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WATER SYSTEM FLOW TEST

Date: _____ Case: _____ Applicant (Name/Title): _____

This form must be submitted prior to permit approval from The Riverside County Fire Department

The minimum fire flow for this building is determined using the CFC, Table B 105.1 as adopted by Riverside County Fire Protection Ordinance 787.

Hydrant testing shall include the minimum following information:

- Static pressure (maximum and minimum): _____
- Residual pressures: _____
- Pitot Reading/ Outlet Size: _____ / _____
- Computed flow (in gallons per minute): _____
- Date and time of test: _____
- Water main diameter: _____
- Flow location map (to be obtained from the water purveyor if possible)

The following shall be considered when evaluating the water system:

Average daily demand, or the average of the total amount of water used each day during a 1 year period. Unusual situations that might have caused an excessive use of water, such as refilling a reservoir after cleaning, should not be considered when this figure is determined.

Peak hourly demand, or the maximum amount of water used in any given hour of a day.

The maximum daily demand can be estimated as 1.5 times the average daily consumption if the actual maximum is not known times the normal hourly rate. Pumps that are not provided with secondary power supplies shall not be relied upon to produce additional fire flow.

When measuring flow from a straight-stream fire nozzle, the use of the Pitot tube method only holds with reasonable accuracy for tip sizes up to **1 3/8in.** (35mm) supplied from 2 1/2-in. (64mm) hose. Above that, the error rate increases beyond acceptable limits, as the assumptions of uniform velocity and full flow become less valid. An exception is the Underwriters play pipe that maintains a uniform coefficient over a wide range of flows and pressures for tip sizes of **1 1/8** or **1 3/4 in.** (29 or 45 mm). For the most accurate readings the pitot pressure should be at least 10 psi and the residual pressure should drop 25% or 15 psi below the static pressure. Pressure drops less than these values induce an element of inaccuracy to the test results, and a second flow test shall be ran as indicated above. This is required for stronger systems where the flowing of multiple hydrants can not be conducted due to water conservation or topographical or distribution issues that inhibit such testing. All flow testing should be conducted in accordance with NFPA 291 and shall not be older than 1 year in accordance with NFPA 13.

All fire flow tests shall be conducted in coordination with the local water purveyor.

Fire flow test company: _____ CSLB C-16# _____
Name: _____ Title: _____ Date: _____

Water District Witness: _____
Name: _____ Title: _____ Date: _____

District Comments:

