



February 21, 2019

**Performance Audit of the
Hillsborough County
Vertical Building
Process**

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INDEPENDENT AUDITORS' REPORT

Members of the Board of County Commissioners of
Hillsborough County, Florida

This report represents the results of our performance audit of the Hillsborough County Development Services Department Building Division Vertical Process. We conducted our performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS), as applicable to performance audits contained in the *Government Auditing Standards* issued by the Comptroller General of the United States. 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.

Our summary is hereby incorporated as the Executive Summary, Section III, in the enclosed report. Our summary is hereby incorporated as the Executive Summary, Section III, in the enclosed report. Concerns, that may have been identified and not included in this report, were communicated to management and/or corrected during fieldwork.

We issued a draft of this report on October 26, 2018. We subsequently communicated with your representative, the Hillsborough County Internal Auditor, and we obtained feedback from management. Based on the feedback we received, we made certain changes to the report as deemed appropriate.

Our work did not include an assessment of the sufficiency of internal control over financial reporting or other matters not specifically outlined in the enclosed report. CliftonLarsonAllen LLP cautions that projecting the results of our performance audit to future periods is subject to the risks that conditions may materially change from their current status. The information included in this report was obtained from the Hillsborough County Building and Construction Services Division (the "Division") on or before December 19, 2018. We have no obligation to update our report or to revise the information contained therein to reflect events and transactions occurring subsequent to December 19, 2018.

CliftonLarsonAllen LLP's policy requires that we obtain a management representation letter associated with the issuance of a performance audit report citing generally accepted government auditing standards. We obtained a signed management representation letter from the Division on February 21, 2019.

Please contact Andrew Laflin, Principal, at 813.384.2711, or Monica Sanchez, Engagement Director, at 813.384.2722, if you have any questions or comments regarding this report.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Tampa, Florida
February 21, 2019

I. INTRODUCTION AND OBJECTIVES

The Board of County Commissioners (BOCC) of Hillsborough County, Florida (the County) engaged CliftonLarsonAllen LLP (CLA) to conduct the Performance Audit of the County's Development Services Department Building Division Vertical Process. To enhance its capability, CLA subcontracted Calvin, Giordano & Associates, Inc., a practice that specializes in all aspects of the vertical building process.

A performance audit refers to an independent examination of the management systems and procedures of a governmental entity to assess whether the entity is achieving economy, efficiency and effectiveness in the employment of available resources. Fieldwork primarily took place between March and June 2018.

This report presents the results of objective analyses carried out by CLA so the Hillsborough County Building and Construction Services Division (the "Division") and those charged with governance within the County may use the information provided to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

The County requested CLA to evaluate the overall efficiency and effectiveness of the vertical building process and identify and recommend opportunities for enhancements such as:

1. Workflows and processes for optimal service delivery.
2. Key performance indicators for monitoring production levels.
3. Forward thinking demand forecasting techniques to address future needs.
4. Optimal level of resources to meet the desired level of services.
5. Appropriate alignment of products and services to corresponding fines and fees.
6. Optimal technology utilization for processes, monitoring, and future needs.
7. Optimal customer service, communication, and experience to meet customer expectations.
8. Robust recruitment and retention strategies.
9. Timely performance of building inspections that are in compliance with the Florida Building Code.
10. High building inspector productivity while performing quality work.
11. Building inspector work load alignment with professional standards.

II. APPROACH AND METHODOLOGY

APPROACH

The CLA Audit Team (Audit Team, we, our) performance audit was conducted in accordance with generally accepted government auditing standards (GAGAS) contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (also known as "the Yellow Book"). Performance audits, as required by GAGAS, provide reasonable assurance that the auditors have obtained sufficient, appropriate evidence to support the findings and conclusions reached. The Yellow Book's reporting standards require a discussion of noteworthy accomplishments, provide for privileged and confidential information to remain so, and assure the views of responsible officials are included in the final report.

METHODOLOGY

The audit included three phases: diagnostics, analysis, and recommendations. The diagnostics and analysis phases of the performance audit consisted of the tasks outlined below.

- **Personnel interviews.** The first step of the audit was to conduct interviews with all members of the Division leadership team to develop an understanding of the strengths, weaknesses, opportunities and strengths, and gather information on relevant aspects of the operations. Conversations with managers, supervisors, technicians and direct services personnel were conducted to obtain an understanding of key operational areas. Multiple follow-up interviews took place during the course of the audit.
- **Field visits.** The Audit Team accompanied inspections personnel and visited several construction projects. We also observed various permitting processes.
- **Review of relevant documents.** The Audit Team requested and reviewed numerous documents such as the business plan, organizational charts, budgets, financial statements, policies and procedures, job descriptions, operational reports, and customer satisfaction surveys, among others.
- **Focus group.** In coordination with the Division, The Audit Team conducted a focus group with representatives of the various customer groups served by the Division. Participants included representatives from: the Tampa Bay Builders Association (TBBA) for residential contractors; the Associated Builders and Contractors (ABC) for commercial contractors; the Commercial Real Estate Development Association (NAIOP); the local engineering society and the local architectural chapter; permitting services companies; and the building, plumbing, electrical and mechanical trade industries. Comments and ideas for improvement shared by the participants were considered in our analyses and recommendations.
- **Board of County Commissioner input.** The Audit Team conducted one-on-one debrief meetings with the County Administrator and each of the seven (7) County Commissioners. The County Internal Auditor was present during these meetings.

III. EXECUTIVE SUMMARY

The Division is facing the challenges of unprecedented construction growth resulting from the nation's improved economic health. No other part of the Tampa Bay area is seeing such an explosion of single-family home construction as south Hillsborough County. In 2016, a total of 7,545 new homes began construction in Pinellas, Pasco, Citrus, Hernando and Hillsborough counties. A third of those homes, 2,502, were in just one area — south Hillsborough¹.

Over the last four years, the Division has seen a 40% growth in permitting workload, from 39,452 permit applications processed in FY14 to 54,999 in FY17, and inspections increased from 180,406 in FY14 to 271,415 in FY17. This significant upsurge in customer activity has resulted in rising work demands and staff workloads.

To successfully face such change, an organization requires a solid foundation of an adequate level of staff, automated tools to support the operation, optimized processes, and well-defined mechanisms to monitor production. The performance audit identified several potential focus areas for management to transition from traditional to more modern business practices adopted by private industry, expected by customers, and necessary to successfully meet the service demand. The executive team has already recognized the need to modernize and is making concerted efforts to adopt such practices to optimally meet customer expectations.

Strengths and accomplishments

Under the guidance and leadership of the new Building Official hired in March 2017, the Division has recently accomplished the following:

- Significant reduction in inspection rollovers, from an average of 28% in early 2017, to an average 2% through May 2018.
- Pay increases for Inspectors and Plans Examiners to levels closer to the current market, and establishment of a stipend for additional inspector licenses.
- Significant progress towards realizing the upgrade in permitting technology.
- Reached an industry goal of a ten-day turnaround for Plans-on-File reviews.
- Utilized several new contract service providers to assist with meeting service goals.
- Increased the number of Inspectors, Graphics/Floodplain Site Reviewers and Plans Examiners.
- Established a policy that requires managers/supervisors to regularly meet with their teams.
- Restored permit discounts previously awarded to the original fee schedule prices.
- Developed a solid working relationship with the development and construction community to foster open communication and feedback.

¹ Tampa Bay Times, November 2, 2017: Where in Tampa Bay is home construction booming the most? Southern Hillsborough County.

Opportunities for Improvement

Overall, the performance audit identified several areas of operational inefficiencies that drive down customer experience and create an obstacle for seamless service integration. To enhance efficiency and effectiveness and raise customer service quality, the Division can take action in the following areas: (1) Technology; (2) Customer service and performance expectations; (3) Workforce flexibility; (4) Operational efficiency; and (5) Quality assurance. The following is a summary of the recommendations made.

Technology. System limitations were frequently found to be the root cause driving down productivity and customer service, as the organization attempts to manage a large workload with manual processes. Lack of data readily available to measure results impedes the calculation of basic performance indicators, such as the time it takes to process a permit application, which can negatively impact team productivity and balanced workloads. Management expects that the new functionality associated with the eventual upgrade to a new permitting software solution, Accela, will address multiple elements within in the vertical building operation that are currently ineffective, fragmented, or non-existent.

The upgrade to Accela will be essential to advance and transform the Division. Prior to the implementation of Accela however, the Division should implement suggested procedural and operational changes that lead up to a successful implementation. In the longer term, the Division should evaluate other advanced technologies (such as online scheduling or routing applications) either currently being widely considered or adopted in the industry to achieve efficiencies within permitting and inspection processes in the near future. (Refer to page 12 for details.)

Customer service and performance expectations. The complexity of the operations and level of service demands necessitate a complete and clearly defined performance monitoring and reporting system. While the implementation of Accela will facilitate a new, more effective approach, management should continue to identify meaningful indicators that address customer service expectations, identify the source of the data, and establish a management structure for the measurement process. (Refer to page 15 for details.)

Workforce flexibility. The Development Services Department leadership should evaluate its organizational structure and consider staff classification changes to achieve a higher level of workforce flexibility in the three key functions – permit intake, plan review and inspection services. Over the years, the Division’s structure has followed a traditional vertical structure model whereby employees specialize on specific functions or process types, and there is limited cross-training. In the permit intake process for example, customers are assigned to the next service queue where they are assisted by a different employee, causing delays as they wait for the next functional “expert” to be available, as opposed to being served by the same person or a smaller team from beginning to end. A workforce with more diversified service capabilities will improve the customer experience, eliminate functional silos, and create a customer-centered organization.

A key aspect of achieving workforce diversification in a highly competitive market is adequate salary and incentives. Workforce diversification programs involve increased roles and

responsibilities with additional licenses and certifications, and the shift typically creates the need to verify that pay scales are commensurate with new job descriptions. In order to be able to attract and retain the best and the brightest, and once a more diversified workforce model begins to consolidate, the County should evaluate the need to further revise existing pay scales to ensure the Division is able to attract and retain such highly qualified and diversified employees.

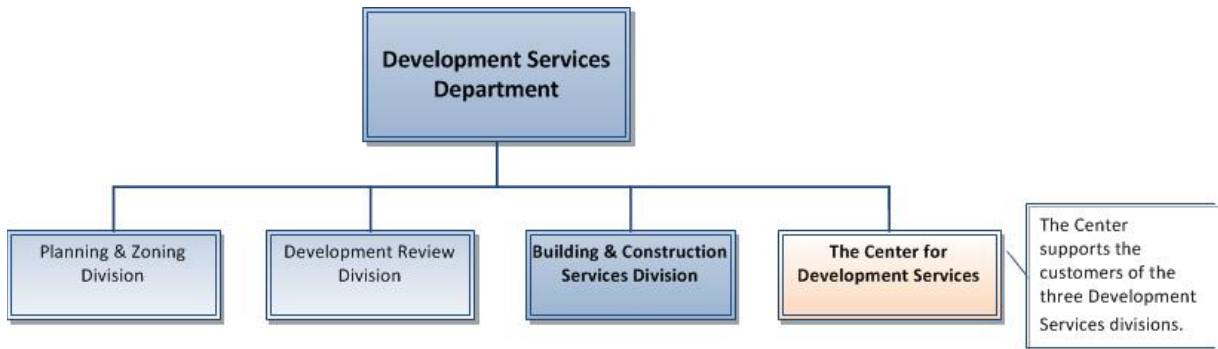
The County could also modify the existing incentive program that provides a stipend for additional inspector certifications to a career path based on multi-disciplined roles and responsibilities. Similarly, the County could develop an incentive program for a plans examiner group, as well as a career ladder for permit intake/processing based on acquired certifications. A training program focused on assisting employees with acquiring new certifications and licenses, including training for the permit intake and processing group, should also be contemplated. (Refer to page 20 for details.)

Operational efficiency. The Audit Team identified certain operational practices, especially within permit processing and residential site review, that could be improved to increase efficiency and enhance the customer experience. As of April 25, 2018, 650 of the 800 permit applications in process were pending residential site review. During the same timeframe, permit processing was taking approximately two weeks after the plan review had been completed, when a goal of one to three day turnaround with a 95% success rate after completing the plan review could be achievable. One key recommendation is for the Division to establish accountability measures to ensure that the parties responsible for collecting information that is verified prior to permit issuance are held responsible for providing complete and accurate information. (Refer to page 27 for details.)

Quality assurance. The Division and the Florida building and construction industry, in general, operates in a highly regulated environment. The Audit Team did not identify any instances of noncompliance concerning the Hillsborough County Floodplain Ordinance or the Florida Building Code. However, the Audit Team observed certain practices attributable to high workloads that could compromise the Division's ability to deliver on its commitment to quality on a consistent basis. (Refer to page 34 for details.)

IV. OVERVIEW

The Division is an integral part of the County’s Development Services Department, providing construction permitting services in the County’s unincorporated area, from the application, review and issuance of site and structural permits, through building inspections and issuance of certificates of occupancy. The Division’s core mission is to ensure the integrity of all new buildings and improvements to existing structures and verify compliance with County ordinances and the Florida Building Code. The Division is also responsible for contractor licensing and investigations and overseeing various construction boards.



Organization

The Division operates at the County Center and in a South County satellite office. Most permit processing staff, including plans examiners, operate at the County Center while the South County Office accommodates the inspections staff, some permit intake personnel, and a plans examiner group. The Division contracts with multiple service providers for supplemental inspections and plan reviews during periods of high demand.

County Center customers are served at The Center for Development Services (The Center), a concept created in 2011 as a one-stop concept to serve the needs of all Development Services Department customers, from planning and zoning to construction.

In fiscal year 2018, the Division had 126 funded positions and budgeted building services and construction revenues as shown, by type, below.

Table 1: Building Services and Construction Revenue Sources, Fiscal Year 2018

Revenue Source	Amount
Building permit fees	\$13,657,565
General government charges and fees	1,658,000
Ordinance violations	115,000
Miscellaneous revenue *	335,000
Total	\$15,765,565

* Local business tax, administrative service fees, copies, charges for services, dishonored payment fee.

The Division's leadership team includes the Division's Director, who is also the County's Building Official, two senior Building Permitting/Plans Review managers, one Licensing/Code Compliance Manager, and four Chief Building Inspectors. The Division Director came to office in March 2017. The Division has had six Certified Building Officials over the last eight years.

Level of service

Construction activity in Hillsborough County has increased exponentially over the past four years, which has caused a nearly 40% increase in the Division's permitting workload, which experienced continual annual increases from 39,452 permit applications in FY14, to 54,999 in FY17. Residential permits have experienced the largest increase at 100%, as shown in Table 2 and Graphic 1 below. Similarly, the Division's inspection activity increased 50% over the last four years, from 180,406 inspections in FY14 to 271,415 in FY17, as shown in Table 3 and Graphic 2.

Table 2: Permitting Activity Last Four Years

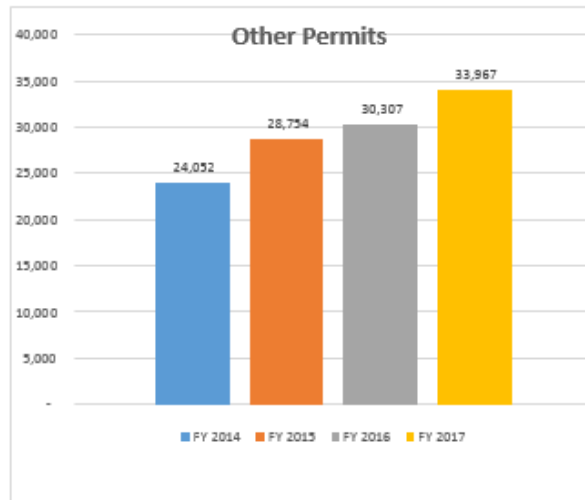
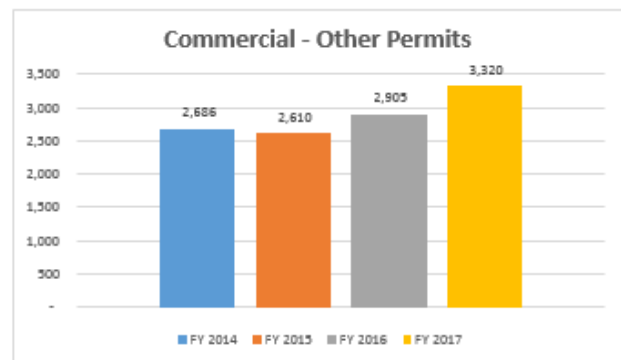
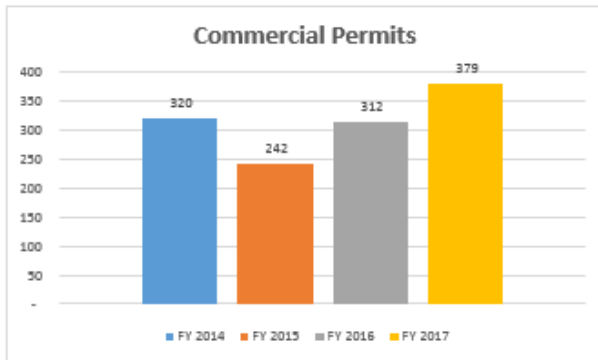
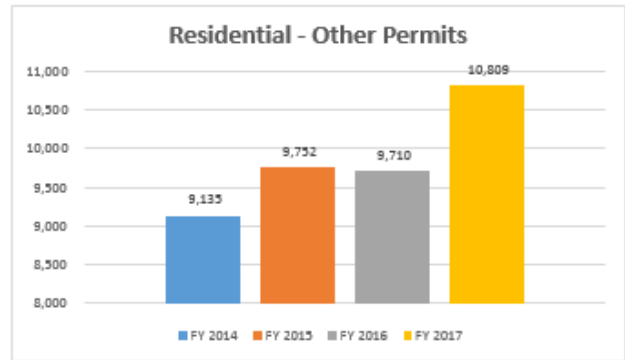
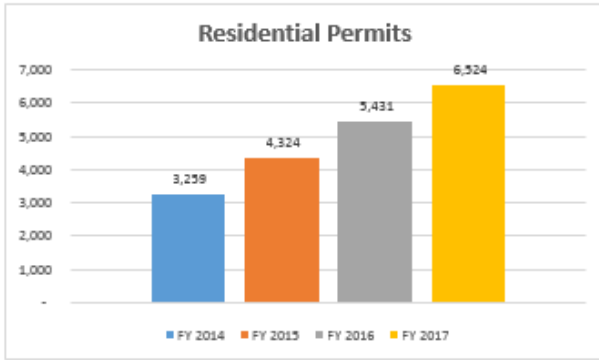
Permit Type	FY 2014	FY 2015	FY 2016	FY 2017
Residential	3,259	4,324	5,431	6,524
Residential Other	9,135	9,752	9,710	10,809
Commercial	320	242	312	379
Commercial Other	2,686	2,610	2,905	3,320
Other	24,052	28,754	30,307	33,967
Total	39,452	45,682	48,665	54,999

Table 3: Inspection Activity Last Four Years

Type of Inspection	FY 2014	FY 2015	FY 2016	FY 2017
Structural	62,251	67,569	85,574	93,372
Electrical	36,747	42,041	52,331	59,156
Plumbing	34,654	36,554	46,915	48,955
Mechanical	19,817	22,945	27,233	31,888
Re-Roofing	15,006	20,174	20,635	21,884
Swimming Pool	7,918	8,771	10,025	10,327
Gas	3,061	3,169	3,981	4,577
Signs	952	1,111	922	1,256
Total	180,406	202,334	247,616	271,415

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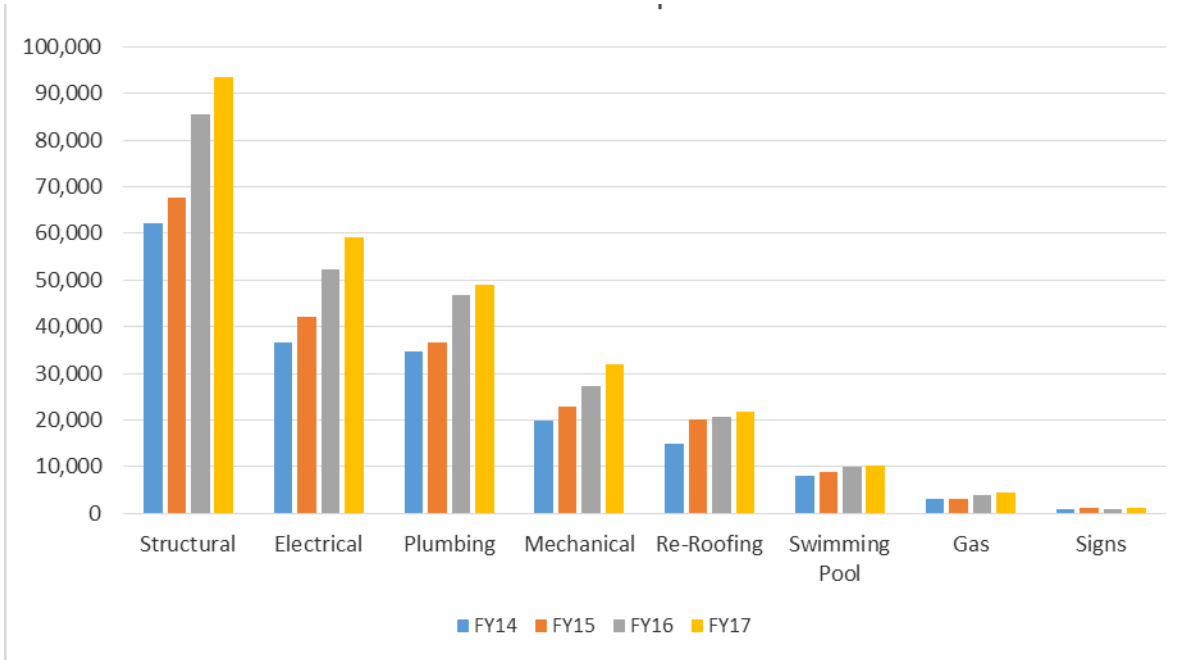
Graphic 1: Permitting Activity by Permit Type - Four Year Comparison



Three-year Increase By Permit Application Type (FY14 to FY17)	
Residential	100.2%
Residential Other	18.3%
Commercial	18.4%
Commercial Other	23.6%
Other	41.2%
Overall Increase	39.4%

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**Graphic 2: Completed Inspections by Type - Four Year Comparison
(Residential and Commercial Projects)**



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**V. PERFORMANCE ASSESSMENT AND
RECOMMENDATIONS FOR IMPROVEMENT**



Improvement Area: Technology

Background

The software system currently used to support the permitting operation, PermitsPlus, does not adequately support the high intensity, volume and complexity of the County's vertical building process. The current system is limited and does not allow comprehensive permit integration efforts or enhanced customer self-service opportunities. The system's limitations create manual workarounds to extract operational data, which is recorded during the normal course of business and necessary for decision-making, but difficult to extract.

As part of a Development Services Department strategy to implement a technologically advanced operation, the Division is adopting the Accela system and expects to complete implementation close to December 2019. Accela is a more robust application with the functionality to support the complexity of the County's permitting operations and the expectations of its customers. Management expects that the new functionality will address multiple elements within in the vertical building operation that are currently ineffective, fragmented, or non-existent. The new system will allow the County to overcome the challenges listed below and automate processes currently performed manually or are unavailable.

Implementation of Accela will grant citizens the convenience of self-service by applying, paying and tracking their permit applications online from the convenience of their home, office or mobile devices. The new system will also enable the various business units to seamlessly integrate and share new and historical information about permits, applications and other records. It will also provide mobile workers with access to a broader range of work processes and data, thus, maximizing staff productivity and eliminating manual and time-consuming business practices.

RECOMMENDATION 1

The County should undertake several actions to maximize performance through the use of technology:

- a. **Implement Accela as soon as possible.** Prior to the implementation of Accela however, the Division should implement procedural and operational changes suggested throughout the report that lead up to a successful implementation of the new system.
- b. **Modify existing technology and related procedures prior to Accela implementation**
 - Collaborate with the County's Information & Innovation Office (IIO) to research and explore any features within PermitsPlus that are potentially available but currently

unused. Based on a conversation with the County's IIO, portions of PermitsPlus may be utilized to generate data necessary to more effectively manage certain processes. For example, it might be possible to utilize the system's reporting functionality to track items such as manually corrected fees.

- Establish policies for any party who has a role in the vertical building process but is not an Accela user, to establish procedures that facilitate the complete and accurate collection of data. For example, the Fire Marshal uses a separate system to support fire code inspections that does not interface with the Division's system. In this case, the Division should recommend that the Fire Marshal Inspectors access and record their inspection comments/results in Accela for new construction.
- Develop a robust plan with significant training up front for both customers and all staff who interact with customers to face the increase in customer demands the new technology will pose.

c. Initiate discussions about other advanced technologies for the future

Technological advances applicable to building and construction and other similar industries continue to be developed. These new and cutting-edge products represent a potential for service improvement and will be available to both the public and the private sector.

The Division should evaluate the potential benefit of technological innovations that are currently being utilized or contemplated by other building services organizations. Major innovative advances that represent potential benefits to the Division and the County, include:

- Video calls – Video calls (Facetime, WhatsApp) allow inspectors to assist other inspectors on routine assignments. While the Division works on diversifying its workforce, video calls can allow a structural inspector to save the trip of other discipline inspectors, thereby, reducing travel time and related costs. For example, during a swimming pool steel inspection, the structural inspector can video call the electrical inspector, who can complete the bond inspection utilizing live feed video. This opportunity to utilize live feed video will work for many types of daily inspections. This technology can also be utilized by contractors to identify repairs completed for re-inspections saving inspectors valuable travel time.
- Routing apps – Routing applications (apps) have become commonplace for many industries, and the Division could utilize these apps to route inspectors daily. The routing apps can be set to identify the fastest route or the shortest route all while identifying traffic delays. There are many routing apps available for free or less than \$10.00. Routing apps are simple and inexpensive options to help reduce the travel component of onsite inspections. Some options include "Route4me" and "Plan My Route".
- Drone technology – This technology can be utilized to complete steep slope roof inspections which will make the inspection as effective but, more importantly, much

safer. The inspector can perform final inspections on tile and metal roofs without the potential of damaging the finished product. The future may include drones being utilized to perform complete inspection routes.

- Digital and 3-D modeling plan review – This is a technology that is progressing rapidly in the construction industry. To properly be prepared for the future, the Division should investigate and determine if this technology will add to improved customer service in the future.
- Online scheduling – Appointment scheduling software will allow the Division to manage development services appointments and bookings online. The Division is already in the process of adopting this technology.
- Help-Desk function or online assistance via chat – Available to the new online customers, to guide and educate them on the use of the Accela online services.
- Online tutorials – The Division could produce videos or screencast recordings on the various online processes that will be available with Accela, and make them available on the Division’s public website.

MANAGEMENT RESPONSE 1

See detailed response under Exhibit 2, Management Response.

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Improvement Area: Customer Service and Performance Expectations

Background

The Division has five distinct customer groups:

- Home and property owners
- Trade contractors (roofers, plumbers, electricians, & mechanical)
- Real estate developers
- Design professionals (architects & engineers)
- Construction builders (residential and commercial construction)

Although each of these groups has specific needs, their customer service expectation is similar: fast and effective permitting and inspection service. Current leadership has begun transforming its business model from a focus on mainly performing basic regulatory functions to a focus on providing a facilitated optimal customer experience.

Customer focus group results

The comments received from the focus group served to validate the areas for improvement identified during the audit, such as the need to modernize technology, increase operational efficiency, balance personnel workloads, and to develop and comply with service standards. Focus group participants generally agreed that Division staff place customer service as a top priority, but at the same time, believe that existing operational conditions preclude the Division from providing optimal service.

Absence of a complete performance measurement system

The Division has not defined a complete performance measurement system inclusive of key performance indicators (KPIs) and service target levels for service completion and turnaround times for all business areas. This is especially true for permit intake, plan review and permit issuance. Without key performance indicators and service delivery targets, it is not possible to ascertain whether the service provided and completion timelines are satisfactory to customers or meet the standards of the Florida Building Code. Lack of performance indicators is also an obstacle in measuring staff productivity, workload adequacy, and cost effectiveness; it also inhibits opportunities for comparison to other similar operations.

A major impediment to tracking performance is that the Division cannot extract the necessary data from the existing permitting system. Management anticipates that Accela will provide the means necessary to extract performance data.

Some performance measurement issues noted include:

- Permit application processing standards

The actual time that it takes to complete the permit application process, from the time the Permit Technician begins the intake process until the issuance of the permit, is not tracked either as a whole, or by its sub-processes in the current permitting system. The system only tracks two dates in the permitting process, the date applied and the date issued; it does not track the various in-between steps and does not specifically capture the time the customer is reviewing and addressing plans examiner comments. It is not possible to determine when the permit was in the Division or with the customer and for what duration.

For residential projects, the Florida Building Code mandates no more than 30 business days to complete the application review or to reject the permit application with comments. Although no instances of noncompliance with this rule were noted, in the current conditions it is difficult and time consuming to demonstrate continuous compliance with the 30-day standard.

- Center for Development Services customer service standards

The Center for Development Services has established customer service standards for the front-end of the permit application processes, such as the time a customer discusses the purpose of the visit and is assigned to a service queue, and the time the customer waits in the queue at the lobby before being served².

The Audit Team noted some issues with the standards The Center applies to permitting services. For example, the five (5) minutes allocated to understanding the customer need and subsequent assignment to the appropriate Permit Technician might not be appropriate for all types of permits or services. The Center also applies a 15 minute wait time to be seen by a Permit Technician to all service queues, which could be too low for building permits or perhaps too high for services like cashiering. Adherence to the time standards is a priority for the Permit Technicians, which could impede the quality of the review process at intake by not spending sufficient time with the customer up-front.

- Inspection services standards

For inspections, the Building Official recently established a standard of 95% for the percentage of inspection requests completed on-schedule and a rollover rate of not more than 5%. The rollover rate is the acceptable percentage of inspections not completed by the day scheduled, thus, rolled over to be completed the next day. While tracking the rollover rate is a top priority, the process is highly manual and time consuming.

² These standards are processed and tracked within Q-Flow, the application used at The Center for Development Services to support and manage customer flow at The Center. Q-Flow includes rules engines that route and place customers into Permitting Technician's queues based on the nature of the permit, technician skill and priority.

RECOMMENDATION 2

The Division should develop an adequate performance measurement system that includes service level targets and consider certain staff relocation efforts to improve the customer experience.

a. Establish service levels and a performance measurement system for each business group

Management should internally develop or outsource the development of a performance measurement system that includes a mix of outcome, output, efficiency, and effectiveness measures for the Division as a whole and for individual business processes or activities. Specifically, the performance measurement system should:

- Revise the vision and mission statements of the Division as necessary.
- Establish goals and objectives for each business group and the Division as a whole that describe what it plans to accomplish within specific time frames.
- Identify performance measures and service levels that adequately reflect the overall efficiency and effectiveness of key business processes or activities within the Division. **Tables 4a and 4b** include suggestions of both customer service standards and management performance indicators.

The development of a complete performance measurement system will involve a series of steps, including:

- Conduct a customer outreach effort via survey or other method to obtain specific feedback on service expectations.
- Select the measures to be tracked and identify the source of data and the frequency of each measure (daily, monthly or annually).
- Establish baseline values (current targets) for the indicators based on a combination of industry best practice and customer expectation.
- Obtain the actual results and adjust the targets as needed.
- Summarize the performance measures into a dashboard and the annual business plan; disseminate results among employees and other relevant stakeholders.

The Division should also:

- Create an advisory group to foster collaboration among all of the building industry stakeholders that will provide insight on current and emerging industry issues.
- Consider participating in activities of the Florida Benchmarking Consortium (FBC) or partner with other participating communities to track and compare results.

- Solicit ongoing feedback from the entire staff and customer base regarding the appropriateness of the current customer service standards.
- Enhance the customer satisfaction survey to include all services provided.

**Table 4a
Suggested Customer Service Standards**

Customer Service Standard by Process	Customer Service Expectation	Actual Result
Permitting services		
▪ Time customers wait at the lobby to be assigned to a service queue	(To be established)	(To be measured)
▪ Time customers waits in the queue before being served, by permit type	(To be established)	(To be measured)
▪ Number of days to issue permits after plan review completion	(To be established)	2 weeks
▪ Number of days between permit application intake and permit issuance, for residential and commercial projects (excluding days in customer possession)	(To be established)	(To be measured)
Plan review services		
▪ Number of days to review plans, by discipline (Building, Electrical, Mechanical Plumbing), excluding time customer is in possession of documents for corrections	(To be established)	(To be measured)
▪ Number of days to review plans on file	(To be established)	(To be measured)
Inspection services		
▪ Percent of inspection requests completed on-schedule	(To be established)	(To be measured)
▪ Number of days a project is in the horizontal process and the vertical building process(*)	(To be established)	(To be established)

(*) This measure involves measurement of service time by the Development Review Division.

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Table 4b
Suggested Internal Management Performance Indicators

Management Performance Indicator by Process	Current Goal	Actual Result
Permitting services		
▪ Percent of residential permit applications completed within 30 days as required by FS 553	(To be established)	(To be measured)
Plan review services		
▪ Number of total plans reviewed (commercial and residential) by reviewer	(To be established)	(To be measured)
▪ Average annual cost per plan reviewed	(To be established)	(To be measured)
Inspection services		
▪ Percent of all rollover inspections per day	5 % or less	5 % or less
▪ Number of inspections by inspector per day	(To be established)	(To be measured)
▪ Percent of rollover inspections by inspector	(To be established)	(To be measured)
▪ Average annual cost per inspection (can be by type, (Building, Electrical, Mechanical Plumbing)	(To be established)	(To be measured)

b. Relocate technical staff for increased effectiveness

Upon or close to the implementation of Accela online services, management should consider the following:

- Consolidate the technical staff (permitting and plan review) in the same location, which could be the County Center. The South County office could remain as a customer service site, staffed with two permit technicians responsible for assisting customers with the online submittal of permit applications. To bridge the separation from the technical group, require weekly meetings between inspectors and technical staff.
- Further, and to accommodate the needs of citizens who do not want to travel downtown to apply for permits, or are not sufficiently familiar with online tools, conduct outreach efforts to impart training and assistance, or provide extended services such as live chats.
- As the reorganizations at the County Center take place, consider rearranging the facilities at the County Center to create a more welcoming atmosphere, with clearer entry and exit points for the customer at each stage in the process.

MANAGEMENT RESPONSE 2

See detailed response under Exhibit 2, Management Response.



Improvement Area: Workforce Flexibility

Background

As previously referenced, the Division has experienced a 40% increase in its permitting workload over the last four years, from 39,452 permit applications in FY14 to 54,999 in FY17. Of this, residential permits have experienced the largest increase at 100%. Likewise, the Division's inspection activity increased 50% over the last four years, from 180,406 inspections in FY14 to 271,415 in FY17.

This significant increase in service demand has over time contributed to rising work demands and staff workloads. Although Division staffing also increased over the last four years, from 53 employees in FY14 to 63 in FY17, interviews with staff revealed that the workload continues to be difficult to manage and that the level of overtime required is at times overwhelming yet necessary to satisfy the demand. As of May 31, 2018, the Division had incurred a total of 12,934 hours of overtime at a cost of \$448,265.

To combat increasing demands on the Division's existing workforce, the adoption of certain employee incentives, such as base compensation increases and the establishment of a stipend for additional inspector licenses in March 2017, has helped improve job satisfaction.

Over the years, the Division has operated under a traditional vertical structure model whereby employees specialize on specific functions or process types, and there is limited cross-training. Such model not only creates organizational silos but renders a workforce that lacks the flexibility necessary to face high activity volume and service demand.

This impact is described further within the following processing stages:



Permit intake and processing

Between the County Center and the South County satellite office, there are 27 support services staff members, including technicians, analysts, administrative assistants, coordinators and customer service representatives providing permit application support services. Twenty-two (22) of these employees serve at The Center, and five (5) at the South County satellite office. Additionally, six (6) employees provide contractor licensing and code compliance support at The Center. Exhibit 1 on page 40 provides additional staffing details of the support services personnel.

Despite the different position names and reporting areas, the employees processing permit applications are completing very similar tasks. However, most of them are only proficient in and assigned to one or a limited number of permitting processes. Of the 14 Permit Technicians who operate at The Center, 6 are assigned to permit intake, 5 to permit issuance (processing) and 3 to electrical release. The six (6) employees assigned to permit intake are only trained to complete specific types of permits. In this type of structure, where cross-training is limited and business functions rely on few individuals, customer service can be impacted.

In the current process, customers are assigned to the next service queue where they are assisted by a different employee, continually having to wait for the next functional “expert” to be available, as opposed to being served by the same person or a small team from beginning to end. For example, when a contractor initiates a trade permit, the contractor is assigned to the permit intake queue. When the permit intake staff calls the contractor up, the contractor might need to update his/her contractor insurance requirements. Under that scenario, the contractor would be assigned to the licensing queue, and then reassigned back to permit intake. If other questions are raised during the permit intake process, then the contractor would continually be directed to a separate technician and then reverted back to the original permit intake queue before the permit application could finally be completed. Each entry into the queue generally includes wait time whether the task is simple or complex. By instituting a higher degree of employee cross-training, a single permit technician can assist a customer with multiple tasks.

Effects of an independent customer service structure

The administrative functions supporting the permit application process at The Center encompass multiple units under the purview of three different divisions and managers. The administrative functions supporting permit applications include:

- Initial phone or email customer contact, typically handled by the customer service representatives (reports to The Center Manager)
- Up-front screening and technician assignment (reports to The Center Manager)
- Permit intake (reports to the Building and Construction Services Director)
- Status updates/follow-ups (reports to The Center Manager)
- Back-end permit processing (reports to the Building and Construction Services Director)
- Cashiering staff and function (reports to the Budget Manager)

Having multiple reporting units can hinder consistent and seamless customer service because staff members are serving under different management standards and service approaches. In the current setting, the customer service function operates independently. For example, the Customer Service Representatives at the service counter are the first contact for a permit customer and have the critical task of correctly understanding and matching the customer’s need to the appropriate permitting technician. However, this group reports to The Center Manager and therefore, their service standards may not fully align with permitting services objectives.



Plan review process

The plan review process for the five core disciplines: plumbing, mechanical, electrical, fire and structural, is not concurrent but sequential. The sequential review approach creates lags in the review process and delays in customer service. It can also create staff idle time as examiners wait for other disciplines to be completed. In a concurrent model, any reviewer, regardless of discipline, can complete the review when available.

When a permit requires review by all five disciplines, the plans are examined in strict order, starting with plumbing and ending with the structural review. Residential permits have to undergo an additional review by the Residential Site Review (Graphics) team, which takes place first, before the core discipline review begins.

The root cause and basis for the sequential review model is two-fold. First, a limited number of Building Plans Examiners are trained in multiple review disciplines, which creates a practice focused on segmented specialty reviews. As of April 2018, there was a total of 12 plans examiners, 9 of which focused on a single discipline and only 3 were multi-disciplined. The multi-disciplined reviewers are not utilized to review multiple disciplines.

Secondly, most plans are accepted in manual, not digital form, which causes the plans to be physically moved from one discipline station to the next. Only a small percentage of plans were submitted and reviewed electronically. Of 27,714 plan reviews completed in calendar year 2017, 734 plans were submitted electronically via Project Docs.

A more efficient approach would be to complete reviews in any order to maximize plan examiners' time and ensure that the process is always in motion. The residential site review does not have to be completed first within a review cycle because most changes that result from this review are minor and obtaining core discipline comments at the first review cycle can save significant overall review time.



Building inspections

The Division has a minimal number of multi-disciplined inspectors. As of March 2018, only 7 of 63 of the building inspectors were multi-licensed/certified.

Inspection services personnel are organized based on construction discipline and/or license held (structure, electric, mechanical, plumbing). Under the current model, every construction site is typically inspected by four different inspectors. Thus, up to four groups may incur additional travel time, transportation, and overhead costs to support these separate activities.

To illustrate, in Hillsborough County, the greatest workload is residential inspections (70% approximately). If the inspection requires all trades (for example the rough inspection that is usually called in for the same day), ideally, one inspector could perform all of the inspections, as opposed to the current process of sending four inspectors to the same site. This arrangement yields savings of both time and expense, as well as, an improved overall customer experience because the contractor would generally be working with one inspector.

Limited workforce flexibility, paired with higher than normal demand levels, have contributed to the following issues:

- Not all inspections were completed when requested (rollovers). A review of rollover inspections over the last 12 months indicates rollover frequency as high as 15%. There has been a significant reduction in the number of rollover inspections since the new Building Official came onboard, and set an expectation goal of less than 5% rollover inspections per day. As of May 2018, the average rollover inspections was 2%.
- Inspectors do not have enough time to spend with customers during inspections creating customer satisfaction issues.
- An analysis showed that inspectors have routes that include as many as 30 inspections in one day with as many as 20 different stops.
- Inspectors are working overtime which increases the County's personnel costs. From October 1, 2017, to May 31, 2018, inspectors incurred 2,896 hours of overtime at a cost of \$133,550.
- The Division has experienced difficulty in hiring and retaining employees in technical positions including Inspectors as well as Plans Examiners. A salary study conducted by the County's Human Resources Department prompted pay increases in March 2017 that helped curtail the loss of additional employees. The fact that the private inspection and construction industries typically pay more, remains as an obstacle for any county or city attempting to attract and retain talented, qualified employees.

RECOMMENDATION 3

The Division should transition to a more diversified and fluid workforce, properly trained to provide services across permit types or construction disciplines.

Specific actions by process area are described below.

a. Increase workforce flexibility in permit intake and processing

The Development Services Department leadership should evaluate potential organizational structure and staff classification changes to achieve a higher level of workforce flexibility, including the following:

- Consolidate the 27 staff members supporting permit applications and re-classify them into a single position of “Construction Permit Technician” (or another title that appropriately represents a professional position), with a manager and a team of supervisors reporting to one leader. Three supervisors are recommended to maintain appropriate management and oversight of these job functions.
- Gradually cross-train staff to support most aspects of the permit application process. To provide employees the opportunity for advancement, the “Construction Permit Technician” would have different levels, for example:
 - Technician 1 (new start, uncertified)
 - Technician 2 (minimum 2 years of experience, International Code Council (ICC), permit technician certification)
 - Technician Supervisor (minimum 5 years of experience, ICC permit technician certification).
- As the implementation of Accela is completed, a reexamination of existing staff levels may be necessary.

b. Increase workforce flexibility in plan review

The Division should transition to a multi-disciplined plan-review workforce, properly trained to conduct the review of any discipline which will support a change from sequential to a concurrent plan review. In this model, all plans could be reviewed by the next available plan reviewer based on submittal date order. Management should decide on the multi-discipline combinations based on each employee’s capabilities and the greatest needs within the Division. This change should be accompanied by an employee incentive program that rewards the pursuit of additional certifications. In the proposed model, fire inspections will continue to be completed by the Fire Marshal due to the specific skillset required and requirements under the Hillsborough County Fire Rescue policy.

Additionally, the implementation of Accela will allow the team to review plans digitally, which will increase staff productivity.

c. Increase workforce flexibility in building inspections

Establish goals for creating a multi-certified workforce. Adopting a more diversified model could free up as many as three inspectors at one site to perform other inspections. This approach is also consistent with the goal of minimizing drive time (considered lost productivity) by combining inspection activities at each site. The County may ultimately merge all four of these roles into a single position description. The Division should allocate sufficient time to achieve the certifications and training to reach the necessary level of proficiency to conduct multiple inspection types.

Consider expanding the qualifications and responsibilities of the County's inspectors through the following means:

- Establish goals for creating a multi-certified workforce. For example, in two years the inspections workforce will consist of a large multi-disciplinary unit (50% of inspectors) and smaller specialty units.
- Pursue licenses that complement each other and are conducive to a balanced workload (i.e., Plumbing-Mechanical or Structural-Electrical.)
- Establish an incentive program for employees to be proficient in multiple disciplines. Specifically:
 - Create multi-certification/1 and 2 Family program for all staff.
 - Encourage single trade inspectors to obtain licenses in other disciplines, or as a 1 and 2 Family Dwelling Inspector.

d. Adopt service models that facilitate a seamless permitting process

In the longer term, the Division should consider the adoption of service models whereby building and construction experts ensure that large and/or complex projects are completed in a highly effective manner. Two models include:

- **Comprehensive Development Service Facilitator model.** The main function of a Development Services Facilitator is to be a single point of contact for a development services customer to coordinate and facilitate interactions with all County departments.
- **Concierge model.** The focus of the concierge model is to assist customers through the permitting and construction process with a single point of contact.

e. Attract and retain qualified employees

The Division should take additional measures to achieve the goal of attracting and retaining the best-and the brightest employees, by considering the following:

- As a higher workforce diversification level is achieved, and new roles and increased responsibilities naturally develop, the County should consider further revisions to existing pay rates to ensure they are competitive. Competitive pay rates can be determined through salary comparisons that appropriately represent the hiring environment by including the pay rates offered in neighboring communities as well as in the private sector for similar positions.

- Modify the existing incentive program that provides a stipend for additional inspector certifications to a career path based on multi-disciplined role requirements. Develop a similar incentive program for a plans examiner group, as well as a career ladder for the permit intake/processing based on acquired certifications.
- Develop a training program focused on assisting employees with acquiring new certifications and licenses, including training for the permit intake and processing group.
- Consider the creation of a training officer position, in charge of providing internal training year-round, organizing outside training, and create cross-training for administrative and field staff.
- Develop employee succession plans as needed.

f. Take actions to better forecast future workload demands

The Planning Department's approval of new developments provides the industry with a vision of what horizontal and vertical development activity may be in the future. However, the timing of when the development actually occurs is driven by the market and the economy, and is sometimes difficult to predict.

Such uncertainty creates challenges for the Division and the Development Services Department as a whole with regard to maintaining adequate staffing levels amidst the building and construction market's ebbs and flows.

As mentioned in Recommendation 2, the Division should cultivate a collaborative relationship with all of the building industry stakeholders that will provide insight on the future direction of the market. This relationship may be formalized by hosting monthly stakeholders meetings and creating an advisory committee.

To address uncertainty, develop a staffing plan that incorporates flexibility within the staffing model to adjust to the fluctuations in the market. This may include part-time employees, contract employees and employees who can be temporally reassigned to other County departments. The use of contracted services during high service demand should remain an option.

MANAGEMENT RESPONSE 3

See detailed response under Exhibit 2, Management Response.



Improvement Area: Operational Efficiency

Background

This section evaluates some of the key factors impacting operational efficiency in the following areas:

- Permit application intake and permit processing
- Plan review assignment
- Building inspections
- Route assignment
- Residential site review and floodplain determinations



Permit application intake process

The following factors were identified as challenges to efficient permit application intake:

- Errors originated during application intake review
Incomplete or erroneous data recorded at intake from information provided by the customer, is often detected by the plans examiners or by the permit processing team, which creates additional work for the permit processing team because it must research and then validate key information prior to the issuance of the permits. A contributing factor to this issue may be the limited time allotted for application intake.
- Minimal number of permits submitted online
Very few permits are submitted electronically. There is opportunity to submit more permits online, even with the existing permitting system. Examples include over-the-counter permits and single-discipline permits. From October 2017 to March 2018 there were 15,757 over the counter permits, which do not require review and could have been potentially submitted online.
- Permit filing system
The method used in the plan review area to file permit application files and related plans does not appear reliable. Each review discipline has a designated filing shelf, and permit files are moved from shelf to shelf as individual reviews are completed. In the current setting, the last

person that handles the file writes a note in the system indicating the subsequent location of the file. If that person fails to add the note, there is a risk that the file gets lost. Staff indicated that looking for lost files has resulted in hours of lost time. The current system makes it difficult to move the files through the process on a first-in first-out basis.

- Forms and checklists used by the permitting technicians

Some checklists used to support the various types of permits lack certain steps that are important in the process and are not documented. For example, in the Single Family Residential (Duplex) checklist, Step 4, *Natural Resources*, involves many more steps than what is currently documented. Additionally, some checklists are a mix of customer steps and technician steps, and some of the checklists and forms included staff names, as opposed to position titles.

Further, there may be insufficient procedures documented for the various sub-processes such as After the Fact, Electrical Releases, etc. Some of the forms may not be necessary and in some cases might create challenges.



Permit processing time

Based on our interviews with management personnel, currently permit processing spans approximately two weeks after the plan review has been completed. The Audit Team could not verify this result due to absence of readily available operational data. By eliminating unnecessary procedural steps, the Division could potentially reduce the turnaround time from two weeks to one to three days. Table 5 below lists certain steps that could be eliminated or adjusted in order to reduce the time spent processing a permit after the completion of site plan review.

Table 5: Verification Steps Prior to Permit Issuance

Pre-Permit Issuance Review Step	Comment/Recommendation
1. Determines if the site plan has been approved.	No permit application should be initiated without site review.
Enters the interior and exterior square footage of the project, but first verifies their accuracy by comparing the information provided by the customer at intake to the information documented by the plan reviewer. Often, the information does not match.	Square footage data provided by the customer should be validated and entered accurately at intake, and then confirmed and corrected, as necessary, by the plan reviewers.
2. Verifies that the address provided by the customer is correct. The Manager	The address, if new construction, should be entered during site review; existing

Pre-Permit Issuance Review Step	Comment/Recommendation
stated that the address frequently is incorrect.	construction or infills, should be entered at intake and confirmed by the intake team with the Public Works Department's Streets and Addresses Team, if necessary.
3. Determines whether the flood zone has been correctly identified.	The flood zone should be identified by the Development Site Review if it is new construction and entered in GIS during site review. Plan reviewers should identify the flood zone on existing construction or infills.
4. Calculates and enters the impact fees.	Impact fees should be automatically calculated by Permits Plus (Accela, when implemented).
5. Evaluates the permit fees and determines whether the fees have been fairly implemented due to scope description. Fees entered as miscellaneous creates the need to manually calculate State of Florida surcharges.	The permit fee schedule should be reviewed and adjusted to ensure fair implementation commensurate with the scope of work. This will reduce the need for manual fee adjustments on a case by case basis.
6. Reviews locks, holds, and notices that have been placed on the permit application. This is a valuable tool if utilized properly.	Locks, holds and notices allow users to add stops for information like paperwork and submittals in Permits Plus. The senior staff should create a detailed list of the types of locks, holds and notices that are acceptable and when they must be satisfied.

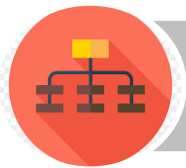
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Manual assignments of plan review and inspector routes

Plan review workload is assigned manually due mainly to limitations in the current permitting system. Weekly, the responsible manager generates a report that displays the reviews pending for active permits that are a priority because they are either past due or close to being due, and then organizes the permits by date (first-in first-out). Finally, the manager assesses the plan reviewer workloads and judgmentally assigns the plans. The time required to assign plan reviews could be drastically reduced if the process could be generated automatically by the system.

The inspections assignment process is also highly manual because the current system creates inspector routes based on zones but does not have the ability to balance the workloads among the routes to ensure that the work is equally distributed. The manual nature of staff assignments creates additional work for the chief inspectors and is time consuming.



Organizational design

The Division is currently responsible for certain important development functions that do not directly relate to the vertical building process, including a) residential site review and b) flood zone determination review for non-construction related projects. The residential site review is part of land determination procedures, which occur prior to the vertical process; the flood zone determination is typically a function under the Flood Zone Administrator.

- **Residential site review**

Residential site reviews and commercial site reviews are conducted by two organizationally separate teams: residential site reviews are conducted within the Building and Construction Services Division by the Building Services Graphics Team (Graphics Team) and commercial site reviews occur within the Development Review Division. The organizational separation between the two teams creates challenges for the Graphics Team because it often needs to access or research data originated in the Development Review Division. This condition leads to inefficiency and backlog of the overall application process.

As of April 25, 2018, 650 of 800 plans were pending graphics review. While the Graphics team had three vacancies at the time of our analysis, the Graphics Team's inability to readily access data that originated within the Development Review Division contributed to delays in the completion of residential site reviews.

- **Flood zone determination review**

Permit and non-permit related flood zone determinations require significant effort because of the extensive research and interpretation for the Graphics team to conduct. This can cause delays in completing the permitting process.

Non-construction related flood zone determinations are typically conducted by the Flood Zone Administrator but in Hillsborough, this function has been historically performed by the Division’s Graphics/Floodplain Manager. Processing flood determination letters is a cumbersome task that diverts attention from permit-related responsibilities. In March 2018, the Division processed 146 letters. Further, flood determination letters are free of charge whereas comparable local government entities charge a fee (for example, the City of Tampa charges \$100).

Permit related flood zone determinations are carried out solely by the Graphics Team, who also performs commercial permit flood determinations upon request. In March 2018, the Division processed approximately 1,000 permit related flood zone elevation determinations.

RECOMMENDATION 4

Implement measures to address the operational practices causing inefficiency within key aspects of the permitting process.

- a. **Improve application intake procedures**

- Create a policy for intake personnel to capture complete and accurate information at intake, and actively monitor employee performance. Provide additional training to administrative staff, as needed.
- Establish procedures to encourage a higher frequency of over-the-counter permit and single-discipline permit submissions online.
- Until the new system and digital plan review is implemented, establish a single central filing location (“a single rack”) for all files pending review based on application submittal date order and marked showing what discipline is pending review. Simplify the permit application filing system by organizing files in three locations:
 - Plan review
 - In-Process to be issued/returned for corrections
 - Issued
- Revise the existing procedures, forms and checklists to complete, update and standardize the steps of every key process. Improve the forms by separating customer instructions from technician instructions, and replace employee names with position names.

b. Improve permit processing procedures

Adjust the timing of current procedures associated with permit processing to ensure that the parties responsible for collecting the information verified during permit intake are accountable for complete and accurate information to avoid re-verification by the permit processor. See Table 5 on page 28, Verification Steps Prior to Permit Issuance, for further information. Additionally, design a training program for customers focused on increasing the accuracy and completeness of data provided at intake.

c. Improve the assignment of inspector routes

Until Accela is implemented, explore additional capabilities within PermitsPlus to improve assignment of inspector routes. Re-draw the areas in PermitsPlus based on active construction. By having more areas strategically identified, manual adjustments may be reduced. As mentioned in Recommendation 1, the Division can also consider a standalone off-the-shelf routing software to help reduce the time needed daily to create and balance workloads.

d. Improve residential site review and flood zone determination review procedures

Take measures to address the inefficiencies, backlog, and unnecessary workload generated within the permitting process by functions that are not core to the vertical building process. Specifically, management can:

- Develop procedures to more effectively integrate residential site reviews with the vertical building process. Suggested options to consider include –
 - Develop a process by which information that the Development Review Division obtains on specific site reviews is placed in shared files for access by the Graphics Team while completing residential site reviews.
 - Reduce residential site review work volume by implementing a procedure where by the design professional would attest to the accuracy of the submitted plans for certain new single family home projects.
 - Provide training to the plans examiners to assist with technical aspects of residential site reviews.
 - Discuss a long term strategy covering hierarchical structure, integration opportunities, divisional responsibilities, and other possible solutions that could improve the effectiveness of the residential site review function over time, as it relates to the Graphics Team of the Building and Construction Division and the Development Review Division. Upon evaluating options, management should assess short and

long term effects on customer service, and the potential impact of any changes on the overarching goals of the Development Services Department.

- Conduct independent performance assessments of the Planning & Zoning Division and the Development Review Division, focused on identifying any issues that may have an impact on the efficiency of vertical building processes, including residential site reviews. The assessment should identify any re-organization required to facilitate the vertical building processes, maximize the capabilities of the new permitting system and improve overall customer service.
- Relocate the issuance of non-permit related flood determination letters to the Public Works Department under the Flood Zone Administrator.
- Consider the possibility of charging a fee for processing flood determination letters like other jurisdictions to, at minimum, recover processing costs.

MANAGEMENT RESPONSE 4

See detailed response under Exhibit 2, Management Response.

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Improvement Area: Quality Assurance

Background

Building and construction services in Florida operate in a highly regulated environment. Management and staff ensure compliance with applicable laws and regulations, namely the Florida Building Code and the Hillsborough County floodplain ordinance. In addition, management continually strives to maintain the highest level of quality within its permitting and inspection processes that not only meets minimum regulatory requirements but also exceeds quality standards, with a focus on eliminating any potential errors or other deficiencies within the process. The listing below represents particular areas that can ensure the Division's success in delivering permitting and inspection services without omissions, oversight, or potential errors.

a. Plan review practices

The Audit Team identified certain other operational practices within the plan review process which impact efficiency and, although low, can potentially create a risk of noncompliance with the Hillsborough County Floodplain Ordinance or the Florida Building Code. These are:

- i. The tie-in survey/Elevation Certificate process is currently occurring too late in the vertical construction process. Errors in the location of vertical construction on the lot are identified through the tie-in survey/Elevation Certificate process after significant portions of the structure are in place. If the vertical construction is located incorrectly or the elevation is below the design flood elevation, a cumbersome variance process is required.
- ii. Floodplain review for substantial improvement/damage compliance is not tracked for over-the-counter single trade permits of relatively low value (i.e., water heater change-outs). To ensure success, the Division should review the over the counter permitting processing to address this low-level risk.

RECOMMENDATION

Implement measures to continue to ensure compliance with the Hillsborough County Floodplain Ordinance and the Florida Building Code. Specifically:

- i. Implement a tie-in survey/Elevation Certificate that requires the surveyor to submit a survey and Elevation Certificate showing the location of the building on the lot and the elevation of the lowest floor upon placement of the lowest floor. This is required for the Elevation Certificate under Section 110.3 "Required Inspection" of the Florida Building

Code. Modify the process so that the tie-in survey/Elevation Certificate are submitted and approved prior to tie beam inspection

- ii. Create a monitoring process to ensure compliance with the Hillsborough County Floodplain Ordinance for over-the-counter trade permits submitted both online and in person.

b. Independence issues with private providers

An independence issue may arise when a private provider services the Division and developers/contractors. When assigned to the Division, the private provider inspector and/or plans examiner may be required to enforce the Florida Building Code on developers/contractors with whom his/her employer has financial ties. This potentially could influence the judgement of the inspector/plans examiner.

RECOMMENDATION

To avoid conflicts of interest or even the appearance of a conflict of interest, the Building and Construction Services Division should consider the inclusion of a clause in the request for proposals for supplemental building services precluding the inspector/plans examiner vendor from providing private provider services in the community. Further, consider adding a requirement for the provider to sign a conflict of interest statement as part of the agreement.

c. Quality control procedures over building inspections

Although some procedures exist for conducting inspection audit, due to the volume of work, formal auditing goals have not been established.

When accompanying inspectors on site visits, the Audit Team observed that private providers may be performing inspections below the standards set by the County. For example, we observed properties with items approved by the private providers, but were not ready for inspections.

Even though private providers are fully licensed and authorized by state law to perform these functions, without a sufficient level of verification of the work, inspections may be completed that do not meet the minimum standards of the Florida Building Code.

Because the County issues the Certificate of Occupancy of all projects, including projects inspected by private providers, the County has discretion to conduct audits of private provider inspections to ensure standards are met. The private provider audit goal should conform to industry standards for a jurisdiction as large as Hillsborough County, which is permitted under Section 553, Florida Statutes.

RECOMMENDATION

- Formalize inspection audit goals for County inspectors, County contract inspectors and private provider inspectors. These quality control audits should have the following characteristics:
 - Be sample-based.
 - Track results by inspector.
 - Be conducted by the Chief Inspectors in each discipline.
 - Each Chief Inspector should perform a minimum number of audits during each measurement period (for example, at least once per month).
 - Specific trainings should be tailored and administered to inspectors based on the deficiencies and other findings identified through the audit process.
 - Audit results should be tracked and utilized in the inspector’s performance review.
- For private provider audits, management should adopt a risk-based approach based on types of inspections and specific providers. For example, a greater frequency of audits should be performed on inspections of private providers who have had previous audit findings or no historical context. In contrast, a lesser number audits may be suitable for reputable private providers with no previous audit deficiencies. Private provider inspections should be audited by County inspectors in conformance to Florida Statutes 553, at a level commensurate with industry standards for a jurisdiction as large as the County.

d. Inspections above the required standards

The list of inspection types currently followed by the Division exceeds the minimum standards of Chapter 1 of the Florida Building Code. A cursory review of the current Hillsborough County inspection list and a comparison to Chapter 1 of the Florida Building Code identified two examples of incremental inspections above the required minimum: Wall Conduit inspection and Special Inspector – Leave Message.

Providing inspections that are not specifically required by the code increases the workload for the Division. The addition of inspection types above the requirements of the Florida Building Code occur for several reasons.

- Inspections are created due to unique situations or special purposes and then become normalized.
- Based on the software’s original configuration, inspections were included that are not required under the Florida Building Code.
- The Florida Building Code changes on a three-year cycle and this includes the code required inspections.

RECOMMENDATION

The Division should provide a review of the current list of inspection types identifying any inspections that are not a requirement of the Florida Building Code. Any inspection found to be in excess should be reviewed by the Building Official and senior management staff to determine the actual need and revise the inspection list accordingly. This process should be completed prior to the implementation of each new code cycle.

e. Fee schedule issues

The current fee schedule needs to be updated. The current fee schedule was established in the early 2000s by considering factors such as type of construction, type of occupancy, and square footage, to determine the complexity of projects and their fees. The permit fee schedule for any building department should include several key aspects.

- Ease of use
- Transparency
- Fees sufficient to recover the cost of operating the Building Department

Several changes have been made to the building code over the last 15 years that have originated new types of construction and types of occupancy, which have not been specifically defined in the fee schedule. This condition has created some elements of ambiguity.

One particular issue is the misalignment between certain project types and the fees charged, which are higher than the cost of the inspection effort involved. When this circumstance arises, the Permit Technicians are instructed to use the number of required project inspections, which is established by the Plans Examiners, to manually calculate the fee. In doing so, the fees are more reasonable and adequately reflect the cost of the proposed inspection effort. This issue arises often, and although the Permit Technicians work under a supervisor's direction, a control system is not in place to specifically ensure that only valid, authorized and approved manual adjustments to fees are enacted when necessary. Based on the results of our interviews, we identified a risk that system users, including permit technicians and possibly even cashiers, could initiate adjustments to permit and inspection fees within Permits Plus without knowledge of supervisory personnel, which presents conditions for potential misappropriation.

RECOMMENDATION

- Update the existing fee schedule. The Division should conduct a fee study to determine whether there is appropriate alignment of products and services with the corresponding fees and fines. The Division should identify an alternative method of calculation to establish an easy to use and transparent fee schedule that adequately covers the County's cost of services, such as the value of construction, square foot cost, or other appropriate

method. Such change would eliminate or at least minimize the number of manual fee adjustments that are currently necessary.

- Improve internal controls over manual fee adjustments. When the need arises to initiate a manual adjustment of a permit fee due to the unusual nature of a project, the Division should formalize a review process involving supervisory review and approval. Such process should include a notation of reason for adjustment in a memo field and documented approval within the Permits Plus system, as the fee changes occur.

To track the validity of manual adjustment of permit fees, the Division should work with the County's Information & Innovation Office to periodically generate a report of all manual permit fee adjustments. This report should be reviewed by an individual in a supervisory role. Any adjustments listed on the report that did not adhere to a formal approval process upon initiation of the adjustment should be scrutinized. The Division should also analyze user rights within Permits Plus, specifically those users who have the ability to make manual fee changes in the system. Access rights should be revoked for users who do not need this access, namely cashiers and other employees who act in a supervisory capacity.

f. Chief Inspectors' oversight responsibilities

No supervisor should have more than 10 direct reports. The current ratio of Chief Inspectors to Inspectors ranges from 8 to 30 Inspectors to 1 Chief. With this imbalance, adequate oversight and quality control of the Inspectors' work in general may be compromised.

- Chief Structural Inspector - 29 Structural Inspectors plus 1 Plans Examiner/Inspector
Ratio 1:30
- Chief Mechanical Inspector - 8 Mechanical Inspectors plus 1 Plans Examiner/ Inspector
Ratio 1:9
- Chief Electrical Inspector - 12 Electrical Inspectors plus 1 Plans Examiner/Inspector
Ratio 1:13
- Chief Plumbing Inspector - 10 Plumbing/Gas plus 1 Plans Examiner Inspector
Ratio 1:11

RECOMMENDATION

Reduce the ratio of Chief Inspectors to subordinates by adding leads or Assistant Chief Inspectors to achieve a ratio of no more than 1:10 which is more manageable from a review and oversight and training perspective.

g. Records management and document retention

A single source/single location for all existing records does not exist. Historical records are kept onsite and older records are kept on micro film or in the original form much longer than required by Florida Public Records Laws, which exasperates the burden on the Division to maintain and provide service. Some records are sent to a contractor to digitalize, but the record of submission to the vendor is handwritten, and the number of plan pages submitted to the vendor is not always clearly identified. Management anticipates that implementation and use of Accela will improve the management and storage of permitting records.

Additionally, access to some protected records is not restricted. The current document storage system (Optix) represents a risk in that it has no clear restrictions as to what the public can view.

RECOMMENDATION

Take actions to improve records management and retention, such as:

- Use Excel to keep account of submission of records to the digitalizing contractor.
- Review and revise the procedures for verifying that digitalized records comply with the minimum standards (ensure all records are preserved in a usable format.)
- Move the records of closed-out permits to the Hillsborough County Clerk's Records Department or designated records custodian for archiving.
- Revise procedures to restrict access to public records exempted from the Public Records Law.

MANAGEMENT RESPONSE 5

See detailed response under Exhibit 2, Management Response.

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EXHIBIT 1
STAFFING DETAILS OF THE SUPPORT SERVICES PERSONNEL

Number of FTEs by Functional Group	County Center		South County		Total
	FTEs	Description	FTEs	Description	
<u>Permit Intake and Processing</u>					
Manager	2	1, Permitting/Plans Review	1		3
Supervisor	2	1, Permit Intake 1, Permit Issuance	0		2
Technician	14	6, for Permit Intake, 5, for Permit Issuance, 3, for Electrical Releases	5	3, Permit Intake/Issuance 2, Planning & Zoning	19
Administrative Specialist	1		1		2
Administrative Assistant	0		1		1
<u>Customer Service</u>					
Manager	1	Community Relations	0		1
Supervisor	1		0		1
Analyst	1		0	(*)	1
Representative	4		0		4
<u>Contractor Licensing/Code Compliance</u>					
Manager	1		0		1
Program Coordinator	3		0		3
Administrative Specialist	1		0		1
Administrative Assistant	2		0		2

(*) Customer service in South County is performed by the Admin. Assistant and Specialist listed above.

EXHIBIT 2 MANAGEMENT RESPONSE

Management appreciates the time and effort dedicated to this initiative by the County Internal Auditor and her team, our industry stakeholders, the County Administrator and County Commissioners. Management requested this performance audit to evaluate the overall efficiency and effectiveness of the vertical building process and to identify and recommend opportunities for enhancement.

The Audit Report recognized that the Building Services Division is facing the challenges of unprecedented construction growth resulting from the nation's improved economic health. Over the last four years, Building Services has seen a 40% growth in permitting workload, from 39,452 permit applications processed in FY14 to 54,999 in FY17. During that same time period, inspections increased by 50% from 180,406 in FY14 to 271,415 in FY17. This significant upsurge in customer activity has resulted in rising work demands and staff workloads.

Despite the challenges posed by this upsurge in activity, the Audit Report noted the recent accomplishments of Building Services under the guidance and leadership of the new Building Official, hired in March of 2017. The noted accomplishments include the following:

- Significantly reduced inspection rollovers, from an average of 28% in early 2017, to an average 2% through May 2018. Currently, this rollover rate is less than 1%.
- Achieved an industry goal of a ten-day turnaround for Plans-on-File reviews.
- Made significant progress towards realizing the upgrade in permitting technology.
- Developed a solid working relationship with the development and construction community to foster open communication and feedback.

In order to enhance the efficiency and effectiveness of the Building Services Division and raise customer service quality, the Audit Report identified five potential focus areas for management to transition from traditional to more modern business practices adopted by private industry, expected by customers, and necessary to successfully meet the service demand. The following management responses will address each of the five findings.

Many of the improvements identified in the Audit Report hinge on the successful implementation of The Accela system. Accela will provide the ability to evaluate and enhance business operations including customer service and performance expectations, workforce flexibility and operational efficiency. Once Accela is implemented and improvements are undertaken, it may be appropriate to evaluate the structure of the building fee schedule.

FINDING 1: TECHNOLOGY

Management Response: Concur – As noted in the Audit Report, the software system currently used to support the permitting operation, PermitsPlus, does not adequately support the high intensity, volume and complexity of the County’s vertical building process and was frequently found to be the root cause driving down productivity and customer service, as the organization attempts to manage a large workload with manual processes. In order to address this software system challenge, management has acquired the Accela Automation system, which is a more robust application with the functionality to support the complexity of the County’s permitting operations and the expectations of our customers. The Development Services Department is actively engaged with the Information and Innovation Office to implement the Accela system for Hillsborough County. As part of this effort, the County recently entered into an interlocal agreement with the City of Tampa to acquire Tampa’s Accela software configuration in order to expedite going live with Accela while at the same time providing consistency for our customers in the permit processes between the County and Tampa. The attached project schedule (see page 45 and 46) shows the status of the ongoing Accela implementation projects with a target completion date for the building permitting component of August 1, 2020. The project schedule also identifies software projects being undertaken to enhance the Accela system in areas such as electronic plan review and inspection scheduling by text messaging.

Target Completion Date: August 1, 2020

FINDING 2: CUSTOMER SERVICE AND PERFORMANCE EXPECTATIONS

Management Response: Concur – Performance measures have been established and are tracked for several significant elements of the permitting and inspection processes, including the rollover rate for inspections, time to review building plans on file and the time it takes to issue residential permits. Tracking of these performance measures is a manual process and the Audit Report recognized that the current permitting system has limitations that make data extraction for additional performance measures difficult and necessitates inefficient manual workarounds to extract data. While these performance measures track significant elements of the process that are very important to our customers, we recognize that there are other performance measures that could be tracked to ensure we are effectively and efficiently delivering services. The Accela system will provide enhanced data extraction capabilities which will enable the tracking of additional measures.

The Audit Report recognized that current leadership has begun transforming its business model from a focus on mainly performing basic regulatory functions to a focus on providing a facilitated optimal customer experience. As part of this transformation and in preparation for Accela,

management has initiated discussions with the construction industry stakeholders to determine the most appropriate manner to establish service goals and meaningful additional performance measures. As the implementation of the Accela system proceeds, reporting capabilities will be included to allow data to be easily extracted and tracked in order to measure our performance in those areas identified in partnership with our stakeholders.

Target Completion Date: August 1, 2020

In advance of Accela implementation, the customer service surveys currently tracked through kiosks in the Center for Development Services will be enhanced and an appropriate customer feedback mechanism will be developed and implemented by October 1, 2019. Additionally, an interim efficiency plan will be presented as part of the FY20 budget process which will include a proposal for additional positions to serve as facilitators for customers in the permitting process.

Target Completion Date: October 1, 2019

FINDING 3: WORKFORCE FLEXIBILITY

Management Response: Concur – Management concurs that the successful completion of this recommendation will require the restructuring, reclassification and cross-training of most of the existing staff members with the likelihood of requiring several new positions to meet the high level demand for services. Management has taken initial steps to begin cross-training and realignment of duties and responsibilities for certain work units including providing stipends to incentivize inspectors to become licensed in multiple construction trades. It is anticipated a comprehensive plan to restructure the organization and reclassify positions in order to increase workforce flexibility will be an evolving process over a multi-year timeframe that will be influenced by the changes that the Accela system brings to our business practices. Presently, management has identified staff reclassifications and upgrades, particularly in the permitting and processing areas, that would create a much more flexible staff. The position upgrades and changes will be pursued with Human Resources in order to have the changes completed this year.

Target Completion Date: December 31, 2019

FINDING 4: OPERATIONAL EFFICIENCY

Management Response: Concur – Management understands the ultimate success of this recommendation heavily relies on the timely implementation of the Accela Automation software system, which is a robust fully integrated permitting and inspection system that is capable of delivering efficient and effective services to our staff and customers, both online and in the office. As indicated above, the new system is expected to be implemented within 12-18 months.

Target Completion Date: August 1, 2020

In advance of Accela, management has been reviewing existing procedures and implementing strategic changes that have streamlined and enhanced the quality of many services, such as the Alternative Residential New Construction Permitting Program which resulted in a significant improvement in permit review times. An interim efficiency plan will be presented as part of the FY20 budget process which will include a proposal for additional positions to serve as facilitators for customers in the permitting process.

Target Completion Date: October 1, 2019

FINDING 5: QUALITY ASSURANCE

Management Response: Concur – The Audit Report recognized that the building and construction industry is a highly regulated environment. The audit team did not identify any instances of noncompliance concerning the enforcement of the Hillsborough County Floodplain Ordinance or the Florida Building Code and noted that management continually strives to maintain the highest level of quality within its permitting and inspection processes that not only meets minimum regulatory requirements but also exceeds quality standards, with a focus on eliminating any potential errors or other deficiencies within the process. While recognizing management’s commitment to quality assurance, the audit team identified certain items that could be reviewed in an effort to ensure that Building Services maximizes its ability to deliver on its commitment to quality on a consistent basis. These items mainly focused on inspection types and timing, enhanced quality assurance program and span of control of staff. Identification of potential adjustments in these areas has already begun and implementation of appropriate changes can be completed by the end of the year.

Target Completion Date: December 31, 2019

Development & Infrastructure Services - DRAFT
Development Services Department Summary

ID	Project	Description	Procurement / Project Status	Cost	Target Start Date	Target Completion Date
1	Accela Civic Platform - Building (BLDG), Contractor Licensing (CL), & Fire Rescue	Automates all aspects of the building permit/licensing process, 24-hr self-service portal, transparent view of workflow/approval process, and electronic plan submissions/reviews.	Change Order 2 Pending Deliverables Split to Incorporate Dev Review Record Types	\$700,000	JUN '17	AUG '20
2	Accela Civic Platform - Development Review & Utilities	Automates all aspects of the permitting/inspection process, 24-hr self-service portal, transparent view of workflow/approval process, and electronic plan submissions/reviews.	ON HOLD Pending BLDG Go-Live	TBD	TBD	TBD
3	Accela Civic Platform - Code Enforcement (CE)	Create/manage code cases in the field more efficiently and digitize the mobile workforce.	Change Order 3 Pending Final Scope of Work	\$250,000 (Estimate)	APR '19	OCT'19
4	Accela Civic Platform - Right of Way (ROW)	Automates all aspects of the permitting/inspection process, 24-hr self-service portal, transparent view of workflow/approval process, and electronic plan submissions/reviews.	ON HOLD Pending BLDG Go-Live	(Original \$1.7M SOW)	TBD	TBD
5	Accela Civic Platform - Zoning (ZON)	Automates all aspects of the planning process, 24-hr self-service portal, transparent view of workflow/approval process, and electronic plan submissions/reviews.	ON HOLD Pending BLDG Go-Live	(Original \$1.7M SOW)	TBD	TBD
6	Granicus Agenda Management - Phase 1: Land Use Agenda Phase 2: Accela Integration Phase 3: BOCC Agenda	An automated legislative solution to streamline the agenda and public meeting process.	Sole Source Pending Draft SOW	\$55,500	FEB '19	MAY '19
7	Selectron IVRS (Accela Integration)	Upgrade the current interactive voice response system (IVRS), integrate with Accela, build new outbound inspector arrival texts, and allow for inspection scheduling via text (SelectTXT)	Contract Renewal Pending Board Approval	\$99,750 (Implement) \$60,000 (SMS Fees)	MAR '19	AUG '20
8	ePermit Hub (Accela Integration) - Electronic Plans Review	SaaS solution provides end-to-end management of construction projects. Construction teams are able to share and collaborate to fulfill the permit requirements for a project, while managing schedules and seamlessly interacting with jurisdictions.	Sole Source Pending Final SOW	\$123,440 (Implement) \$119,980 (Service Fee)	MAR '19	AUG '20
9	PayIt (Accela Integration) - Payment Processor	The SaaS platform is highly secure (PCI-Level 1 Merchant compliant and certified), requires minimal customer configuration (provider integrates), provides analytics, and robust disaster recovery.	State Contract Pending Financial Review	TBD	TBD	TBD

Development & Infrastructure Services - DRAFT
Position Needs

ID	Project	Existing Positions			New Positions					
		Project Manager	Solutions Engineer	Solutions Analyst	Sr. IT Project Manager	Project Manager	Solutions Engineer	Solutions Analyst	Data Engineer	Network Admin
1	Computerized Maintenance & Management System (CMMS) Assessment	Greg McLean					1	1		
2	Capital Delivery Solution (CDS) - Primavera Cloud, Unifier, & Business	Corey McGonigle					1	1		
3	Customer Cloud Solution (CCS) - Customer Care & Billing (CC&B) Upgrade to Oracle Cloud	Dorinda Rottenberger					1	1		
4	Business Technology Assessment - Public Works & Solid Waste	Greg McLean						1		
5	Capital Asset Management (CAM) - Phase 1 Discovery: Assess Pavement and Bridge Program Phase 2 Deployment: Collect/Evaluate Asset Inventories and Implement Solution	Corey McGonigle		Vacant						
6	Public Utilities SCADA Upgrade	Will Schill								
7	Upgrade Public Works Pump Stations to SCADA	Greg McLean			1		1			1
8	Traffic Management System Upgrade	TBD				1	1	1		
9	Iteris Intelligent Transportation Systems	TBD				1		2		
10	Mobile Workforce Management (Dependency on CMMS Solution - May Include Capability)	TBD				1		2		
11	Content Management	TBD						2		
12	Performance Management Phase 1 CCS: Rewrite all billing reports into Oracle BI Tool Phase 2 Non-Oracle Systems: Determine Solution	TBD						1		
Totals					1	3	2	8	0	1
Total Positions Needed		15								