

# Commercial Fire Inspections Audit

September 26, 2018



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**The Commercial Fire Inspections Audit was conducted as part of the Department of Internal Audit's amended Fiscal Year 2018 Annual Audit Plan.**

### Audit Objective

The objective of this audit was to determine whether commercial fire inspections were completed in compliance with the City of Fort Worth's Fire Code.

### Audit Scope

Our audit included a limited review of commercial fire inspections for calendar years 2016 and 2017. The audit scope was limited to commercial inspections completed by the CFW's Bureau of Fire Prevention Division.

### Opportunities for Improvement

Verification that properties are entered into Firehouse software

Electronic comparison of Certificate of Occupancy to fire inspection data

## Executive Summary

As part of the amended Fiscal Year 2018 Annual Audit Plan, the Department of Internal Audit conducted a limited scope audit of Commercial Fire Inspections.

We performed audit testing to determine whether commercial fire inspections were performed at properties where Certificates of Occupancy (COs) were issued during calendar years 2016 and 2017. Based on our audit results, we concluded that 31 of the 35 sampled inspections were completed as required by City Code.

While most commercial fire inspections (88.6%) were conducted in accordance with the City Code, we concluded that enhanced data analysis could help improve the commercial fire inspection process. For example, four properties that had no inspections (and were unknown to Fire Department staff) could have been detected if CO data within the Accela software was electronically compared to inspection data within the Firehouse software. During our audit period, Fire Department staff manually compared CO and inspection records.

It should be noted that fire inspections are not required prior to the City's CO issuance. Although performing fire inspections subsequent to CO issuance could result in higher risks to the City, staff was in compliance with the CFW's Fire Code. Fire Department staff indicated that CFW fire inspectors work with building inspectors to inspect new buildings for fire and life-safety hazards (e.g., sprinklers, fire alarms, fire lanes striping, etc.) before the CO is issued.

Our audit findings are discussed in further detail within the [Detailed Audit Findings](#) section of this report.

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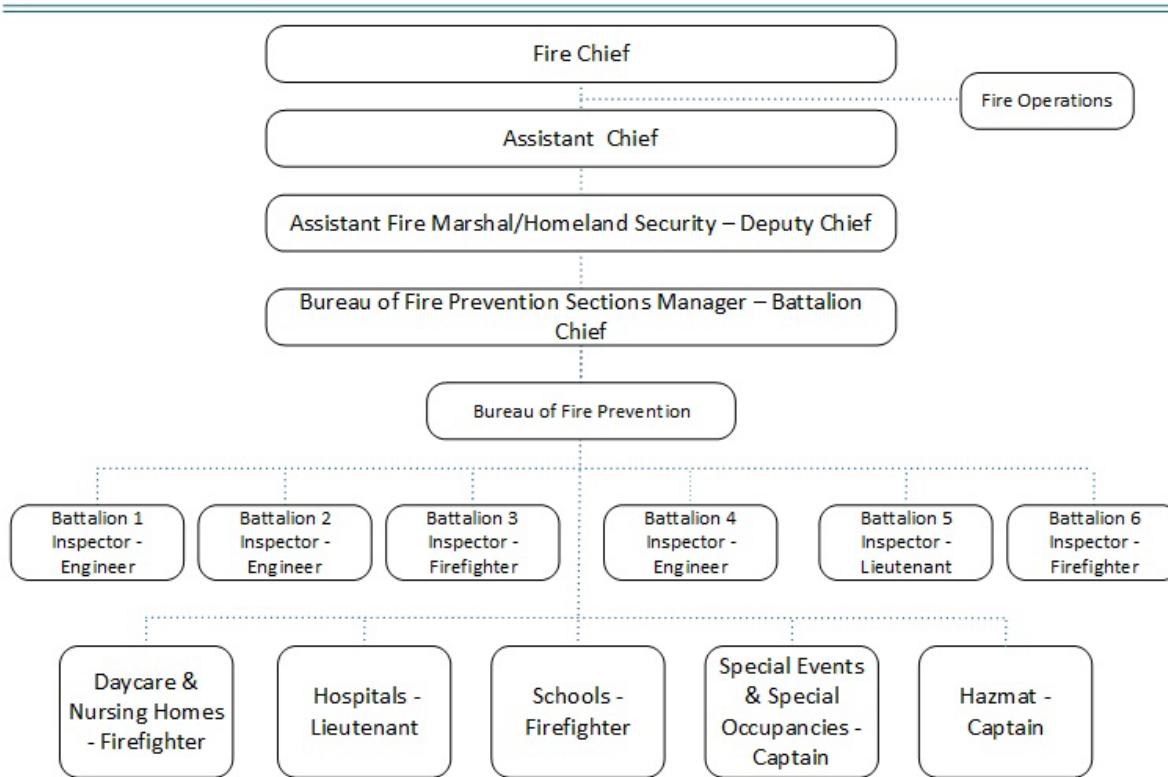
## Background

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It is the goal of the Fort Worth Fire Department to inspect all businesses in the City of Fort Worth (CFW). The Bureau of Fire Prevention (BFP) Division has 11 fire inspectors who are responsible for commercial fire inspections of buildings classified as:

- building with four or more stories;
- building with more than 200,000 square feet of floor space;
- daycare and nursing home facilities with occupant loads of over 100 people;
- hospitals;
- public assembly occupancies with an occupant load over 200 people; or,
- other occupancies under special circumstances.

As noted in the following diagram, the Bureau of Fire Prevention Division has six battalion inspectors assigned to the more complexed structures listed above. In addition to the six battalion inspectors, one inspector is assigned to daycare/nursing home inspections, one inspector is assigned to hospital inspections, one inspector is assigned to school inspections and two supervisors oversee responsibilities of inspectors. There were over 18,364 assigned building inspections, with 2,533 assigned to the Bureau of Fire Prevention Division. Inspections for buildings/structures not classified in the preceding list are performed by Fire Operations under the supervision of battalion inspectors. The battalion inspectors act as a support mechanism for Fire Operations inspections when issues with non-compliance are discovered.

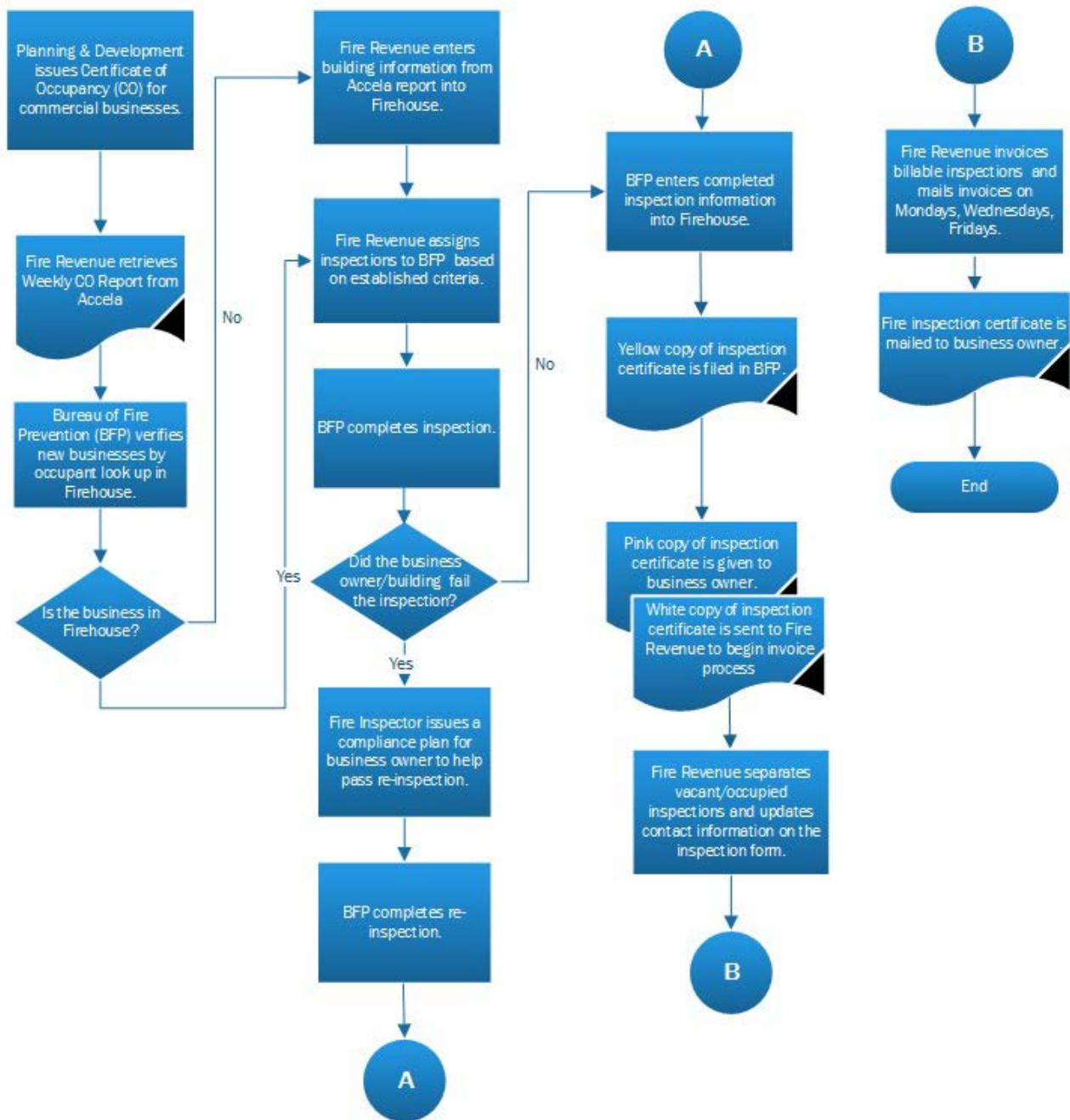


Source: Bureau of Fire Prevention



The CFW's local fire code conforms to the International Fire Code, by requiring annual re-inspections, once an initial inspection is completed. The Fire Department uses Firehouse software to schedule and assign inspections, invoice property owners and track revenue.

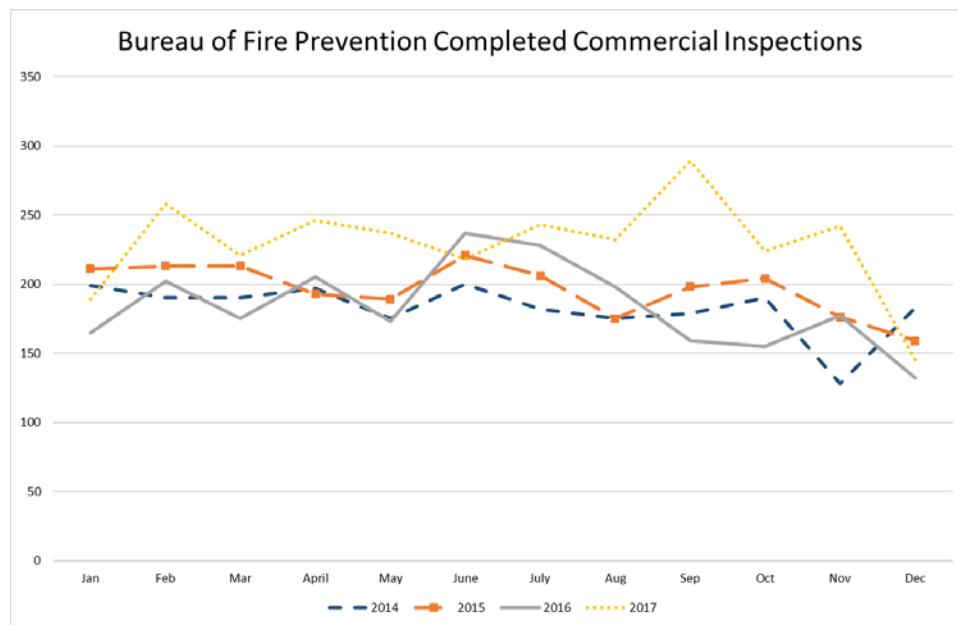
## Commercial Fire Inspections Process



Source: Auditor - generated



The following chart and table show the number of completed inspections performed by the Bureau of Fire Prevention from CY2014 through CY2017.



Month	Year			
	2014	2015	2016	2017
Jan	199	211	165	189
Feb	190	213	202	258
Mar	190	213	175	221
April	197	193	205	246
May	175	189	173	237
June	200	221	237	218
July	182	206	228	243
Aug	175	175	198	232
Sep	179	198	159	289
Oct	190	204	155	224
Nov	128	176	177	242
Dec	183	159	132	145
<b>Totals</b>	<b>2,188</b>	<b>2,358</b>	<b>2,206</b>	<b>2,744</b>

Source: Firehouse Software



## Objective

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To determine whether commercial fire inspections were completed in compliance with the City of Fort Worth's Fire Code.

## Scope

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Our audit covered the period of January 1, 2016 through December 31, 2017. Our audit was limited to new commercial inspections completed by the Bureau of Fire Prevention Division.

Re-inspections, inspections assigned outside of the Bureau of Fire Prevention as well as fire inspection revenue were not included in the audit scope.

## Methodology

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To achieve the audit objective, the Department of Internal Audit performed the following:

- interviewed key personnel within the Bureau of Fire Prevention Division and Fire Administration to understand current business processes;
- reviewed Local and International Fire Codes;
- reviewed Local and International Building Codes;
- selected and reviewed COs issued in CY2016 and CY2017 for commercial buildings classified as institutional, education or industrial;
- reviewed fire inspection data stored within the Firehouse software; and,
- evaluated internal controls related to commercial fire inspections.

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.



## Detailed Audit Findings

### 1. Property records for four of 35 commercial properties were not entered into Firehouse.

Bureau of Fire Prevention Standard Operating Procedures state that commercial buildings shall be inspected once per calendar year. The Fire Department utilizes Firehouse software to track properties that are due for inspection. However, we identified four properties that were not entered into Firehouse.

Based on our audit testing, COs were issued on August 30, 2017 for four TCU properties. However, the Firehouse software did not contain a record for the four properties because the properties were classified as residential. As a result, inspections were not scheduled.

Since occupants are allowed on premises without an inspection, buildings that have not been inspected could create a high risk for fire hazards, possible injury or death. Additionally, there is a possibility of negative media coverage should a fire occur.

**Recommendation 1:** *The Fire Chief should require that fire inspection data for the four TCU-area properties be researched, fire inspections conducted, and occupant records entered in Firehouse, as deemed appropriate.*

**Auditee Response:** Fire concurs with the recommendation. The four TCU-area occupancies have been inspected and the Firehouse records have been updated accordingly. The subject occupancies included are:

- 3428 Pond Drive (047755), completed inspection on 7/28/18.
- 3516 Pond Drive (047758), completed inspection on 6/26/18.
- 3624 Pond Drive, (047764), completed inspection on 7/31/18.
- 3500 Pond Drive, (047756), completed inspection on 7/25/18.

**Target Date:** Completed

**Responsibility:** Not Applicable

### 2. The Fire Department's process, for identifying properties due for inspections, is ineffective.

The fire inspection process currently requires a Fire Captain to manually review the weekly CO Report. Verification is then made by searching for the occupant record in the Firehouse software.

We concluded that CO and fire inspection data does not have an interface between the Accela (software where CO data is stored) and Firehouse software. As a result, the current process requires manual effort that is time consuming and prone to human error. There is also a higher risk that properties could be overlooked and not entered into Firehouse for subsequent inspections. The development of an interface between the two aforementioned software would have detected the deficiency noted in Finding 1.

Section MEA01.03 of the Control Objectives for Information and Related Technologies (COBIT) states that data should be collected from defined and automated processes, and the data should be assessed for purposes of accuracy in reporting and data analysis.



**Recommendation 2:** *The Fire Chief, in conjunction with the Chief Technology Officer, should consider an interface between the Accela and Firehouse software systems and the generation of exception reports to identify properties for which fire inspections have not been completed as required.*

**Auditee Response:** Fire concurs with this recommendation. ITS is aware of this recommendation as well and will be working with Fire to look at developing this interface. Fire is also in the process of looking at replacement systems for Firehouse, so depending upon the timing of procurement, it might be more appropriate for the interface work to begin once a new system has been selected for replacing Firehouse.

**Target Date:** End of FY19

**Responsibility:** ITS and Fire



## Acknowledgements

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The Department of Internal Audit would like to thank the Fire Department for their cooperation and assistance during this audit.