

File No. 221223

Committee Item No. 9

Board Item No. 14

## COMMITTEE/BOARD OF SUPERVISORS

### AGENDA PACKET CONTENTS LIST

Committee: Budget and Finance Committee Date March 1, 2023

Board of Supervisors Meeting Date March 7, 2023

#### Cmte Board

<input type="checkbox"/>	<input type="checkbox"/>	Motion
<input type="checkbox"/>	<input type="checkbox"/>	Resolution
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ordinance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Legislative Digest
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Budget and Legislative Analyst Report
<input type="checkbox"/>	<input type="checkbox"/>	Youth Commission Report
<input type="checkbox"/>	<input type="checkbox"/>	Introduction Form
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Department/Agency Cover Letter and/or Report
<input type="checkbox"/>	<input type="checkbox"/>	MOU
<input type="checkbox"/>	<input type="checkbox"/>	Grant Information Form
<input type="checkbox"/>	<input type="checkbox"/>	Grant Budget
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Contract/Agreement
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Form 126 – Ethics Commission
<input type="checkbox"/>	<input type="checkbox"/>	Award Letter
<input type="checkbox"/>	<input type="checkbox"/>	Application
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Public Correspondence

#### OTHER (Use back side if additional space is needed)

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Referral FYI 12/9/2022</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Referral CEQA 12/9/2022</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>CEQA Determination 12/16/2022</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Presidential Action Memo 1/26/2023</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>ENV Resolution No. 2023-03-COE 2/7/2023</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>ENV Presentation 3/1/2023</u>
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Completed by: Brent Jalipa Date February 22, 2023

Completed by: Brent Jalipa Date March 2, 2023

[Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

**Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.**

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.  
**Additions to Codes** are in *single-underline italics Times New Roman font*.  
**Deletions to Codes** are in ~~*strikethrough italics Times New Roman font*~~.  
**Board amendment additions** are in double-underlined Arial font.  
**Board amendment deletions** are in ~~strikethrough Arial font~~.  
**Asterisks (\* \* \* \*)** indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. CEQA Findings.

The Planning Department has determined that the actions contemplated in this ordinance comply with the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of Supervisors in File No. 221223 and is incorporated herein by reference. The Board affirms this determination.

Section 2. General Findings: In 2021, San Francisco adopted an accelerated climate action goal to be net zero carbon citywide by 2040. To respond to the City's new strategies for resilience and sustainability, this update to Chapter 7 of the Environment Code is intended to support the 2021 Climate Action Plan commitments, simplify organization of the Chapter,

1 update definitions and legislative findings, and build upon advancements made in the 2022  
2 San Francisco Building Code.

3  
4 Section 3. Repeal of Environment Code Chapter 7: Green Building Requirements for  
5 City Buildings of the Environment Code. Chapter 7: Green Building Requirements for City  
6 Buildings is hereby repealed in its entirety. Chapter 7 was initially enacted in its current form  
7 on October 11, 2011, by Ordinance No. 204-11, and was amended by Ordinance Nos. 75-14,  
8 71-16, 52-17, 250-18, and 8-20 (these ordinances are available on the Board of Supervisors'  
9 website). Chapter 7 is deleted in its entirety, as follows:

10 **~~SEC. 700. FINDINGS AND PURPOSE.~~**

11 ~~—The Board of Supervisors finds that:~~

12 ~~—1. Buildings are one of the distinguishing elements of human civilization. Traditional~~  
13 ~~building design and construction practices have significant negative environmental impacts. In the~~  
14 ~~United States, buildings consume 48% of all energy, 76% of all electricity, and generate 38% of all~~  
15 ~~carbon (CO2) emissions. In San Francisco, buildings consume 54% of all energy, 80% of all~~  
16 ~~electricity, and generate 56% of all carbon emissions. Advanced green buildings can generate their~~  
17 ~~own energy, minimize carbon emissions, produce and process their own water, emphasize reuse of~~  
18 ~~buildings and materials, and provide healthy interior environments.~~

19 ~~—2. The selection of sustainable design features and building materials is consistent with the~~  
20 ~~City's Precautionary Principle Policy. This policy requires that the City consider a full range of~~  
21 ~~alternatives in order to select products and procedures that minimize harm and maximize the~~  
22 ~~protection of public health and natural resources.~~

23 ~~—3. The United States Green Building Council (USGBC) is a non-profit organization~~  
24 ~~committed to a prosperous and sustainable future for our nation through cost efficient and energy-~~  
25

1 ~~saving green buildings. LEED® is an internationally recognized green building certification system,~~  
2 ~~developed by the USGBC.~~

3 ~~—4. Green buildings provide financial benefits while protecting human and environmental~~  
4 ~~health. Total construction costs for buildings seeking LEED certification fall into the existing range of~~  
5 ~~costs for buildings not seeking LEED certification. Green buildings, on average, result in savings of~~  
6 ~~20% of total construction costs over the first 20 years of operation.~~

7 ~~—5. The California Energy Commission has established a goal that all new commercial~~  
8 ~~construction in California will be Zero Net Energy by 2030, and 50% of existing commercial buildings~~  
9 ~~will be retrofit to Zero Net Energy by 2030.~~

10 **~~SEC. 701. DEFINITIONS.~~**

11 ~~—The following terms shall have the meanings set forth below.~~

12 ~~—“All Electric” means the described system, Building, or project uses a permanent supply of~~  
13 ~~electricity as the source of energy for all space conditioning (including heating and cooling), water~~  
14 ~~heating (including pools and spas), cooking appliances, and clothes drying appliances. An All-Electric~~  
15 ~~system, Building or project may include solar thermal collectors, but installs no natural gas or propane~~  
16 ~~plumbing or equipment in or in connection with a Building, or within property lines of the premises,~~  
17 ~~extending from the point of delivery at the gas meter.~~

18 ~~—“Alternative Daily Cover” or “ADC” means materials, other than soil, that have been~~  
19 ~~approved by the California Department of Resources Recycling and Recovery (“CalRecycle”) or a~~  
20 ~~successor agency for use as a temporary overlay on an exposed landfill face. Material used as~~  
21 ~~Alternative Daily Cover, including Green Material, does not qualify as material diverted from landfill.~~

22 ~~—“Beneficial reuse” means the reuse of material at a landfill that does not include ADC but~~  
23 ~~shall include, but not be limited to, use of the material for or as the following: alternative intermediate~~  
24 ~~cover; final cover foundation layer; liner operations layer; leachate and landfill gas collection system;~~

1 ~~construction fill; road base; wet weather operations pads and access roads; and, soil amendments for~~  
2 ~~erosion control and landscaping. “Beneficial reuse” does not include disposal of material at a landfill.~~

3 ~~—“BioMass Energy Generation” means the controlled combustion, when separated from other~~  
4 ~~solid waste and used for producing electricity or heat, of wood, wood chips, wood waste, and tree and~~  
5 ~~brush prunings. “BioMass Energy Generation” does not include the controlled combustion of~~  
6 ~~recyclable pulp or recyclable paper materials, or medical or hazardous waste.~~

7 ~~—“Building” means:~~

8 ~~—(1) Any structure used for support or shelter of any use or occupancy. “Structure” means~~  
9 ~~that which is built or constructed, an edifice or building of any kind, or any piece of work artificially~~  
10 ~~built or composed of parts joined together in some definite manner and permanently attached to the~~  
11 ~~ground.~~

12 ~~—(2) “Building” includes office buildings, libraries, recreation centers, museums, airport~~  
13 ~~buildings, public safety buildings, hospitals, clinics, education centers, transportation facilities, cruise~~  
14 ~~ship terminals, marina buildings, convention facilities, and other structures.~~

15 ~~—(3) “Building” does not include any construction installation that is not part of a building,~~  
16 ~~or any tunnel, roadway, or bridge, or any vehicle or mobile equipment. “Building” also does not~~  
17 ~~include a structure, facility, or type of infrastructure that primarily provides for the collection, storage,~~  
18 ~~treatment, delivery, distribution, and/or transmission of water, wastewater, and/or power utilities.~~

19 ~~—“CALGreen” means the California Green Building Standards Code (Cal. Code of Regs. Title~~  
20 ~~24, Part 11) as adopted by San Francisco Green Building Code.~~

21 ~~—“City department” means any department of the City and County of San Francisco. City~~  
22 ~~department does not include any other local agency or any federal or State agency, including but not~~  
23 ~~limited to, the San Francisco Unified School District, the San Francisco Community College District,~~  
24 ~~the Office of Community Investment and Infrastructure or the San Francisco Housing Authority.~~

1           ~~—“City-owned Facility” means any Building owned by the City and County of San Francisco.~~  
2           ~~“City-owned Facility” includes City-owned Buildings or portions thereof that the City leases to non-~~  
3           ~~City entities.~~

4           ~~—“City Leasehold” means a Building or portion thereof owned by others where the City is a~~  
5           ~~tenant.~~

6           ~~—“City Representative” means the employee of the City who oversees the construction and/or~~  
7           ~~demolition process for a municipal construction and/or demolition project and is responsible for~~  
8           ~~ensuring that the contractor complies with all aspects of the contract documents.~~

9           ~~—“Commission” means the Commission on the Environment.~~

10          ~~—“Commissioning Process” means an independent process to ensure the attainment of quality~~  
11          ~~facilities pursuant to this Chapter. The commissioning process verifies and documents that the energy~~  
12          ~~using systems in buildings are installed, tested, and operate as designed.~~

13          ~~—“Construction and Demolition Debris” or “C & D Debris” means building materials and~~  
14          ~~solid waste generated from construction and demolition activities, including, but not limited to: fully-~~  
15          ~~cured asphalt; concrete; brick; lumber; gypsum wallboard; cardboard and other associated~~  
16          ~~packaging; roofing material; ceramic tile; carpeting; fixtures; plastic pipe; and metals. “Construction~~  
17          ~~and Demolition Debris” does not include refuse regulated under the 1932 Refuse Collection and~~  
18          ~~Disposal Ordinance or sections of the Municipal Code that implement the provisions of that ordinance,~~  
19          ~~or materials excavated from the public right-of-way. “Construction and Demolition Debris” does not~~  
20          ~~include “hazardous waste,” as defined in California Health and Safety Code Sections 25100 et seq.~~

21          ~~—“Contractor” means the company or person to whom the City awards a contract for a~~  
22          ~~municipal construction and/or demolition project. The contractor is responsible for complying with all~~  
23          ~~aspects of Section 708 of this Chapter and for ensuring that all subcontractors, lower-tier~~  
24          ~~subcontractors and suppliers also comply.~~

1           —“Deconstruction” means the process of taking apart a structure with the primary goal of  
2     preserving the value of all useful building materials, so that they may be reused or recycled.

3           —“Demolition Project” means the decimating, razing, ruining, tearing down or wrecking of any  
4     facility, structure, pavement, building, wall or fence, whether in whole or in part and whether interior  
5     or exterior.

6           —“Department” means the Department of the Environment.

7           —“Design Phases” means the generally accepted stages of architectural design: conceptual  
8     design, schematic design, design development and construction documents.

9           —“Design Development Phase” means the transitional phase of architectural design in which  
10    the design moves from the schematic phase to the construction document phase, in which the architect  
11    prepares drawings and other presentation documents to crystallize the design concept and describe it  
12    in terms of architectural, electrical, mechanical, and structural systems. In addition, the architect also  
13    prepares a statement of the probable project cost. This phase is often charted in percentages of  
14    completion leading up to the permit drawings. Such percentages refer to the level of details the plans  
15    have achieved and benchmarks established in the cost estimation process.

16          —“Director” means the Director of the Department of the Environment or his or her designee.

17          —“Disposal” means final deposition of material at a legally operating permitted landfill that  
18    does not include beneficial reuse or at a permitted transformation facility. A legally operating,  
19    permitted landfill includes Class III landfills and inert fills. Disposal of inert materials at inert fills or  
20    inert backfill sites does not constitute recycling.

21          —“Diversion” means use of material for any purpose other than disposal in a landfill or  
22    transformation facility, such as source reduction, reuse, recycling, and composting activities that do  
23    not result in material being disposed at permitted landfills and transformation facilities.

1       —“~~Diversion Rate~~” means the percentage of total material that is diverted from disposal at  
2       permitted landfills and transformation facilities through processes such as source reduction, reuse,  
3       recycling, and composting.

4       —“~~Green Business Certification Inc.~~” or “~~GBCI~~” is the body providing independent third-party  
5       LEED certification and professional credentials recognizing excellence in green building performance  
6       and practice.

7       —“~~Green Material~~” means any plant material that is either separated at the point of generation  
8       or separated at a centralized facility that employs methods to minimize contamination of waste streams.  
9       Green Material includes, but is not limited to, yard trimmings, untreated wood wastes, paper products,  
10      and natural fiber products. Green Material does not include treated wood waste, mixed demolition or  
11      mixed construction debris, manure, or plant waste from food processing facilities, alone or blended  
12      with soil.

13      —“~~Hazardous Material~~” means any material defined as hazardous in California Health and  
14      Safety Code Sections 25100 et seq., as amended and 25500 et seq., as amended.

15      —“~~Indoor Air Quality~~” or “~~IAQ~~” means the quality of air inside buildings, especially as it  
16      relates to the health and comfort of building occupants. Factors such as gases (including carbon  
17      dioxide, carbon monoxide, radon, formaldehyde, volatile organic compounds), particulates, and  
18      microbial contaminants (mold, bacteria) that cause adverse health conditions can affect IAQ.

19      —“~~Indoor Environmental Quality~~” means the overall state of conditions within a building that  
20      affect its occupants, including air quality, lighting, acoustics, thermal conditions, daylight, views,  
21      ergonomics, and controllability of lighting and thermal systems.

22      —“~~Landfill~~” means a facility that (a) accepts for disposal in or on land non-hazardous waste  
23      such as household, commercial, and industrial waste, and waste generated during construction,  
24      remodeling, repair and demolition operations, and (b) has a valid current solid waste facilities permit  
25      from the California Department of Resources Recycling and Recover (CalRecycle).



1           ~~—“Land-disturbing activity” means any movement of earth or a change in the existing soil~~  
2 ~~cover or existing topography that may result in soil erosion from wind, or water, and the movement of~~  
3 ~~sediments into or upon waters, lands, or public rights-of-way within the City and County of San~~  
4 ~~Francisco, including, but not limited to building demolition, clearing, grading, grubbing, filling,~~  
5 ~~stockpiling, excavating and transporting of land.~~

6           ~~—“Leadership in Energy and Environmental Design” or “LEED®” is an internationally~~  
7 ~~recognized green building certification system developed by the USGBC, providing third-party~~  
8 ~~verification that a building or community was designed and built using strategies aimed at improving~~  
9 ~~performance across all the following metrics: energy savings; water efficiency; CO2 emissions~~  
10 ~~reduction; improved indoor environmental quality; and, stewardship of resources and sensitivity to~~  
11 ~~their impacts. LEED provides building owners and operators with a concise framework for identifying~~  
12 ~~an implementing practical and measurable green building design, construction, operations, and~~  
13 ~~maintenance solutions. LEED-certified buildings are rated on a scale from lowest to highest: LEED~~  
14 ~~Certified, LEED Silver, LEED Gold and LEED Platinum. Wherever specific LEED prerequisites or~~  
15 ~~credits are cited, such references are to LEED version 4 (“v4”). More recent LEED versions may be~~  
16 ~~used, provided the credits and points achieved are at least as stringent as LEED v4.~~

17           ~~—“LEED Accredited Professional with specialty” or “LEED AP with specialty” means an~~  
18 ~~employee of a City department or a consultant retained by the City through a design or construction~~  
19 ~~contract or other agreement who has passed the LEED AP with specialty accreditation exam issued by~~  
20 ~~GBCI and maintained this credential through continuing education.~~

21           ~~—“LEED Online” is a web-based platform provided by USGBC for LEED project registration,~~  
22 ~~team collaboration, document management, project progress monitoring, and access to forms, reviewer~~  
23 ~~comments and certification credit language.~~

24           ~~—“LEED Project Administrator” means the individual member of the design team who~~  
25 ~~registers a project with GBCI, and subsequently administers the LEED documentation and certification~~

1 ~~process for the project. For San Francisco municipal construction projects, the LEED Project~~  
2 ~~Administrator shall be a LEED AP with specialty.~~

3 ~~—“LEED Scorecard” means a summary chart indicating all LEED prerequisites and credits~~  
4 ~~being pursued and reasonably expected to be achieved for a municipal construction project.~~

5 ~~—“Major Renovation” means any unicipal Municipal Construction Project or renovation to~~  
6 ~~an existing structure other than repair or addition. A Major Renovation may include, but is not limited~~  
7 ~~to, a change in occupancy or use, or structural repair to an existing Building or facility; or remodeling,~~  
8 ~~rehabilitation, reconstruction, historic restoration, or changes to the plan configuration of wall and~~  
9 ~~full-height partitions, where the scope of work is sufficient to support LEED certification and extensive~~  
10 ~~enough such that normal building operations cannot be performed while the work is in progress,~~  
11 ~~and/or a new certificate of occupancy, or similar official indication that it is fit and ready for use, is~~  
12 ~~required. Major Renovation does not encompass normal maintenance, reroofing, floor covering,~~  
13 ~~painting, wallpapering, or changes to mechanical and electrical systems.~~

14 ~~—“Minimum Program Requirements” or “MPR” means the minimum requirements necessary~~  
15 ~~for projects to become LEED certified, as determined by the USGBC.~~

16 ~~—“Mixed Construction & Demolition debris” or “Mixed C & D Debris” means “Construction~~  
17 ~~and Demolition Debris” or “C&D Debris,” but excluding materials source-separated for reuse or~~  
18 ~~recycling.~~

19 ~~—“Municipal Construction Project” includes any planning, design, building, or construction~~  
20 ~~activity, including demolition, New Construction, Major Renovation, or building additions performed~~  
21 ~~either by a City department at a Building, City-owned Facility, or City Leasehold, or by tenants at a~~  
22 ~~City-owned Building or Facility.~~

23 ~~—“Natural Gas” shall have the same meaning as “Fuel Gas” as defined in the California~~  
24 ~~Plumbing Code and Mechanical Code, as amended from time to time.~~

1       ~~—“New Construction” means construction from the ground up, including a new building~~  
2 ~~envelope, and new structural, mechanical, electrical and plumbing systems.~~

3       ~~—“Person” means a natural person, a firm, joint stock company, business concern, association,~~  
4 ~~partnership or corporation or, to the extent permitted by law, governmental entity, including the City~~  
5 ~~and County of San Francisco and its departments, boards and commissions for projects within the nine~~  
6 ~~counties surrounding the San Francisco Bay, and its or their successors or assigns.~~

7       ~~—“Recover” or “Recovery” means any activity, including source reduction, deconstruction and~~  
8 ~~salvaging, reuse, recycling and composting, which causes materials to be recovered for use as a~~  
9 ~~resource and diverted from disposal.~~

10       ~~—“Recycle” or “Recycling” means the process of collecting, sorting, cleansing, treating, and~~  
11 ~~reconstituting materials that would otherwise become solid waste, and returning them to the economic~~  
12 ~~mainstream in the form of raw material for new, reused, or reconstituted products which meet the~~  
13 ~~quality standards necessary to be used in the marketplace. “Recycling” does not include~~  
14 ~~“transformation,” as defined in Section 40201 of California Public Resources Code.~~

15       ~~—“Recycling Facility” means an operation or person that collects and processes materials for~~  
16 ~~recycling.~~

17       ~~—“Registered Facility” means a facility that accepts mixed construction and demolition debris~~  
18 ~~for processing and recycling and holds a valid registration issued by the City and County of San~~  
19 ~~Francisco pursuant to Chapter 14 of the Environment Code.~~

20       ~~—“Registered Transporter” means a person who removes mixed construction and/or demolition~~  
21 ~~(C&D) debris from a construction and/or demolition site, using a vehicle with more than two axles or~~  
22 ~~two tires per axle (such as a large pickup truck with four tires on the rear axle or three-axle dump~~  
23 ~~trucks), and hauling at least one (1) cubic yard of mixed construction and demolition debris. A~~  
24 ~~“Registered Transporter” must hold a valid registration from the City and County of San Francisco~~  
25 ~~and is obligated to take all mixed C&D material only to a Registered Facility.~~

1           ~~—“Reuse” means using an object or material again, either for its original purpose or for a~~  
2 ~~similar purpose, without significantly altering the physical form of the object or material.~~

3           ~~—“Source Reduction” means any action which causes a net reduction in the generation of solid~~  
4 ~~waste. Source reduction includes, but is not limited to, reducing the use of non-recyclable materials,~~  
5 ~~replacing disposable materials and products with reusable materials and products, reducing~~  
6 ~~packaging, reducing the amount of yard wastes generated, establishing garbage rate structures with~~  
7 ~~incentives to reduce waste tonnage generated, and increasing the efficiency of the use of paper,~~  
8 ~~cardboard, glass, metal, plastic, and other materials.~~

9           ~~—“Source Separated Materials” means materials that have been separated or kept separate~~  
10 ~~from the solid waste stream, at the point of generation, for the purpose of reuse, recycling or~~  
11 ~~composting in order to return them to the economic mainstream in the form of raw material for new,~~  
12 ~~reused, or reconstituted products which meet the quality standards necessary to be used in the~~  
13 ~~marketplace.~~

14           ~~—“Tenant Improvements” are municipal construction projects that involve changing the~~  
15 ~~interiors of commercial, institutional, or industrial properties and are undertaken by the City and/or~~  
16 ~~tenants to accommodate the needs of tenants. They include floor and wall coverings, ceilings,~~  
17 ~~partitions, lighting, heating, ventilation, air conditioning, fire protection, and security, where the scope~~  
18 ~~of work is sufficient to support LEED certification. Normal maintenance, reroofing, floor covering,~~  
19 ~~painting or wallpapering, or changes to mechanical and electrical systems are not Tenant~~  
20 ~~Improvements unless they are so extensive that normal building operations cannot continue while the~~  
21 ~~work is in progress, and/or a new certificate of occupancy, or similar official indication that the~~  
22 ~~building is fit and ready for use, is required.~~

23           ~~—The “United States Green Building Council” or “USGBC” is a non-profit organization~~  
24 ~~committed to a prosperous and sustainable future for our nation through cost-efficient and energy-~~  
25 ~~saving green buildings.~~

1       ~~—“Waiver Request” means a waiver request made by a City department in accordance with~~  
2       ~~Section 713.~~

3       ~~—“Whole Building Major Renovation Project” means a major renovation that includes~~  
4       ~~replacement of the building heating, ventilation and air conditioning (HVAC) system. A Whole Building~~  
5       ~~Major Renovation Project may, in addition to the aforementioned replacement, involve replacing~~  
6       ~~electrical distribution, lighting, fire protection, plumbing, and security systems, as well as changes to a~~  
7       ~~building envelope such as window replacements or exterior wall insulation.~~

8       ~~—“Zero Net Energy (ZNE) Building” means a building where the amount of energy produced~~  
9       ~~by on-site renewable energy resources is equal to the amount of the energy consumed annually by the~~  
10       ~~building.~~

11       **SEC. 702. MUNICIPAL GREEN BUILDING TASK FORCE.**

12       ~~—(a) Establishment and Purpose. The Board of Supervisors establishes the Municipal Green~~  
13       ~~Building Task Force (the “Task Force”) to oversee and assist in enhancing the environmental~~  
14       ~~performance of City construction projects pursuant to this Chapter. The Task Force shall review~~  
15       ~~municipal construction projects subject to this Chapter during their design and construction to ensure~~  
16       ~~that the responsible City departments are complying with the requirements of the Chapter, and may~~  
17       ~~advise the Department of the Environment on matters of policy related to this Chapter. The Task Force~~  
18       ~~shall facilitate interdepartmental communication and cooperation, and act as an educational forum to~~  
19       ~~increase green building knowledge and share project-related successes and lessons learned. The Task~~  
20       ~~Force shall hear Waiver Requests from City departments and make recommendations to the Director~~  
21       ~~(or to the Executive Director of the Port of San Francisco for projects located on property owned or~~  
22       ~~managed by the Port of San Francisco) with respect to such requests.~~

23       ~~—(b) The Task Force will consist of one member of the public appointed by the Mayor, and a~~  
24       ~~representative with building design, construction and/or finance experience from each of the following~~  
25       ~~City departments and divisions, or their successor agencies:~~

1       ~~—(1) Department of the Environment;~~  
2       ~~—(2) Building Design and Construction Division within San Francisco Public Works;~~  
3       ~~—(3) Design and Engineering Division within San Francisco Public Works;~~  
4       ~~—(4) Landscape Architecture Division within San Francisco Public Works;~~  
5       ~~—(5) San Francisco Public Works Buildings—Project Management;~~  
6       ~~—(6) Power Enterprise within San Francisco Public Utilities Commission;~~  
7       ~~—(7) Water Enterprise within San Francisco Public Utilities Commission;~~  
8       ~~—(8) Wastewater Enterprise within San Francisco Public Utilities Commission;~~  
9       ~~—(9) Infrastructure within San Francisco Public Utilities Commission;~~  
10      ~~—(10) Project Management Division within Recreation and Parks Department;~~  
11      ~~—(11) Capital Programs and Construction Division within San Francisco Municipal~~  
12 ~~Transportation Agency;~~  
13      ~~—(12) Capital Planning Program within Office of City Administrator;~~  
14      ~~—(13) Department of Building Inspection;~~  
15      ~~—(14) Citywide Planning Division within Planning Department;~~  
16      ~~—(15) Port of San Francisco;~~  
17      ~~—(16) San Francisco International Airport;~~  
18      ~~—(17) Facilities Division within San Francisco Public Library;~~  
19      ~~—(18) Fire Department;~~  
20      ~~—(19) Department of Public Health; and,~~  
21      ~~—(20) Real Estate Division within Department of Administrative Services.~~  
22      ~~—(c) The Task Force shall adopt bylaws to govern its operations. At least half the Task Force~~  
23 ~~members and the public member shall hold the credential of LEED Accredited Professional with~~  
24 ~~specialty.~~  
25

1       ~~—(d) The Municipal Green Building Coordinator from Department of the Environment shall~~  
2 ~~be a permanent member and act as chair of the Task Force.~~

3       ~~—(e) Beginning on the effective date of the ordinance adding this subsection (e) to Section 702,~~  
4 ~~the public member of the Task Force appointed by the Mayor shall serve for a three year term. No~~  
5 ~~person may serve as the public member of the Task Force for more than two consecutive terms.~~

6       **~~SEC. 703. DUTIES OF THE DEPARTMENT OF THE ENVIRONMENT.~~**

7       ~~—(a) General Duties Under this Chapter. The Department of the Environment shall:~~

8       ~~—(1) Develop goals, criteria, and strategies for optimizing municipal green building design,~~  
9 ~~construction and operations and make policy recommendations regarding requirements for municipal~~  
10 ~~construction projects to the Board of Supervisors;~~

11       ~~—(2) Develop and oversee a training program in green building practices, including design,~~  
12 ~~construction, renovation, operation and reuse of buildings for City department heads and architects,~~  
13 ~~engineers, construction managers, building managers, department managers and finance officers~~  
14 ~~employed by the City in order to implement the policies adopted by the Board of Supervisors;~~

15       ~~—(3) Chair the Task Force and coordinate City departments having responsibility for~~  
16 ~~compliance with the requirements of this Chapter. The Task Force shall assist the Director in providing~~  
17 ~~green building advice, assistance, outreach, and education to City departments;~~

18       ~~—(4) Provide technical project oversight and assistance directly to City project teams or~~  
19 ~~through green building technical assistance contracts; and~~

20       ~~—(5) Develop forms and materials necessary for compliance with this Chapter.~~

21       ~~—(b) Guidance, Rules and Regulations. After a public hearing, the Director may promulgate~~  
22 ~~such guidance, forms, performance procedures, rules and regulations as may be necessary or~~  
23 ~~appropriate from time to time to carry out the provisions of this Chapter, including the adoption of~~  
24 ~~forms necessary to implement this Chapter. The Director is authorized to call upon the Task Force and~~  
25 ~~other City departments as necessary and appropriate to assist in developing such guidance, forms,~~

1 ~~performance procedures, rules and regulations. Such guidance, forms, performance procedures, rules~~  
2 ~~and regulations may include adopting appropriate versions of LEED and adopting or modifying~~  
3 ~~locally required measures for municipal construction projects, as provided in Section 706.~~

4 ~~—(c) The Director shall determine the costs of implementing this Chapter and shall request~~  
5 ~~that relevant City departments provide work orders to the Department to cover the costs of~~  
6 ~~implementing and maintaining the programs required by this Chapter.~~

7 ***SEC. 704. DUTIES OF CITY DEPARTMENTS.***

8 ~~—(a) Each City department, board and commission subject to this Chapter shall administer its~~  
9 ~~municipal construction projects in accordance with the Chapter.~~

10 ~~—(b) Each City department, board and commission subject to this Chapter shall cooperate~~  
11 ~~with, and provide in writing to the Department all information necessary for the Department to carry~~  
12 ~~out its duties under this Chapter.~~

13 ~~—(c) Each City department with a municipal construction project registering for LEED~~  
14 ~~certification shall provide LEED Online project access to the Department.~~

15 ~~—(d) Upon request, each City department subject to this Chapter shall provide project reports~~  
16 ~~and presentations to the Task Force.~~

17 ~~—(e) Each City department as designated in Section 702 shall designate an employee to~~  
18 ~~represent the interest of that City department on the Task Force for municipal construction projects~~  
19 ~~and green building communications.~~

20 ~~—(f) Each City department shall assist the Director in providing advice, assistance, outreach~~  
21 ~~and education to other City departments concerning municipal green building practices.~~

22 ~~—(g) Appropriate City department personnel shall attend green building related training~~  
23 ~~offered by the Department.~~



1           ~~—(h) The San Francisco Public Utilities Commission may provide energy or water-related~~  
2 ~~technical project design review assistance directly to City project teams or through technical assistance~~  
3 ~~contracts.~~

4           **~~SEC. 705. LEED CERTIFICATION REQUIREMENTS FOR MUNICIPAL~~**  
5 **~~CONSTRUCTION PROJECTS.~~**

6           ~~—Except as otherwise provided by the City's Charter,~~

7           ~~—(a) In addition to complying with this Chapter (except that municipal construction projects~~  
8 ~~located on property owned or managed by the Port of San Francisco will not be subject to Sections 705~~  
9 ~~and 706 of this Chapter), municipal construction projects are subject to the applicable building codes~~  
10 ~~in effect at the time of permit application. Municipal construction projects located within the City and~~  
11 ~~County of San Francisco shall comply with the requirements of the San Francisco Green Building~~  
12 ~~Code, except that municipal construction projects located on property owned or managed by the Port~~  
13 ~~of San Francisco shall comply with the Port of San Francisco Green Building Standards Code, and~~  
14 ~~municipal construction projects located at the San Francisco International Airport, which shall comply~~  
15 ~~with this Chapter and the California Building Standards Code (CCR Title 24). All other municipal~~  
16 ~~construction projects located outside the City and County of San Francisco shall comply with this~~  
17 ~~Chapter and the local building code promulgated by the authority having jurisdiction.~~

18           ~~—(b) As described in this Chapter, the LEED rating system shall be used to certify the~~  
19 ~~environmental design of the City's municipal construction projects. The minimum requirement for~~  
20 ~~municipal construction projects of 10,000 gross square feet or more shall be LEED Gold certification~~  
21 ~~by GBCI.~~

22           ~~—(c) Municipal construction projects shall demonstrate compliance with locally required~~  
23 ~~measures as provided in Section 706 of this Chapter.~~

1           ~~—(d) Operative Date. This section shall apply to any municipal construction project otherwise~~  
2 ~~subject to the provisions of this Chapter 7 where LEED project registration takes place on or after~~  
3 ~~November 1, 2016.~~

4           ~~—(e) Municipal construction projects Less Than 10,000 Gross Square Feet. For municipal~~  
5 ~~construction projects less than 10,000 gross square feet and for municipal construction projects of any~~  
6 ~~size not meeting the Minimum Program Requirements to be eligible for LEED certification, the~~  
7 ~~sponsoring City department, in consultation with a LEED AP with specialty, shall prepare and submit a~~  
8 ~~conceptual design phase LEED Scorecard to the Department for informational and reporting purposes.~~  
9 ~~The conceptual design phase LEED Scorecard shall demonstrate the maximum LEED credits that are~~  
10 ~~practicable for the project. The sponsoring City department shall pursue these LEED credits~~  
11 ~~throughout the design and construction process. The sponsoring City department, in consultation with~~  
12 ~~a LEED AP with specialty, shall prepare and submit a final as-built LEED Scorecard to the~~  
13 ~~Department indicating all LEED credits that would be achieved if the project had been certified.~~  
14 ~~Documentation of LEED credits is not required for these projects. Municipal construction projects less~~  
15 ~~than 10,000 gross square feet are subject to all applicable local ordinances and requirements,~~  
16 ~~including but not limited to, Construction and Demolition Debris Management, Recycling by~~  
17 ~~Occupants, Construction Site Runoff Pollution Prevention, Stormwater Control, and Water Efficient~~  
18 ~~Irrigation, as well as the requirements of the California Green Building Standards Code (CCR Title 24,~~  
19 ~~Part 11).~~

20           ~~—(f) Municipal construction projects of 10,000 Gross Square Feet or More. For municipal~~  
21 ~~construction projects with square footage of 10,000 gross square feet or more the following applies:~~

22           ~~—(1) Conceptual Design Phase. During the conceptual design phase, the sponsoring City~~  
23 ~~department shall assemble a design team, which shall include a LEED AP with specialty assigned to be~~  
24 ~~the LEED Project Administrator. The LEED Project Administrator shall prepare and submit a~~  
25 ~~conceptual phase LEED Scorecard to the Department for review by the Task Force. The conceptual~~

1 ~~phase LEED Scorecard shall demonstrate a LEED v4 Gold rating or higher, including all locally-~~  
2 ~~required measures. The Task Force shall review and make recommendations on the conceptual LEED~~  
3 ~~Scorecard within 35 days of submittal.~~

4 ~~—(2) Schematic Design, Design Development and Construction Document Phases. During~~  
5 ~~the Schematic Design phase, the LEED Project Administrator shall register the municipal construction~~  
6 ~~project with GBCI as a LEED registered project. At the conclusion of each design phase (Schematic~~  
7 ~~Design, Design Development, and Construction Documents), the LEED Project Administrator shall~~  
8 ~~submit an updated LEED Scorecard to the Department; the Scorecard shall demonstrate a LEED v4~~  
9 ~~Gold rating or higher for the municipal construction project, including locally required measures.~~  
10 ~~These interim LEED Scorecards shall be available for review by the Task Force.~~

11 ~~—(3) Project Closeout. At the completion of construction, the LEED Project Administrator~~  
12 ~~shall submit the final LEED documentation to the GBCI for certification. Upon receiving the LEED~~  
13 ~~certification from GBCI, the LEED Project Administrator shall submit a copy of the LEED certificate~~  
14 ~~and the final LEED Scorecard to the Department for review by the Task Force.~~

15 ~~—(g) The USGBC regularly updates the LEED rating system. The Director shall adopt by~~  
16 ~~regulation the current applicable versions of LEED pursuant to Section 703(b).~~

17 **~~SEC. 705.1. RESERVED.~~**

18 **~~SEC. 705.2. RESERVED.~~**

19 **~~SEC. 705.3. RESERVED.~~**

20 **~~SEC. 705.4. RESERVED.~~**

21 **~~SEC. 705.5. RESERVED.~~**

22 **~~SEC. 706. LOCALLY-REQUIRED MEASURES FOR MUNICIPAL CONSTRUCTION~~**  
23 **~~PROJECTS.~~**

24 ~~—All municipal construction projects shall comply with the following locally required~~  
25 ~~measures:~~

1           ~~—(a) Stormwater Management. Municipal construction projects that create and/or replace~~  
2           ~~5,000 or more square feet of impervious surface in separate and combined sewer areas, and projects~~  
3           ~~that create and/or replace from 2,500 up to but not including 5,000 square feet of impervious surface in~~  
4           ~~separate sewer areas only, shall implement post-construction stormwater controls that comply with the~~  
5           ~~Stormwater Management Ordinance (Public Works Code Sections 147-147.6).~~

6           ~~—(b) Construction Site Runoff. Municipal construction projects that involve land-disturbing~~  
7           ~~activities on 5,000 or more square feet of ground surface shall implement construction site run-off best~~  
8           ~~management practices in compliance with the Construction Site Runoff Ordinance (Public Works Code~~  
9           ~~Sections 146-146.11). Persons commencing Construction Projects after January 1, 2014, must obtain a~~  
10          ~~Construction Site Runoff Control Permit prior to the commencement of land-disturbing activities.~~

11          ~~—(c) Indoor Water Use Reduction. Municipal construction projects subject to a LEED~~  
12          ~~certification requirement shall demonstrate a minimum 30% reduction in the use of indoor potable~~  
13          ~~water, as calculated to meet and achieve LEED credit Indoor Water Use Reduction.~~

14          ~~—(d) Renewable Energy Efficiency, Better Roofs, and Energy Resilience.~~

15          ~~—(1) As provided in Administrative Code Section 99.3, the municipal construction project~~  
16          ~~shall receive electric service from the San Francisco Public Utilities Commission (“SFPUC”) unless~~  
17          ~~SFPUC determines that such service is not feasible or that the City’s lease or contract, if any, does not~~  
18          ~~permit such service. The municipal construction project design team shall work with SFPUC to~~  
19          ~~arrange for electric service and shall confer with SFPUC on renewable energy opportunities and~~  
20          ~~interconnection requirements for municipal construction projects, including photovoltaics and solar~~  
21          ~~hot water.~~

22          ~~—(2) For municipal construction projects subject to a LEED certification requirement, the~~  
23          ~~design team shall demonstrate that the project meets LEED prerequisite Minimum Energy Performance~~  
24          ~~EA-1 Energy Performance requirement and demonstrates compliance with Title 24, Part 6 California~~  
25          ~~Energy Standards in effect at the time of the permit application.~~

1           ~~—(3) For each municipal new construction or whole building major renovation project the~~  
2 ~~project design team shall set a target for annual net energy consumption, and report this target to the~~  
3 ~~Task Force. The Department in collaboration with the Task Force shall provide guidance as to the~~  
4 ~~tools and methods to be used for setting annual net energy consumption targets. This provision shall~~  
5 ~~apply to projects for which the initial appropriation request, either whole or partial, is submitted to the~~  
6 ~~Board of Supervisors after March 1, 2017.~~

7           ~~—(4) For each municipal new construction or whole building major renovation project with~~  
8 ~~an estimated height of no more than three stories above grade, project design teams shall determine the~~  
9 ~~feasibility of designing and constructing such project to have zero net annual site energy consumption,~~  
10 ~~including all building end uses. The Department in collaboration with the Task Force shall provide~~  
11 ~~guidance as to the tools and methods to be used for determining feasibility. The design team shall~~  
12 ~~submit determinations of feasibility to the Task Force. This provision shall apply to projects for which~~  
13 ~~the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after~~  
14 ~~March 1, 2017.~~

15           ~~—(5) Each municipal new construction project shall include a combination of photovoltaic,~~  
16 ~~solar thermal, and/or living roof area, meeting the requirements of Planning Code Section 149 and San~~  
17 ~~Francisco Green Building Code Chapter 5, Division 5.2, or demonstrate the applicability of any~~  
18 ~~exceptions to those requirements. Compliance with the Living Roofs Alternative approved by the~~  
19 ~~Planning Department in accordance with Planning Code Section 149 shall be acceptable in lieu of~~  
20 ~~compliance with San Francisco Green Building Code Sections~~

21           ~~.2 and~~

22           ~~.1.3. In such cases, the applicable requirements of CCR Title 24, Part 6, Section 110.10 for the~~  
23 ~~solar zone shall continue to apply.~~

24           ~~—(6) For each municipal new construction or whole building major renovation project, the~~  
25 ~~project design team shall analyze the costs and benefits of incorporating onsite batteries that store~~

1 ~~electricity from onsite solar photovoltaic systems and can be temporarily separated from the electricity~~  
2 ~~grid to supply the community with electricity in the event of disaster. The Task Force, in consultation~~  
3 ~~with Department of Emergency Management, shall define the building types subject to this requirement~~  
4 ~~and parameters for sizing batteries and analyzing costs and benefits. Cost-benefit analyses shall be~~  
5 ~~submitted to the Task Force and Department of Emergency Management. This provision shall apply to~~  
6 ~~projects for which the initial appropriation request, either whole or partial, is submitted to the Board of~~  
7 ~~Supervisors after March 1, 2017, and shall remain in effect through December 31, 2025.~~

8 ~~—(7) Each Municipal New Construction or Major Renovation Project for which the first~~  
9 ~~building permit application is submitted on or after January 1, 2020 shall be All-Electric, except as~~  
10 ~~follows:~~

11 ~~—(A) Natural Gas or propane service and plumbing may be installed if necessary for~~  
12 ~~processes or features separate from the operation of systems integral to Building functions, such as~~  
13 ~~vehicle fueling and mechanic shop equipment.~~

14 ~~—(B) Existing equipment that uses Natural Gas and serves the project area, but is outside~~  
15 ~~the scope of the project, may be retained. Projects which both (i) are served by existing equipment that~~  
16 ~~use Natural Gas and are outside the scope of work, and (ii) include upgrade to electric service in the~~  
17 ~~project scope of work, are encouraged to include sufficient electrical service capacity to, in the future,~~  
18 ~~replace existing systems that use Natural Gas with All-Electric systems.~~

19 ~~—(C) Emergency backup electricity generation systems may use any combination of~~  
20 ~~technologies permitted under applicable law, including combustion of fossil fuels. Zero-emissions~~  
21 ~~emergency backup electricity systems are encouraged, such as onsite batteries that store electricity~~  
22 ~~from onsite solar photovoltaics.~~

23 ~~—(D) Pursuant to approval of a Waiver under Section 713 of this Chapter 7.~~

24 ~~—(e) Commissioning. For each municipal construction project subject to a LEED certification~~  
25 ~~requirement, the design team shall demonstrate that the project achieves Option 1 of LEED credit~~

~~Enhanced and Monitoring-Based Commissioning, in addition to LEED prerequisite Fundamental Commissioning and Verification.~~

~~—(f) Construction Debris Management. All municipal construction projects shall demonstrate a minimum 75% diversion from landfill. For all municipal construction projects subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED credit Construction and Demolition Waste Management (75%; 2 points). The project must also satisfy the requirements of Section 708.~~

~~—(g) Indoor Air Quality. For each municipal construction project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED credit Enhanced Indoor Air Quality Strategies (1 point), LEED credit Construction Indoor Air Quality Management Plan (1 point), and LEED credit Indoor Air Quality Assessment Option 2: Air Testing (2 points).~~

~~—(h) Low Emitting Materials. For each municipal construction project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED Low Emitting Materials (3 points).~~

~~—(i) Toxics Reduction and Pollution Prevention.~~

~~—(1) For all municipal new construction, major renovation and tenant improvement projects that include furniture within the project scope, or for purchases made by or on behalf of City departments for these projects, the purchased furniture shall comply with regulations promulgated under this Chapter pertaining to the following environmental attributes, subject to verification by the Department of the Environment:~~

~~——(A) Added flame retardant chemicals;~~

~~——(B) Emissions of volatile organic compounds (VOCs);~~

~~——(C) Use of certified wood;~~

~~——(D) Polyvinyl chloride (PVC) content;~~

1           ~~——(E) Antimicrobial chemicals;~~  
2           ~~——(F) Fluorinated chemicals;~~  
3           ~~——(G) Required ecolabels; and~~  
4           ~~——(H) Other environmental attributes, consistent with this Chapter.~~  
5           ~~——(2) For all municipal new construction, major renovation and tenant improvement~~  
6 ~~projects, and for purchases made by or on behalf of City departments for such projects, interior~~  
7 ~~surfaces, including but not limited to countertops, doorknobs, handles, wall paints, and carpet, where~~  
8 ~~these features are included within the project scope, shall comply with regulations promulgated under~~  
9 ~~this Chapter pertaining to the following attributes, subject to verification by the Department of the~~  
10 ~~Environment:~~  
11           ~~——(A) Emissions of volatile organic compounds (VOCs);~~  
12           ~~——(B) Fluorinated chemicals;~~  
13           ~~——(C) Recycled content and recyclability;~~  
14           ~~——(D) Antimicrobial chemicals;~~  
15           ~~——(E) Required ecolabels; and~~  
16           ~~——(F) Other environmental attributes, consistent with this Chapter.~~  
17           ~~——(3) These requirements shall apply to projects for which the initial appropriation request,~~  
18 ~~either whole or partial, is submitted to the Board of Supervisors after March 1, 2017.~~

19           **~~SEC. 707. COLLECTION, STORAGE AND LOADING OF RECYCLABLE AND~~**  
20 **~~COMPOSTABLE MATERIALS.~~**

21           ~~——(a) City departments shall ensure that adequate, accessible, and convenient recycling,~~  
22 ~~composting and trash areas are provided within City-owned facilities and leaseholds, and that all~~  
23 ~~contract documents for construction activities contain this requirement. In accordance with the City~~  
24 ~~and County of San Francisco's solid waste diversion goals, and the Mandatory Recycling and~~  
25 ~~Composting Ordinance (Chapter 19 of the Environment Code), the departments shall provide sufficient~~



1 ~~space to allow the collection, storage and loading of 100% of the facility's recyclable, compostable and~~  
2 ~~trash materials. That space must be sufficient to accommodate containers consistent with both current~~  
3 ~~methods and goals of refuse collection, storage and loading, and with projected needs when full zero~~  
4 ~~waste goals are met.~~

5 ~~—(1) All areas designated for the collection, storage and loading of recyclable, compostable~~  
6 ~~and trash materials shall be integrated into the design and construction of the project. The departments~~  
7 ~~shall ensure that areas for collection, storage and loading of recyclable and compostable materials are~~  
8 ~~at least as convenient and usable as spaces provided for non-recyclable waste disposal, and located in~~  
9 ~~the same areas whenever possible. When separate locations must be provided due to space constraints,~~  
10 ~~the locations for collection, storage and loading of recyclable and compostable materials shall be at~~  
11 ~~least as convenient as non-recyclable trash disposal locations.~~

12 ~~—(2) All areas designated for the collection, storage and loading of recyclable, compostable~~  
13 ~~and trash materials shall allow for easy access to the containers by collection vehicles.~~

14 ~~—(3) Each interior space shall include adequate area designed and designated for collection~~  
15 ~~and storage of recyclable, compostable and trash materials.~~

16 ~~—(4) Any chute system for solid waste disposal shall be designed for equal convenience to~~  
17 ~~all users to separate the three refuse streams of trash, recycling and compostable materials.~~

18 ~~—(b) Surplus Furniture, Equipment, Computers and Supplies. The Virtual Warehouse~~  
19 ~~Program facilitates the reuse, recycling, and disposal of surplus City materials. To the extent permitted~~  
20 ~~by law, all surplus furniture, equipment, computers and supplies purchased with San Francisco City~~  
21 ~~and County funds shall be turned in to the Virtual Warehouse. Before buying any new furniture,~~  
22 ~~equipment or supplies, City employees shall check the Virtual Warehouse for available products that~~  
23 ~~meet their needs.~~

24 ~~—(c) City departments are required to recycle used fluorescent and other mercury containing~~  
25 ~~lamps, batteries, and universal waste as defined by California Code of Regulations Section 66261.9.~~

1           ***SEC. 708. CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT.***

2           ~~—(a) This requirement applies to all Construction and/or Demolition Projects at City-owned~~  
3 ~~Facilities and City leaseholds, regardless of size of the project, located within the nine counties~~  
4 ~~surrounding the San Francisco Bay. All City departments shall ensure that each Construction and/or~~  
5 ~~Demolition Project subject to this Section shall meet the following requirements:~~

6           ~~—(1) The Contractor shall employ the following hierarchy of highest and best use for~~  
7 ~~handling Construction & Demolition ("C&D") debris as follows:~~

8           ~~—(A) Implement reduced material usage or reuse of materials before any recycling;~~

9           ~~—(B) Implement recycling of source-separated material before any recycling of mixed~~  
10 ~~C&D debris material;~~

11           ~~—(C) Implement recycling of mixed C&D debris before all other forms of disposal.~~

12           ~~—(2) The contractor shall manage all project C&D debris materials to meet a minimum~~  
13 ~~diversion rate of 75 percent. The Director may increase the minimum diversion rate by regulation~~  
14 ~~under Section 703(b) based on the Director's assessment of infrastructure, markets and materials~~  
15 ~~available to support the new rate.~~

16           ~~—(3) The contractor is prohibited from sending any C&D debris material directly to a~~  
17 ~~landfill without submitting a request to and receiving approval from the Department. The request must~~  
18 ~~demonstrate that all reuse and recycling options for the material have been evaluated and determined~~  
19 ~~to be not possible. A request to send C&D material directly to landfill must demonstrate that beneficial~~  
20 ~~reuse of the material is employed, if possible, before any material is used as alternative daily cover~~  
21 ~~(ADC), and that material is used as landfill disposal only as a last resort if necessary, and shall include~~  
22 ~~documentation such as a written statement by the landfill operator that the material will be used as~~  
23 ~~designated.~~

24           ~~—The contractor should submit any initial request for approval to send C&D debris~~  
25 ~~material directly to a landfill to the Department at the same time the contractor submits the~~

1 ~~Construction and Demolition and Debris Management Plan (CDDMP) to the City Representative, as~~  
2 ~~provided in subsection (b)(2)(A)(ii), below. But if unforeseen circumstances affect the material during~~  
3 ~~the project, the contractor may at that time submit an additional or amended request to the Department~~  
4 ~~for its review and possible approval.~~

5 ~~—(4) The contractor is prohibited from sending any C&D debris materials directly to any~~  
6 ~~facility that would incinerate such debris or otherwise process such debris using high temperature~~  
7 ~~conversion technology, unless the debris is used as boiler fuel in BioMass Energy Generation, which~~  
8 ~~will only be allowed after the contractor has submitted a request to and received approval from the~~  
9 ~~Department. The contractor shall demonstrate in the request that all reuse and recycling options for~~  
10 ~~the material have been evaluated and determined to be not possible.~~

11 ~~—(5) No solid waste or C&D debris material shall be buried or otherwise disposed of on the~~  
12 ~~project site, unless engineered and processed on site for on-site reuse such as engineered backfill or~~  
13 ~~landscaping; any such use shall be documented on all C&D debris material management plans and~~  
14 ~~reports.~~

15 ~~—(6) In order for C&D debris to be considered hazardous, such as containing asbestos or~~  
16 ~~lead, it shall be tested and determined to be hazardous by an independent professional, such as a~~  
17 ~~Cal/OSHA Certified Asbestos Consultant. The waste determination and other verification shall be~~  
18 ~~included with the C&D Debris Management Plan, together with a list of hazardous materials found at~~  
19 ~~the project site and plans for proper disposal.~~

20 ~~—(b) Construction and Demolition Debris Management Plan. The contract between the City~~  
21 ~~department and the contractor shall require the contractor responsible for construction and/or~~  
22 ~~demolition debris material management to:~~

23 ~~—(1) Conduct a site assessment to estimate the types of materials that will be generated~~  
24 ~~during the construction and/or demolition project, including packaging or shipping materials.~~

1           ~~—(2) Complete a plan as set forth below describing procedures for reuse, recycling and~~  
2 ~~material management.~~

3           ~~—(A) Plan Requirements. The contract between the City department and the contractor~~  
4 ~~shall require that:~~

5           ~~—(i) After award of the contract and prior to commencement of the demolition or~~  
6 ~~construction project, the City Representative shall ensure that the contractor develops a plan for~~  
7 ~~managing C&D debris material from the project to meet the requirements of this Section.~~

8           ~~—(ii) The contractor shall prepare, sign and submit a Construction and Demolition~~  
9 ~~Debris Management Plan ("CDDMP") to the City Representative. The City Representative shall review~~  
10 ~~the plan to ensure the contractor and the City are maximizing highest and best use of all C&D debris~~  
11 ~~material and are meeting the requirements of this Section. The City Representative shall, if~~  
12 ~~appropriate, approve and sign the CDDMP to ensure that the contractor abides by all requirements of~~  
13 ~~this Section.~~

14           ~~—(B) The Director shall specify the form of the CDDMP by regulation pursuant to Section~~  
15 ~~703(b). The form shall include, but not be limited to:~~

16           ~~—(i) Contractor and project identification information;~~

17           ~~—(ii) Procedures to be used for C&D debris management;~~

18           ~~—(iii) A list of the materials generated from the project, their estimated weight by tons,~~  
19 ~~and how they will be reused, recycled, or otherwise handled; and,~~

20           ~~—(iv) The names and locations of reuse and recycling facilities or sites, and companies~~  
21 ~~that will transport the material.~~

22           ~~—(3) If the project involves a Full Demolition Permit from the code official having~~  
23 ~~jurisdiction, or if the projected cost of the project exceeds \$100,000, or as may be required by the~~  
24 ~~Department, the City Representative shall send the approved CDDMP to the Department for optional~~  
25 ~~review and approval.~~

1       ~~—(c) Summary of Diversion; Disposal. The contract between the City department and the~~  
2 ~~contractor shall require that:~~

3       ~~—(1) With each application for progress payment, the contractor shall submit a signed~~  
4 ~~Summary of Diversion to the City Representative showing C&D debris material diversion and disposal~~  
5 ~~coinciding with the time period of the progress payment. This summary shall quantify all materials~~  
6 ~~generated by the municipal construction and/or demolition project, and how they were diverted from~~  
7 ~~disposal through reuse or recycling, plus supporting documentation in the form of weight slips or other~~  
8 ~~similar proof. The means used to reuse or recycle debris material must be consistent with the~~  
9 ~~Construction and Demolition Debris Management Plan (“CDDMP”) for the project. No material may~~  
10 ~~be taken to any landfill without prior approval pursuant to Section 708(a)(3), and landfill~~  
11 ~~documentation provided with the Summary of Diversion must show that material was used as specified~~  
12 ~~in the CDDMP. Failure to submit the Summary of Diversion and supporting documentation to the City~~  
13 ~~Representative shall render the application for progress payment incomplete and delay progress~~  
14 ~~payment. The Summary of Diversion must be submitted on a form specified by regulation of the~~  
15 ~~Director under Section 703(b).~~

16       ~~—(2) The City Representative shall review and, if appropriate, sign as approved, the~~  
17 ~~Summary of Diversion and supporting documentation to ensure that the contractor is adhering to the~~  
18 ~~approved CDDMP, and that the reported diversion rate is correct. The City Representative shall send~~  
19 ~~the Department a copy of the approved Summary of Diversion for any projects subject to subsection~~  
20 ~~(b)(3).~~

21       ~~—(d) Final Diversion Report. The contract between the City department and the contractor~~  
22 ~~shall require that:~~

23       ~~—(1) A Final Diversion Report signed by the contractor showing the weight of C&D debris~~  
24 ~~material diverted for the entire construction and/or demolition project and the overall diversion rate~~  
25 ~~achieved shall be prepared and submitted to the City Representative for approval prior to final~~

1 ~~payment. The Final Diversion Report will be submitted on a form established by regulation, pursuant to~~  
2 ~~Section 703(b).~~

3 ~~—(2) The City Representative will send an approved copy of the Final Diversion Report to~~  
4 ~~the Department. The City Representative shall retain all supporting documentation and make it~~  
5 ~~available to the Department upon request.~~

6 ~~—(e) Retention of Records. The City Representative shall retain all C&D Debris Management~~  
7 ~~Plans, Summaries of Diversion, Final Diversion Reports and all supporting documentation after~~  
8 ~~completion of the project for a period of time determined by the Department by regulation.~~

9 ~~—(f) Revenue. Revenues or other savings obtained from recycled or reused materials shall~~  
10 ~~accrue to the City department or the contractor as negotiated between them and embodied in the~~  
11 ~~contract.~~

12 ~~—(g) All factual representations required by this Section shall be signed under penalty of~~  
13 ~~perjury.~~

14 ~~—(h) All forms and documentation required by this Section will be submitted electronically, if~~  
15 ~~possible.~~

16 ~~—(i) Enforcement. The Director and his or her designee may administer all provisions of this~~  
17 ~~section and enforce those provisions by any lawful means available for such purpose except as~~  
18 ~~otherwise provided in this Chapter.~~

19 **~~SEC. 709. WATER CONSERVATION RETROFIT REQUIREMENTS.~~**

20 ~~—(a) On or before January 1, 2017, the City department responsible for any City-owned~~  
21 ~~facility's operation and maintenance shall take all steps necessary to bring the facility into compliance~~  
22 ~~with this Section.~~

23 ~~—(b) The City department shall use San Francisco Public Utilities Commission ("SFPUC")~~  
24 ~~guidelines to determine which of the following provisions applies.~~

25 ~~—(c) Water Conservation Requirements for Water Closets (Toilets) and Urinals.~~

1           ~~—(1) This subsection applies to all City-owned facilities.~~

2           ~~—(2) City leaseholds are subject to the all the requirements of the Commercial Water~~  
3 ~~Conservation Ordinance of Chapter 13A of the San Francisco Building Code, including provisions~~  
4 ~~requiring the replacement of non-compliant water closets and urinals on or before January 1, 2017.~~

5           ~~—(3) The responsible City department shall ensure that all water closets in City-owned~~  
6 ~~facilities with a rated flush volume exceeding 1.6 gallons per flush are replaced with high-efficiency~~  
7 ~~water closets that use no more than 1.28 gallons per flush. All wall-mounted urinals with a rated flush~~  
8 ~~volume exceeding 1.0 gallon per flush shall be replaced with high-efficiency urinals that use no more~~  
9 ~~than 0.125 gallons per flush. All non-wall-mounted urinals with a rated flush volume exceeding 1.0~~  
10 ~~gallon per flush shall be replaced with high-efficiency urinals that use no more than 0.5 gallons per~~  
11 ~~flush.~~

12           ~~—(4) The responsible City department shall replace the bowl and flushometer valve together~~  
13 ~~in all City-owned facilities to meet high-efficiency standards for flushometer type water closets and~~  
14 ~~urinals. The responsible City department shall replace the bowl and tank together to meet high-~~  
15 ~~efficiency standards for tank type water closets.~~

16           ~~—(5) The responsible City department shall be responsible for the costs of compliance and~~  
17 ~~for ensuring that all applicable contract documents for the replacement of water closets and urinals~~  
18 ~~contain the above requirement.~~

19           ~~—(6) Installation of water closets and urinals:~~

20           ~~—(A) City departments purchasing water closets and urinals may only purchase high-~~  
21 ~~efficiency water closets and urinals listed by the General Manager of the SFPUC.~~

22           ~~—(B) City departments shall confer with the General Manger of the SFPUC and~~  
23 ~~incorporate technical assistance and water conservation audit findings in project plans.~~

24           ~~—(7) City departments shall comply with inspection findings determined to be necessary by~~  
25 ~~the General Manager of the SFPUC to ensure that all fixtures have been properly installed for~~

1 ~~buildings subject to the requirements in subsection (c)(3) where four or more high-efficiency water~~  
2 ~~closets or urinals are replaced.~~

3 ~~—(8) Should the General Manager of the SFPUC determine that water closets and urinals~~  
4 ~~that are more water-efficient than those specified in the foregoing sections exist City departments shall~~  
5 ~~install fixtures identified on a SFPUC list of other water-efficient water closets and urinals that City~~  
6 ~~departments may use pursuant to Section 703(b).~~

7 ~~—(d) Water Conservation Requirements for Shower Heads.~~

8 ~~—(1) This subsection applies to all City-owned facilities.~~

9 ~~—(2) City leaseholds are subject to the Commercial Water Conservation Ordinance of~~  
10 ~~Chapter 13A of the San Francisco Building Code, including provisions requiring the replacement of~~  
11 ~~non-compliant showerheads on or before January 1, 2017.~~

12 ~~—(3) The City department responsible for any City-owned facility's operation and~~  
13 ~~maintenance shall take all necessary steps to ensure that all showerheads in the facility having a~~  
14 ~~maximum flow rate exceeding 2.5 gallons per minute are replaced with shower heads having a~~  
15 ~~maximum flow rate, not to exceed 1.5 gallons per minute.~~

16 ~~—(4) The City department shall be responsible for the costs of compliance and for ensuring~~  
17 ~~that all applicable contract documents for the replacement of showerheads contain the above~~  
18 ~~requirement.~~

19 ~~—(5) Should the General Manager of the SFPUC determine that shower heads that are more~~  
20 ~~water-efficient than those specified in the foregoing section exist, City departments shall install fixtures~~  
21 ~~identified on a San Francisco Public Utilities Commission list of other water-efficient shower heads~~  
22 ~~that City departments may use pursuant to Section 703(b).~~

23 ~~—(e) Water Conservation Requirements for Faucets and Faucet Aerators.~~

24 ~~—(1) This subsection applies to all City-owned facilities.~~



1           ~~—(2) City leaseholds are subject to requirements of the Commercial Water Conservation~~  
2 ~~Ordinance of Chapter 13A of the San Francisco Building Code, including provisions requiring the~~  
3 ~~replacement of non-compliant faucets and faucet aerators on or before January 1, 2017.~~

4           ~~—(3) The City department responsible for any City-owned facility's operation and~~  
5 ~~maintenance shall take all necessary steps to ensure that all faucets and faucet aerators in the facility~~  
6 ~~with a maximum flow rate exceeding 2.2 gallons per minute are replaced with fixtures having a~~  
7 ~~maximum flow rate not to exceed 0.5 gallons per minute per appropriate site conditions.~~

8           ~~—(4) The City department shall be responsible for the costs of compliance and for ensuring~~  
9 ~~that all applicable contract documents for the replacement of faucet or faucet aerators containing the~~  
10 ~~above requirement.~~

11           ~~—(5) Should the General Manager of the SFPUC determine that faucet aerators that are~~  
12 ~~more water efficient than those specified in the foregoing section exist, City departments shall install~~  
13 ~~fixtures identified on a SFPUC list of other water-efficient faucets or faucet aerators that City~~  
14 ~~departments may use pursuant to Section 703(b).~~

15           **~~SEC. 710. RESERVED.~~**

16           **~~SEC. 711. INDOOR ENVIRONMENTAL QUALITY.~~**

17           ~~—(a) The requirements of this Section apply to all City-Owned Facilities and City leaseholds.~~

18           ~~—(b) The San Francisco Department of Public Health ("DPH"), in consultation with the~~  
19 ~~Department, shall track Indoor Environmental Quality (IEQ) problems, including indoor air pollution,~~  
20 ~~fumes, odors, humidity problems, and thermal and acoustical comfort issues, in City-owned buildings~~  
21 ~~and City leaseholds through the Department of Public Works and the Real Estate Division's~~  
22 ~~Computerized Maintenance Management System (CMMS).~~

23           ~~—(c) City Departments not using the CMMS may complete a voluntary annual survey of IEQ~~  
24 ~~information.~~

1           ~~—(d) DPH shall compile tracking information from the CMMS and survey results into an~~  
2 ~~annual analysis including commonalities among complaints and preventative techniques. The annual~~  
3 ~~survey results and analysis will provide information with which to provide better solutions to IEQ~~  
4 ~~problems and improve IEQ policy-making.~~

5           ~~—(e) DPH will coordinate research and interventions relating to the causes, effects, extent,~~  
6 ~~prevention, and control of indoor pollution, and will disseminate outcomes to City departments.~~

7           ~~—(f) Pursuant to Section 703(a)(2), the Department, in consultation with DPH, will provide~~  
8 ~~outreach and education programs for City Departments and design professionals on the importance of~~  
9 ~~IAQ management in the design, construction, operation and maintenance of municipal buildings.~~

10          ~~—(g) Construction specifications and facility maintenance protocols for City-owned Facilities~~  
11 ~~and City Leaseholds shall include the following:~~

12           ~~—(1) Implementation of moisture and mold management practices during the design,~~  
13 ~~construction and maintenance of a building. City-owned Facilities and City Leaseholds shall have a~~  
14 ~~system in place that provides prompt response and remediation for moisture infiltration, water damage~~  
15 ~~and/or mold.~~

16           ~~—(2) For new construction, elimination of building materials manufactured with lead.~~  
17 ~~Eliminated materials are established by regulation, pursuant to Section 703(b).~~

18           ~~—(h) Additional IEQ construction specifications and facility maintenance protocols for City-~~  
19 ~~owned Facilities and City Leaseholds may be adopted by regulation pursuant to Section 703(b).~~

20           **~~SEC. 712. REPORT TO THE BOARD OF SUPERVISORS.~~**

21           ~~—No later than July 1, 2018, the Director, in consultation with the Task Force and affected City~~  
22 ~~departments and with input from members of the public who have asked to be informed by the Task~~  
23 ~~Force or the Department, shall submit to the Board of Supervisors a report on the effects of this~~  
24 ~~Chapter, including but not limited to the following:~~

1           ~~—(1) A report of the compliance of municipal construction projects under the LEED rating~~  
2 ~~system, including a report on waivers;~~

3           ~~—(2) A report of City departments' compliance with this Chapter;~~

4           ~~—(3) An assessment of whether this Chapter has achieved its stated goals; and~~

5           ~~—(4) Recommended changes, if any, to this Chapter.~~

6           **~~SEC. 713. WAIVERS.~~**

7           ~~—(a) Waivers from the requirements of this Chapter are available under the following~~  
8 ~~circumstances:~~

9           ~~—(1) Emergency. A City department may grant itself a waiver from any requirement of this~~  
10 ~~Chapter, except the requirements of Section 706(a), when it is necessary to respond to an emergency~~  
11 ~~which endangers public health or safety. In such case, the City department shall report to the Director~~  
12 ~~on a form provided by the Director regarding the emergency that prevented compliance with this~~  
13 ~~Chapter within five business days. City departments desiring an emergency waiver from the~~  
14 ~~requirements of Section 706(a) shall confer with the General Manager of the San Francisco Public~~  
15 ~~Utilities Commission.~~

16           ~~—(2) Cost Prohibitive. If the sponsoring City department determines that compliance with~~  
17 ~~this Chapter is cost prohibitive, a City department may request a waiver from any provision of this~~  
18 ~~Chapter that is not otherwise required by the San Francisco Building Inspection Commission Codes,~~  
19 ~~the Port of San Francisco Building Standards Code, or other state or local requirement. Waivers may~~  
20 ~~be requested on a form provided by the Director and submitted to the Task Force. The Task Force shall~~  
21 ~~provide the Director with a recommendation with respect to the waiver request. Where a project is~~  
22 ~~located on property owned or managed by the Port of San Francisco, the Task Force shall provide the~~  
23 ~~Executive Director of the Port of San Francisco with a recommendation with respect to the waiver~~  
24 ~~request. The Director (or, where a project is located on property owned or controlled by the Port of~~  
25

1 ~~San Francisco, the Executive Director of the Port of San Francisco) may grant a waiver upon a finding~~  
2 ~~that the requesting City department project team has:~~

3 ~~——(A) Demonstrated which specific requirements are cost prohibitive as weighed against~~  
4 ~~the potential economic, environmental and health benefits posed by a particular requirement; and~~

5 ~~——(B) If applicable for Section 705, or equivalent provisions in the Port of San Francisco~~  
6 ~~Green Building Standards Code, developed a reasonable plan to maximize the number of LEED points~~  
7 ~~attainable.~~

8 ~~——(3) Alternate Compliance. A City department may request a waiver from LEED Gold~~  
9 ~~certification if utilizing an independently verified green building rating system or standard that is~~  
10 ~~determined by the Task Force to be at least as stringent as LEED, or to be a more appropriate~~  
11 ~~standard for a specific project. Such waiver requests shall provide justification and details for alternate~~  
12 ~~compliance. Waivers for alternate compliance may be requested on a form provided by the Director~~  
13 ~~and submitted to the Task Force. The Task Force shall provide the Director with a recommendation~~  
14 ~~with respect to the waiver request. Where a project is located on property owned or managed by the~~  
15 ~~Port of San Francisco, the Task Force shall provide the Executive Director of the Port of San~~  
16 ~~Francisco with a recommendation with respect to the waiver request. The Director (or, where a project~~  
17 ~~is located on property owned or managed by the Port of San Francisco, the Executive Director of the~~  
18 ~~Port of San Francisco) may grant a waiver upon finding that the requester has provided adequate~~  
19 ~~justification.~~

20 ~~——(4) Other. If, due to specific circumstances, compliance would defeat the intent of this~~  
21 ~~Chapter or create an unreasonable burden on the municipal construction project or City department,~~  
22 ~~the City department may request a waiver from that requirement on a form provided by the Director.~~  
23 ~~The Task Force shall provide the Director with a recommendation with respect to the waiver request.~~  
24 ~~Where a project is located on property owned or managed by the Port of San Francisco, the Task~~  
25 ~~Force shall provide the Executive Director of the Port of San Francisco with a recommendation with~~

1 ~~respect to the waiver request. The Director (or, in the case of projects located on property owned or~~  
2 ~~managed by the Port of San Francisco, the Executive Director of the Port of San Francisco) may grant~~  
3 ~~a waiver upon a finding that the requesting City department has:~~

4 ~~——(A) Documented the circumstances and burdens at issue; and~~

5 ~~——(B) If applicable for Section 705, or equivalent provision in the Port of San Francisco~~  
6 ~~Green Building Standards Code, developed a reasonable plan to maximize the number of LEED points~~  
7 ~~attainable.~~

8 ~~——(b) After the end of the 50% Design Development Phase, the Director or the Executive~~  
9 ~~Director of the Port of San Francisco will only accept waiver requests for consideration if the project~~  
10 ~~design team can demonstrate extenuating circumstances, including but not limited to the following:~~

11 ~~——(1) Unforeseen site conditions; or~~

12 ~~——(2) Unavailability of specified system or products.~~

13 ~~——(c) The Director shall respond to a request for a waiver within 35 days.~~

14 ~~——(d) The Director (or, where a project is located on property owned or managed by the Port~~  
15 ~~of San Francisco, the Executive Director of the Port of San Francisco) may not waive the requirements~~  
16 ~~of Sections 706(a), 707, and 708, except in the case of emergencies as provided in subsection (a)(1) of~~  
17 ~~this Section 713. Granting of a waiver for any requirement of this Chapter, or the Port of San~~  
18 ~~Francisco Green Building Standards Code does not waive any requirement of the San Francisco~~  
19 ~~Building Inspection Commission Codes, the Port of San Francisco Building Standards Code, or the~~  
20 ~~California Building Standards Code (CCR Title 24, Part 6 and Part 11) as applicable.~~

21 ~~——(e) The Director (or, when a project is located on property owned or managed by the Port of~~  
22 ~~San Francisco, the Port of San Francisco representative to the Task Force) shall regularly report to the~~  
23 ~~Task Force on waivers requested, granted and denied. The Director in consultation with the Task~~  
24 ~~Force shall report to the Commission on the Environment regularly on waivers requested, granted and~~  
25 ~~denied.~~

1           **SEC. 714. PREEMPTION.**

2           ~~—The City recognizes that in some circumstances state or federal law governs some of the~~  
3 ~~matters addressed in this Chapter. Nothing in this Chapter shall be interpreted or applied by a court or~~  
4 ~~an agency of City government so as to create any requirement, power, or duty in conflict with federal~~  
5 ~~or state law or with a requirement of any government agency, including any agency of City~~  
6 ~~government, implementing federal or state law.~~

7  
8           Section 4. Enactment of New Chapter 7 of the Environment Code. Chapter 7:  
9 Municipal Green Building Requirements, consisting of Sections 700-705, is hereby enacted, to  
10 read as follows:

11  
12                           **CHAPTER 7: MUNICIPAL GREEN BUILDING REQUIREMENTS**

13  
14           **SEC. 700. FINDINGS.**

15           The Board of Supervisors finds and declares that:

16           (a) Conventional building industry practices contribute to ecosystem degradation and our  
17 climate crisis. Construction activities are responsible for more than 30% of global resource use, and it  
18 is anticipated that embodied carbon will be responsible for 72% of the carbon emissions associated  
19 with global new construction between 2020 and 2030.

20           (b) In the United States, buildings consume 40% of all energy and 74% of all electricity.  
21 Buildings in San Francisco currently generate 41% of the City's greenhouse gas emissions. More than  
22 99% of the greenhouse gas emissions associated with the municipal portfolio can be attributed to the  
23 use of natural gas for building operations.

24           (c) San Francisco has established targets to supply 100% renewable energy by 2025, reduce  
25 greenhouse gas emissions 61% below 1990 levels by 2030, and achieve net-zero emissions by 2040.

1 (d) San Francisco is susceptible to natural and climate disasters, and the incorporation of  
2 strategies for resilience can reduce morbidity and mortality rates, lower utility costs, and contribute to  
3 incident stabilization.

4 (e) Green building is a form of climate action that minimizes greenhouse gas emissions, relies  
5 on energy efficiency and renewable resources, conserves water, optimizes material use, provides  
6 healthy and biodiverse environments, and bolsters an equitable society.

7 (f) Third party rating systems characterize the lifecycle considerations for green buildings.  
8 These programs can offer credibility, transparency, and consistency to project teams in pursuit of an  
9 elevated and well-defined performance standard for Municipal Construction Projects.

10  
11 **SEC. 701. DEFINITIONS.**

12 For purposes of this Chapter 7, the following terms shall have the meanings set forth below.

13 "All-Electric" shall have the same meaning as "All-Electric Building or Project" as defined in  
14 the San Francisco Green Building Code, as amended from time to time.

15 "Biodiversity Guidelines" means specific actions for project teams to create local wildlife  
16 habitat in the built environment toward fulfilling the City's Biodiverse City Vision, in accordance with  
17 the SF BOS 2018 Biodiversity Resolution. ([sfenvironment.org/biodiversityguidelines](http://sfenvironment.org/biodiversityguidelines))

18 "Building" means any structure with a roof and walls that supports or shelters a use or  
19 occupancy, other than that which primarily provides for the collection, storage, treatment, delivery,  
20 distribution, and/or transmission of water, wastewater, and/or power utilities.

21 "City Department" means any agency of the City and County of San Francisco. Any other local,  
22 state, or federal agency doing business in San Francisco is not a City Department, such as the San  
23 Francisco Unified School District, the San Francisco Community College District, the Office of  
24 Community Investment and Infrastructure, and the San Francisco Housing Authority.

1           "City Leasehold" means a Building or portion thereof owned by a party other than the City  
2           where a City Department is a tenant.

3           "City-Owned Property" means any land or real estate belonging to the City and County of San  
4           Francisco, including any portion thereof that is leased to a non-City entity.

5           "City Representative" means the employee of the City and County of San Francisco who  
6           oversees the process for a Municipal Construction Project and is responsible for ensuring that the  
7           Contractor complies with all aspects of the contract documents.

8           "Commission" means the Commission on the Environment.

9           "Community Center" means a Building and its grounds, where regular public programming  
10          provides an essential health and wellness function, important to maintain during an emergency. For the  
11          Recreation and Park Department, Community Center specifically means a recreation center.

12          "Construction and Demolition Debris" or "C & D Debris" shall have the same meaning as  
13          "Construction and Demolition Debris" as defined in the Environment Code, Chapter 14, as amended  
14          from time to time.

15          "Contractor" means the company or Person to whom the City awards a binding agreement to  
16          deliver a Municipal Construction Project.

17          "Critical Community Institution" means a Building necessary for providing vital societal and  
18          individual functions, including public safety facilities, health clinics, Community Centers, libraries, and  
19          emergency management facilities.

20          "Department" means the Department of the Environment.

21          "Design Phases" means the generally accepted stages of architectural design: conceptual  
22          design, schematic design, design development, and construction documents.

23          "Director" means the Director of the Department of the Environment or their designee.

24          "Embodied Carbon" means the sum impact of all the greenhouse gas emissions attributed to a  
25          material throughout its lifecycle.



1 "Green Building Rating System" means an assessment tool, created and managed by a  
2 reputable organization in good standing and recognized by the building industry as meeting the  
3 standard of care, that includes the following general characteristics, at a minimum:

4 • Holistic approach to program requirements, with established and comprehensive  
5 sustainability metrics for measuring performance in a range of impact areas, such as energy;  
6 environmental justice; human and environmental health; integrative process; materials; site and  
7 surrounds; and water;

8 • Independent third-party verification;

9 • Mechanism for consistent evaluation and communication of achievement or levels of  
10 achievement;

11 • Standardized processes for project data tracking and project team support; and

12 • Commitment to continuous improvement with clearly delineated and transparent  
13 methods for program updates.

14 "Green Business Certification Inc." or "GBCI" is the global certification body for the LEED  
15 green building program and other sustainability rating systems, as well as the administrator of related  
16 professional credentials. (www.gbci.org)

17 "Indoor Air Quality" or "IAQ" means the characteristics of air within and around a Building,  
18 especially as it relates to the health and comfort of Building occupants, and as it is affected by gases  
19 (including but not limited to carbon dioxide, carbon monoxide, radon, formaldehyde, ozone, nitrogen  
20 oxides, semi-volatile organic compounds, sulfur oxides, volatile organic compounds), particulates, and  
21 microbial contaminants (e.g., mold, bacteria).

22 "Indoor Environmental Quality" means the overall state of conditions within a Building that  
23 affects its occupants, including but not limited to Indoor Air Quality, lighting, acoustics, thermal  
24 conditions, daylight, views, and ergonomics.

1 "Leadership in Energy and Environmental Design" or "LEED®" is an internationally  
2 recognized and third-party verified green building rating system developed by the U.S. Green Building  
3 Council. ([www.usgbc.org/leed](http://www.usgbc.org/leed))

4 "LEED Accredited Professional With Specialty" or "LEED AP With Specialty" means an  
5 employee of a City Department or a consultant retained by the City through a design or construction  
6 contract or other agreement, who has passed the LEED AP With Specialty accreditation exam issued  
7 by GBCI and has maintained this credential by earning continuing education hours.

8 "LEED Online" means the web-based platform provided by the U.S. Green Building Council for  
9 LEED project registration, team collaboration, document management, project progress monitoring,  
10 and access to forms, reviewer comments, and certification credit language.

11 "LEED Project Administrator" means the individual member of the design team who registers a  
12 Municipal Construction Project with GBCI, and subsequently administers the LEED documentation  
13 and certification process for the project. The LEED Project Administrator shall be a LEED AP With  
14 Specialty in good standing.

15 "LEED Scorecard" means a summary chart indicating all LEED prerequisites and credits being  
16 pursued and reasonably expected to be achieved for a Municipal Construction Project.

17 "Maintenance" means repair, replacement, or modernization of items as part of single-trade  
18 scope of work (e.g., roofing, boiler, chiller, fire sprinkler, fire alarm, elevator), accessibility barrier  
19 removal, or non-permitted work (e.g., finish materials, furniture systems, hardware).

20 "Major Renovation" means a Municipal Construction Project where Building interior finishes  
21 are removed and significant upgrades to structural and/or mechanical, electrical, and/or plumbing  
22 systems are proposed; and where the scope of work is extensive enough such that normal Building  
23 operations cannot continue while the work is in progress and/or a new certificate of occupancy, or  
24 similar official indication that it is fit and ready for use, is required.

1       "Material Reduction and Recovery Plan" or "MRRP" shall have the same meaning as  
2       "Material Reduction and Recovery Plan" as defined in Environment Code, Chapter 14, as amended  
3       from time to time.

4       "Municipal Construction Project" means any planning, design, construction, deconstruction, or  
5       demolition activity performed by a City Department or on a city-owned property.

6       "Natural Gas" shall have the same meaning as "Fuel Gas" as defined in the California  
7       Plumbing Code and Mechanical Code, as amended from time to time.

8       "New Construction" means a Municipal Construction Project that includes land disturbing  
9       activity from the ground up, with a new Building envelope and new structural, mechanical, electrical,  
10       and plumbing systems.

11       "Non-Building Project" means a Municipal Construction Project that does not include a  
12       Building.

13       "Person" means a natural person, a firm, joint stock company, business concern, association,  
14       partnership or corporation or, to the extent permitted by law, governmental entity, including the City  
15       and County of San Francisco and its departments, boards, and commissions for projects within the nine  
16       counties surrounding the San Francisco Bay (Alameda, Contra Costa, Marin, Napa, San Francisco,  
17       San Mateo, Santa Clara, Solano, and Sonoma), and its or their successors or assigns.

18       "Small Project" means New Construction, Major Renovation, or Tenant Improvement that  
19       either is less than 10,000 gross square feet or is of any size with insufficient scope to meet all LEED  
20       prerequisites.

21       "Tenant Improvement" means a Municipal Construction Project that involves the customized  
22       alterations to the interior of an occupiable Building to accommodate the needs of specific occupants,  
23       where interior finishes are removed and/or mechanical, electrical, and/or plumbing systems are  
24       proposed, such that normal building operations cannot continue while the work is in progress and/or a  
25       new certificate of occupancy, or similar official indication that it is fit and ready for use, is required.

1           "Tier 1 Emergency Loads" means mission-critical, life-sustaining electrical end uses which  
2 shall not comprise less than 10% of total Building electrical capacity and shall include loads essential  
3 to the continued function of the use(s) that are the basis for the designation of Critical Community  
4 Institution at the site.

5           "Tier 2 Priority Loads" means electrical end uses that should maintain operation in the event  
6 of disruption to electricity supply only when doing so does not threaten the resilient operation of Tier 1  
7 Emergency Loads. Tier 2 Priority Loads usually comprise about 15% of total Building electrical  
8 capacity.

9           "Tier 3 Discretionary Loads" means electrical end uses that should maintain operation in the  
10 event of disruption to electricity supply only when doing so does not threaten the resilient operation of  
11 Tier 1 Emergency Loads and Tier 2 Priority Loads. Tier 3 Discretionary Loads usually comprise about  
12 75% of total Building electrical capacity.

13           "Virtual Warehouse" means the City's online reuse system for all unwanted City-owned items.  
14 The Virtual Warehouse facilitates the reuse, recycling, and proper disposal of city-owned material  
15 pursuant to the Surplus Disposal Ordinance and Resource Conservation Ordinance.  
16 (<https://sfenvironment.org/virtualwarehouse>).

## 18   **SEC. 702. ROLES AND RESPONSIBILITIES.**

### 19   **(a) Municipal Green Building Task Force.**

20           (1) Establishment and purpose. The Municipal Green Building Task Force (the "Task  
21 Force") is hereby established to oversee and assist in enhancing the environmental performance of  
22 Municipal Construction Projects pursuant to this Chapter 7. The Task Force shall assist the Director in  
23 providing green building advice, assistance, outreach, and education to City Departments. The Task  
24 Force shall advise the Department of the Environment on matters of policy related to this Chapter and  
25 may review Municipal Construction Projects subject to this Chapter during their design and

1 construction to ensure that the responsible City Departments are complying with the Chapter's  
2 requirements. The Task Force shall hear waiver requests from City Departments and propose  
3 recommended actions to the Director (or to the Executive Director of the Port of San Francisco for  
4 projects located on property owned or managed by the Port of San Francisco). The Task Force shall  
5 facilitate interdepartmental communication and cooperation, and act as an educational forum to  
6 increase green building knowledge and share project-related successes and lessons learned.

7 (2) **Membership.** The Task Force shall consist of one member of the public appointed by  
8 the Mayor, and a representative with building design, construction, and/or finance experience from  
9 each of the following City Departments and divisions, or their successor agencies:

10 (A) Department of the Environment;

11 (B) Building Design and Construction Division within San Francisco Public  
12 Works;

13 (C) Design and Engineering Division within San Francisco Public Works;

14 (D) Landscape Architecture Division within San Francisco Public Works;

15 (E) San Francisco Public Works Buildings - Project Management;

16 (F) Bureau of Building Repair within San Francisco Public Works;

17 (G) Power Enterprise within San Francisco Public Utilities Commission;

18 (H) Water Enterprise within San Francisco Public Utilities Commission;

19 (I) Wastewater Enterprise within San Francisco Public Utilities  
20 Commission;

21 (J) Infrastructure within San Francisco Public Utilities Commission;

22 (K) Capital and Planning Division within Recreation and Park Department;

23 (L) Capital Programs and Construction Division within San Francisco  
24 Municipal Transportation Agency;

1                    (M) Office of Resilience and Capital Planning within Office of City  
2 Administrator;  
3                    (N) Department of Building Inspection;  
4                    (O) Citywide Planning Division within Planning Department;  
5                    (P) Port of San Francisco;  
6                    (Q) San Francisco International Airport;  
7                    (R) Facilities Division within San Francisco Public Library;  
8                    (S) Fire Department;  
9                    (T) Department of Public Health; and,  
10                   (U) Real Estate Division within Office of the City Administrator.

11                   Membership on the Task Force is intended, to the extent applicable, to be a continuation of  
12 membership on the similar task force established in an earlier iteration of this Section 702, repealed by  
13 the ordinance in Board File No. 221223, except to the extent an appointing authority decides to make a  
14 change in membership.

15                   (3) Governance. The Task Force shall adopt bylaws to govern its operations.

16                   **(b) Department of the Environment.**

17                   **(1) General duties under this Chapter 7. The Department of the Environment shall:**

18                   (A) Develop goals, strategies, and criteria for optimizing the design,  
19 construction, renovation, operation, reuse, and dismantling of Municipal Construction Projects and  
20 Buildings, and make related policy recommendations to the Board of Supervisors;

21                   (B) Develop and oversee trainings in green building practices for City staff to  
22 aid the implementation of policies adopted by the Board of Supervisors;

23                   (C) Chair the Task Force, and coordinate City Departments having  
24 responsibility for compliance with the requirements of this Chapter;  
25

1                                (D) Provide technical oversight and assistance directly to Municipal  
2 Construction Project teams or through green building technical assistance contracts; and

3                                (E) Develop forms and materials necessary for compliance with this Chapter.

4                                (2) **Guidance, rules and regulations.** After a public hearing, the Director may  
5 promulgate such guidance, forms, performance procedures, rules, and regulations as may be necessary  
6 or appropriate from time to time to implement the provisions of this Chapter 7. The Director is  
7 authorized to call upon the Task Force and other City Departments as necessary and appropriate to  
8 assist in developing such guidance, forms, performance procedures, rules, and regulations. Such  
9 guidance, forms, performance procedures, rules, and regulations may include adopting or modifying  
10 locally required measures for Municipal Construction Projects, as documented in Section 704.

11                                (3) **Implementation costs.** The Director shall determine the costs to implement the  
12 provisions of this Chapter 7 and shall request that relevant City Departments provide work orders to  
13 the Department to cover the costs of implementing and maintaining the programs required by this  
14 Chapter.

15                                (c) **City Departments.**

16                                (1) **General Duties Under This Chapter 7.** Each City Department, board, and  
17 commission subject to this Chapter shall:

18                                (A) Administer its Municipal Construction Projects in accordance with this  
19 Chapter;

20                                (B) Cooperate with the Department, and supply in writing all information  
21 necessary for the Department to carry out its duties under this Chapter;

22                                (C) Assist the Director in providing advice, assistance, outreach, and education  
23 to other City Departments concerning municipal green building practices;

24                                (D) Provide project reports and presentations to the Task Force upon request;  
25

1 (E) Attend green building related trainings offered by the Department, as  
2 appropriate;

3 (F) Give the Department access to LEED Online and other Green Building  
4 Rating System web-based platforms for each Municipal Construction Project registered for  
5 certification; and

6 (G) Designate an employee to represent the interest of, and provide the expertise  
7 of, that City Department or division on the Task Force, if listed in Section 702(a)(2).

8  
9 **SEC. 703. APPLICABILITY.**

10 (a) **Preemption.** The City recognizes that in some circumstances state or federal law governs  
11 some of the matters addressed in this Chapter 7. Nothing in this Chapter shall be interpreted or applied  
12 by a court or an agency of City government so as to create any requirement, power, or duty in conflict  
13 with federal or state law or with a requirement of any government agency, including any agency of City  
14 government, implementing federal or state law.

15 (b) **Compliance with building codes.** In addition to complying with this Chapter 7, a  
16 Municipal Construction Project is subject to the applicable building codes in effect at the time of  
17 permit application. A Municipal Construction Project located within the City and County of San  
18 Francisco shall comply with the requirements of the San Francisco Green Building Code, except that a  
19 Municipal Construction Project located on property owned or managed by the Port of San Francisco  
20 shall comply with the Port of San Francisco Green Building Standards Code, and a Municipal  
21 Construction Project located at the San Francisco International Airport shall comply with this Chapter  
22 and the California Building Standards Code (CCR Title 24). A Municipal Construction Project  
23 otherwise located outside the City and County of San Francisco shall comply with this Chapter and the  
24 local building code promulgated by the authority having jurisdiction.

25 (c) **Exemptions.**



1 (1) A Municipal Construction Project located on property owned or managed by the  
2 Port of San Francisco is not subject to Section 704 of this Chapter 7, except that it is subject to Sections  
3 704(b)(1), 704(b)(2), 704(c)(1)(A), 704(c)(1)(B), 704(c)(2), 704(c)(3), 704(c)(4)(A), 704(d), and  
4 704(e).

5 (2) A Municipal Construction Project located on property owned or managed by the San  
6 Francisco International Airport is not subject to Section 704(e).

7  
8 **SEC. 704. REQUIREMENTS.**

9 **(a) Green Building Rating Systems.**

10 (1) LEED®. New Construction, Major Renovation, and Tenant Improvement project  
11 teams shall use LEED to certify and/or document environmental attributes. Wherever specific LEED  
12 prerequisites or credits are cited in this Chapter 7, such references are to LEED version 4.1 ("v4.1").  
13 The U.S. Green Building Council updates LEED from time to time; more recent versions may be used,  
14 provided the credits and points achieved are at least as stringent as LEED v4.1. The Director shall  
15 adopt by regulation the current applicable versions of LEED pursuant to Section 702(b)(2).

16 (A) Projects of 10,000 gross square feet or more. The minimum requirement for  
17 a project of 10,000 gross square feet or more shall be certified as LEED Gold®. In addition, the  
18 following applies:

19 (i) Conceptual design phase. During the conceptual design phase, the  
20 sponsoring City Department shall assemble a project team, which shall include a LEED Project  
21 Administrator.

22 (ii) Schematic design phase. During the schematic design phase, the  
23 LEED Project Administrator shall register the Municipal Construction Project with GBCI as a LEED  
24 registered project.

1 (iii) **All Design Phases.** At the conclusion of each Design Phase, the  
2 LEED Project Administrator shall submit to the Department an updated LEED Scorecard for optional  
3 review by the Task Force. The Task Force may provide comment on the LEED Scorecard within 35  
4 days of submittal. The LEED Scorecard shall indicate a LEED Gold rating or higher, incorporating all  
5 LEED credits referenced in Section 704 and other compatible locally required measures.

6 (iv) **Project Closeout.** At the completion of construction, the LEED  
7 Project Administrator shall submit LEED documentation to GBCI for certification. Upon achieving  
8 certification, the LEED Project Administrator shall submit to the Department a copy of the LEED Gold  
9 or LEED Platinum certificate and the final LEED Scorecard for review by the Task Force.

10 (B) **Small Projects.** LEED certification is not required and LEED credit  
11 documentation is not necessary for a Small Project. Instead, the sponsoring City Department, in  
12 consultation with a LEED AP With Specialty, shall prepare and submit to the Department a LEED  
13 Scorecard for informational and reporting purposes as follows:

14 (i) At the conclusion of the conceptual design phase, indicating the  
15 maximum LEED credits that are practicable for the project, the sponsoring City Department shall  
16 integrate the environmental attributes of these LEED credits throughout the design and construction  
17 process.

18 (ii) Upon receiving a temporary certificate of occupancy or similar  
19 indication that the project is substantively complete, indicating all LEED credits that have been or  
20 would likely be achieved.

21 (C) **Maintenance.** LEED certification, LEED credit documentation, and LEED  
22 Scorecard preparation is not required for Maintenance.

23 (2) **Other Green Building Rating Systems.** The Department, in consultation with  
24 affected City Departments, shall explore the applicability of Green Building Rating Systems for Non-  
25 Building Projects and report to the Task Force no later than two years after the effective date of the

1 ordinance in Board File No. 221223, enacting this Chapter 7 and repealing an earlier version of  
2 Chapter 7.

3 **(b) Energy Optimization.**

4 (1) Each Municipal Construction Project is subject to compliance with the following  
5 locally required measures:

6 (A) **Electric Service To City Departments And Facilities** (Administrative Code  
7 Section 99.3).

8 (B) **Better Roofs** (San Francisco Green Building Code Chapter 5, Section  
9 5.201.1.2).

10 (2) **Commissioning.** For each Municipal Construction Project subject to a LEED  
11 certification requirement, the LEED Project Administrator shall submit documentation to the  
12 Department of Environment verifying that the project achieves the LEED credit Enhanced  
13 Commissioning Option 1, Path 2: Enhanced and monitoring-based commissioning.

14 (3) **All-Electric Building.** Each New Construction or Major Renovation that includes  
15 HVAC system replacement shall be All-Electric, except as follows:

16 (A) Natural Gas or propane service and plumbing may be installed if necessary  
17 for processes or features separate from the operation of systems integral to Building functions, such as  
18 vehicle fueling and mechanic shop equipment.

19 (B) Existing equipment that uses Natural Gas and serves the project area, but is  
20 outside the scope of the project, may be retained. Projects which both (i) are served by existing  
21 equipment that use Natural Gas and are outside the scope of work, and (ii) include upgrade to electric  
22 service in the project scope of work, are encouraged to include sufficient electrical service capacity to,  
23 in the future, replace existing systems that use Natural Gas with All-Electric systems.

24 (C) Emergency backup electricity generation systems may use any combination  
25 of technologies permitted under applicable law, including combustion of fossil fuels. Zero-emissions

1 emergency backup electricity systems are encouraged, such as onsite batteries that store electricity  
2 from onsite solar photovoltaics.

3 **(4) Electrification of Existing Building Systems.**

4 (A) Each City Department shall conduct an inventory of gas-using equipment in  
5 their managed Buildings using a template provided by the Director, and upload the inventory results to  
6 the City and County of San Francisco's online data catalog no later than December 31, 2023.

7 (B) Where a gas-using equipment or system integral to building functions is  
8 removed from a Building other than a hospital and/or new equipment is required for a Municipal  
9 Construction Project, electric equipment or system must be installed, and:

10 (i) If new equipment can be supported by existing electric service  
11 capacity, no upgrade to electric service infrastructure is required by this subsection 704(b).

12 (ii) If new equipment requires an increase from existing electric service  
13 capacity, the upgraded electric service infrastructure must be sufficient to accommodate the new  
14 equipment, future replacement, and electrification of the Building's remaining gas-using equipment.

15 **(5) Energy Resilience.** This provision shall apply to any Municipal Construction Project  
16 for which the initial appropriation request, either whole or partial, is submitted to the Board of  
17 Supervisors after the effective date of the ordinance in Board File No. 221223, enacting this Chapter 7  
18 and repealing an earlier version of Chapter 7.

19 (A) Critical Community Institution: For New Construction and Major  
20 Renovation that includes HVAC system replacement and electrical system upgrade:

21 (i) Calculate the battery storage capacity and photovoltaic array size  
22 sufficient to ensure ongoing operation of the Building's Tier 1 Emergency Loads to be met by battery  
23 storage and solar resources in the event of disaster or other disruption to electrical power, using a  
24 typical operational 3-day cycle in March as a basis of design; and  
25

1 (ii) install battery storage and photovoltaics consistent with daily  
2 ongoing delivery of Tier 1 Emergency Loads and functions specified in Section 704(b)(5)(A)(i).

3 (B) All other Buildings: For New Construction and Major Renovation, other  
4 than at Critical Community Institutions, that includes HVAC system replacement and electrical system  
5 upgrade, comply with at least one of the following:

6 (i) Battery storage and photovoltaics sufficient to sustain ongoing Tier 1  
7 Emergency Loads as specified in Section 704(b)(5)(A)(i); OR

8 (ii) Annual site zero net energy; OR

9 (iii) Design energy use intensity (EUI) 50% better than the national  
10 median site EUI; OR

11 (iv) For a Building with process loads that are at least 50% of the  
12 Building's total energy use, exceed requirements of ASHRAE 90.1-2019 by 10%.

13 **(c) Responsible Production and Consumption.**

14 **(1) Building Material Management.**

15 (A) Each Municipal Construction Project located within the nine counties  
16 surrounding the San Francisco Bay must comply with the Construction and Demolition Debris  
17 Recovery Ordinance (No. 27-06) and Environment Code Chapter 14.

18 (B) For each Municipal Construction Project, the contract between the City  
19 Department and the Contractor shall require the Contractor responsible for construction and/or  
20 demolition (C&D) debris management to:

21 (i) Conduct a site assessment to estimate the types of material discards  
22 that will be generated during the project, including packaging and/or shipping materials.

23 (ii) Write and implement a Material Reduction and Recovery Plan  
24 (MRRP) in accordance with regulations promulgated under this Chapter 7 to guide onsite material  
25 management procedures for waste prevention and material reuse and recycling.

1 (iii) At a minimum, source-separate for reuse or recycling concrete,  
2 metal, clean solid wood, clean and unpainted drywall, and carpet and carpet padding. Other C&D  
3 debris must either be source-separated or placed in a C&D debris box for transport to a registered  
4 facility to maximize material recovery. The Director may adjust the materials to be source-separated by  
5 regulation under Section 702(b)(2) based on the Director's assessment of infrastructure and markets  
6 available.

7 (iv) If needed, maintain dedicated separate bins for recyclable,  
8 compostable, and trash materials as required by Environment Code Chapter 19 Mandatory Recycling  
9 and Composting.

10 (C) For each Tenant Improvement subject to a LEED certification requirement,  
11 the LEED Project Administrator shall submit documentation verifying that the project achieves the  
12 Interior Design + Construction – Commercial Interiors LEED credit Construction and Demolition  
13 Waste Management Option 2: Waste Prevention (1 point).

14 (2) **Material Reuse.** City Departments are encouraged to prioritize source reduction and  
15 onsite reuse through whatever means practicable. To the extent permitted by law, City Departments  
16 shall list in the Virtual Warehouse all unwanted furniture, fixtures, equipment, computers, and supplies  
17 purchased with City and County of San Francisco funds. Before buying any new furniture, fixtures,  
18 equipment, computers, or supplies, City Departments shall check the Virtual Warehouse for available  
19 items that meet their needs.

20 (3) **Material Recovery.**

21 (A) City Departments shall ensure that all City-Owned Properties and City  
22 Leaseholds have adequate, accessible, and convenient areas for the collection, storage, and loading of  
23 100% of recyclable, compostable, and refuse materials. Design and/or construction contract  
24 documents shall incorporate requirements of Environment Code Chapter 19 Mandatory Recycling and  
25 Composting, and ensure that the designed and designated areas are sufficient to accommodate

1 containers consistent with both current methods and projected needs when zero waste goals are met, as  
2 well as allow for easy access by a collector's vehicle.

3 (B) City Departments are required to recycle used fluorescent and other  
4 mercury-containing lamps, batteries, and universal waste as defined by California Code of Regulations  
5 Section 66261.9.

6 **(4) Embodied Carbon.**

7 (A) Each Municipal Construction Project of 10,000 gross square feet or more  
8 shall submit to the Department an embodied carbon reduction strategies checklist on a form provided  
9 by the Director for informational and reporting purposes as follows:

10 (i) At the conclusion of the schematic design phase, as an assessment of  
11 the maximum embodied carbon reduction strategies that are practicable for the project. The  
12 sponsoring City Department shall prioritize the integration of these strategies throughout the design  
13 and construction process.

14 (ii) Upon receiving a temporary certificate of occupancy or similar  
15 indication that the project is substantively complete, explaining the embodied carbon reduction  
16 strategies that have been successfully integrated into the design and/or construction process.

17 (B) For each New Construction or Major Renovation subject to a LEED  
18 certification requirement, the LEED Project Administrator shall submit documentation verifying that  
19 the project achieves the LEED credit Building Life-Cycle Impact Reduction Option 2: Whole-Building  
20 Life-Cycle Assessment, Path 3 by addressing at least three product categories or building assembly  
21 types. For each Tenant Improvement subject to a LEED certification requirement, the LEED Project  
22 Administrator shall submit documentation verifying that the project achieves the LEED credit Interiors  
23 Life-Cycle Impact Reduction Option 1: Interior Furniture and Nonstructural Elements Reuse (1 point)  
24 or Option 3: Building Interiors Life Cycle Assessment (2 points).

1 (C) For each Municipal Construction Project subject to a LEED certification  
2 requirement, the LEED Project Administrator shall submit documentation verifying that the project  
3 achieves the LEED credit Environmental Product Declarations (1 point).

4 **(d) Human and Environmental Health.**

5 (1) **Indoor Air Quality.** For each Municipal Construction Project subject to a LEED  
6 certification requirement, the LEED Project Administrator shall submit documentation verifying that  
7 the project achieves the following LEED credits:

8 (A) Enhanced Indoor Air Quality Strategies (1 point);

9 (B) Low-Emitting Materials (5 product categories);

10 (C) Construction Indoor Air Quality Management Plan (1 point); and

11 (D) Indoor Air Quality Assessment Option 2: Air Testing (2 points).

12 **(2) Toxics Reduction and Pollution Prevention.**

13 (A) For each Municipal Construction Project subject to a LEED certification  
14 requirement, the LEED Project Administrator shall submit documentation verifying that the project  
15 achieves the LEED credit Building Product Disclosure and Optimization - Material Ingredients (1  
16 point) using reporting methodologies that inventory content of a product's homogeneous materials to at  
17 least 1,000 ppm.

18 (B) For all Municipal Construction Projects and for purchases made by or on  
19 behalf of City Departments for these projects, product categories including but not limited to furniture,  
20 countertops, door hardware, paints, ceilings, and flooring shall comply with regulations promulgated  
21 under this Chapter 7 pertaining to the following attributes, subject to verification by the Department of  
22 the Environment:

23 (i) Added flame retardant chemicals;

24 (ii) Antimicrobial chemicals;

25 (iii) Fluorinated chemicals;



- (iv) Volatile organic compounds (VOCs) content or emissions.
- (v) Polyvinyl chloride (PVC) content;
- (vi) Recycled content and recyclability;
- (vii) Sustainably grown and harvested wood; and
- (viii) Other environmental attributes, consistent with this Chapter.

**(3) Biodiversity and Wildlife Habitat.**

Each Municipal Construction Project shall follow the City and County of San Francisco's Biodiversity Guidelines.

**(e) Water Conservation.**

A Municipal Construction Project located outside of the City and County of San Francisco may be subject to the following locally required measures if the project is not mandated by the local agency having jurisdiction to meet equivalent requirements:

**(1) Construction Site Runoff Ordinance** (Public Works Code Sections 146-146.11).

**(2) Stormwater Management Ordinance** (Public Works Code Sections 147-147.6).

**(3) Indoor Water Use Reduction.** (Green Building Code, Section 5.103.1.2). For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Indoor Water Use Reduction (30% reduction minimum).

**(4) Water Efficient Irrigation Ordinance** (Administrative Code Chapter 63).

**SEC. 705. WAIVERS.**

(a) Waivers for any requirement of this Chapter 7, except any requirement that is mandated by other local or state policy, are available under the following circumstances:

**(1) Emergency.** When it is necessary to respond to an emergency that endangers public health or safety, the Director of a City Department may grant itself a waiver from any requirement of this Chapter. The City Department shall report within five business days to the Director, on a form

1 provided by the Director, and explain the emergency that prevented compliance with the  
2 requirement(s) of this Chapter.

3 (2) **Cost Prohibitive.** If the sponsoring City Department of a Municipal Construction  
4 Project determines that compliance with any requirement of this Chapter is cost prohibitive, that City  
5 Department may request a waiver on a form provided by the Director and submitted to the Task Force.  
6 The Task Force shall propose a recommended action to the Director (or the Executive Director of the  
7 Port of San Francisco for a project that is located on property owned or controlled by the Port of San  
8 Francisco), who may grant a waiver upon a finding that the Municipal Construction Project's team  
9 has:

10 (A) Ascertained the specific requirement(s) is cost prohibitive, as measured  
11 against the potential economic, environmental, societal, and health benefits posed by that requirement;  
12 and

13 (B) Developed a reasonable plan to maximize the sustainability strategies for the  
14 Municipal Construction Project, and counterbalance the requirement that cannot be met to the extent  
15 that it is practicable.

16 (3) **Alternate Compliance.** The sponsoring City Department of a Municipal  
17 Construction Project may request a waiver from LEED Gold if using a Green Building Rating System  
18 or standard that is determined by the Task Force to be at least as stringent as LEED or to be more  
19 appropriate for a specific project. Such waiver request shall document justification and details for  
20 alternate compliance on a form provided by the Director and submitted to the Task Force. The Task  
21 Force shall propose a recommended action to the Director (or the Executive Director of the Port of  
22 San Francisco for a project that is located on property owned or controlled by the Port of San  
23 Francisco), who may grant a waiver upon finding that the Municipal Construction Project's team has  
24 provided adequate justification.

1                   (4) **Other.** If, due to specific circumstances, compliance with a requirement would defeat  
2 the intent of this Chapter 7 or create an unreasonable burden on the Municipal Construction Project or  
3 sponsoring City Department, that City Department may request a waiver on a form provided by the  
4 Director. The Task Force shall propose a recommended action to the Director (or the Executive  
5 Director of the Port of San Francisco for a project that is located on property owned or controlled by  
6 the Port of San Francisco), who may grant a waiver upon a finding that the requesting City  
7 Department has:

8                   (A) Documented the circumstances and burdens at issue; and  
9                   (B) Developed a reasonable plan to maximize the sustainability strategies for the  
10 Municipal Construction Project, and counterbalance the requirement that cannot be met to the extent  
11 that it is practicable.

12                   (b) After the end of the 50% design development phase, the Director (or the Executive Director  
13 of the Port of San Francisco for a project that is located on property owned or controlled by the Port of  
14 San Francisco) will only accept a waiver request for consideration if the project design team can  
15 demonstrate extenuating circumstances, including but not limited to unforeseen site conditions or  
16 unavailability of a specified system or product.

17                   (c) The Director shall respond to a waiver request within 35 days.

18                   (d) The Director (or the Executive Director of the Port of San Francisco for a project that is  
19 located on property owned or managed by the Port of San Francisco) may not grant a waiver for the  
20 requirements of Sections 704(c)(1)(B) or 704(c)(2)(A). Granting a waiver for any requirement of this  
21 Chapter 7 does not eliminate any requirement of other local or state codes.

22                   (e) The Director, in consultation with the Task Force, shall report to the Commission on the  
23 Environment regularly on waivers requested, granted, and denied.

Section 5. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

APPROVED AS TO FORM:  
DAVID CHIU, City Attorney

By: /s/ Robb Kapla  
ROBB KAPLA  
Deputy City Attorney

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## **LEGISLATIVE DIGEST**

[Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

**Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.**

### **Existing Law**

Chapter 7 of the Environment Code outlines heightened green building requirements for City buildings. When originally enacted, Chapter 7's requirements were significantly stricter than the San Francisco Building and Green Building Codes that govern all other buildings in the City. These requirements include the establishment of a Municipal Green Building Task Force to oversee and guide enhancements in environmentally superior design for City projects, mandating Leadership in Energy Efficiency and Design (LEED) certification, renewable energy onsite or purchase, all-electric design, strict recycling and construction debris management, improved indoor air quality, and stricter water conservation and stormwater runoff protections for new City buildings.

### **Amendments to Current Law**

The Proposed Legislation would repeal Chapter 7 and adopt a reorganized and retitled Chapter 7: Municipal Green Building Requirements. The new Chapter 7 would update legislative findings regarding environmental conditions, and advance building standards for City projects such that Chapter 7 will remain a "reach" code that exceeds the standards of the 2022 San Francisco Building and Green Building Codes and aligns with the 2021 Climate Action Plan.

Among the more significant updates, the Proposed Legislation would compel electrification of systems utilizing gas in existing mixed-fuel City buildings where feasible, include energy resiliency and storage requirements for critical infrastructure, mandate enhanced construction debris and material reuse requirements, and introduce embodied carbon reduction provisions for City projects. The Proposed Legislation also updates LEED certification requirements for different types of City projects; clarifies water conservation, renewable energy, and stormwater managements provisions; and better defines the composition and responsibilities of the Municipal Green Building Task Force and the Department of Environment in promulgating regulations pursuant to Chapter 7 and evaluating requests for waivers from various requirements.

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<b>Item 9</b> <b>File 22-1223</b>	<b>Department:</b> Environment (ENV)
<b>EXECUTIVE SUMMARY</b>	
<p style="text-align: center;"><b>Legislative Objectives</b></p> <ul style="list-style-type: none"> <li>The proposed ordinance would repeal and replace Chapter 7 of the Environment Code regarding Municipal Green Building Requirements.</li> </ul> <p style="text-align: center;"><b>Key Points</b></p> <ul style="list-style-type: none"> <li>Chapter 7 of the City’s Environment Code sets green building requirements for City-owned buildings. According to the proposed ordinance, approximately 41 percent of greenhouse gas emissions in San Francisco are generated from buildings. The City’s municipal buildings generally obtain their electricity from the San Francisco Public Utilities Commission’s (SFPUC) Hetch Hetchy Power Enterprise, which is free from fossil fuel combustion and greenhouse gas emissions. Therefore, over 99 percent of greenhouse gas emissions from municipal buildings are due to the use of natural gas.</li> <li>The key changes to Chapter 7 under the proposed ordinance are: (1) requirement to replace existing municipal building natural gas systems, such as furnaces and water heaters, with all-electric systems at the end of useful life; (2) energy resilience requirements (photovoltaic and battery storage systems) for new construction and major renovations of municipal buildings; and (3) embodied carbon life cycle assessment requirement for new construction and major renovations of municipal buildings. There are also minor changes regarding building material management, human and environmental health, water conservation, and the Municipal Green Building Task Force.</li> </ul> <p style="text-align: center;"><b>Fiscal Impact</b></p> <ul style="list-style-type: none"> <li>The largest fiscal impact of the proposed ordinance likely comes from the requirement to replace existing natural gas building systems in municipal buildings with all-electric systems at the end of useful life. Based on a range of interconnection, retrofit, and soft costs from available project data and interviews with subject matter experts, we estimate the City would face approximately an additional \$247 million to \$1.58 billion in electrification costs for 332 municipal buildings. There is a wide range of building types, sizes, and existing conditions that creates significant uncertainty in this estimate.</li> <li>The estimated cost for each battery system for a medium office building is approximately \$160,000-\$270,000. Actual costs may vary significantly depending on the size and energy needs of each building. The estimated cost for an embodied carbon life cycle assessment on a project is approximately \$15,000-20,000.</li> </ul> <p style="text-align: center;"><b>Recommendation</b></p> <ul style="list-style-type: none"> <li>Approval of the proposed ordinance is a policy matter for the Board of Supervisors.</li> </ul>	

**MANDATE STATEMENT**

City Charter Section 2.105 states that all legislative acts shall be by ordinance, approved by a majority of the members of the Board of Supervisors.

**BACKGROUND**

Chapter 7 of the City's Environment Code sets green building requirements for City-owned buildings. Chapter 7 was enacted in its current form by the Board of Supervisors in October 2011 (File 11-0854) and was amended in 2014, 2016, 2017, 2018, and 2020 (Files 14-0226, 16-1054, 16-1287, 18-0002, and 19-0972). Chapter 7 standards include construction and operating requirements for energy efficiency, water conservation, toxics reduction, indoor environmental quality, and recycling and composting of waste.

According to the proposed ordinance, approximately 41 percent of greenhouse gas emissions in San Francisco are generated from buildings. The City's municipal buildings generally obtain their electricity from the San Francisco Public Utilities Commission's (SFPUC) Hetch Hetchy Power Enterprise, which is free from fossil fuel combustion and greenhouse gas emissions. Therefore, over 99 percent of greenhouse gas emissions from municipal buildings are due to the use of natural gas. The City has adopted a goal of net-zero emissions by 2040 through an update to Chapter 9 of the City's Environment Code in 2021 (File 21-0563).

The 2020 amendments to Chapter 7 required new construction and whole building major renovations of municipal buildings to exclude natural gas and include exclusively all-electric energy sources. The ordinance exempted buildings primarily used for water, wastewater, and/or power utilities, as well as natural gas equipment that service other buildings or is part of an emergency backup electricity system. The ordinance did not require existing buildings to replace gas appliances with all-electric appliances if not part of a whole building major renovation.

**DETAILS OF PROPOSED LEGISLATION**

The proposed ordinance would repeal and replace Chapter 7 of the City's Environment Code regarding Municipal Green Building Requirements. The key changes are summarized below.

**Electrification of Existing Building Systems**

The proposed Chapter 7 amendments require existing municipal building natural gas systems, such as furnaces and water heaters, to be replaced with all-electric systems at the end of useful life, with the exception of hospitals.<sup>1</sup> At the time of equipment replacement, electric service infrastructure to the building must be sufficient to accommodate new equipment, future replacement, and the electrification of any remaining natural gas equipment in the building. Additionally, each City department would be required to conduct an inventory of gas-using equipment in their managed buildings and upload the inventory to a City database by December 31, 2023.

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<sup>1</sup> Throughout Environment Code Chapter 7, the term "building" excludes structures primarily used for water, wastewater, and/or power utilities.

The Bay Area Air Quality Management District (BAAQMD) is considering a rule change to prohibit the sale and installation of water heaters and furnaces that emit nitrogen oxides in the nine-county Bay Area. This would effectively prohibit natural gas appliances, as currently only electric appliances do not emit nitrogen oxides. The proposed rule would take effect in 2027 for small water heaters, 2029 for furnaces, and 2031 for large commercial water heaters. The State has a carbon neutrality target of 2045, which may require building code electrification mandates as well.

### **Energy Resilience**

The proposed Chapter 7 amendments include energy resilience requirements for new construction and major renovations. For “critical community institutions,” such as public safety facilities, health clinics, community centers, libraries, and emergency management facilities, construction must include photovoltaic panels and battery storage capacity to meet Tier 1 emergency loads, which is generally equivalent to 10 percent of total building electrical capacity for emergency uses. For other buildings, photovoltaics and battery storage must either meet Tier 1 emergency loads or the building must comply with other energy efficiency standards.<sup>2</sup> Photovoltaic installation is already required under State Building Energy Efficiency Standards Section 140.10 and City Green Building Code Section 5.201 and is not an additional requirement.

### **Embodied Carbon**

The proposed Chapter 7 amendments would require each municipal construction project of at least 10,000 square feet to submit an embodied carbon checklist assessing the embodied carbon reduction strategies considered for the project and those that were incorporated into the design and/or construction process. Each new construction project or major renovation would be required to conduct a life cycle assessment demonstrating at least 10 percent global warming potential reduction by addressing at least three product categories or building assembly types. Each tenant improvement of at least 10,000 square feet would be required to either conduct a life-cycle assessment demonstrating at least 10 percent global warming potential reduction or demonstrate furniture and interior nonstructural elements reuse equivalent to at least 10 percent by cost. These requirements are consistent with certain LEED<sup>3</sup> certification requirements.

### **Minor Changes**

The proposed ordinance also makes several minor changes to Chapter 7, including:

- **Building Material Management:** Each tenant improvement subject to a LEED certification requirement would be required to submit documentation verifying that the project generates less than 10 pounds of waste per square foot;

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<sup>2</sup> Other energy efficiency standards include annual site zero net energy, designing energy use intensity (EUI) 50 percent better than the national median site EUI, or for a building with process loads that are at least 50 percent of the building’s total energy use, exceed American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) equipment efficiency requirements by 10 percent.

<sup>3</sup> Leadership in Energy and Environmental Design (LEED) is a widely used green building certification program developed by the U.S. Green Building Council



- Human and Environmental Health: Each municipal construction project subject to a LEED certification requirement would be required to meet LEED requirements for material ingredient reporting, and each municipal construction project would be required to follow the City's biodiversity guidelines;
- Water Conservation: Applies the Water Efficient Irrigation Ordinance (Administrative Code Chapter 63) to municipal construction projects outside of San Francisco city limits; and
- Green Building Task Force: Adds a representative from the Department of Public Works Bureau of Building Repair to the Green Building Task Force.

### **Waivers**

Chapter 7 allows for code waivers due to emergencies, cost-prohibitiveness, alternative compliance measures, or other circumstances. According to the Department of Environment, 26 Chapter 7 waivers have been granted over approximately 20 years, and none have been denied. Waivers are typically granted due to technical inability for projects to achieve LEED requirements and have never been sought due to cost-prohibitive reasons.

### **Role of Municipal Green Building Task Force and Department of the Environment**

Under Chapter 7, the role of the Municipal Green Building Task Force includes assisting the Department of the Director of the Environment in providing green building advice, assistance, outreach and education to City Departments, advising the Department of the Environment on policy matters, reviewing municipal construction projects for compliance during design and construction, hearing waiver requests from City departments and proposing recommended actions, facilitating interdepartmental communication and cooperation, and acting as an educational forum to increase green building knowledge and sharing project-related successes and lessons learned. The role of the Department of the Environment includes developing goals, strategies, and criteria for optimizing the design, construction, renovation, operation, reuse, and dismantling of municipal construction projects and buildings, making policy recommendations to the Board of Supervisors, developing and overseeing trainings in green building practices for City staff to aid policy implementation, chairing the Municipal Green Building Task Force, coordinating City departments having responsibility for compliance with requirements, providing technical oversight and assistance on green building projects, and developing forms and materials necessary for Chapter 7 compliance.

## **FISCAL IMPACT**

### **Electrification of Existing Building Systems**

The largest fiscal impact of the proposed ordinance likely comes from the requirement to replace existing natural gas building systems in municipal buildings with all-electric systems at the end of useful life. There are varying estimates of this cost, which should consider capital costs, energy costs, and electrical connection costs.

### ARUP Study

In October 2022, ARUP issued a study commissioned by the Department of Environment to estimate costs associated with proposed Chapter 7 amendments. The study focused specifically on the incremental costs of equipment, installation, and energy for the replacement of existing natural gas systems with all-electric systems, as opposed to replacement with new natural gas systems. The study analyzed costs for five building types (libraries, office buildings, fire stations, recreational pools, and health centers) that comprise approximately 75 percent of the City's municipal building stock and estimated the incremental costs of replacement of natural gas systems with all-electric systems in 250 buildings over a 15-20 year period. ARUP estimated that all-electric system replacements would have an added cost of approximately \$37.6 million for equipment and installation but a savings of approximately \$16.4 million in energy costs, for a total net cost of approximately \$21.2 million. If extrapolated to the approximately 332 applicable municipal buildings, the total net cost would be approximately \$28.2 million.

ARUP notes that at present, electricity is typically more expensive than gas energy. However, electric appliances are more efficient than gas appliances, and natural gas costs are projected to escalate much faster than electric costs in future years. Furthermore, City facilities use SFPUC's Hetch Hetchy Power, which provides favorable pricing compared to PG&E electricity rates. Therefore, ARUP estimates that over a 15-20 year timeframe, energy costs would be lower for all-electric replacement of gas systems.

The ARUP study did not estimate other costs associated with the proposed Chapter 7 amendments, including engineering and design costs, electric connection costs, battery storage, embodied carbon analysis, and other considerations of all-electric systems, such as structural upgrades, space constraints, and cascading impacts on mechanical distribution systems.

### Electrical Upgrade Costs

The ARUP report notes that as building systems are converted from natural gas to all-electric, infrastructure upgrades may be needed to provide sufficient power to operate the systems. This includes PG&E interconnection costs, upgrades to primary service, new main switchgear, panelboard, and/or transformer, trenching, and design. According to SFPUC, the cost of new PG&E interconnections has ranged from \$30,000 to \$2.5 million per project but will likely increase to a minimum cost of approximately \$300,000 per project. SFPUC estimates that at least \$800,000 per project should be budgeted for a primary switchgear (power system control equipment), if needed, and that additional costs may be incurred to rearrange floorplans to make space for new switchgear. SFPUC also notes that PG&E's process for service upgrades can take between 10 months and four years, which may contribute to additional cost escalation. PG&E also requires "cost of ownership" payments for maintenance and future replacement costs of new distribution infrastructure, and perhaps substation upgrades.

### SFPUC Pilot Projects

SFPUC has four building electrification pilot projects in process. Two projects are located at health clinics (Sunset Health Center and City Clinic) and two projects are at the San Francisco Zoo (Lurie Education Building and Lion House). For these projects, SFPUC identified relatively small buildings that did not require additional electrical loads and upgrades of electrical systems. Construction

contracts are under negotiation, and SFPUC estimates that the capital cost to purchase and install electric appliances range from approximately \$505,000 to \$963,000 per project. SFPUC notes that space requirements vary by building and the estimates include additional work, such as structural or roofing upgrades, to accommodate the new equipment. Estimated design and project management costs range from approximately \$82,000 to \$132,000 per project. SFPUC did not estimate the cost of replacing gas equipment with new gas equipment, so this is not a marginal cost estimate. SFPUC did not analyze ongoing energy costs. SFPUC also notes that these sites are atypical in that they did not require power upgrades, and SFPUC had ruled out several other locations due to the electric connection costs.

#### Engineering/Design

In the SFPUC pilot projects noted above, soft costs are estimated to be approximately 11 to 20 percent of construction costs. Public Works staff note that soft costs are typically budgeted at approximately 35 percent of total project costs.

#### **Total Electrification Capital Costs**

Based on a range of interconnection, retrofit, and soft costs from available project data and interviews with subject matter experts, we estimate the City would face approximately an additional \$247 million to \$1.58 billion in electrification costs for 332 municipal buildings. We note that there is a wide range of building types, sizes, and existing conditions that creates significant uncertainty in this estimate. By comparison, the FY 2022-FY 2031 Capital Plan includes \$617 million for General Fund facility renewal projects over ten years (and notes \$2.3 billion of deferred facility renewal projects). These costs may be partially offset by reduced energy costs if natural gas rates escalate faster than electricity rates in future years, as projected by ARUP. A breakdown of cost estimates is shown in Exhibit 1 below.

#### **Exhibit 1: Electrification Capital Cost Estimates**

<b>Costs</b>	<b>Low Estimate</b>	<b>High Estimate</b>
PG&E Upgrades	\$300,000	\$2,500,000
Building Retrofits <sup>4</sup>	403,382	1,210,145
Soft Costs (10-20% of Retrofit Cost)	40,338	242,029
Switchgear	0	800,000
Total Cost per Building	\$743,720	\$4,752,174
<b>Total Cost (332 Buildings)</b>	<b>\$246,915,034</b>	<b>\$1,577,721,931</b>

Complying with the proposed ordinance's electrification requirements will likely require a reorganization of the Capital Plan that includes a combination of deferring planned projects, additional debt, and/or new revenue sources. If capital funds are strained, City departments may seek to utilize the Chapter 7 waiver process under cost-prohibitive grounds. As noted above,

<sup>4</sup> The building retrofit cost range of \$403,382-\$1,210,145 per building is an estimate of the marginal cost of replacing gas equipment with electric equipment, rather than with new gas equipment. This assumes retrofit capital costs of approximately \$500,000-\$1,500,000 per building, and that electric equipment and installation costs are approximately 5.2 times the cost of gas replacements (which is consistent with ARUP's findings).

proposed action by BAAQMD or future State building code amendments may necessitate electrification of municipal or privately-owned buildings, regardless of the proposed ordinance.

### **Benefits of Electrification**

The ARUP study notes that building electrification has the benefits of reduced air pollution and greenhouse gas emission. Natural gas combustion releases carbon dioxide, nitrous oxides, particulate matter, sulfur dioxide, and volatile organic compounds, which are all either air pollutants or greenhouse gases and contribute to adverse public health impacts and global warming. ARUP estimates total benefits of approximately \$14.3 million from the electrification of 250 municipal buildings. This includes \$4.2 million in reduced healthcare costs, as air pollution contributes to strokes, heart disease, lung cancer, asthma, and other respiratory diseases, as well as \$10.1 million in avoided economic damages from climate change, including the cost of sea level rise, extreme heat, and other weather-related events. If extrapolated to the approximately 332 applicable municipal buildings, the total benefits would be approximately \$19 million.

### **Battery Storage**

The proposed Chapter 7 amendments include energy resiliency requirements for new construction and major renovations. For “critical community institutions,” construction must include photovoltaic panels and battery storage capacity to meet Tier 1 emergency loads, which is generally equivalent to 10 percent of total building electrical capacity for emergency uses. For other buildings, photovoltaics and battery storage must either meet Tier 1 emergency loads or other requirements. According to estimates from the California Energy Commission, a medium office building (approximately 53,628 square feet) would require approximately 217-360 kWh of battery storage. At an estimated cost of \$767 per kWh, the estimated cost for each battery system is approximately \$160,000-\$270,000. SFPUC notes recent battery pricing of \$1,100 per kWh for a 253 kWh system, or approximately \$278,300. Actual costs may vary significantly depending on the size and energy needs of each building. As noted above, photovoltaic installation is already required under state and local building codes and does not present an added cost.

### **Embodied Carbon**

According to the Department of Environment, which conducted several interviews with green building consultants and architects, the cost for a life cycle assessment on a project is approximately \$15,000-20,000. The Department does not expect the requirement to complete an embodied carbon checklist for each project to have a significant added cost.

### **Department of Environment Staffing**

According to the Department of Environment, the Department assigns 0.25 FTE Senior Environmental Specialist and 0.10 Environmental Specialist to administer existing Environment Code Chapter 7 requirements (such as evaluating planned capital project’s compliance with that Code’s requirements). In addition, the Department is planning to assign 0.50 FTE Public Service Aide this fiscal year to assist with evaluating municipal and residential projects. The Department reports it will not seek additional positions to implement the new requirements of the proposed ordinance.

**RECOMMENDATION**

Approval of the proposed ordinance is a policy matter for the Board of Supervisors.

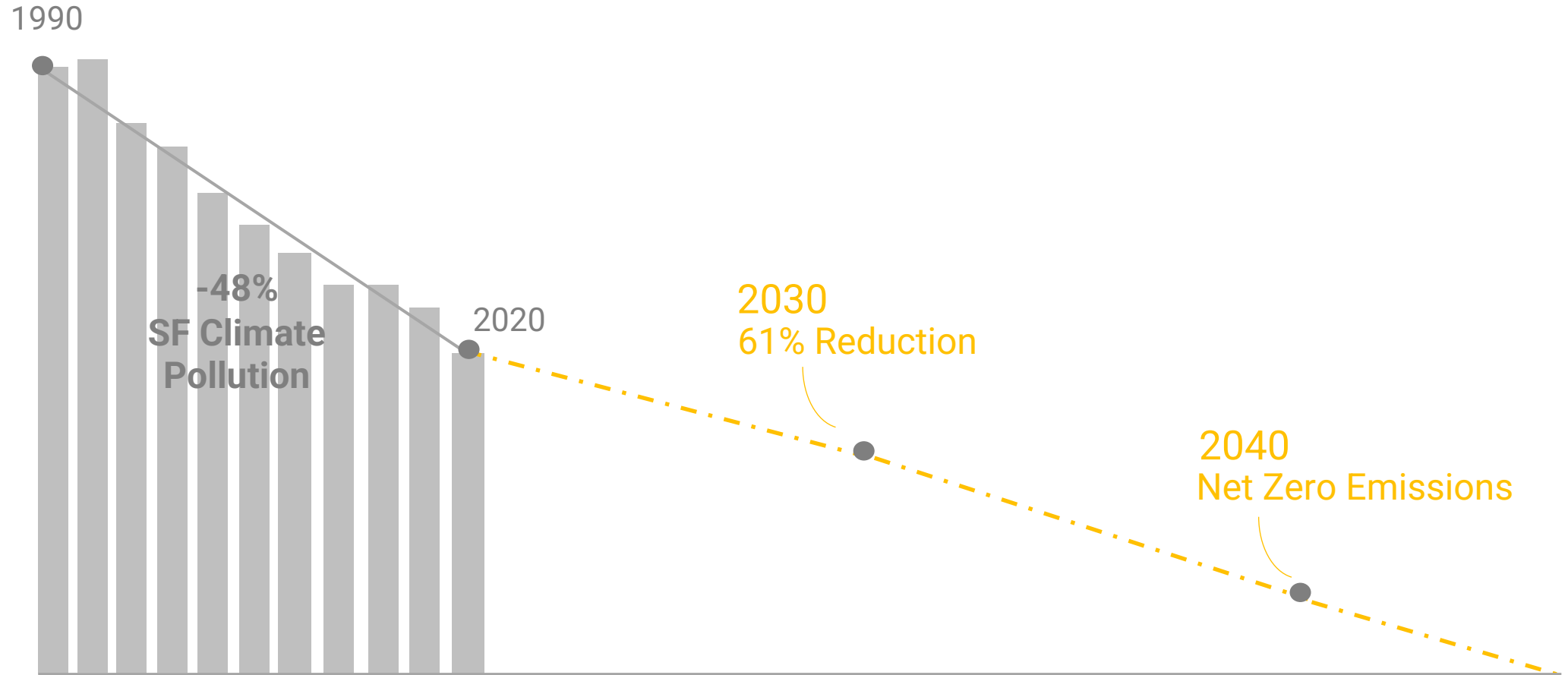


# Environment Code Chapter 7 Update

March 1, 2023

SAN FRANCISCO  
**ENVIRONMENT**  
DEPARTMENT

# To mitigate the climate crisis, this is what we need to do:

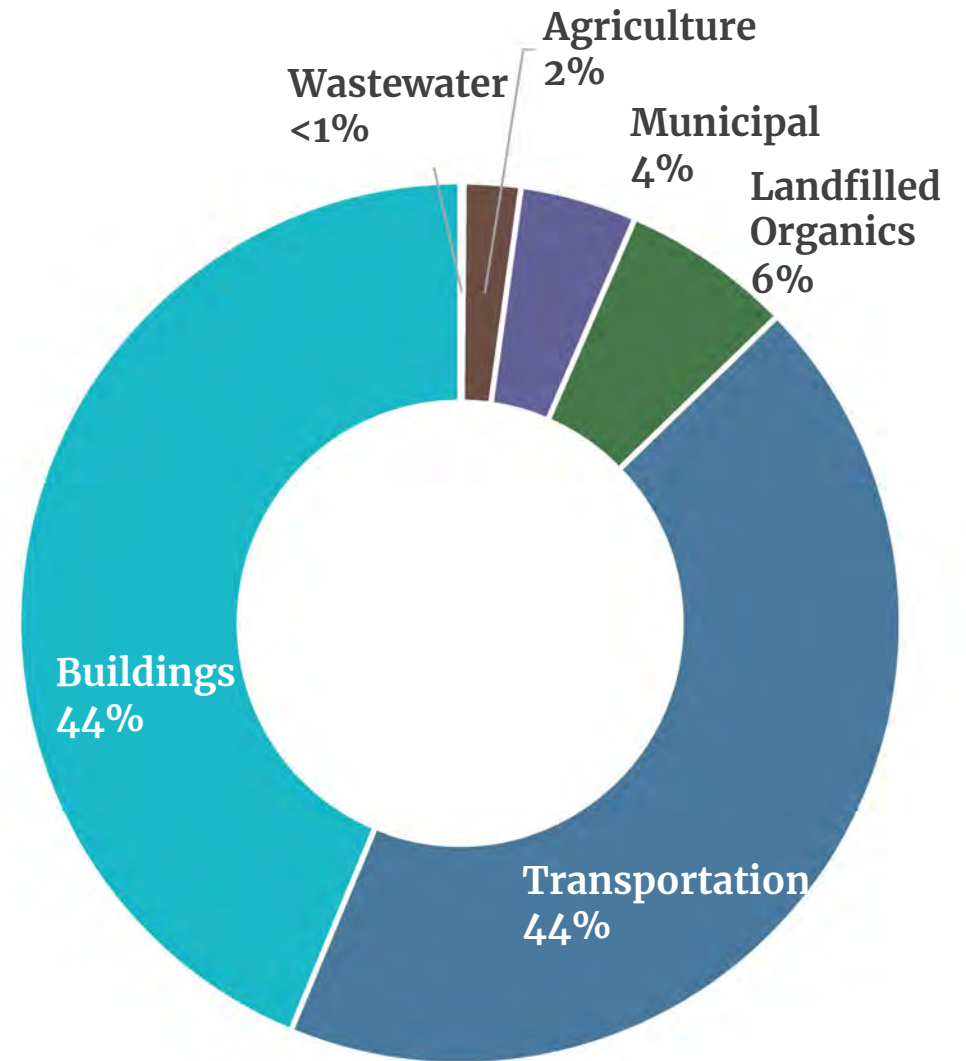


San Francisco's GHG Emission Targets

*Chapter Nine of the Environment Code*

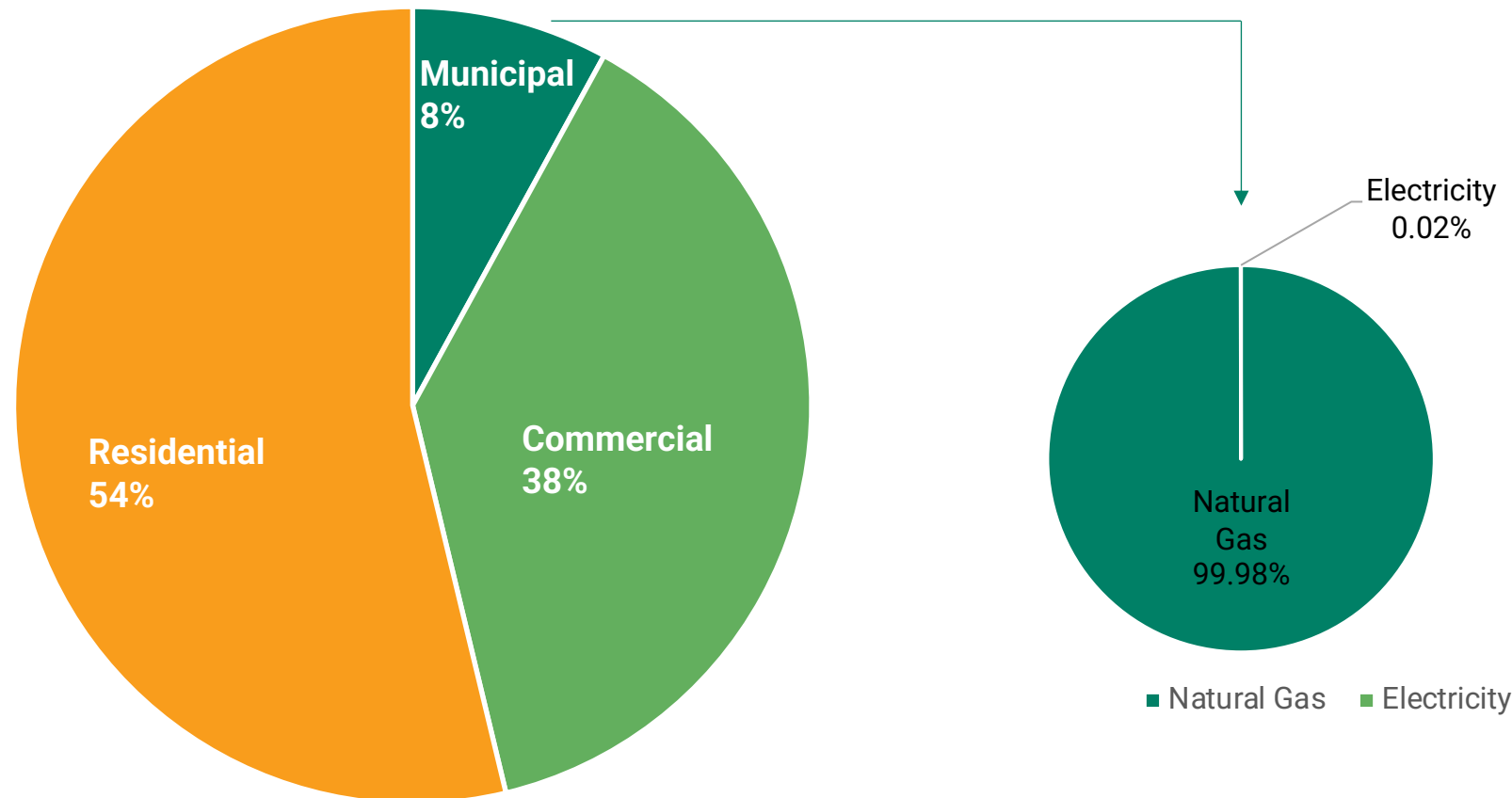


44% of the City's  
emissions are from  
buildings





8% of the building emissions are municipal buildings and almost all those emissions are from natural gas



*San Francisco's 2020 GHG Inventory – February 24, 2023*

Why Update

# Chapter 7 of the Environment Code?

**Incorporate Net Zero Goals &  
Climate Action Plan**

**Align with Updated Codes**

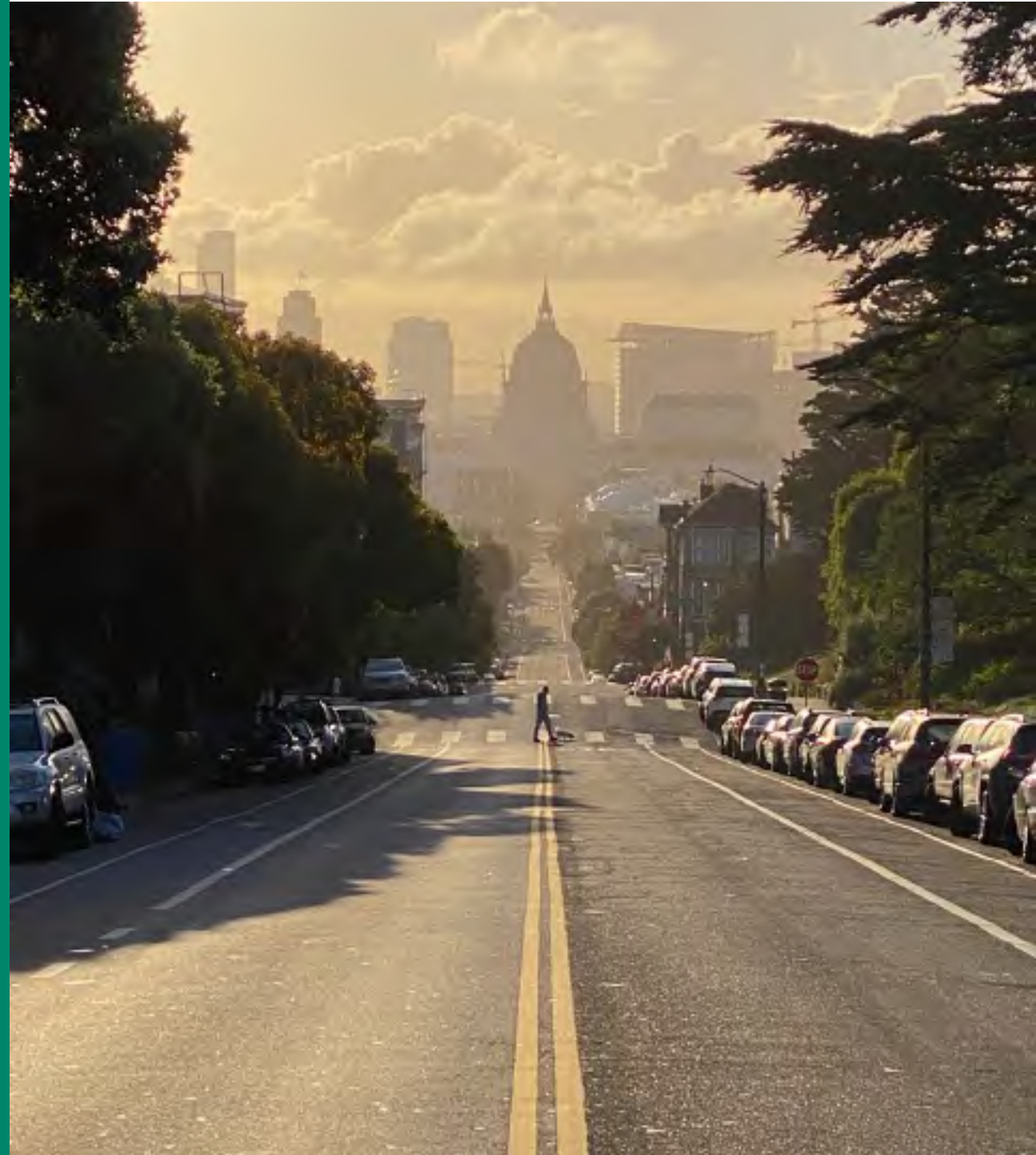
**Simply and Refine language**

**SFE**



# Chapter 7 of the Environment Code

Green Rating Systems  
Energy Optimization  
Waste Reduction/Reuse  
Human and Environmental Health  
Water Conservation  
Biodiversity





# Engagement, outreach, and awareness

10 months of public meetings

12 meetings with department leadership

25+ presentations

**SFE**



# Proposed requirements with largest impacts



Mission Branch Library

**Electrification Retrofits  
“Time of Replacement”**



SF Police Academy

**Energy Resilience &  
Efficiency**



SFO Harvey Milk Terminal 1 Boarding Area B

**Life Cycle Assessment**



# Alignment with new/proposed regional & state laws



Image: Arup, Market Zero

## Electrification

BAAQMD  
(PROPOSED)  
REGULATION 9 RULE 6



## Battery Storage

CA ENERGY CODE  
(AS OF 1/1/23)  
SECTION 140.10



## Life Cycle Assessment

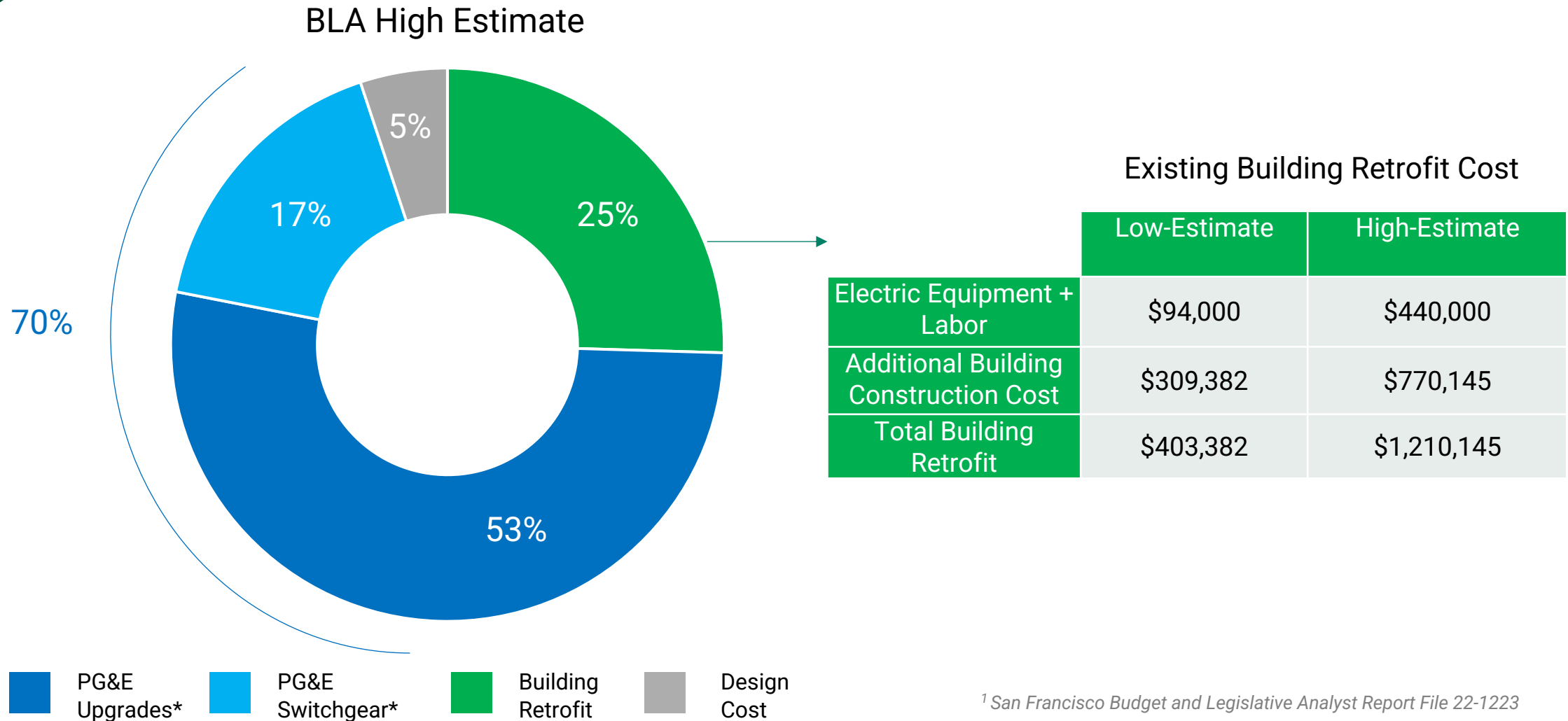
CALGREEN  
(PROPOSED)  
SECTION A5.409

# Cost impacts of Chapter 7 update<sup>1</sup>

	Low Estimate	High Estimate
Electrification of 332 existing buildings	\$246,915,034	\$1,577,721,931
Battery storage for each new construction project	\$160,000	\$270,000
Life cycle assessment for each new construction project	\$15,000	\$20,000



# Breakdown of electrification per municipal building<sup>1,2</sup>



<sup>1</sup> San Francisco Budget and Legislative Analyst Report File 22-1223

<sup>2</sup> Arup Memo "Proposed Environment Code Chapter 7 update: Time of Replacement Electrification - Equipment Cost Impacts" October 7, 2022

\*Specific to Buildings with Hetch Hetchy Power



# Cost benefits of Chapter 7 update<sup>1,2</sup>

\$16.4 M

Utility savings over a 15-20 years as gas equipment is replaced with electric

\$10.1 M

Avoided economic damages from climate change, including sea-level rise, extreme heat, and other weather-related events

\$4.2 M

Reduction in healthcare costs associated with air pollution

1,240 -1,740  
Jobs

Estimates of “job years” related to the decarbonization of existing municipal buildings



<sup>1</sup> Arup Memo “Proposed Environment Code Chapter 7 update: Time of Replacement Electrification - Equipment Cost Impacts” October 7, 2022

<sup>2</sup> Inclusive Economics “Employment Impacts Analysis of San Francisco’s Climate Action Plan: Methodology and Assumptions” November 12, 2021

# Other notable updates

- References updated:

  - Construction & Demolition and  
Source Separation Requirements

  - Biodiversity Guidelines



- Embodied Carbon Checklist

- Environmental Product Declarations





# Waiver requests: when compliance is not possible

  **SF Environment**  
Our home. Our city. Our planet.  
A Department of the City and County of San Francisco

**MUNICIPAL GREEN BUILDING WAIVER REQUEST**  
Environment Code Chapter 7; Ordinance No. 204-11; SFE Regulations SFE13-03-GB  
For projects applying for building permit on or after January 1, 2017, subject to LEED v4 requirements in San Francisco Environment Code Chapter 7 as amended effective April 16, 2017

London N. Breed  
Mayor  
Deborah O. Raphael  
Director

**Project Information**

Project Name:			
Project Street Address:			
Current Design Phase % Completion:	Project/Job Number:	Date of Waiver Request:	
City Project Manager:	Project Sponsor (City Department):		
	Phone:	Email:	

**San Francisco Environment Code CHAPTER 7: Green Building Requirements**

**SEC. 713. WAIVERS.**

(a) Waivers from the requirements of this Chapter are available upon request to the Director if compliance with this Chapter is not possible.

(2) **Cost Prohibitive.** A City department may request a waiver from the requirements of this Chapter if the department determines that compliance with this Chapter is not possible due to cost prohibitive circumstances.

(A) The department requesting the waiver shall submit a written request to the Director, including a statement of the reasons why compliance is not possible and a proposed alternative to the requirements of this Chapter.

# Questions?

**Cyndy Comerford**  
Climate Program Manager

[SFEnvironment.org](https://SFEnvironment.org)



**SAN FRANCISCO**  
**ENVIRONMENT**  
**DEPARTMENT**

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BOARD of SUPERVISORS



City Hall  
1 Dr. Carlton B. Goodlett Place, Room 244  
San Francisco, CA 94102-4689  
Tel. No. (415) 554-5184  
Fax No. (415) 554-5163  
TDD/TTY No. (415) 554-5227

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## MEMORANDUM

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Date: December 9, 2022  
To: Planning Department/Commission  
From: Erica Major, Assistant Clerk, Land Use and Transportation Committee  
Subject: Board of Supervisors Legislation Referral - File No. 221223  
Environment Code - Repeal and Replace Chapter 7 Green Building Requirements

---

- ☒ California Environmental Quality Act (CEQA) Determination  
(*California Public Resources Code, Sections 21000 et seq.*)
  - ☒ Ordinance / Resolution
  - ☐ Ballot Measure
- ☐ Amendment to the Planning Code, including the following Findings:  
(*Planning Code, Section 302(b): 90 days for Planning Commission review*)
  - ☐ General Plan    ☐ Planning Code, Section 101.1    ☐ Planning Code, Section 302
- ☐ Amendment to the Administrative Code, involving Land Use/Planning  
(*Board Rule 3.23: 30 days for possible Planning Department review*)
- ☐ General Plan Referral for Non-Planning Code Amendments  
(*Charter, Section 4.105, and Administrative Code, Section 2A.53*)  
(Required for legislation concerning the acquisition, vacation, sale, or change in use of City property; subdivision of land; construction, improvement, extension, widening, narrowing, removal, or relocation of public ways, transportation routes, ground, open space, buildings, or structures; plans for public housing and publicly-assisted private housing; redevelopment plans; development agreements; the annual capital expenditure plan and six-year capital improvement program; and any capital improvement project or long-term financing proposal such as general obligation or revenue bonds.)
- ☐ Historic Preservation Commission
  - ☐ Landmark (*Planning Code, Section 1004.3*)
  - ☐ Cultural Districts (*Charter, Section 4.135 & Board Rule 3.23*)
  - ☐ Mills Act Contract (*Government Code, Section 50280*)
  - ☐ Designation for Significant/Contributory Buildings (*Planning Code, Article 11*)

Please send the Planning Department/Commission recommendation/determination to Erica Major at [Erica.Major@sfgov.org](mailto:Erica.Major@sfgov.org).

Not defined as a project under CEQA Guidelines Sections 15378 and 15060(c)(2) because it would not result in a direct or indirect physical change in the environment. Physical projects will require separate environmental review.

12/16/22

A handwritten signature in black ink, appearing to be "Erica Major", written over the date.

BOARD of SUPERVISORS



City Hall  
1 Dr. Carlton B. Goodlett Place, Room 244  
San Francisco, CA 94102-4689  
Tel. No. (415) 554-5184  
Fax No. (415) 554-5163  
TDD/TTY No. (415) 554-5227

## MEMORANDUM

TO: Tyrone Jue, Interim Director, Department of the Environment  
Elaine Forbes, Executive Director, Port Department  
Carla Short, Interim Director, Public Works  
Dennis Herrera, General Manager, Public Utilities Commission  
Phil Ginsburg, General Manager, Recreation and Parks Department  
Jeffrey Tumlin, Executive Director, Municipal Transportation Agency  
Brian Strong, Program Director, Office of Resilience and Capital Planning  
Carmen Chu, City Administrator, Office of the City Administrator  
Rich Hillis, Director, Planning Department  
Ivar C. Satero, Airport Director, Airport Department  
Michael Lambert, City Librarian, Library Department  
Jeanine Nicholson, Chief, Fire Department  
Dr. Grant Colfax, Director, Department of Public Health  
Andrico Penick, Director, Real Estate Division

FROM: Erica Major, Assistant Clerk, Land Use and Transportation Committee

DATE: December 9, 2022

SUBJECT: LEGISLATION INTRODUCED

---

The Board of Supervisors' Land Use and Transportation Committee has received the following proposed legislation, introduced by Mayor Breed on December 6, 2022.

**File No. 221223**

**Ordinance amending the Environment Code to require new construction and major renovations of municipal buildings to exclude natural gas and include exclusively all-electric energy sources; and affirming the Planning Department's determination under the California Environmental Quality Act.**

If you have comments or reports to be included with the file, please forward them to me at the Board of Supervisors, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102 or by email at: Erica.Major@sfgov.org.

cc: Peter Brastow, Department of the Environment  
Charles Sheehan, Department of the Environment  
Boris Delepine, Port Department  
David Steinberg, Public Works  
Ian Schneider, Public Works  
John Thomas, Public Works  
Lena Liu, Public Works  
Masood Ordikhani, Public Utilities Commission  
Jeremy Spitz, Public Utilities Commission  
Kate Breen, Municipal Transportation Agency  
Janet Martinsen, Municipal Transportation Agency  
Joel Ramos, Municipal Transportation Agency  
Sophie Hayward, Office of the City Administrator  
Vivian Po, Office of the City Administrator  
Angela Yip, Office of the City Administrator  
Dan Sider, Planning Department  
Corey Teague, Planning Department  
Tina Tam, Planning Department  
Lisa Gibson, Planning Department  
Devyani Jain, Planning Department  
AnMarie Rodgers, Planning Department  
Aaron Starr, Planning Department  
Joy Navarrete, Planning Department  
Elizabeth Watty, Planning Department  
Cathy Widener, Airport Department  
Theresa Ludwig, Fire Department  
Greg Wagner, Department of Public Health  
Dr. Naveena Bobba, Department of Public Health  
Sneha Patil, Department of Public Health  
Ana Validzic, Department of Public Health

President, District 3  
BOARD of SUPERVISORS



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San Francisco, CA 94102-4689

Tel. No. 554-7450  
Fax No. 554-7454  
TDD/TTY No. 544-6546

Aaron Peskin

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**PRESIDENTIAL ACTION**

Date: 01/26/2023

To: Angela Calvillo, Clerk of the Board of Supervisors

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Madam Clerk,

Pursuant to Board Rules, I am hereby:

☐ Waiving 30-Day Rule (Board Rule No. 3.23)

File No. \_\_\_\_\_

\_\_\_\_\_  
(Primary Sponsor)

Title. \_\_\_\_\_

---

☒ Transferring (Board Rule No 3.3)

File No. \_\_\_\_\_

221223

Mayor

\_\_\_\_\_  
(Primary Sponsor)

Title. \_\_\_\_\_

[Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

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From: Land Use & Transportation

Committee

To: Budget & Finance

Committee

☐ Assigning Temporary Committee Appointment (Board Rule No. 3.1)

Supervisor: \_\_\_\_\_

Replacing Supervisor: \_\_\_\_\_

For: \_\_\_\_\_

(Date)

(Committee)

Meeting

Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_

Temporary Assignment: ☐ Partial ☒ Full Meeting

*Aaron Peskin*

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Aaron Peskin, President  
Board of Supervisors



**[RESOLUTION ENCOURAGING THE ADOPTION OF ORDINANCE  
221223 UPDATED CHANGES TO CHAPTER 7 OF THE ENVIROMENT  
CODE]**

WHEREAS, San Francisco has established targets to achieve net-zero emissions by 2040 and reduce greenhouse gas emissions by 61% from 1990 levels by 2030; and

WHEREAS, Conventional building industry practices contribute to ecosystem degradation and our climate crisis; and

WHEREAS, Construction activities are responsible for more than 30% of global resource use, and embodied carbon is anticipated to be responsible for 72% of the carbon emissions associated with global new construction between 2020 and 2030; and

WHEREAS, Mayor London Breed committed San Francisco to reduce solid waste generation by 15% by 2030 and reduce disposal to landfill by 50% compared to 2015 levels, and prioritize the better use, repurposing, and retrofitting of existing building stock and infrastructure to reduce the impact of materials, design, and construction on our City's resilience to climate impacts; and

WHEREAS, Green building is a form of climate action that minimizes greenhouse gas emissions, relies on energy efficiency and renewable resources, conserves water, optimizes material use, provides healthy and biodiverse environments, and fosters an equitable society; and

WHEREAS, Third-party rating systems characterize the lifecycle considerations for green buildings. These programs can offer credibility, transparency, and consistency to project teams in pursuit of an elevated and well-defined performance standard for Municipal Construction Projects; and

1 WHEREAS, San Francisco municipal buildings receive 100% greenhouse  
2 gas-free electricity from the San Francisco Public Utilities Commission, and, as a  
3 result, all greenhouse gas emissions from the operation of City buildings come  
4 from the onsite combustion of natural gas or the production of district steam; and

5 WHEREAS, The 2021 San Francisco Climate Action Plan includes  
6 commitments to transition buildings from natural gas to clean electricity and  
7 achieve total carbon balance across the building and infrastructure sectors; and

8 WHEREAS, To achieve the City's goal of net zero emissions, it is necessary  
9 to require City agencies to discontinue the installation of equipment dependent on  
10 fossil fuels, and instead install high-efficiency equipment that uses electricity and  
11 does not emit greenhouse gas; and

12 WHEREAS, Zero-emission buildings, and resilient buildings that generate  
13 and store energy onsite, benefit the health, safety, and welfare of San Francisco  
14 and its residents by improving indoor air quality, enhancing emergency  
15 preparedness, and reducing harmful greenhouse gas emissions from energy  
16 consumption; and

17 WHEREAS, Green buildings with high indoor environmental quality protect  
18 the health and comfort of building occupants, enhance productivity, decrease  
19 absenteeism, and improve a building's value; and

20 WHEREAS, Healthy ecosystems provide nature-based solutions to climate  
21 change by sequestering carbon from the atmosphere and storing it in plants, trees,  
22 and soil. Stewardship of the City's natural resources helps restore biodiversity and  
23 provides a healthy environment  
24 that benefits all San Franciscans; and

25 WHEREAS, San Francisco continues to lead by example through its own  
26 municipal building stock, which must meet rigorous green building standards and

1 includes 86 LEED certified projects that together comprise more than 11 million  
2 square feet; and

3 WHEREAS, The Municipal Green Building Task force has developed  
4 recommendations to update Chapter 7 of the Environment Code through a public  
5 and inclusive process; now, therefore, be it

6 RESOLVED, That the Commission on the Environment requests that the  
7 Board of Supervisors adopt ordinance 221223 and update Chapter 7 of the  
8 Environment Code to uphold San Francisco as a leader in decarbonization and  
9 green building practices; and, be it

10 FURTHER RESOLVED, That the Commission on the Environment urges  
11 that the Board of Supervisors continue to adopt ordinances that implement Climate  
12 Action Plan strategies, lead San Francisco down the path to be an emissions-free  
13 city, and enhance the health and general welfare of all who live here.

14 I hereby certify that this Resolution was adopted by the Commission on the  
15 Environment at its special meeting on February 7, 2023.

16  
17 \_\_\_\_\_

18 Kyle Wehner, Commission Affairs Officer

19 Vote: Approved 6-0

20 Ayes: Commissioners Ahn, Stephenson, Hunter, Sullivan, Wald, and Wan

21 Noes: None

22 Absent: Commissioner Bermejo

**From:** [Thomas Chung](#)  
**To:** [Jalipa, Brent \(BOS\)](#)  
**Subject:** supportive comments for updates to municipal green building policy  
**Date:** Tuesday, February 28, 2023 2:07:16 PM

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Hello Brent,

My name is Thomas Chung. I am a cofounder of a company focused on applying AI toward energy efficiency and building optimization. I am writing both as a San Franciscan and advocate for San Francisco's continued leadership on climate and resilience.

I have learned the City of San Francisco's board of supervisors is considering an update to the municipal green building policy proposed by the Breed administration.

I believe the city's leadership in adapting municipal green building policy to current environments is crucial to supporting the regional business ecosystem. These businesses, like mine, hope in turn to create jobs and serve the city and its citizens in the delivery of more responsive, efficient building environments.

As a private for-profit entity, my company looks for climate and sustainability policy updates from municipal leadership as a positive signal for where we should prioritize future investment. I am proud to see San Francisco engaging in this important dialogue and am hopeful the virtuous cycle that the adoption of these policies creates comes to be in the near future.

All the best,  
Thomas Chung

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**THOMAS CHUNG**  
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**From:** [Conine-Nakano, Susanna \(MYR\)](#)  
**To:** [BOS Legislation, \(BOS\)](#); [KAPLA, ROBB \(CAT\)](#)  
**Cc:** [Paulino, Tom \(MYR\)](#); [Thornhill, Jackie \(BOS\)](#); [Piasecki, Joseph \(ENV\)](#); [Sheehan, Charles \(ENV\)](#); [Comerford, Cyndy \(ENV\)](#); [Brukman, Eden \(ENV\)](#)  
**Subject:** Mayor -- Ordinance -- Repeal and Replace Chapter 7 Green Building Requirements  
**Date:** Tuesday, December 6, 2022 4:12:57 PM  
**Attachments:** [20221206 ORD new findings Env Ch 7 inc LEG edits.DOCX](#)  
[20221206 LEG Digest for GB update.DOCX](#)

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Hello Clerks,

Attached for introduction to the Board of Supervisors is an Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.

@KAPLA, ROBB (CAT), can you please reply-all to confirm your approval? Thanks!

Please note that Supervisor Mandelman is a co-sponsor of this legislation.

Best,  
Susanna

Susanna Conine-Nakano  
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City & County of San Francisco  
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