



**CITY OF KELSO  
COMMUNITY DEVELOPMENT DEPARTMENT**

P.O. Box 819  
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**FIRE SPRINKLER AFFIDAVIT**

**Alterations or Tenant Improvements**

(1 to 10 sprinkler heads without plans)

Tenant: \_\_\_\_\_ Use: \_\_\_\_\_

Project Address: \_\_\_\_\_

Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Number of Heads: \_\_\_\_\_ Valuation: \_\_\_\_\_

Type: Wet Hazard: Light Density: 10

I, \_\_\_\_\_ State of Washington License #: \_\_\_\_\_

Certify that the following is true and reasonably defines the scope of work for this project:

- A. All work is limited to drops and arm-overs in a light hazard occupancy.
- B. Positions of sprinkler heads relative to architectural features such as soffits, beams, partitions, walls, etc. comply with the NFPA 13.
- C. The orifice size of the sprinkler heads being installed in the TI and those used in the approved shell plans are half inch (K=5.6)
- D. Only one sprinkler head will be installed from one drop (exception: up to 2 heads from one drop may be installed when each head is in a separate fire area.)
- E. The area covered per sprinkler head in the TI is no greater than 168 sq. ft. (exception: a room may have up to 2 sprinklers covering 200 sq. ft. each.)
- F. A sketch showing the area of work within the building structure.
- G. TI's in a new building shall be equipped with Quick Response heads (see 1996 NFPA 13, section 5-2.1.3 for exceptions.)
- H. The installation shall comply with the requirements of NFPA 13.
- I. Piping shall not be covered until hangars and bracing are inspected.
- J. Final approval shall be subject to onsite tests and inspections.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**INSPECTORS USE ONLY**

Hangars and bracing \_\_\_\_\_ Date \_\_\_\_\_ Comments: \_\_\_\_\_

Spacing of drops \_\_\_\_\_ Date \_\_\_\_\_ \_\_\_\_\_

Final \_\_\_\_\_ Date \_\_\_\_\_ \_\_\_\_\_

Dear Fire Sprinkler Contractor:

As you know, the Cowlitz 2 Fire & Rescue tries to make the processing and inspection of simple tenant improvements as easy as possible.

The most important assumption in reducing or eliminating plan review time, cost and its related delays is the knowledge that hard piped arm-overs and drops for light hazard occupancies typically add only about 1psi or so. This is a minor increase in an analytical procedure that starts with street pressures that can vary by several psi from day to day and hydraulic calculations that have reasonable interpretation errors of 1psi or 2psi.

**Flexible piping for drops** is being proposed for more and more projects. Unfortunately the friction loss factors that are being provided in the manufacturer's literature are not based on consistent criteria. Some of the most recent tests have demonstrated loss characteristics of 40 to 70 equivalent feet of one inch pipe for the 48" to 60" lengths, requiring an additional 5psi to 10psi in light hazard occupancies with standard coverage heads.

In an effort to allow some use of flexible drops without fundamental UL test data and substantial hydraulic analysis on your part, Cowlitz 2 Fire & Rescue is providing a restricted set of guidelines for using any of the brands below in a "TI w/o plans" permit application.

- AQUAFLEX
- EASYFLEX
- FLEXHEAD
- GATEWAY (SIDEWINDER)
- VIKING

- Maximum length - **36in**
- Maximum of **2 - 90deg bends**
- Minimum bend radius - **6in**
- Absolutely **NO KINKS**

A listing sheet shall be on site with the affidavit and other paperwork in order to clarify the rest of the manufacturer's guidelines.

**NOTE: 4 or fewer arm-overs done under an open COM (commercial building) permit may note use flexible pipe.**

At this time **TI's with plans and system plans** shall be subject to the same criteria unless it can be shown that the shell system has the hydraulic capacity to absorb the additional pressure losses. Only the most reliable data will be accepted at the discretion of the plans examiner. Test data developed by UL and FM after July 1<sup>st</sup> 2007 will receive a higher level of credibility.