CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Office of the City Auditor

Report to the City Council
City of San José

FIRE DEVELOPMENT SERVICES: STAFF RESOURCES AND PROCESS EFFICIENCIES WILL HELP TO REDUCE BACKLOG

Report 20-03
August 2020

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CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Office of the City Auditor
Joe Rois, City Auditor

August 21, 2020

Honorable Mayor and Members
Of the City Council
200 East Santa Clara Street
San José, CA 95113

Audit of Fire Development Services: Staff Resources and Process Efficiencies Will Help to Reduce Backlog

The Fire Department's Development Services Division within the Bureau of Fire Prevention is responsible for ensuring new construction complies with the City's fire safety code. Fire staff review plans for new development or tenant improvement projects to check that sites have reliable access for emergency vehicles, sprinkler systems have sufficient water pressure for fire suppression, alarm systems are well-positioned to detect and alert inhabitants to hazards, exits are easy-to-find, and other safety requirements are met. During construction, Fire staff inspect building sites to ensure that they are built according to the approved plans and safe for occupancy.

From the customer's perspective, Fire inspections are among the last sign-offs required prior to completing the project. As such, delays in the Fire plan review and inspections process can lead to delays in opening a business or residents occupying their homes. The objective of this audit was to review the timeliness, efficiency, and consistency of fire safety code compliance for new construction.

Finding 1: Increased Development and Staffing Shortage Led to a Backlog. Since 2019, Fire has faced a major backlog in fire systems plan review and inspections. We found:

- Plans have waited months prior to staff review and average wait times for fire systems inspections peaked at three to five weeks.
- This backlog appears to be a result of an influx in permit applications in early 2019, compounded by staff vacancies.
- Fire has recently contracted for additional peak staffing services to help staff work through the plan review and inspections backlogs.

RECOMMENDATIONS

To help reduce the current backlog and prepare for future influxes in development, Fire should:

→ Adopt a peak staffing strategy, potentially with inspector-only positions to allow more time for plan review by engineers

Finding 2: Further Process Improvements Can Help Reduce Plan Review Workload. Additional staff time and resources for plan review will help to reduce the backlog. Further improvements can help limit the number of plan resubmittals, making more efficient use of staff time. We found:

- As a result of the backlog, the median turnaround time for fire systems plan review increased to around 20 working days. Fire aims to have a two-week, 10-working day turnaround.
- Some plans spend a lot of time sitting "on the shelf" before an engineer can begin review. This backlog is compounded by resubmittals resulting from incomplete plans.
- Fire Development Services' website can offer more organized, current, and concise resources to guide customers.

RECOMMENDATIONS

To encourage submission of complete plans and reduce the number of plan resubmittals, Fire should:

→ Use intermediate staff to review smaller, more routine plans for completeness at intake

→ Update its website with more organized and current resources for customers

Finding 3: Fire Can Better Support Customers to Reduce Inspection Wait Times and Re-inspections. Wait times for inspections scheduling has also increased, peaking at over 30 days for sprinklers and over 20 for alarms. We found:

- Because Fire requires multiple, sequential inspections, the effects of these delays tend to accumulate, as delays in the first inspection can cause delays in the final inspection.
- Additionally, any re-inspections due to site unpreparedness or noncompliance need to be rescheduled, extending construction timelines for the customer.
- Implementing process improvements to reduce re-inspections and ensure customer preparedness will improve customer service, reduce overall workload, and lessen development delays.

RECOMMENDATIONS

To increase the efficiency of the inspections process, Fire should:

→ Pilot combination inspections and provide inspectors mobile devices to use in the field

→ Limit staff time at unprepared sites by incentivizing customers to cancel inspections and providing clear guidance to staff

→ Improve the customer experience by pursuing online scheduling, posting expected wait times online, or resolving call routing issues

Finding 4: A Quality Assurance Program and Standardized Training Would Support Consistency in Staff Comments. Although most customers rated staff knowledge and expertise highly, some expressed concerns about consistency among staff. We found:

- Currently, the Bureau does not have a formal system for quality assurance in plan review to make sure that comments are complete and consistent.
- A quality assurance program like the one used in the Bureau's annual (non-development) fire and life safety inspection program would help ensure staff interpret and apply code consistently.
- Additionally, Fire Development Services does not have a standardized training program; new staff have received different training and support depending on the senior engineer they work under.

RECOMMENDATION

To ensure consistency in how plan reviews and inspections are conducted, Fire should:

→ Develop a formal quality assurance system

→ Standardize their training program

→ Create resources to guide staff through common processes for plan review and inspections

Finding 5: Fire Management Does Not Currently Have Easy Access to Workload and Performance Data. The City's permitting system (AMANDA) has several preconfigured reports pertaining to Fire Development Services. We found:

- Fire management does not currently have easy-to-use reports that show project progress, assignment, distribution of staff hours, project turnaround times, and backlog. However, this data could be made available through AMANDA.
- Staff do not track hours consistently and AMANDA does not have a mechanism to readily identify unscheduled inspections.
- Additionally, inaccuracies in the AMANDA reports on workload and cycle times for inspections and plan review misrepresent performance measures.

RECOMMENDATIONS

To support management assessment of staff-level workload and project progress, Fire should:

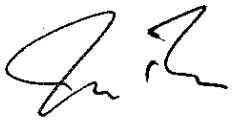
→ Implement guidelines for consistent data entry

→ Work with the Information Technology Department to improve report tools

→ Revise Division-level performance measures on inspection and plan check cycle times

This report has 14 recommendations. We plan to present this report at the September 1, 2020 City Council meeting. We would like to thank the Fire Department for their time and insight during the audit process. The Administration has reviewed the information in this report, and their response is shown on the yellow pages.

Respectfully submitted,



Joe Rois
City Auditor

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Appendix B

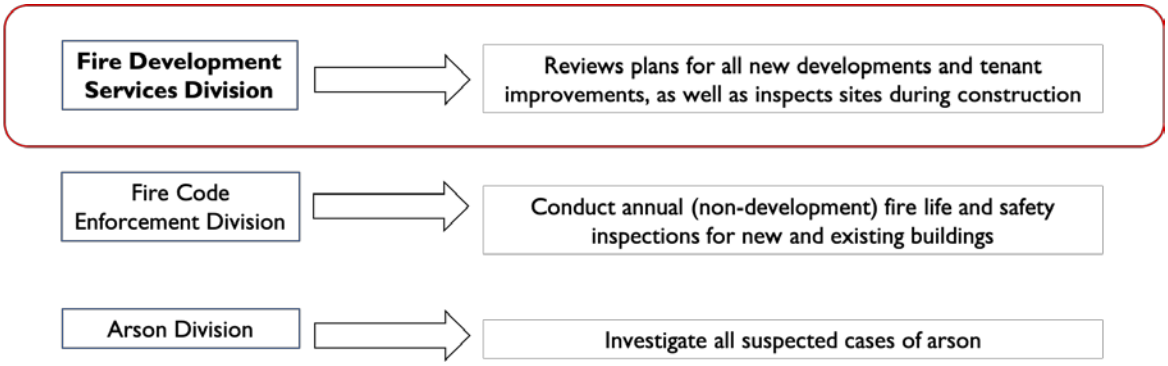
Table of Exhibits

Background

The San José Fire Department's mission is "to serve the community by protecting life, property, and the environment through prevention and response." The Bureau of Fire Prevention contributes to this mission through public education and outreach services; investigation of fires to determine cause and origin; and code compliance activities, such as plan review and inspection.

The Bureau of Fire Prevention is divided into three divisions: Development Services, Code Enforcement, and Arson. The Development Services Division reviews plans for all new developments and tenant improvements, and inspects sites during construction to ensure buildings meet fire safety requirements. The Code Enforcement Division (the non-development program) conducts annual fire life and safety inspections for existing buildings, such as those used for public assembly or education, multifamily residences, and high-rise buildings. The Arson Division investigates all suspected cases of arson. This audit reviews the work of the Development Services Division. See Exhibit 1 below.

Exhibit 1: The Bureau of Fire Prevention Is Divided Into Three Divisions



Source: Auditor analysis of departmental organization chart and Adopted Operating Budget.

California and San José Fire Code

State and local laws govern fire safety requirements. The California Fire Code, part of the California Building Standards Code, is developed through the collaboration of the Office of the State Fire Marshal, the California Building Standards Commission, and other departments and offices. The California Building Standards Code is updated and published every three years. With every three-year update, San José adopts this code, along with local amendments, as Municipal Code Section 17.12 (San José Fire Code). The most recent changes to the San José Fire Code were adopted in November 2019 and became effective for new developments starting January 2020.

Under the San José Fire Code, there are two types of permits:

> *(1) Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by the California Code Section 105.6 for either:*
>
> > *1.1. A prescribed period. If no period is prescribed, the period shall be for one year.*
> >
> > *1.2. Until renewed or revoked*
>
> *(2) Construction permits. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by the California Fire Code Section 105.7.*

Fire's Development Services Division focuses on construction permits.

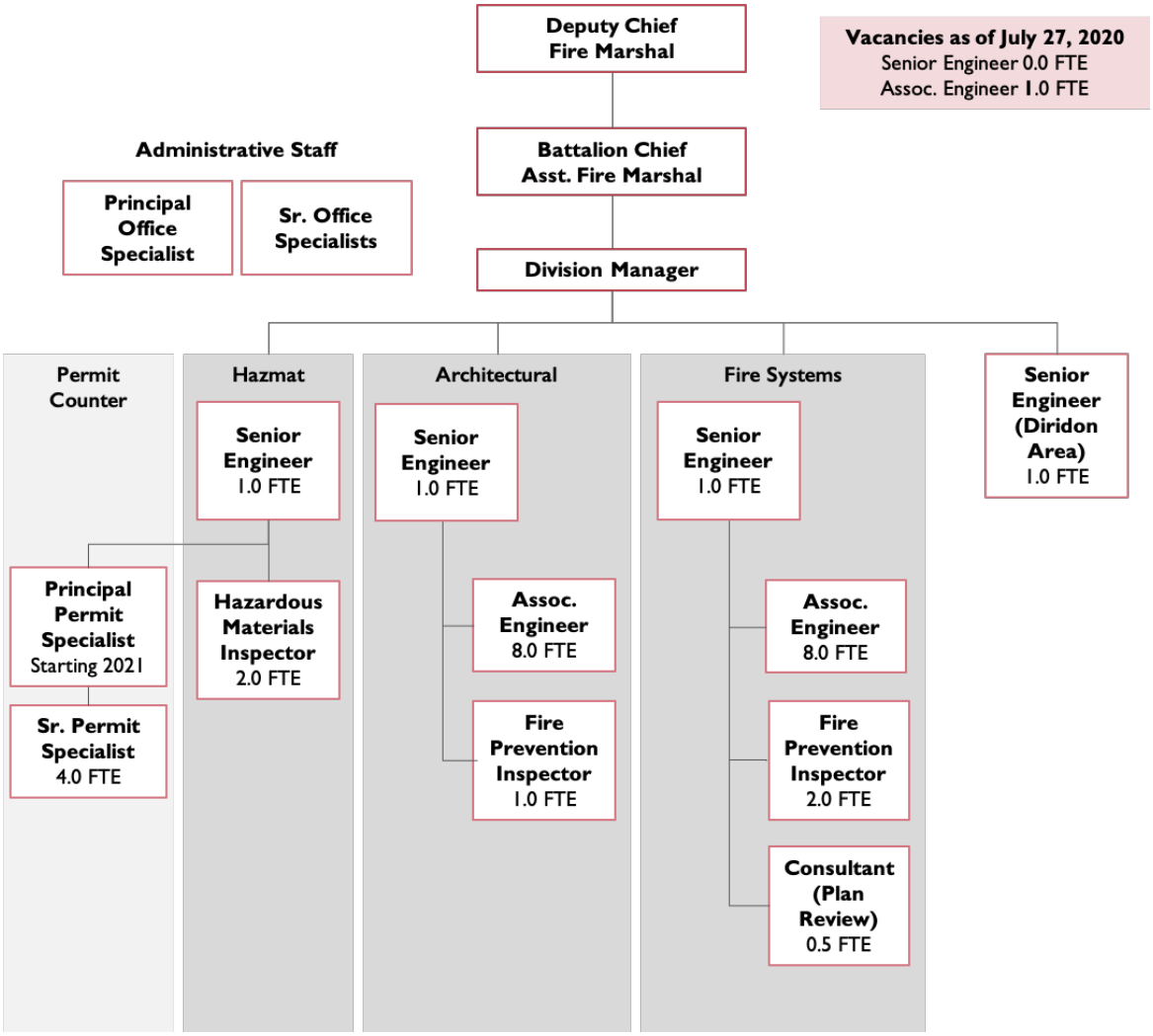
Fire Development Services is Organized by Discipline

Fire's Development Services Division is organized into three workgroups, which roughly correspond to different engineering disciplines:

- The architectural engineering workgroup works on building plans, conducting architectural plan reviews and life safety inspections, which usually serve as the final sign-off on all fire inspections.
- The fire protection systems workgroup conducts plan review and inspections for deferred systems permits (which come after building plans have been approved) such as sprinklers and fire alarms.
- The hazardous materials (hazmat) workgroup conducts plan reviews and inspections for permits related to storage of hazardous materials, including explosive, corrosive, and combustible materials, as well as moderately or highly toxic gases. This workgroup also reviews highly technical tools and processes, including but not limited to semiconductors, generators, and carbon dioxide systems.

Each workgroup is supervised by a senior engineer (see Exhibit 2).

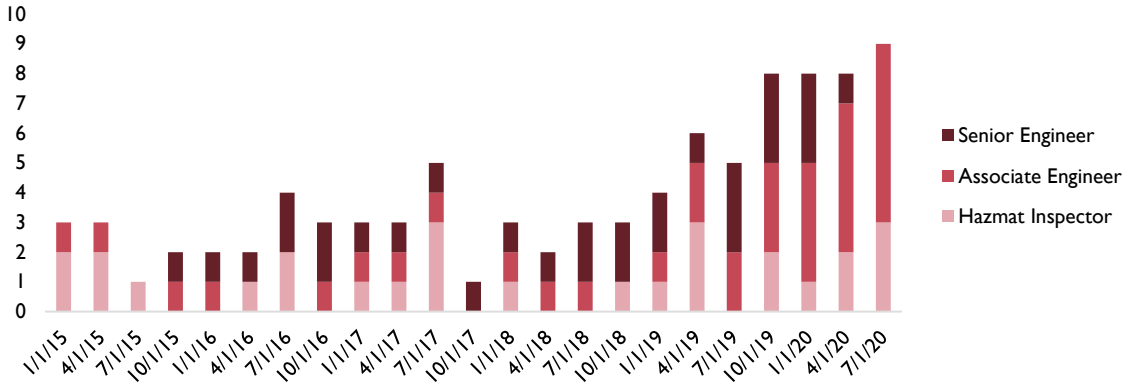
Exhibit 2: Fire Development Services Organizational Chart



Source: Auditor analysis based on organizational chart dated November 2019, staff interviews, FY 2020-21 Adopted Operating Budget, and PeopleSoft data as of July 27, 2020. Note that some positions are partly funded through the Fire Development Fee Program.

On July 1, 2020, six of the 20 engineering positions within Fire Development Services were vacant. By the end of July 2020, Fire reduced the number of vacancies to just one engineering position. However, as shown in Exhibit 3, vacancies have been an ongoing concern.

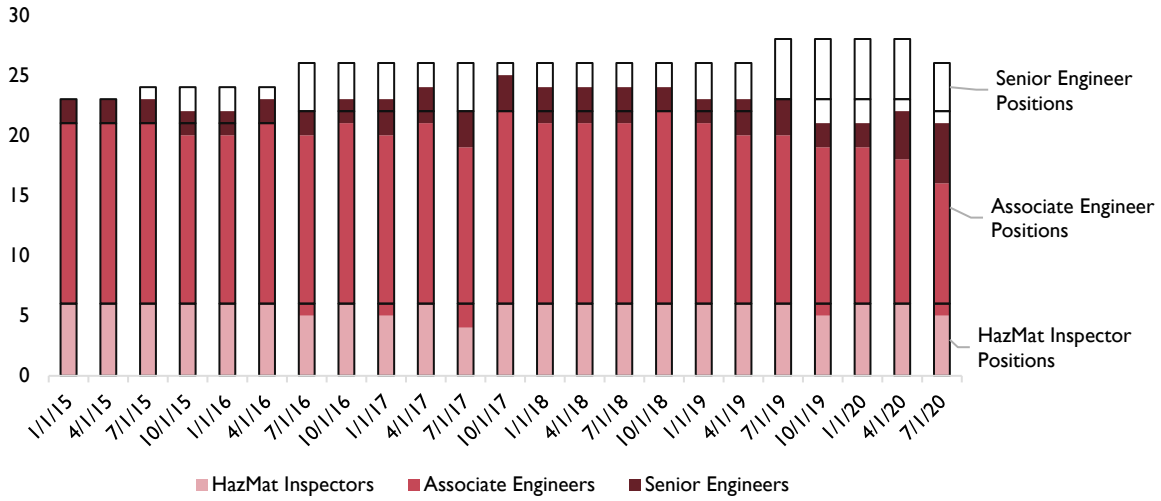
Exhibit 3: Fire Code Compliance Vacancies Have Been a Concern



Source: Auditor analysis of PeopleSoft data. Data represents vacant positions at the first day of each quarter. Note that hazmat inspectors shown may be in the Development Services Division or Code Enforcement Division.

This growth in vacancies occurred despite increases in authorized positions (see Exhibit 4). Fire management has had difficulty filling vacancies, as discussed further in Finding 1.

Exhibit 4: Despite More Positions, Fire Prevention Had Fewer Active Staff



Source: Auditor analysis of PeopleSoft active employee data for the first day of each quarter and Adopted Operating Budgets for each fiscal year. White space indicates vacancies.

Note that hazmat inspectors shown may be in the Development Services Division or Code Enforcement Division.

Program costs, such as staffing, are funded by revenues from the Fire Department Development Fee Program. The 2020-21 Operating Budget allocated $9.2 million in total expenditures under the Fire Development Fee Program, $7.4 million of which is Fire staffing.[1]

The Permitting Process Ensures New Developments Meet Fire Safety Requirements Through Plan Review and Inspections

The Fire Development Services Division is one of the City's development service partners, which also include the Planning and Building Divisions of the Department of Planning, Building and Code Enforcement (PBCE), and the Department of Public Works. The development service partners support the City's permitting process, which ensures that new developments meet safety standards.

Within the permitting process, Fire Development Services staff ensure that new construction complies with the San José Fire Code, requiring fire plan review and inspections prior to final building permit approval and certification of occupancy.

Fire Development Services staff work with a wide array of customers throughout the development process who have varying levels of development experience, including:

- Residential property owners, business owners, developers, or residents with projects;
- Architects, designers, or sub-contractors who draft fire systems for plan review; and
- General contractors or sub-contractors throughout inspections.

PBCE Routes Initial Plans to Fire for Review

During the planning phase of new development, shown in Exhibit 5, customers submit applications to PBCE. PBCE staff route these plans to relevant development services partners, including the Fire Department.

Fire staff review the preliminary architectural plans for safety items related to the project site, such as access for emergency vehicles and fire hydrants. This initial review is high-level and does not include features such as alarms or sprinklers. Fire staff update a template memo (including items like vehicle and hydrant access), which they route to PBCE. Information from Fire's memo is included within the 30-day letter that PBCE sends to the customer with initial comments.

Once the customer receives approval for entitlement, the customer submits a building permit application to PBCE. During the building permit process, PBCE staff route building plans to Fire. Fire staff conduct a second architectural plan

[1] Overhead and shared resources among other departments account for the remainder.

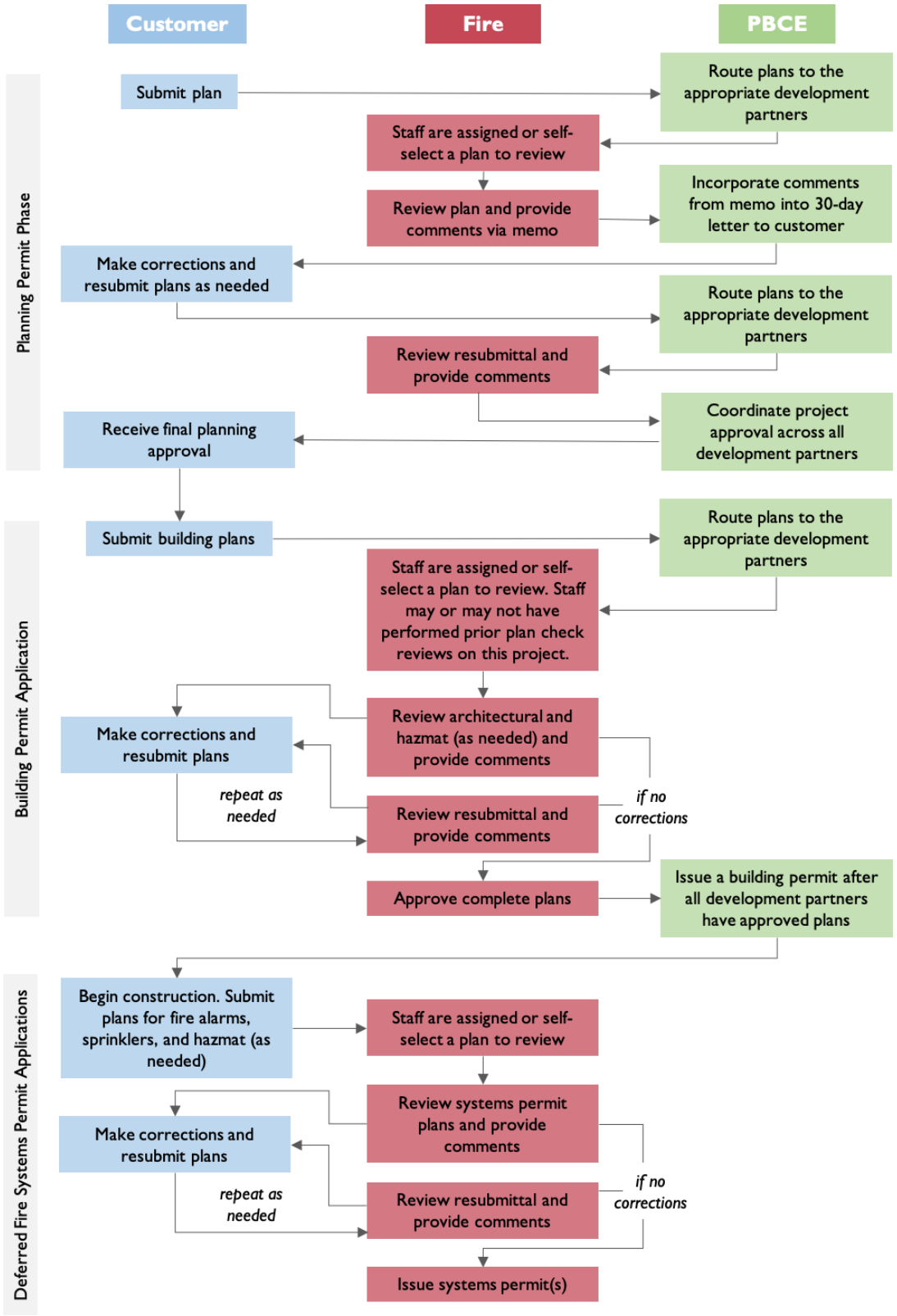
review to consider fire life safety issues associated with the building, such as building access and egress. They also identify necessary "deferred" permits, such as whether a development will require a permit for fire systems (sprinklers, alarms) or hazardous materials (hazmat). These are referred to as "deferred" permits because they come after the initial building permit is approved.

With the Start of Construction, Customers Submit Plans for Deferred Fire Engineering Permits to Fire Directly

After the building plans are approved, customers apply for deferred fire systems permits with Fire directly. For these, engineers review detailed systems plans to check that the systems meet specific safety requirements—for example, staff check that sprinkler systems have sufficient water pressure and coverage for fire suppression, that alarm systems are well-positioned to detect and alert inhabitants and emergency services to hazards, and that pipes have earthquake bracing. Some buildings require additional permits for hazardous materials. For those, staff check that areas with hazardous materials have appropriate signage, ventilation, and detection systems.

Fire staff either approve plans on first submission or return the plans to the customer with comments, requiring a corrected plan resubmittal. Fire plan review can involve multiple resubmittals (as shown in Exhibit 5).

Exhibit 5: Fire Plan Review Spans Planning and Construction Phases



Source: Auditor analysis based on staff interviews and 2016 Management Partners' report *City of San José Development Services Cost Recovery Analysis, Process Improvements, Calculation of Unearned Revenues, and Refund Processing.*

Plans for smaller projects may be reviewed "over the counter," in the City's permit center. A plan reviewer and customer discuss the plans for about an hour and the reviewer can approve the plans that session. For some larger projects, Fire staff may meet with the customer (along with other development service partner staff) to do a preliminary review of the proposed plans.

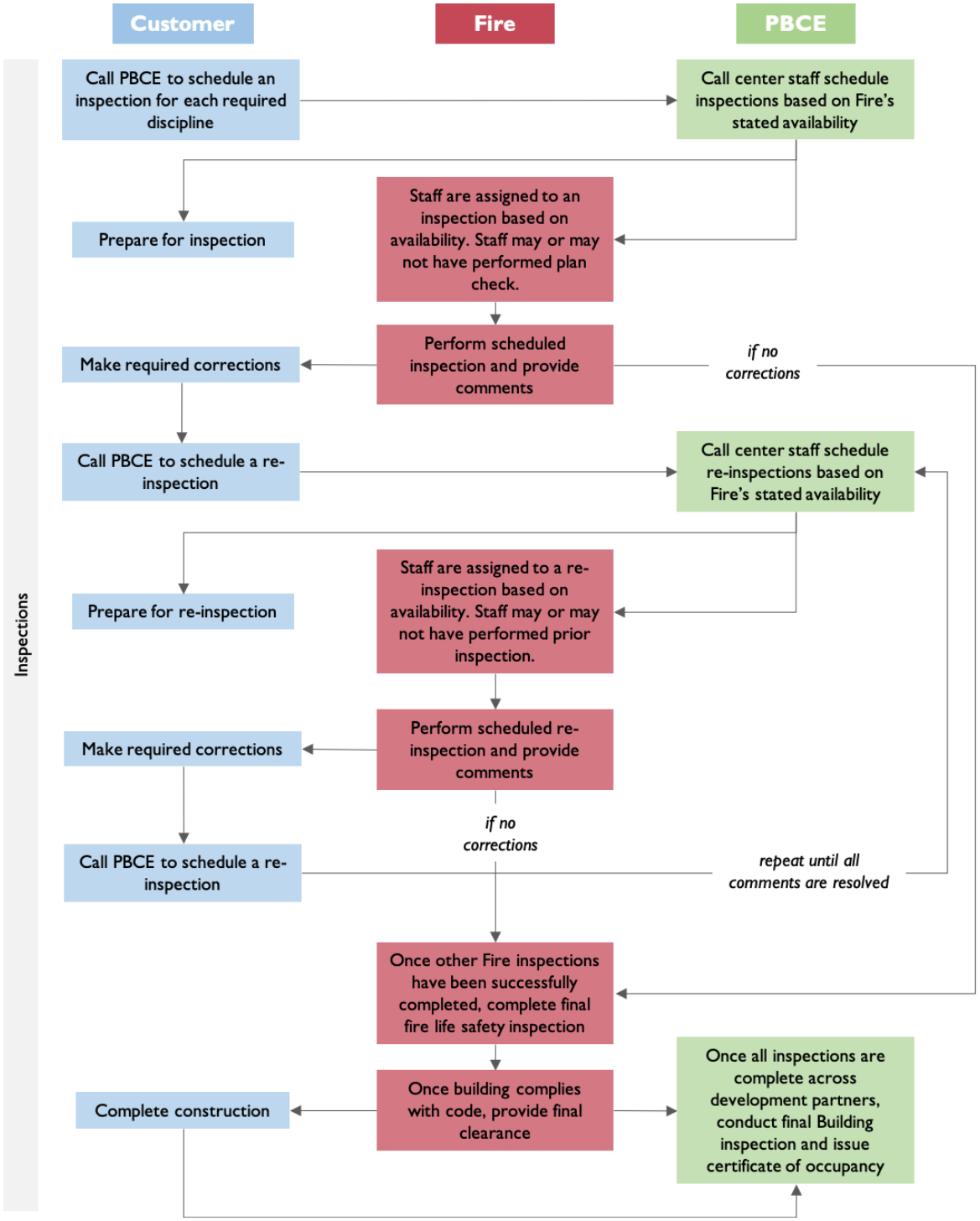
Not all projects complete every step of this process. Depending on the expected changes to an existing building, a project may not need a building permit and may just need a deferred permit. For example, a property owner updating the fire alarm system in an existing building would just need a fire systems permit.

Fire Inspections Occur Throughout Construction

After fire systems plans are approved and systems installation begins, customers schedule inspections for each permit through the PBCE call center. Inspections generally occur throughout the construction process. For example, an inspector must check fire sprinkler piping before and after the ceiling is installed. If a customer is not prepared for their inspection or does not pass, a re-inspection is necessary.

Once all the fire inspections are cleared by Fire and across all other development partners, the Building Division of PBCE conducts the final building inspection and issues a certificate of occupancy. Some fire inspections occur at the very end of the construction process, just before the final inspection, so delays at this point can delay a project at a critical phase before opening. In some cases, Fire signs off on a temporary certificate of occupancy so that a building can be occupied by tenants before the final building inspection. Overall, the process varies in length depending on the complexity of a project. See Exhibit 6.

Exhibit 6: The Inspections Process Varies in Length Depending on Project Complexity



Source: Auditor analysis based on staff interviews and 2016 Management Partners' report *City of San José Development Services Cost Recovery Analysis, Process Improvements, Calculation of Unearned Revenues, and Refund Processing*.

Earlier Consultant Report Made Recommendations to Improve Fire Development Services

In November 2016, Management Partners reviewed the City's development process and provided recommendations to improve cost recovery and efficiency.[2] Among their recommendations were that the development services partners should:

- Fill existing staff vacancies,
- Develop staffing level standards based on workload,
- Expand the use of combination inspections,
- Reduce processing times for plan check by closely managing turnaround times by individual and project type, and
- Improve efficiency by equipping all inspectors with mobile technology.

Fire has been working on implementing a variety of process improvements, including those recommended by Management Partners. These recommendations, and Fire's process improvements, are further addressed throughout this report.

[2] http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2292&meta_id=606812

Finding I Increased Development and Staffing Shortage Led to a Backlog

Summary

Since 2019, Fire has faced a major backlog in plan review and inspections. As discussed in later Findings, plans have waited months prior to staff review and wait times for inspections peaked at three to five weeks. According to Fire staff and customers, the worst delays have been for alarms and sprinklers. The backlog was the result of an uptick in fire systems permit applications in early 2019, which was accompanied by staff vacancies and the end of an overtime pilot. While it appears that Fire has made progress on reducing the backlog—inspection wait times have decreased and fewer plans are pending approval—the median wait time for plan review remains high. We recommend that Fire adopt a peak staffing strategy to prepare the Development Services Division for future influxes in development. Additionally, we recommend that Fire add inspector-only positions to allow more time for plan review by engineers to help reduce the current backlog.

Incoming Fire Systems Permit Applications Increased as the Development Services Division Struggled to Fill Vacancies

As described in the Background, engineering staff in Fire Development Services review and approve plans for new developments to ensure that construction will comply with the fire code and be safe for use.

Customers submit fire systems plans for review along with their fire systems permit application. Permit specialists in Fire complete plan intake, taking the application and plan documents, and recording relevant information into the City's permitting system (AMANDA). The plans then wait on a shelf until engineering staff can review them. After the plans have been approved, the customer can begin systems installation and inspections.

Fire Systems Permits for New Development Fluctuate

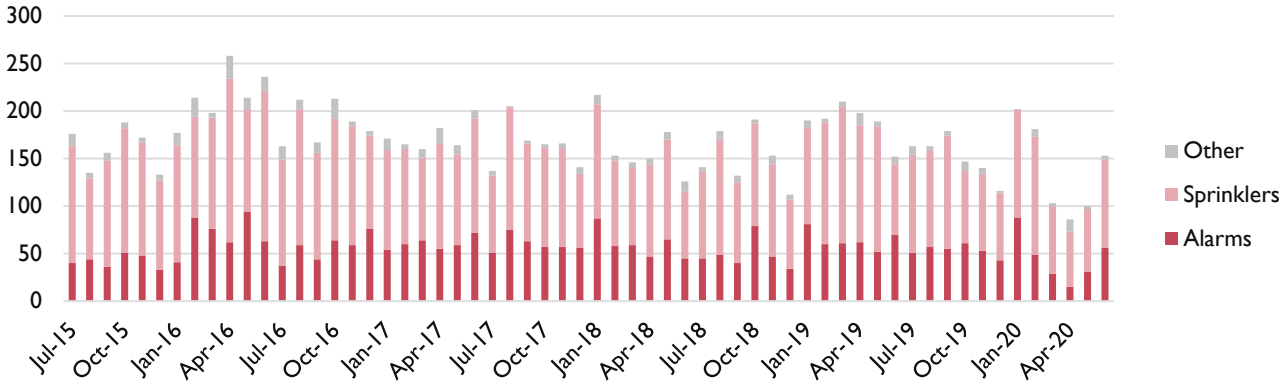
Incoming fire systems permit applications fluctuate with development patterns in the city. In the past five fiscal years, Fire received up to 30 permit applications for fire systems (sprinklers, alarms, variances[3]) on a given day,

Fire receives an average of **six** fire systems permit applications per day, but has received **up to 30** on a busy day.

[3] Variances are exceptions to code requirements. If a project does not meet code requirements, the customer has the option to apply for a variance and propose alternate means of mitigations. Engineers in Fire Development Services review proposed variances and justifications to determine whether a development may safely implement an alternative mitigation.

averaging six permits per day and 170 per month. As shown in Exhibit 7, Fire sees periodic peaks in permit intake.

Exhibit 7: Fire Receives Around 100 to 250 Fire Systems Permits Applications per Month

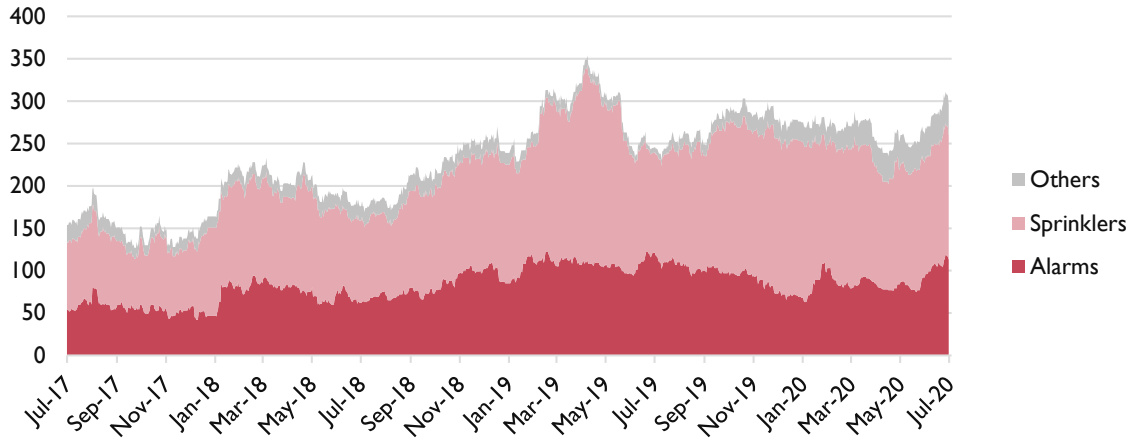


Source: Auditor analysis of AMANDA in-dates for permits with intake dates from July 1, 2015 through June 30, 2020. Other incudes variances, as well as less common fire engineering permits such as those for occupant load reviews or firefighter breathing air replenishment systems.

Fire Systems Permit Applications Grew While the Development Services Division Had a 15 Percent Engineering Vacancy Rate

In Spring 2019, there was a notable peak in the number of fire systems engineering plans in-queue (i.e., submitted but not yet approved or cancelled) as shown in Exhibit 8. In early 2019, Fire received an above-average number of applications for five consecutive months. At the same time as the increased permit submittals, Fire had a 15 percent vacancy rate among engineers. Plans started getting backed up; while the number of incoming applications decreased, the number of plans that needed to be reviewed increased. Fire staff were able to reduce that backlog somewhat over the summer, but vacancies increased and the backlog remained high.

Exhibit 8: As Applications Built Up, Delays in Reviewing Led to a Backlog of Plans In-Queue, Spiking in Spring 2019

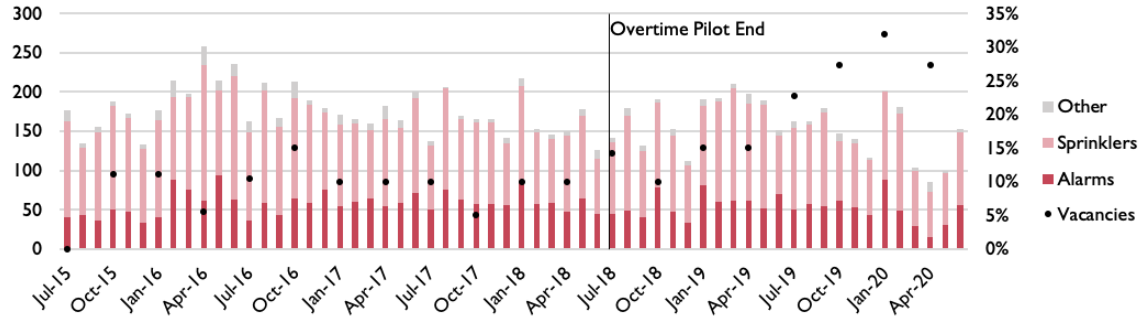


Source: Auditor analysis of AMANDA data. Graph displays the net number of plans within a discipline, based on the application intake date and the issue date (if applicable), on a given day. Does not adjust for interim review by contractors. Backlog is shown for all plans incoming as of July 2015. Other includes variances, which may be reviewed by either discipline.

Note: Auditors excluded some applications that appeared to be inactive (based on limited processes after intake), though there may be other inactive plans included.

It is notable that while Fire has experienced peaks in permit applications in the past (mid-2016 and early 2018), they did not experience the same backlog in the number of plans in-queue. At those times, Fire had either higher staffing rates among engineers or available paid overtime hours (see Exhibits 9 and 10). The paid overtime hours were part of a temporary pilot that ended in 2018-19.[4]

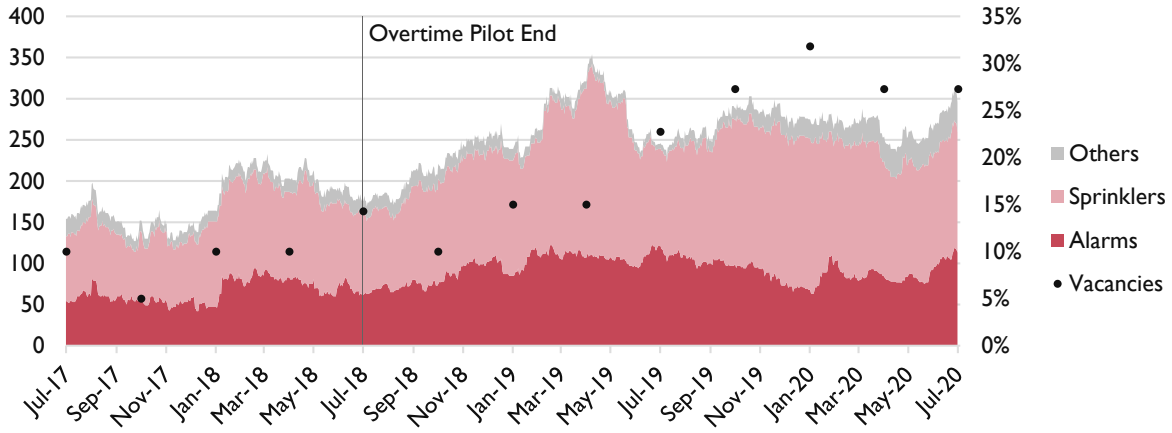
Exhibit 9: During Past Peaks in Development, Fire had More Staff Resources to Help Address the Influx



Source: Auditor analysis of AMANDA permitting data and PeopleSoft vacancy data. Other includes variances. Vacancies shown are for associate and senior engineers on the first day of each quarter.

[4] We should note that while Fire staff charged around 2,500 hours of annual overtime during the pilot, engineers are salaried employees. We do not have comparable data to show additional time worked beyond a regular 40-hour workweek after the end of the pilot. Fire management has expressed that the extent of overtime required to overcome the backlog with limited staffing is unsustainable.

Exhibit 10: Past Peak Periods Did Not Experience the Same Level of Backlog in Plan Review Workload



Source: Auditor analysis of AMANDA permitting data and PeopleSoft vacancy data. Graph displays the net number of plans within a discipline based on the application intake date and the issue date (if applicable). Does not adjust for interim review by contractors. Backlog is shown for all plans incoming as of July 2015. Others include variances, which may be reviewed by either discipline.

Note: Auditors excluded some applications that appeared to be inactive (based on limited processes after intake), though there may be other inactive plans included. Vacancies shown are for associate and senior engineers on the first day of each quarter.

The Development Services Division Experienced High Turnover and Had Trouble Filling Engineering Vacancies

Fire management report that they have had challenges with turnover and difficulty hiring staff to fill vacancies.[5] For example, a recruitment process in mid-2019 for two associate engineers resulted in just one hire, though the position was left open for 28 days; typical City hiring processes leave the position open for 10 days. Fire management have explored several avenues to address the ongoing staffing need:

- The Development Services Division is undergoing a class compensation study (underway at the time of the audit), which may inform changes to associate and senior engineer compensation (i.e., whether staff pay should be set hourly or salaried, and at what rate) and job class qualifications and duties.
- The Bureau of Fire Prevention has added sworn, non-engineering staff from the Bureau's Code Enforcement Division's annual inspections team to inspect new development, including for off-hour or overtime inspections. Fire is also working to cross-train these inspectors to do fire

[5] In particular, Fire management described 100 percent turnover in senior engineers in the last three years. Since 2015, there have been more engineers leaving Fire per year and the engineers generally leave with less tenure. Fire management reported that it has been difficult to find qualified applicants with fire systems experience. This concern was also expressed by a neighboring jurisdiction. In their 2016 report, Management Partners also noted that "in the current development market, obtaining the services of qualified contract inspectors is becoming more difficult."

systems inspection (like alarms and sprinklers) in addition to life safety inspections, which more closely resemble annual inspections.

- Fire is expanding the use of retiree-rehires to include engineering staff.

Expanded, Strategic Use of Peak Staffing Will Help Reduce the Current Backlog and Prevent Future Backlogs

PBCE has a master contract for peak staffing that allows Fire to hire consultants for plan review. In Fall 2019, Fire started using PBCE's master contract for peak staffing (i.e., consultants for plan review services). Under that contract, the Division had just one consultant on plan reviews. Management attributed limited peak staffing in part to limitations of the contract, specifically, provisions that consultants must work on-site at City Hall and receive a daily rate for eight hours of work, or an hourly rate for part-time work.

To expand potential peak staffing resources, Fire has entered two new contracts to include inspectors (in addition to plan reviewers) and allow remote plan review, such that contractors do not need to work from City Hall.

Most cities we benchmarked use consultants to support regular and peak workload. Management Partners similarly stated that San José's development services need "established strategies to expand [staff] capacity, including using temporary or contract workers, and in some cases, expanding permanent staff." Expanding the peak staffing contract to include inspections as well as plan review should help Fire address future influxes in workload, without creating a need to transition or cut back on staff during slowdowns in development. It may also help to reduce the current backlog. The Fire Department should continue to evaluate the efficacy of peak staffing resources and adopt a peak staffing strategy to prepare for future upticks in permit applications.

Fire Development Services Engineers Conduct Both Plan Review and Inspections

Associate engineers conduct both plan review and inspections, alternating days in which they work in the field inspecting sites and when they are in the office reviewing plans. Fire reports that its current staffing model is useful because it allows engineers to have a better idea of how plans translate to real-world structures and enables Fire management to "flex" staff where needed; however, it also means that staff time spent on one task takes away from available time for another. Engineers may spend up to three days a week in the field.

Fire's staffing model is unique. In other jurisdictions, and other departments in the City, different positions approve plans and inspect sites. Other jurisdictions also require different minimum qualifications for plan reviewers and inspectors. Whereas Fire's associate engineers must have a bachelor's degree related to fire protection engineering and three years of fire protection engineering experience,

mid-level fire inspectors in other jurisdictions can meet minimum qualifications with:

- a bachelor's degree in fire protection engineering with one year of fire system installation or repair experience,
- a bachelor's degree in engineering or a related field (fire protection, fire science, etc.) and three years' experience performing technical code inspections, code enforcement, or fire protection reviews,
- an associate's degree in fire protection, engineering, or related field and one year of experience performing technical code inspections, code enforcement, or fire protection reviews, or
- one year of experience performing all phases of journey-level fire suppression systems installation and repair, with completion of a four-year, state-accredited fire sprinkler fitter apprenticeship program.

Similarly, San José Building inspectors have different qualifications from plan reviewers. Building inspectors must have a high school degree with four years of construction experience (college coursework can be substituted for up to two years of experience). Associate engineers working in the Building Division, by contrast, must have a bachelor's degree and four years' experience in civil engineering with at least two years' experience in building design and construction.

Fire management reports that they are working on changing their engineering position criteria to better match the work. The unique nature of the position has made it difficult to find qualified applicants with fire systems experience.

Additional Inspectors Will Give Engineers More Time for Plan Review

Given the difficulty Fire has had in hiring engineers, and based on Fire's supplementary use of sworn, non-engineering staff for inspection of new development, we recommend that Fire adopt a peak staffing strategy, which may include hiring or contracting additional inspector-only positions with different minimum qualifications than associate engineers. This would free up time for engineers to complete plan review, while allowing Fire to maintain its flexible staffing model, as engineers could still do both plan reviews and inspections as needed.

Recommendation #1: The Fire Department should adopt a peak staffing strategy, which may include:

a) **The use of consultants for specified projects, project-types, or engineering disciplines to allow flexibility to staff up during peak development periods, and**

b) **Inspector-only positions, with different minimum qualifications than associate engineering positions, to allow more time for plan review by engineering staff.**

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Finding 2 Further Process Improvements Can Help Reduce Plan Review Workload

Summary

Internally, the department aims to have a two-week (10-working day) turnaround for plan review. As a result of the backlog, turnaround times for fire systems plan review have increased to around 20 working days. While additional staff time and resources for plan review are needed to reduce the backlog, further improvements can help limit the number of plan resubmittals, making more efficient use of staff time. We recommend that Fire improve customer resources to help ensure plans meet City requirements on first submittal and implement a process to review smaller, more routine plans for completeness at intake.

Plan Review Turnaround Times Increased to Over a Month

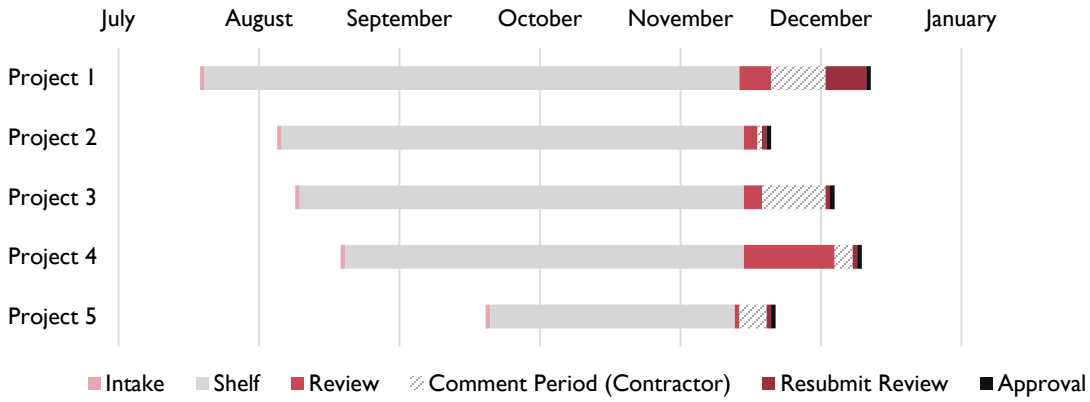
The department aims to have a two-week (10-working day) turnaround for plan review. As a result of the backlog in fire systems plan review, however, turnaround times between an application submission and an engineer's first review (when the plan is "on the shelf") have increased.

The median number of working days "on the shelf" increased from seven days in 2017-18 to 20 days in 2018-19. In the first half of 2019-20, the number of days to first review decreased overall, to 18 working days, but increased for sprinklers to 23 working days.[6] As shown in Exhibit 11, some sprinkler plans waited months before receiving staff review.

In 2018-19, the median days that passed before an engineer could review plans increased to **20**, double the 10-day turnaround target.

[6] Fire systems includes alarms, sprinklers, and variances. Medians presented exclude over-the-counter review, which have a day or less turnaround.

Exhibit 11: Some Sprinkler Plans Waited Months Before Receiving Staff Review



Source: Auditor analysis of AMANDA process dates for five sample projects that were removed from the shelf over the course of the audit.

Note that the comment period indicates the time when staff have returned the plans to the contractor for corrections prior to approval.

Notably, the time spent "on the shelf" is substantially more than the time spent under review, indicating that the backlog in plan review is largely due to difficulty getting to projects timely rather than the review itself taking a long time.

Fire Is Working on Improvements to the Plan Review Process to More Efficiently Distribute Work

At the time of the audit, Fire generally followed first-in, first-out model for plan review staff assignment.[7] When staff finished a plan review, they would go to the shelf to select the next plan in the queue. This meant that some smaller projects, which would otherwise be reviewed quickly, would have to wait on other, larger projects submitted earlier.

Recently, Fire management have started implementing a new system of staff assignment for plan review with the aim of more efficiently distributing work. Senior engineers now assign the plans to staff based on the plan's approximate size and scope and staff's experience and workload.

Identifying Incomplete Plans at Intake Can Help Reduce Backlog For Smaller, Less Complex Development Projects

Fire can further reduce wait times for plan review by using intermediate staff, such as a permit specialist or technician, to help identify incomplete plans at intake, particularly for smaller, more routine, and less complex plans.

[7] Key economic development projects – identified by the Office of Economic Development and development services partners as supporting City goals and objectives for housing and employment development – received some priority.

According to Fire staff, there is not currently a process to ensure plans are complete at intake, so some incomplete plans sit on the shelf, creating unnecessary delay to the customer and increasing the backlog. In some instances, City staff have advised customers to submit incomplete plans because that would get them into the backlogged queue. Upon reviewing the incomplete plans, an engineer would send comments to the customer, requiring a resubmittal. In 2018-19, Fire engineering staff reviewed nearly 1,100 fire systems resubmittals.[8]

Using intermediate staff to identify incomplete plans would reduce workload for the engineers, allowing them to get to other, complete plans sooner. Fire management report that they are working on developing a checklist for staff intake to help identify plan completion and are considering what intermediate staff would best fit this role. Such a checklist could incorporate items such as whether plans include relevant equipment lists and calculations.

Recommendation #2: To prevent unnecessary delays for development, and to reduce the workload for engineering staff, the Bureau of Fire Prevention should use intermediate staff (such as a permit specialist or technician) to review initial plans for completeness prior to intake.

Fire Can Better Communicate Expectations for Plans to Reduce the Number of Resubmittals

Clarifying expectations may help customers to submit complete plans and reduce the number of resubmittals, which would help reduce turnaround times for Fire.

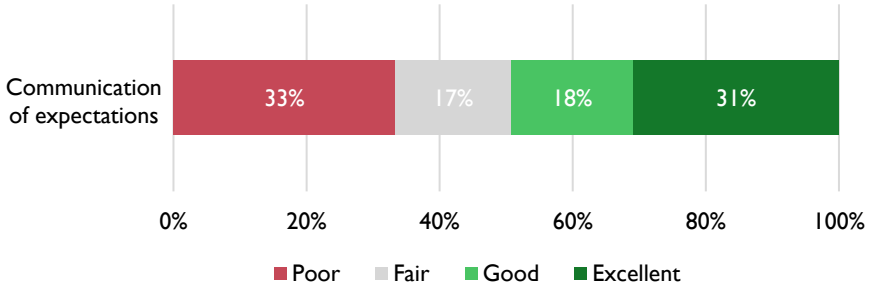
To understand the customer experience, we surveyed Fire Development Services customers about their satisfaction with fire plan review and inspections, including topics such as timeliness, consistency, and quality of communication.[9] A third of responses (69 out of 207) reported that Fire's communication of expectations was "poor," as shown in Exhibit 12.[10] In an open-ended response, one customer suggested providing handouts to set clear expectations and help ensure plans pass review.

[8] For context, engineers completed around 2,100 fire systems plan reviews in 2018-19. Fire staff reviewed additional plan revisions for changes not required by engineers during plan review (for example, to account for changes to underlying building structures or update calculations based on how the building is constructed). Overall, the number of resubmittals is in line with past years.

[9] Customers who had applied for Fire permits in 2018-19 received email invitations to complete the survey (581 total), with a follow-up reminder email before the survey close. 94 customers responded to the survey for a 16 percent response rate. An overview of the survey results can be found in Appendix B.

[10] Customers were able to respond to each question based on the disciplines they worked with (i.e., sprinklers, alarms, architectural, and hazmat). For this reason, there may be multiple responses by individual customers for each dimension within the survey (e.g., timeliness, expertise, communication). See Appendix B for details.

Exhibit 12: About Half of the Responses Rated the Communication Of Expectations For A Successful Plan Review Or Inspection As "Poor" Or "Fair"[11]



Source: Auditor-conducted survey of Fire Development Services customers. Question posed was: *Thinking about the service you have received from SJFD in the past year, how well did staff* ***communicate what was expected*** *for a successful plan review/inspection?*

Providing clear expectations is also important because the City has some different requirements than other jurisdictions. For example, upon adoption of the 2019 Fire Code, San José also adopted local amendments that go beyond the state code, including regulations around sprinklers and emergency responder radio communications. According to City staff, San José Fire is generally more stringent than neighboring jurisdictions.

Management Partners had similar concerns about customer communications, recommending the development partners:

> *Ensure that all application requirements are up to date and clearly set forth on the department website and in printed materials.*
>
> *Ensure that the Partners' website and handouts adequately address the various special requirements that may be mandated for projects.*

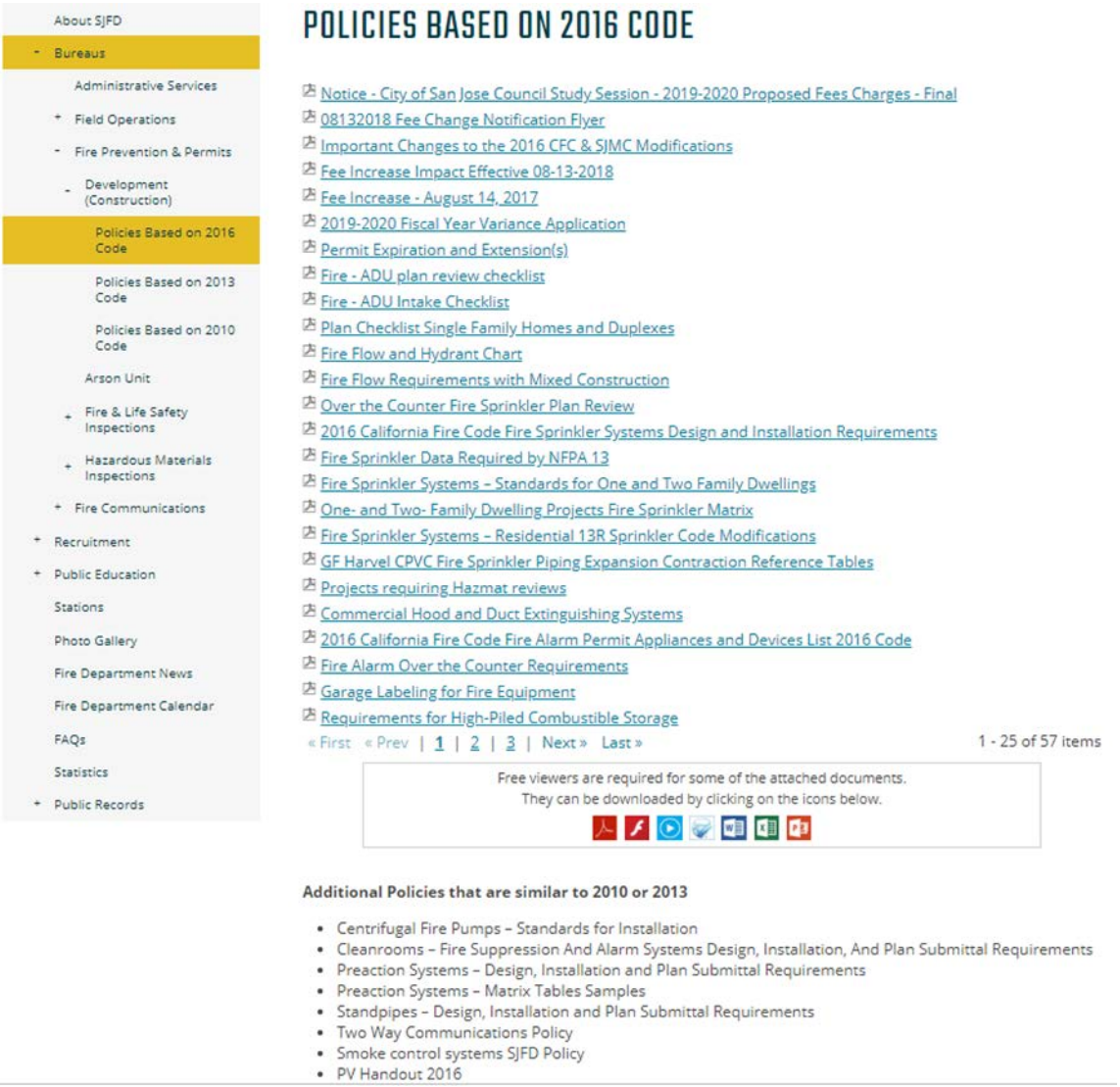
Organized Online Resources Can Help Customers Navigate Code Requirements

As of June 2020, Fire's website did not have much information or policies regarding the new requirements resulting from the 2019 Fire Code changes. Rather, at the time, most of the recent policies available pertained to the 2016 Fire Code, and the home page for Fire Prevention and Permits linked to policies based off the 2010 Fire Code.

[11] This figure represents all responses pertaining to communicating expectations. It does not reflect the number of customers who participated in the survey, as an individual customer could provide responses for the communication of expectations for up to four disciplines.

Additionally, Fire's policies were not listed in a logical order (see Exhibit 13).[12] The page lists 57 links on three separate pages. Without a clear organization system, it may be difficult for customers to find information relevant to them.

Exhibit 13: Fire Development Services' Online Resources Can Be Improved



Source: Screenshot of the Fire Prevention and Permit webpage as of March 2, 2020.

[12] Fire has since re-ordered policies in alphabetical order.

Fire Offers Some High-Level Resources for Customers

Many of Fire's resources for customers are lengthy documents filled with dense text. Simplifying some of these resources would make it easier for customers to navigate requirements.

The Accessory Dwelling Unit (ADU) Universal Checklist provides a good example of a development handout that clearly outlines requirements in a simple and concise fashion (see Exhibit 14). The checklist walks customers through six "yes" or "no" questions that determine what next steps are necessary, such as installing sprinklers or completing additional paperwork. Fire's section of the checklist is only one page and provides links to additional instructions. Checklists like this for other project types can help customers understand fire safety requirements for different kinds of projects or permits.

Exhibit 14: The Fire Safety Section of the ADU Universal Checklist Helps Customers Understand Requirements

BULLETIN #210 - ADU Universal Checklist Page 4

SECTION D. FIRE SAFETY & EMERGENCY ACCESS

Your ADU project will be reviewed for compliance with the California Fire Code (CFC) so that projects are built for safety and ease of access during an emergency. For questions relating to fire requirements and safety, call the City's Fire Prevention Bureau: 408-535-7750

QUESTION	YES	NO
14. Fire sprinklers. Is the primary residence protected by fire sprinklers? **> Outcome:** If yes, the ADU must have a fire sprinkler system.		
15. Fire sprinklers and attached ADUs. Is the project an attached ADU greater than 500 square feet AND does the overall gross floor area with the main unit exceed 3,600 square feet? **> Outcome:** If yes, the entire house and ADU are required to be protected with a fire sprinkler system.		
16. ADU Address. Does the ADU have its own address and is the address visible and legible from the street? Premises Identification guidelines: www.sanjoseca.gov/Home/ShowDocument?id=9323. On the Site Plan for plan submittal, show the address location on the primary dwelling unit and on the ADU. **> Outcome:** If no, please complete Form #302, found at: www.sanjoseca.gov/home/showdocument?id=25943		
17. ADU Access. Is the distance from the street curb of the lot to all portions of the proposed ADU no greater than 200 feet as measured along a minimum 3-foot clear path to all sides of the ADU? On the Site Plan for plan submittal, show the distance along the minimum 3-foot clear path from the front property line to the ADU's farthest exterior side or projection, whichever is farthest. **> Outcome:** If no, your project may require a Fire Variance that entails additional safety measures. Call 408-535-7750 for direction. Find the Variance application at: www.sanjoseca.gov/Home/ShowDocument?id=9343		

Source: Screenshot of ADU Universal Checklist

Other Cities Provide High-Level Resources and Guidance

Other jurisdictions provide various resources to communicate expectations for developers. For example:

- Sacramento's contractor information packet provides a brief overview of their administrative requirements, such as inspection scheduling expectations and what permits are relevant to the Fire Department. Sacramento also provides a Final Occupancy Checklist, which lists 24 of the most commonly missed items.
- Long Beach has concise plan review checklists online for alarms and sprinklers that are each less than three pages long.
- San Diego separates guidance in information bulletins and technical bulletins. Information bulletins seem to be more high level, such as how to obtain an alarms permit, while technical bulletins seem to discuss more specific topics like fire alarm wiring and control panels.

Similar resources would allow Fire to better communicate expectations to customers. Fire management reports that they plan to organize resources on the website by project type or purpose, similar to PBCE.

Recommendation #3: To make it easier for customers to navigate the permitting process, the Bureau of Fire Prevention should update the website such that information is current and organized by discipline or customer type, and create simplified, concise resources for customers, similarly by discipline or project type.

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Finding 3 Fire Can Better Support Customers to Reduce Inspection Wait Times and Re-inspections

Summary

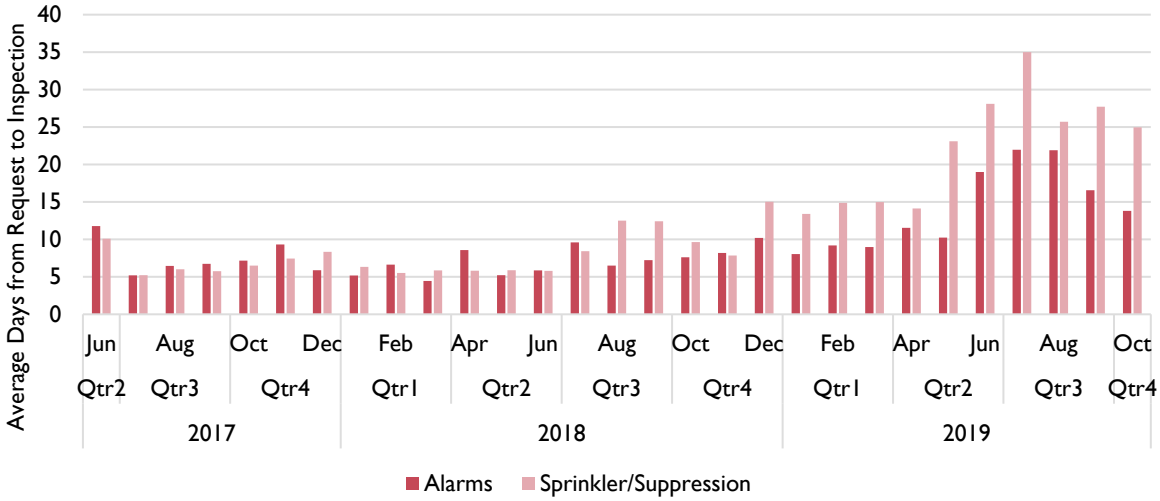
Wait times for inspections scheduling also increased, peaking at over 30 days for sprinklers and over 20 for alarms. Because Fire requires multiple, sequential inspections, the effects of these delays tend to accumulate, as delays in the first inspection can cause delays in the final inspection. Additionally, re-inspections due to unpreparedness or noncompliance need to be rescheduled, extending construction timelines for the customer. While additional staff time and resources will help to reduce the current backlog, implementing process improvements to reduce re-inspections and ensure customer preparedness will improve customer service, reduce overall workload, and lessen development delays. We recommend that Fire explore combination inspections to reduce the number of inspections needed. We also recommend Fire incentivize customers to cancel inspections at unprepared sites and establish expectations for how inspectors treat unprepared sites. Lastly, Fire should make the inspection scheduling process more customer-friendly by allowing online scheduling for Fire inspections, posting expected wait times and policies online, and resolving call routing issues with the PBCE call center.

Wait Times for Inspections Caused by the Backlog Have Created Problems for Customers and Fire

Associate engineers do on-site inspections two to three days per week, for six to seven hours per day. They spend the remaining work time on plan reviews. Supplementary sworn staff spend all their time on inspections. With current staffing, around 200 hours are available for fire inspections per week.

With the increase in permit applications in early 2019, the need for inspections increased later in the year. Limited flexibility in the total number of hours available for inspection – caused in part by the staffing concerns discussed in Finding 1 – resulted in longer wait times for inspections scheduling. As shown in Exhibit 15, average wait times for fire systems inspections grew from around a week to over a month from early 2018 to the summer of 2019.

Exhibit 15: Wait Times for Fire System Inspections Peaked at Three to Five Weeks



Source: Auditor analysis of AMANDA inspection record data.

Combination Inspections and Mobile Devices Can Improve Efficiency of Inspections

With such high demand and long wait times for inspections, it is important to make the most of available inspection time. Fire safety inspections are specialized according to discipline: life safety, alarms, sprinklers, and hazardous materials. Customers schedule inspections for each of the disciplines separately, although there is some overlap between the different types. Separate life safety inspections are required as a final sign-off. Additionally, Fire management have prioritized cross-training staff in different disciplines to allow more flexibility in staff resources (i.e., an engineer or inspector could conduct an alarms, sprinkler, or life safety inspection, as needed).

Some Fire staff report that combination inspections, where multiple disciplines are reviewed in one inspection, could be useful for customers. Currently, Fire does not allow formal combination inspections, though some inspectors may point out a few items for other types of inspections as time allows. According to staff, the department does not offer combination inspections in part because different systems often have different contractors or sub-contractors. Additionally, staff would likely require more inspection time to check items for multiple disciplines.

Other Jurisdictions Provide Combination Inspections

Other jurisdictions provide combination inspections that account for these issues. For example, in Sunnyvale, customers can schedule longer, combination inspections (lasting several hours or up to a whole day) so that multiple disciplines are covered. Coordination is done in advance to ensure the relevant contractors are present.

Furthermore, combination inspections can save time travel time for Fire staff and reduce wait times between inspections for the customer. In addition, combination

inspections would potentially reduce the number of re-inspections because staff would inspect items from other disciplines, such as alarms, if a customer is not ready for a sprinkler inspection.

Combination Inspections May Be Best Suited for Certain Types of Projects

In their 2016 report, Management Partners acknowledged that combination inspections would not be feasible for large, complex projects that require the specialized skills of inspectors of various disciplines. Even so, they noted that combination inspections for smaller scale projects may improve efficiency:

> *… combination inspections may be more appropriate in low-rise, multi-family and other small-scale projects. A greater use of combination inspections would provide more efficiency for the department, convenience for customers, and help with improving overall inspection timeframes.*

Other Challenges and Considerations for Combination Inspections

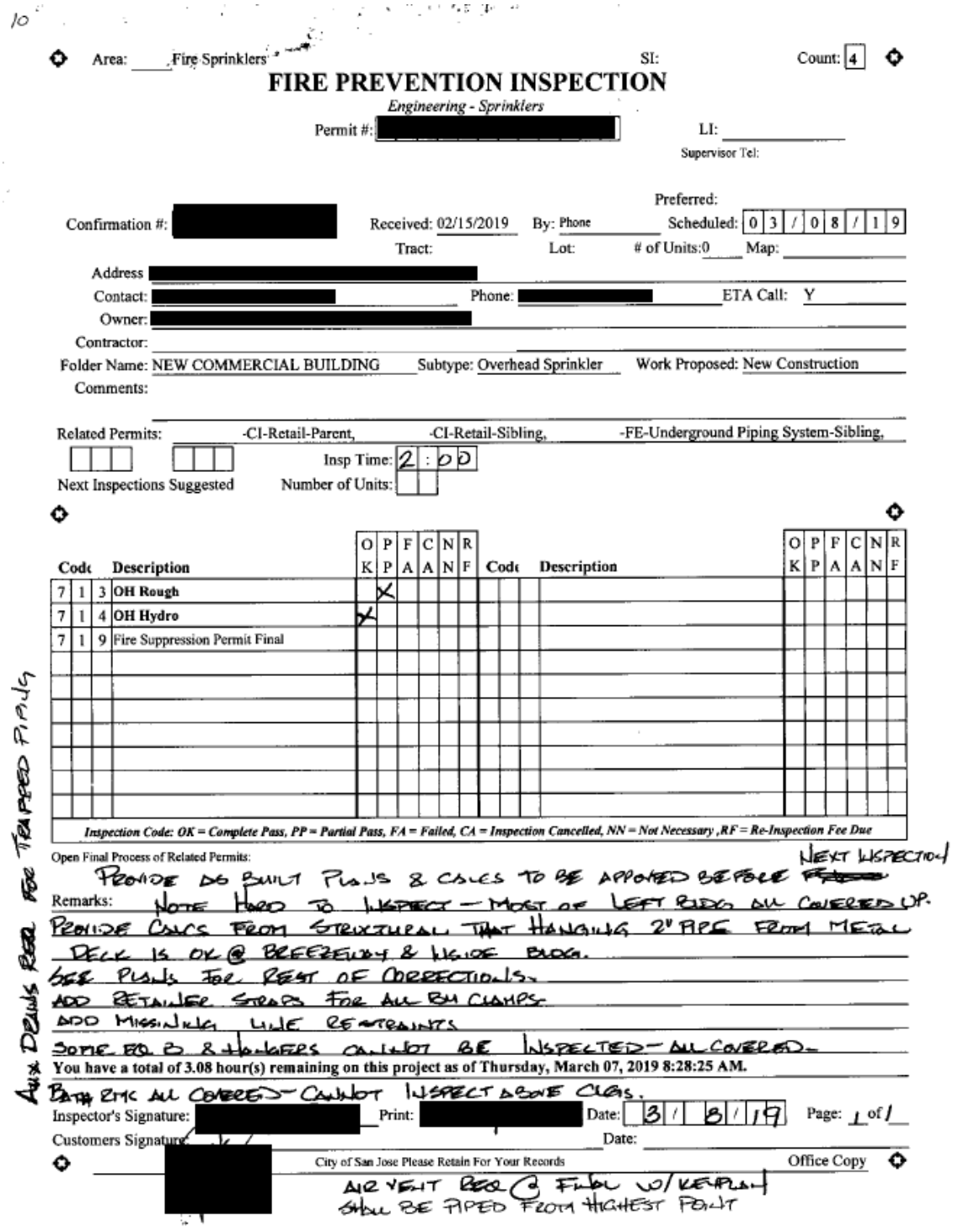
Fire management reports that their goal is to eventually have combination inspections, where at least two disciplines are reviewed at once. However, it will take time to cross-train staff to be able to provide this service. According to Fire management, 60 percent of staff are currently trained in more than one discipline; ongoing cross-training is underway. They also noted that they anticipate that combination inspections will require more time than regular inspections because more items will be reviewed. Further, Fire will need to consider how combination inspections will impact their schedule of fees and charges.

Recommendation #4: The Bureau of Fire Prevention should pilot an option for customers to schedule combination inspections, such that staff trained in multiple disciplines (i.e., alarms, sprinklers, life safety) can inspect multiple systems at one time.

Relying on Paper Inspection Records Costs Staff Extra Time

Currently, staff use paper inspection forms to take notes during inspections and require customers to have physical copies of plans on-site for staff to review. These inspection records include notes for the customer on what may be needed to pass a future inspection as well as information on the amount of time that the inspector took on the inspection. Notes on the deficiencies found during the inspection are important for staff to refer to when conducting a future re-inspection, shown in Exhibit 16.

Exhibit 16: Example Paper Form Used During an Inspection



Area: Fire Sprinklers SI: Count: 4

FIRE PREVENTION INSPECTION

Engineering - Sprinklers

Permit #: [redacted] LI:

Supervisor Tel:

Confirmation #: [redacted] Received: 02/15/2019 By: Phone Preferred: Scheduled: 03/08/19

Tract: Lot: # of Units:0 Map:

Address [redacted]

Contact: [redacted] Phone: [redacted] ETA Call: Y

Owner: [redacted]

Contractor:

Folder Name: NEW COMMERCIAL BUILDING Subtype: Overhead Sprinkler Work Proposed: New Construction

Comments:

Related Permits: -CI-Retail-Parent, -CI-Retail-Sibling, -FE-Underground Piping System-Sibling,

Insp Time: 2:00

Next Inspections Suggested Number of Units:

Code	Description	OK	PP	FA	CA	NN	RF
7 1 3	OH Rough		X				
7 1 4	OH Hydro	X					
7 1 9	Fire Suppression Permit Final						

Inspection Code: OK = Complete Pass, PP = Partial Pass, FA = Failed, CA = Inspection Cancelled, NN = Not Necessary, RF = Re-Inspection Fee Due

Open Final Process of Related Permits:

Remarks: PROVIDE AS BUILT PLANS & CALCS TO BE APPROVED BEFORE NEXT INSPECTION/ FINAL. NOTE HARD TO INSPECT — MOST OF LEFT BLDG ALL COVERED UP. PROVIDE CALCS FROM STRUCTURAL THAT HANGING 2" PIPE FROM METAL DECK IS OK @ BREEZEWAY & INSIDE BLDG. SEE PLANS FOR REST OF CORRECTIONS. ADD RETAINER STRAPS FOR ALL BH CLAMPS. ADD MISSING LINE RESTRAINTS. SOME EQ'D & HANGERS CANNOT BE INSPECTED — ALL COVERED. AUX DRAWS REQ FOR TRAPPED PIPING

You have a total of 3.08 hour(s) remaining on this project as of Thursday, March 07, 2019 8:28:25 AM.

BATH RMS ALL COVERED — CANNOT INSPECT ABOVE CLGS.

Inspector's Signature: [redacted] Print: [redacted] Date: 3/8/19 Page: 1 of 1

Customers Signature: [redacted] Date:

City of San Jose Please Retain For Your Records Office Copy

AIR VENT REQ'D FOR LOW/KEYPLAN SHALL BE PIPED FROM HIGHEST POINT

Source: AMANDA inspection record

Relying on paper inspection records can cost staff time in the field as well as administrative time in the office. Without access to online records, inspectors must contact permit center staff by phone for questions. If customers do not have hard-copy plans on site, it can be difficult or time-consuming for inspectors to complete the inspection and ensure that all requirements are met.

Scanning Paper Inspection Records May Lead to Data Inaccuracies

After the inspection, administrative staff must scan the handwritten notes into AMANDA and ensure accurate data transfer, which takes more staff time as well. Fire staff reported that imaging errors can occur when scanning inspection records and lead to inaccuracies in the data. Namely, staff noted that errors can appear in inspection hours or the results of inspections. When there are discrepancies in the inspection hours data, staff must manually change the hours.

Management Partners similarly noted the risk that handwritten scans are not accurately read by AMANDA:

> *Fire staff indicated that scans are not always accurate. For instance, the number of hours spent might be misread. Staff mentioned that only certain people in the department can fix this. This is problematic if not caught and corrected because a permit holder may be asked to pay more fees than warranted, or not charged enough if the time actually spent on the inspection exceeds the original estimate.*
>
> *These scenarios can result in inefficiencies for the staff, as well as project delays and higher costs for customers.*

Fire Development Services staff do not currently use City-issued mobile devices, but they reported mobile devices could be helpful to have access to records while out in the field. Some staff use their personal devices. Mobile devices (such as laptops or tablets) will also save staff time by reducing the need to scan documents after inspections.

Though there had been a previous budget allocation for mobile device, staff reported that they were waiting for the latest AMANDA upgrade to ensure that they bought mobile devices that are compatible with the software. Once compatibility issues are resolved, staff report they plan on moving ahead with the purchase of mobile devices.

Recommendation #5: To improve accuracy and efficiency in inspections and data entry, the Fire Department should provide mobile devices to staff conducting inspections in the field.

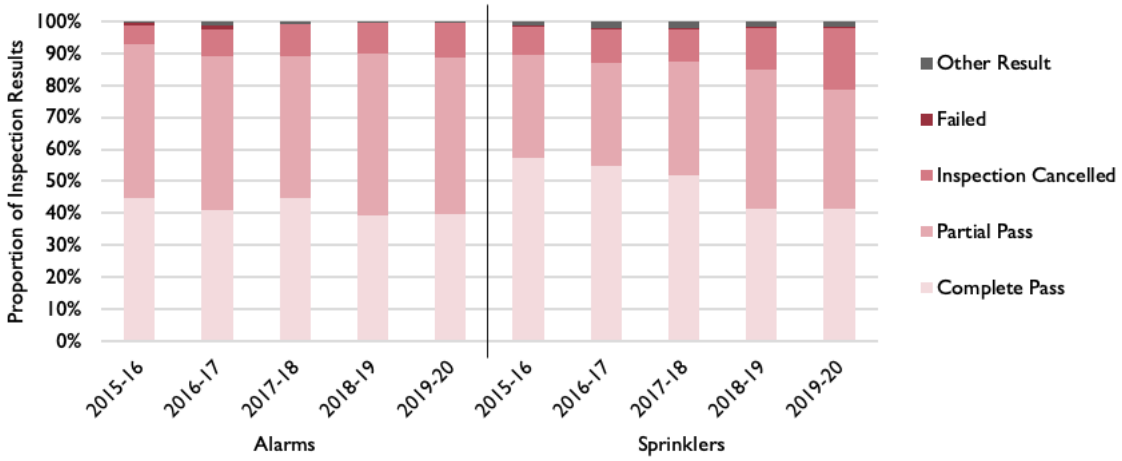
Reducing Re-Inspections Would Help Make Better Use of Limited Staff Time

Delays and long wait times associated with the backlog tend to accumulate because Fire requires at least two sequential inspections per site – at least one for the system and one for final life safety review. As a result, delay in securing the first inspection can delay the final inspection. Additionally, re-inspections due to unpreparedness or lack of compliance on the first site visit will require a later site visit, increasing the customer's wait time and inspector workload.

High demand for inspections and long wait times have compounded problems with the inspections backlog, especially for sprinklers, which require subsequent inspections at different stages of construction. Given the backlog in sprinkler inspections (four weeks during the time of the audit), customers would schedule sprinkler inspections far in advance, based on when they anticipated needing an inspection, when they may or may not be ready for an inspection. If the site is not prepared in time, it means that that time slot is not available for a prepared site and that an inspector will need to visit the same site for a re-inspection later.

From 2015-16 to the first half of 2019-20, the proportion of sprinkler inspection attempts resulting in complete pass has declined, while the proportion of partial passes and cancellations have increased.[13] Alarms have stayed about the same. See Exhibit 17.

Exhibit 17: The Number of Sprinkler Inspections Resulting in a Complete Pass Has Decreased, While the Number of Partial Passes and Cancellations Have Increased



Source: Auditor analysis of AMANDA data for fire systems permits with intake dates from July 2015 through December 2019. Very few inspections (less than 0.5 percent overall) failed – this is due in part to how staff code failed inspections, as discussed in Finding 5. Note that 2019-20 is partial year data. According to Fire staff, inspections data for the end of FY 2019-20 may not be complete due to changes in workflow following the March 2020 emergency shelter-in-place order.

[13] As described further in Finding 5, partial passes can indicate either that a site was not prepared or that it was prepared in part.

Fire's Appointment Confirmation System Helps to Ensure Customer Readiness

When inspections are primarily conducted with customers who are ready to pass, less re-inspections are necessary and valuable inspector time can be used more efficiently. During the audit, we found that some Fire staff would call customers the day prior to inspections to ensure that the customer was aware of the inspection requirements and was prepared for the inspection.

Fire has since standardized this type of appointment confirmation. This system should improve efficiency by ensuring appointments are cancelled if a contractor is not ready for the inspection. Fire management has reported some initial success in that some calls enabled staff to cancel appointments and reschedule customers who are ready. However, in some cases customers have kept appointments though the site was unprepared.

Fire Should Develop Policies to Respond to Unprepared Customers

Currently, customers do not have a strong incentive to cancel inspection appointments if they are not ready. Future appointments are several weeks away and customers must pay the full inspection fee for inspections cancelled within one business day of the appointment.

Additionally, some Fire staff give customers walkthrough consultations when customers are not ready. These walkthroughs are duplicative because the requirements are listed in the approved plan set. Furthermore, walkthroughs describing process-type information could be made available online.

Spending less time visiting unprepared sites would give Fire staff more time to work down the backlog in inspections and plan review. Customers may be more inclined to cancel appointments when they are not ready if there was a reduced cancellation fee. Eliminating walkthrough consultations may further incentivize cancellations when sites are not prepared.

Recommendation #6: To ensure inspection time is used efficiently, the Bureau of Fire Prevention should develop policies to address unprepared customers, such as:

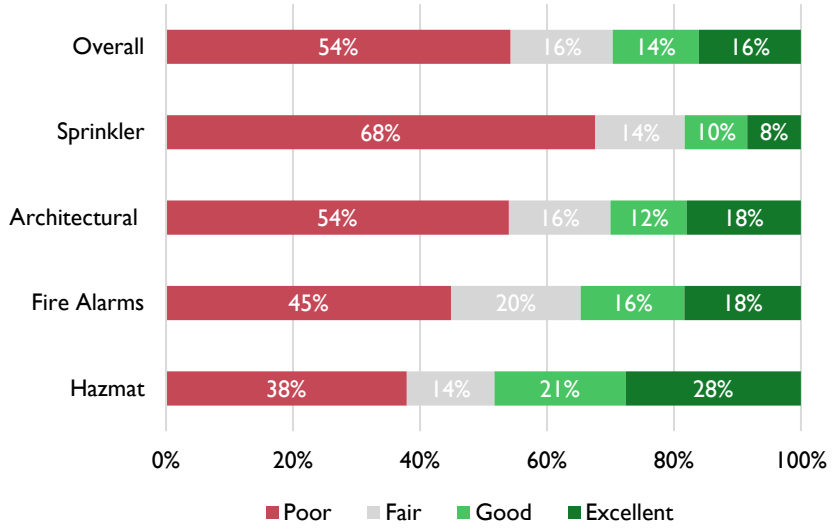
a) **incentivizing customers to cancel appointments when they are not prepared by piloting a reduced cancellation fee, and**

b) **clarifying expectations for when staff should leave a site that is not ready for a full inspection.**

Customers Are Dissatisfied with Long Wait Times and Lack of Flexibility in Scheduling

In our customer survey, 70 percent of the 199 responses rated scheduling inspections as "poor" or "fair."[14] For sprinkler inspections particularly, 48 of 71 customers who responded to the survey (or 68 percent) rated scheduling as "poor." See Exhibit 18.

Exhibit 18: Seventy Percent of Responses Rated Inspection Scheduling as "Poor" or "Fair"



Source: Auditor-conducted survey of Fire Development Services customers. Question posed was: *Thinking about the service you have received in the past year, how would you rate your experience **scheduling inspections** with SJFD?*

Fire Inspection Scheduling Is Done Through the PBCE Call Center

Although Building inspections can generally be scheduled online, customers cannot do so for Fire. Fire's customers can only schedule inspections by calling the PBCE call center. Senior engineers in Fire set and release the number of time slots for inspections and PBCE call center staff field calls and schedule inspections for Fire.

Fire allows developers to schedule inspections in one- to two-hour increments. If a development requires three hours of inspection, the customer must request either three separate inspections or an exception to have a longer inspection time. Call center staff do not have authorization to grant exceptions; they forward exception requests to Fire. Currently, Fire has senior engineers assigned to answer calls, but there have been challenges with routing. PBCE call center and Fire staff do not communicate the issue prior to the call transfer – as a result, customers

[14] This figure represents all responses related to inspection scheduling. It does not reflect the number of customers who participated in the survey, as an individual customer could rate inspection scheduling for up to four disciplines. Not all customers responded to every question in the survey.

need to reiterate the request, and in some instances, Fire staff have transferred these calls back to the call center. Fire management report that they are working with PBCE call center staff to introduce a new call transfer procedure to provide an informed transfer and improve customer service.

Sprinkler Inspections Must Be Scheduled Weeks in Advance

At the time of the audit, sprinkler inspections were scheduled out four weeks in advance. One day per week, Fire Development Services opens the next available week of appointments for scheduling. When all the appointments for that week (four weeks later) were scheduled, customers could not get an appointment unless there was a last-minute cancellation.

In response to our survey, several customers seemed unaware that they needed to call on a particular day for sprinkler inspections. In open-ended responses, some customers reported long hold times while trying to reach a call center representative only to hear that no appointments were available. Several mentioned paying their own staff to call every morning to try to schedule an inspection while still struggling to book appointments.

Fire Should Improve the Customer Experience for Inspection Scheduling

As previously described, having the next available appointment for sprinkler inspections four weeks out can increase the need for a reinspection. In other jurisdictions, the availability of next-day appointments has helped reduce the number of inspections where customers are not prepared because customers call to schedule appointments when sites are ready for an inspection.

The Building Division and other jurisdictions typically have next-day appointments available. Building puts a 12-day cap on how far in advance customers can schedule appointments to prevent them from scheduling too far in advance when they are less certain if they would be ready. Once the backlog is reduced, Fire should similarly provide online inspections scheduling, with caps like Building, to reduce workload for call center staff and improve the customer experience.

While addressing the inspections backlog, Fire should also clarify expectations for customers. Publishing inspection scheduling policies online (like when customers can call for a sprinkler inspection) along with expected wait times, and working to ensure these policies are communicated consistently among call center and Fire staff, would help improve the customer experience. Further, resolving routing issues between the PBCE call center and Fire to promote seamless transfers and consistent messaging would improve the customer experience and keep Fire informed of persistent problems.

Once the backlog is addressed, the Division should consider limiting how far in advance inspections can be scheduled to ensure customers schedule appointments

when they are prepared, as well as other controls to improve the online scheduling system. Many of these improvements rely upon collaboration with PBCE IT and the PBCE call center.

Recommendation #7: To improve customer service, the Bureau of Fire Prevention should implement a more efficient and customer friendly scheduling process, that may include:

a) **Developing an online scheduling system, potentially with limits on how far out inspections can be scheduled,**

b) **Posting any limits on inspection scheduling along with expected wait times (for when new inspection slots are available) online, and**

c) **Resolving call routing issues between the PBCE call center and Fire Development Services Division.**

Finding 4 Standardized Training and Quality Assurance Would Support Consistency in Staff Comments

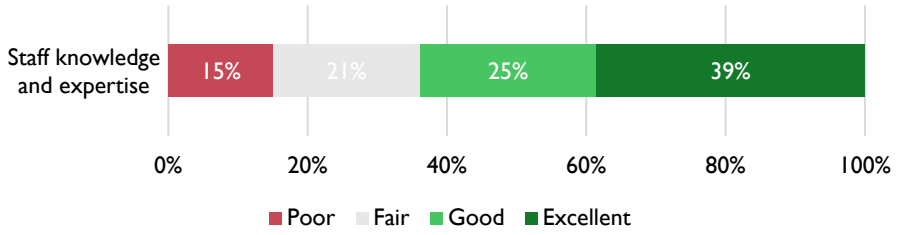
Summary

While Fire customers have rated staff knowledge and expertise highly, multiple customers have reported frustration with inconsistency in staff comments. More systematic training and quality assurance systems, especially as the Division faces high staff turnover, will help address this. New staff have received different training and support depending on their senior engineers. Fire management is working on putting together a training program for new staff. Continuing to standardize templates, policies and procedures, and checklists will also help ensure staff conduct plan reviews and inspections consistently and that no items are missed. Finally, a quality assurance program like the one used in the Bureau's annual (non-development) inspection program would help ensure staff interpret and apply the fire code consistently.

Customers Rated Staff Knowledge and Expertise Highly, But Some Expressed Concerns About Consistency in Comments From Staff

Overall, the knowledge and expertise of Fire staff was rated highly by the majority of responses to our survey. As shown in Exhibit 19, 64 percent of responses (131 of 205) rated the knowledge and expertise of Fire staff as "good" or "excellent." Additionally, 59 percent (51 of 86) of customers agreed that staff comments were understandable (see Exhibit 20).

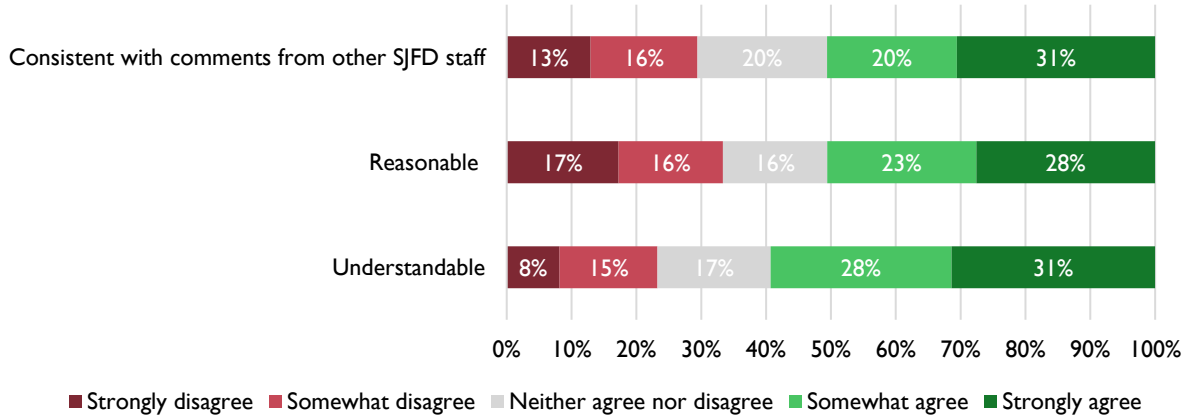
Exhibit 19: Most Responses Rated Staff Knowledge and Expertise as "Good" or "Excellent"



Source: Auditor-conducted survey of Fire Development Services customers. Question posed was: *Thinking about the service you have received from the SJFD in the past year, how would you rate the **knowledge and expertise** of the staff you have worked with.*

However, nearly one third of customers expressed concerns about consistency among staff as shown in Exhibit 20.[15] About one third of customers also expressed concerns about how reasonable staff comments were during plan review and inspection.

Exhibit 20: Some Customers Expressed Concerns About Consistency Among Staff



Source: Auditor-conducted survey of Fire Development Services customers. Question posed was: *Would you say the **comments** you've received from SJFD staff during plan review or inspections were in line with other jurisdictions, consistent with comments from other SJFD staff, reasonable, and understandable?*

Roughly a quarter of the 76 customers who provided open-ended feedback commented on issues related to consistency (21 comments in total in this area). Some customers reported that staff interpret the code inconsistently and different staff would add extra requirements. Customers reported that these changes were costly and time consuming, causing delays in project timelines. One customer asserted that requirements seem to "change every day" and another stated that "each [staff member] works as their own entity." A few suggested Fire develop a standard for consistency by having one staff per project or sticking to the approved plans or codes.

Concerns about Consistency Have Been Identified in the Past

In 2016, Management Partners noted similar concerns with inconsistencies:

> *Stakeholders reported concerns that different inspectors sometimes handle the same project. This can result in different interpretations of codes or other requirements, including a second inspector adding new requirements beyond that required by the first inspector.*

[15] These survey results may differ from the development services partners' customer survey, which also asks about consistency, due to different sampling methodologies and timing of the survey.

Consistency Can Be Improved Through Standardized Quality Assurance, Staff Training, and Resources

Fire management have been working to improve consistency in staff feedback. Fire is creating a standard curriculum for onboarding new staff and identifying areas where checklists and policies can help support staff work and clarify code interpretation. Standardized training and resources can help ensure consistency among City and contracted peak staff as well. While training and resources help align expectations on the front end, a formal system of quality assurance would provide a check on the back end, informing management of any issues that may need further clarification.

Standardized Training Would Improve Consistency

Inconsistent training can cause staff to miss requirements during plan review and inspections. This leads to requirements being added later in the process, which has been the source of some customer complaints.

Fire does not currently have a standard staff training program. New staff have received different training and support depending on the senior engineers they worked under. Some have reviewed corrections of old plans, while others have received re-submittals for review. New staff often shadow inspections. Staff may also learn the code independently and pursue outside classes, such as those with the National Fire Protection Association (NFPA).

Particularly given turnover among senior engineering staff, Fire would benefit from a standardized training program to support consistent service delivery. A standardized training program could formalize current and previous training practices to ensure staff conduct plan reviews and inspections consistently.

Recommendation #8: To ensure staff are prepared to conduct plan reviews and inspections consistently, the Bureau of Fire Prevention Development Services Division should develop a standardized training program for new hires.

Additional Guidance Can Enhance Training and Support Contract Staff

Templates or checklists for staff that refer to relevant sections of the fire code and NFPA guidelines, or Division guidance can also help ensure consistent and complete plan review and inspections. These resources may also be used to enhance training for new staff and support contract staff.

Fire management has been working on developing resources, such as plan check directive templates, that could be used across projects. Plan check directives outline inspection requirements for a project based off the plan review; these are

used by staff and customers. As mentioned in the Background, Fire uses templates for the initial, architectural review during the entitlement process. However, staff do not use similar templates for alarm or sprinkler plan reviews.

Other jurisdictions have standard resources for staff to ensure complete and consistent plan review and inspections:

- Santa Clara has a template for plan review to maintain a baseline of consistency. This template provides an exhaustive checklist of requirements to ensure that nothing is missed during plan review.
- San Diego's Development Services Department has technical bulletins that describe how to interpret the codes that both staff and customers use.
- Sunnyvale has a final sign off inspection checklist for both contract staff and customers.

The Division should continue to standardize plan check directives across projects and develop templates for plan review like the ones used for initial architectural review.

Recommendation #9: To support training for new staff and consistency among City staff and contract staff, the Bureau of Fire Prevention should create procedures, templates, or checklists that guide staff through common processes for plan review and inspections and, as applicable, clarify Bureau interpretation of code requirements.

Fire Does Not Have a Quality Assurance Program for Development Services

Currently, the Development Services Division does not have a formal system of quality assurance for plan review and inspections related to new construction. Instead, staff report that the Division uses different inspectors and plan reviewers as a control on quality – if a plan reviewer or inspector misses an issue, another will catch it later. In one case during the audit, audit staff observed a requirement that was supposed to be noted in plan review caught during an inspection.

While Fire staff report that the current practice of sending multiple inspectors helps to assure quality, this process can be a source of customer frustration. As mentioned before, customers reported that inspectors adding on additional requirements beyond what was communicated by other staff can lead to project delays.

Fire's Non-Development Inspections Program and Other Jurisdictions' Fire Development Services Programs Have Quality Assurance Systems

The Bureau's Code Enforcement Division has a quality assurance system for their annual non-development inspections, which could serve as a model the Development Services Division. Every month, the Captain or Assistant Fire Marshal randomly selects 10 percent of each inspector's inspection records and assigns them for peer review. When reviewing the inspections, inspectors check for compliance with requirements outlined in their procedures and document the results in a review worksheet.

Other jurisdictions also use quality assurance systems to ensure fire development services staff are consistent in their work:

- In Long Beach, supervisors randomly select plans for quality assurance reviews. These assessments are used as part of staff's annual performance review.
- In San Diego, supervisors review every plan review completed by new staff and audit select plan reviews monthly. Inspection mileage and calls are reviewed, as well as their comments to customers.
- In Sunnyvale, a supervisor reviews plan review comments before they are sent to customers. Less-experienced staff receive additional review.
- In Santa Clara, more experienced staff review work for newer plan reviewers and inspectors during their first months on the job. More experienced inspectors also shadow new inspectors in the field.

Similar to the annual non-development program and other jurisdictions, the Division should develop a formal system of quality assurance managed by their supervisory staff to ensure staff are conducting plan review and inspections completely and consistently. The quality assurance results may also inform how to prioritize areas for training or clarifying policies and procedures for staff.

Recommendation #10: To ensure consistent plan review and inspections, the Bureau of Fire Prevention Development Services Division should implement a system of quality assurance that includes:

a) Periodic review of plan comments to verify complete and consistent plan review, and

b) Periodic review of inspection records to verify consistent interpretation of requirements.

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Finding 5 Fire Management Does Not Currently Have Easy Access to Workload and Performance Data

Summary

The City's permitting system (AMANDA) has several preconfigured reports pertaining to Fire Development Services. However, Fire management does not currently have easy-to-use reports that show project progress, assignment, distribution of staff hours, turnaround times, and backlog, though this data could be made available through AMANDA. Additionally, Fire administrative staff regularly run AMANDA-based reports on Bureau-level workload and cycle times for inspections and plan review, but our review found inaccuracies in the data used to generate these performance measure reports. Better management tools would allow greater oversight and accountability. We recommend that Fire implement guidelines for consistent data entry, work with the Information Technology (IT) Department to create a mechanism to flag unscheduled inspections and create reports to support staff resource management, and revise Bureau-level performance measures on inspection and plan check cycle times.

Fire Management Does Not Currently Have Access to Accurate Data to Assist Managing Staff Resources and Performance

According to Fire management, the only way to tell where a project is in the plan review process is to physically look for the plan set and talk with an engineer.[16] No reports within AMANDA show active plans and staff assignment.[17] AMANDA has a preconfigured report relating to Fire's plan review backlog, but it was not working at the time of the audit.

Management has tried several ways to track projects outside of the AMANDA system, including manual tracking worksheets. Without the ability to track project status, management has not been able to monitor the full extent of the plan review backlog. They also cannot readily assess individual staff workload. This makes it difficult for Fire management to efficiently allocate staff time and resources.

[16] AMANDA has status codes for permits in process. Fire permit status codes include Intake, Cancelled, Review, Ready to Issue, Expired, Approved, and Closed. A permit application in the plan review process would be marked as Review, regardless of whether there has been progress made in terms of comments sent, resubmittals received, etc. It does not indicate how much work remains on the plan review portion of the project.

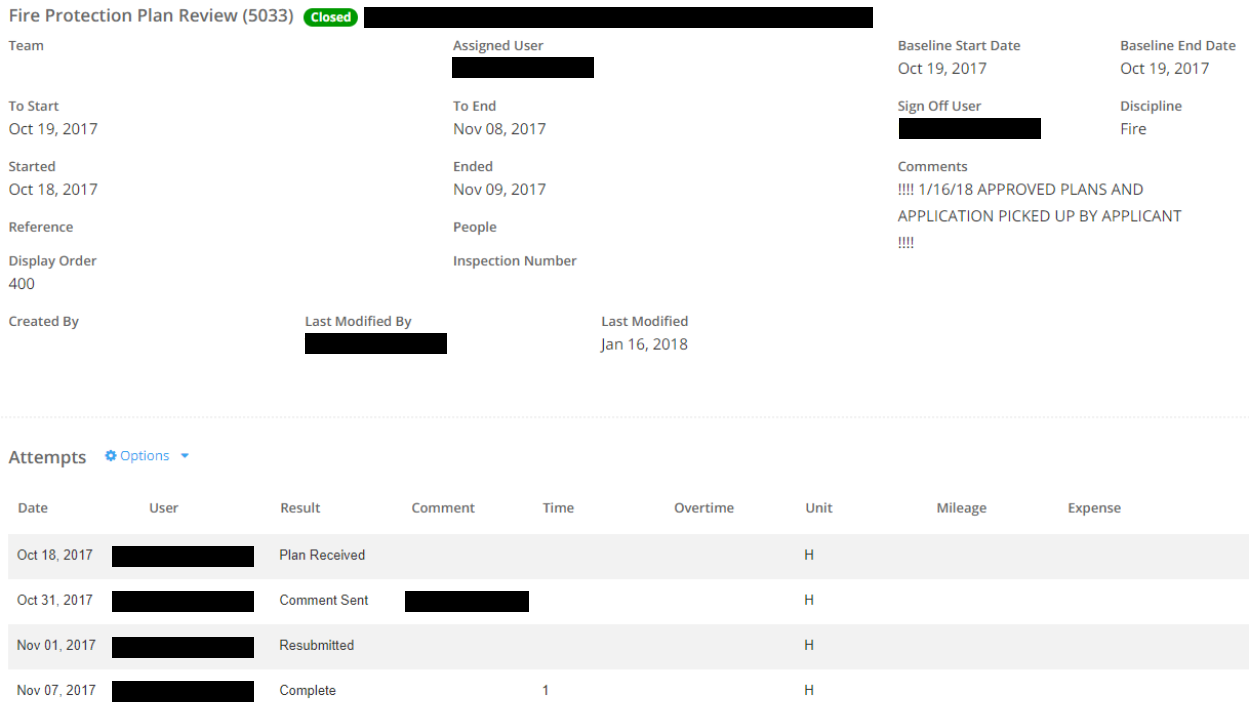
[17] AMANDA shows staff associated with a project, as shown in Exhibit 21, however, this requires looking up individual projects within AMANDA.

Staff Enter Process Data into AMANDA System

Our review of AMANDA data indicates that workload information could be made available to Fire management, though more consistency in data entry would help support the reliability of report information.

Staff enter data into AMANDA to track correspondence with customers during plan review and to record inspection times (see Exhibit 21 for an example). These entries are referred to as "attempts" and are listed as line items under different "processes." For example, an overhead sprinkler permit would have a process for application intake, plan review, and several inspections. Under the plan review process, "attempt" line items may describe when the plan was received, when a plan was under review, when an engineer sent a comment to the customer, when a customer resubmitted plans, and when the engineer approved plans.

Exhibit 21: Example "Attempts" Entered into AMANDA System



Fire Protection Plan Review (5033) Closed [redacted]

Team

Assigned User [redacted]

Baseline Start Date: Oct 19, 2017

Baseline End Date: Oct 19, 2017

To Start: Oct 19, 2017

To End: Nov 08, 2017

Sign Off User [redacted]

Discipline: Fire

Started: Oct 18, 2017

Ended: Nov 09, 2017

Comments: !!!! 1/16/18 APPROVED PLANS AND APPLICATION PICKED UP BY APPLICANT !!!!

Reference

People

Display Order: 400

Inspection Number

Created By

Last Modified By [redacted]

Last Modified: Jan 16, 2018

Attempts Options

Date	User	Result	Comment	Time	Overtime	Unit	Mileage	Expense
Oct 18, 2017	[redacted]	Plan Received				H		
Oct 31, 2017	[redacted]	Comment Sent	[redacted]			H		
Nov 01, 2017	[redacted]	Resubmitted				H		
Nov 07, 2017	[redacted]	Complete		1		H		

Source: Example data entries in AMANDA. This log shows a Fire Protection Plan Review submitted to Fire staff on October 18, 2017. The Attempts table shows each time Fire staff interacted with the plans – to receive them, to send a comment, to receive a resubmittal, and to complete the review. For the whole process, staff only logged one hour of work (on the last attempt), though staff interacted with the plans on four different days.

Inconsistent Data Entry Makes It Difficult to Assess Progress, Manage Staff Resources

Staff use these attempt fields differently – for example, some plan review processes never indicate when a plan was under review only that there was a comment sent.

Additionally, Fire staff do not use the "chess clock" feature on AMANDA, which indicates whether a plan is pending review from the department or customer. This makes it hard to know when a plan has been removed from the shelf (i.e., when it is no longer awaiting review) and how many plans are awaiting action by the department.

In addition, staff appear to enter plan review hours inconsistently within AMANDA. For example, Exhibit 21 above shows one hour of time entered only for the "complete" attempt – it is not clear whether this is representative of the time spent on the second-round review and approval of the resubmittal, or for the entire plan review process.[18] This information could be useful for management in assessing a project's progress. In contrast, inspection hours are uploaded automatically to AMANDA when staff scan in inspections forms.

Hours Entered in AMANDA Vary From Timecards and Inspections Schedules

In a review of total billed project hours for a sample week, fire systems staff billed 15 to 100 percent of their available standard work week hours to projects, including plan review and inspections.[19] Cumulatively, staff reported 46 fewer hours on fire systems inspections in AMANDA than were scheduled in the week reviewed. Without consistent plan review hours reported within AMANDA, it is unclear whether this range is a result of a loss of staff time due to unprepared inspection sites; staff spending time on other, administrative tasks; or unentered data.

Consistent entry of staff hours would help management better understand how staff time is spent and how inspections scheduling may be improved. As discussed in Finding 3, Fire does not have a policy on how staff should address unprepared inspections sites. Sometimes staff perform preliminary walkthroughs; other times, staff perform an inspection at another, unscheduled site. For these unscheduled inspections, staff fill out a blank inspection form (i.e., one that did not have prefilled permit and location information). While the hours associated with these inspections appear in AMANDA, unscheduled inspections are not easily identifiable, requiring a manual review of scanned PDF inspection forms. With the implementation of mobile devices for inspections, Fire management should incorporate a feature to flag unscheduled inspections, or "blanks," to better understand inspections scheduling and use of staff time. This could be initiated when staff select an option to fill out a blank inspection form.

[18] Plan review fees for fire engineering systems are based on the number of devices (e.g., sprinkler heads, alarms, panels, pumps, and suppression systems) rather than hours in AMANDA.

[19] Standard work week hours exclude any work done over an employee's regular work schedule, which was usually 40 hours per week. In this review, one employee billed for half an hour more than their regular timecard hours.

Marking Inspections as Failed Can Help Fire Management Better Understand Inspections Progress

Lastly, inspection results do not accurately capture progress made because staff usually mark an inspection as a "partial pass" if the inspection did not pass outright. This does not distinguish between an inspection of an unprepared or insufficient site, which would require re-inspection, and a large, prepared site, which requires passing multiple, partial inspections. Multistory buildings, for example, generally require at least one inspection per floor. To better convey the progress on these larger sites, and number of re-inspections required, Fire should distinguish between sites that failed inspection (due to unpreparedness or failed systems tests), and sites that passed in part.

Recommendation #11: To ensure accurate reporting for project and performance management, the Bureau of Fire Prevention Development Services Division should create and implement guidelines for consistent data entry among staff.

Recommendation #12: The Fire Department should work with the Information Technology Department to:

a) **Create reports or a dashboard tool utilizing AMANDA attempt data to show the number of plans pending review, under review, awaiting resubmittal, and staff assignments, and**

b) **Implement a mechanism to identify unscheduled inspections within AMANDA to better track and manage inspections scheduling.**

The Bureau of Fire Prevention Should Review and Revise Performance Measures to Reflect Meaningful, Accurate Data

The Fire Department currently has four performance measures and two workload measures in the City's budget document under the core service of Fire Safety Code Compliance. See Exhibit 22.

Exhibit 22: Performance Measures and Activity and Workload Highlights from the City of San José 2019-20 Proposed Operating Budget

Fire Safety Code Compliance

Performance Measures

	2017-2018 Actual	2018-2019 Target	2018-2019 Estimated	2019-2020 Target
Ratio of fee revenue to Development Fee Program cost (includes reserve funding)	100%	100%	100%	100%
Selected cycle time measures for Development services:				
- Fire Plan Check processing targets met	91%	92%	82%	85%
- Fire inspections within 24 hours	N/A[1]	100%	N/A[1]	100%
% of Development process participants rating service as good or excellent	89%	88%	89%	90%

[1] The fire inspections within 24 hours was previously measured from the point a requested inspection was placed on the schedule rather than the when it was requested. The methodology for this performance measure is under review and an update to this measure and methodology may be presented in the 2020-2021 Budget.

Activity and Workload Highlights

	2017-2018 Actual	2018-2019 Forecast	2018-2019 Estimated	2019-2020 Forecast
# of new construction and tenant improvement plan checks performed	6,322	6,150	6,810	6,300
# of new construction and tenant improvement inspections performed	7,937	8,500	6,517[1]	8,500

[1] Significant decrease from 2017-2018 as Development Services has experienced challenges with adequate resources to meet the demands of new construction and tenant improvement inspections. Additional staffing is included in the 2019-2020 Proposed Operating Budget to help increase capacity and improve performance in this area.

Source: City of San José 2019-20 Proposed Operating Budget. As a note, we only reviewed cycle times, number of plan checks, and number of inspections as part of this audit. For more information, see the scope and methodology section of Appendix A.

The Fire Inspection Cycle Time Measure Should Be Revised

As described in the first footnote in the preceding exhibit, the measure for "fire inspections within 24 hours" is measured not from when the inspection was requested, but from the time when the inspection was scheduled.[20] That is, if an inspection was scheduled for January 1 and the inspection took place on January 1, that would be considered within 24 hours for the purposes of the performance measure, regardless of when the customer called in to make that inspection. Fire has reported that 100 percent of inspections were within 24 hours using this methodology in recent fiscal years. As noted, this performance measure is under review.

[20] The note on methodology included in the Proposed Operating Budget was not included in the Adopted Operating Budget for the same year.

When measured from the time when a customer called to make the inspection until the time when the inspection occurs, the inspection turnaround time has been days or even weeks. By fiscal year, the average time it took to schedule a sprinkler inspection increased from six days in 2017-18 to 28 days in the first half of 2019-20 (see Exhibit 23). Few inspections occur within 24 or 48 hours of the time when a customer calls.

Exhibit 23: Time to Schedule an Alarm or Sprinkler Inspection Has Increased

	Alarms	Sprinklers	Other	Overall		
Time Period	Avg. days to Inspection			Avg. days to Inspection	% within 24 hours	% within 48 hours
2017-18	7	6	7	7	7%	17%
2018-19	9	14	15	12	3%	7%
2019-20 (partial)	19	28	33	26	6%	9%
Overall	10	13	13	12	5%	12%

Source: Auditor analysis of AMANDA inspection records. Data shows from the date the inspection record was created (call date) to the date the inspection took place. Does not include architectural/life safety inspections or hazmat inspections. Potential errors in date values were also excluded from analysis. Percentage within 24/48 hours excludes inspection requests that were received on Friday or Saturday. "Other" category includes firefighter breathing air replenishment system, occupant load reviews, and other engineering permits. Note that 2019-20 only shows data from July 2019 to December 2019.

Meaningful performance measures, when paired with appropriate targets, communicate to customers and stakeholders the current service levels and ability of a program to meet stated goals. This information is important for management and policy makers to determine if any changes are needed to resource allocation. Additionally, it increases accountability to the public for how taxpayer dollars are spent.

Other Programs Measure From Customer Request to Inspection Date

Other programs we reviewed, both in other jurisdictions and within the City, report on inspection turnaround times from the date of a customer request to when an inspection takes place.

The City's Building Division within PBCE tracks from when an inspection request occurred to when the inspection took place. The City's targets for inspections within the construction process are 85 percent within 24 hours and 95 percent with 48 hours. In 2018-19, 69 percent Building inspections took place within 24 hours and 75 percent took place within 48 hours.[21]

[21] PBCE does not include inspections that customers request beyond the target date (e.g., three days from when they call in) in this performance measure.

The Sacramento Fire Department has a goal of getting a customer an inspection within 24 or 48 hours of their request. Staff reported that most inspections can be scheduled for the following day. Sunnyvale has an inspection turnaround target of three days (though staff report that it currently takes longer). In San Diego, inspections are generally scheduled for the following day and in Long Beach, inspections are can be scheduled within one or two days.

Recommendation #13: The Fire Department should revise its calculation of the fire inspection cycle time measure to reflect the time from when an inspection was requested until when the inspection occurred, and revise its target, as appropriate.

Plan Check Cycle Time and Workload Measure Should Be Reviewed

In addition to revising the fire inspection cycle time measure, the Fire Department should continue to review the data used for measures on plan check cycle time and the number of plan checks to ensure they are complete and accurate.

The data for these measures comes from several preconfigured reports from AMANDA. Staff use reports on initial plan submittals for architectural reviews, resubmittals for architectural reviews, and both initial plan submittals and resubmittals for deferred systems permits (i.e., alarms, sprinklers, and deferred hazmat). Within these reports are both the count of the number of plans that were initially submitted or resubmitted, as well as whether those plans were completed within cycle times.

Due to inconsistencies in AMANDA data entry and how the reports are configured, it appears that the reports miscalculate how many plans were actually submitted in a few ways. Specifically, a plan may not be counted if:

- It does not have a submittal date recorded in a particular field in AMANDA;
- It is a deferred systems permit submittal that does not fall under the category of fire alarms, fire sprinklers, or hazmat (such as a variance);
- It is a revised plan submitted on a deferred systems permit; or
- It is a repeat resubmittal for an architectural review (i.e., it is the second or third time a plan was resubmitted).

It also should be noted that some records do not appear to be counted for unknown reasons based on our review of back-up data for the reports.

Due to limitations with the data, it is difficult to ascertain exactly how many plans were undercounted. Based on our review, we estimate that between July 2017 and December 2019, reports may have undercounted:

- 400 plans that did not have a submittal date recorded in the correct field in AMANDA[22]
- 600 plans for deferred systems that did not fall under the category of fire alarms, fire sprinklers, or hazmat[23]
- 500 revised plans that were submitted or resubmitted for deferred systems permits[24]
- An unknown number of repeat resubmittals for architectural plan reviews.[25]

On the other hand, it appears that in some cases, plans submitted for hazmat reviews may be counted twice—once as architectural reviews, and once again as deferred systems permit reviews. In the report for deferred systems permit reviews, 800 hazmat plans appeared to relate to an architectural permit rather than a deferred permit.

Though the reports contain information on the percentage of plan checks that were completed within cycle times, the nature of the reports and the data in AMANDA made validation of this information difficult. Each time these reports are run, the underlying data changes and the summary reports produce different totals of the number of plans.[26] According to staff, the underlying data changes as a result of project progress and additional data entry. The variability, however, may affect Fire's ability to pull consistent information for their performance measures.

Based on our review of the performance data, the Fire department reports that it has begun to look into how to make necessary corrections.

Recommendation #14: The Fire Department should review the methodology of its calculations of the number of plan reviews and the percent of time that plan check processing time targets are met, and should reset targets, as appropriate.

[22] This is out of a total of 17,000 plans submitted for architectural review and deferred systems permits recorded. For some plans, work was completed and the plan should be counted as a submittal. However, for other plans, staff may have determined that no review was required and so the plan was correctly excluded.

[23] This is out of a total of 9,000 deferred systems permit plan submittals/resubmittals recorded.

[24] The data for the performance measure reports includes plans that were submitted or reviewed between July 2017 and December 2019, but those reports do not include information on how many revised plans were submitted for deferred systems permits. To get an estimate, we used data we had gathered for AMANDA projects that were created between July 2017 and December 2019, which will differ slightly from the dataset of the performance measure reports. The estimate given provides an approximation of how many revised plans might have been submitted in a recent 2.5 year period.

[25] We did not have resubmittal data for architectural reviews, as these are disaggregated among different Building permit folders within AMANDA. For comparison, there were 1,800 fire systems permit repeat resubmittals during that time period.

[26] Exact changes are difficult to track as the back-up data for performance reports use summarized data fields, including binary yes/no indicators for whether something happened within a cycle.

Conclusion

Fire Development Services has faced a major backlog in fire systems plan review and inspections since 2019 – a result of increased permit applications and staff vacancies. The backlog has compounded timeliness and efficiency issues, particularly for inspections, and caused frustration for customers and City staff. We recommend that Fire adopt a peak staffing strategy, potentially adding inspector-only positions to reduce the current backlog. Fire can also improve efficiency of plan review by flagging incomplete plans at submittal and improving online resources for customers. Reducing the number of re-inspections would also save staff time. We recommend Fire offer combination inspections, use mobile devices during inspections, and develop policies to address unprepared customers to reduce the amount of inspection time used for walkthroughs and consultations. Fire can further improve the customer experience by ensuring consistent, timely staff comments and clarifying expectations. Finally, Fire management should implement guidelines for consistent data entry among staff and work with the Information Technology (IT) Department to create or improve performance management reports.

RECOMMENDATIONS

Finding 1: Increased Development and Staffing Shortage Led to a Backlog

Recommendation #1: The Fire Department should adopt a peak staffing strategy, which may include:

a) The use of consultants for specified projects, project-types, or engineering disciplines to allow flexibility to staff up during peak development periods, and

b) Inspector-only positions, with different minimum qualifications than associate engineering positions, to allow more time for plan review by engineering staff.

Finding 2: Further Process Improvements Can Help Reduce Plan Review Workload

Recommendation #2: To prevent unnecessary delays for development, and to reduce the workload for engineering staff, the Bureau of Fire Prevention should use intermediate staff (such as a permit specialist or technician) to review initial plans for completeness prior to intake.

Recommendation #3: To make it easier for customers to navigate the permitting process, the Bureau of Fire Prevention should update the website such that information is current and organized by discipline or customer type, and create simplified, concise resources for customers, similarly by discipline or project type.

Finding 3: Fire Can Better Support Customers to Reduce Inspection Wait Times and Re-inspections

Recommendation #4: The Bureau of Fire Prevention should pilot an option for customers to schedule combination inspections, such that staff trained in multiple disciplines (i.e., alarms, sprinklers, life safety) can inspect multiple systems at one time.

Recommendation #5: To improve accuracy and efficiency in inspections and data entry, the Fire Department should provide mobile devices to staff conducting inspections in the field.

Recommendation #6: To ensure inspection time is used efficiently, the Bureau of Fire Prevention should develop policies to address unprepared customers, such as:

a) Incentivizing customers to cancel appointments when they are not prepared by piloting a reduced cancellation fee, and

b) Clarifying expectations for when staff should leave a site that is not ready for full inspection.

Recommendation #7: To improve customer service, the Bureau of Fire Prevention should implement a more efficient and customer friendly scheduling process, that may include:

a) Developing an online scheduling system, potentially with limits on how far out inspections can be scheduled,

b) Posting any limits on inspection scheduling along with expected wait times (for when new inspection slots are available) online, and

c) Resolving call routing issues between the PBCE call center and Fire Development Services Division.

Finding 4: Standardized Training and Quality Assurance Would Support Consistency in Staff Comments

Recommendation #8: To ensure staff are prepared to conduct plan reviews and inspections consistently, the Bureau of Fire Prevention Development Services Division should develop a standardized training program for new hires.

Recommendation #9: To support training for new staff and consistency among City staff and contract staff, the Bureau of Fire Prevention should create procedures, templates, or checklists that guide staff through common processes for plan review and inspections and, as applicable, clarify Bureau interpretation of code requirements.

Recommendation #10: To ensure consistent plan review and inspections, the Bureau of Fire Prevention Development Services Division should implement a system of quality assurance that includes:

a) Periodic review of plan comments to verify complete and consistent plan review, and

b) Periodic review of inspection records to verify consistent interpretation of requirements.

Finding 5: Fire Management Does Not Currently Have Easy Access to Workload and Performance Data

Recommendation #11: To ensure accurate reporting for project and performance management, the Bureau of Fire Prevention Development Services Division should create and implement guidelines for consistent data entry among staff.

Recommendation #12: The Fire Department should work with the Information Technology Department to:

a) Create reports or a dashboard tool utilizing AMANDA attempt data to show the number of plans pending review, under review, awaiting resubmittal, and staff assignments, and

b) Implement a mechanism to identify unscheduled inspections within AMANDA to better track and manage inspections scheduling.

Recommendation #13: The Fire Department should revise its calculation of the fire inspection cycle time measure to reflect the time from when an inspection was requested until when the inspection occurred, and revise its target, as appropriate.

Recommendation #14: The Fire Department should review the methodology of its calculations of the number of plan reviews and the percent of time that plan check processing time targets are met, and should reset targets, as appropriate.

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APPENDIX A

Audit Objective, Scope, and Methodology

The mission of the City Auditor's Office is to independently assess and report on City operations and services. The audit function is an essential element of San José's public accountability, and our audits provide the City Council, City management, and the general public with independent and objective information regarding the economy, efficiency, and effectiveness of City operations and services. In accordance with the City Auditor's Fiscal Year (FY) 2020-21 Audit Work Plan, we have completed an audit of fire safety code compliance.

We conducted this performance 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.

The objective of this audit was to review the timeliness, efficiency and consistency of fire plan review and inspections for new construction. This audit did not review program cost and fees or evaluate annual inspections for fire safety code compliance.

To meet our audit objectives, we did the following:

- Interviewed Fire staff about their training and responsibilities. Created corresponding flow charts of processes.
- Interviewed staff from Planning, Building and Code Enforcement (PBCE) about the call center's inspection scheduling process.
- Analyzed Fire's personnel data and use of overtime from PeopleSoft, the City's human resource management system.
- Reviewed the hiring process for engineers by reviewing class specifications and interviewing Fire administrative staff.
- Reviewed the process of adopting amendments to the California Fire Code through the Municipal Code and how changes are communicated to customers.
- Reviewed resources available to customers on the City's website.
- Surveyed 581 customers in January 2020 about their satisfaction with fire plan review and inspections, including topics such as timeliness and consistency. The online survey went out to all customers associated with Fire Engineering (e.g. alarms and sprinklers) and Hazardous Materials permits with an in-date between January 1, 2018 and June 30, 2019, and had a response rate of 16 percent.
- Met with staff from Fire and PBCE Information Technology (PBCE IT) to understand and access information stored within the Citywide integrated permit system (AMANDA).
- Tested AMANDA data reliability by checking for duplicate records, assessing outliers, and comparing computer-processed data with AMANDA documentation, hardcopy records, and other reports. We also reviewed the relative coverage of different statuses, process codes, and work codes, and checked for patterns that would indicate false records. We removed from our analysis test records associated with the implementation of AMANDA 7 and records that appeared to be associated with inactive projects (i.e., customer did not pursue

development past initial application) based on the number of processes subsequent to plan intake and feedback from administrative staff. We also identified 600 records with backdated in-dates and used stamp dates instead, based on a review of a sample of these dates and the dates on plan sets.

- Analyzed data from AMANDA to approximate backlogs in fire plan review and inspections.
- Reviewed a judgmental sample of 38 permits in AMANDA for consistency of data entry and interactions with customers among staff. The sample of permits were associated with 14 unique property IDs, submitted from 2017 through 2019, and included fire engineering systems and building permits of various statuses. The sample was selected by taking the n^{th} item from lists of property IDs or permits.
- Assessed the accuracy of data and methodologies used to calculate performance measure reports from AMANDA by reviewing the data that fed into the report.
- Reviewed PBCE's consultant contract associated with fire plan review to determine how consultants could be used to address gaps in staffing.
- Shadowed fire inspections for each discipline (life safety, hazardous materials, fire alarms, and sprinklers).
- Reviewed the report and process maps developed by Management Partners during a previous review of development services partners, including the Fire Department.
- Benchmarked relevant information to other jurisdictions by interviewing staff and reviewing website information for the: City of San Diego, City of Sacramento, City of Long Beach, City of Santa Clara, and City of Sunnyvale.

We would like to thank the Fire Department; the Department of Planning, Building and Code Enforcement; the Office of Economic Development; the City Attorney's Office; and the Budget Office for their time and insight during the audit process.

APPENDIX B

Customer Survey Data

The following tables contain a complete set of responses to each question on the survey, excluding the "not applicable" or blank responses. Columns titled "N=" refer to the total number of responses or ratings per question. Not every customer who participated in the survey provided a response to every question.

Overall Survey Participation	
Total Number of Customer Participants	94
Number of Surveys Sent Out	581
Response Rate	16.18%

Q1 - Which of the following best describes you? (Select all that apply.)	
Customer Type	N=
General Contractor	15
Sub-Contractor	38
Developer	4
Architect	14
Resident with a project	15
Other	14

Examples of responses for those who marked "Other" for Q1 included business owner and designer.

Q2 - How frequently do you work with SJFD on projects requiring fire safety plan reviews and/or inspections?		
# of Projects	N=	% of Total
Less than 1 project annually	21	22.34%
1-2 projects annually	9	9.57%
3-5 projects annually	13	13.83%
5-10 projects annually	13	13.83%
More than 10 projects annually	38	40.43%
Total Responses	94	100.00%

Q3 - Which of the following best describes those projects? (Check all that apply)	
Project Type	N=
Small residential	26
Small commercial	24
Medium to large residential or commercial	54
Mega-projects (campuses, multi-year commercial/infrastructure)	16
Other (please specify)	8

For questions four through eight, the row for "Overall" combines all the responses from each of the disciplines (architectural, fire alarms, sprinkler, and hazmat). Customers could provide a response for each discipline for each question, and some customers provided responses for multiple disciplines per question. The total responses for "Overall" is the total number of responses that were combined, rather than the total number of customers. Totals may not add up to 100 percent due to rounding.

Q4 - Thinking about the service you have received from SJFD in the past year, how would you rate your overall experience working with SJFD for each of the following services?										
	Poor		Fair		Good		Excellent		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Architectural	21	37%	13	23%	4	7%	19	33%	57	100%
Fire Alarms	17	34%	8	16%	7	14%	18	36%	50	100%
Sprinkler	33	45%	11	15%	9	12%	20	27%	73	100%
Hazmat	7	21%	8	24%	8	24%	11	32%	34	100%
Overall	78	36%	40	19%	28	13%	68	32%	214	100%

Q5 - Thinking about the service you have received from SJFD in the past year, how would you rate the timeliness of service you have received for each of the following services?										
	Poor		Fair		Good		Excellent		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Architectural	27	47%	13	22%	5	9%	13	22%	58	100%
Fire Alarms	26	48%	9	17%	7	13%	12	22%	54	100%
Sprinkler	48	64%	7	9%	10	13%	10	13%	75	100%
Hazmat	11	31%	7	19%	7	19%	11	31%	36	100%
Overall	112	50%	36	16%	29	13%	46	21%	223	100%

Q6 - Thinking about the service you have received in the past year, how would you rate your experience scheduling inspections with SJFD?										
	Poor		Fair		Good		Excellent		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Architectural	27	54%	8	16%	6	12%	9	18%	50	100%
Fire Alarms	22	45%	10	20%	8	16%	9	18%	49	100%
Sprinkler	48	68%	10	14%	7	10%	6	8%	71	100%
Hazmat	11	38%	4	14%	6	21%	8	28%	29	100%
Overall	108	54%	32	16%	27	14%	32	16%	199	100%

Q7 - Thinking about the service you have received from the SJFD in the past year, how would you rate the knowledge and expertise of the staff you have worked with?										
	Poor		Fair		Good		Excellent		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Architectural	7	13%	10	19%	13	25%	22	42%	52	100%
Fire Alarms	7	14%	10	20%	12	24%	21	42%	50	100%
Sprinkler	13	19%	15	21%	18	26%	24	34%	70	100%
Hazmat	4	12%	8	24%	9	27%	12	36%	33	100%
Overall	31	15%	43	21%	52	25%	79	39%	205	100%

Q8 - Thinking about the service you have received from SJFD in the past year, how well did staff communicate what was expected for a successful plan review/inspection?										
	Poor		Fair		Good		Excellent		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Architectural	17	32%	11	21%	8	15%	17	32%	53	100%
Fire Alarms	16	31%	9	18%	10	20%	16	31%	51	100%
Sprinkler	26	37%	13	19%	12	17%	19	27%	70	100%
Hazmat	10	30%	3	9%	8	24%	12	36%	33	100%
Overall	69	33%	36	17%	38	18%	64	31%	207	100%

Q9 - Would you say the comments you've received from SJFD staff during plan review or inspections were:												
	Strongly Disagree		Somewhat Disagree		Neither Agree nor Disagree / No Opinion		Somewhat Agree		Strongly Agree		Total Responses	
	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
Understandable	7	8%	13	15%	15	17%	24	28%	27	31%	86	100%
Reasonable	15	17%	14	16%	14	16%	20	23%	24	28%	87	100%
Consistent with comments received from other SJFD staff	11	13%	14	16%	17	20%	17	20%	26	31%	85	100%
In line with the types of comments you receive with other jurisdictions you work with	22	26%	15	18%	14	16%	17	20%	17	20%	85	100%

Q10 - If the comments you received from SJFD staff were not clear, how easily were you able to obtain clarification on those comments?											
Very Difficult		Difficult		Neither Easy nor Difficult		Easy		Very Easy		Total Responses	
N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total	N=	% of Total
16	20%	17	21%	11	14%	23	28%	14	17%	81	100%

Q11 and Q12 were free response questions. The open-ended responses to these two questions were analyzed together because participants sometimes reiterated the same ideas in both categories and participants tended to interpret both questions in the same way.

Q11 - If you had a challenging experience working with SJFD, what would have helped to make the process easier to navigate?	
Total Number of Responses	72
% of Total Participants (N=94)	77%

Q12 - Any other comments you would like to provide about your experience working with the SJFD Bureau of Fire Prevention?	
Total Number of Responses	63
% of Total Participants (N=94)	67%

Q11 & Q12 - Combined	
Total Participants Responded to Q11 and/or Q12	76
% of Total Participants (N=94)	81%

While reviewing the open-ended responses from Q11 and Q12, three common themes were identified. Some responses related to multiple themes.

Q11 & Q12 - Common Themes		
Issue	# Responses	% of Total (N=76)
Consistency	21	27%
Communication	29	38%
Timeliness	46	60%

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CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: JOE ROIS, CITY AUDITOR **FROM:** Robert Sapien, Jr.

SUBJECT: (SEE BELOW) **DATE:** September 1, 2020

Approved /s/ Kip Harkness Date 8/20/2020

SUBJECT: RESPONSE TO "AUDIT OF FIRE DEVELOPMENT SERVICES: STAFF RESOURCES AND PROCESS EFFICENCIES WILL HELP TO REDUCE BACKLOG"

The Administration has reviewed the report from the City Auditor (*Audit of Fire Development Services: Staff Resources and Process Efficiencies Will Help to Reduce Backlog*) and agrees with the fourteen (14) recommendations identified in the report. This memorandum captures the Administration's response to each recommendation and presents an overview of the work required to fully implement the recommendations, and the associated timeframes for completion. The Fire Department greatly appreciates the work of the City Auditor and audit staff for this evaluation and looks forward to improving its Development Services.

BACKGROUND

Bureau of Fire Prevention Development Fee Program staff are responsible for plan review and inspections services for all new construction and tenant improvements to ensure compliance with the City's fire safety code. Recently, a combination of high numbers of staff position vacancies and high new development and tenant improvement volume have resulted in extended wait times for project plan review and inspection. In response, the Fire Department conducted several recruitments, strengthened employee onboarding and training processes, expanded staff cross-training to increase scheduling flexibility, optimized staff assignments, improved workflows, and worked with Human Resources to conduct a classification analysis. These efforts have yielded some positive results. The Administration welcomes the Auditor's recommendations and looks forward to incorporating recommendations into the Fire Department work plan to continue positive progress.

The Fire Department agrees with the five findings and offers the following responses to the Auditors 14 recommendations.

RECOMMENDATIONS AND ADMINISTRATION'S RESPONSE

Finding 1: Increased Development and Staffing Shortage Led to a Backlog

Recommendation #1: The Fire Department should adopt a peak staffing strategy, which may include:

a.) The use of consultants for specified projects, project-types, or engineering disciplines to allow flexibility to staff up during peak development periods, and

b.) Inspector-only positions, with different minimum qualifications than associate engineering positions, to allow more time for plan review by engineering staff.

Administration's Response: The Administration agrees with this recommendation.

(*a.*) **Green** – On June 30, 2020 the City Council authorized negotiation and execution of agreements with Fire & Risk Alliance, LLC and CSG Consultants Inc. for temporary contract employees to support the Fire Development Fee Program with completing fire sprinkler, fire alarm, and fire architectural (life safety) plan reviews and inspections for new development and tenant improvement projects. Contracts have been executed with both firms and project plans have been assigned for review as of August 7, 2020.

Target Date for Completion: January 2021

(*b.*) **Green** – In Fiscal Year 2019-2020, retiree-rehire Fire Prevention Inspectors were employed to support fire safety and systems inspections to offset work for engineering staff. The 2020-2021 Adopted Operating Budget authorized a shift of an existing sworn Fire Prevention Inspector position from Non-Development to Development Fee Program to provide additional support in these efforts. Non-sworn classification options will be evaluated to identify opportunities to implement Inspector-only positions. Retiree-rehire Fire Prevention Inspectors may also be an option used to address predictable and known seasonal increases that exist and do not justify additional budgeted positions.

Target Date for Completion: January 2021

Finding 2: Further Process Improvements Can Help Reduce Plan Review Workload

Recommendation #2: To prevent unnecessary delays for development, and to reduce the workload for engineering staff, the Bureau of Fire Prevention should use intermediate staff (such as a permit specialist or technician) to review initial plans for completeness prior to intake.

Administration's Response: The Administration agrees with this recommendation.

Green – The 2020-2021 Adopted Operating Budget the addition of Principal Permit Specialist position, partially funded to begin on January 2, 2021, to focus on the Development Fee Program intake processes. Additionally, the Fire Department will collaborate with Development Services partners (Planning, Building and Code Enforcement Department – Building and Planning Divisions and Public Work Department) on ways to improve the intake process to ensure that customers submit complete applications.

Target Date for Completion: June 30, 2021

Recommendation #3: To make it easier for customers to navigate the permitting process, the Bureau of Fire Prevention should update the website such that information is current and organized by discipline or customer type, and create simplified, concise resources for customers, similarly by discipline or project type.

Administration's Response: The Administration agrees with this recommendation.

Yellow – Through its website, the Fire Department seeks to provide all information necessary for developers including several iterations of adopted Fire Code, permit requirements and applications, and inspection requirements and procedures. Website reconstruction will require external consulting support and interdepartmental coordination. The Department will initiate steps to determine project scope and estimated costs and if necessary, pursue funding during the FY 2020-2021 Mid-Year Review or during the FY 2021-2022 Proposed Budget process.

Target Date for Completion: August 1, 2022

Finding 3: Fire Can Better Support Customers to Reduce Inspection Wait Times and Re-inspections

Recommendation #4: The Bureau of Fire Prevention should pilot an option for customers to schedule combination inspections, such that staff trained in multiple disciplines (i.e., alarms, sprinklers, life safety) can inspect multiple systems at one time.

Administration's Response: The Administration agrees with this recommendation.

Green - The Fire Department has initiated cross-training amongst sworn Fire Prevention Inspectors and engineering staff to increase staff availability for inspection and plan review requests. The cross-training efforts will also enable staff to schedule and/or conduct combination inspections where possible. The Department will initiate a pilot to capture the efficacy of combination inspections.

Target Date for Completion: June 30, 2021

Recommendation #5: To improve accuracy and efficiency in inspections and data entry, the Fire Department should provide mobile devices to staff conducting inspections in the field.

Administration's Response: The Administration agrees with this recommendation.

Green – Deployment of mobile devices for field inspections is currently in process. Full implementation will require integration with shared Development Services software platforms including AMANDA. In the interim, partial implementation will provide some efficiency benefit as more information and reference resources will be immediately available to staff in the field through mobile devices.

Target Date for Completion: June 30, 2022

Recommendation #6: To ensure inspection time is used efficiently, the Bureau of Fire Prevention should develop policies to address unprepared customers, such as:

a.) Incentivizing customers to cancel appointments when they are not prepared by piloting a reduced cancellation fee, and

b.) Clarifying expectations for when staff should leave a site that is not ready for full inspection.

Administration's Response: The Administration agrees with this recommendation.

(*a.*) **Green** – In FY 2019-2020, the Fire Department implemented a pre-inspection procedure where confirmation of site readiness is obtained prior to inspector arrival. If it is determined that the site is not ready for an inspection, an alternate appointment is offered, and attempts are made to reassign the inspector to a pending site that is confirmed ready for inspection. The Department believes that the newly implemented procedure effectively eliminates unnecessary site visits, however will pilot this to determine efficacy.

Target Date for Completion: June 30, 2021

(*b.*) **Green** – The Department will develop policies for inspectors to ensure valuable time is not spent at sites that are not ready for inspection.

Target Date for Completion: December 31, 2020

Recommendation #7: To improve customer service, the Bureau of Fire Prevention should implement a more efficient and customer friendly scheduling process, that may include:

a.) Developing an online scheduling system, potentially with limits on how far out inspections can be scheduled,

b.) Posting any limits on inspection scheduling along with expected wait times (for when new inspection slots are available) online, and

c.) Resolving call routing issues between the PBCE call center and Fire Development Services Division.

Fire Department Response: The Fire Department agrees with this recommendation.

(*a.*) **Yellow** - The Fire Department will evaluate possible solutions to providing online scheduling including consideration of the system currently utilized by PBCE.

Target Date for Completion: August 1, 2022

(*b.*) **Yellow** - The Fire Department will identify effective methods to ensure explicit explanation of scheduling processes and expected (estimated) wait times online. Additionally, the Fire Department will pursue options to leverage AMANDA system capabilities to refine wait time estimates and monitor plan review progress.

Target Date for Completion: August 1, 2022

(*c.*) **Green** - In July 2020, the Fire Department and Building Division collaborated to create a process agreement which includes a "soft" transfer whereby the PBCE call taker confers with the Fire Department staff member prior to transferring a call.

Target Date for Completion: December 31, 2020

Finding 4: Standardized Training and Quality Assurance Would Support Consistency in Staff Comments

Recommendation #8: To ensure staff are prepared to conduct plan reviews and inspections consistently, the Bureau of Fire Prevention Development Services Division should develop a standardized training program for new hires.

Fire Department Response: The Fire Department agrees with this recommendation.

Green – In FY 2020-2021, the Fire Department implemented a standardized onboarding process for all new hires in the Bureau of Fire Prevention to address administrative and general

workplace logistics and process orientation. Currently, a training program is being developed which will provide a common foundation for conducting plan reviews and inspections.

Target Date for Completion: June 30, 2021

Recommendation #9: To support training for new staff and consistency among City staff and contract staff, the Bureau of Fire Prevention should create procedures, templates, or checklists that guide staff through common processes for plan review and inspections and, as applicable, clarify Bureau interpretation of code requirements.

Fire Department Response: The Fire Department agrees with this recommendation.

Green -The Fire Department is currently developing job aids including process maps and checklists to support training and consistency in the Fire Prevention Development Services Division. Additionally, resources have been developed for managers to ensure that staff is trained consistently. Once finalized these resources will be available in a single reference library available to all staff.

Target Date for Completion: June 30, 2021

Recommendation #10: To ensure consistent plan review and inspections, the Bureau of Fire Prevention Development Services Division should implement a system of quality assurance that includes:

a.) Periodic review of plan comments to verify complete and consistent plan review, and

b.) Periodic review of inspection records to verify consistent interpretation of requirements.

Fire Department Response: The Administration agrees with this recommendation.

(a., b.) **Green** – The 2019-2020 Adopted Operating Budget authorized the addition of a Division Manager to improve Bureau of Fire Prevention Development Services Division oversight including quality assurance. Because the Division Manager was added during a period of high workload and high vacancy rate, the position duties have not been fully implemented. The Fire Department will be filling position vacancies and adding capacity through its peak staffing contracts, thus enabling the Division Manager to assume plan review and inspection performance oversight and quality assurance duties.

Target Date for Completion: June 30, 2021

Finding 5: Fire Management Does Not Currently Have Easy Access to Workload and Performance Data.

Recommendation #11: To ensure accurate reporting for project and performance management, the Bureau of Fire Prevention Development Services Division should create and implement guidelines for consistent data entry among staff.

Administration's Response: The Administration agrees with this recommendation.

Yellow - In FY 2020-2021 the Bureau of Fire Prevention Development Services Division emphasized the importance of daily consistent and accurate data entry to all staff. Data entry will also be emphasized as component of standardized plan review and inspection training. As previously noted, as capacity is increased through peak staffing contracts and hiring, the Fire Prevention Development Services Division Manager position will be assuming quality assurance duties.

Target Date for Completion: June 30, 2021

Recommendation #12: The Fire Department should work with the Information Technology Department to:

a) Create reports or a dashboard tool utilizing AMANDA attempt data to show the number of plans pending review, under review, awaiting resubmittal, and staff assignments, and

b) Implement a mechanism to identify unscheduled inspections within AMANDA to better track and manage inspections scheduling.

Administration's Response: The Administration agrees with this recommendation.

(*a.*) **Green** - The Fire Department will pursue opportunities to leverage AMANDA capabilities and other platforms to provide at-a-glance status views of key business metrics. The Fire Department will coordinate with Development Partners and the Information Technology Department for execution and support.

Target Date for Completion: June 30, 2022

(*b.*) **Yellow** - The Fire Department will pursue opportunities to leverage AMANDA capabilities to monitor project progress and flag inspection needs. The Fire Department will coordinate with PBCE and the Information Technology Department for execution and support.

Target Date for Completion: June 30, 2022

Recommendation #13: The Fire Department should revise its calculation of the fire inspection cycle time measure to reflect the time from when an inspection was requested until when the inspection occurred, and revise its target, as appropriate.

Administration's Response: The Administration agrees with this recommendation.

Yellow - To measure cycle time from the point of inspection request will require data capture at the PBCE call center and AMANDA scheduling module configuration. The Fire Department will coordinate with PBCE and the Information Technology Department as needed for execution and support.

Target Date for Completion: June 30, 2021

Recommendation #14: The Fire Department should review the methodology of its calculations of the number of plan reviews and the percent of time that plan review processing time targets are met, and should reset targets, as appropriate.

Administration's Response: The Administration agrees with this recommendation.

Green - The Fire Department will pursue opportunities to leverage AMANDA and other platform capabilities to improve plan review performance metrics. The Fire Department will coordinate with PBCE and the Information Technology Department as appropriate for execution and support.

Target Date for Completion: June 30, 2021

CONCLUSION

The Administration greatly appreciates the comprehensive audit of Fire Development Services: Staff Resources and Process Efficiencies Will Help to Reduce Backlog. The audit report provides recommendations that will lead to increased capacity, improved scheduling and customer experience, greater use of technology and analytics, and consistency that will aid in bringing needed change to implement larger Development Services Transformation efforts and achieve the City Manager's stated enterprise priority to drive development in San Jose. The Department values the recommendations and would like to thank the City Auditor and staff for this review.

/s/
ROBERT SAPIEN, JR.
Fire Chief