



OFFICE OF THE
City Auditor

Building Permit and Inspection Services Audit

January 23, 2014

The Office of the City Auditor conducted
this project in accordance with the
*International Standards for the
Professional Practice of Internal Auditing*

Building Permit and Inspection Services Audit

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Executive Summary

The Building Permit and Inspection Services (BPIS) Section is part of the Current Planning Branch in the Sustainable Development Department. BPIS is responsible for monitoring the construction of buildings and structures for compliance with the Alberta's *Safety Codes Act*. To do this the Section manages a program of permit issuance, plans examination, site inspection, and follow-up inspection.

Our objectives for this audit were to determine if BPIS' operations are performed in an effective and efficient manner, and if BPIS has an effective method of regularly assessing its operational performance. The scope of this audit covered the period January 1, 2008 to June 30, 2013.

Effectiveness and Efficiency of BPIS' Service Delivery

To assess the effectiveness and efficiency of BPIS' service delivery, we reviewed various aspects of BPIS operations. Overall, we found that BPIS' current service delivery strategy could be improved. We based this conclusion on the following:

- The use of overtime to increase BPIS output of plans examinations and inspections has not been effective.
- The existing inspection backlog is not being addressed in a timely and cost-efficient manner.
- Current plans examination and inspection timelines have a negative impact on stakeholder satisfaction with the quality and effectiveness of BPIS' service delivery.
- Re-inspection fees have not been levied consistently or in accordance with the Bylaw.

We also conclude that BPIS can improve the efficiency of its service delivery by enhancing its use of technology and improving its staff supervision practices.

We identified five opportunities to improve the effective and efficient delivery of BPIS' permitting and inspection services. Implementing these recommendations will enhance BPIS' ability to achieve its key responsibility of monitoring compliance with Alberta's *Safety Codes Act* and associated codes and standards. **(Recommendations 1 to 5)**

Performance Management System

We found that BPIS had not established measurable performance goals or targets to facilitate effective and efficient performance monitoring. We recommended that BPIS implement an effective performance management system. **(Recommendation 6)**

BPIS Roles and Responsibilities

We found that there is some ambiguity about BPIS' roles and responsibilities. As a result of this ambiguity, BPIS is currently exceeding its core service levels as defined in the City's Quality Management Plan. There is no formal justification or documented

rationale for the extra inspection services that BPIS provides above its core service levels. We therefore recommended that BPIS define and document an achievable Service Delivery Model. (**Recommendation 7**)

In addition, we found that BPIS' present strategy of reviewing all permit applications in detail before issuing a permit and ensuring that all permit activity is subject to inspections before a permit is closed is not being achieved. BPIS needs to adjust its current delivery practices to focus its limited resources on those activities that pose the highest risk to public safety. Consequently, we recommended that BPIS move to a risk-based plans examination and inspection methodology. (**Recommendation 8**)

Management has already launched some initiatives to address the issues identified in this report. Management has accepted the eight recommendations and developed action plans to address them. We anticipate that implementing the recommendations will improve the effectiveness and efficiency of BPIS and positively affect BPIS service delivery.

Building Permit and Inspection Services Audit

1. Introduction

The Manager of the Current Planning Branch in the Sustainable Development Department requested that the Office of the City Auditor (OCA) conduct a review of the City's building permitting and inspection processes. In response, we included an audit of the City's Building Permit and Inspection Services Section (BPIS) in our *2013 Annual Work Plan*.

2. Background

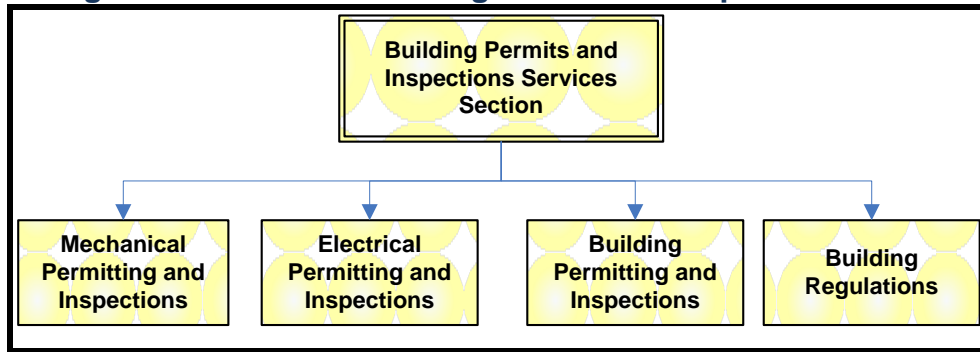
2.1. Organizational Structure

BPIS is responsible for approving building permits and inspecting building sites within the boundaries of the City of Edmonton. The purpose of the permit and inspection system is to monitor that buildings and structures are constructed in compliance with the requirements of Alberta's *Safety Codes Act (SCA)*. The SCA provides a framework for the development of a safety system for the design, construction, operation and maintenance of buildings in Alberta. The Province delegates the responsibility for administering the SCA to municipalities and other entities. Appendix A provides a detailed overview of this framework. As delegated through the SCA, BPIS monitors compliance through a program of permit issuance, plans examination, site inspection, and follow-up inspections, using certified Safety Codes Officers.

As shown in Figure 1, BPIS is comprised of four units: Mechanical Permitting and Inspections (includes HVAC,¹ and plumbing and gas disciplines), Electrical Permitting and Inspections, Building Permitting and Inspections, and Building Regulations. Each unit is responsible for managing the permit issuance process and for performing inspections specific to its discipline. The Building Regulations Unit is responsible for managing complex permit files incorporating all Safety Codes disciplines.

¹ HVAC is a collective term used to describe the heating, ventilation, and air conditioning disciplines.

Figure 1: Organization Chart - Building Permit and Inspection Services Section



Prior to 2011, the electrical permitting and inspection processes were contracted out to an external party. This contracted party issued and administered all electrical permits on behalf of the City. As of January 1, 2011, the City moved the electrical permit issuance and administration in-house. The contractor still conducts the electrical inspections on behalf of the City.

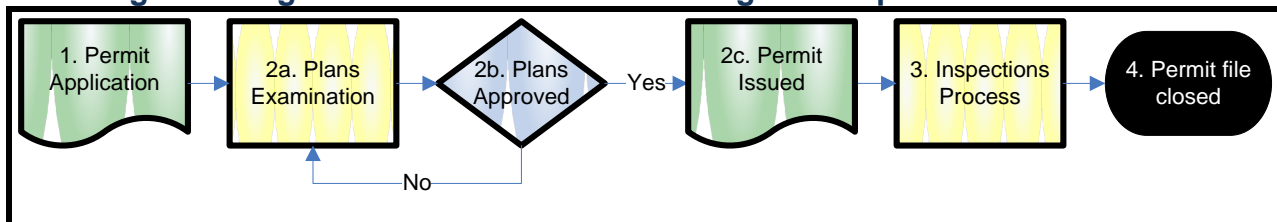
2.2. Permitting and Inspections Process

A building permit is required for any new construction and for additions, alterations, renovations, relocations, and change of use of an existing structure or building (including residential, industrial, and commercial buildings). A project may also or only require safety codes permits, such as HVAC, plumbing and gas, and electrical permits. A permit provides:

- The owner with access to expert advice before costly mistakes are made;
- The owner with a record of having done their due diligence to comply with the codes and standards;
- Notice to the jurisdiction with the responsibility for administering the SCA that the project is taking place;
- Additional oversight at the early stages of a project through services such as plans or design examination; and
- Initiation of an inspection process by trained and certified safety codes officers.

Figure 2 provides a high-level overview of the permitting (permit application and plans examination) and inspection processes.

Figure 2: High-level Overview of Permitting and Inspection Processes



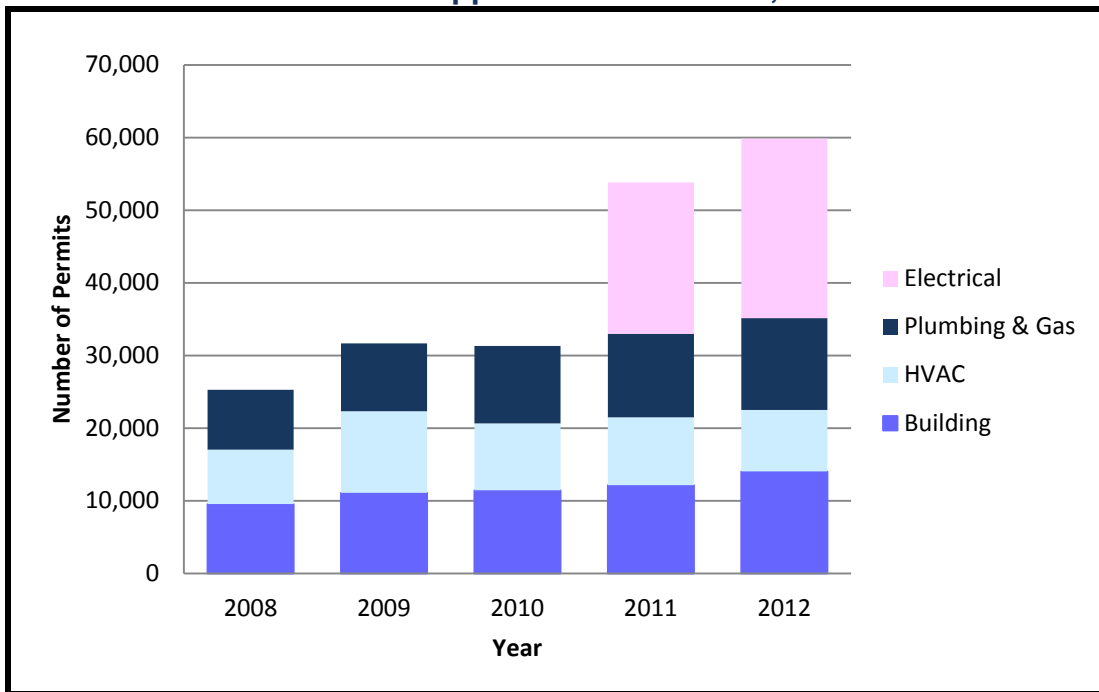
1. *Permit application* - To begin the permitting process, the owner, property manager, realtor, designer (architect and/or engineer), or the contractor who has been hired to carry out any construction activity may apply for the permit for the work that is being carried out. Ultimately, the property owner is responsible for obtaining the necessary permits and complying with applicable legislation. Based on the type of permit, the applicant is required to submit the necessary information regarding the structure and the property as well as all the plans for construction. Permit applications can be received in a number of ways: fax, mail, in person, or online. (Online applications can only be made in specific circumstances.) When a permit application is made, the applicant must pay all the associated fees. Permit fees are dependent on the type of permit. For example, building permit fees are based on the size of the project or by its construction value. Permits are to be obtained prior to the start of construction.
2. *Plans examination* - All plans must undergo a detailed review prior to BPIS issuing the permit. Most plans examinations and application approvals are performed by BPIS, although some smaller permits are reviewed and approved directly by the Current Planning Service Centre.² Some plans examinations also include an additional review by other City departments, such as Transportation Services. A permit is issued after the plans have been examined and accepted and the permit fees are paid. In some instances, the applicant is allowed to begin work prior to issuance of the building permit.
3. *Inspections process* – Safety Codes Officers (SCOs) are responsible for inspecting all construction activity covered under a permit. The permit holder is responsible to advise the SCOs when work is ready for inspection at pre-defined key points during construction. Once the SCO is satisfied that work complies with applicable building and safety codes, BPIS will close the permit file.

2.3. BPIS Performance

Between 2008 and 2012, the City experienced an increase in permit applications. As shown in Chart 1, in 2012 there were approximately 34,572 more permit applications received as compared to 2008. Most of the increase in permit applications was due to BPIS taking on the responsibility of issuing and administering the City's electrical permits (24,700 applications in 2012). The remaining increase of 9,872 permit applications resulted from relatively steady growth in building activity in the Edmonton market between 2008 and 2012.

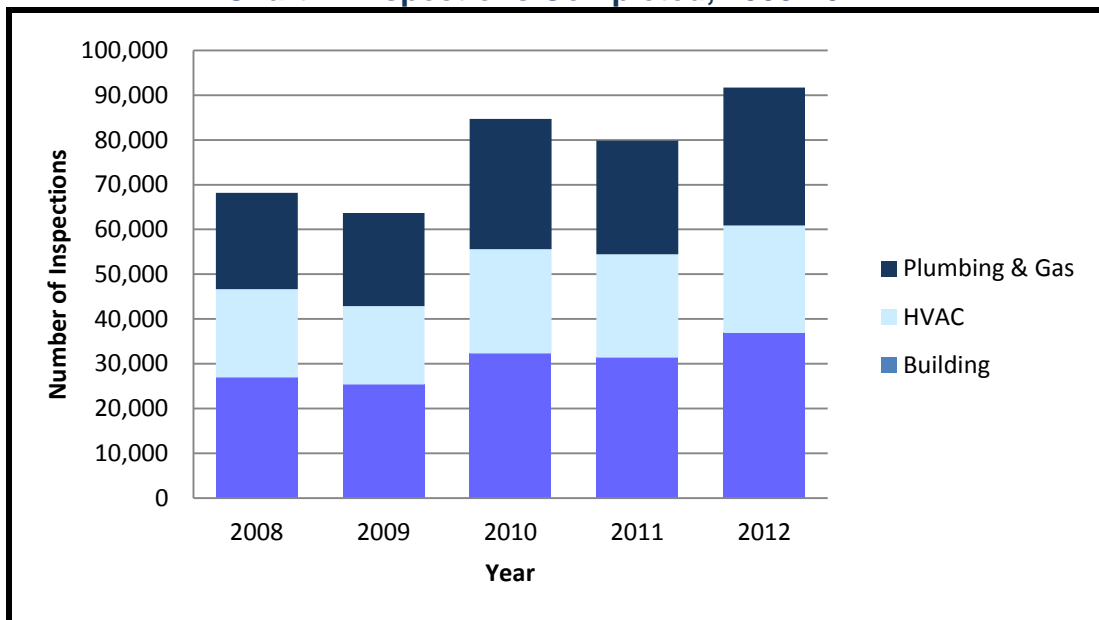
² The Current Planning Service Centre is the customer support contact for permitting and inspection services. It provides permit application intake and approval services, accepts payments for all permits, and maintains permit records.

Chart 1: Permits Applications Received, 2008-2012



The impact of the increase in permit applications has been an increase in the demand for plans examination and inspection services. Considering that each permit requires several inspections to complete, the number of completed inspections performed by BPIS staff increased exponentially. As displayed in Chart 2, between 2008 and 2012, the number of inspections performed by BPIS (plumbing and gas, HVAC, and building disciplines) rose by approximately 23,500.

Chart 2: Inspections Completed, 2008-2012*



*Electrical inspections are conducted by third party provider on behalf of the City and therefore not included.

As a result of the growing demand in permit applications and corresponding inspections, the number of staff for the period under review increased from 54 FTEs in 2008 to 74 FTEs in 2013 (see Table 1).

Table 1: BPIS Full-time Equivalent Positions (FTEs), 2008-2012

	2008	2009	2010	2011	2012
Building Unit	30	30	35	37	41
Mechanical Unit	22	22	27	29	26
Electrical Unit	0	0	3	3	4
BPIS Director's Office	2	2	4	5	3
Grand Total	54	54	69	74	74

2.4 BPIS Operational Expense

Table 2 shows BPIS' 2011 and 2012 actual and 2013 budgeted financial operating details by discipline.

Table 2: BPIS Operational Expenses, 2011-2013

	2011 (Actual)	2012 (Actual)	2013 (Budget)
Building Unit	\$ 3,424,520	\$ 3,842,123	\$ 4,063,533
HVAC Unit	1,099,673	1,130,051	974,597
Plumbing and Gas Unit	1,089,188	1,132,661	1,062,600
Electrical Unit	1,462,721	3,836,178	1,966,263
Total Direct Expenses	7,076,102	9,941,013	8,066,993
Shared Services Cost (HR, IT, Finance, Law, etc.) (calculated)	1,769,026	2,485,253	2,016,748
Total Expenses	\$ 8,845,128	\$ 12,426,266	\$ 10,083,741

The direct operating cost for the electrical discipline increased significantly in 2012 because of the electrical permitting process being fully incorporated into BPIS.

3. Audit Objectives, Scope and Methodology

3.1. Audit Objectives

Our objectives for this audit were to determine if:

1. BPIS' operations are performed in an effective and efficient manner.
2. BPIS has an adequate method of regularly assessing its operational performance.

3.2. Audit Scope and Methodology

This audit covered the period January 1, 2008 to June 30, 2013. We reviewed the transactions, processes, policies and practices in place at BPIS during this period. In addition, we reviewed the performance data that BPIS was already using and, when necessary, we supplemented it with our own analysis.

We used the following methods to gather evidence to conclude on the above objectives:

- Analyzed data from corporate information systems: Posse, PeopleSoft and SAP.³
- Discussions with management and supervisory staff.
- On-the-job observations and discussions with a variety of employees.
- Consultations with external stakeholders.
- Reviewing BPIS documentation.
- Quantitative analysis.
- Random sample testing.

4. Observations and Analysis

4.1. Effective Service Delivery

We defined effective service delivery to mean that BPIS is ensuring that resources are being used to achieve BPIS' operational goals. To assess the effectiveness of BPIS' service delivery, we reviewed various aspects of BPIS operations. We could not compare the results against any targets as BPIS has not identified or established any formal performance targets. We did identify opportunities for improvement. Below is a summation of our most significant observations.

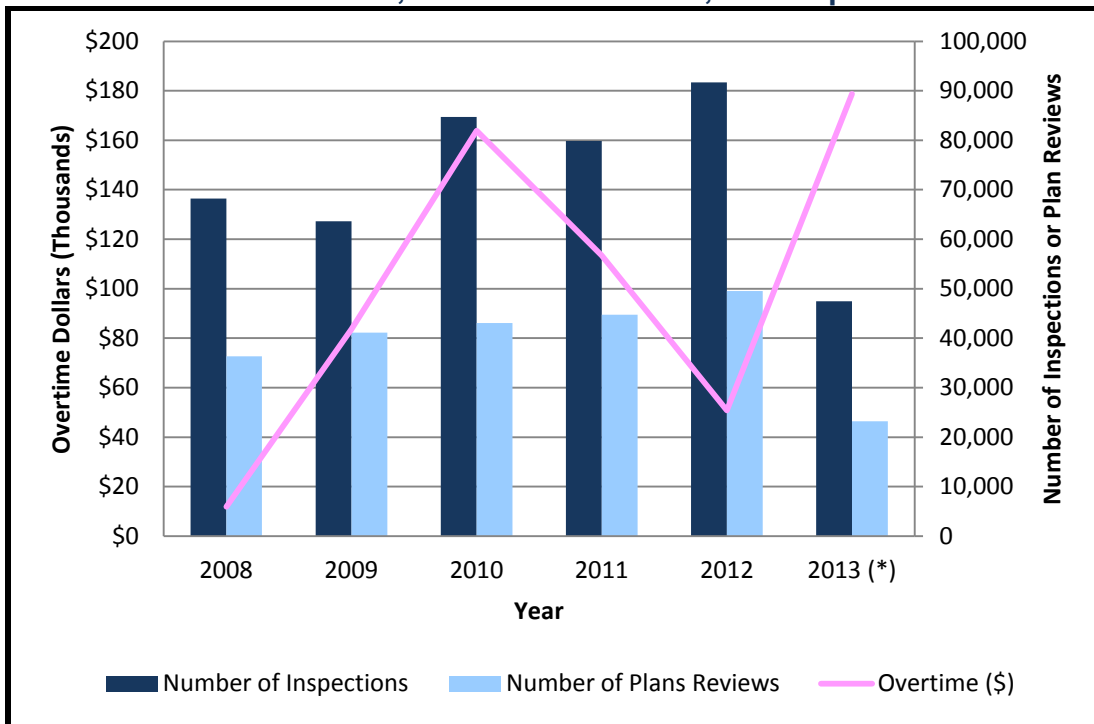
4.1.1. Staff Overtime

The increase in demand for permitting and inspection services, and bringing the electrical permit process in-house in 2011 has put pressure on BPIS' resources. As illustrated in Chart 3, BPIS increased the level of overtime from 2008 to 2010 to address the growing demand in permitting and inspection services. From 2010 to 2012, overtime

³ **Posse** (Public-one-stop-service): The City's information and work management system that captures most of BPIS' operational data. **PeopleSoft**: The City's human resources information system. **SAP**: The City's enterprise resource planning system.

declined significantly following the release of the Corporate Overtime Audit Report. During the first six months of 2013 overtime has significantly increased again, but the level of output (i.e., number of inspections and plans examinations completed) appears to be comparable to the previous year. Furthermore, in 2010, 85,000 inspections and 41,000 plans examinations were completed and total overtime amounted to \$165,000. As at June 30, 2013, 58,000 inspections and 23,000 plans examinations had been completed, but overtime was already at \$180,000. There is not an obvious connection between the amount of overtime usage and the numbers of permits and inspections processed.

Chart 3: Overtime, Plans Examinations, and Inspections[^]



[^] Data excluding electrical

* January to June, 2013

Management provided the explanation that building projects are getting increasingly complex; therefore, plans examinations and inspections require more time. Management also indicated that they have had difficulty filling vacant positions with qualified staff in a timely manner due to the competitive environment. Since 2008, 37 SCOs have left the City (18 permanent and 19 temporary positions), with 9 of them leaving since January 2013 (5 permanent and 4 temporary positions). As a result, resources have been put towards recruiting and training new inspectors, placing additional strain on resources and service delivery.

While using overtime for short periods of time can be an effective strategy for maintaining service levels, management needs to ensure that overtime is used effectively and efficiently. Excessive overtime has significant cost implications and can

impact employees' work/life balance. In addition, it can have negative impacts on the quality of service and staff productivity.

4.1.2. Inspection Backlog

We also assessed the effectiveness of BPIS' service delivery by analyzing its inspection backlog data. As indicated, SCOs perform inspections on all construction activity under a permit. Once the SCO is satisfied that work complies with applicable building and safety codes, BPIS closes the permit file. Backlog is an accumulation over time of permits that have not been formally closed.

At the end of 2012, BPIS identified a backlog of 61,493 delinquent permit jobs (open permit files created from January 1, 2003 to April 2, 2012 that were not closed by the end of 2012⁴). BPIS indicated that this backlog is primarily a result of the 2003-2006 construction boom years. Although, BPIS has made some effort to deal with this backlog by assigning dedicated resources, it has not created a formal plan (including key milestones). As of June 28, 2013, the backlog was reduced to 42,224. At the current rate, based on our calculations, it will take BPIS until the end of 2016 to address the remaining backlog. There is a risk that at least some inspections will never be carried out because construction is probably complete and the work is inaccessible.

Fundamentally, the backlog indicates that a significant portion of work is either not being adequately inspected or not inspected at all. Consequently, for these permits BPIS is not in a position to state that the work is in compliance with building and/or safety codes. For the permit jobs that have known deficiencies (i.e., an inspection took place and identified an infraction but the owner has not requested a re-inspection), the City may be at risk. According to the City's Quality Management Plan, the City has an obligation for "*each required inspection to follow up on noted deficiencies or unsafe conditions ...*"

BPIS needs to develop a comprehensive corrective action plan to address the backlog in a timely and cost-effective manner. In addition, BPIS needs to ensure that situations where there are known deficiencies are corrected in a timely manner.

Recommendation 1 – Permit Files Backlog

The OCA recommends that the Current Planning Branch Manager in cooperation with the Chief Safety Codes Officers and the Building Regulations Administrator develop a formal strategy and resource plan to address the backlog of open permit files in an effective manner, while monitoring that those projects are not in violation of safety codes.

⁴ BPIS made a decision only to include files created as of 2003. Based on discussion with management no decision has been made what to do with permit files that were created prior to 2003, but never closed.

Management Response and Action Plan**Accepted**

Comments: Although Current Planning has reduced the backlog of open permit files by over 30 percent since the end of 2012, the Branch recognizes the urgency of addressing outstanding inspection assignments.

Historically, the Branch has allocated additional staff to meet inspection demands; however, growth exceeded the capacity of available resources, resulting in the current backlog. In the 2014 Budget, the Branch has secured an additional 32 FTEs to accommodate anticipated growth in construction activity and to address the number of open permit files. In addition, the Branch is developing a formalized strategy to be deployed in the second quarter of 2014 that will include:

1. A risk-based plans examination and inspection policy that more appropriately aligns with the City's Quality Management Plan.
2. Focus on supervision and leadership for Safety Codes Officers to clearly define roles and responsibilities to ensure the efficient and effective use of staff resources.
3. A review of outsourced inspection contracts to re-evaluate administrative duties and costs.
4. System changes to improve the management of permit files when an inspection has been completed.

Planned Implementation Date: First Quarter 2014

Responsible Party: Branch Manager, Current Planning

4.1.3. Timelines

To measure the effectiveness of BPIS' service delivery, we computed permit wait times and inspection timelines. Based on our calculations, BPIS improved the timelines of its inspection delivery between 2008 and 2013, but needs to further improve the timelines of its permitting process. As indicated before, we could not compare the results against any targets as BPIS has not identified or established any formal performance targets.

Permitting wait times

We defined and calculated permitting wait times as the time between receiving a permit application to BPIS staff issuing the permit. Based on our analysis, we determined that the permit application and plans examination processes are working well for HVAC, plumbing and gas, and electrical permits. As illustrated in Table 3, over 80 percent of permits in these disciplines were issued in 1 day and less than 2 percent took longer than 2 weeks. For building permits, the performance data is considerably different. In 2012, only 44 percent of building permits were issued within 1 day and 38 percent took more than 2 weeks to issue.

Table 3: Permit Issuance Wait Times, 2008 and 2012

	Percent of Permits issued in 1 day		Percent of Permits issued > 2 weeks	
	2008	2012	2008	2012
Building Permits	48%	44%	20%	38%
HVAC Permits	86%	83%	1%	2%
Plumbing and Gas Permits	94%	89%	1%	1%
Electrical Permits		83%		2%

According to BPIS, delays of two weeks or more are in part due to staffing challenges in the plans examination unit, incomplete information provided by permit applicants, plans being non-compliant with building and safety codes, and delays caused by other City departments.

We found, based on stakeholder interviews, that due to these timelines and delays the industry is starting construction before receiving building permits. Members of the development industry indicated that they cannot afford to wait for BPIS to approve permit applications or conduct inspections. They are willing to accept the risks associated with starting construction without a valid permit. The fact that buildings are being constructed before permits are issued undermines the purpose of the plans examination process. The current practice could result in construction rework in case of code violations or, at the extreme, occupancy of unsafe buildings.

Inspection timelines

We defined and calculated inspection timelines as the time between the inspection date preferred by the customer and the actual date inspection took place. BPIS' ability to conduct inspections in a timely manner is illustrated in Table 4 below. BPIS has been able to improve its performance since 2008. However, there has been a slight decline in same-day inspections in 2013 compared to 2012.

Table 4: Inspection Timelines

Year	Percent of Inspections completed on preferred day	Percent of Inspections completed within 5 days of preferred day
2008	79.03%	88.15%
2009	79.16%	90.80%
2010	77.83%	94.31%
2011	83.56%	94.56%
2012	85.54%	95.26%
2013	84.79%	97.14%

Industry expects that inspections will be performed within one or two workdays from the date preferred. According to the City's Quality Management Plan, inspections are to be conducted in a timely fashion ("*endeavor to inspect within two working days and will not exceed five working days*"). Inspection delays results in construction delays and additional costs to the developer. This negatively impacts stakeholder satisfaction with the quality and effectiveness of BPIS' services.

Careful examination of plans prior to the issuance of a permit and proper inspection during construction are important steps in monitoring public safety. However, from the perspective of builders and their clients slow processes can mean expensive delays in the construction process. We therefore encourage management to track these performance measures and establish aggressive but achievable targets. This will be further addressed in Section 4.4. *Performance Management* of this report.

4.1.4. Re-inspection Fees

According to the Safety Codes Permit Bylaw (Bylaw 15894), a fee of \$240 is payable for every additional inspection where an inspection was previously arranged but the address was not properly displayed, the SCO was unable to access the building, the project was not ready for inspection, or previously-identified deficiencies had not been corrected. The re-inspection fee was established in 2005 as a means to decrease the number of re-inspections and to change the behaviour of a few contractors who consistently failed to resolve deficiencies in a complete and timely manner.

Through interviews with staff, we learned that the current BPIS practice is to only apply the re-inspection fee after the second re-inspection (not the first re-inspection as prescribed in the Bylaw). According to BPIS, customers will receive "one free" follow-up inspection to correct any deficiencies identified in the original inspection. Between January and August, 2013, BPIS collected a total of \$67,680 in re-inspection fees.

To test the application of the re-inspection fee, we randomly selected and reviewed 98 re-inspections and found that 72 percent of the time re-inspection fees were not charged for the third or subsequent re-inspections. We observed that in many instances, re-inspections are booked as regular inspections and as such the re-inspection fee is not applied. Re-inspections are scheduled through the City's 311 Call Centre, Current Planning Service Centre, or online.

Because the re-inspection fee is not being consistently applied, BPIS is not achieving its objective of reducing the number of re-inspections and changing contractor behaviour. In addition, the City is not recovering its costs associated with re-inspections. By reducing the number of re-inspections, these staff resources could be used more effectively in meeting service demands (for example, addressing the backlog).

Recommendation 2 – Re-inspection Fees

The OCA recommends that the Current Planning Branch Manager in cooperation with the Chief Safety Codes Officers and the Building Regulations Administrator take steps to ensure consistent application of the re-inspection fee for all additional inspections in accordance with the Bylaw.

Management Response and Action Plan

Accepted

Comments: The Current Planning Branch will ensure the consistent application of re-inspection fees. The initial phase for implementation will consist of communication to both the business community and section staff to ensure all stakeholders are aware of inspection fee policies. The second phase requires system changes to ensure that fees are applied in all instances where re-inspection is needed. Although fees may still be waived by a Safety Codes Officer, rationale will be documented to ensure transparency and accountability. Staff alignment and system changes allows for greater cost recovery and adherence to the Bylaw.

Planned Implementation Date: First Quarter 2014

Responsible Party: Branch Manager, Current Planning

Overall Conclusion on Effective Service Delivery

Based on our observations, we concluded that BPIS' current service delivery strategy of reviewing all permit applications and ensuring all the permit activity is inspected before a permit is closed has not been completely effective. Instead, it has exposed the City to significant risks and has limited BPIS' ability to achieve its key responsibility of monitoring compliance with the SCA and associated safety codes and standards.

4.2. Efficient Service Delivery

We defined efficient service delivery to mean that BPIS is ensuring that staff resources are being used in a productive manner. We believe that BPIS can improve the efficiency of its plans examination and inspection processes. We believe that productivity could be improved by enhancing the use of technology and improved supervision.

4.2.1. Staff Productivity and Supervision

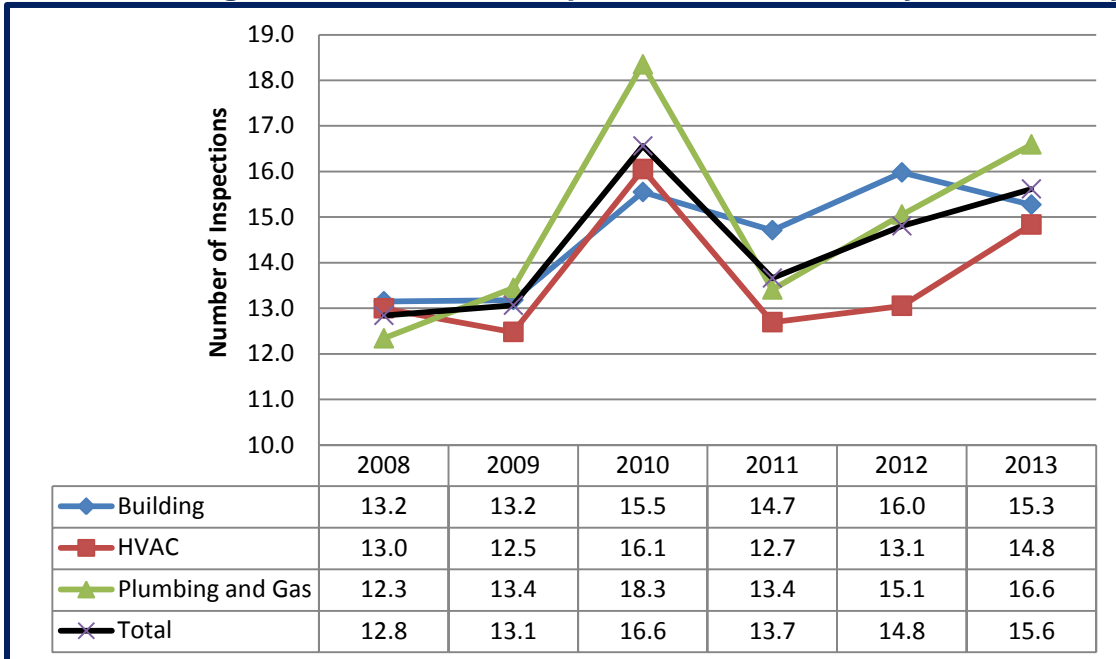
Productivity is a common measure used to evaluate efficiency. We defined productivity to be the ratio of outputs (i.e., number of plans examinations and inspections conducted) to inputs (i.e., staff and financial resources). Staff supervision is a key component in monitoring staff productivity and the efficient use of staff resources.

Field inspections

We analyzed staff productivity levels for field inspections by determining the average number of inspections conducted by an SCO per day. As shown in Chart 4, SCOs averaged 15.6 inspections per day in 2013. This is up from 2012 when the average was 14.8. In 2010 there was a spike in the average number of inspections conducted per

SCO per day. This spike corresponds to the increase in overtime shown in Chart 3. It appears that by working overtime, SCOs were able to complete more inspections per day. In 2013, overtime was significantly increased again, especially for the Building Unit field SCOs with the intent of addressing the demand for inspections. However, there has only been a slight increase in the average number of inspections conducted per SCO per day. In fact, for the Building Unit, the average number of inspections per day has declined compared to 2012. Using overtime as a means to increase BPIS' production has not resulted in efficiency gains for the area.

Chart 4: Average Number of Field Inspections Conducted by SCO Per Day



According to management, supervisors regularly discuss production targets with staff. However, no formal or written targets exist. Consequently, SCOs may not clearly understand management's expectations. We also observed that the number of inspections conducted per day per SCO and the number of hours between the first and last inspection in one day varied significantly. There was insufficient information to assess the reasonableness of staff productivity or to assess how well actual productivity compares with expectations.

Staff supervision

To ensure efficient use of staff resources, it is crucial that staff performance be adequately monitored and that any issues that arise are followed up on a timely basis. While BPIS has some staff supervision processes in place, we identified additional opportunities for improvement.

According to the applicable job descriptions, the supervisory roles are to be performed by Level II SCOs. Based on management and staff interviews, we determined that the Level II SCOs do not spend much time supervising. Instead, they spend the majority of

their time answering questions from customers and field SCOs, reviewing plans, and conducting inspections in order to help meet BPIS' demand for inspections.

As a result of limited available time, supervisors are not always able to conduct key supervisory duties, such as validating the quality and quantity of work performed by their inspectors, validating the use of overtime, reviewing private vehicle reimbursement claims, and conducting regular employee reviews. BPIS has developed an audit process for inspections, however, according to BPIS, limited staff resources has impeded their ability to implement this process.

We observed that as a result of the lack of staff supervision, plans examinations and inspections, as well as the reviews of overtime and private vehicle reimbursement claims, were being performed inconsistently. This has a direct impact on the efficient and effective use of staff resources. It also increases the City's liability in cases where deficiencies in the inspection procedures occur. It also exposes the City to the potential for fraudulent overtime and private vehicle reimbursement claims. In summary, we believe the lack of adequate supervision decreases the efficiency, effectiveness and quality of service delivery that BPIS is able to provide and therefore recommend the following.

Recommendation 3 – Staff Supervision

The OCA recommends that the Current Planning Branch Manager in cooperation with the Chief Safety Codes Officers and the Building Regulations Administrator establish and document supervision procedures for BPIS which cover:

- Roles and responsibilities for supervisors,
- Standards for inspection outcomes and documentation of inspection results,
- How standards are monitored and maintained (quality assurance), and
- Review of staff performance (including scheduling, staff overtime, and personal vehicle reimbursement claims).

Management Response and Action Plan

Accepted

Comments: In response to high work volumes, supervisors have been assisting with the completion of inspections. This has reduced the capacity for the section to coordinate supervisory duties and focus on internal performance management.

In the 2014 Budget, the Branch has secured an additional 32 FTEs to accommodate anticipated growth in construction activity and to address the number of open permit files. Adequate staffing levels will allow for the segregation of duties between inspectors and supervisors. Work is currently underway to ensure staff are hired and trained. As full training for Safety Codes Officers may take up to 24 months, full benefits may not be realized until mid-2015. Longer term, supervisors will be able to effectively monitor staff performance, and provide optimal service delivery with focus in the following areas:

- Orientation and training

- Documentation of processes
- Quality of plan examinations and inspections
- Efficiency of plan examinations and inspections

Planned Implementation Date: First Quarter 2015

Responsible Party: Branch Manager, Current Planning

4.2.2. Use of Technology

In order to perform BPIS' work efficiently, it is essential that all employees have access to the right tools. BPIS uses technology for many of its processes. We found the following areas where BPIS could enhance its use of technology to improve efficiency:

- **Route Planning Software** (with GPS tracking capability and advanced reporting features) could assist SCO's in more effectively planning of their daily inspection routes.
- **Internet capabilities** could be enhanced to facilitate real-time and 24-hour access to inspection results for clients, hence reducing the number of calls from clients.

We also found that POSSE, BPIS' information system, is not being used to its full potential. Desirable enhancements include the following:

- Improving reporting capability for performance management purposes.
- Allowing real-time recording of inspection results. This would improve SCO efficiency because there would be no need to download or upload information. In addition, it would provide field SCOs with access to more information on a project, hence reducing the number of calls to supervisors. It would also enhance supervisor's abilities to monitor and validate actual time worked by SCOs to ensure they are using City time and money appropriately and efficiently.

In addition, POSSE currently does not flag permits that are approaching their expiry date or files with known deficiencies that have been outstanding for a long time (for example 30 days). This capability would significantly improve BPIS' ability to address known safety concerns.

BPIS has been slow to adopt, change, and make use of available technologies. Cited obstacles include staff resistance to change, finding the right hardware in terms of durability, internet connectivity (now solved with purchase of smart phones that can serve as "hot spots"), and costs.

On a positive note, BPIS is currently conducting trials in the Mechanical and Electrical units with real-time recording of inspection results in POSSE through the use of iPads. Further optimizing the use of new or existing technology would assist BPIS in ensuring its key goals are achieved more efficiently.

Recommendation 4 – Use of Technology

The OCA recommends that the Chief Safety Codes Officers and the Building Regulations Administrator optimize the use of existing technology in their respective areas.

Management Response and Action Plan**Accepted**

Comments: Prior to 2010, the Current Planning Branch did not have resources dedicated to business systems or technological improvements. Since that time, Council has approved a \$2 million annual budget for this investment.

The Branch is evaluating the potential use of available technologies to improve overall operations. Actions include researching tools employed by other municipalities and the operational costs required. Options being investigated include:

- Equipping Safety Codes Officers with mobile devices with interoperability with existing systems to reduce the duplication of work.
- Deploying GPS technologies to improve routing and align with corporate standards.
- Improvements to business systems.

As indicated in the audit report, the section is already testing certain mobile devices to improve operations. The Current Planning Branch will develop a technology plan for the section by the end of Second Quarter 2014.

Planned Implementation Date: Second Quarter 2014

Responsible Party: Branch Manager, Current Planning

Overall Conclusion on Efficient Service Delivery

Based on the observations listed above, we conclude that BPIS can improve the efficiency of its service delivery by increasing staff productivity by enhancing the use of technology and improving staff supervision.

4.3. Electrical Inspections Service Delivery

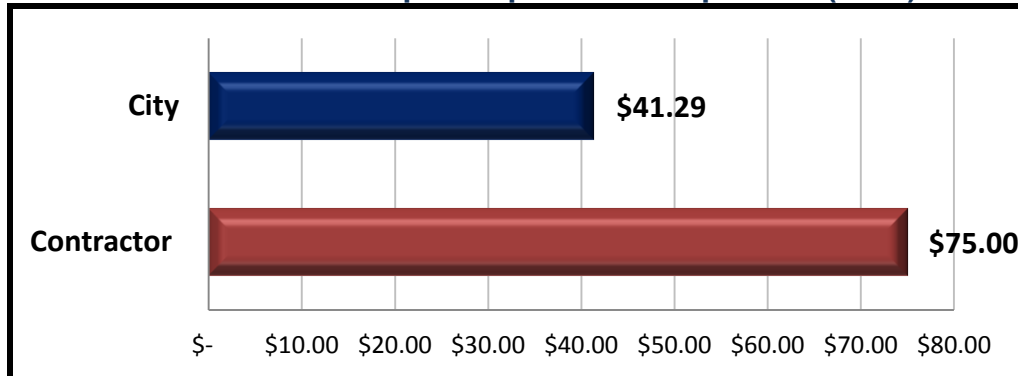
Our risk assessment process identified the electrical contract as a major risk factor in ensuring cost-efficient and effective service delivery for BPIS. Starting on January 1, 2011, the City solicited the services of a contractor to provide permit-based electrical inspections for a period of three years with the option of three one-year renewable periods. The current contract is set to expire on December 31, 2013. Overall, we found that the current contract is not providing optimal value-for-money to the City. Below is a summary of our most significant observations.

4.3.1 Cost-Efficiency Assessment

To assess the cost-efficiency of the contract, we computed and compared the costs of the City conducting its own electrical inspections (in-house) to the electrical inspection services provided by the contractor.

As Chart 5 shows, it was more economical for the City to conduct electrical inspections in-house at approximately \$41 per inspection versus the \$75 per inspection paid to the contractor.

Chart 5: Unit Cost per Inspection Comparison (2012)



Based on the number of inspections completed by the contractor in 2012 (approximately 30,000), this translates to potential savings of approximately \$1 million per year that could have been realized by the City had the electrical inspections been conducted in-house.

4.3.2 Effectiveness Assessment

When assessing the overall effectiveness of the contract, we defined effectiveness to mean that the contract was positively impacting the productivity of BPIS' electrical operations. We determined that the current contract structure and related administration tasks are limiting the electrical unit's productivity.

Contract structure

The contract designates the performance of "Safety Code Inspections for (the) Electrical discipline" to the contractor. Based on discussions with management, safety code inspections per the contract are understood to mean permit-based inspections which accounted for approximately 30,000 inspections in 2012. Accordingly, the City's electrical SCOs can only perform non-permit based inspections which include inspections for special programs such as the City's *Safe Housing* program as well as audits on the work performed by the contractor. In 2012, non-permitted inspections accounted for approximately 170 inspections. Unlike permit based-inspections which can be forecasted based on the City's construction demands, non-permit based inspections are dependent on special programs and designated audits and vary from year to year. Therefore, restricting the permit-based electrical inspections to the contractor has resulted in under-utilization of the City's electrical SCOs.

Contract administration

SCOs in the Electrical Unit administer the electrical contract. Key tasks include scheduling inspections, processing inspection reports, conducting quality audits on the contractor, following up on complaints, and reviewing and reconciling the contractor's invoices. Based on interviews with management and staff, this accounts for approximately 26 percent of the unit's daily effort and time. Only 74 percent of the area's daily effort is spent accepting and reviewing permit applications, answering customer questions, conducting non-permitted inspections, and completing in-house administrative tasks. While we acknowledge that some aspects of administering the contract will never go away, there is an opportunity to increase the unit's productivity by realigning and re-designing some of the contract-related tasks.

4.3.3 Quantitative Assessment

Based on our assessment of the types and numbers of inspections conducted by the contractor, we determined that the total number of inspections charged by the contractor can be reduced for the following three types of projects:

- Row-housing developments
- Apartment buildings
- Commercial development

The case study below illustrates the current contract limitations and how the total number of inspections charged by the contractor can be reduced.

Case study: Row housing development X

Row house development X consists of four rows of houses. Row A has six units. On one side of the row (on the first unit) there are six electrical meters positioned in two groups of three. On the ground below the meters there are two main service cables coming out of one trench. Each cable will be connected to one group of three units.

The Underground Service Cable Inspection is intended to check the service cable as it is brought through a trench to the electric meter(s). The actual connection to the meters is not included in this inspection as it is part of a separate service inspection for each individual meter.

In this particular case, the contractor charged the City \$450 (6 x \$75) for conducting "six" Underground Service Cable Inspections. BPIS suggested that the City should only be charged for one \$75 inspection as only one Underground Service Cable Inspection was actually performed because both cables are in the same trench.

The issue is that the Developer requested an Underground Service Cable Inspection for each individual unit (as is required). This is how the jobs are recorded in POSSE and communicated to the contractor. The actual situation doesn't become known until the SCO arrives at the location. The contract is silent on how to deal with this situation. One option to avoid these charges by the contractor is for City SCOs to conduct the Underground Service Cable Inspections. Another option is to revise the payment schedule of the contract.

We calculated that the total cost difference for Development X's Underground Service Cable Inspections would have been \$1,275 (see table below).

Table: Comparison of charges for Underground Service Cable Inspections for this complex

Description	Actual Charges	Optimal Charges	Difference
Row A: 6 units	\$450 (6x\$75)	\$75	\$375
Row B: 6 units	\$450 (6x\$75)	\$75	\$375
Row C: 5 units	\$375 (5x\$75)	\$75	\$300
Row D: 4 units	\$300 (4x\$75)	\$75	\$225
Total	\$1,575	\$300	\$1,275

In addition to the Underground Service Cable Inspection there is a Service Inspection on each individual meter, a Rough-in Inspection on each unit and a Final Inspection on each unit.

A second opportunity for reducing the number of inspections charged under the contract is to implement a risk-based approach when assigning inspections to the contractor. This approach will be further discussed under Section 4.5.3.

Overall Assessment of Electrical Inspections Service Delivery

Based on our observations and analysis of the current electrical contract arrangements and service delivery, we determined that the current contract is not providing optimal value-for-money to the City.

Recommendation 5 – Electrical Inspections

The OCA recommends that Current Planning Branch Manager, in cooperation with the Chief Electrical Safety Codes Officer review the current service delivery model for electrical inspections to ensure the City is getting optimal value for money.

Management Response and Action Plan

Accepted

Comments: Outsourced inspection services enables the Branch to manage the variability in demand without incurring fixed staffing costs.

Current Planning is re-evaluating outsourced contract to ensure optimal value for money. As the current contract will expire on December 31, 2014, the Branch will seek to restructure future option years or invite new proposals to ensure:

- Appropriate number of inspections are charged for row-housing, apartment buildings, and commercial developments.
- Greater ability to shift contract administrative tasks to the contractor

The current electrical inspection contract is meeting service delivery expectations and there is no backlog for these types of permits. For the development of future contracts, the Branch will seek a balance between financial cost and level of service that customers are demanding.

Planned Implementation Date: First Quarter 2015

Responsible Party: Branch Manager, Current Planning

4.4. Performance Management

The second objective of our audit was to determine if BPIS has an adequate method of regularly assessing its operational performance. An effective performance management (PM) system ensures that goals are consistently being met in an effective and efficient manner. Performance management makes it clear that being busy is not the same as producing results. We determined that BPIS does not have an adequate method of regularly assessing its operational performance.

We defined adequacy to mean that the PM system includes the following components:

- Goals, strategies and targets are established by management and are relevant to BPIS' desired outcomes.
- A system is in place to collect valid, useful, and easily-obtainable data.
- There is regular monitoring of actual performance against established goals, strategies and targets.
- There is follow-up and operational activities are improved based on identified gaps between actual performance and established goals, strategies, and targets.

We determined that BPIS does not have established goals and targets to measure the adequacy of its operational results. BPIS does not have a document that clearly outlined expected outcomes and operational objectives for the unit as a whole or its individual disciplines. We found that BPIS primarily manages performance on an informal basis. However, there were very few instances of performance data being produced and, in those instances the information was not being measured against a stated goal or target. The information was being used only to monitor actual performance but not desired performance.

An adequate PM system would strengthen accountability, enhance staff supervision, and improve performance by identifying opportunities to improve the quality, effectiveness, and efficiency of services.

Recommendation 6 – Performance Management System

The OCA recommends that the Current Planning Branch Manager in cooperation with the Chief Safety Codes Officers and the Building Regulations Administrator develop and document a Performance Management System.

Management Response and Action Plan**Accepted**

Comments: The Current Planning Branch is developing formalized internal targets and measures across all lines of business by January 2014. Actual performance will be continually measured against desired service levels provide context and evaluate the need for further improvements to business practices and service enhancements. Once developed, the targets and criteria used to measure operational performance will be communicated to all employees in the section.

Planned Implementation Date: Second Quarter 2014

Responsible Party: Branch Manager, Current Planning

4.5. BPIS' Roles and Responsibilities

It is clear from the issues cited in the previous sections that BPIS' current service delivery strategy of reviewing all plans and inspecting all work is not achievable without significant changes to the processes and strategies. We observed that the City has some uncertainty as to its role with respect to the permitting and inspections process. According to the Alberta *Safety Codes Act*, the City is responsible for monitoring compliance with approved plans and applicable building and safety codes. However, it appears that the City has taken full responsibility for ensuring that buildings are safe. Consequently, this understanding has impacted the ability of BPIS to provide effective and efficient services.

4.5.1 Safety Codes Act and Quality Management Plan

Authority for BPIS is derived from Alberta's *Safety Codes Act* (SCA). The role and responsibility of the City as per the SCA, is to monitor compliance through a program of permit issuance, plans examination, site inspection, and follow-up inspections in accordance with the SCA, and using certified SCOs to conduct inspections. According to the SCA, the owner of a building has full responsibility for carrying out construction, or having construction carried out, in accordance with the requirements of:

- The SCA;
- Regulations related to the SCA, including codes and standards relating to the technical disciplines covered by the SCA;
- The Alberta Building Code; and
- The permit, including compliance with any special conditions required by the authority having jurisdiction.

Neither the issuance of a permit, nor inspections made by the local authority, in any way relieves the owner from full responsibility for compliance.

Based on our discussions with management and interviews with industry representatives, there appears to be some ambiguity as to what the City's role is with respect to permits and inspections. It appears that this ambiguity has led BPIS to take a

conservative approach and accept extensive responsibility for ensuring buildings are compliant with building and safety codes in the name of ensuring public safety. BPIS practices and communications to customers appear to place much more responsibility on the City than the SCA and the City’s own Bylaw require. Instead of *monitoring*⁵ compliance with the codes the City is trying to *ensure*⁶ compliance. This understanding has negatively impacted BPIS’ ability to meet its current service level demands. Since BPIS has been accumulating a significant backlog of inspections over a period of several years, the City has not been consistently ensuring compliance for an extended period of time.

The minimum service levels the City needs to provide in order to meet its monitoring responsibilities are prescribed in the City’s Quality Management Plan (QMP). The City’s current QMP was signed by the Safety Codes Council (as representatives of the Province) and the Mayor and City Manager (as representatives of the City). The QMP was formally established by resolution of City Council on March 14, 2012. For each discipline, the QMP provides an outline of safety policies and standards and the process for monitoring compliance. For example, the types of inspections required and at what stages during construction are all defined. Because the QMP was approved by City Council, it defines BPIS’ core services levels.

Our review of BPIS’ practices revealed that it is currently exceeding its core service levels by performing more inspections than required under the City’s QMP. Table 5 provides two examples to illustrate the difference between the QMP requirements and BPIS actual service levels for two types of building projects. As shown in Table 5, BPIS has been conducting from one to eight additional inspections beyond what is required by the QMP.

Table 5: Examples of City’s QMP Requirements versus BPIS Practices (Building and HVAC disciplines only)

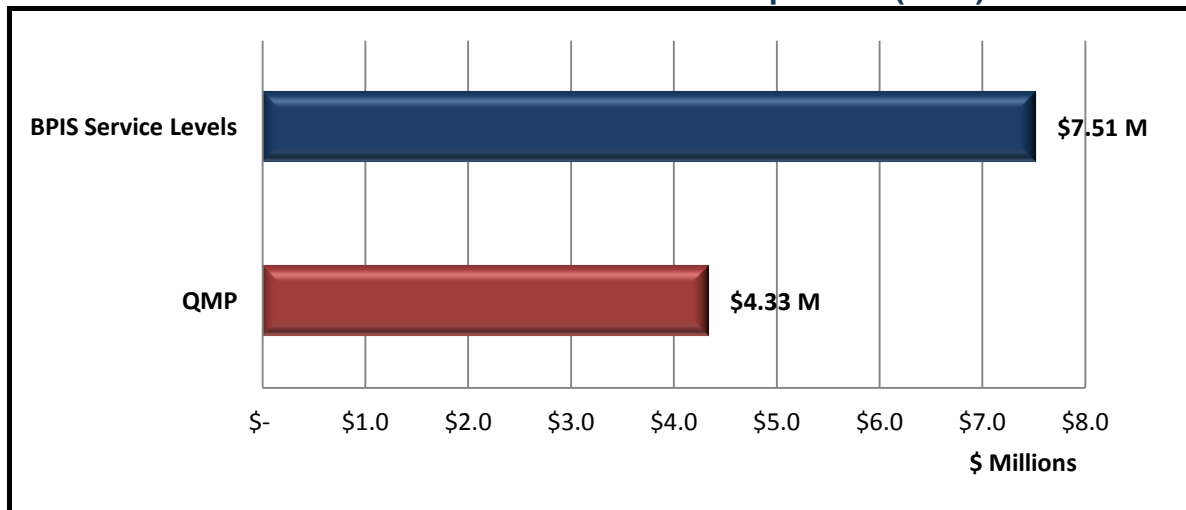
Project Type	QMP Requirements	BPIS Practices
<i>Single & Two Family Dwellings</i> New construction OR alteration, addition, renovation, reconstruction, change of occupancy (with a value of work of more than \$20,000)	2 Building/HVAC inspections	4 to 6 building inspections AND 2 to 4 HVAC inspections
<i>Business & Personal Services, Mercantile, Medium & Low Hazard Industrial</i> New construction OR alteration, addition, renovation, reconstruction	2 Building/HVAC inspections	2 to 6 building inspections AND 1 HVAC inspection
Total Inspections per project	2	3 to 10

⁵ Definition of “to monitor”: To watch, keep track of, or check. Source: Merriam-Webster Dictionary

⁶ Definition of “to ensure”: To make sure or certain. Source: Merriam-Webster Dictionary

As the QMP only prescribes minimum standards, BPIS can provide higher service levels if so desired. However, BPIS needs to ensure it has a defined need and proper justification for these desired service levels as there is a cost to conducting these extra services. We quantified the impact of conducting inspections that exceed the QMP requirements and determined the amount to be approximately \$3.2 million for 2012 (see Chart 6). Because the Current Planning Branch operates on a full cost-recovery basis, these costs are passed on to contractors and citizens through permit fees.

Chart 6: Service Levels Cost Comparison (2012)



There are also legal implications to conducting extra inspections. These additional services have the potential to create additional liability for the City if not conducted properly. Under the SCA, the City is protected from liability as long as it is acting in *“good faith while exercising their powers and performing their duties under this Act”*. The protection provided by the SCA explains the limited number of claims that have been received by the City. Since 2008, the City has been named in 16 claims, 8 claims costing the City \$6,000 have been closed and 8 claims totalling \$159,000 are still open.

Based on the above findings, it is evident that there is a gap between the services currently provided by BPIS and those prescribed in the QMP. This performance gap is the result of the growing role BPIS has taken on over the past several years. Our primary concern is that there is no formal justification or documented rationale for the permitting and inspection services provided by BPIS above its core service levels as documented in the QMP.

4.5.2 Service Delivery Model

Implementing a Service Delivery Model (SDM) would address the performance gap between the QMP and management’s assertions. An SDM describes the way a service provider (for example BPIS) intends to deliver its services for a particular program. A well-designed SDM is critical to achieving program success and ensures that services are delivered effectively.

We observed that BPIS does not currently have a formal SDM that clearly defines the area's purpose and goals. The QMP only prescribes the minimum service levels the City needs to provide, but does not define its goals and desired service levels. As a result, based on our findings, there is no rationale to support the current service levels (i.e., plans examinations and inspections). The consequence of this, as was demonstrated in section 4.1, has led to increased timelines for plans examinations, excessive overtime to perform inspections, and growing inspection backlogs.

Developing and implementing a SDM would require BPIS to formally define its:

- Program objectives and expected outcomes;
- Key clients and their respective needs;
- Key activities, their relevance to the area's goals, and the manner in which they will be delivered; and
- Expected baseline service/performance level and expected target(s) for each key activity.

As part of the process to develop a formal SDM, BPIS needs to develop a risk assessment process that will clearly identify, analyze, and evaluate the risks associated with the permitting and inspection processes. BPIS management has indicated that public safety risk drives the delivery of their services. Yet, we observed that BPIS does not have a method in place to formally identify, categorize, document, and address all the possible risks that may be associated with the City's roles and responsibilities relating to the permitting and inspection processes. A direct and negative result of this has been inconsistent understanding of what the key risks are and what service levels are appropriate to mitigate those risks. We believe that the key risk categories are:

1. *Public safety risk* – Incidents which could negatively impact the health and safety of citizens of Edmonton.
2. *Reputational risk* – Incidents which would negatively impact the reputation of the City.
3. *Legal risk* – Incidents resulting in possible legal action against the City.
4. *Financial risk* – Incidents in which the City could incur financial loss in the form of legal payouts or increased operational costs.

It is critical that management conduct its own risk assessment and further identify the risks that the City is responsible for and determine an appropriate balance between the level of risk the City is prepared to accept and the cost of mitigating the risk. This assessment should be the result of collaborative discussion involving all BPIS staff and the Law Branch. In addition, the perspectives of BPIS' stakeholders need to be considered when redefining BPIS' service delivery. Finally, this assessment should be repeated periodically to incorporate changes in BPIS' operational environment both external and internal.

Implementing a properly defined and documented SDM will enable BPIS to assess its risks, convey its operational goals and objectives, identify key clients and their needs,

and establish baseline service levels and targets. These service levels and targets should be achievable, reflective of its organizational risk tolerance, and in line with available resources. In the absence of such a model, performance expectations and assessment will continue to be unclear.

Recommendation 7 – Service Delivery Model

The OCA recommends that the Current Planning Branch Manager together with the Chief Safety Codes Officers and the Building Regulations Administrator define and document an achievable Service Delivery Model which is approved by General Manager of Sustainable Development Department.

Management Response and Action Plan

Accepted

Comments: Through consultation and education of industry stakeholders, the Branch will define operational goals and objectives in line with QMP requirements. The Service Delivery Model will account for potential risks in the permitting and inspection processes, while ensuring builders are compliant with regulations outlined in the Bylaw. The model's scope will be shared both internally and externally to provide transparency and consistency in service delivery.

Planned Implementation Date: Second Quarter 2014

Responsible Party: Branch Manager, Current Planning

4.5.3 Risk-Based Plans Examination and Inspection Strategy

In addition to defining and formalizing its Service Delivery Model, BPIS also needs to re-evaluate the delivery of its services. Currently, BPIS' strategy is to review all permit applications in detail before a permit is issued and to inspect all permit activity before a permit is closed. As illustrated by the backlog and overtime observations, BPIS has been unable to keep abreast of its inspection schedule as required by its current strategy. BPIS needs to focus its limited resources on the activities that pose the highest risk to public safety.

Inspections can be classified as mandatory and desirable. Mandatory inspections are required under the QMP and represent BPIS' core service delivery standards. Desirable inspections are those inspections that are conducted in excess of the QMP requirements because they are deemed desirable by BPIS. A risk-based delivery strategy could be applied to these desirable inspections.

The OCA interviewed key stakeholders of BPIS' external operating environment, including members of the Alberta Home Builders Association and the Association of Professional Engineers and Geoscientists of Alberta. Collectively, they indicated that the City would add more value and be more effective in achieving its goals if BPIS accepted the work of qualified building professionals and focused on conducting high-risk inspections and plans examinations. This would reduce the number of inspections required for projects managed by licensed engineers and architects, while more

inspections would be performed on projects undertaken by less experienced builders and developers or “Do-It-Yourself” projects.

BPIS has already adopted a risk-based delivery strategy in the following areas:

1. Expedited permit application process (for qualified professional builders).
2. Acceptance of Footing and Foundation Compliance Letter (replacing the footing and foundation inspection).
3. Acceptance of Verification of Compliance Letters by Electrical Discipline (replacing re-inspections in select cases).

These initiatives have been well-received by the members of industry we interviewed. Documents such as the Schedules of Professional Involvement (included with certain permit applications), the Verification of Compliance letters, and the Footing and Foundation Compliance letter clearly identify the building professional managing the project as being responsible for ensuring the plans and the structure itself are in compliance with all applicable codes and bylaws.

The focus of detailed plans examinations and inspections should be on higher-risk projects such as office towers and on work performed by unskilled workers, non-professionals, and contractors and developers with a history of non-compliance. Developing and adopting a risk-based approach would allow more effective use of staff.

Recommendation 8 – Risk-based Plans Examination and Inspections

The OCA recommends that the Current Planning Branch Manager, together with the Chief Safety Codes Officer and the Building Regulations Administrator develop and formally adopt a risk-based plans examination and inspection policy. This policy should include criteria and process descriptions, and be endorsed by General Manager, Sustainable Development Department.

Management Response and Action Plan

Accepted

Comments: As part of the revised Service Delivery Model and strategy to address permit file backlogs, a risk-based approach to plans examination and inspections will be adopted. The section will establish and communicate an inspection process that adheres to standards outlined in the QMP while ensuring the number of inspections is sufficient to minimize risks to public safety. Plans examinations and inspections for professional builders that are consistently compliant with safety standards will be monitored through inspections as required. Increased industry relations will enable more efficient service delivery in exchange for compliance to regulations outlined in the Bylaw.

Planned Implementation Date: Second Quarter 2014

Responsible Party: Branch Manager, Current Planning

5. Conclusions

The first objective of this audit was to determine if BPIS' operations are performed in an effective and efficient manner. We identified opportunities to improve the effective and efficient delivery of BPIS permitting and inspection services and made five recommendations. **(Recommendations 1 to 5)**

The second objective for this audit was to determine if BPIS has an adequate method of regularly assessing its operational performance. We found that BPIS has not established measurable and achievable performance goals or targets to allow systematic performance evaluation. We recommended that BPIS implement a performance management system to enhance the effectiveness and efficiency of its operations. **(Recommendation 6)**

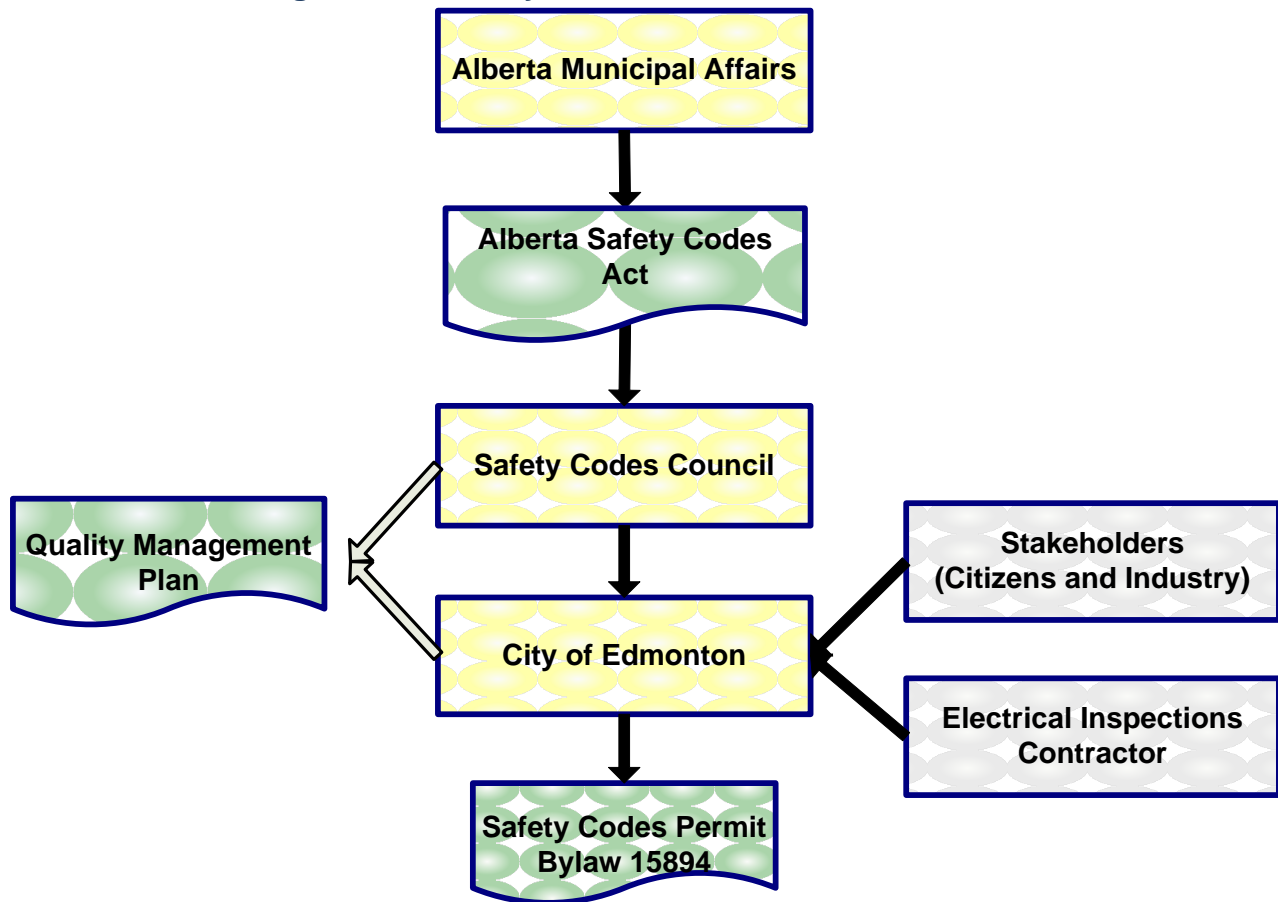
We found that BPIS' roles and responsibilities need to be clarified as the services delivered by the City exceed the responsibilities assigned under the Safety Codes Act. The main concern is that there is no formal justification or documented rationale for the extra permitting and inspection services provided by BPIS. We recommended that BPIS define and document an achievable service delivery model, which is approved by General Manager of Sustainable Development Department. **(Recommendation 7)**

In addition, BPIS is going to have to adjust their current delivery practices to help reduce the workload and focus its limited resources on the activities that pose the highest risk to public safety. Consequently, we recommended that BPIS re-evaluate its current strategy of reviewing all permit applications in detail before a permit is issued and ensuring that all the permit activity is subject to inspections before a permit is closed, and move to a risk-based examination and inspection methodology. **(Recommendation 8)**

We thank all City Staff and Management who participated in this review for their support, cooperation and feedback.

Appendix A – Safety Codes Governance Framework

Figure A1 – Safety Codes Governance Structure



A description of the framework is provided below.

1. **Alberta Municipal Affairs (AMA)** is the provincial ministry responsible for administering a safety system that strives to ensure appropriate safety standards for construction and maintenance of buildings and associated equipment. The Public Safety Division of AMA administers the framework established in Alberta's *Safety Codes Act*, including but not limited to the development of codes and standards adopted in Alberta, and providing advice and technical support related to the Act to the public, industry, all municipalities and the Safety Codes Council.
2. **The Alberta's Safety Codes Act (SCA)** is provincial legislation that is maintained by the AMA. The SCA applies to the design, manufacture, construction, installation, and maintenance of buildings, electrical systems, elevating devices, gas systems, plumbing, and pressure equipment.
3. **The Safety Codes Council (SCC)** has been designated by the Province to be responsible for accrediting municipalities, regional service commissions, and

corporations and agencies to carry out specific activities under the SCA. They provide training courses and certification for Safety Code Officers. The SCC was established in 1993 and is unique in Canada.

4. **The City of Edmonton (City)** has been designated by the SCC to be responsible for applying provisions of the SCA within its municipal boundaries and for the disciplines in which it has been accredited. Since December 1995, the City has been accredited for the disciplines of Buildings (including HVAC), Plumbing and Gas, and Electrical.
5. **The Quality Management Plan (QMP)** is prescribed by the SCA and is an agreement between the SCC and the City. The QMP prescribes the minimum service levels required for the City to maintain its status as an accredited municipality. The QMP documents the manner in which the City intends to discharge the responsibilities delegated to it under the SCA. The City's current QMP was signed by the SCC (as representatives of the Province), the Mayor, and the City Manager (as representatives of the City), and established by resolution of City Council on March 14, 2012.
6. **The Safety Codes Permit Bylaw (Bylaw 15894)** establishes the application procedures and fees for building, HVAC, plumbing and gas, and electrical permits.
7. **The Stakeholders** are comprised of the citizens of Edmonton and industry organizations who are responsible for the construction of buildings and structures in accordance with the SCA.
8. **The Electrical Inspections Contractor** is the third party provider for electrical field inspections for the City.