



# WHAT YOU SHOULD KNOW ABOUT MECHANICAL PLAN CHECK SERVICES



Department of Building Inspection  
1660 Mission Street  
San Francisco, CA 94103  
415-558-6088 General Information  
415-558-6084 Code Questions  
415-558-6672 Mechanical Questions  
415-558-6054 Fax 415-558-6178  
[www.sfgov.org/dbi](http://www.sfgov.org/dbi)

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## WHAT ARE THE RESPONSIBILITIES OF THE MECHANICAL PLAN CHECK GROUP?

The Mechanical Plan Check Group is responsible for reviewing plans submitted with building permit applications to ensure that requirements of the following codes are adequately addressed:

- ✓ Energy Efficiency Standards of the California Code of Regulations Title 24, Part 6.
- ✓ San Francisco Mechanical Code.
- ✓ Heat, ventilation, life safety, smoke control, and related construction requirements of the San Francisco Building Code.

In addition, the Mechanical Plan Check Group answers general questions related to compliance with these code requirements. Please inquire at the 2nd floor counter or call (415) 558-6672 and ask for the "mechanical engineer of the day" to schedule an appointment, or for assistance with any code questions.

Also, if your project is of substantial size or complexity, you might want to consider requesting a pre-application plan review, in which you will receive a formal written reply to your code questions. Please refer to Section 106.4.9 of the San Francisco Building Code for further information.



## WHEN ARE PERMITS REQUIRED FOR MECHANICAL WORK?

Generally, mechanical work is covered under building permit applications (particularly when submittal of plans is required), and to a lesser extent under plumbing and electrical permits. Section 112.2 of the San Francisco Mechanical Code lists various types of work for which a building permit is not required. For example, a building permit is not required for replacement water heaters of not more than 100 gallons

capacity, as long as a new flue is not installed. Subject to the exemptions listed in the plumbing and electrical codes, separate permits may be required for plumbing and electrical work, even if a building permit is not. Please refer to the Plumbing and Electrical Inspection Divisions for further guidance regarding this.



## IF A BUILDING PERMIT FOR MECHANICAL WORK IS REQUIRED, IS IT POSSIBLE TO OBTAIN THE PERMIT "OVER-THE-COUNTER"?

Depending upon the complexity of the work, over-the-counter approval may be possible, particularly if building plans are not required. Examples of work that require permits, but not plans include:

- ✗ Installation of a new furnace in the same location as a furnace to be replaced; please note that all new or replaced thermostat must meet the mandatory setback requirements of Title 24 Part 6, Section 150(i).
- ✗ Installation of new heating ducts within a single dwelling unit in which the volume of heated space is not increased; please note that any ducts routed within unheated space requires a minimum of R4.2 insulation in accordance with Title 24 Part 6, mandatory Section 150 (m). Cold air returns shall be ducted or metal lined.
- ✗ Installation of any listed appliance in strict accordance with manufacturer's instructions.

Additionally, on a limited basis some permit applications that do require submittal of building plans may also be eligible for over-the-counter approval, subject to the determination of the mechanical engineer of the day. Examples of mechanical or energy-related work eligible for over-the-counter review include:

- ✓ Alterations limited to lighting systems in commercial spaces. Tailor method compliance will not be reviewed over the counter.

- ☑ Re-routing of ventilation ducts in which no penetration of fire-rated construction is proposed, and no new energy-consuming appliances or heat exchangers are included.
- ☑ Minor alteration of or additions to residential single family dwellings with complete energy calculation and documentation on plans.
- ☑ Minor Office Tenant Improvement for lighting, mechanical and plumbing system (OTI-2) with complete energy calculation and documentation on plans.
- ☑ Minor fire-damage repair projects such as replacement of ducts, mechanical units, etc.
- ☑ Minor revisions of previously-approved mechanical permits.

In addition to plan review and approval, you can also request over-the-counter assistance with code questions, or with screening of your plans for determination of their "completeness". Please call to make a reservation.



## COMPLIANCE WITH CALIFORNIA TITLE 24 ENERGY STANDARDS

With the exception of Group I occupancies (hospitals, nurseries, prisons, etc.), newly constructed heated and/or cooled buildings are required to meet all applicable energy conservation standards. In addition, these standards apply to any alterations of the energy-related features (lighting, mechanical and building envelope) of existing heated and/or cooled buildings. Conversely, unheated buildings such as warehouses and parking garages are exempt from the energy standards, but conversions of unheated/or uncooled space to heated/or cooled space must comply.

If you have any questions regarding Title 24 energy standards, you may contact the California Energy Commission Hotline at (916) 654-5106 or (800) 772-3300.

The California Energy Commission (C.E.C.) requires all plans submitted with building permit applications that involve energy-related work to include proper documentation (commonly referred to as "energy calculations"). Furthermore, this documentation must be incorporated directly onto (not stapled to) the submitted plan sheets. As a minimum the following compliance forms are required on the plans:

- 📄 Low-rise residential (new construction and alterations/additions), - "Certificate of Compliance: Residential" form CF-1R and "Mandatory Measures Check list: Residential form MF-1R"
- 📄 Nonresidential, hotels/motels and residential buildings with 4 or more habitable stories and 3 or more dwelling units:
  - 📄 mechanical work - "Certificate of Compliance MECH-1" & Mechanical Mandatory Measures Note Block
  - 📄 lighting work - "Certificate of Compliance LTG-1" & Lighting Mandatory Measures Note Block
  - 📄 building envelope work - "Certificate of Compliance ENV-1" & Envelope Mandatory Measures Note Block.

Additional MECH, LTG, AND ENV documentation is also required, depending upon the chosen method of compliance. Please refer to the "Instructions to Applicant" located at the bottom of part 1 of compliance forms MECH-1, LTG-1 and ENV-1 for further information.

Numerous computer programs certified by the California Energy Commission are available which can be used to develop "performance compliance" analysis, and generate the above-described certificates and note blocks. Please contact the Commission at (800) 772-3300 or (916) 654-5106 to determine which versions of these programs are currently acceptable.

All these required certificates must be

signed on the spaces indicated, and all other information (addresses, license nos., checkmarks, etc.) must be included. Energy forms may be downloaded from the CEC website, [www.energy.ca.gov](http://www.energy.ca.gov).

Although the Department of Building Inspection has information packages available for the prescriptive compliance approach pertaining to low-rise residential buildings, we cannot provide copies of any other compliance forms. Please refer to the Yellow Pages under the heading "Energy Consulting & Documentation" if you or your architect require the services of a knowledgeable consultant to prepare the required documentation.

You may also obtain a statewide roster of Certified Energy Plans Examiners by contacting the California Building Officials Training Institute at (916) 456-3824.

In addition to the State Energy Standards, residential buildings may also be required to comply with San Francisco's Residential Energy Conservation Ordinance (RECO). Please contact the Housing Inspection Division at (415) 558-6220 for further information.



## COMMONLY ASKED QUESTIONS

The most commonly asked questions pertain to residential window replacement, residential kitchen hoods, flexible duct, electrical heat, bedroom fireplaces, and legal locations for various types of exhaust discharges, flues and chimneys.

**Q:** Are dual-pane windows, skylights and glass doors always required for alterations to low-rise (generally, three or fewer habitable stories) residential buildings?

**A:** Yes, effective October 1, 2005, replacement windows shall comply with U-factor of 0.42.

0.67 dual glazing may be used provided heater ducts are tested and sealed against leakage.

All manufactured windows, skylights and glass doors are required by the California Energy Commission to have a sticker that indicates the certified U-value. Please do not remove these stickers until final inspection is completed.

These requirements apply to all windows, glass doors and skylights located in heated portions of the building. Also, please inquire to the Department of City Planning regarding any additional window-related requirements not pertaining to energy conservation.

**Q:** Are hoods always required over residential kitchen stoves?

**A:** Residential kitchen hoods are not required by code. But if you install one, please remember to:

- 1 Locate the exhaust discharge no closer than 3 feet from property lines or other building openings.
- 2 Ensure that the system includes a backdraft or automatic damper to prevent leakage of conditioned air.
- 3 Observe all installation instructions furnished with your listed hood.
- 4 Special consideration shall be paid to reversing flue and other exhaust from kitchen hood action.

**Q:** What are the restrictions governing the use of flexible duct?

**A:** Flexible ducts are referred to in the Uniform Mechanical Code as "factory-made" air ducts. Please note that flexible duct is not intended as a universal substitute for rigid metal ducts. Its use is limited by the manufacturer's instructions, as well as Sections 602.3, 604.2 and Standard 6-5 Part B of the 2001 Uniform Mechanical Code.

**Q:** What are the requirements for location of exhaust fan or domestic clothes dryer duct outlets?

**A:** The aforementioned "3 foot" rule for residential kitchen hood exhaust outlet locations also applies to domestic clothes dryer exhaust, as well as domestic laundry room exhaust fans, and the exhaust fan discharge from bathrooms in any building (residential or non-residential).

**Q:** What are the requirements for location of gas appliance flue discharges and solid-fuel fireplace chimneys?

**A:** Flues for furnaces, water heaters, boilers and gas fireplaces should terminate at least 4 feet from property lines, and at least 3 feet above any roof opening (such as an operable skylight) located within 10 feet. Please refer to Section 806.6 of the 2001 Uniform Mechanical Code for further guidance. Chimneys for solid-fuel burning fireplaces shall terminate 2 feet above any building within 10 feet as required in Table 31-B of the 2001 San Francisco Building Code, and shall be provided with a spark arrester in accordance with Section 3102.3.8.

Please note that the aforementioned property line-related requirements of the Uniform Mechanical Code may sometimes be superseded by Table 5-A of the Uniform Building Code. For example, exterior wall openings in R-1 occupancies (residential buildings with 3 or more dwelling units) are in many instances required to be located no less than 5 feet from the property line which is parallel to that wall.

**Q:** In what types of permit-related work is it acceptable to use electric heat?

**A:** The State of California Energy Efficiency Standards (Title 24, Part 6) place severe restrictions on the use of electric heat. For low-rise residential buildings, a computer-generated performance compliance energy

calculation is required to justify use of electric heat in either new construction, or in remodels that increase the conditioned floor area and volume of the building. Furthermore, conversion from natural gas to electric heat requires submittal of an "existing plus alteration" performance compliance energy calculation. Similarly for non-residential or high-rise residential buildings, a performance compliance energy calculation is required to justify electric heat, unless one of the limited exceptions to Section 144(g) are satisfied under the simpler, though more conservative prescriptive compliance method.

**Q:** What are the major concerns related to installation and use of fireplaces in bedrooms?

**A:** Installation and use of fireplaces within bedrooms, particularly in modern energy-tight (low infiltration) construction requires extreme caution to prevent accidental asphyxiation of sleeping occupants. Selection of a gas-fired "direct vent" type of appliance for this purpose will minimize if not eliminate this potential hazard, but no listed fireplace should ever be installed in any closed-off bedroom unless stated otherwise in the manufacturer's instructions. Solid fuel or unlisted fireplaces are particularly dangerous for bedroom use and are therefore, not acceptable.

Keep in mind that the California Title 24 Energy Standards require closeable doors and an outside combustion air intake for virtually all fireplaces. These mandatory requirements not only enhance energy conservation but also may serve as an added safety measure when glass doors are utilized and kept closed during operation of the fireplace.

Engineered systems is required for highrise installations.

## DEPARTMENT OF BUILDING INSPECTION

1660 Mission Street, San Francisco, CA 94103  
(415) 558-6088 Information - (415) 558-6401 Fax  
[www.sfgov.org/dbi](http://www.sfgov.org/dbi)

The Department of Building Inspection is charged with implementing and enforcing local, state, and federal regulations and controls that govern the design, construction, quality, use, occupancy, and location of buildings and structures within the City and County of San Francisco. A seven-member Building Inspection Commission governs the Department.

	<b>OFFICE</b>	<b>FAX</b>
<b>DIRECTOR</b>		
<b>6TH FLOOR</b> .....	558-6131	558-6225
<b>CHIEF ADMINISTRATIVE OFFICER</b>		
<b>6TH FLOOR</b> .....	575-6871	558-6225
<b>DEPUTY DIRECTOR OF PERMIT SERVICES</b>		
<b>2ND FLOOR</b> .....	558-6139	558-6436
<b>DEPUTY DIRECTOR OF INSPECTION SERVICES</b>		
<b>3RD FLOOR</b> .....	558-6142	558-6435
<b>COMMUNICATIONS MANAGER</b>		
<b>6TH FLOOR</b> .....	558-6250	558-6225

### ADMINISTRATION AND FINANCE DIVISION (AFD)

1650 Mission St., 3RD Floor ..... 558-6323 558-6207  
Provides support to the Department in the areas of fiscal management, purchasing, employee services, and related data collection. *Office Hours 8:00 a.m. – 5:00 p.m.*

### BUILDING INSPECTION DIVISION (BID)

3RD Floor ..... 558-6096 558-6261  
Inspects buildings for compliance with building code requirements for building permits and responds to complaints on residential and commercial buildings.  
*Office Hours 7:30 a.m. – 5:00 p.m. • Building Inspectors' Office Hours - 7:30 a.m. to 8:30 a.m. and 3:00 p.m. to 4:00 p.m.*

### CENTRAL PERMIT BUREAU (CPB)

1ST Floor ..... 558-6070 558-6170  
Issues building, plumbing and electrical permits; collects fees for processing applications for DBI and other City agencies.  
*Office Hours 8:00 a.m. – 5:00 p.m. • Last customer will be served at 4:30 p.m.*

### CODE ENFORCEMENT SECTION (CES)

1650 Mission St., 3RD Floor ..... 558-6454 558-6226  
Responsible for abatement of code violation cases referred from the building, plumbing, and electrical divisions. *Office Hours 8:00 a.m. – 5:00 p.m.*

### COMMERCIAL PLAN CHECK DIVISION (CPC)

2ND Floor ..... 558-6129 558-6041  
Screens, reviews, and approves commercial tenant improvement applications for compliance with building, and disabled access regulations.  
*Office Hours 8:00 a.m. – 5:00 p.m. • OTI Office Hours 8:00 a.m. – 12:00 Noon Commercial Plan Check Counter Hours 8:00 a.m. – 4:00 p.m.*

### DISABLED ACCESS SECTION (DAS)

3RD Floor ..... 558-6014 558-6474  
Responsible for the intake and resolution of all complaints filed by the public regarding disabled access citywide. *Office Hours 7:30 a.m. – 5:00 p.m.*

### ELECTRICAL INSPECTION DIVISION (EID)

3RD Floor ..... 558-6030 558-6397  
Provides public safety by enforcing municipal and State regulations and codes relative to construction, alteration, and installation of electrical equipment and systems. *Office Hours 7:30 a.m. – 5:00 p.m. • Electrical Inspectors' Office Hours – 7:30 a.m. to 8:30 a.m. and 3:15 p.m. to 4:00 p.m.*

### HOUSING INSPECTION SERVICES (HIS)

6TH Floor ..... 558-6220 558-6249  
Inspects buildings for code compliance in residential housing under building permits or as a result of complaints and inspects apartments and hotels.  
*Office Hours 8:00 a.m. – 5:00 p.m. • Housing Inspectors' Office Hours - 8:00a.m. to 9:00a.m. and 4:00p.m. to 5:00p.m.*

### LEAD ABATEMENT SECTION (LAS)

1650 Mission St., 3RD Floor ..... 558-6598 558-6635  
Responsible for environmental health and safety of DBI and applicable health and safety regulations and inspection of buildings for lead paint-exterior work practices.  
*Office Hours 8:00 a.m. – 5:00 p.m.*

### MAJOR PROJECTS/UMB'S DIVISION (MPC/UMB)

2ND Floor ..... 558-6101 558-6041  
Reviews and approves new, major and UMB applications and plans for compliance with building, and disabled access regulations. *Office Hours 8:00 a.m. – 5:00 p.m.*

### MANAGEMENT INFORMATION SERVICES (MIS)

1650 Mission Street, 3RD Floor ..... 558-6400 558-6467  
Provides automated data capture, data management, and report dissemination throughout the Department. *Office Hours 8:00 a.m. – 5:00 p.m.*

### MECHANICAL PLAN CHECK DIVISION (MECH)

2ND Floor ..... 558-6159 558-6041  
Screens and reviews applications and plans for compliance with mechanical and energy codes and mechanical ventilation, life/safety smoke control systems, and related portions of building code. *Office Hours 8:00 a.m. – 5:00 p.m.*

### PERMIT COORDINATION DIVISION (PCD)

1ST Floor ..... 558-6649 558-6660  
Provides parallel review for complex residential as well as commercial projects that require multi departmental review; and performs quality control screening of all permit applications that have gone through the plan review process and are ready for permit issuance. *Office Hours 8:00 a.m. – 5:00 p.m.*

### PERSONNEL PAYROLL DIVISION (PPD)

6TH Floor ..... 558-6343 558-6636  
Provides support to the Department in the areas of personnel, payroll, and other related Human Resources activities. *Office Hours 7:30 a.m. – 5:00 p.m.*

### PLUMBING INSPECTION DIVISION (PID)

3RD Floor ..... 558-6054 558-6178  
Provides public safety by enforcing municipal and State regulations and codes relative to construction, alteration, and installation of plumbing equipment and systems. *Office Hours 7:30 a.m. – 5:00 p.m. • Plumbing Inspectors' Office Hours - 7:30 a.m. to 8:00 a.m. and 3:00 p.m. to 4:00 p.m.*

### PUBLIC SERVICES DIVISION (PSD)

1ST Floor ..... 558-6130 558-6605  
Serves as the first point of contact for the public, answers general questions; gives permit status and information. Management, processing, and updating of all microfilm services and residential records. *Office Hours 7:30 a.m. – 5:00 p.m.*

### RESIDENTIAL PLAN CHECK DIVISION (RPC)

2ND Floor ..... 558-6133 558-6041  
Screens, reviews, and approves residential applications and plans for compliance with building, and disabled access regulations.  
*Office Hours 8:00 a.m. – 5:00 p.m. • Residential Plan Check Counter Hours 8:00 a.m. – 4:00 p.m.*

### TECHNICAL SERVICES DIVISION (TSD)

1650 Mission Street, 3RD Floor ..... 558-6205 558-6688  
Provides technical support for the Department in the areas of code development and information, and earthquake/emergency program. *Office Hours 8:00 a.m. – 5:00 p.m.*

## BOARDS AND COMMISSIONS

<b>Building Inspection Commission (BIC)</b>		
<b>Ann Aherne, Commission Secretary</b> .....	558-6164	558-6509
<b>Abatement Appeals Board (AAB)</b>		
<b>Dept. Rep.</b> .....	558-6142	558-6435
<b>Access Appeals Commission (AAC)</b>		
<b>Neil Friedman, Dept. Rep.</b> .....	558-6168	558-6474
<b>Board of Examiners (BOE)</b>		
<b>Hanson Tom, Dept. Rep.</b> .....	558-6157	558-6686
<b>Code Advisory Committee (BCAC)</b>		
<b>Alan Tokugawa, Dept. Rep.</b> .....	558-6004	558-6688
<b>Unreinforced Masonry Buildings Appeals Board (UMB)</b>		
<b>Gary Ho, Dept. Rep.</b> .....	558-6083	558-6041

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Department of Building Inspection  
1660 Mission Street  
San Francisco, CA 94103-2414



For general information please call 415-558-6088

