative emissions factors
- Data verification
- Additional guidance will be provided on:
 - How to delegate reporting responsibilities to a single tenant.
 - o How to correct previously submitted data.
- We will also issue specific instructions for third-party verifiers, including a third-party verifier checklist.
- ENERGY STAR Portfolio Manager also provides <u>numerous resources</u> to support building owners in reporting through the platform.

PLANNING FOR MEETING EMISSIONS STANDARDS

Buildings subject to BERDO will need to begin complying with declining emissions standards starting in either 2025 or 2030 depending on the building size.

Building Size	First year required to comply with emissions standards
All buildings with ≥35 units or ≥ 35,00 SF	2025 (reported in 2026)
All buildings with ≥15 units or ≥ 20,000 SF	2030 (reported in 2031)

Emissions standards are set by building use. Buildings with multiple uses will be able to calculate a blended emissions standard based on the square footage of the building's main uses. More details on calculating blended emissions standards will be included in later phases of the regulations. The table below details the emissions standards by year for each building type. Please refer to the draft regulations for a detailed list of what property/space types fall into each building use category.

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Building use	Emissions standard (kgCO ₂ e/SF/yr.)					
	2025 - 2029	2030-2034	2035-2039	2040-2044	2045-2049	2050-
Assembly	7.8	4.6	3.3	2.1	1.1	0
College/ University	10.2	5.3	3.8	2.5	1.2	0
<u>Education</u>	3.9	2.4	1.8	1.2	0.6	0
Food Sales & Service	17.4	10.9	8.0	5.4	2.7	0
<u>Healthcare</u>	15.4	10.0	7.4	4.9	2.4	0
Lodging	5.8	3.7	2.7	1.8	0.9	0
Manufacturing/ Industrial	23.9	15.3	10.9	6.7	3.2	0
Multifamily housing	4.1	2.4	1.8	1.1	0.6	0
<u>Office</u>	5.3	3.2	2.4	1.6	0.8	0
<u>Retail</u>	7.1	3.4	2.4	1.5	0.7	0
Services	7.5	4.5	3.3	2.2	1.1	0
<u>Storage</u>	5.4	2.8	1.8	1.0	0.4	0
Technology/Science	19.2	11.1	7.8	5.1	2.5	0

The emissions factors in Appendix B were used in Synapse Energy Economics' "Boston Building Emissions Performance Standard Technical Methods Overview". These emissions factors can be used for planning purposes to estimate future emissions intensities; however, they are subject to change. Later phases of the regulations process will describe how emissions factors for compliance will be calculated and updated and how owners can apply to have alternative emissions factors considered for compliance.

ADDITIONAL SUPPORT FOR BUILDING OWNERS

Staff in the Environment Department are committed to providing ongoing support to building owners for reporting for BERDO and reducing emissions.

EXTENSION TO REPORTING DEADLINE

In 2022, owners will have the opportunity to apply for a one-time six-month extension to the reporting and data verification deadline. Owners will be encouraged to complete their reporting and data verification as soon as possible, but the extension will allow building owners to get additional time to gather necessary data and to complete their first third-party verification. A form to request the 6-month extension will be posted on boston.gov/berdo in early 2022.

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STAFF SUPPORT FOR REPORTING

We are committed to helping building owners collect and report their data in 2022. Here are a few of the things we are planning:

- Hosting recorded webinars to walk through reporting and to answer questions. Webinars can be attended live or viewed online afterwards.
- Drop-in virtual office hours for Q&A on reporting with staff
- One-on-one assistance via email at <u>energyreporting@boston.gov</u> or phone at 617-635-3850x5.

SUPPORT FOR MEETING EMISSIONS STANDARDS

The Environment Department created an online Retrofit Resource Hub, which provides a one-stop-shop for building owners to find technical and financial resources to reduce their energy usage and emissions. We will continue to update the resources on the Retrofit Resource Hub.

We will continue to expand the guidance documentation as needed. If you have an additional topic that you would like to request guidance on, please let us know through this form.



APPENDIX A: DRAFT BERDO SUPPLEMENTAL REPORTING FORM

All fields are subject to change.

In addition to reporting through ENERGY STAR Portfolio Manager in 2022, building owners will be required to report additional information through a supplemental reporting form. The supplemental reporting form will collect information not reported through Portfolio Manager, including:

- Address
- Parcel Number
- Owner Contact Information
- Reporter Contact Information
- Additional Building Uses
- Did you purchase RECs in 2021?
 - REC Source
 - Date RECs generated
 - Proof of retirement of RECs
 - Document upload
 - Percentage or kWh of RECs allocated to this building
- Did you purchase renewable energy through a Power Purchase Agreement?
 - Material terms of PPA (document upload)
 - Energy purchased by PPA (kWh)
 - Type of generation (select one)
 - Location where energy was generated
 - Ownership of RECs associated with PPA
 - o Date PPA RECs generated
 - Emissions factor of the grid where the generating facility is located
- Do you participate in Boston's Community Choice Aggregation program for your non-tenant electricity usage?
- Does your building have a backup generator?
 - Generator Fuel Type
 - Usage instance(s)

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- Date
- Hours used
- Reason for backup usage
- Does your building have battery storage?
- Does your building have electric vehicle charging?
 - Number of ports by charging level
 - Level 1: # of ports
 - Level 2: # of ports
 - Level 3: # of ports
 - Monthly EV charging usage (kWh)
 - o Is EVSE separately metered? Y/N
- Alternative Emissions Factors
- Do you monitor indoor air quality?
- Optional Reporting Questions

DATA VERIFICATION

- Verifier Name
- Verifier email
- Verifier phone
- Verifier credential (select qualifications)
- Credential documentation upload
- Verification document upload
- Verification checklist

APPENDIX B: EMISSIONS FACTORS FOR PLANNING PURPOSES ONLY

TABLE 1: ELECTRICAL GRID EMISSIONS FACTORS

Year	Emissions Factor (kgCO2e/MMBTU)
2013	97.04
2014	96.51
2015	99.3
2016	94.38
2017	90.66
2018	87.47
2019	84.15
2020	83.3
2021	81.2
2022	79.1
2023	77.1
2024	75
2025	72.9
2026	70.8
2027	68.7
2028	66.6
2029	64.6
2030	62.5
2031	60.4
2032	58.3
2033	56.2
2034	54.2
2035	52.1



2036	50
2037	47.9
2038	45.8
2039	43.7
2040	41.7
2041	39.6
2042	37.5
2043	35.4
2044	33.3
2045	31.2
2046	29.2
2047	27.1
2048	25
2049	22.9
2050	20.8

Values for 2013-2019 are taken from ISO-NE Electric Generator Air Emissions Reports. Values for 2020-2050 are taken from Synapse Energy Economics projections based on Massachusetts policies.

TABLE 2: OTHER EMISSIONS FACTORS

Fuel Type	Emissions Factor (kgCO2e/MMBTU)
Natural Gas	53.11
Fuel Oil (no. 1)	73.50
Fuel Oil (no. 2)	74.21
Fuel Oil (no. 4)	75.29
Diesel Oil	74.21
District Steam	66.40



District Hot Water	66.40
Electric Driven Chiller	52.70
Absorption Chiller using Natural Gas	73.89
Engine-Driven Chiller Natural Gas	49.31

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AIR POLLUTION CONTROL COMMISSION

BOSTON CITY HALL

BOSTON, MASSACHUSETTS 02201

BUILDING EMISSIONS REDUCTION AND DISCLOSURE REGULATIONS

- 1.01 *Introduction.* The following Regulations are promulgated by the City of Boston Air Pollution Control Commission ("the Commission") pursuant to the authority granted to it under Chapter VII, Section 7-2.2 of the City of Boston Code.
- 1.02 *References.* References to Section 7-2.2 are to Chapter VII, Section 7-2.2 of the City of Boston Code.
- 1.03 **Definitions.** Terms defined in Section 7-2.2 have the same meanings for purposes of these Regulations and those definitions are hereby incorporated by reference. Terms related to data reporting that are not otherwise defined shall have the same meanings as in the ENERGY STAR Portfolio Manager. For the purposes of this section, the following additional terms are defined as follows:

Emissions Intensity means Emissions divided by the floor area for which those Emissions are applicable.

Energy Type means any Energy source used in a Building, including, but not limited to, electricity, natural gas, fuel oil, propane, steam, and hot and chilled water, and any other Energy Types that the Commission may designate.

Energy Use Intensity means Energy consumption divided by the floor area for which that consumption is applicable.

Owner, as defined in Section 7-2.2, means a Building's Owner of record, provided that the "Owner" may be deemed to include (i) multiple Owners in common ownership; (ii) the association or organization of unit Owners responsible for overall management in the case of a condominium; and (iii) the board of directors in the case of a cooperative apartment corporation. In the case of a Building subject to a lease that assigns maintenance, regulatory compliance and/or capital improvement costs to Tenants with a term of at least thirty (30) years, inclusive of all renewal options, the Owner may designate the lessee as "Owner" for purposes of compliance with this Subsection; such designation must be provided in writing to the Commission as required by the Regulations. An Owner may designate an agent to act on its behalf, including reporting as required by this Subsection; provided, however, that such designation (i) must be provided in writing to the Commission, and (ii) does not relieve the Owner of any compliance obligation under this Subsection.

Space Type, also referred to as Building Use, means the primary activity for which a given building or part of a building is utilized.

Tenant, as defined in Section 7-2.2, means any tenant, tenant-stockholder of a cooperative apartment corporation, and condominium unit Owner.

Verification Year; as defined in Section 7-2.2, means any year where an Owner must report third-party verified reporting data. Verification Years will be 2022, 2026, and every five years thereafter.

Whole-Building Data means complete energy consumption data for all Energy Types used in a building and complete water data for an entire building, inclusive of Tenant spaces and uses.

1.04 *Reporting Process.* Owners must annually report data through the ENERGY STAR Portfolio Manager and/or other methods as outlined in guidance documents issued by the Commission. Data should be reported in accordance with the requirements in Section 7-2.2, the following provisions and any other methods detailed in guidance documents issued by the Commission.

a. Energy and Water Use.

- (i) Owners shall report Whole-Building Data for all Energy and water uses. Owners that are unable to obtain Whole-Building Data shall follow the procedures in section 1.04(e) of these Regulations.
- (ii) Owners that procure Energy through the City of Boston's Community Choice Electricity (CCE) program, or Owners whose Tenants procure energy through the CCE program, may provide evidence of enrollment in the CCE program when reporting a Building's Energy use in accordance with any guidance documents issued by the Commission.
- (iii) Owners that authorize an Energy or water utility or other third party to report Building-specific data on their behalf shall remain responsible for verifying the accuracy of such data. Any discrepancies between data provided by a utility or other third-party and reported data must be indicated in the "Property Notes" section of Portfolio Manager. The direct upload of such data by a utility or other third party does not relieve an Owner of the duty to report other required data.
- b. Calculation of Gross Floor Area. Owners may use the Gross Floor Area listed in the Boston Assessing Department records for purposes of Section 7-2.2. Alternatively, Owners may calculate Gross Floor Area in accordance with the following provisions: (i) Gross Floor Area means the total number of square feet measured between the principal exterior surfaces of the enclosing fixed walls of the building, including Tenant areas, lobbies, common areas, restrooms, stairways, elevator shafts, mechanical equipment rooms, basement space, and storage rooms; (ii) Gross Floor Area excludes all surface parking areas, unroofed courtyards, outdoor balconies, exterior loading docks, plenums

between floors, and unroofed light wells; (iii) for atria, Gross Floor Area includes only the area of atrium floors; and (iv) for Tenant spaces, interior demising walls should be measured to the centerline of the wall. Owners that calculate Gross Floor Area in accordance with this provision must preserve the supporting documentation pursuant to Section 1.09.

- c. **Building Use Classifications.** For purposes of Section 7-2.2, the Building Use classifications in Appendix A are assigned to ENERGY STAR Portfolio Manager property types. Owners are encouraged to report all Building Uses and associated square footage in Portfolio Manager, including Building Uses that occupy less than ten percent (10%) of the Building's square footage.
- d. **Vacant Space.** Owners must account for any vacant or unoccupied space in Portfolio Manager in accordance with Portfolio Manager instructions or with guidance documents issued by the Commission.
- e. Buildings without Whole-Building Data. If an Owner is not able to obtain Whole-Building Data for any Energy Type or water use, then the Owner must report such Energy Type use or water use as provided in this Subsection. In the event that an Owner does not have Whole-Building Data because Tenant(s) failed to respond to data requests and utilities have not provided Whole-Building Data within the time period specified in Section 7-2.2(o), the Owner shall also comply with the requirements in Section 1.05.
 - (i) Common Area Energy and Water Use. The Owner shall submit Energy and water use data for all common areas and all centrally metered areas.
 - (ii) Calculating Energy Use in Tenant Spaces. For each Energy Type used in separately metered Tenant space, the Owner must report known Energy usage data and then use one of the following methods to determine Energy usage for the areas in which it is unknown, for each month.
 - 1. With Significant Partial Data for a Building Use. If an Owner has actual Energy use data for at least 50 percent of a given Building Use, the Owner shall extrapolate the energy data for the remainder of Gross Floor Area with the same Building Use. This extrapolation shall be applied only to those areas for which Energy use is unknown and shall be calculated by (i) multiplying the average Energy Use Intensity of the floor areas for which Energy Use Intensity is known by the total floor area for which the Energy Use Intensity is not known, and (ii) multiplying the result from step (i) by one hundred and fifty percent (150%).

- 2. **Without Significant Partial Data for a Building Use.** If an Owner does not have actual Energy use data for at least 50 percent of any particular Building Use, the Owner shall utilize the default values set by the Commission, applied only to those areas for which Energy use is unknown. The appropriate energy use per square foot per month from Appendix B shall be multiplied by the floor area of that Building Use for which Energy use is unknown. The Commission may revise the tables in Appendix B as it deems appropriate.
- (iii) Noting When Whole-Building Use Data Are Not Available. In accordance with guidance documents issued by the Commission, Owners shall indicate when Whole-Building Data for Energy or water use is not available and where extrapolated data is used.
- g. **Contextual Information.** Owners may supply contextual information regarding their required data, including hyperlinks, in the "Property Notes" section of Portfolio Manager or via any supplemental reporting methods detailed by the Commission in guidance documents. Such contextual information may be included in public disclosures. Contextual information shall conform to guidance that the Commission may issue regarding acceptable length and formats.
- h. **New Information.** If, after having submitted a report to the Commission, the Owner of a Building changes or an Owner receives or becomes aware of new or updated information that would result in a change to Emissions, Energy or water use, or Emissions or Energy Intensity of two percent (2%) or more, the Owner shall, within thirty (30) Days of the change or of receiving the new information, submit the additional or corrected data to the Commission in accordance with guidance documents issued by the Commission, and notify the Commission accordingly. Owners may submit other updates at any time. The Commission will include such updates in its annual disclosure of data.

1.05 Obligation to Request and Report Information from Building Tenants.

- a. **Delegating Reporting Duties to Single Tenant.** If an Owner has leased a Building to a single Tenant and that Tenant has assumed management, maintenance, regulatory compliance and/or capital improvement costs of the entire building, the Owner may, with the consent of the Tenant, delegate all responsibility regarding reporting under 7-2.2 to that Tenant. The Owner shall report such delegation in accordance with guidance documents issued by the Commission.
- b. **Tenant Non-Response.** Owners shall report in writing to the Commission if any non-residential Tenant fails to respond to data requests from the Owner within the time period specified in Section 7-2.2(o), accompanied by documentation of the Owner's request. Owners seeking data from Tenants shall document reasonable steps to collect

such data, including making the written request using the most up-to-date contact information for the Tenant at least twice.

1.06 Requesting Alternative Reporting Dates. A request for an alternative reporting date to that otherwise required by Section 7-2.2(e)(ii) must explain the extenuating circumstances that make an Owner unable to complete the report by the deadline and must be submitted prior to the applicable deadline. Such requests must comply with any procedures created by the Review Board or guidance documents issued by the Commission. The Commission may grant a request for an alternative reporting date for a period not to exceed six months.

1.07 Special Conditions.

- a. **Multiple Buildings on a Single Tax Lot.** If there are multiple buildings on a single tax lot, the Owner(s) shall report data required by Section 7-2.2 as follows:
 - (i) For any building whose Energy and/or water use is separately metered or sub-metered, data must be reported for each such building.
 - (ii) For any building whose Energy and/or water use is not separately metered or sub-metered, the total Energy and water use should be apportioned by the Gross Floor Area of each building and reported for each such building. The apportioned data shall be marked as an "Estimation" in Portfolio Manager.
- b. **Buildings on Multiple Tax Lots that Share Systems.** If there are multiple buildings on multiple tax lots that share utility systems and are not separately metered or sub-metered for Energy or water use, the Owner(s) shall report data required by Section 7-2.2 as follows:
 - (i) If all the buildings are classified as the same property type in Portfolio Manager, then they shall, if practicable, be reported as individual buildings, with Energy and water use apportioned by the Gross Floor Area of each building. The apportioned data shall be marked as an "Estimated Value" in Portfolio Manager.
 - (ii) If all the buildings are not classified as the same building type in Portfolio Manager, they must be reported as a campus as defined in Portfolio Manager.
- c. **Newly Constructed Buildings.** The first reporting requirement for newly-constructed buildings shall be the first full calendar year following the issuance of a Certificate of Occupancy for the building.
- d. **Change of Ownership.** When a building changes ownership, the previous Owner shall provide to the new Owner any required data that has been collected and is necessary for completing the next required report under Section 7-2.2.

- 1.08 *Third-Party Data Verification.* Third party verifications of a Building Owner's reporting data shall be performed by a qualified energy professional who is not on the staff of a Building's Owner or Building's management company. Pursuant to 7-2.2(h), third-party verification is required for all reporting data for the specified time period, including, but not limited to, data necessary to show compliance with and qualification for Emissions Standards, Individual Compliance Schedules and Hardship Compliance Plans, if applicable.
 - a. **Qualified energy professionals** include individuals who hold an active qualification of at least one of the credentials listed in Appendix C. Starting in 2023, individuals with different qualifications may apply to the Review Board for designation as a qualified energy professional.
 - b. **Corrections to Reported Data.** In the event of errors found in previously reported data or discrepancies between previously reported data and third-party verified data, Owners shall submit an updated report as outlined in guidance documents provided by the Commission.

1.09 Preservation of Records.

- a. Building Owners shall retain, in printed or electronic format, the following records until at least two years after the reporting deadline in the Building's next Verification Year:
 - (i) All records and information submitted pursuant to 7-2.2, including records and information that is optional to report, whether submitted via the ENERGY STAR Portfolio Manager or otherwise;
 - (ii) All records and information necessary to demonstrate compliance with 7-2.2, including, but not limited to, any back-up information substantiating a Building's Energy and water data, Emissions, and qualifications for Building Portfolios, blended Emission standards, Individual Compliance Schedules or Hardship Compliance Plans, if applicable;
 - (iii) Confirmation of submissions from ENERGY STAR Portfolio Manager or other systems designated for reporting by the Commission;
 - (iv) Requests to Tenants for information pursuant to 7-2.2(o) or as otherwise needed to comply with Section 7-2.2;
 - (v) Third-party verifications and a copy of the credentials and the contact information for the qualified energy professional that were uploaded to Portfolio Manager or other systems designated for reporting by the Commission; and

(vi) Requests for extensions of reporting deadlines.

Building owners shall make such records and information available for inspection or audit upon request by the Commission, Environment Department, Review Board or any third-party acting at their direction.

1.10 Disclosure of Records and Information.

- a. All records and information submitted pursuant to 7-2.2, including records and information that is optional to report, whether submitted via the ENERGY STAR Portfolio Manager or otherwise, may be disclosed as determined appropriate by the Commission, Environment Department or Review Board.
- b. The Commission's public disclosure of any Building's compliance with the Emission Standards in 7-2.2 may include information regarding a Building Owner's use of "Estimated" data and the Additional Compliance Mechanisms in Section 7-2.2(m), including, but not necessarily limited to, the type and amount of each Additional Compliance Mechanism used in a compliance period.

1.11 Enforcement and Penalties.

a. **Penalties.** The violation of any provision of these Regulations is subject to the imposition of penalties as outlined in Sections 7-2.2(q) and 7-2.2(r).

APPENDIX A: BUILDING USE CLASSIFICATIONS

Building Use	Energy Star Portfolio Manager Property Type
Assembly	Aquarium
	Convention Center
	Fitness Center/Health Club/Gym
	Heated Swimming Pool
	Indoor Arena
	Ice/Curling Rink
	Museum
	Movie Theater
	Other - Entertainment/Public Assembly
	Other - Recreation
	Other - Stadium
	Performing Arts
	Race Track
	Social/Meeting Hall Stadium (Open)
	Swimming Pool
	Worship Facility
College/ University	College/ University
Education	Adult Education
	K-12 School Other - Education
	Pre-school/Daycare
	Vocational School
Food Sales & Service	
rood sales & service	Bar/Nightclub Fast Food Restaurant
	Food Sales
	Food Service
	Other - Restaurant/Bar
	Restaurant
	Supermarket/Grocery Store
Healthcare	Ambulatory Surgical Center
	Hospital (General Medical & Surgical)
	Medical Office
	Other - Specialty Hospital
	Outpatient Rehabilitation/Physical Therapy
	Urgent Care/Clinic/Other Outpatient
	Veterinary Office

Building Use	Energy Star Portfolio Manager Property Type
Lodging	Barracks
	Hotel
	Other - Lodging/Residential
	Residence Hall/Dormitory
	Residential Care Facility
	Senior Care Community
	Senior Living Community
	Single Family Home
Manufacturing/ Industrial	Manufacturing/ Industrial
Multifamily housing	Multifamily housing
Office Office	Financial Office
	Office
<u>Retail</u>	Automobile Dealership
	Bank Branch
	Enclosed Mall
	Lifestyle Center
	Other - Mall
	Retail Store
	Strip Mall
	Wholesale Club/Supercenter
<u>Services</u>	Convenience Store without Gas Station
	Courthouse
	Energy/Power Station
	Fire Station
	Library
	Other - Public Services
	Other - Services
	Other - Utility Personal Services (Health/Peauty Dry Cleaning etc.)
	Personal Services (Health/Beauty Dry Cleaning etc.) Police Station
	Repair Services (Vehicle, Shoe, Locksmith, etc.)

Building Use	Energy Star Portfolio Manager Property Type
Storage	Distribution Center Non-Refrigerated Warehouse Parking Refrigerated Warehouse Self-Storage Facility
Technology/Science	Data Center Laboratory Other - Technology/Science

APPENDIX B: DEFAULT ENERGY USE VALUES

If all energy **District** uses are **Electricity Natural Gas Fuel Oil District heat** Cooling unknown (kBtu/sq (kBtu/sq (kBtu/sq (kBtu/sq (kBtu/sq (kBtu/sq **Building Use** ft/month) ft/month) ft/month) ft/month) ft/month) ft/month) 6.629 5.448 0.104 1.554 0.317 13.659 Assembly College/ University 6.493 6.730 0.104 3.045 0.720 17.011 Education 2.220 7.065 0.104 2.131 0.317 9.292 Food Sales & Service 0.317 22.530 0.104 2.131 33.998 11.468 Healthcare 11.369 5.744 0.104 12.822 2.415 32.366 Lodging 5.121 5.632 0.104 0.894 0.144 11.833 Manufacturing/ Industrial 3.152 50.196 0.327 2.131 0.317 53.675 Multifamily housing 2.802 4.786 0.238 0.221 0.317 8.047 Office 0.076 9.394 6.734 1.468 1.115 0.317 Retail 4.698 2.031 0.104 0.140 0.317 6.869 2.930 0.072 14.946 Services 5.321 6.623 0.104 Storage 2.268 1.447 0.104 0.166 0.317 3.921 Technology/ Science 9.653 0.104 1.029 15.419 7.376 33.477

APPENDIX C: QUALIFIED ENERGY PROFESSIONAL CREDENTIALS

Profession	Credential	Organization
Engineer	Professional Engineer (PE)	National Society of Professional Engineers (NSPE)
Architect	Licensed Architect	National Council of Architectural Registration Boards (NCARB)
Architect	Registered Architect (RA)	American Institute of Architects (AIA)
Energy Modeler	Passive House	Passive House Institute US (PHIUS)
Energy Auditor	Building Energy Assessment Professional (BEAP)	American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Energy Auditor	Certified Energy Auditor (CEA)	Association of Energy Engineers (AEE)
Energy Auditor	Building Energy Modeling Professional (BEMP)	American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Energy Auditor	RPA/FMA High Performance Designation (RPA/FMA-HP)	BOMI International
Energy Auditor	Certified Measurement and Verification Professional (CMVP)	Association of Energy Engineers (AEE)
Energy Auditor	LEED Advanced Professional (AP) Building Design + Construction	U.S. Green Building Council (USGBC)
Commissioning Professional	Commissioning Process Management Professional Certification (CPMP)	American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Commissioning Professional	Certified Commissioning Professional (CCP)	Building Commissioning Association (BCA)

Profession	Credential	Organization
Commissioning Professional	Associate Commissioning Professional (ACP)	Building Commissioning Association (BCA)
Commissioning Professional	Certified Building Commissioning Professional (CBCP)	Association of Energy Engineers (AEE)
Commissioning Professional	Existing Building Commissioning Professional (EBCP)	Association of Energy Engineers (AEE)
Commissioning Professional	Certified Commissioning Authority (CxA)	AABC Commissioning Group (ACG)
Energy Manager	Operations and Performance Management Professional (OPMP)	American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Energy Manager	Certified Energy Manager (CEM)	Association of Energy Engineers (AEE)
Energy Manager	Energy Management Professional (EMP)	Energy Management Association (EMA)



ORDINANCE AMENDING CITY OF BOSTON CODE, ORDINANCES, CHAPTER VII, SECTIONS 7-2.1 AND 7-2.2, BUILDING ENERGY REPORTING AND DISCLOSURE (BERDO)

WHEREAS: Buildings contribute to three-quarters of greenhouse gas emissions in the

City of Boston; and

WHEREAS: Low-income and communities of color in Boston are disproportionately

impacted by climate change through increasing heat island exposure,

rising sea levels, and stormwater flooding; and

WHEREAS: In May 2013, the Boston City Council passed CBC Chapter VII, Section

7-2.2 Building Energy Reporting and Disclosure Ordinance (BERDO)

proposed by Mayor Thomas M. Menino; and

WHEREAS: BERDO requires that all commercial and residential buildings that are

35,000 square feet or have 35 units or more report their energy and water

use to the City of Boston every year; and

WHEREAS: The purpose of the ordinance was to reduce emissions including

greenhouse gases from energy production, encourage efficient use of energy and water, and develop investment in a green economy by requiring the reporting and disclosure of annual energy and water use in

all large buildings; and

WHEREAS: The ordinance was then updated on May 14, 2014 by Mayor Martin J.

Walsh with an amendment to extend the reporting deadline from May 15

to September 15, 2014; and

WHEREAS: The City of Boston's 2019 Climate Action Plan Update details strategies

to reduce carbon emissions from buildings over the next five years, including introducing an amendment to BERDO to replace energy action and assessment requirement with a building emissions performance

standard by 2021; and

WHEREAS: The Boston City Council unanimously passed a resolution in January 2020

declaring that the climate crisis is a health emergency; and

WHEREAS: The City of Boston historically exhibited leadership in combating global

climate change as the first city in the nation to deploy a green building standard through municipal zoning requirements; and **THEREFORE BE**

IT

ORDERED: That the City of Boston Code, Ordinances, Chapter VII, Section 7-2.1 and 7-2.2 shall be amended as follows:

SECTION 1. City of Boston Code, Ordinances, Chapter VII, Section 7-2.2 is hereby by stricken in its entirety, and shall be replaced with the following:

Section 7-2.2 Building Emissions Reduction and Disclosure.

(a) Purpose.

It is the intent of this Subsection to reduce the emissions of air pollutants, including greenhouse gases, from building energy production and consumption, and thereby to encourage efficient use of energy and water, develop further investment in building a green economy, including by encouraging the hiring and training of green jobs, protect public health, and promote equitable access to housing. To do so, the provisions of this Subsection require the reporting and disclosure of annual energy use, disclosure of annual water use in all covered buildings, and compliance with emissions requirements in accordance with this article.

The Air Pollution Control Commission has enforcement authority pursuant to, inter alia, Article 89 of the Massachusetts Constitution, M.G.L. c. 111, s. 31C, MG.L. c. 40, s. 21D, MG.L. c. 40U, and this Subsection.

(b) Definitions.

When used in this Subsection 7-2.2, unless a contrary intention clearly appears, the following terms shall have the following meaning:

Alternative Compliance Payment means a per-metric ton payment based on the average cost per metric ton of CO2e to decarbonize Buildings subject to this Subsection.

Building means a City Building, Non-Residential Building, or Residential Building as defined in this Subsection or by regulation.

Building Portfolio means two or more Buildings, on one or more properties, provided that (i) all Buildings within the Portfolio have the same Owner; for this purpose, a Building management company does not constitute an Owner, or (ii) all Buildings within the Portfolio are part of an approved Institutional Master Plan.

Building Use shall mean (i) space type as defined in the Regulations, which refers to the primary activity for which a given space is utilized, as entered into the Portfolio Manager, or (ii) other activities as defined in the ENERGY STAR Portfolio Manager or by the Regulations as may be updated from time to time.

Carbon Dioxide Equivalent (CO_2e) means greenhouse gas Emissions, including carbon dioxide, methane and nitrous oxide. CO_2e shall be calculated using a methodology as set forth in the Regulations and as may be amended from time to time by the Regulations.

City means the City of Boston.

City Building means a Building, as it appears in the records of the Boston Assessing Department, that is owned by the City, or for which the City regularly pays all of the annual Energy bills. City Buildings shall include Buildings that are owned or managed by the Boston Housing Authority.

Commission means the Air Pollution Control Commission.

Community-Based Organization means a not-for-profit organization that is driven by community residents, that is the majority of the governing body and staff consists of local residents, the main operating offices are in the community of service, priority issue areas are identified and defined by residents, solutions to address priority issues are developed with residents, and program design, implementation, and evaluation components have residents intimately involved and in leadership positions.

Days means consecutive calendar days.

Electrical Vehicle Supply Equipment (EVSE) means equipment for the purpose of transferring electric Energy to a battery or other Energy storage device in an electric vehicle, including but not limited to "electric vehicle charging stations" as defined in MGL ch. 25. sec. 16.

Emergency Backup Generation/Backup Power means a device or mechanism, such as battery storage, reciprocating internal combustion engine, or turbine, that serves solely as a secondary source of mechanical or electrical power whenever the primary Energy supply is disrupted or discontinued during power outages or natural disasters that are beyond the control of the Owner, occupant or operator of a Building.

Emissions means the emission of greenhouse gases, measured in units of Carbon Dioxide Equivalent associated with the generation and transmission of Energy used by a Building.

Emissions Factor means CO₂e calculated according to regional Energy and greenhouse gas factors as set forth in the Regulations, as may be amended from time to time.

Employment Plan means a plan submitted to the Mayor's Office of Workforce Development by a Building Owner establishing training protocols and minimum employment standards.

Energy means electricity, heating and cooling from any fuel source including, but not limited to, natural gas, fuel oil, propane, and power used to generate steam and hot and chilled water, and any other sources of Energy that the Commission may designate.

ENERGY STAR Portfolio Manager or *Portfolio Manager* means the U.S. Environmental Protection Agency's online tool for reporting and managing Building Energy data.

Environment Department means the City of Boston Environment Department.

Environmental Justice Population means a neighborhood that meets 1 or more of the following criteria: (i) the annual median household income is not more than 65 per cent of the statewide annual median household income; (ii) minorities comprise 40 percent or more of the population; (iii) 25 percent or more of households lack English language proficiency; or (iv) minorities comprise 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the state annual median income; or such other meaning as is adopted or amended by the Commonwealth's Executive Office of Energy and Environmental Affairs, by state statute, or defined in the Regulations. In the event of a conflict with the Regulations, the requirements in the Regulations shall prevail.

Gross Floor Area (GFA) or *Area* means the total number of square feet measured between the principal exterior surfaces of enclosing fixed walls.

Hardship Compliance Plan means alternative Emissions reduction targets and/or timelines for a Building or Building Portfolio.

Individual Compliance Schedule means an alternative timeline for complying with the Emissions Standards outlined in this Subsection, as may be updated by the Regulations.

Non-Residential Building means, as it appears in the records of the Boston Assessing Department, either:

- (i) a Building that equals or exceeds twenty thousand (20,000) square feet in gross Building Area, and of which fifty percent (50%) or more of the gross Building Area, excluding parking, is used for commercial, retail, office, professional, educational or other non-residential purposes;
- (ii) a parcel with a single Owner and multiple Buildings whose gross Building Areas cumulatively equal or exceed twenty thousand (20,000) square feet, and of which fifty percent (50%) or more of the cumulative gross Building Area, excluding parking, is used for commercial, retail, office, professional, educational or other non-residential purposes. Each such Building shall individually comply with the requirements of this Subsection, including reporting and complying with Emissions standards, unless part of a Building Portfolio; or
- (iii) any grouping of Non-Residential Buildings designated by the Review Board as an appropriate reporting unit. Each such Building shall individually comply with the requirements of this Subsection, including

reporting and complying with Emissions standards, unless part of a Building Portfolio.

The term "Non-Residential Building" shall not include any Building that is a City Building.

Owner means a Building's Owner of record, provided that the "Owner" may be deemed to include (i) multiple Owners in common ownership; (ii) the association or organization of unit Owners responsible for overall management in the case of a condominium; and (iii) the board of directors in the case of a cooperative apartment corporation. In the case of a Building subject to a lease that assigns maintenance, regulatory compliance and/or capital improvement costs to Tenants with a term of at least thirty (30) years, inclusive of all renewal options, the Owner may designate the lessee as "Owner" for purposes of compliance with this Subsection; such designation must be provided in writing to the Commission as required by the Regulations. An Owner may designate an agent to act on its behalf, including reporting as required by this Subsection; provided, however, that such designation (i) must be provided in writing to the Commission, and (ii) does not relieve the Owner of any compliance obligation under this Subsection.

Power Purchase Agreement means a contract by which an Owner agrees to purchase electricity from a generating facility over a fixed term of years.

Regulations means the Air Pollution Control Commission's Building Emissions Reduction and Disclosure Regulations.

Residential Building means, as it appears in the records of the Boston Assessing Department, either:

- (i) a Building with fifteen (15) or more total individual dwelling units that, together with hallways and other common space serving residents, comprise more than fifty percent (50%) of the gross Building Area, excluding parking;
- (ii) a parcel with a single Owner and multiple Buildings that cumulatively have fifteen (15) or more total individual dwelling units or that cumulatively equal or exceed twenty thousand (20,000) square feet in gross Building Area. Each such Building shall individually comply with the requirements of this Subsection, including reporting and complying with Emissions standards, unless part of a Building Portfolio; or
- (iii) any grouping of Residential Buildings designated by the Review Board as an appropriate reporting unit. Each such Building shall individually comply with the requirements of this Subsection, including reporting and complying with Emissions standards, unless part of a Building Portfolio.

The term "Residential Building" shall not include a City Building or a Non-Residential Building.

Renewable Energy Certificate (REC) means a certificate representing the positive environmental attributes associated with the production of one (1) megawatt hour (MWh) of electricity by a renewable Energy facility.

Review Board means the board established pursuant to section (s) of this Subsection.

Tenant means any tenant, tenant-stockholder of a cooperative apartment corporation, and condominium unit Owner.

This Subsection shall refer to Chapter VII, Section 7-2.2 of the City of Boston Code.

Verification Year means any year where an Owner must report third-party verified reporting data. Verification Years will be the first year following the enactment of this Subsection, 2026, and every five years thereafter.

(c) Building Portfolios

Building Portfolios must be approved by the Review Board, and Building Portfolio Owners must submit documentation confirming eligibility as a Building Portfolio. Notwithstanding the approval of a Building Portfolio, Owners must continue to report the water and Energy use, Emissions data, and any other information required by this Subsection for each individual Building. If a Building is removed from or added to a Building Portfolio for any reason, including transfer to a different Owner, the Building shall retain its individual reporting data and be subject to the Emissions standards and the Building Portfolio shall be adjusted to reflect the removal or addition of the Building. The Review Board may require that the Owner submit a portfolio emissions reduction plan that prioritizes emissions reductions in Buildings located in or near Environmental Justice Populations, and may set further conditions on the approval of a Building Portfolio consistent with the Regulations. The City may create multiple Building Portfolios.

(d) Energy, Emissions, and Water Disclosure Required for City Buildings.

No later than May fifteenth (15th) of each year, the City shall report to the Commission the previous year's Energy and water use by each City Building. No later than October first (1st) of each year, the City shall publicly disclose (i) the previous year's Energy and water use by each City Building and (ii) the Emissions compliance status of each City Building.

The Commission shall coordinate the performance of this requirement.

(e) Energy, Emissions, and Water Reporting Required for Non-City Buildings.

(i) Data Reporting Requirements.

No later than May fifteenth (15th) of each year, the Owner of each Building subject to reporting requirements shall accurately report to the Commission, via the Portfolio Manager or as required by the Regulations, the following information for the previous calendar year:

- (a) Energy and water use of each Building and other Building characteristics necessary to evaluate absolute and relative CO₂e Emissions intensity as required by the Commission. Energy and water use data shall not include its associated cost.
- (b) The primary Building Use(s) of each Building in accordance with the categories listed in the Portfolio Manager and the Regulations. Multiple primary Building Uses can be reported, provided that each use occupies at least ten percent (10%) of the Building's square footage or accounts for at least ten percent (10%) of the Building's annual Energy use or CO₂e Emissions.
- (c) If applicable, any Renewable Energy Certificates (RECs) used to comply with the Emissions standards set forth in this Subsection, including proof of retirement of the RECs.
- (d) If applicable, any Energy purchased via a Power Purchase Agreement(s) that was used at the Building and/or used to comply with the Emissions standards set forth in this Subsection, including, if relevant, proof of retirement of associated RECs and the Emissions Factor of the grid where the generating facility is located, if on a grid other than ISO New England. Owners must provide the material terms of an executed Power Purchase Agreement that demonstrates (i) the quantity of Energy purchased in the relevant calendar year, (ii) the type and generation location of the Energy purchased, (iii) the ownership of any RECs associated with the Energy, if relevant, and (iv) other information required by the Regulations.
- (e) Any CO₂e Emissions Factors for Energy used by the Building if different from the Emissions Factors in the Regulations.
- (f) Contact information for Owners and any designated agents.

Building Owners may choose to report additional metrics, including but not limited to, Building waste, occupancy, density, operational hours, net lessees, Boston Resident Jobs Policy compliance, energy storage, and indoor air quality.

(ii) Reporting Schedules.

The initial reports shall occur according to the following schedule:

- 1. For every Non-Residential Building equal to or greater than fifty thousand (50,000) gross square feet or two (2) or more Buildings on the same parcel that equal or exceed one hundred thousand (100,000) gross square feet, the first report shall be submitted no later than September 15, 2014.
- 2. For every Non-Residential Building equal to or greater than thirty-five thousand (35,000) gross square feet but less than fifty thousand (50,000) gross square feet, the first report shall be submitted no later than May 15, 2016.
- 3. For every Non-Residential Building, or two (2) or more Buildings on the same parcel, equal to or greater than twenty thousand (20,000) gross square feet but less than thirty-five thousand (35,000) gross square feet, the first report shall be submitted no later than May 15, 2022.
- 4. For every Residential Building equal to or greater than fifty (50) units or fifty thousand (50,000) gross square feet, or two (2) or more Buildings held in the same condominium form of ownership that are governed by the same board of managers that together equal or exceed fifty (50) units or fifty thousand (50,000) gross square feet, the first report shall be submitted no later than May 15, 2015.
- 5. For every Residential Building equal to or greater than thirty-five (35) units or thirty-five thousand (35,000) gross square feet, the first report shall be submitted no later than May 15, 2017.
- 6. For every Residential Building, or two (2) or more Buildings on the same parcel, equal to or greater than fifteen (15) units or twenty thousand (20,000) gross square feet but less than thirty-five (35) units or thirty-five thousand (35,000) square feet, the first report shall be submitted no later than May 15, 2022.

Notwithstanding the foregoing, the Review Board shall develop a procedure for establishing alternative reporting dates for Building Owners who supply timely notification of extenuating circumstances. In 2022, Building Owners may apply for a one-time six-month extension on their reporting deadline.

(f) Direct Upload.

Provided that the necessary mechanisms already exist, Building Owners may authorize an Energy or water utility or other third party to report Building-specific data on their behalf to the Commission. Such authorization shall not create an obligation on the part of Energy or water utilities or remove the obligation of Building Owners to comply with reporting requirements.

(g) Equitable Emissions Investment Fund.

The City auditor shall establish the Equitable Emissions Investment Fund (hereinafter, the "Fund") as a separate account and credit to the Fund all Alternative Compliance Payments and penalties made pursuant to this Subsection; the City or Environment Department may direct other funds to the Fund at its discretion. The Review Board is responsible for evaluating local carbon abatement proposals, and making recommendations for expenditures from the Fund.

Money in the Fund shall be expended for the support, implementation, and administration of local building carbon abatement projects that benefit the City of Boston's emissions reduction goals. Fund expenditures shall prioritize projects that benefit Environmental Justice Populations and populations disproportionately affected by air pollution, including by improving or promoting:

- low-income affordable housing and housing where tenants are at risk of displacement and in need of rent stabilization;
- local air quality improvement;
- indoor environmental quality and health for building tenants;
- economic inclusion, training, and technical assistance for Minority, Women, and Disadvantaged Business Enterprises (MWDBE) and cooperative contractors;
- equitable workforce development training programs for residents who have been disproportionately impacted by the effects of climate change;
- projects with community ownership of housing and renewable energy infrastructure;
- reduced energy burdens; or
- any further environmental initiatives.

The Regulations will address conditions for expenditure, which may include but are not limited to the scale of anticipated emissions reductions, compliance with employment and contracting standards, living wage standards, language access, rent stabilization, air quality monitoring and improvements, housing stability, disclosure of compliance status and mechanisms to tenants, and compliance with Fair Housing standards.

During each fiscal year, the Review Board may incur liabilities against and spend monies from the Fund, which shall operate for fiscal years that begin on or after the date of implementation. Money in the Fund may be used for administrative costs incurred by the Review Board, including compensation for members as provided in section (s), or by the Environment Department in supporting the Review Board.

(h) Data Verification.

- a. Building Owners shall self-certify their reporting data every year.
- b. In the Building's first year of reporting after this Subsection is enacted, Building Owners shall provide a third-party verification of their reporting data for the previous year. For every Verification Year thereafter, Building Owners shall

provide a third-party verification for the five calendar years prior, but not including, the current year. Verifications must be performed by qualified Energy professionals, as defined by the Regulations, and submitted no later than the reporting deadline of the relevant year.

c. In the event that there is a discrepancy between third-party verified data and an Owner's self-certified reporting data, any resulting lack of compliance with the Emissions standards in this Subsection shall be subject to fines as outlined in the Regulations.

The Commission may revise requirements for data verification and qualified Energy professionals via the Regulations.

(i) Emissions Requirements.

Each Building subject to the reporting requirements of this Subsection shall comply with the CO₂e Emissions standards set forth in Table 1 below; provided, however, that Building Owners may develop and request approval for Individual Compliance Schedules pursuant to the requirements in section (k) or request a Hardship Compliance Plan pursuant to section (l). Buildings must comply with the Emissions standards on an annual basis and compliance shall be measured as a total of metric ton of CO₂e Emissions per square foot. Buildings equal to or greater than twenty thousand (20,000) square or fifteen (15) units but less than thirty-five thousand (35,000) square feet or thirty-five (35) units shall not be subject to the Emissions standards until 2031, reporting for 2030 emissions. Any Building that has been completed after date of implementation shall comply with Emissions Standards consistent with zoning approvals, which shall be considered binding and supersede any less stringent Emissions standards set out in this Subsection.

Upon recommendation from the Environment Department, the Review Board shall propose to the Commission an update to the CO₂e Emissions standards set forth in Table 1, to ensure the City is achieving its emissions reduction goals.

Table 1: CO₂e Emissions Standards by Building Use

Building use	Emissions standard (kgCO ₂ e/SF/yr.)					
	2025 - 2029	2030-2034	2035-2039	2040-2044	2045-2049	2050-
Assembly	7.8	4.6	3.3	2.1	1.1	0
College/ University	10.2	5.3	3.8	2.5	1.2	0
Education	3.9	2.4	1.8	1.2	0.6	0
Food Sales & Service	17.4	10.9	8.0	5.4	2.7	0
<u>Healthcare</u>	15.4	10.0	7.4	4.9	2.4	0
Lodging	5.8	3.7	2.7	1.8	0.9	0
Manufacturing/	23.9	15.3	10.9	6.7	3.2	0

Industrial						
Multifamily housing	4.1	2.4	1.8	1.1	0.6	0
Office	5.3	3.2	2.4	1.6	0.8	0
Retail	7.1	3.4	2.4	1.5	0.7	0
Services	7.5	4.5	3.3	2.2	1.1	0
Storage	5.4	2.8	1.8	1.0	0.4	0
Technology/Science	19.2	11.1	7.8	5.1	2.5	0

(i) Blended Emissions Standards.

Buildings or Building Portfolios with more than one primary use may comply with a blended CO₂e Emissions standard; provided, however, that a use may constitute a primary use only if it (i) occupies at least ten percent (10%) of a Building's or Building Portfolio's square footage, or (ii) accounts for more than ten percent (10%) of a Building's or Building Portfolio's total annual Energy use or CO₂e Emissions. Building Owners using a blended CO₂e Emissions standard must (i) designate the blended standard in annual reports to the Commission, and (ii) provide documentation verifying the qualification of each primary use in annual reports to the Commission for the first year a blended CO₂e Emissions standard is used and in any subsequent year when the blended Emissions standard or primary use(s) change.

(j) Energy Use Exempt from Emissions Requirements.

Building Owners may choose to deduct Energy used by Emergency Backup Generation/Backup Power and Electrical Vehicle Supply Equipment (EVSE) from a Building's total Energy use subject to this Subsection's CO₂e Emissions standard, provided that:

- i. Emergency Backup Generation/Backup Power provides Energy only to the Building or Building Portfolio.
- ii. Electrical Vehicle Supply Equipment is separately metered or EVSE is capable of tracking and reporting accurate energy usage, and EVSE meets specifications as defined by the Regulations; and
- iii. Building Owners annually report (i) Energy used by Emergency Backup Generation / Backup Power and Electrical Vehicle Supply Equipment; (ii) the date(s), hour(s) and conditions that required the use of Emergency Backup Generation/Backup Power; and (iii) any other information required by the Regulations. Such reporting shall be subject to the self-certification and third-party verification procedures in section (h).
- iv. In the event that Emergency Backup Generation/Backup Power or EVSE serve, or have the potential to serve, multiple Buildings in a Building

Portfolio, the Energy use from such activities shall be allocated for individual Buildings in proportion to the square footage of each Building;

Upon recommendation from the Review Board, the Commission may revise the availability and use of these exemptions or add additional exemptions via the Regulations. Energy used by Emergency Backup Generation / Backup Power may no longer be exempted after 2030, unless otherwise amended in the Regulations; provided, however, that such energy usage by a healthcare institution shall continue to be exempted thereafter for so long as the healthcare institution is required to install and maintain Emergency Backup Generation / Backup Power to ensure reliable operations or as a condition to receiving accreditation.

(k) Individual Compliance Schedules.

Owners of Buildings or Building Portfolios may apply for an Individual Compliance Schedule as an alternative to the CO₂e Emissions standard reduction schedule in Table 1. Individual Compliance Schedules must establish declining CO₂e Emissions standards in five- (5-) year increments, provided that such standards must (i) decline on a linear or better basis, (ii) reduce Emissions 50% by 2030, and (iii) reduce Emissions 100% by 2050; and

- a. Use the year that a Building was first required to report Energy use pursuant to this Subsection as the baseline for emissions, provided, however, that (i) the Building's or Building Portfolio's Energy use, Gross Floor Area, and any relevant Emissions Factors have been reported to the Commission in accordance with this Subsection or is retroactively reported in accordance with the data verification requirements of this Subsection and the Regulations; or
- b. Use a baseline from any year starting in 2005 to the first required reporting year, provided, however, that the Building or Building Portfolio Owner provides documentation of Energy use, Gross Floor Area and relevant Emissions Factors by the Building or Building Portfolio for the selected baseline year and the year in which an Individual Compliance Schedule is requested in accordance with the data verification requirements of this Subsection and the Regulation. The Commission may make such information publicly available.

A Building or Building Portfolio that failed to comply with previous reporting requirements may use an Individual Compliance Schedule, provided, however, that the necessary data is submitted to the Review Board and any applicable penalties for past non-compliance are paid in full.

Individual Compliance Schedules must be approved by the Review Board. Building and Building Portfolio Owners must submit the information required in this Subsection, and any other documentation specified in the Regulations, when requesting an Individual Compliance Schedule from the Review Board. The Review Board may include additional

conditions on the approval of Individual Compliance Plans consistent with the Regulations.

(I) Hardship Compliance Plans.

A Building Owner may apply to the Review Board for a Hardship Compliance Plan if there are Building characteristics or circumstances that present a hardship in complying with the Emissions standards in this Ordinance. Such characteristics or circumstances, to be detailed in the Regulations, may include historic Building designations, affordable housing refinancing timelines, pre-existing long-term Energy contracts without reopeners, or financial hardship. The application, review process and conditions for Hardship Compliance Plans shall be set forth in the Regulations. The Review Board shall have sole discretion in issuing Hardship Compliance Plans; such plans may include alternative timelines for meeting Emissions standards, and alternative Emissions standards. At its discretion, the Review Board may also allow the use of compliance mechanisms additional to those outlined in section (m) consistent with achieving the purpose of this Subsection as laid out in section (a). The Review Board may include additional conditions on the approval of Hardship Compliance Plans consistent with the Regulations, including measures related to Employment Plans, housing stabilization, air quality monitoring, energy cost- and benefit-sharing, and disclosure of compliance status and mechanisms to tenants, as appropriate.

(m) Additional Compliance Mechanisms.

- a. <u>Municipal Aggregation</u>: Buildings may use electricity obtained through the Boston municipal electricity aggregation program, and have the appropriate Emissions Factor applied to such electricity.
- b. <u>Renewable Energy Certificates</u>: Buildings may mitigate CO₂e Emissions from electricity use by purchasing unbundled Renewable Energy Certificates that:
 - (i) Are generated by non-CO₂e emitting renewable sources and meet the RPS Class I eligibility criteria outlined in 225 CMR 14.05, as may be amended from time to time:
 - (ii) Are tracked by the New England Power Pool Generation Information System;
 - (iii) Are generated in the compliance period in which they are used;
 - (iv) Are retired within six (6) months after the end of the compliance period in which they are used; and
 - (v) Comply with any additional or different requirements set forth in the Regulations, as may be amended from time to time. In the event of a conflict between the requirements for Renewable Energy Certificates in this provision and the Regulations, the requirements in the Regulations shall prevail.

- c. <u>Power Purchase Agreements</u>: Buildings may mitigate CO₂e Emissions from electricity use by entering Power Purchase Agreements for Energy generated by renewable non-emitting fuel sources, provided that:
 - (i) The Energy purchased pursuant to a Power Purchase Agreement is generated during the compliance period for which a Building is mitigating CO₂e Emissions;
 - (ii) The Renewable Energy Certificates associated with the Energy purchased under a Power Purchase Agreement are retired by the Building Owner within six (6) months after the end of the compliance period in which used; and
 - (iii) The Power Purchase Agreement complies with any additional or different requirements set forth in the Regulations, as may be amended from time to time, including but not limited to additionality criteria. In the event of a conflict between the requirements for Power Purchase Agreements in this provision and the Regulations, the requirements in the Regulations shall prevail.
- d. <u>Alternative Compliance Payments</u>: Buildings may mitigate CO₂e Emissions from Energy use by making Alternative Compliance Payments. The price of an Alternative Compliance Payment shall be based on the average cost per metric ton of CO₂e to decarbonize Buildings subject to this Subsection. The initial cost of an Alternative Compliance Payment shall be \$234 per metric ton of CO₂e. The cost of an Alternative Compliance Payment shall be reviewed every five (5) years by the Review Board, with input from the Environment Department, and may be adjusted by the Regulations.

Upon recommendation from the Review Board, the Commission may revise the availability and use of these compliance mechanisms or add additional compliance mechanisms via the Regulations, consistent with the purpose of this Subsection as laid out in section (a).

(n) Preservation of Documents.

Building Owners shall preserve records and information (i) required to be submitted by this Subsection and/or (ii) submitted pursuant to this Subsection in order to demonstrate compliance with the Emissions standard, including but not limited to information regarding Building Uses, Emissions Factors, compliance mechanisms outlined in section (m), Individual Compliance Schedules or Hardship Compliance Plans, for such time as set forth in Regulations, and shall make such records available for inspection and audit by the Commission and Review Board upon request.

(o) Obligation to Request and Report Information.

Where a unit or other space in a Building is occupied by a Tenant and such unit or space is separately metered by a utility company, the Owner of such Building may request from

such Tenant information relating to such Tenant's separately metered Energy and water use, purchase of renewable energy or RECs, use of space, and operating hours, and other information required for Portfolio Manager reporting, for the previous calendar year, and such Tenant shall report such information to such Owner. The Commission may designate and make available a form to be used to request and report such information. Notwithstanding the foregoing, individual residential Tenants shall have no obligation to report Energy and water use to Building Owners.

- 1. Such Owner may request information related to such Tenant's metered Energy and water use and other related information for the previous calendar year no earlier than January 1 and no later than January 31 of any year in which the Owner is required to report such information.
- 2. Upon receiving such a request, a Tenant shall report information relating to the Tenant's separately metered Energy and water use for the previous calendar year no later than February 28 of any year in which the Owner is required to report such information.
- 3. If a Tenant vacates a unit or other space before the end of the calendar year without reporting metered Energy and water use, such Owner may immediately request such information for any period of occupancy relevant to such Owner's obligation to report and the Tenant shall respond within thirty (30) Days.
- 4. Failure of any Tenant to report the information required in this Subsection does not relieve such Owner of the obligation to report pursuant to this article.
- 5. Where an Owner of a Building is unable to obtain complete Energy and water use data due to the failure of any Tenant to report the information required by this Subsection, the Owner shall use values or formulas established by the Commission to estimate whole Building Energy and water use.

(p) Disclosure.

The Commission shall make Energy, water, and Emissions information for Buildings available to the public on the City of Boston website in multiple languages consistent with City of Boston language standards no later than October 1 of every year, except for 2022 in which it shall make such information available to the public no later than December 1, 2022. Such disclosure shall include, at a minimum, Building identification, Energy intensity, CO₂e Emissions per square foot, Emissions compliance status, ENERGY STAR rating, where available, and water consumption per square foot. Such disclosures may include information voluntarily reported to the Commission. Before any such disclosure, the Commission shall subject all data to a quality-assurance/quality-control process.

- 1. At least thirty (30) Days prior to disclosure, the Commission shall provide Building Owners an opportunity to review the accuracy of information to be disclosed.
- 2. The Commission shall invite Building Owners to submit contextual information related to Energy and water use in their Buildings, and shall disclose contextual information in such form as it shall determine.

3. The Commission shall also, from time to time, publicly report on implementation of, compliance with, and overall results from this Subsection; however, the first such report shall be issued no later than December 31, 2022.

To the extent available to the Commission, the Commission shall disclose information relevant to air quality, Energy cost burdens, fair housing and housing displacement, jobs, and other qualitative and quantitative metrics related to Environmental Justice Populations and equitable implementation of this Subsection. Within one year, the Environment Department shall identify appropriate metrics and research mechanisms for (i) measuring and collecting this type of information and (ii) analyzing the impact, if any, of this Subsection on such metrics.

The City, in consultation with the Review Board, shall issue annual reports on the Equitable Emissions Investment Fund, including balance of funds, expenditures, funded projects and anticipated impacts relative to greenhouse gas emissions, air quality, and local employment. Administrative costs, Review Board compensation, and other liabilities incurred against and spent from the Fund shall also be included. These reports will be available for the public on the City of Boston website and follow current City of Boston language and accessibility guidelines.

(q) Enforcement for Failure to Comply with this Subsection.

- 1. Failure to comply with the provisions of this Subsection and regulations issued pursuant to this Subsection shall result in the imposition of penalties by the Review Board. For any failure to comply, the Review Board shall have the authority to: (i) issue a notice of violation subject to penalties if not corrected; and (ii) recommend seeking an injunction from a court of competent jurisdiction requiring a Building Owner or Tenant to comply with the requirements of this Subsection; provided, however, this provision shall not apply to residential Tenants.
- 2. Notice of violation. The Review Board shall issue a written notice of violation to any Building Owner or Tenant violating this Subsection by failing to comply with any of the provisions of this Subsection or any Regulation issued pursuant to this Subsection. The notice of violation shall indicate which obligations the Building Owner or Tenant has not fulfilled and provide the Building Owner or Tenant with thirty (30) days to either: (i) correct the notice of violation by complying with this Subsection and associated Regulations; or (ii) send a written request to the Executive Director of the Commission for a hearing by the Review Board for a determination of whether the Building Owner or Tenant violated this Subsection.
- 3. Request for a Hearing. If a Building Owner or Tenant requests a hearing, the Review Board shall hold such hearing within sixty (60) days of the Executive Director of the Commission's receipt of a written request for hearing. The hearing shall be conducted according to the requirements of M.G.L. c. 30A. If the Review Board determines that the Building Owner or Tenant violated this Subsection, that person shall have thirty (30) days from the issuance of a final decision to correct the violation.

- 4. Failure to comply with notice of violation. If a person who does not request a hearing fails to correct a noticed violation of this Subsection within thirty (30) days after the Review Board issues a written notice of violation, that person shall be deemed to have failed to comply with the notice of violation. If a person who requested a hearing fails to correct a noticed violation of this Subsection within thirty (30) days after the issuance of an adverse decision after a hearing, that person shall be deemed to have failed to comply with the notice of violation. Any person who has failed to comply with a notice of violation shall be subject to a fine as set forth in section (r):
- 5. Injunctive relief. Upon recommendation from the Review Board, the City shall seek an injunction from a court of competent jurisdiction instructing a Building Owner or Tenant who has failed to comply with a notice of violation to comply with this Subsection and regulations issued pursuant to this Subsection, provided, however, this provision shall not apply to residential Tenants.

The Review Board shall have discretion in deciding whether to recommend seeking an injunction.

6. Fines. All fines and penalties issued under this Subsection may be enforced pursuant to M.G.L. c. 40, s. 21D or M.G.L. c. 111, s. 31C, provided however, that this permission to utilize the noncriminal disposition procedures of section 21D shall not deprive the Review Board or the Commission of any other remedy or means of collecting the fine, including by indictment or complaint. For any fines or penalties that remain unpaid thirty (30) Days following the receipt of a notice of violation the Commission shall, upon recommendation from the Review Board, take steps to place an assessment on the Building Owner's tax bill or a lien on the Building pursuant to M.G.L. c. 40U, s. 12. The Review Board shall have discretion in deciding whether to recommend placing assessments or liens.

(r) Penalties and Fines for Failure to Comply with this Subsection.

The fines outlined in this Subsection may be revised by the Regulations upon advisement by the Environment Department. References to Buildings in this Subsection shall be deemed to include Building Portfolios. The Regulations shall provide a Building Owner with an opportunity to administratively appeal any such fine pursuant to an appeal mechanism that is consistent with that required by M.G. L. c. 40U.

(i) Failure to Comply with Reporting Requirements.

Each Day that a Building Owner is out of compliance with the reporting requirement of this Subsection, in whole or in part, shall be deemed a separate violation of this Subsection and subject to a fine of:

1. Three hundred dollars (\$300) a Day for:

- a. Non-Residential Buildings equal to or greater than thirty-five thousand (35,000) gross square feet or two (2) or more Buildings on the same parcel that equal or exceed one hundred thousand (100,000) gross square feet; and
- b. Residential Buildings equal to or greater than thirty-five (35) units or thirty-five thousand (35,000) gross square feet.
- 2. One hundred-fifty dollars (\$150) a Day for:
 - a. Non-Residential Buildings equal to or greater than twenty thousand (20,000) gross square feet but less than thirty-five thousand (35,000) gross square feet; and
 - b. Residential Buildings equal to or greater than fifteen (15) units or twenty thousand (20,000) gross square feet, but less than thirty-five (35) units or thirty-five thousand (35,000) gross square feet.

No penalty shall be assessed prior to thirty (30) Days after receipt of a notice of violation by a Building Owner or if a Building Owner corrects the violation within thirty (30) Days of receipt of a notice of violation.

(ii) Failure to Comply with Emission Standards.

If a Building Owner did not comply with the applicable Emissions standard in a calendar year, each Day of that calendar year and each subsequent Day when the violation is not corrected shall be deemed a separate violation of this Subsection and subject to a fine of:

- 1. One thousand dollars (\$1,000) a Day for:
 - a. Non-Residential Buildings equal to or greater than thirty-five thousand (35,000) gross square feet or two (2) or more Buildings on the same parcel that equal or exceed one hundred thousand (100,000) gross square feet; and
 - b. Residential Buildings equal to or greater than thirty-five (35) units or thirty-five thousand (35,000) gross square feet.
- 2. Three hundred dollars (\$300) a Day for:
 - a. Non-Residential Buildings equal to or greater than twenty thousand (20,000) gross square feet but less than thirty-five thousand (35,000) gross square feet; and
 - b. Residential Buildings equal to or greater than fifteen (15) units or twenty thousand (20,000) gross square feet, but less than thirty-five (35) units or thirty-five thousand (35,000) gross square feet.

For any Building Owner that has failed to report any or all information required by this Subsection to calculate compliance with the Emissions standard, the Building shall be deemed to be in non-compliance with the Emissions standard and subject to the fines in this subclause. A Building Owner may correct such non-compliance by providing the information required by this Subsection to calculate compliance with the Emissions

standard and, if necessary, make use of relevant Compliance Mechanisms to account for any failure to meet the Emissions standard. No penalty shall be assessed prior to thirty (30) Days after receipt of a notice of violation by a Building Owner or if a Building Owner corrects the violation within thirty (30) Days of receipt of a notice of violation.

(iii) Failure to Accurately Report Information

In the event that third-party verification of information reported by a Building Owner identifies a discrepancy with a Building Owner's self-certified reporting, and such discrepancy is not reconciled pursuant to a process to be outlined by Regulation, such discrepancy shall be deemed a violation of this Subsection and subject to a fine between one thousand dollars (\$1,000) and five thousand dollars (\$5,000). The Review Board shall, in its sole discretion, determine the fine taking into account whether the failure to accurately report information impacted a determination of compliance with an Emissions standard. An Owner may petition the Review Board for a reduction in such a penalty in accordance with the conditions outlined in the Regulations, which shall include circumstances in which a third-party verification was filed by a prior Owner. The Review Board may, in its discretion, reduce such penalty through the process as laid out in the regulations.

In the event that a failure to accurately report information resulted in inaccurately determining that a Building Owner complied with an Emissions standard, the penalties from subclause (ii) above shall apply.

(iv) Penalty reductions and waivers

The Review Board may grant penalty reductions or waivers. Details regarding petitions, review process and conditions for penalty reductions or waivers may be set forth in the Regulations. In determining whether to grant any reduction in penalty for failure to comply with Emission standards, the Review Board shall consider an Owner's plans for bringing a Building into full compliance and whether there are Building characteristics or circumstances that present a hardship in complying with the Emissions standards in this Ordinance. Such characteristics or circumstances could include historic Building designations, affordable housing, or financial hardship. The Review Board shall have sole discretion in granting penalty reductions or waivers.

Section (r) shall not apply to the City or any City Building.

(s) Review Board.

There is established a nine-member independent Review Board appointed by the Mayor and approved by the Boston City Council. Members of the Review Board shall have expertise in environmental justice, affordable housing, labor, and workers' rights, workforce development, building engineering and energy, real estate development and management, public health and hospitals, architecture and historic preservation, or any combination thereof

Two-thirds of the members of the Review Board shall be nominated by Community-Based Organizations, and all members shall be current residents of the City of Boston. The Chair of the Boston City Council's Environment, Resiliency and Parks Committee, or their designee shall serve as a member of the Review Board. The Regulations shall designate community groups and organizations to nominate individuals to serve on the Review Board, subject to the Mayor's appointment and the Council's approval. Members of the Review Board for whom participation is not part of a full- or part-time job may request compensation for their service on the Review Board. The Regulations shall establish a rate of compensation per meeting and a cumulative compensation per year.

Members shall serve for a term of three (3) years. As the term of any member expires, their successor, or their renewal, shall be nominated by the organizations identified in the Regulations and appointed by the Mayor, subject to Council approval. Vacancies in the Review Board shall be filled by the Mayor, subject to Council approval for the unexpired term. Every three (3) years, the Mayor shall designate a member to be the Chair of the Review Board.

The Review Board shall meet a minimum of four times per year and may meet more often as it deems necessary to fulfill its obligations under this Subsection.

Working groups may be convened to study or make recommendations for Regulations changes or sector-specific criteria for Hardship Compliance Plans, subject to the approval of the Review Board. A working group will be convened to address the specific needs of healthcare institutions connected to district energy systems. Working groups may include individuals not on the Review Board, including representatives of appropriate federal, state and local agencies and authorities, sector-specific professionals, financial institution representatives, energy providers and utility representatives, among others.

The Review Board may draft Regulation revisions and may issue guidance to the Environment Department to ensure equitable implementation of this Subsection.

Funding, capacity-building and staff support shall be provided to the Review Board by the Environment Department. The Environment Department shall also be responsible for annual disclosure and policy administration and carry out enforcement actions as directed by the Review Board. The Review Board may delegate responsibilities, such as, but not limited to, the approval of requests for blended Emissions standards and Individual Compliance Schedules, to the Environment Department.

(t) Advisory Committee.

Any Advisory Committee previously established pursuant to this Subsection shall be disbanded.

(u) Review and Power to Suspend.

The Commission shall direct the Environment Department to review the implementation of this Subsection every five (5) years. As part of such review, the Environment Department shall hold at least one (1) public hearing and solicit comments from the public. Such request for comments shall include a request for information regarding how, if at all, implementation of this Subsection has impacted air quality, Energy cost burdens, and other qualitative and quantitative metrics related to Environmental Justice Populations and equitable implementation of this Subsection; to the extent such information is available from other City departments, the Environment Department shall take all reasonable steps to collect and analyze such information.

The Commission may suspend all or part of the requirements of this Subsection upon a written finding from the Environment Department that a significant obstacle interferes with implementation or that implementation has a significant negative effect on Energy cost burdens, equitable access to housing or other factors set forth in the Regulations. The Commission may lift such suspension upon a written finding from the Environment Department that the obstacle has been removed or the negative effect addressed. The Commission shall suspend the requirements of this Subsection as necessary to ensure that at least ninety (90) Days passes between the promulgation of Regulations and any reporting deadline.

Notwithstanding the foregoing, the Environment Department may recommend revisions to the Regulations as needed.

(v) Regulatory Authority.

In accordance with recommendations from the Environment Department, the Commission shall promulgate rules and regulations, including amending the existing Regulations, necessary to implement and enforce this Subsection, pursuant to M.G.L., c. 30A.

(w) Applicability.

If any provision of this Subsection imposes greater restrictions or obligations than those imposed by any other general law, special law, regulation, rule, ordinance, by-law, order, or policy, then the provisions of this Subsection control.

(x) Implementation.

The provisions of this Subsection are effective immediately upon passage.

(z) Notice.

Within three months of the adoption of this Subsection, notification concerning reporting and disclosure procedures shall be provided to Owners subject to the requirements of this Subsection. This notice, and any other notice required by this Subsection, including notices of violation, shall be delivered to the contact information in the Assessor's database unless an Owner provides alternative contact information to the Commission.

SECTION 2. The City of Boston Code, Ordinances, Chapter VII, Section 7-2.1, first paragraph shall be amended as follows:

- a. Section 7-2.1 is amended in the first sentence, by adding the phrase- "the Environment Commissioner, ex officio" after the phrase- "the Commissioner of Transportation, ex officio".
- b. Section 7-2.1 is further amended in the first sentence by striking the phrase—"three (3) members appointed by the Mayor", and inserting in its place the phrase and following sentence- "four (4) members appointed by the Mayor. Of the four (4) members appointed by the Mayor, at least one (1) member shall serve for a three- (3)-year term."

SECTION 3. If any provision of this ordinance is held invalid by a court of competent jurisdiction, then such provision should be considered separately and apart from the remaining provisions, which shall remain in full force and effect.

SECTION 4. These provisions shall be in effect immediately following passage.

Filed in Council: September 22, 2021