**WORKING DRAFT: Fire TAC Final Report and Recommendations**

*As of 11.13.26.*

**Executive Summary**

**1. Introduction**

**1.1 What Prompted the TAC**

**1.2 Details of the Retrofit Requirement**

**1.3 Formal remit of the TAC**

**1.4 Composition of the Body**

***(l) Seat I*** *shall be held by a property owner or building manager of a building subiect to the requirements of Section I I 03. 5. 4 of the San Francisco Fire Code.*

***(2) Seat 2*** *shall be held by a non-owner tenant of a building affected by Section I 103.5.4.*

***(3) Seat 3*** *shall be held by a duly authorized homeowners' association representative of a building subiect to the requirements of Section I I 03. 5. 4.*

***(4) Seat 4*** *shall be held by a person who holds an active C-16 fire protection contractor license issued by the California Contractors State License Board (CA-CSLB), as defined in California Code of Regulations, Title I 6, Division 8, Article 3.*

***(5) Seat 5*** *shall be held by a construction professional with experience in either general labor or a skilled trade.*

***(6) Seat 6*** *shall be held by a professional architect who holds an active license issued by the California Architects Board or a professional structural engineer who holds an active license issued by the California Board for Professional Engineers, Land Surveyors, and Geologists.*

***(7) Seat 7*** *shall be held by an employee of the Controller's Office appointed by the Controller.*

***(8) Seat 8*** *shall be held by an employee of the Fire Department appointed by the Fire Chief*

***(9) Seat 9*** *shall be held by an employee of the Department o(Building Inspection, appointed by the Director of the Department of Building Inspection.*

***(I0) Seat 10*** *shall be held by an employee of the Public Utilities Commission, appointed by the General Manager of the Public Utilities Commission.*

***(11) Seat 11*** *shall be held by a member of the Board of Supervisors appointed by the President of the Board of Supervisors,· the appointed Supervisor may designate a legislative assistant to serve in the Supervisor's seat.*

**1.5 Meeting Schedule**

*Following the inaugural meeting, the Council shall hold a regular meeting not less than twice each month during the first 90 days following its first meeting, and thereafter shall continue to meet no less than once per month until its sunset as provided in Section 5.42-7.*

The Council met on the following days:

**1.6 Presentations**

**1.7 Site Visits**

**1.8 Data Sets and other Research**

**1.9 Public Comment and Written Submissions**

**1.10 Process to compile and confirm final report**

**2. History**

**2.1 History and Legislative Path**

| Year | Event | Source |
|---|---|---|

| | | |
|---|---|---|
| 1974 | State law requires sprinklers in all newly constructed high-rises | BLA Report, Background |
| 1993 | Ordinance 377-93 requires sprinklers in new and most existing high-rises within 12 years (by February 2006), exempting residential occupancies and qualified historic buildings | BLA Report, Background |
| 2022 | File No. 22-0038 removes the exemptions; full installation due January 1, 2028 | BLA Report, Background |
| March 2026 | Board extends the schedule six years via the 2025 San Francisco Fire Code; full installation now due January 1, 2035 | BLA Report, Background |
| August 3, 2026 | BLA cost and risk report to Supervisor Sherrill | BLA Report |
| October 2, 2026 | BLA presents to the TAC | |

**2.2 Who is Affected by the Requirement**

*[add demographics and buildings]*

**3. Presentation Summaries**

**3.1 BLA Report**

**3.2 Resident Reports**

**3.3 SFFD Reports**

**3.4 Industry Reports**

**3.5 PUC Report/Letter**

**3.6 Controller Report**

*NOTE THAT THIS SECTION WOULD LIKELY INCLUDE COST ESTIMATES AND REPORTS*

**4. Data**

**4.1 The BLA Incident Record**

The below shows SFFD data reported by the BLA for fires since July 1, 2016 [BLA Report, Risk Factor]. It records whether a sprinkler system was present, but the data is not specific to the building impacted by the mandate.

**BLA incident figures, July 2016 onward.** All come from SFFD data as reported by the BLA.

| Measure | Value | Source |
|---|---|---|
| Fires in occupied residential structures | 1,694 | BLA Report, Risk Factor |
| In multifamily dwellings | 942 (55 to 56 percent) | BLA Report, Risk Factor |
| In single-family homes or duplexes | 752 (45 percent) | BLA Report, Risk Factor |

| | | |
|---|---|---|
| Kitchen as point of origin | 304 (18 percent) | BLA Report, Risk Factor |
| Fires originating on the 7th floor or higher | 86 | BLA Report, Risk Factor |
| Of those: operating wet-pipe sprinkler system | 36 | BLA Report, Risk Factor |
| Of those: no suppression system | 46 | BLA Report, Risk Factor |
| Civilian injuries, sprinklered / unsprinklered | 2 / 2 | BLA Report, Risk Factor |
| Fatalities in the 86 incidents | 0 | BLA Report, Risk Factor |
| Average property loss, sprinklered confirmed high-rises | $29,764 | BLA Report, Risk Factor |
| Average property loss, unsprinklered confirmed high-rises | $339,395 | BLA Report, Risk Factor |
| Fire incidents since 2011 in high-rise residential properties not previously subject to sprinkler rules | 145 | BLA Report, Background (2022 ordinance) |

*Calculations from the figures above: the 86 upper-floor fires are about 5.1 percent of the 1,694 residential fires; the unsprinklered average property loss is about 11.4 times the sprinklered average.*

**What does this data demonstrate?**

- *Life safety.* **No deaths and four civilian injuries across 86 upper-floor fires in ten years**. The injury counts were 2 sprinklered and 2 unsprinklered.
- *Property loss.* **Unsprinklered buildings averaged roughly eleven times the property loss** of sprinklered buildings The BLA does not report sample sizes, medians, or outliers, so a few large losses could drive the averages. **[NEED ADDITIONAL DATA]**
- *Where fires occur.* **45 percent of residential fires since 2016 were in single-family homes and duplexes**; kitchens were the point of origin for 18 percent; fires starting on the 7th floor or higher were about 5 percent.
- *Data limits.* SFFD incident data has no building height field, and no City inventory of buildings over 75 feet exists [BLA Report, Risk Factor]. The 86 incidents are therefore fires originating on a high floor, not necessarily fires in covered buildings (note that the BLA did not sprinkler data on 4 of those 86 incidents).

### 4.2 Fire Incidents: Covered Buildings, the Rest of the City, and the Nation

These data sets were compiled by the San Francisco Fire Department and the staff of Supervisor Stephen Sherrill. They intend to compare fire incidents in the covered buildings to those across San Francisco and the United States. Additionally, they delve deeper into each individual fatal fire since 2000 in San Francisco.

#### *4.2.1 Scope, definitions, and data used*

**Scope of this section.** Only incidents classified as Working Fires and Structure Fires are counted, in SFFD data and in all other San Francisco data used here. Vehicle fires; outdoor, brush, rubbish, and tent fires; explosions without fire; EMS and rescue calls; and false alarms are excluded.

**[SFFD TO DEFINE WHY ONLY WORKING AND STRUCTURE FIRES MAKE SENSE TO USE]:**

**How the casualty files were filtered.** EXPLAIN HOW INJURIES/FATALITIES IN TENTS/ENCAMPMENTS WERE EXCLUDED

| **Citywide casualty data** | **All incidents in file** | **Working Fire and Structure Fire only** | **Excluded** |
|---|---|---|---|
| Incidents with injuries or fatalities (injury file) | 481 | 391 | 90 |

| | | | |
|---|---|---|---|
| Civilian injuries | 757 | 663 | 94 |
| Civilian fatalities | 46 | 35 | 11 |
| Firefighter injuries | 164 | 150 | 14 |
| Firefighter fatalities | 2 | 2 | 0 |
| Fatal incidents (fatality file) | 41 | 31 | 10 |

*Source: [S5], Citywide Incidents w. Injuries tab; [S6]. TAC filter on the DataSF "Primary Situation" field. The Summary Table's unfiltered totals (757 civilian injuries, 46 civilian deaths, 164 firefighter injuries) include the excluded incident types.*

**Data used and its sources.**

| Dataset | Used for | Source |
|---|---|---|
| Master Data Table, "Summary Table" tab and the tabs it sums (workbook) | Covered buildings vs. citywide: fires, injuries, deaths, 2000 to 2026 | [S5]. Compiled by TAC staff from SFFD and DataSF records. **[SOURCE NEEDED: the SFFD data request or DataSF dataset URL behind each tab.]** |
| Total buildings: 177,023 | Denominator | Labeled "DataSF Building Footprints Dataset" in [S5]. **[SOURCE NEEDED: URL and extraction date.]** |
| Residential units: 422,958 citywide; ~9,800 in covered buildings | Denominator for every per-unit rate | **[2025 SAN FRANCISCO HOUSING INVENTORY and BLA report.]** |

| | | |
|---|---|---|
| DataSF fire incidents with civilian or firefighter injuries or fatalities (481 incidents, 2003 to 2025; 391 are Structure Fires) | Citywide casualties (Structure Fire filter) | [S5], tab "Citywide Incidents w. Injuries or Fatalities (Source: DataSF)". |
| DataSF fire incidents with fatalities (41 incidents, 46 deaths, 2004 to 2025; 31 incidents and 35 deaths are Structure Fires) | Where fatal fires occur | [S6]. |
| NFPA 2024 survey figures | National comparison | [S7]. [**CONFIRM report edition and publication year, and that the figures cover home Structure Fires, and whether NFPA's definition matches SFFD's.**] |
| BLA residential fire counts since July 2016 | Multifamily vs. single-family split | [BLA Report, Risk Factor] |

***3.2.2 Covered buildings vs. all buildings citywide, 2000 to 2026***

| **Measure** | **All buildings** | **126 "covered" buildings** | **"Covered" as % of citywide** |
|---|---|---|---|
| Buildings | 177,023 | 126 | 0.07% |
| Residential units (approx.) | 422,958 | 9,800 | 2.3% |
| Working Fires | 6,522 | 34 | 0.5% |
| Structure Fires | 40,139 | 589 | 1.5% |

| | | | |
|---|---|---|---|
| Civilian injuries | 663 | 18 | 2.7% |
| Civilian fatalities | 35 | 0 | 0% |
| Firefighter injuries | 150 | 0 | 0% |
| Firefighter fatalities | 2 | 0 | 0% |

*Source: [S5], Summary Table tab. Citywide civilian and firefighter casualties are limited to Structure Fire incidents (Primary Situation "111 Building fire"; see 3.2.1), so they differ from the Summary Table's unfiltered totals. The tab's "Total Fires" row (46,661 citywide; 623 covered) counts Working Fires and Structure Fires only and excludes vehicle, outdoor, and other fires.*

**The covered buildings hold 2.3% of the city's residential units and account for 1.3% of its fires and 2.7% of its civilian injuries. They account for none of its 35 civilian deaths.**

**KEY FINDINGS (provisional, pending the verifications flagged in this section)**

**1. Small share of the city's fire experience.** The 126 covered buildings hold 2.3% of San Francisco's residential units. They account for 1.3% of its Working Fires and Structure Fires and 2.7% of its civilian injuries in those incidents. They account for none of its 35 civilian deaths in Structure Fires.

**2. Working Fires are less frequent per unit; Structure Fires are more frequent.** On a like-for-like 2014 to 2026 window, Working Fires per unit in covered buildings run at about 0.55 times the citywide rate. Structure Fires per unit run at about 1.5 times the citywide rate, but 81% of them caused no recorded property loss.

**3. Injury severity matches national apartments.** Covered buildings record 2.9 civilian injuries per 100 Working Fires and Structure Fires, against 3.0 for apartments nationally.

**4. Property loss is concentrated in two fires.** Two Working Fires at Davis Court produced 91% of all recorded property loss in the covered buildings since 2002.

**5. San Francisco's fatal fires occur elsewhere.** None of the city's 31 fatal Structure Fires (35 civilian deaths, 2004 to 2025) was in a building of 7 or more stories. Only one of the 31 had a sprinkler system recorded. The Retrofit Requirement does not affect these buildings.

**CONCLUSION (4.2.3). The data does not show that covered buildings have a worse fire record than the rest of the city.** Serious fires are roughly half as frequent per unit, and the higher count of Structure Fires consists mostly of incidents with no recorded loss.

*4.2.4 Covered buildings: year by year, 2014 to 2026*

| Year | Working Fires | Structure Fires | Injured | Displaced | Property loss |
|---|---|---|---|---|---|
| 2014 | 0 | 12 | 0 | 0 | $4,120 |
| 2015 | 2 | 45 | 0 | 0 | $3,820 |
| 2016 | 1 | 52 | 0 | 1 | $88,120 |
| 2017 | 5 | 57 | 4 | 9 | $482,558 |
| 2018 | 4 | 52 | 1 | 9 | $8,061,540 |
| 2019 | 1 | 46 | 0 | 0 | $5,400 |
| 2020 | 5 | 74 | 3 | 21 | $4,080,965 |
| 2021 | 2 | 60 | 0 | 0 | $23,351 |
| 2022 | 0 | 49 | 1 | 0 | $8,200 |
| 2023 | 1 | 27 | 5 | 7 | $236,500 |
| 2024 | 4 | 55 | 1 | 0 | $15,070 |
| 2025 | 3 | 39 | 2 | 4 | $51,000 |
| 2026 (to Sept. 21) | 4 | 14 | 1 | 0 | $125,000 |

| | | | | | |
|---|---|---|---|---|---|
| **Total** | **32** | **582** | **18** | **51** | **$13,185,644** |

*Source: [S5], Required Buildings Year by Year tab. All 18 injuries and all 51 displacements occurred in 2016 or later. 80 of the 126 buildings had at least one incident; 46 had none.*

**Loss is highly concentrated.**

| Incident | Property loss | Displaced | Injured |
|---|---|---|---|
| 405-465 Davis Ct, October 22, 2018 | $8,000,000 | 7 | 0 |
| 440 Davis Ct, November 20, 2020 | $4,000,000 | 21 | 3 |
| 125 Cambon Dr, September 22, 2017 | $350,000 | 7 | 2 |
| 6-8 Locksley Ave, May 9, 2023 | $225,000 | 7 | 5 |

*Source: [S5], Required Buildings Detailed Loss Incidents tab.*

*3.2.5 Where fatal Structure Fires occur in San Francisco*

All 31 fatal Structure Fire incidents (35 civilian deaths) in the DataSF record, 2004 to December 2025 [S6]. Ten other fatal incidents (11 deaths: vehicle, outdoor, tent, EMS, and other incident types, plus one contained cooking fire) are excluded as not Structure Fires:

| Occupancy | Incidents | Deaths | Share of deaths |
|---|---|---|---|
| 1 or 2 family dwelling | 17 | 19 | 54.3% |

| | | | |
|---|---|---|---|
| Multifamily dwelling | 9 | 11 | 31.4% |
| Other (rooming house, residential hotel, other residential, residential driveway) | 5 | 5 | 14.3% |
| **Total** | **31** | **35** | **100%** |

*Source: [S6], by DataSF "Property Use" code, limited to Primary Situation "111 Building fire." Deaths in covered buildings: 0 ([S5], Summary Table).*

**Height, construction, and sprinklers.** All 31 fatal Structure Fires have a recorded story count.

| **Characteristic** | **Result** |
|---|---|
| Building height | 2 to 6 stories, median 2. None at 7 or more stories |
| Construction, as coded in the source | 26 "Type V-B: Unprotected Wood Frame"<br><br>5 "Type III-B: Unprotected Combustible" (Masonry or Concrete frame w/ Wood interior) |
| Deaths in covered buildings | 0 |

*Source: [S6].*

**CONCLUSION (4.2.5). San Francisco's fatal fires have occurred in low-rise, combustible, almost entirely unsprinklered housing, most often in 1 to 2 family homes. None occurred at 7 or more stories.** T.

### *3.2.6 National comparison*

NFPA 2024 residential fire experience [S7]:

| Property type | Fires | % | Deaths | % | Injuries | % |
|---|---|---|---|---|---|---|
| 1 to 2 family dwellings | 253,500 | 72% | 2,580 | 86% | 6,630 | 71% |
| Apartments and other multifamily | 76,000 | 22% | 340 | 11% | 2,290 | 25% |
| Other residential | 21,500 | 6% | 80 | 3% | 410 | 4% |
| **Total** | **351,000** | | **3,000** | | **9,330** | |

*Source: [S7], NFPA, Fire Loss in the United States*

**CONCLUSION (4.2.6). Nationally, 1 to 2 family homes account for 72% of residential fires and 86% of deaths, and apartments are about 44% as deadly per fire. San Francisco's pattern is consistent with that.**

### *4.2.7 Overall conclusions for Section 4.2 (provisional)*

**1. The covered buildings have a real but modest measured fire record.** They show fewer serious fires per unit than the city, injury severity near national norms, and no deaths.

**2. Loss is driven by rare large fires.** Two incidents produced 91% of recorded property loss, and the data cannot yet show whether sprinklers would have changed that.

**3. San Francisco's fatal fires are concentrated elsewhere.** They occur in low-rise, combustible, unsprinklered housing, mostly 1 to 2 family homes. None occurred at 7 or more stories.

## 4.6 Sprinkler Effectiveness: What the National Evidence Shows

This section records the national evidence on how much automatic sprinklers reduce harm in a fire. It is included so that the report does not understate the benefit of sprinklers while it tests whether the Retrofit Requirement targets the right buildings. The figures are NFPA's, drawn from NFIRS data and NFPA's annual survey of fire departments. They are national figures and are not specific to San Francisco or to high-rise residential buildings.

**SPRINKLER EVIDENCE: THREE POINTS**

**1. Sprinklers unquestionably make a building safer.** Where a fire occurs, sprinklers reduce deaths, injuries, and damage. The TAC does not dispute this, and nothing in this report argues otherwise. The open question is where the Retrofit Requirement, as drafted, delivers that benefit and at what cost (Sections 3.4, 4.3, and 6).

**2. 2021: the civilian fire death rate was 89% lower in structures with installed fire sprinklers than in structures without them.** Source: NFPA [S8; S9].

**3. 2020 to 2024: compared with reported fires in properties with no automatic extinguishing systems (AES), when sprinklers were present the civilian fire death rate and injury rate per fire were 90% and 37% lower, respectively.** The rate of firefighter injuries was also 42% lower. Data are from NFIRS and NFPA [S8].

**NFPA findings on sprinkler effectiveness**

| Measure | Result with sprinklers present | Period | Source |
|---|---|---|---|
| Civilian fire death rate per fire, sprinklers present vs. no AES | 90% lower | 2020 to 2024 | NFIRS and NFPA [S8] |
| Civilian fire injury rate per fire, sprinklers present vs. no AES | 37% lower | 2020 to 2024 | NFIRS and NFPA [S8] |
| Firefighter injury rate, sprinklers present vs. no AES | 42% lower | 2020 to 2024 | NFIRS and NFPA [S8] |

*Source: NFPA, U.S. Experience with Sprinklers [S8]; 2021 figure as reported by the Home Fire Sprinkler Coalition [S9]. AES means automatic extinguishing system.*

**CONCLUSION (4.6).** Throughout our work on the TAC, there is consensus that, broadly, sprinklers reduce deaths and injures, however, our specific examination is whether these 126 buildings (which recorded no civilian fire deaths in 623 Working Fires and Structure Fires) are where the Retrofit Requirement's benefit is largest compared with other uses of the same resources. There is strong evidence to suggest not.

### 4.7 Emerging and Changing Risks: Lithium-Ion Batteries

**Lithium-ion battery fires in San Francisco: PLACEHOLDER, awaiting SFFD data.**

***[add table of data Still to be gathered]***

**CONCLUSION (4.7).** *[Pending SFFD data.]* Battery fires are a rising and severe problem that must be addressed at the source.

## 5. Findings

*Tbd*

## 6. Recommendations [DRAFT - THESE SEEM TO HAVE SOME BROAD AGREEMENT]

### 6.1 Any Building undergoing a Major Renovation must install sprinklers as the Trigger

- **Recommendation (broad agreement):** Any building undergoing a Major Renovation must install an automatic sprinkler system in accordance with Section 903.3.1.1 of the California Fire Code.

### 6.2 SOME THRESHOLD OF FIRE SAFETY WOULD QUALIFY A BUILDING FOR AN EXEMPTION

- **EXAMPLE:** Any building that fails its annual high-rise inspection or other annual fire inspection, has not complied with the San Francisco sleeping-area requirements, and has other outstanding Fire Code violations, and that does not cure all of those conditions within *[TAC TO DECIDE: X]* months, must install an automatic sprinkler system.

### 6.3 Require Lithium-Ion Battery and Micromobility Device Storage Areas

### 6.4 CONSIDER RECS AROUND HOARDING AND LIGHT WELLS

### 6.5 Codify the Following Definitions and Use them to guide an exemption process for buildings that would not be exempted due to other recommendations

- **Action:** Amend the San Francisco Fire Code to add the Section 5 definitions (Not Physically Possible, Disproportionate Effort, Undue Hardship, Reasonable Degree of Fire Protection, and Alternative Protection) as the standards the Fire Marshal applies when deciding modifications, extensions, exemptions, and alternative methods under the Retrofit Requirement.
- **Why:** The Fire Marshal already has authority to approve alternative methods, grant modifications, and extend deadlines for undue hardship [BLA Report], but no written criteria guide those decisions. Codified definitions would give owners, residents, and SFFD the same tests, and make decisions consistent and reviewable.

#### 6.5.1 Definitions

**Not Physically Possible.** We base the following definition on the California Building Code's definition of "Technically Infeasible: [DSA-AC]" in the Accessibility Code.

**Definition**: An alteration of a building or a facility, that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features that are in full and strict compliance with the minimum requirements for fire sprinkler installation.

Such constraints include but may not be limited to:

- **Structural:** work that would require moving, removing, or demolishing a load-bearing wall or other member essential to the structural frame, or that would otherwise compromise the building's structural integrity;
- **Space:** insufficient space for the sprinkler system or its ancillary infrastructure, such as piping, pumps, a pump room and the passageway to it, or electrical systems *[Note: "insufficient" requires a prescriptive definition]*;
- **Ceiling height:** ceiling heights that would fall below the code minimum because of the sprinkler system or its ancillary infrastructure;
- **Enlargement:** enlarging the existing building, or an existing stair or elevator shaft within it;
- **New building features:** adding features such as new egress stairs or elevators serving the building;
- **Water:** water supply, water pressure, or infrastructure currently available from the SFPUC at the building's point of connection that is insufficient for the required automatic sprinkler system;
- **Electrical and gas:** electrical or gas supply or infrastructure, including for backup power, currently available from PG&E at the building's point of connection that is insufficient for the required automatic sprinkler system;

- **Neighboring property:** work that would require an easement or other access to adjacent or nearby lots or parcels; or
- **Major Renovation:** work that would otherwise constitute a "Major Renovation" of the property.

**Disproportionate Effort.** A condition in which the financial cost, time, difficulty, or displacement required to make a building compliant with the relevant regulation outweighs the additional life-safety benefit the required system would provide in that building.

This test is applied together with the definitions of Not Physically Possible, Undue Hardship, and Reasonable Degree of Fire Safety, and against the evidence in Sections 3.2 and 3.6.

The test is applied as follows:

- *Baseline.* The benefit is measured against the building's existing fire protections and the San Francisco fire record for covered buildings documented in Section 3.2, and against the national evidence on sprinkler effectiveness documented in Section 3.6.
- *Thresholds.* The TAC proposes that effort be presumed disproportionate where compliance would require a resident to move out for more than one week; asbestos remediation requiring a resident to move out for more than 24 hours; or work that would infringe on the public right of way for any period of time.
- *Exclusions.* Disproportionate effort is not established solely by high overall project cost, owner preference for concealed piping, aesthetic concerns, or the inclusion of unrelated building improvements.

**Undue Hardship.** A burden on an individual resident or household from the cost of, or displacement caused by, installing a complete automatic sprinkler system in their building that is not justified by the life-safety benefit the system would provide there, measured against the Disproportionate Effort baseline. It exists where any of the following applies:

- *Financial hardship, tenant occupants.* The household meets the Rent Board's Financial Hardship guidelines, applied to the rent increase or other cost attributable to the retrofit: monthly rent exceeds 33 percent of gross monthly household income; household assets, excluding retirement accounts and non-liquid assets such as cars, antiques, and collectibles, do not exceed $60,000; or gross monthly household income is below the Rent Board's maximum for the household size. Exceptional circumstances, such as large out-of-pocket medical bills, may qualify a household that misses the income test.
- *Categorical eligibility.* The household earns at or below 80 percent of the San Francisco area median income for its size, or is enrolled in Medi-Cal or CalFresh. This mirrors the income exemption the Bay Area Air District adopted for its gas water heater rule in November 2026 [https://calmatters.org/environment/2026/11/bay-area-gas-water-heater/], and it can be verified without a full financial review.
- *Financial hardship, owner occupants.* For owners of condominium, cooperative, and similar units, the same three tests apply with total housing costs in place of rent (mortgage

or rent, property taxes, HOA fees, retrofit assessments, and similar items). Each household is assessed on its own circumstances.

- *[TAC TO DECIDE: whether to use the Bay Area Air District's simpler owner test instead: mortgage and property tax payments of at least 28 percent of gross household income [https://calmatters.org/environment/2026/11/bay-area-gas-water-heater/].]*
- *Displacement.* Compliance would displace a resident beyond the Disproportionate Effort thresholds: more than one week, or more than 24 hours for asbestos remediation.
- *Other proceedings.* Compliance would trigger proceedings before the Rent Board or the Housing Preservation Commission.

A household's undue hardship is not to be remedied by requiring other residents, owners, or tenants in the building to cover its share of the cost, and consideration of reserves, financing, and assistance does not extend to contributions by other residents on the hardship household's behalf.

*Confidential determination.* A household claims undue hardship by applying to the City, not to its building's owner or homeowners association. The City tells the building only whether the household qualifies, never its finances.

**Reasonable Degree of Fire Protection.** The building contains/possesses elements of fire protection, means of egress and advanced warning devices considered adequate to provide sufficient safeguards to mitigate potential fire life safety risk to a level deemed acceptable. More specifically, a building would need to meet the applicable standards set forth in the San Francisco Fire and Building Codes, excluding the requirement set forth in Section 1103.5.4 of the San Francisco Fire Code that "All existing residential high-rise buildings shall be equipped with an automatic sprinkler system."

- [**POTENTIALLY CONSIDER ADDING A NOTE AS TO WHY WE ARE NOT INCLUDING THE SPRINKLER REQUIREMENT?** "…it does not apply to other building categories with equal or greater demonstrated fire risk, which the codes already treat as adequately protected.]

**Alternative Protection.** A combination of fire and life-safety measures, other than a complete automatic sprinkler system built to prescriptive code requirements, that a building not otherwise exempt may install in place of sprinklers, and that the authority having jurisdiction approves as meeting [**the level of protection set in Section 6.5.? Reasonable degree of protection?**]

Specific methods may include:

- Partial sprinkler coverage (e.g., corridors and common areas only, not units)
- Enhanced early-warning detection in lieu of suppression
- Compartmentation upgrades (fire-rated doors, self-closing devices)
- Standpipe or manual suppression equipment upgrades

- Third-party engineered life-safety analysis showing equivalent protection
- Combination of measures rather than a single substitute

*Example equivalency pathway: R-2 high-rises under 120 feet.* A residential (Group R-2) high-rise under 120 feet that has at least one enclosed, fire-rated interior exit stairway with 90-minute self-closing doors, plus a second exit stairway (interior or exterior) that does not meet current code, may request a local equivalency under DBI Administrative Bulletin AB-005, reviewed by SFFD case by case for each building. Equivalencies that may be acceptable in place of a sprinkler retrofit include:

- **Both stairways can be brought to code.** Upgrade the non-compliant stairway's walls and doors to fire-rated construction (2-hour walls and 90-minute self-closing doors), and upgrade the fire alarm system to comply with SFFC 1103.5.4.2, with smoke detection and audibility of at least 75 dBA at each sleeping area (SFFC 1103.7.6.1).
- **One compliant interior stairway and one open exterior stairway that cannot be enclosed.** In place of enclosing the exterior stairway, the following upgrades may be acceptable *[TAC TO CONFIRM: whether all items are required, or a selection based on each building's conditions]*:
- **a. Voice fire alarm.** Upgrade the fire alarm system to full current code, with speakers throughout common and sleeping areas for automatic pre-recorded messages and manual floor-by-floor paging.
- **b. Firefighter radio coverage.** Provide a new emergency responder radio coverage system (ERCES), even where the building already has a wired phone-jack system.
- **c. In-unit smoke detection.** Replace existing standalone hard-wired smoke alarms in each unit with new system-connected detectors listed to UL 268, interconnected within the unit, sending a supervisory signal to the fire alarm control unit, and with low-frequency sounder bases or low-frequency speakers. Multi-criteria UL 268 detectors can reduce nuisance alarms from cooking, smoking, and shower steam.
- **d. Carbon monoxide.** In units with CO-producing sources, use combination smoke/CO detectors with the interconnected UL 268 smoke detectors.
- **e. Elevator hoistway smoke protection.** Where hoistways lack smoke protection, add smoke doors or smoke curtains.
- **f. Firefighter elevator operation.** Where elevators lack Firefighters' Emergency Operation, upgrade them to code-compliant Phase I recall and Phase II operation.
- **g. Survivable alarm wiring.** Where fire alarm wiring and conduit lack survivable pathways, upgrade their survivability level.
- **h. Fire command center.** Where the building has no enclosed fire command center, provide one in an approved location.
- **i. Elevator lobby two-way communication.** Where none exists, provide a new UL 2525-listed two-way emergency communication system in elevator lobbies.

- **j. Stairway two-way communication.** Where stair doors are locked from the stair side and there is no code-compliant stairway two-way communication system, provide a new UL 2525-listed system. *[CONFIRM: the source says "UL 252"; UL 2525 is assumed.]*

*Basis.* An alternative must rest on one or more of: nationally recognized standards;[1] established principles of fire protection;[2] recognized tests of the systems or products used;[3] or performance-based engineering analysis or modeling that demonstrates the alternative meets the required level of protection.

*Approval.* Approved by the Fire Marshal for Fire Code requirements, and by DBI for Building Code requirements. The design must be certified by a licensed Fire Protection Engineer.

*Ongoing verification.* An approved alternative is verified at the building's annual high-rise inspection and recorded so current and future residents can see it.

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**7. Implementation and Next Steps**

*tbd*

**Appendices**

**Sources**

| ID | Document | Author and date | URL |
|---|---|---|---|
| BLA Report | High Rise Fire Sprinkler Retrofit Ordinance Cost Estimates (policy analysis report) | Budget and Legislative Analyst, August 3, 2026 | [URL needed] |

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| S2 | High Rise Fire Sprinkler Retrofit, presentation to the Fire Code Technical Advisory Council | Budget and Legislative Analyst, October 2, 2026 | [URL needed] |
| S3 | Fire Sprinkler Mandate Final Report and Recommendations (Draft Structure) | TAC working document | Internal |
| S4 | The Bureau of Fire Prevention Must Strengthen Ethical Policies, Controls Over Inspection, and Data Capabilities | Office of the Controller, City Services Auditor, December 18, 2024 | [URL needed] |
| S5 | Master Data Table for Citywide Fire Data (workbook: Summary Table; Required Buildings detailed, year-by-year, and all-incident tabs; Citywide Incident Summary; Citywide Incidents with Injuries or Fatalities) | TAC staff compilation from SFFD and DataSF records; covered-building data through September 21, 2026 | Internal. [URL needed for underlying SFFD and DataSF sources] |

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|---|---|---|---|
| S6 | San Francisco Citywide Fire Incidents with Fatalities (41 incidents, 2004 to 2025) | DataSF; extract dated October 30, 2026 | [URL needed: DataSF Fire Incidents dataset] |
| S7 | Fire Loss in the United States, 2024 survey of fire departments (residential fires, deaths, injuries by property type) | National Fire Protection Association | https://www.nfpa.org/education-and-research/research/nfpa-research/fire-statistical-reports/fire-loss-in-the-united-states |
| S8 | U.S. Experience with Sprinklers (NFPA research report; sprinkler effectiveness by death, injury, and firefighter injury rates) | National Fire Protection Association, Fire Analysis and Research Division | https://content.nfpa.org/-/media/Project/Storefront/Catalog/Files/Research/NFPA-Research/Suppression/ossprinklers.pdf **[CONFIRM edition and date]** |
| S9 | Home Fire Sprinkler Coalition fact sheet (reports NFPA's 2021 civilian death rate finding) | Home Fire Sprinkler Coalition | https://homefiresprinkler.org/?p=2311 |
| BLA Report1 | San Francisco sets new safety standards for lithium-ion batteries to prevent fires, deaths | CBS News Bay Area, March 11, 2024 | https://www.cbsnews.com/sanfrancisco/news/san-francisco-sets-new-safety-standards-lithium-ion-batteries-prevent-fires-deaths |

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|---|---|---|---|
| BLA Report2 | SF legislation aims to crack down on uncertified batteries as fires grow more common | KQED, April 7, 2026 (updated July 9, 2026) | https://www.kqed.org/news/12078969/sf-legislation-aims-to-crack-down-on-uncertified-batteries-as-fires-grow-more-common |
| BLA Report3 | California SB 1271 (2024), e-bikes, powered mobility devices, and storage batteries (chaptered text) | California Legislature, 2023-2024 session | https://legiscan.com/CA/text/SB1271/2023 |
| BLA Report4 | FDNY Commissioner Robert S. Tucker Announces Significant Progress in the Battle Against Lithium-Ion Battery Fires | FDNY, January 8, 2025 | https://www.nyc.gov/site/fdny/news/03-25/fdny-commissioner-robert-s-tucker-significant-progress-the-battle-against-lithium-ion-battery-fires |
| BLA Report5 | As Bronx (NY) Family Reels from Fire That Killed Four, E-Bike Fires Have Skyrocketed Across NYC, FDNY Says | Fire Engineering, October 2026 | https://www.fireengineering.com/?p=732191 |
| BLA Report6 | Micromobility Information Center | U.S. Consumer Product Safety Commission | https://cpsc.gov/Safety-Education/Safety-Education-Centers/Micromobility-Information-Center |

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|---|---|---|---|
| BLA Report7 | Firefighters send warning after electric scooter battery causes fire in San Francisco | NBC Bay Area [TAC TO CONFIRM date] | https://www.nbcbayarea.com/news/local/san-francisco/electric-scooter-battery-causes-fire-san-francisco/3279814/ |
| BLA Report8 | FDNY warns of fatal e-bike battery risk following Queens fire | International Fire & Safety Journal, July 2025 | https://internationalfireandsafetyjournal.com/fdny-warns-of-fatal-e-bike-battery-risk-following-queens-fire/ |