

Seattle Fire Prevention Division

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Systems Testing Form Updates for the 2021 Fire Code

The Seattle Fire Department uses a third-party vendor, The Compliance Engine (TCE), to receive reports of required testing, maintenance and repairs for fire protection systems in buildings in Seattle. Private sector contractors perform the testing and maintenance for building owners and provide reports to the Seattle Fire Department.

From time to time, code changes or other changes require us to update the standard reporting forms that are used by the contractors in TCE. This document includes a summary of changes and Attachment 1 lists them individually. We expect these new forms to be available in The Compliance Engine for contractor use when the new fire code takes effect in Washington and Seattle, expected March 2024.

When Will the New Forms be in Use?

The new forms will be available in The Compliance Engine by the date the 2021 fire code takes effect, expected March 2024. Vendors and contractors are required to use the new forms for tests conducted on or after the effective date of the new fire code.

What Has Changed?

- **All Forms** The technician attestation included at the end of all forms has been updated to more clearly reference State requirements for technicians and contractors.
- **BDA/DAS** Updated to reflect that PSERN is the radio operator responsible for uplink testing approval, as a result of a voter approved levy that is [replacing the emergency responder radio system](#) in King County. Seattle has also moved from the 90% threshold to the 95% threshold for grid square test, consistent with both NFPA and the 2021 International Fire Code. Many jurisdictions in Puget Sound have already been requiring 95%.
- **Sprinkler** Updated question 7 related to dry sprinklers to align with NFPA 25-2020 which requires replacement or sample testing beginning 15 years after installation, instead of 10 years.
- **Many Forms** have minor changes related to updated codes, please see Attachment 1.

Please see Attachment 1 for a list of specific changes by system type. The Proposed 2021 Fire Code forms are also on our website: www.seattle.gov/fire/business-services/systems-testing#systemstestingforms

Attachment 1: List of Changes to Testing Forms in The Compliance Engine

Attachment 2: Participating AHJs in Regional Systems Testing Ad Hoc Group

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Attachment 1 to Seattle Fire Department Information Sheet “Systems Testing form Updates for the 2021 Fire Code”

Form	Regional or Seattle Form	Item	Change
All Seattle Forms	All	Technician Attestation (end of form)	“By accepting this statement I, the certified technician shown on this form, certify that this fire protection system(s) has been properly inspected for functional operation in accordance with the current Fire Code (FC) used by the department that has jurisdiction and NFPA Standards adopted by the FC for this system. Any deficiencies found are noted in the report and have been reported to the building Owner/Manager for corrective action. I also certify that the report indicates the correct field inspection/repair date, and I have placed an accurate red, yellow, or white tag on the system indicating its status consistent with my inspection today and SFD Administrative Rule 9.02. By accepting this statement, I further attest that I am properly certified by the City of Seattle (and State of Washington if required for the work) to perform the work documented in this report, or exempt from those requirements. Finally, by accepting this statement I attest that the contractor on whose behalf this report is submitted holds the appropriate Washington State licenses should any be required for the work documented in this report.”
Clean Agent	Seattle	Date of Test and Test Description Section	“The items on the checklists below shall be inspected and tested. This list does not constitute all of the required inspecting and testing of the fire and life safety system. Refer to the Fire Code used by the AHJ and adopted NFPA standards 2001: Clean Agent <u>Fire Extinguishing Systems</u> and 12: CO2 for inspecting and testing requirements.”
Clean Agent	Seattle	Question 2	“No significant changes or unrepaired penetrations were found in the enclosure protected by the system. Manufacturer’s instructions and system design documents were used for inspections and testing. (NFPA 2001-18 8.4.5.1)”
Clean Agent	Seattle	Question 4	“All nozzles, piping, and brackets are properly placed and secured. Enclosure was inspected for integrity. (NFPA 2001-18 8.4.5.1)”
Clean Agent	Seattle	Question 5	“All end of line resisters are in place. Enclosure penetrations are sealed. (NFPA 2001-18 8.5.4.1)”
Clean Agent	Seattle	Question 6	“All hose was visually inspected and does not have visual damage or defects. (NFPA 2001-18 8.5.4.1)”
Clean Agent	Seattle	Question 7	“All hose five years old and older has been tested in 5-year intervals in accordance with NFPA 2001 or replaced. (NFPA 2001-18 8.7.1)”
Clean Agent	Seattle	Question 8	“For halocarbon clean agents, the quantity loss is <5% and the pressure loss is <10% in each cylinder from the required quantity and pressure of the extinguishing agent. For inert gas clean agents, the pressure loss is 5% or less. (NFPA 2001-18 8.3.1)”
Clean Agent	Seattle	Question 11	“All cylinders are inspected, tested according to NFPA 2001 at the proper intervals. (NFPA 2001-18 8.6.1.1, 8.6.1.2, 8.6.2)”
DAS/Acceptance	Regional	Throughout form	Form updated throughout to change reference “PSERN” with new contact info for borrowing radios and arranging uplink testing: https://psern.org/confidential-resources

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DAS – All Forms	Regional	DAS Inventory	Updated “Electrical Permit” that previously had “Y/N” answers to “Electrical Permit #” and text field to enter the permit number.
DAS – All Forms	Regional	DAS Inventory	Updated Critical Areas definition to align with NFPA 1225 and Fire Code (updated definition).
DAS/Acceptance	Regional	Questions 1-4	Rearranged so that preventable alarm question is #1.
DAS/Acceptance	Regional	Question 11 (Seattle changes only)	Changes to Seattle form will result in Seattle aligning with rest of region: “Perform in-building coverage test/grid test as required by 2018 Seattle Fire Code Section 510.5.3 using a calibrated spectrum analyzer: Signal strength remains stronger than (less negative than) -95 dBm for <u>90% 95%</u> of grids on each floor in non-critical areas (for a 20 grid square test, this means that at least 18 <u>19</u> of the grids must pass for the floor to pass).”
DAS/Acceptance	Regional	Questions 19-22	Questions renumbered so that options (a) – (f) related to fire alarm panel fall at end of section for best clarity.
DAS/Acceptance	Regional	Question 20 (previously 21)	“Communications link between the fire alarm system and the two-way radio communications enhancement system <u>in-building emergency responder communications enhancement system</u> is monitored for integrity.
DAS/Annual	Regional	Throughout form	Form updated throughout to change reference “PSERN” with new contact info for borrowing radios and arranging uplink testing: https://psern.org/confidential-resources
DAS/Annual	Regional	General – Record Keeping	Added requirement for Rebroadcast Agreement with PSERN to be stored in the enclosure with other construction and project documents. New item e.
DAS/Annual	Regional	Question 13a Question 11 (Seattle changes only)	Changes to Seattle form will result in Seattle aligning with rest of region: “Perform in-building coverage test/grid test as required by 2018 Seattle Fire Code Section 510.5.3 using a calibrated spectrum analyzer: Signal strength remains stronger than (less negative than) -95 dBm for <u>90% 95%</u> of grids on each floor in non-critical areas (for a 20 grid square test, this means that at least 18 <u>19</u> of the grids must pass for the floor to pass).”
DAS/Annual	Regional	Question 13	Updated Critical Areas definition to align with NFPA 1225 and Fire Code (updated definition).
DAS/Annual	Regional	Question 14a Question 11 (Seattle changes only)	Changes to Seattle form will result in Seattle aligning with rest of region: “Perform alternative in-building coverage test/grid test in non-critical areas. Signal strength shall be tested using a spectrum analyzer. For floor plate with standard 20 grid squares, test 3 grids per floor, those grids having the poorest performance in the acceptance test or in subsequent annual testing, when annual testing has previously occurred. Failure of 2 grids <u>1 grid</u> is 95% pass rate and acceptable. Failure of more than 2 grids <u>1 grid</u> (signal strength weaker than -95 dBm) on a floor indicates failure of the in-building coverage test for the building. Is test passed?”
DAS/Annual	Regional	Question 17	“Communications link between the fire alarm system and the two-way radio communications enhancement system <u>in-building emergency responder communications enhancement system</u> is monitored for integrity.
Dry Chem/Spray Booth	Seattle	Questions 1-3	Added N/A options
Dry Chem/Spray Booth	Seattle	Question 9	“The ventilation system operates for at least 3 minutes <u>or at least 4 air changes, whichever is greater</u> , prior to rendering any drying equipment operable.”

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Emergency Generator	Seattle	Question 2	“The EG was operated for the annual test according to Fire Code Section 604.4—604.5 <u>1203.4 and 1203.5</u> , the manufacturer’s recommendations, and NFPA 110 Section 8.4.”
Emergency Generator	Seattle	Question 3	REMOVED. All of the fire and life safety equipment requiring EG power was checked and operated properly.
Emergency Generator	Seattle	Question 4 (now 3)	“The test results indicate compliance with section 8.4 of NFPA 110-19 regarding operational inspection and testing. The test results indicate that this generator provides adequate power to support all loads connected to it and/or sheds the Optional loads (Emergency, Legally Required, Optional).”
Emergency Generator	Seattle	Question 9 (now 8)	“The EG has been exercised once a month according to Fire Code Section 604.4—604.5 <u>1203.4 and 1203.5</u> , the manufacturer’s recommendations, and NFPA 110 Section 8.4.”
Emergency Generator	Seattle	Question 10 (now 9)	“The EG has a low-fuel sensing switch that indicates when remaining fuel is less than necessary to support full load running, and the fuel is not low (answer N/A if the EG does not have a low-fuel sensing switch). (NFPA 110-19 5.5.2) The EG has a fuel supply large enough to accommodate the longest minimum time required for the Emergency and/or Legally Required load while the generator is under full load.”
Emergency Generator	Seattle	Final Checks	“Put the Fire Alarm back into service and/or other precautionary measures that were made to restore fire alarm system to normal operation (includes removal of protective coverings). ”
Fire Alarm	Regional	Inventory	Added “Energy Storage System” and “Gas Detection” to Auxiliary Equipment section
Fire Alarm/Acceptance	Regional	Throughout	Updated code cites to clarify whether the reference is to FC or NFPA 72 and updated references to latest version of code/standard.
Fire Alarm/Acceptance	Regional	Question 47	“All stairway door locking devices release simultaneously upon activation from the fire command center <u>or inside main entrance of building.</u> ” And added reference to 2021 IFC 1010.2.7.
Fire Alarm/Annual	Regional	Throughout	Updated code cites to clarify whether the reference is to FC or NFPA 72 and updated references to latest version of code/standard.
Fire Alarm/Annual	Regional	Questions 15, 16, and 19	Updated NFPA 72 ref from 2016 to 2019.
Fire Alarm/Annual	Regional	Question 48	“All stairway door locking devices release simultaneously upon activation from the fire command center <u>or inside main entrance of building.</u> ” And added reference to 2021 IFC 1010.2.7.
Fire Pump	Seattle	Inventory	Added text field to enter type of pump.
Fire Pump	Seattle	Electric Pump Section	Remove text fields for entering of test results – required for acceptance test only.
Fire Pump	Seattle	Added new Q 5, renumbered subsequent Q’s	“5. Electrical connections were inspected and repaired as necessary. <u>NFPA 25-20 8.1.1.2.2.1</u> ”
Fire Pump	Seattle	Question 25	“After the automatic connection was made to an alternate power source peak flow was redelivered within 30 seconds. ”

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Fire Pump	Seattle	Question 26	“The manual emergency transfer equipment operated properly during peak flow and peak flow was redelivered within 30 seconds. ”
Fire Escape	Seattle	Question 4	“The Fire Escape displays a sign permanently posted on the fire escape from the lowest edge of the lowest landing that is easily read from grade. The sign is made of plastic; 9” x 17” formatted the same as a Service Tag with contrasting type, indicating White, Yellow or Red certification, and complies with Fire Code Administrative Rule 09.02-09 for specifications and color coding.”
Hood Supp / Range Hood	Regional	Throughout	Updated code cites
Hood Supp / Range Hood	Regional	Question 7-end	Renumbered to correct typo.
Hood Supp / Range Hood	Regional	Question 27 (previously 28)	“Advised <u>responsible party or their representative personnel</u> on the importance of keeping hood, ducts, and filters clean <u>and the requirement to inspect them and clean them when dirty.</u> NFPA 96 11.6.1”
Sprinkler	Regional	Question 5	“The standard sprinkler heads are less than 50 years old or within a prescribed testing period. If “No”, have the heads sample tested or replaced per NFPA 25 and at the prescribed intervals thereafter. <u>If tested or replaced, contractors must also add date information in inventory section of this report.</u> ”
Sprinkler	Regional	Question 6	“The Quick Response sprinkler heads are less than 20 years old or within a prescribed testing period. If “No”, have the heads sample tested or replaced per NFPA 25 and at the prescribed intervals thereafter. <u>If tested or replaced, contractors must also add date information in inventory section of this report.</u> ”
Sprinkler	Regional	Question 7	“The dry type sprinkler heads are less than 10 <u>15</u> years old or within a prescribed testing period. If “No”, have the heads sample tested or replaced per NFPA 25 and at the prescribed intervals thereafter. <u>If tested or replaced, contractors must also add date information in inventory section of this report.</u> ”
Sprinkler	Regional	Question 45	A current red (impaired), yellow (deficient) or white (normal operations) tag was placed on the agent cylinder and the manual pull handle <u>or adjacent to the sprinkler control valve</u> indicating the system’s status consistent with my inspection today.
Standpipe	Seattle	Question 6	Added checkbox option: “ <u>Manual standpipe, flow test not required.</u> ”
Standpipe	Seattle	Question 7	“The standpipe passed the 5-year Flow Test. (NFPA 25-20 6.3.1; and SFD Ad Rule 9.03 Section 5.2 “ <u>The standpipe flow test is not required during system acceptance testing or thereafter. However, flow testing of any standpipe pressure reducing devices is required at acceptance and in accordance with maintenance testing requirements.</u> ”
Standpipe	Seattle	Question 12	“Fire pump(s) started from roof flow <u>when no test header is present.</u> (NFPA 20-19 Section 4.22.3.1.3)”
Standpipe	Seattle	Question 19	“If a plug or cover was missing from a FDC the FDC was inspected for debris in accordance with NFPA 25.”
Standpipe	Seattle	New Question 29	“Added new question 29: The cabinet hose(s) last inspection date is within standards of NFPA 25.”
Standpipe	Seattle	Question 30 (now 31)	“A current status tag was posted <u>on or adjacent to the lowest outlet</u> (SFD Administrative Rule 09.02-08), and a copy of the confidence test report will be provided to the owner.”

Participating AHJs in Regional Systems Testing Ad Hoc Group as of 6/2023

	Jurisdiction	Ad Hoc Group Participant	Standard Reports in TCE	Forms: Common A/Q/L/R Templates
1	Bellevue	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
2	Bothell	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
3	Eastside Fire/Resc	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
4	Kirkland	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
5	Mercer Island	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
6	Northshore Fire	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
7	Puget Sound Fire	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
8	Redmond	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
9	Renton	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
10	Seattle	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
11	Shoreline	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
12	South King Fire	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
13	Tukwila	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
14	Valley Regional	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
15	Woodinville	Yes	Yes	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
16	KC Fire Marshal	Yes	No	Fire Alarm, Sprinkler, Standpipe, DAS/BDA
17	WA State FM	Observer	No	
18	PSERN	Observer	N/A	
19	KC Radio Shop	Observer	N/A	