GLENDALE FIRE DEPARTMENT

FIRE MARSHAL'S OFFICE

To: Contractors

From: Chuck Jenkins, Fire Marshal

Subject: Contractor's Guide

Welcome to the Glendale Fire Department's Contractors Guide. This guide is provided by the Fire Marshal's Office as a service to the construction and design community. The purpose of the publication is to provide information regarding frequently asked fire code questions and issues. Additionally, the guide provides important inspection and testing information and Certificate of Occupancy requirements that will assist the fire inspector in completing an inspection and assisting you with finishing your project.

Our goal is to achieve compliance with the City of Glendale Fire Code by partnering and assisting you with the completion of your project within your deadlines. In order to be successful in this endeavor, communication is critical. If you communicate your issues to the fire inspector an early solution can generally be worked out that will satisfy everyone.

If you have any questions, please contact your fire inspector or the Fire Marshal's Office at (623) 930-4420.

FIRE SAFETY DURING CONSTRUCTION, ALTERATION OR DEMOLITION OF A BUILDING

****

APPROVED PLANS AND PERMITS MUST BE ON THE JOB SITE DURING CONSTRUCTION AND TESTING

General Contractor
The general contractor is responsible for the fire safety of all property under their control. The general contractor will ultimately be held responsible for any fire code violations that may occur on the job site.

Fire Apparatus Access Roads
Fire apparatus access roads are required during construction to allow emergency response vehicles onto the construction site. Access roads shall be in place prior to combustible construction materials being brought onto the site. Access roads may be required at an earlier stage of the project. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches. Additionally, drive through access or an approved turn-around per Engineering Design & Construction Standard Detail G-954 shall be provided.

During construction, temporary access roads shall be provided and shall comply with the following minimum requirements. They shall be maintained throughout the construction project:

- The fire apparatus access road shall be an all weather driving surface, graded to drain standing water and engineered to bear the imposed loads of fire apparatus when the roads are wet. The minimum surface shall be six inches of ABC compacted to 90 percent over an approved base. Compaction test results shall be provided to the inspector *prior* to approval. Alternate methods may be approved when designed and sealed by a professional engineer and approved by the fire department.
- All fire apparatus access roads shall be clearly marked at the entrance with an approved sign approximately three feet by four feet. The lettering shall be red on a white background which states, "**EMERGENCY ACCESS ROAD**" and shall include the address of the site. The use of arrows may be approved by your inspector. Additional access road markings may be required throughout the project.
- Open trenches in a fire apparatus access road shall be plated at all times with steel plates capable of maintaining the integrity of the fire apparatus access road design.
- The access road shall reach to within 150 feet of all points of any building, combustible construction materials, and combustible debris storage areas.
- The edges of the access road shall be marked. Where markings are not practical/possible or markings are not visible, curbing shall be installed.

Fire Hydrants
Fire hydrants shall be in place and operational prior to combustible construction materials being brought onto the site. *Operational* means being fully tested, chlorinated, and

approved. A hydrant shall be located within 150 feet of stored combustible construction materials, additional hydrants shall be installed in accordance with Section 6.11 (B) (4) of the Engineering Design & Construction Standard.

The use of temporary piping and hydrant system is acceptable provided the hydrant(s) will operate at the required flow rate. Plans for such a system must be submitted and approved prior to installation.

Combustible Waste
Combustible waste shall not be allowed to accumulate on any site except in approved containers. Waste material shall be removed from the building on a daily basis. Combustible debris, waste material, or trash shall not be burned on the construction site.

Fire Extinguishers
Fire extinguishers sized for not less than ordinary hazard (2 A:10-B:C) shall be required in buildings under construction, alteration or demolition at each stairway, on all floor levels where combustible materials have accumulated and in every storage and construction shed. Extinguishers shall be installed in plain view, an accessible location and away from hazardous areas. Additional extinguishers shall be provided where special hazards exist. Consult with your fire inspector.

Asphalt Kettles
Asphalt (tar) kettles and pots shall not be used inside or on the roof of a building or structure. Kettles shall not be located within 20 feet of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other approved means. Roofing kettles and operating asphalt (tar) kettles shall not block emergency escape routes, gates, roadways or entrances. There must be an attendant within 100 feet of an operating kettle who is knowledgeable of the operations and hazards. The attendant shall have the kettle within sight during operation. Ladders or similar obstacles shall not form a part of the route between the attendant and the kettle.

A portable fire extinguisher with a minimum 40-B:C rating shall be located within 25 feet of each kettle being utilized and an additional minimum 3A:40-B:C rated fire extinguisher shall be on the roof being covered.

Heaters
Heaters used in structures shall be designed and approved for inside use. Heaters shall not be used in areas where they will create a hazard. Adequate ventilation shall be provided for fuel burning heaters. Heaters shall be turned off, moved to a safe distance from fueling.

Hot Work
Any person using a torch or other flame-producing device for removing paint, sweating pipe joints, applying roofing materials, or any other process requiring an open flame device in any building or structure shall provide one approved fire extinguisher (minimum size 2A:20-B:C) within 30 feet. Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag or heat from

igniting exposed combustibles. In all cases, a fire watch shall be maintained in the vicinity of the operation for no less than one-half hour after the torch or flame-producing device has been used. The individuals responsible for performing the hot work and individuals responsible for providing the fire watch shall be trained in the use of portable fire extinguishers.

Knox Boxes

A Knox box, Knox padlock, Knox key switch, or other Knox device shall be installed per the City of Glendale Fire Code.

- Knox box location will be determined during the plan review process and shall be confirmed with the fire inspector assigned to the project. Common locations for the Knox box are the front or main entrance, riser or fire control room door. More than one Knox device may be required.
- Knox box shall be installed at a height of 4 to 6 feet above the finished grade and shall be confirmed with plan review and the fire inspector.
- The City of Glendale Fire Code allows the installation of flush or wall mounted Knox boxes. Flush Knox boxes are recommended for aestitic and security reasons but early construction decisions will determine if they are able to be installed. The applicant shall obtain a Knox Company order form from the Glendale Fire Marshal's Office by calling (623) 930-4420. Instructions are on the form.
- The fire inspector shall secure the keys in the Knox box.

Fire Lane Signs

When required, approved signs, curb markings or other approved notices shall be provided for access roads. Their location may be shown on the approved plans. If fire lane signs are not shown, please consult with your fire inspector for assistance in locating the signs. The signs shall be in accordance with Engineering Design and Construction Standard Detail G-434.

Signs shall be installed perpendicular to the road and facing the direction of travel. The fire inspector will determine if two-sided signs are required.

Storage and Use of Flammable Liquids

A Fire Permit is required for the storage or use of flammable and combustible liquids and shall be in an area approved for flammable/combustible liquid storage. The storage of all flammable liquids must be in containers designed for their use. Flammable liquids shall not be stored in buildings under construction. All containers must be labeled with the liquid they contain and the words "**FLAMMABLE – KEEP FIRE AND FLAME AWAY - KEEP 50 FEET FROM BUILDINGS**."

Acceptance Testing Scheduling

Procedure for calling in an inspection;

1. Dial (623) 915-3263 from a touch-tone phone.
2. Press 1 for English or press 2 for Spanish.
3. Press 1 to schedule an inspection.
4. Enter the numeric portion of your permit number followed by the pound key (#),
5. Verify that the correct site address was spoken.

6. Enter the three-digit inspection code you wish to schedule (please refer to list at the end of this document).
7. Verify that the correct inspection type was spoken.
8. Press 1 to schedule an inspection for the next business day (only if calling prior to 4:00 a.m.) or to schedule an inspection for a different day listen to the recorded message for further options.
9. Press 2 to continue.
10. Verify the correct inspection day is spoken.
11. Press 1 to hear your confirmation number if this is the only inspection you will be scheduling for this call or

Press 2 to schedule another inspection on the same permit number or

Press 3 to schedule another inspection on a different permit number.

12. Verify that your confirmation number is spoken.
13. Press zero for the operator at any time for assistance.

- Approved plans bearing a red fire department stamp shall be on the job site at all times. No inspections or tests will be conducted without them. The front page and the fire protection sheets shall bear a red fire department stamp.
- Examples of separate plan submittals for fire permits are for fire sprinkler monitoring, fire alarm systems and kitchen hood extinguishing systems.
- Fire protection systems shall be pre-tested by the contractor and all corrections made prior to calling for an acceptance inspection.
- The permit fee is calculated to include one primary test/inspection and two follow-up inspections. An additional charge equal to the original permit fee or $223.85, whichever is less, will be charged for each additional inspection. Scheduled inspections not canceled prior to the arrival of the inspector will be counted as an inspection.
- Tests performed after normal duty hours will be charged the current scheduled rate for a minimum of 2 hours.
- Acceptance test inspections are for the system covered by the permit. This may include the entire building, only a portion of the building, or a piece of equipment. Testing a single system in phases requiring more than the allotted inspections for the permit, additional inspection fees shall apply. Consult with your fire inspector.
- Unless otherwise approved in writing through the alternate means and methods section of the fire code, all systems shall be designed and installed in accordance with the Glendale Building and Fire Code and the approved standards. This may not be the most current edition of the standard or code. It is the contractor's responsibility to use the proper adopted standard.

- Click here for a list of current adopted codes and amendments.

Sprinkler Systems
A minimum of three separate inspections is required prior to approval of new sprinkler systems and final fire approval.

Underground Hydrostatic Two-Hour Pressure Test

- Systems shall be pre-tested by the contractor.
- The system shall be tested hydrostatically at 200 psi for 2 hours (pressure test gauge at lowest end of the system being tested).
- All joints shall be fully exposed.
- Thrust blocks (kickers) or other approved mechanical restraints shall be in place and visible.
- Ductile iron pipe and fittings shall be encased in a polyethylene tube in accordance with the Engineering Design and Construction Standard, Chapter 6. A flush will be conducted and WITNESSED BY A FIRE INSPECTOR after approval of the underground pressure test. All check valves shall be in full open position.

**** IMPORTANT NOTE ****

It is highly recommended you consult with your city inspector who witnesses and conducts chlorination and bacteria tests of underground water lines to coordinate the testing required by the Fire Marshal's Office and the city inspectors.

- The contractor completing the work shall provide the Glendale Fire Department with a completed and signed (by the sub-contractor and general contractor) Contractor's Material and Test Certificate for Underground Pipe (NFPA 13).

Overhead Hydrostatic Two-Hour Pressure Test and Rough-in Inspection

- Systems shall be pre-tested by the contractor.
- The system shall be tested at 200 psi for two hours with all system piping visible from floor level. Sheet rock or ceiling tile shall not be installed prior to the testing or inspection of the piping systems without the approval of the fire inspector. Obstructions shall be removed before an inspection will be conducted (Glendale Fire Code Section 106.3). Click here for current amendments to adopted codes.
- The contractor completing the work shall provide the Glendale Fire Department with a completed and signed (by the sub-contractor and general contractor) Contractor's Material and Test Certificate for Overhead Pipe (NFPA 13).

Final Inspection

- The completed Contractors Material and Test Certificates (NFPA 13) shall be provided to the fire inspector prior to final inspection.
- Visual inspection of the entire system (drywall and ceiling panels shall be in place).
- Exterior bell tests, including third party monitoring, with the installation of over 20 heads.
- Verification of addressing and alarm signal receiving by a third party monitoring company. When required by the code a separate permit from the Fire Department is required for the monitoring of the sprinkler system. Permit must be obtained prior to testing.
- A hydraulic calculation data plate (NFPA 13) shall be stamped or engraved metal or rigid plastic plate and installed on all calculated systems. The use of magic markers, embossed tape labels, or metal impression labels shall be prohibited.
- Sprinkler head box(es) shall be properly installed and stocked with sprinkler heads, wrench, and a NFPA 25 booklet. The number of heads and boxes shall be in accordance with NFPA 13.

- Valves shall be supervised.
- System shall be fully operational.
- Signage shall be installed per NFPA 13.
- The Main drain test shall be witnessed by the fire inspector.
- The inspectors test and timed water flow alarm test shall be witnessed by the fire inspector.
- Pressure drop test across the backflow device, if installed.
- Other tests or inspections that may be required.

Fire Alarm Systems

- Inspections/testsests shall be requested by the contractor named on the fire alarm permit.
- The entire system shall be fully installed and pre-tested prior to scheduling a witness of the test.
- The permit fee is calculated to include one primary test/inspection and two follow-up inspections. An additional charge equal to the original permit fee or $223.85, whichever is less, will be charged for each additional inspection. Scheduled inspections not canceled prior to the arrival of the inspector will be counted as an inspection.
- Tests performed after normal duty hours will be charged the current scheduled rate for a minimum of 2 hours.
- Control panels, initiating and signaling devices, power supplies and auxiliary devices shall be tested in the presence of the inspector.
- All devices shall be tested in accordance with manufacturers' recommendations. It shall be the responsibility of the installer to provide and be ready with the equipment and supplies necessary to conduct the test. This includes heat guns, approved canned smoke, ladders and other necessary devices required for testing of the entire system.
- A copy of the approved plans shall be permanently maintained at the fire alarm panel.
- An approved simplified floor plan of the areas served by the alarm panel shall be posted near the annunciator panel. Zone descriptions and/or devices shall correspond with the floor plan. Consult with the fire inspector.
- A Certificate of Completion and an Inspection and Testing Form (NFPA 72) shall be completed and provided to the Glendale Fire Department prior to acceptance.

Kitchen Hood Systems

Kitchen hood systems shall be installed in accordance with the Glendale Fire Code.

- All actuation components including remote manual pull stations, mechanical or electrical devices, detectors, actuators, etc., shall be checked for proper operation during the inspection in accordance with the manufacturers' listed procedures.
- All utilities shall be supplied to the equipment being protected by cooking equipment prior to testing.
- Upon activation of the system, the makeup air supply to a hood shall be shut down and hood exhaust fans shall continue to operate. Exceptions to this must be approved before final inspection.
- Buildings equipped with a fire alarm system, the kitchen system must be electronically connected to provide an alarm signal.

Certificate of Occupancy
Approved plans bearing the Fire Department stamp, permits and all other acceptance paperwork shall be available at the job site at all times from the start of construction through final inspection.

In order to obtain Fire Department sign off on the Certificate of Occupancy, the following minimum conditions must be met:

- All automatic fire protection and life safety systems and equipment including sprinklers, fire alarms, smoke control, emergency lighting, etc. shall be installed, tested and in full operation.
- Fire department permits shall be completed. When required by the code third party monitoring shall be operational. Consult with your fire inspector.
- Occupancies shall have proper fire extinguishers required for the occupancy. Consult with your fire inspector.
- Paving and signage shall be completed and installed.
- Address numbers shall be posted. When required by the code a graphic directory and separate building identification shall be installed. Consult with your fire inspector.