



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
www.ladpw.org

11/22

ENERGY, MECHANICAL AND PLUMBING CODES CHECKLIST

The following list shall be checked/marked by the applicant in order to determine whether a plan check is required for energy, mechanical code and/or plumbing code by the Mechanical Section.

It is the responsibility of the applicant, engineer, architect, and/or contractor to mark the appropriate items below:

Property Address:

Property Title:

Applicant Name:

Applicant Phone Number:

I. Plumbing Code

1. The following plumbing systems require a complete plumbing code plan check:
 - Any new potable water service or new water branch of 2"
 - Any new gas service or new gas branch of 2" diameter or larger, or a medium or high pressure gas system.
 - New drainage system with more than 216 waste fixture units.
 - Any multi-building development on a single lot where the total drainage fixture load exceeds 216 drainage fixture units. Note: Condominium subdivisions with an approved public sewer serving each building where any one of the buildings exceeds a total of 216 drainage fixture units.

2. The following individual plumbing systems shall be reviewed independently:
 - Any medium or high-pressure gas system addition or alteration.
 - Any seismic gas shut off valve not listed by the Mechanical Section (See attached list.)
 - Any combination waste and vent system.
 - Roof drainage system within the building with a roof area greater than 6,000 Sq ft.
 - Chemical waste system.
 - Plumbing installation in State licensed health care facilities. (e.g.: Dialysis centers, clinics.)
 - Gray water or Rainwater Catchment Systems per Chapter 15, 16 or 16A.
 - Solar hot water heating systems.
 - Running a sewer lateral through an abutting lot.

II. Mechanical Code

1. The following mechanical systems required complete mechanical Code plan check:
 - New systems with aggregate comfort heating or comfort cooling input capacity of greater than 500,000 BTU/hr per building.
2. The following individual mechanical systems shall be reviewed independently:
 - Ventilation for enclosed automobile parking and repair garages.
 - Stairway pressurization systems.
 - Smoke control systems.
 - Food processing establishments with a new Type I or II hood(s) or new equipment under an existing hood.
 - Product conveying systems (e.g.: dust collection system, fume hoods, etc.)
 - Ventilation for a State licensed health care facilities (e.g.: Dialysis Centers, Clinics.)
 - Installation of refrigeration systems requiring refrigeration machinery room (e.g.: aggregate combined compressor horsepower of 100 (74.6kw) or more, or other than Group A1 refrigeration, etc.)

III. Energy Standards

The following conditions would require energy plan review.

- All new buildings, additions heated and/or cooled
- All new tenant improvements (addition of heating and/or cooling systems to existing conditioned space or to buildings in which the envelope was previously approved for compliance with the Energy Standards).
- All alterations to the envelope of any building.
- All newly installed or altered ductwork.
- All shell buildings

For projects with a total conditioned area of less than 1,000 Sq ft, and an occupant load less than 49, the applicant may choose to submit the plans for plan review or file an Attachment - 4.

Replacement of heating and/or cooling systems of equal or lesser capacity without any new or modified ductwork is exempt from plan check, provided that the applicant files an Attachment-4.

CC:

ATTACHMENT

Please be advised that:

1. A plumbing permit must be obtained by a contractor licensed in the appropriate classification, or qualified installer for all the above-mentioned cases.
2. Plan review is required for:
 - a. All low pressure gas systems with SGSOV sizes smaller than the size of gas pipe immediately downstream of the by-pass "T".
 - b. All low pressure gas systems 2" or larger:
Exception: When VAGV-200 SGSOV is installed on an existing 2" or smaller gas system with no other change to the system.
 - c. All medium pressure gas systems equipped with a SGSOV.

Although it is not mandatory in the unincorporated areas of the County and the contract cities to install seismic gas shut off valves (SGSOV), It has become commonplace for applicants to install them in new and existing buildings.

Since SGSOV's restrict gas flow, it adds to the losses within the gas pipe system. Thus, the loss shall be considered when sizing the gas piping system. In sizing low-pressure gas systems, pressure loss through the SGSOV shall be converted into equivalent length of straight pipe and added to the developed length of the actual gas pipe system. Pipes shall be sized based on this new equivalent length.

Following tables provide equivalent length for some of the listed SGSOV's.

Table of Equivalent Lengths for Low Pressure Gas Systems

Table 1: "CALIFORNIA, AKA: KOSO, or PACIFIC SEISMIC PRODUCTS" Earthquake Activated Gas Shut-Off Valves

Model	Size (in.)	Equivalent Length (ft.) of pipe (same nominal size as a SGSOV)
300	3/4	3
301	1	3
302	1-1/4	4
303	1-1/2	5
310	3/4	3
311	1	3
312	1-1/4	4
313	1-1/2	5
314	2	5
314F	2	5
318	2 1/2	8
318F	2-1-2	8
315	6	10
315F	3	10
316	4	13
316F	4	13
317F	6	13
319F	8	9

Table 2: "LITTLE FIREFIGHTER" Earthquake Activated Gas Shut-Off Valves

Model	Size (in.)	Equivalent Length (ft.) of pipe (same nominal size as a SGSOV)
AGV-0.75	3/4	2
AGV-1	1	3
AGV-1.25	1 1/4	5
AGV-1.5	1 1/2	4
AGV-2-5	2	11
AGV-2-60	2	11
VAGV-0.75	3/4	2
VAGV-1	1	10
VAGV-1.25	1 1/4	64
VAGV-125HF	1 1/4	4
VAGV-1.51	1/2	5
VAGV-2	2	42
NAGV-75	3/4	3
NAGV-100	1	9
NAGV-125	1-1/4	46
AGV-250	2-1/2	4
AGV-300	3	5
AGV-400	4	12

Table 3: "FAV" Earthquake Activated Gas Shut-Off Valves

Model	Size (in.)	Equivalent Length (ft.) of pipe (same nominal size as a SGSOV)
FM-20	3/4	1.9
FM-25	1	5
FM-252	1	5
FM-253	1	5
FM-32	1-1/4	14
FM-40	1-1/2	13
FM-50	2	43
FM-402	1-1/2	12.8
FM-403	1-1/2	12.8
FM-502	2	42.4
FM-503	2	42.4
FM-S-200	3/4	5.6
FM-S-201	3/4	5.6
FM-S-250	1	22.5
FM-S-251	1	22.5

Table 4: "Gas Maestro, AKA: GASGUARD TECHNOLOGY, QTRONICS" Earthquake Activated Gas Shut-Off Valves

Model	Size (in.)	Equivalent Length (ft.) of pipe (same nominal size as a SGSOV)
Standalone GSS-2000	1	25
Standalone GSS-2000	2	4

Table 5: "NORTHRIDGE 2000, AKA: FIRE SOP" Earthquake Activated Gas Shut-Off Valves

Model	Size (in.)	Equivalent Length (ft.) of pipe (same nominal size as a SGSOV)
M75	3/4	6
M100	1	15
M125	1-1/4"	25

All projects with gas pipe size 2" inches or larger and projects with medium or high pressure (any gas pipe size) using SGSOV's shall be submitted to Mechanical Section for plan review. Additionally, projects with proposed SGSOV's smaller than the gas line size shall also be submitted to the Mechanical Section.

All low-pressure gas systems smaller than 2" inches with a line size SGSOV shall be reviewed at District Office by the inspector using equivalent length method as described previously.