2022 CODE REFERENCE

Fire Pump Field & Standpipe System Acceptance Test Form B – Flow Test

NOTE: Use this form for Fire Pumps serving Standpipe or Combined Standpipe & Sprinkler Systems

1. GENERAL INFORMATION & PUMP INFORMATION

Building Address: _____ Borough: _____

Date of Test: _____ Application No.: _____

Pump Manufacturer: _____ Model No.: _____

Pump Capacity (GPM): _____ Rated Horsepower: _____

Pump Type: _____ Model No.: _____

Pump Driver: ☐ Electric Motor ☐ Diesel Engine ☐ Steam Turbine ☐ Other_____ Motor Voltage_____

Does the electric motor have an alternate source of power and an automatic transfer switch? ☐ YES ☐ NO

If **YES**, in addition to testing the system with each water supply, the system must also be tested using the alternate source of power to simulate loss of primary source in accordance with NFPA 20, Section 14.2.8.

Building Pump Location: _____ Zone & Floors Pump is Serving: _____

2. STANDPIPE/COMBINED SYSTEM INFORMATION

Pump Serving: ☐ Standpipe ☐ Combined Sprinkler/Standpipe

Standpipe Classification: ☐ Class I Standpipe ☐ Class III Standpipe

Type of Standpipe System: ☐ Dry ☐ Wet ☐ Automatic ☐ Manual[1] ☐ Semi-Automatic Dry

Riser Diameter: _____ No. of Riser: _____

Design System Demand: ☐ Sprinkler _____GPM ☐ Standpipe _____GPM

Number of water supply services required for **standpipe system** or **combined sprinkler and standpipe system** per BC Q102 and BC Q105: _____

*NOTE: When fire pumps are supplied by two services, conduct the test from each service independent of each other. For example, if primary water supply is city main, and secondary is gravity tank, then fill out **FIRST MAIN SUPPLY** test below using city main, and **SECOND MAIN SUPPLY** test below using gravity tank. If applicable, conduct one (1) additional test with both services supplying the pump simultaneously.*

Pre-Acceptance Test Items

Have Flush and Hydrostatic Tests been completed as required by NFPA 20, Section 14.1? ☐ YES ☐ NO

Has the flushing of piping been completed as required by NFPA 14, Section 11.2? ☐ YES ☐ NO

Have Hydrostatic Tests been completed as required by NFPA 14, Section 11.4? ☐ YES ☐ NO

3. RECORD FIRE PUMP FIELD ACCEPTANCE & STANDPIPE SYSTEM ACCEPTANCE TEST DATA

Primary Main Supply

Fire Pump Field Acceptance: Flow Test (NFPA 20) – Verification of Fire Protection System Demand						
Pump Capacity	**Pump Flow (GPM)**	**Discharge Nozzle Size (in.)**	**Driver Speed (RPM)**	**Suction Pressure (PSI)**	**Pump Discharge Read at the Fire Pump Test Header (PSI)**	**Net Pressure (PSI)**
Minimum (Churn)						
Rated (100%)						
Peak[7] (150%)						

Standpipe System Acceptance Test[3]: Flow Test (NFPA 14) – Verification of System Demand				
Pump Capacity	**Location of Hose Outlets**	**Number of Hose Outlets**	**Actual Flow at Hose Outlets (GPM)**	**Actual Pressure at Hose Outlets (PSI)**
≥100%[5, 6]	**Hydraulically Most Remote Outlet(s):**			
Total Pump Flow (GPM)	–	–		–

Secondary Supply

Fire Pump Field Acceptance: Flow Test (NFPA 20) – Verify with Pump Curve per Manufacture						
Pump Capacity	**Pump Flow (GPM)**	**Discharge Nozzle Size (in.)**	**Driver Speed (RPM)**	**Suction Pressure (PSI)**	**Pump Discharge Read at the Fire Pump Test Header (PSI)**	**Net Pressure (PSI)**
Minimum (Churn)						
Rated (100%)						
Peak[7] (150%)						

Standpipe System Acceptance Test[3]: Flow Test (NFPA 14) – Verification of System Demand				
Pump Capacity	**Location of Hose Outlets**	**Number of Hose Outlets**	**Actual Flow at Hose Outlets (GPM)**	**Actual Pressure at Hose Outlets (PSI)**
≥100%[5, 6]	**Hydraulically Most Remote Outlet(s):**			
Total Pump Flow (GPM)	–	–		–

Combined Mains Supply

Fire Pump Field Acceptance: Flow Test (NFPA 20) – Verify with Pump Curve per Manufacture						
Pump Capacity	**Pump Flow (GPM)**	**Discharge Nozzle Size (in.)**	**Driver Speed (RPM)**	**Suction Pressure (PSI)**	**Pump Discharge Read at the Fire Pump Test Header (PSI)**	**Net Pressure (PSI)**
Minimum (Churn)						
Rated (100%)						
Peak[7] (150%)						

Standpipe System Acceptance Test[3]: Flow Test (NFPA 14) – Verification of System Demand				
Pump Capacity	**Location of Hose Outlets**	**Number of Hose Outlets**	**Actual Flow at Hose Outlets (GPM)**	**Actual Pressure at Hose Outlets (PSI)**
≥100%[5, 6]	**Hydraulically Most Remote Outlet(s):**			
Total Pump Flow (GPM)	–	–		–

Fire Pump On Emergency Power (See NFPA 20-2016 Section 14.2.8)

Fire Pump Field Acceptance: Flow Test (NFPA 20) – Verify with Pump Curve per Manufacture						
Pump Capacity	**Pump Flow (GPM)**	**Discharge Nozzle Size (in.)**	**Driver Speed (RPM)**	**Suction Pressure (PSI)**	**Pump Discharge Read at the Fire Pump Test Header (PSI)**	**Net Pressure (PSI)**
Peak[7] (150%)						

NOTES:

1. *For manual standpipes, a fire department pumper or portable pump of a capacity to provide required flow and pressure shall be used to verify the system design by pumping into the Fire Department connection, in accordance with NFPA 14 section 11.5.2.*
2. *The standpipe system tested shall be provided with at least one 3-way manifold equipped with 2 ½-inch valves with hose valve caps. The standpipe system shall be tested at the hydraulically most remote portion of the system which sometimes may not be the roof if the highest riser is located at an intermediate zone of the building. In buildings with multizone standpipe system, where it is not feasible to discharge water at a (roof) testing manifold, because the hydraulically most remote portion of the system is not located in the roof, supplemental procedures shall be followed to discharge water resulting from the test.*
3. *Where fire pumps are part of the water supply for a standpipe system, standpipe systems shall be tested to verify system demand while the fire pumps are operating. However, depending on the system's demand, the fire pump flow at the hydraulically most remote outlet may NOT be required to match the fire pump's peak or rated capacity.*
4. *Licensed Master Plumber shall only perform plumbing work as defined in the NYC Administrative Code Section §28-401.3.*
5. *Based on current Department staff levels and as required to efficiently use such staff, the Department will witness partially BOTH the Fire Pump Field Acceptance Test and the Standpipe System Acceptance Test AT THE SAME TIME, while utilizing 100% of the pump's capacity to achieve the required total pressure and flow at the hydraulically most remote outlet, which complies with code and referenced standard NFPA 14 sections 7.8, 7.10, and 11.5 and NFPA 20 section 14.2 testing requirements. The entirety of the flow tests must be completed, even if portions are not witnessed by the Department, and documentation that such tests were successfully completed shall be provided to the Department during inspection.*
6. *If the applicant is unwilling to perform, during the Department's inspection, BOTH the Fire Pump Field Acceptance Test and the Standpipe System Acceptance Test AT THE SAME TIME, while utilizing 100% of the pump's capacity to achieve the required total pressure and flow at the hydraulically most remote outlet, the applicant may be allowed to perform the Fire Pump Field Acceptance Test and the Standpipe System Acceptance Test at different times. However, such procedure is inefficient from the perspective of using Department staff and, as a result, prior to performing such alternative test procedures the applicant must submit a Determination request explaining why this more time-consuming approach is needed. The applicant may also be assessed an additional fee related to the additional inspection time.*
7. *If the Department did not witness the pump operating at 150% State "N.W.". If the maximum flow available from the water supply can not provide a flow of 150%, the fire pump shall be operated at the greater of:*
    a. *100% rated flow*
    b. *Max flow demand of the fire protection system*

4. SIGNATURE & WITNESS

Did the fire pump perform in accordance with the manufacturer's characteristic curve? ☐ YES ☐ NO

Relief Valve Properly Set By: _____

Contractor (Name, Address, Telephone No.):

_____

Licensed Master Fire Suppression Piping Contractor:

Name *(print)*: _____ **Signature:** _____

Licensed Master Plumber[4]:

Name *(print)*: _____ **Signature:** _____

The above test was witnessed by:

Name *(print)*: _____ **Signature:** _____