



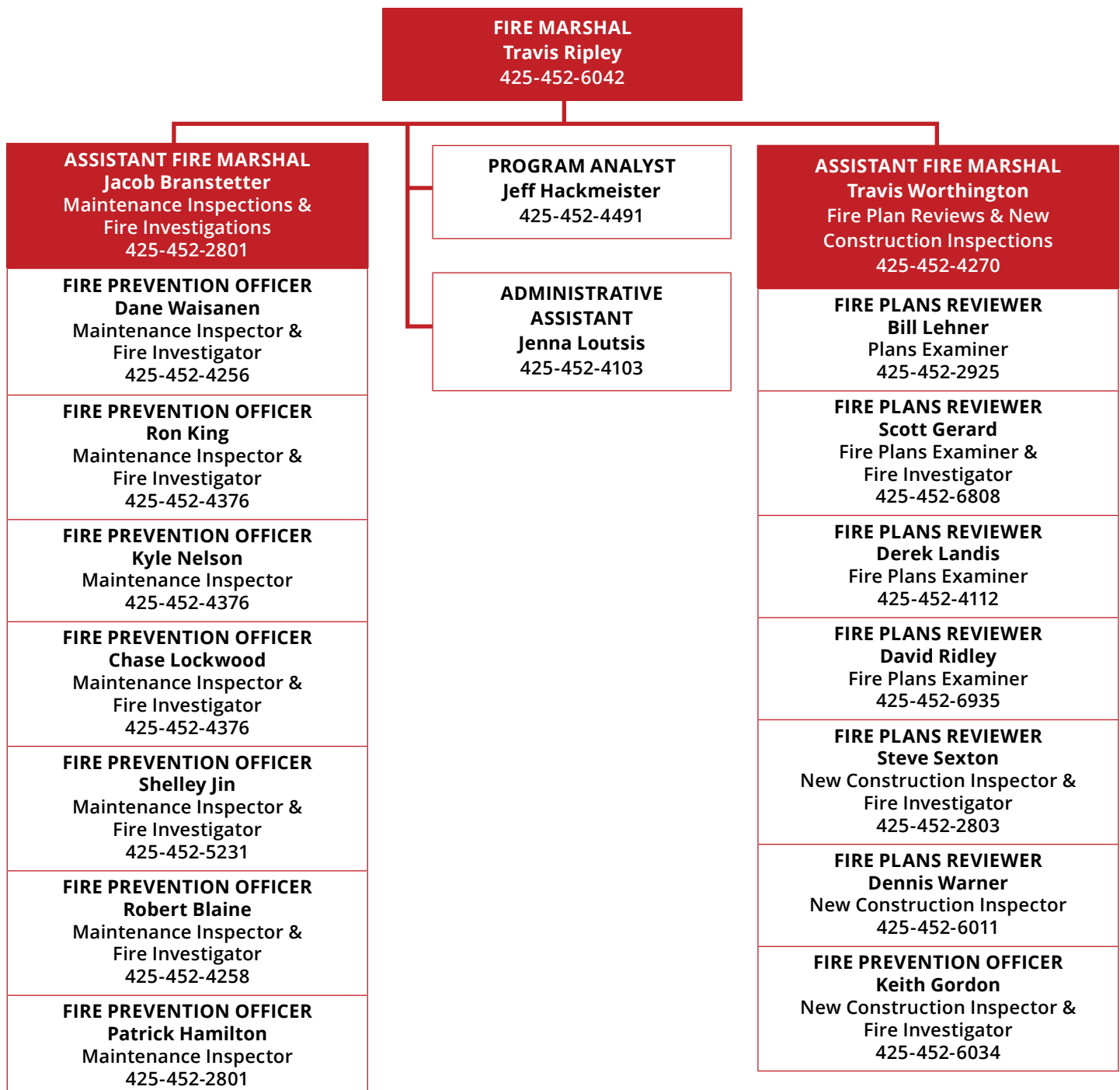
# **2021**

# **ANNUAL REPORT**

## **BELLEVUE FIRE PREVENTION**

# ORGANIZATIONAL CHART

GENERAL INFORMATION	<a href="mailto:fire_prevention@bellevuewa.gov">fire_prevention@bellevuewa.gov</a>	425-452-6872
GENERAL PLAN REVIEW QUESTIONS	<a href="mailto:firereview@bellevuewa.gov">firereview@bellevuewa.gov</a>	425-452-4122
NEW CONSTRUCTION INSPECTIONS	<a href="mailto:fireconstructioninsp@bellevuewa.gov">fireconstructioninsp@bellevuewa.gov</a>	425-452-4254
FIRE / LIFE SAFETY SYSTEMS IMPAIRMENTS	<a href="mailto:impairmentnotification@bellevuewa.gov">impairmentnotification@bellevuewa.gov</a>	425-452-6872
CONSTRUCTION INSPECTION REQUESTS (IVR LINE)	<a href="http://MyBuildingPermit.com">MyBuildingPermit.com</a>	425-452-6875
CITY OF BELLEVUE FIRE DEPARTMENT	<a href="http://Fire.BellevueWA.gov">Fire.BellevueWA.gov</a>	425-452-6892



# MESSAGE FROM THE FIRE MARSHAL



**Travis Ripley**  
Fire Marshal

Recently wildfires have become a rising concern across our state. I believe historically, that many of us have pictured these events as a problem for those East of the Cascade range. However, as we've seen in the last few years, we have been experiencing abnormally warmer temperatures with minimal precipitation. This can create conditions that make the West side equally vulnerable to wildfires, or alternatively urban interface fires. We all enjoy our parks and open space throughout Bellevue and want to protect it along with our own properties.

Here are some helpful tips you can implement to reduce risk or exposure to wildland, urban interface fire.

- Clear all flammable vegetation; rake and remove from under and around structures
- Make sure trees have a 15-foot space between each other and that the branches are no lower than 15 feet from the ground
- Remove branches extending over the roof-line of structures
- Prune branches and shrubs within 15 feet of a stovepipe or chimney outlets
- Ask the power company to clear branches from power lines
- Mow your grass regularly; collect and dispose of lawn clippings
- Clear a 10-foot area around propane tanks and the barbecue
- Regularly dispose of newspapers and garbage
- Properly dispose of stove, fireplace, and grill ashes
- Store flammable materials such as gasoline in approved safety cans and away from the base of buildings
- Stack firewood at least 100 feet away from your home
- Review and update your homeowner's insurance policy
- Consider replacing typical shrubbery with more fire-resistant varieties.

Please also visit [Washington Department of Natural Resources \(DNR\)](#) for more information on protecting your home.



## WESTSIDE

- Cooler/wetter climate
- Shorter summer fire season
- Fewer fires -lightning
- Heavier fuels - brush/timber
- More intense fires

## CURRENT

- More fires:  
>95% human caused
- King, Pierce and Snohomish avg. 2,500/yr. natural vegetation fires

## EASTSIDE

- Warmer/Dryer climate
- Longer summer fire season
- More fires - Lightning
- Lighter fuels - grasses/timber
- Less intense fires

## CURRENT

- More intense fires
- Northern Washington avg. 600/yr. natural veg. fires, lightning and human

Fire Marshal, Bellevue Fire Department

# STAFF ACCOMPLISHMENTS



**Fire Prevention Officer  
KYLE NELSON**

Fire Plans Examiner (International Code Council) & ICS 400 (FEMA)



**Fire Prevention Officer  
SHELLEY JIN**

Fire Inspector 1 & 2 (International Code Council), Fire Protection Engineer in Training (National Council of Examiners for Engineering and Surveying)



**NCEES**  
advancing licensure for  
engineers and surveyors



**Fire Prevention Officer  
CHASE LOCKWOOD**

Fire Inspector I (International Code Council)



## 2021 AT A GLANCE

Bellevue experienced **364** fires for a total of **\$3,665,380** in fire related damage

### Initial Maintenance Inspections

- Fire Prevention Officers completed **2,159**
- Firefighters completed **1,380**
  - for a total of **3,539** maintenance inspections and a total of **1,006** re-inspections

### Fire Prevention staff

- Performed **5,186** construction inspections
- Completed **4,070** hours of development reviews
- Inspected **OVER 35,000,000** square feet of commercial and multi family properties
- Investigated **32** complex fires

### FIRE PREVENTION OFFICERS AND FIREFIGHTERS WORK TOGETHER



Firefighters inspect structures that are no more than three stories in height such as apartments, condominiums, office buildings and strip malls. Fire Prevention Officers inspect all other structures including shopping malls, larger multi-family housing complexes, schools and high rises.

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# MISSION STATEMENT

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The Fire Prevention Division serves the public by providing fire and life safety inspections, community education, and investigation services to help prevent fires, enhance public safety in all buildings, and improve emergency responders ability to manage an incident. By doing this, we help achieve a safe, vibrant, and economically sustainable city.

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## PROMOTIONS

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### **TRAVIS RIPLEY**

#### **Assistant Fire Marshal to Fire Marshal**

Travis Ripley, who has been with our Fire Prevention Division since 2007, was selected through a strenuous recruitment process to lead the team as our new Fire Marshal. Travis has been an Assistant Fire Marshal with the City of Bellevue since 2010 and had acted as Fire Marshal since November 2020 after the previous Marshal's retirement. Travis has revitalized the culture of the Fire Prevention division by leading many process improvement efforts and by opening opportunities for team members at all ranks to contribute their perspectives towards the growth of the division.



### **JACOB BRANSTETTER**

#### **Fire Prevention Officer to Assistant Fire Marshal**

Jacob Branstetter was promoted to Assistant Fire Marshal of Maintenance Inspections and Investigations from the position of Fire Prevention Officer. Jacob stood out from other candidates by his foundational role in integrating the Fire Prevention division's new inspection software, Streamline. Jacob also has been taking on many process improvement initiatives relating to accreditation and making fire safety information more accessible to our diverse community.

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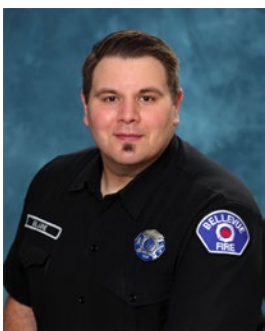
# NEW HIRES

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**TRAVIS WORTHINGTON**  
**Assistant Fire Marshal**

Travis Worthington is a 25 year decorated career veteran of Fire & Emergency Services. He has served with Local and State agencies in Georgia and the Commonwealth of Virginia. Travis rose through the ranks as a Firefighter/Paramedic to the positions of Fire Chief, Emergency Management Director, and Fire Inspector/Marshal. He holds a Bachelor's degree in Fire Science with a focus in code enforcement and a Master's Degree in Business Administration. Additionally, he has acquired a multitude of credentials and professional designations during his years of service. Of particular note are his certifications as a Fire Inspector, Fire Official, Building Official, Fire/Arson Investigator, Fire Plans Examiner, CMS and NFPA - Life Safety Code Specialist, Fire Instructor, Public Fire & Life Safety Educator, Permit Technician, and CFDAI. We are extremely grateful that Travis chose to join our team and we look forward to many years of his leadership and mentoring of our Fire Prevention team.



**ROBERT BLAINE**  
**Fire Prevention Officer**

Robert Blaine previously worked both in Law Enforcement and Fire Service, most recently as a Deputy Fire Marshal with Renton Regional Fire. Robert enjoys spending time with his family and helping with his kids youth sports teams. Robert and his wife took on a small adventure last year and started a small business. Some of Robert's hobbies include sewing, hiking, boxing and bull riding. We are thankful to have Robert join our team and share his unique perspective on fire safety.



**PATRICK HAMILTON**  
**Fire Prevention Officer**

Our newest Fire Prevention Officer is Patrick Hamilton. He previously worked as a fire lieutenant at the Kahului Airport in Maui performing fire safety tasks and responding to aircraft fires and injuries. Having worked as a security officer and personal trainer before beginning a career in the Fire Service, he has experience both in the public and private sector. Patrick enjoys traveling, photography, cooking, exercising, tennis, blogging and working on his cars in his spare time. His knowledge and skills will serve us well.



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# RESPONSIBILITIES

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## Maintenance Inspections

In keeping with its mission statement, Fire Prevention staff inspect existing buildings to ensure fire/life safety systems are being maintained in accordance with all applicable codes and standards. Except for one- and two-family dwellings, every building in Bellevue is inspected at least bi-annually. Multi-family buildings and restaurants lacking sprinkler systems are inspected annually, with all other buildings inspected on alternating years. This work serves the community by ensuring that the residents, visitors, customers, business owners and employees in Bellevue can be confident that they are safe from fire while living, working and playing in our city. The unprecedented pace of construction and lasting economic difficulties as a result of COVID-19 present unique challenges for the Maintenance Inspection Team. Maintenance inspectors inspected over **35 million** square feet of commercial and multi family properties in 2021.

## New Construction Inspections

Fire Prevention staff inspect new construction projects to ensure buildings and fire/life safety systems comply with the appropriate codes and standards. Current development activity is unprecedented in its length, driven by a combination of the economy, the expansion of the Sound Transit Eastlink Light Rail system, and technology companies (Amazon, Microsoft, Facebook etc.) relocating to Bellevue. In 2021, we added **6,705,222** square feet of new major project construction and the outlook for 2022 is similar, with an expected valuation of **\$1.52 billion** for all projects anticipated to be in construction. The challenges on the horizon are keeping pace with the construction demand and complexity, training new staff and aligning resources with the demands. Additional information on construction permits can be obtained at [MyBuildingPermit.com](https://www.bellevuefire.org/MyBuildingPermit.com).

## Fire Review

Fire Prevention staff completed **4,070** hours of plan review in 2021. This includes initial review

and subsequent revision submittals. Fire Plan Examiners evaluate construction documents and fire protection system designs to ensure that the minimum fire codes and standards are consistently applied. Ensuring that projects comply with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, and to provide a reasonable level of safety to firefighters and emergency responders during emergency operations. Permit applications and the progress of submittals are conducted online at [MyBuildingPermit.com](https://www.bellevuefire.org/MyBuildingPermit.com).

## Fire Investigations

A Fire Investigator is a Fire Prevention Officer who has received additional training, experience and certification. They determine the origin and cause of fires and when a fire is suspicious, work in collaboration with our law enforcement partners. On average, **29** fire scenes per year are investigated by a Bellevue Fire Investigator. In 2021, **32** fire scenes were investigated. Under normal conditions, the responding fire company officer will evaluate the scene of a fire. However, Fire Investigators are called to a fire scene when: fire spreads beyond the first material ignited, there are fatalities or injuries, and/or the fire is suspicious. This past year, **32** fire scenes in Bellevue met one or more of the required criteria. Of the 32 fires, **1** was intentionally set, **8** were undetermined, and **23** were determined to be accidental.

## Additional Tasks

Fire Prevention also responds to citizen concerns, updates information of existing systems into a database, implements new inspection technologies, manages new permits and oversees temporary permitted activities. The division also performs trainings for other department members on prevention topics and inspection processes.

# BENCHMARKS

For the purpose of this report, fires have been categorized into three fire areas: fire incidents (all fires), residential fires (fires occurring in or on property where people live) and residential cooking fires.

The Bellevue Fire Department seeks to monitor its effectiveness by measuring itself with these benchmarks. Benchmark information is based on national data and is cited below.



## FIRE INCIDENTS

Benchmark is to have less than 2.48 fire incidents for every 1,000 people

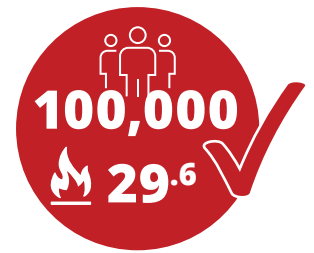
Bellevue's fire incidents were 2.39 for every 1,000 people



## RESIDENTIAL COOKING FIRE

Benchmark is to have less than 49.9 cooking fires for every 100,000 people

In 2021, Bellevue had 29.6 cooking fires for every 100,000 people



## RESIDENTIAL FIRES

Benchmark is to have less than 120 fires for every 100,000 people

Bellevue's residential fires were 54.6 fires for every 100,000 people



National fire incidents/1,000 population for communities of 100,000 to 249,999 = 3.1/1,000 population  
[NFPA.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/US-Fire-Problem/osFireLoss.pdf](https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/US-Fire-Problem/osFireLoss.pdf)

National residential cooking fires are 60.98/100,000 population

[USFA.fema.gov/downloads/pdf/publications/fius20th.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/fius20th.pdf) page 3

National residential fires occur at a rate of 117.28/100,000 population

[USFA.fema.gov/downloads/pdf/publications/fius20th.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/fius20th.pdf) pages 12 and 15

National fire loss per capita in 2017 was \$70.77. Based on the population for Bellevue (142,400 – 2018 estimate) and our contract cities (20,485 – 2018 estimate) that translates to \$11,527,371 fire loss in Bellevue and its contract cities.

[USFA.fema.gov/downloads/pdf/publications/fius20th.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/fius20th.pdf) page 17

For information on 2018 King County and its cities population:

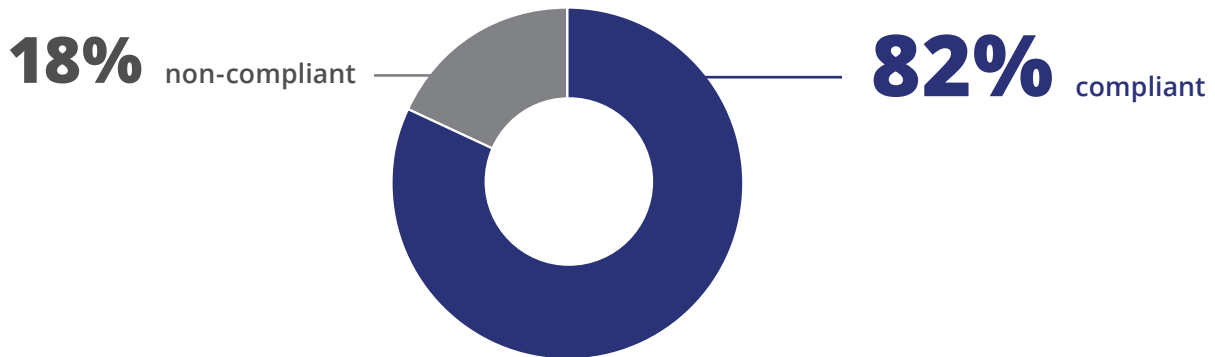
[KingCounty.gov/~media/depts/executive/performance-strategy-budget/regional-planning/Demographics/Dec-2018-Update/OFM-CitiesPop2018.ashx?la=en](https://kingcounty.gov/~media/depts/executive/performance-strategy-budget/regional-planning/Demographics/Dec-2018-Update/OFM-CitiesPop2018.ashx?la=en)



# FIRE/LIFE SAFETY SYSTEMS

FIRE/LIFE SAFETY SYSTEMS	COUNT
Automatic closing fire assemblies	7
Clean agent	37
Emergency power generator	149
Emergency responder radio coverage system	91
Fire alarm	1,533
Fire pump	90
Hood suppression system	466
Paint/spray booth suppression	11
Pre-action	18
Private fire hydrants	92
Firefighter air replenishment system	1
Smoke control system	92
Sprinkler system	1,154
Standpipe	435

## FIRE / LIFE SAFETY SYSTEM INSPECTIONS



There are currently over 4,176 fire/life safety systems in Bellevue and our contract cities (Beaux Arts Village, Clyde Hill, Hunts Point, Medina, Newcastle and Yarrow Point). In order to ensure that these systems are inspected and tested the required intervals we rely on the use of [TheComplianceEngine.com](https://www.thecomplianceengine.com). The web site sends building owners reminders when system testing is due and is a repository for test reports. Owners/property managers can request access to their properties so they can view the status of their systems. Property owners should submit their request for access to [fire\\_prevention@bellevuewa.gov](mailto:fire_prevention@bellevuewa.gov).

### THE BELLEVUE FIRE DEPARTMENT AND FIRE PREVENTION



Fire Prevention fulfills several roles within the Bellevue Fire Department.

Among them are two ways Fire Prevention helps minimize the impact of fires in Bellevue; education and inspections.

# NOTEWORTHY FIRES



In 2021, Bellevue Fire Department responded to many emergencies, including fires. Many of those fires are extinguished or controlled prior to the Fire Department's arrival. Thanks to the diligent work of our Fire Prevention efforts, building occupants are at a reduced risk of fire incidents. These fires may not make the news, but they are an excellent example of the work our department does.



View from dumpster of closed fire door

## October 2021

A residential high rise in Bellevue experienced a fire in the dumpster, located in the basement of the building. Dumpster fires in High rise buildings can be very dangerous, due to the large quantity of combustible materials, and the trash chute, which can allow smoke and fire to travel to all floors of the building. Bellevue amended codes require a small fire door between the dumpster and the trash chute, which closes when exposed to heat. In this case, the barrier acted as intended, closing and containing the fire and smoke to the dumpster area until the fire crews could arrive to extinguish the fire.

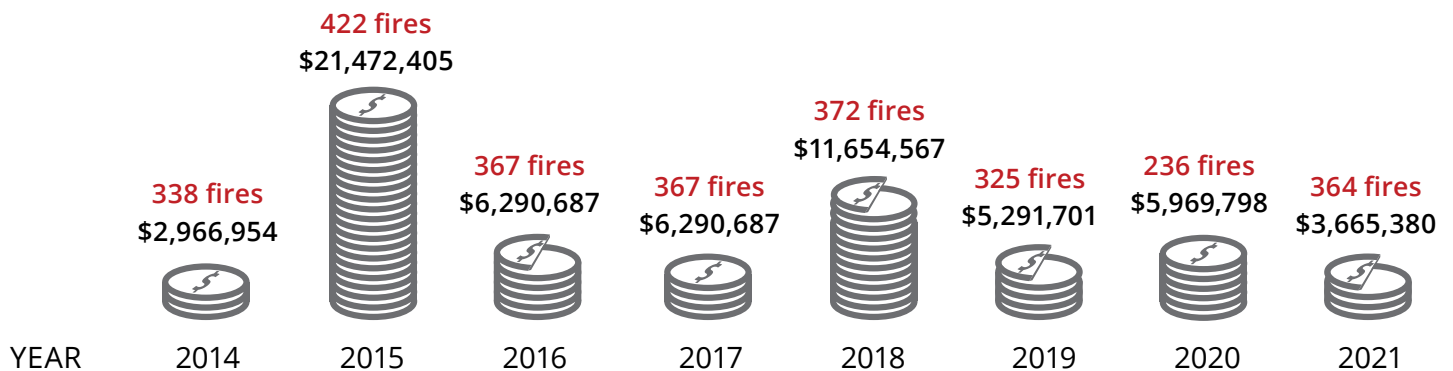


View of fire damage to the attic of the residence

## December 2021

A residential home in Clyde Hill, a City which contracts fire department services from City of Bellevue, experienced a fire when the furnace malfunctioned. The fire spread to the attic area, where the home's fire sprinkler system activated which provided enough water to prevent the fire from spreading to the rest of the home until fire crews could arrive to extinguish it.

## TOTAL MONETARY LOSS BY FIRE PER YEAR



# CONSTRUCTION ACTIVITY

**4,060 HOURS** of plan review were completed in 2021. These represent permit reviews of fire/life safety systems such as fire alarm, fire sprinkler, smoke control, In-building radio systems as well as building permit review.

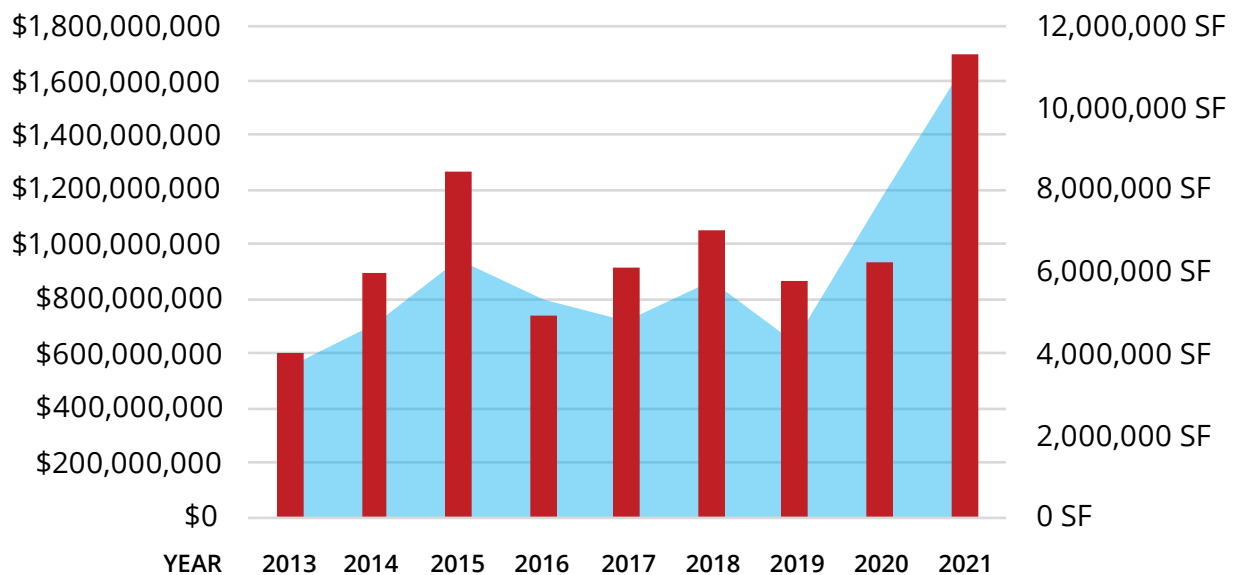
Project permits were issued representing **11,290,092** square feet at a value of **\$1,655,609,236**. Fire Prevention staff assisted in the review of these projects along with Utilities, Transportation and Development Services personnel. New commercial, retail, office, multi-family, school, church and park facilities with

1,000 square feet or more are considered a major project.

**5,186** construction inspections were completed by Fire Prevention Officers.

Fire/life safety systems such as fire alarm, fire sprinkler, smoke control and in-building radio systems are inspected to verify their installation is in accordance with approved plans, applicable codes and standards. Inspections are a coordinated effort of the building, mechanical, plumbing, electrical, transportation and utilities inspection staff.

## TOTAL SQUARE FOOTAGE AND BUILDING DEPARTMENT VALUE BY ISSUE YEAR



Once a project is completed, the Fire Prevention Division inspects the building at regular intervals to verify that the building and its fire/life safety systems are in compliance with current standards.

YEAR	TOTAL SQ. FEET	BUILDING VALUE
2013	4,016,525	\$559,697,149
2014	5,985,654	\$715,011,347
2015	8,462,595	\$949,823,754
2016	4,908,588	\$798,151,634
2017	6,113,785	\$718,276,614
2018	7,045,645	\$867,262,576
2019	5,761,420	\$639,805,425
2020	6,211,825	\$1,160,853,231
2021	11,290,092	\$1,655,609,236

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# MAJOR PROJECTS

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## 555 108th Avenue NE

- Mixed-Use Office Tower
- 42 Stories & 2-Story Pavilion
- 695,610 SF Office
- 24,675 SF Active Uses
- 967 Parking Spaces



## 600 108th Avenue NE Phase 1

- Mixed-Use Office Tower
- 45 Stories
- 839,500 SF Office
- 11,680 SF Active Uses
- 1,056 Parking Spaces



## 10300 NE 8th Street

- 2 Mixed-Use Residential Towers
- 330 Residential Units
- 251 Hotel Units
- 76,000 SF Ground Level & Upper Level Active Uses
- 826 Parking Spaces



## 117 106th Avenue NE

- 3 Mixed-Use Office Towers
- 16, 17 & 17 Stories
- 881,070 SF Office
- 28,210 SF Ground-Level Active Uses
- 2,194 Parking Spaces



# MAJOR PROJECTS



## 10666 NE 8th Street

- Mixed-Use Office
- 25 stories
- 523,000 SF Office
- 12,650 SF Active Use
- 883 Parking Spaces



## 1100 Main Street

- Two Multi-Family Residential Buildings
- 22 Story Residential Tower
- 7 Story Residential Building
- 334 Residential Units
- 7,500 SF Active Uses
- 236 Parking Spaces

## EAST LINK

Construction continues on various segments of the Sound Transit East Link project. The project will be complete in late 2022 or early 2023, carrying passengers from Redmond to Seattle.

*Photo right: The Fire Prevention team inspecting the tunnel in 2021*



# COVID-19 IMPACTS

The COVID-19 pandemic had us all making drastic changes over the last couple years. This is true with the work we do in prevention as well. Measures to stop the spread of COVID-19 spanned from reducing occupant load, installing partitions, and moving people to outdoor areas vs. indoor.

In response to all these changes we developed information sheets along the way to help guide the safest practices to these changes.



For occupant **load reduction** our **information sheet** describes how to calculate the appropriate reduction based on the business type and area you occupy. Our **information sheet on partitions and separations** describes what materials can be used and how they should be arranged in order to maintain a fire safe area while accomplishing the goal of reducing the spread.

Using tents or membrane structures to create outdoor covered space became very popular. And since much of this was done throughout fall and winter, heating concerns were of utmost importance. Since you cannot have open flame heaters within these structures, we worked closely to find alternative means. Our **information sheet on tents and canopies** outlines the concerns when using these for occupancy.





# STREAMLINE & PAPERLESS PROCESSES

**2021 marked the first 2-year cycle of inspections in Streamline which meant:**

- 100% paperless inspections
- All property owners/managers receive automatic notification of inspections and violations
- All inspected buildings received invoices for the inspection fee program

**Operational permits have been moved into Streamline:**

- Applications have moved from paper to a fully accessible webform on public website
- Tracking and approval of new applications is completely paperless
- Implementation for review of all permits and conditions

**Preventable alarm reporting and reconciliation is now 100% paperless**



# FIRE INSPECTION FEES



## Fee program started in January of 2020

- Designed for cost recovery of Fire Prevention activity
- Facilitated the move to Streamline inspections

## Billing information collected by firefighters and FPOs, then validated by Program Analyst

- Reports are built in Streamline and delivered to Finance & Asset Management (FAM)
- FAM creates invoices in Accounts Payable & Receivable Software JDE and is responsible for collection

## Challenges during the first 2-year cycle

- Finding appropriate billing contacts—especially hard during the pandemic with many managers not working on site
- Determining the number of exempt properties under the ordinance
- Explaining the new fee to unaware property owners

## Lessons learned during the first 2-year cycle

- Invoices are now emailed initially (when possible) and followed up with via standard mail
- Reminder notifications are sent sooner
- Training has been provided to firefighters and FPOs on gathering correct information

## Goals going forward

- City-wide payment processing system to allow customers to pay by credit card
- Utilize API between Streamline and JDE to increase efficiency of invoice processing
- Continue to evaluate rates to ensure nexus between workload and fee generation

More detailed information regarding the Fire Inspection Fee is available online at [bellevuewa.gov/city-government/departments/fire/fire-prevention/fire-inspection-fees](https://bellevuewa.gov/city-government/departments/fire/fire-prevention/fire-inspection-fees).

# INTERNATIONAL CODES

## 2018 International Codes

The International Code Council is the leading global source of model codes and standards and building safety solutions that include product evaluation, accreditation, technology, training, and certification. The Code Council's codes, standards, and solutions are used to ensure safe, affordable, and sustainable communities and buildings worldwide. The International Code Council was established in 1994, with the goal of developing a single set of national model construction codes. It brought together three different organizations that had developed three separate sets of model codes throughout the U.S.: Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International, Inc. (SBCCI).

The City of Bellevue, along with the State of Washington, adopted the 2018 International Fire Code effective February 1, 2021. The Bellevue Fire Department has created amendments to the IFC, which have been incorporated into the city's fire code. The purpose of the fire code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises and to provide safety to firefighters and emergency responders during emergency operations.





# FARS



## **FARS is an Acronym for Firefighter Air Replenishment System.**

A firefighter air replenishment system is a complete, self-contained breathing air replenishment system, permanently installed within a structure, consisting of external mobile air connection panels, interior air fill stations, an interconnected piping distribution and air storage system. A FARS is considered a life safety system. The system provides a safe and reliable source of clean breathable air to firefighters and other first responders performing fire suppression, evacuation, search and rescue, and other types of emergency response tasks at incidents requiring the use of self-contained breathing apparatus.

## **The Fire Code (2018) requires a FARS in the following buildings and structures:**

1. Buildings classified as high-rise in accordance with the International Building Code.
2. Transportation tunnels constructed in accordance with NFPA 130 or NFPA 502 that exceed 300 feet in length.
3. Underground pedestrian tunnels that exceed 300 feet in length.

Firefighter air replenishment systems allow firefighters and other first responders to replenish empty breathing air cylinders within close proximity of the incident, reducing the amount of travel distance, time and personnel needed for logistical support, to maximize firefighter safety and effectiveness.





