
AUDITOR GENERAL

Halifax Regional Municipality

A Performance Review of Halifax Regional Municipality's Building Standards – Permits and Inspections[©]

July 2015

AUDITOR GENERAL

Halifax Regional Municipality

A Performance Review of Halifax Regional Municipality's Building Standards – Permits and Inspections[®]

July 2015

Table of Contents

Preamble.....	3
Objective.....	4
Scope.....	5
Methodology.....	5
Executive Summary.....	6
Summary of Recommendations.....	11
1.0 Lack of Defined Outcomes to Address Regulatory Risk – No Definition of Acceptable Level of Risk.....	14
2.0 Effect of Oversight on Managing Risks.....	17
2.1 Lack of Documented Standard Procedures.....	21
2.2 Need for Standardized Documentation.....	23
3.0 Demonstrating Performance – Value for Money.....	26
3.1 Lack of Appropriate Performance Monitoring.....	27
3.2 Inadequate Management of Open Applications.....	29
3.3 Managing Training Requirements to Meet Strategic Needs.....	31
Appendix A: Value for Money Flowchart.....	33
Appendix B: Management Response.....	34

Preamble

According to Section 5(1) of the Nova Scotia Building Code Act (Building Code Act), “The council of a municipality is responsible for the administration and enforcement of this Act in the municipality”. In accordance with the Building Code, permits are required for various types of activities including new construction, renovations and demolitions of buildings such as single-unit residential, multi-unit residential, commercial, industrial and institutional buildings.

Halifax Regional Municipality’s (HRM) Building Standards Division, under the Municipal Compliance section of the Planning and Development Business Unit, is responsible for administering the building standards program, which includes the administration and enforcement of the Provincial Act. This Division accepts and processes a variety of applications related to the various types of building activities listed above. The Division ensures minimum building standards are met to ensure homes and buildings provide a safe and healthy environment for residents.

Each application is required to be submitted (including applicable construction plans and permit fees) to one of three HRM Customer Service Centres. A building permit is valid for two years from the date of issue.

Depending on the type of construction, various inspections may be required throughout the construction process. The homeowner or contractor is required to contact HRM, at pre-established points, to schedule each inspection. A building official in the Division is assigned to perform a physical inspection of the property for the building activity outlined in the application. If the building official determines the construction satisfies the applicable building code, that stage of construction is ‘passed’ by the building official and additional work can continue (if applicable). If the building official is not satisfied, additional work is required or adjustments must be made before the stage of construction is considered ‘passed’. Depending on the type of construction, an occupancy permit can be withheld until HRM is satisfied all work has been completed in accordance with applicable building codes.

Objective

The objective of this review was to identify opportunities to improve operational efficiency and effectiveness of permit and inspection services provided through HRM's Building Standards Division.

In order to satisfy this objective, the Office of the Auditor General (OAG) developed the following lines of enquiry:

- 1.0 Outcomes of the program have been clearly identified and documented:
 - There is a clear link between HRM strategy and policies and the defined outcomes of the building standards program.
 - Outcomes are monitored and reviewed on a regular basis.
- 2.0 Key risks of the program have been identified and documented. There is a process in place to identify, evaluate, assess and mitigate the risks of the program. Methodologies used by the Building Standards Division are based on management of these key risks. These methodologies include such things as:
 - Development and documentation of appropriate policies and procedures for the activities undertaken by the Building Standards Division.
 - Compliance with policies and procedures is required and monitored on a regular basis.
 - Appropriately trained staff are in place to carry out the requirements of building standards. Training levels are monitored to ensure staff are up-to-date on any changes to building code regulations.
- 3.0 Service performance is measured, monitored and reported to ensure:
 - Key performance indicators (KPIs) used are effective indicators of performance.
 - Performance is consistent across building officials.

Scope

In order to review trends in data, the OAG decided to include two years in the review. The review period covered April 2012 to March 2014.

This review included the following processes for new construction, renovations and demolitions of single-unit residential, multi-unit residential, commercial, industrial and institutional buildings:

- Review of permit applications
- Issuance of permits
- Inspections of building or demolition progress
- Closing of permit applications

This review excluded M-100 By-Law compliance and other By-Laws for minimum standards investigations and compliance related to dangerous and unsightly premises, substandard residential housing and rooming house licensing.

Methodology

- Conducted interviews with various staff of the Building Standards Division, parties external to the process such as the Nova Scotia Home Builders Association and interested Regional Councillors.
- Requested documentation and processes around building inspection services.
- Reviewed existing documentation to validate compliance with procedures and performance measures.
- Sampled permit files to determine if policies and procedures are being followed such as whether various inspections were completed within the expected time frame.
- Reviewed the National Building Code, Provincial Building Code Act and relevant HRM By-laws.
- Reviewed reports of other municipalities for permit and inspection process reviews.

Executive Summary

Prior to undertaking this project, the OAG completed an environmental scan of the HRM building inspection program. The purpose of this initial work prior to the OAG commitment of resources, was to properly plan the project and develop lines of enquiry which would address the chosen objectives.

As a result of the initial environmental scan, the OAG concluded the focus of the report would be, as with many other reports, risk. However in this instance risk would be reviewed from the perspective of two similar but separate objectives being:

- Risk associated with public safety which must be considered from a liability and reputational perspective.
- Risk of Management not being able to demonstrate the level of value for money being achieved, hence the risk HRM resources are not being used efficiently, effectively or economically. Once again reputation is also at risk.

In both cases the quantitative risk is monetary, however the circumstances which result in the monetary loss are quite different.

Review of Regional Council's Understanding and Management of Risk

The OAG has repeatedly written about and taken a strong position on HRM Management's identification and management of risk. Risk has been defined by Kaplan¹ in the context of one of the following:

- Preventable risks
- Strategic risks
- External risks

Risks associated with building standards more likely fall into the preventable category. It would seem fair to suggest preventable risks are managed through a rules (process) based approach. Therefore, when risk with respect to strategy is referred to within this report, the OAG has adapted for its' purposes the following – "any risk associated with the formulation, execution or omission of an enterprise strategy designed to achieve specific objectives"². Also strategies for the purposes of this report are related to the organizational response to mitigate or avoid the preventable risk.

In many other reports, the OAG has focused on the quality of Management's

¹*Managing Risks: A New Framework*, R. Kaplin and A. Mikes, Harvard Business Review June 2012.

² *A Framework for Board Oversight of Enterprise Risk*, CPA Canada 2012.

identification, articulation and mitigation of risk. In this report, as with the recently released report, “A Performance Review of Risk Management: Fuel Spill at Halifax Transit”, the OAG believes there is a significant difference resulting from the legislated responsibility. In both instances Provincial governing legislation is involved and in the case of Building Standards, Regional Council is specifically tasked with oversight of adherence to the Provincial Building Code.

Need for Defined Outcomes to Manage Public Safety Risk

Defined outcomes of the program would provide specific criteria against which the effectiveness of the program can be measured in terms of public safety. In order to define the appropriate outcomes, the OAG believes the Municipality must focus on the fundamental objectives of the building code. The National Building Code of Canada is the model building code of Canada and forms the basis for all provincial building codes. Since construction is a provincial jurisdiction, Nova Scotia has adopted the National Building Code in the Nova Scotia Building Code Act. The National Building Code states “An objective of this Code is to limit the probability that, as a result of the design, construction or demolition of the building, a person in or adjacent to the building will be exposed to an unacceptable risk of injury”³.

HRM has established a Building Standards Division which processes an average of 4,000 permits and conducts approximately 25,000 inspections and reviews annually. Therefore, the OAG suggests there is a program in place which is providing a number of outputs.

These outputs attempt to satisfy the regulatory requirements imposed on Regional Council related to limiting the risk of injury and ensuring public safety, however, the OAG questions what level of risk is acceptable? Some would say to limit the risk to zero would mean to eliminate construction altogether or to eliminate all probability of injury which, of course, is not practical.

The OAG believes however, without a specific strategy, it is not clear how these outputs are linked to Council Priority Outcomes or the regulatory requirements stated above.

Regional Council must determine what level of risk is acceptable or as an

³ National Research Council Canada NBC 2010 – intent statements – Part 2 Objectives

alternative, what the outcomes of the program should be to bring the public safety risk down to an acceptable level (as defined by Regional Council). If this level is not defined there is the possibility a disconnect will occur between the level of risk accepted by the oversight body (Regional Council) and the Division responsible for the delivery of the program.

Lack of Risk – Based Strategy to Define Outcomes which Achieve an Accepted Level of Risk

While the objective of the Building Code Act and the Division's mandate is clear, the scope of it is so wide the key challenge for HRM Management and Regional Council is to balance the amount of risk with the resources devoted to inspection and enforcement activities.⁴ HRM, through Regional Council and its Building Standards Division, is responsible for using the resources available to generate optimal enforcement of the Act. This means HRM must define what they consider optimal enforcement and be able to demonstrate the Municipality is using the limited resources in the most efficient and economical way to achieve this level of enforcement.

The OAG believes in order to have optimal enforcement with limited resources the division must focus on the key risks of program delivery. The OAG has identified there is no documented risk-based strategy for the division. In fact, the OAG was unable to locate any recent documentation where Regional Council has provided strategic direction for HRM's approach to building standards. As a result, the division is providing outputs but it is not clear whether these outputs are adequately administering and enforcing the Building Code Act in the Municipality to a level approved by the oversight body.

In reviewing the current practices of the division, the OAG has identified inadequate practices which increase the risk the division cannot demonstrate it is fulfilling the administration and enforcement of the Act.

Examples of this include:

- HRM does not have a defined proactive process in place to identify cases where construction is occurring without a permit.
- There is no procedures manual containing standardized inspection practices, supervisory requirements or records management practices within the division to ensure quality and consistent documentation of inspections.

⁴ Applied Guide: Auditing the Efficiency of a Regulatory Inspection and Enforcement Function, CCAF March 2014, page 5

Need for Defined Outcomes to Demonstrate Value for Money

When the OAG initiates a performance project, the identified program is evaluated against the OAG Performance Value for Money Flowchart. The first step of this flowchart is to determine why the program is in place and what HRM has determined the outcomes of the program to be. In the case of Building Standards, Regional Council has been mandated with administration and enforcement of the Building Code Act. The Act states “the council of a municipality is responsible for the administration and enforcement of this Act in the municipality”. The only specification provided is, “a building official or building officials shall be appointed by each council to administer and enforce this Act in the municipality”. The Act also states a “municipality may pass by-laws not inconsistent with this Act”. Halifax Regional Council has done both. It has appointed building officials and passed a building By-Law; B-201.

The OAG suggests Regional Council is also responsible for the oversight of the practices established by the Building Standards Division not only to ensure public safety but also to demonstrate value for money.

The OAG suggests Regional Council is responsible for the oversight of the practices established by the Building Standards Division not only to ensure public safety but also to demonstrate value for money.

Lack of Appropriate Performance Monitoring – Demonstrating Value for Money

The OAG believes the ability to monitor performance of personnel and processes is essential to ensuring value for money is achieved. Selecting the most important indicators of performance is a key element of demonstrating value for money. The Building Standards Division has two strong KPIs, ‘timeliness of inspections’ and ‘permit application processing’, however, these KPIs do not capture the entire inspection process.

The OAG found re-inspection rates are a common KPI in other municipalities. This indicator looks at re-inspections by construction category, builder and building official.

In review of the application files it was found some properties were requiring re-inspection numerous times, one file required framing to be re-inspected seven times. Monitoring and improving re-inspection rates would increase the

efficiency of the Building Standards Division and potentially allow resources to be allocated more effectively and therefore achieve increased value for money.

Currently, the Division also does not have a KPI related to file closing or inactive file management. When reviewing application files the OAG discovered there were 14,919 open building applications as of September 2014. Of those files approximately 4,600 were over five years old. The system is shared with Development Approvals and open files could be the responsibility of either division. However, because there is no reporting of the reason for the open file, neither division is taking responsibility for managing the issue. The OAG understands there are valid reasons why files would remain open, but the volume of open files and the length of time the files stay open is concerning. The OAG believes the Division is unable to efficiently manage applications given the current number of open files.

Lack of Standardized Policies and Documentation

The OAG acknowledges current Management and building officials within the Building Standards Division have a strong depth of knowledge around inspection practices and the OAG has seen evidence of building officials recognizing high risk projects requiring additional due diligence. However, the OAG is concerned the overall lack of policy and standardized documentation may result in the division being unable to effectively demonstrate quality of service, appropriate due diligence and value for money.

As a result, there is a risk of liability to HRM if an accident was to occur and HRM cannot demonstrate it is appropriately administering and enforcing the Act. Therefore, it is essential HRM be able to demonstrate the appropriate due diligence was performed for each inspection from both a risk perspective and a performance and value for money perspective.

**There is a risk of liability to HRM if an accident was to occur
and HRM cannot demonstrate it is appropriately administering
and enforcing the Act.**

Summary of Recommendations

- 1.0.1 The OAG recommends Regional Council seek legal advice regarding requirements for the administration and enforcement of the Building Code Act and clearly define the level of risk it is prepared to accept. (Page 16)
- 1.0.2 The OAG recommends Regional Council request, from Management, the current practices of the Building Standards Division to assess the current strategy and processes of the Division with the goal to develop a strategic direction and defined outcomes for the Division based on the level of public safety risk Regional Council is willing to accept. (Page 16)
- 1.0.3 The OAG recommends once Recommendation 1.0.2 is implemented, Regional Council request annual updates from the Building Standards Division on their ability to achieve the outcomes as defined by Regional Council. (Page 16)
- 2.0.1 The OAG recommends HRM Administration document the key risks of the Building Standards Division. These key risks should then be used to develop a service delivery strategy for the Division for the short-term and long-term, ensuring adequate resources are allocated to the key risk areas. (Page 21)
- 2.1.1 The OAG recommends HRM Administration ensure a procedures manual is created for the Building Standards Division. The manual should include all current procedures for completing inspections and managing files as well as all relevant directives. (Page 22)
- 2.1.2 The OAG recommends HRM Administration create a records management policy for storing documents within the Building Standards Division to ensure only the most current procedures and reference documents/forms are maintained. (Page 22)
- 2.2.1 The OAG recommends HRM Administration develop standards for file documentation in a procedures manual, whether electronic or paper. (Page 25)

- 2.2.2 The OAG recommends HRM Administration implement a practice of supervisor review of inspections and for documenting this review, prior to closing the file, to ensure all required documentation is included and deficiencies are adequately documented and cleared. (Page 25)
- 3.1.1 The OAG recommends HRM Administration review the current KPIs to ensure they are specifically related to performance and components the Building Standards Division can control. (Page 28)
- 3.1.2 The OAG recommends HRM Administration identify and review all data used to calculate the Building Standards Division KPIs to ensure appropriate data is being used. (Page 29)
- 3.1.3 The OAG recommends HRM Administration develop KPIs specific to the inspection process as a means of continuous improvement. One of these KPIs should be the number of re-inspections by inspection type, builder and building official. (Page 29)
- 3.2.1 The OAG recommends HRM Administration implement a records management process for inspection files from the time the application is received and processed until the point the file is closed. The current status codes should be reviewed and updated or redefined as part of this process so both the Building Standards and Development Approvals Divisions can actively manage files appropriately and consistently. (Page 30)
- 3.3.1 The OAG recommends HRM Administration work with other larger cities and NSBOA to provide more in-house courses to ensure employees are keeping pace with their training needs. (Page 32)
- 3.3.2 The OAG recommends HRM Administration develop and document requirements of the mentoring program to ensure consistent training for Assistant Building Officials and designate a review period for follow up of newly assigned Certified Building Officials. (Page 32)
- 3.3.3 The OAG recommends HRM Administration develop a recruitment and retention strategy to ensure HRM has the optimal number of building officials at each level to satisfy both the current and expected future needs. (Page 32)

Detailed Findings and Recommendations

1.0 Lack of Defined Outcomes to Address Regulatory Risk – No Definition of Acceptable Level of Risk

The Nova Scotia Building Code Act represents a provincial mandate which is in place to address and mitigate the public safety risk of unsafe construction. This Act transfers responsibility to Nova Scotia municipalities to administer and enforce the Act. Specifically, according to Section 5(1) of the Nova Scotia Building Code Act, “The council of a municipality is responsible for the administration and enforcement of this Act in the municipality”. Therefore, Regional Council for Halifax Regional Municipality (HRM) has been mandated by the Province of Nova Scotia to administer and enforce the Provincial Building Code Act in the Municipality. Unfortunately, the Act does not specifically outline how to administer and enforce, therefore, it is left to Regional Council to define. Also, the OAG was not able to find substantive evidence Regional Council has recently debated the acceptable level of risk.

Risks Associated with Enforcement of the Nova Scotia Building Code Act

The Nova Scotia Building Code Act has a number of significant risk-related implications for HRM and Regional Council. First, public safety risk has been transferred to the Municipality in the form of potential liability resulting from unsafe construction. Another implication of the mandate is the specific responsibility of administering and enforcing the Act which has been transferred to Regional Council; including appointing building officials and the ability to pass by-laws which are not inconsistent with the Act. These by-laws outline how Regional Council plans to administer and enforce the Act in the Municipality, including the process for issuing construction permits as well as the requirement for a variety of inspections throughout the construction process.

To fulfill the mandate, Regional Council appoints Building Officials to administer and enforce the Building Code Act. However, it is important to note, although Regional Council can delegate the administration and enforcement of the Act to the Building Standards Division, it is the view of the OAG, the responsibility to mitigate the public safety risk rests with Regional Council. As such, building officials, once having completed all required training, are appointed directly by Regional Council before they begin inspections.

It is the concern of the OAG this mandate leaves HRM potentially liable from a financial and moral perspective if the Municipality is not able to demonstrate statutory requirements, as outlined by the mandate, have been fulfilled. This

is precisely why the OAG believes documentation is important and has provided extensive commentary in a number of reports.

Level of Accepted Risk to Public Safety – Balancing Risk with Cost of Resources

The provincial mandate assigns a level of accountability to Regional Council to address and mitigate the public safety risk of unsafe construction in HRM. In the view of the OAG, based on the Building Code Act, Regional Council has direct oversight of the Building Standards Division, including defining desired outcomes and providing strategic direction based on the level of public safety risk Regional Council is willing to accept.

Although the risk to public safety from unsafe construction cannot be completely eliminated, it is the view of the OAG, it is the role of Regional Council to define the level of public safety risk they are willing to accept. A key challenge for inspection and enforcement programs is to balance the size of the regulated population, the relative risk each member of the regulated population poses and the usually limited number of people and resources devoted to inspection and enforcement activities. More clearly defining the level of public safety risk Regional Council is willing to accept allows the Building Standards Division and Regional Council to determine whether the resources are available to generate optimal administration and enforcement of the Act.

When the OAG enquired about the strategy of the Building Standards Division, the OAG was informed, by Management, the objective of the Division is to simply administer and enforce the Building Code Act. However, the goal to 'administer and enforce the Act' is not clearly defined by either the Act or, to the best of the knowledge of the OAG, in any recent Regional Council interpretation document; therefore the OAG believes the performance of the Division is not measurable and the strategy is likely not optimal. When resources are not allocated based on a thorough risk assessment, it is unlikely optimal enforcement is being generated from the available resources.

Due to the lack of defined outcomes and strategic direction for the Division, the OAG questions HRM's ability to demonstrate the statutory requirements, as outlined by the Act, are being fulfilled. The OAG also questions if the roles and responsibilities, as outlined by the Act, are fully understood by Regional Council and Management. Overall, by not fully accepting and properly demonstrating oversight, it is the view of the OAG it is possible it could be

concluded, Regional Council is not fulfilling the mandate presented in the Building Code Act.

Recommendations:

- 1.0.1 The OAG recommends Regional Council seek legal advice regarding requirements for the administration and enforcement of the Building Code Act and clearly define the level of risk it is prepared to accept.
- 1.0.2 The OAG recommends Regional Council request, from Management, the current practices of the Building Standards Division to assess the current strategy and processes of the Division with the goal to develop a strategic direction and defined outcomes for the Division based on the level of public safety risk Regional Council is willing to accept.
- 1.0.3 The OAG recommends once Recommendation 1.0.2 is implemented, Regional Council request annual updates from the Building Standards Division on their ability to achieve the outcomes as defined by Regional Council.

2.0 Effect of Oversight on Managing Risks

It is the view of the OAG, the perceived lack of oversight from Regional Council presents itself as a risk to the Municipality. Without clearly defined outcomes based on a level of public safety risk Regional Council is willing to accept, it is more difficult for Management to make appropriate strategic decisions such as determining the appropriate allocation of resources in the Building Standards Division.

In order to be effective with the limited resources available, it is important the Division is able to demonstrate resources are being allocated to the areas where there is the most risk to the public and property owners (ensuring the objective of public safety is being achieved). This concept is demonstrated in the second section of the value for money flowchart. A large part of this section of the report discusses the methods used by HRM in determining the inputs required. In order to do this, Management needs to establish a strategy to satisfy the desired outcome and develop processes to deliver the program. In this case, the OAG believes this requires a strategy which addresses key risks.

After reviewing processes of the Division, the OAG believes there are key risk areas which are not being adequately addressed by the Division. The OAG provides the following examples:

Construction Without a Permit

The inspection service provided by the Building Standards Division is designed to provide assurance construction in HRM is being completed in accordance with the Building Code. Once an application is received by the Building Standards Division it is entered into the electronic application tracking system Hansen and can be monitored by building officials throughout the permitting process. "Every owner shall obtain all required permits or approvals prior to commencing the work to which they relate" is a provision of the Building Code Act, however, the OAG was advised by Management and industry experts, not all construction in HRM goes through the permitting process. Although this practice is illegal, they believe it is common.

The amount of construction without a permit is not known and will never be known with certainty. The OAG was advised there is an informal practice of identifying properties for potential unpermitted construction; however it is impossible for building officials to be everywhere, at the appropriate times, to

prevent people from purposely circumventing the system. Currently, HRM does not estimate the amount of unpermitted construction, or have a documented monitoring process; therefore, the estimated risk to public safety is not identified in developing the strategy for the Division. HRM has not determined if there should be specific resources assigned to identifying and addressing this risk. It is also not clear to the OAG whether building officials or Regional Council are fully satisfying the requirement to enforce provisions of the Act and regulations.

No Standard Inspection Practice

When building officials complete inspections they give the portion of construction being inspected a “pass”, “partial pass” or “fail” in Hansen, where building applications are maintained. In discussions with Management, the OAG was advised of the following related to the inspection classifications/statuses:

- Pass - complies with standard, no re-inspection required
- Partial Pass - can require re-inspection or additional information. If “complies except as noted” is indicated no re-inspection is required as it meets the minimum standard
- Fail - requires re-inspection

During a review of a sample of application files, the OAG found inconsistencies in the documentation maintained. In some files reviewed, it was not clear why the project phase required re-inspection and in some cases there was no indication of why the inspection partially passed but did not require re-inspection. Currently, HRM does not have a standard around the required documentation to support inspection classification/statuses. The OAG is concerned, should HRM not properly document its inspection process, one of two possibilities could take place:

- The omission of a step may not be identified, or
- A proper and complete inspection could be performed but HRM would be unable to support this position with standard and consistent documentation.

Should a failure of some type take place, the Municipality may face liability and loss of public confidence. Without proper and consistent documentation of the inspection, the OAG questions whether there is sufficient evidence of adequate due diligence procedures having been completed to limit potential liability. These comments will be elaborated on in greater detail in Section 2.2.

Communicating Deficiencies to Builders is Inconsistent

Having sufficient documentation of the inspection process and requiring all deficiencies be communicated to the builder by the building official is essential to mitigating risk. Currently the practice of communicating deficiencies is inconsistent; Management advised the OAG deficiencies can be communicated verbally or through inspection forms. There is a risk HRM may not be able to demonstrate deficiencies were adequately disclosed when verbal communications are not documented. Having sufficient documentation of the inspection process is essential to mitigate this risk.

There is a risk HRM may not be able to demonstrate deficiencies were adequately communicated.

Level of Supervision

The OAG was advised there is professional judgment used in the inspection process and heavy reliance on building officials to provide high quality, consistent inspections. Without appropriate levels of supervision or peer review it is difficult to determine if inspections are consistent or if performance issues exist with any particular building official and therefore whether support or additional training is needed. In order to ensure inspections are being completed correctly, consistently and with the appropriate due diligence and accountability mechanisms operating as intended, it is the opinion of the OAG, a robust and consistent formal file and post-inspection review process is needed. HRM has neither a formal post-inspection review process nor a set methodology for spot checking or reviewing building officials' work or files. Therefore, there is a risk inspections are not consistent amongst building officials, required processes are not being completed or properly documented and may not be of the expected quality (from the perspective of HRM Management or taxpayers). These comments will be elaborated on in greater detail in Section 2.2.

There is a risk inspections are not consistent amongst building officials, required processes are not being completed or properly documented and may not be of the expected quality.

No Defined Process to Identify High – Risk Construction Projects

There are processes and practices being undertaken by building officials to help manage activities which pose a high risk to the public. For example, the OAG was advised where a building official or supervisor ‘feels’ there is a risk construction may continue without a request for inspection, inspections are carried out anyway.

Based on the OAG sample of application files, some building officials do a good job of making notes and frequently visiting the job site of a difficult project or a project in which they have identified issues, but this is still based on ‘feel’ rather than a documented practice. Based on meetings with Management, the OAG found the building officials currently in the Building Standards Division have a practice of acknowledging different types of projects (higher risk) require more due diligence in the inspection process. For example, swimming pools are automatically scheduled to be inspected within 30 days of the permit issuance regardless of whether an inspection request has been received, even though the By-Law does not require this.

There is however, no documented methodology of how to identify high-risk projects/situations or a documented process of how to proceed. This is of great concern to the OAG since with no process in place there is a risk additional levels of oversight may not occur in all high-risk cases or resources will not be available to satisfy the increased level of due diligence.

Conclusion

The OAG questions if current practices of the Division are truly identifying and addressing all key risks in delivering a program which ensures public safety. As noted, the Building Standards Division is currently unable to provide assurance the limited resources available are being allocated to the highest risk areas for the public and property owners.

The OAG believes in order to deliver the service effectively, with limited resources, the development and documentation of a risk-based service delivery strategy is necessary. This involves identifying the key risks and creating a strategy to address these risks. This process would allow Regional Council and Management to analyze the currently available resources against required resources and identify any potential gaps thus ensuring there is sufficient staff to deliver the planned service both for the short-term and long-term. From this analysis, decisions can also be made on how these gaps

can be closed going forward ensuring the actual outcome manages risk in the most efficient, effective and economical way.

Recommendation:

2.0.1 The OAG recommends HRM Administration document the key risks of the Building Standards Division. These key risks should then be used to develop a service delivery strategy for the Division for the short-term and long-term, ensuring adequate resources are allocated to the key risk areas.

2.1 Lack of Documented Standard Procedures

Procedures Manual

In order to provide clear guidelines for staff, many organizations develop a formal procedures manual to document up-to-date procedures. Documented procedures allow for knowledge transfer to new employees, a baseline for continuous improvement and a tool for risk management.

Well-documented procedures would lower the risk of liability to HRM as they provide a standard of performance for all building officials to ensure consistency and thoroughness in their inspections. Additionally, well-documented procedures aid in reducing training costs for new employees, which increases the value for money of the Division. The Building Standards Division does not have a documented procedures manual. Therefore, there are no clear standards against which to measure employee performance. As a result, the OAG is concerned the Division lacks a baseline or standard to demonstrate performance and for use in continuous improvement. Additionally, if litigation were to arise HRM may be unable to demonstrate building officials consistently followed appropriate standards in the building inspection process.

**Well-documented procedures lower the risk of liability to HRM
as they provide a standard of performance for all building
officials to ensure consistency in inspections.**

Management of Procedures and Directives

The Building Standards Division created an electronic folder of directives used by the Division on technical interpretations. These directives and designated

standard operating procedures (SOPs) are accessed by the Division through searchable files on the shared network drive. The OAG found the directives vary in the level of detail. For example, some are simply in the form of a letter or e-mail correspondence from the Nova Scotia Department of Labour providing clarification in certain areas. Overall, the level of authority these directives carry is unclear.

Not only do the directives vary, they are not maintained following a formal records management policy nor, as noted earlier, is there an approved procedures manual which incorporates these directives. The directive file has documents dating back to 1999 with no clear indication of which are the most recent or currently in effect. The current system may be adequate for current staff; however, it will be difficult to maintain consistency with new employees if the directives are not well organized. While having these directives is helpful, the lack of organization could lead to the use of wrong or out-of-date directives or the inability to locate appropriate procedures/directives. A records management policy would allow the Building Standards Division to prepare and assemble directives efficiently and effectively and easily retrieve them when required.

**The current system may be adequate for current staff;
however, it will be difficult to maintain consistency with new
employees if the directives are not well organized.**

Recommendations:

- 2.1.1 The OAG recommends HRM Administration ensure a procedures manual is created for the Building Standards Division. The manual should include all current procedures for completing inspections and managing files as well as all relevant directives.
- 2.1.2 The OAG recommends HRM Administration create a records management policy for storing documents within the Building Standards Division to ensure only the most current procedures and reference documents/forms are maintained.

2.2 Need for Standardized Documentation

The OAG believes in order to demonstrate the appropriate administration and enforcement of the Act, standardized documentation practices are necessary. To assess consistency in documentation and determine if the completed inspection process could be easily followed and inspection decisions understood, the OAG selected a stratified sample, by building classification, from all building applications for the period under review.

In reviewing the files, the OAG concluded there are no standardized requirements for file documentation in the Building Standards Division; this was confirmed by Management. Critical documentation such as plan reviews and inspection checklists are not required to be kept in the application file or required to be used at all. The Manager of the Division indicated checklists were only developed because some building officials found it easier to complete the inspection. This leads the OAG to question why the use of checklists is not required, as it would allow for better monitoring and quality assurance of the building inspection process, demonstrate consistency in managing application processes and demonstrate due diligence in meeting regulatory requirements.

The OAG questions why the use of the checklists is not required, as it would allow for better monitoring and quality assurance of the building inspection process.

Records in the Building Standards Division are kept as either electronic or paper files; neither is required to include any specific documentation. Management indicated the electronic file was all which was required; in fact, the Division would like to move to a completely electronic system. Given the level of inconsistency between the paper and electronic files, the OAG questions if all inspection files have sufficient information representing the entire inspection process. In order for Management to be able to effectively monitor the building inspection process, the OAG believes the files should include sufficient documentation (whether electronic or paper) to represent the entire inspection process and the required information be consistent from file to file.

Inconsistent Documentation of Deficiencies

When deficiencies are discovered during an inspection, the OAG would expect building officials to make notes regarding the deficiencies observed. The OAG found inconsistencies in how inspection notes and deficiencies were recorded and cleared in both the paper and electronic portions of the files. For example, when the OAG reviewed the electronic files there were cases where an inspection required re-inspection but no notes as to the deficiencies of the first inspection had been made; while other files had detailed notes. The OAG found some paper files included sign offs or notations indicating each deficiency had been cleared; while others did not.

The OAG expected a complete file including documentation of all deficiencies noted to ensure they are appropriately cleared by the follow-up inspection. The OAG questions how another building official could possibly know why a previous inspection failed if deficiencies are not being consistently and adequately disclosed in the inspection files. Management indicated the follow-up building official has to complete the full inspection again if specific deficiencies have not been made clear. The OAG also questions the efficiency of this type of practice.

Management indicated the follow-up building official has to complete the full inspection again if specific deficiencies have not been made clear. The OAG questions the efficiency of this type of practice.

Lack of File Review

There is also no documented file review (electronic or paper) by a supervisor or administrative support. Without an adequate file review, it is difficult to determine quality and consistency of inspection practices. The OAG questions the Division's ability to ensure expected quality of service and provide evidence of adequate due diligence procedures. A review of the files by Management would ensure critical information is being properly and consistently recorded and maintained.

There is also no clear file review (electronic or paper) by a supervisor or administrative support. Without an adequate file review, it is difficult to determine quality and consistency of inspection practices.

The need for consistency of performance is important to protect against potential liability as inspection decisions can be compared against a standard and easily understood. Since there is no accepted standard in the Building Standards Division, the documentation kept is inconsistent. Therefore, there is no way to demonstrate a particular building official followed the HRM required practices. If the level of performance varies, it becomes difficult to demonstrate due diligence and the risk to the Municipality is increased.

Recommendations:

- 2.2.1 The OAG recommends HRM Administration develop standards for file documentation in a procedures manual, whether electronic or paper.
- 2.2.2 The OAG recommends HRM Administration implement a practice of supervisor review of inspections and for documenting this review, prior to closing the file, to ensure all required documentation is included and deficiencies are adequately documented and cleared.

3.0 Demonstrating Performance – Value for Money

In the delivery of any program or service there is a risk the assets will not be used at an optimal level; more simply put, there is a risk the program or service will use too many resources to generate too little in terms of output. There is always a risk the program or service will not generate value for money, despite addressing risks of public safety. A program or service needs to be designed in a way in which value for money is demonstrated. A key to measuring and demonstrating value for money is to have a clearly defined program or service objective and desired outcomes. Without clearly defined objectives or desired outcomes it is impossible to assess whether the program is effective.

Outputs are frequently mistaken as outcomes. In the Building Standards Division, the outputs are the permits and inspection services provided, whereas the outcome is the level to which these services are provided and is a measure against what was expected. Regional Council must define and approve the level to which they want inspections services to be provided and then the outputs can be assessed against the stated level. In this case the level of permit and inspections services should align with the level of risk Regional Council has accepted.

Following the OAG's Value for Money Flowchart, after outcomes have been stated and approved, resources allocated and the processes and actions defined for the delivery of inspection services, the basis for demonstrating performance needs to be established. The OAG believes a key part of achieving value for money is monitoring performance. Monitoring performance examines the actual outputs being produced against the stated outcomes and measures the level of achievement to performance targets. An important part of measuring performance is selecting the right indicators and processes for reporting performance. Key performance indicators (KPIs) should be designed to capture performance. There should also be processes in place to facilitate corrective action if required, such as training.

3.1 Lack of Appropriate Performance Monitoring

The ability to monitor performance of personnel and processes is essential to ensuring value for money is achieved in the Building Standards Division. KPIs are, as the name suggests, indicators of performance which allow managers to monitor the performance of employees and the Division and make important strategic decisions. KPIs are only valuable when they provide relevant and reliable information. KPIs can be used to help evaluate if a process is working or show where a process can be improved. KPIs are also methods to measure progress towards achieving a strategic goal. The Building Standards Division has KPI's related to:

- Value of construction,
- Timeliness of inspections and
- Application processing.

KPIs are more meaningful when the reasons for the KPIs are tied to a desired outcome of a program, in particular when they are focused on increasing efficiencies within the program. When deciding which KPIs to use, organizations should have a known performance target in mind; otherwise the KPI will not provide meaningful information.

When reviewing the current KPIs of the Building Standards Division, the OAG noted two were strong. The KPIs related to 'timeliness of inspections' and 'permit applications processing' are directly related to key aspects of performance as there are standard time measures set for inspections and application processing.

Other measures including for example, the 'value of construction' KPI are not directly related to the building standards process and are more of an indicator of the construction environment of HRM than the performance of the Building Standards Division. This indicator does not provide any information related to how well the Building Standards Division is doing in terms of its expected outcomes and is not something which is within the control of the Division.

Users of the KPIs need to be assured appropriate data is used in the calculation of the KPIs. When questioned by the OAG, current staff were unsure of the source data used in calculating the current KPIs (what was included or excluded). The OAG questions the reliability of a KPI if the underlying source data is unclear.

The OAG questions the reliability of a KPI if the underlying source data is unclear.

A fundamental function of building standards services are the inspections themselves. Building Standards does not view reducing re-inspection rates as a goal for the Division. When reviewing reports of other municipalities the OAG identified a common goal for building standards divisions is to reduce the number of inspections requiring re-inspection. The OAG questions why the Division would not consider this an important goal. Information is available to the Division including whether inspections are passing, failing or requiring re-inspection by category, builder and building official. This information could be used to track and trend which type of inspections, building officials, builders and construction types have high re-inspection rates. Monitoring and improving re-inspection rates would increase the efficiency of the Division and reduce costs to taxpayers.

When the OAG reviewed the inspections file sample, it was found that some properties were requiring re-inspections numerous times; one file required the framing to be re-inspected seven times. If a type of inspection is consistently requiring re-inspection, an effective use of resources could be to increase the education provided to builders on the items required for this inspection to be passed on the first review. If a builder is consistently requiring re-inspection, it could be a flag to the Division on the quality of construction. If a particular building official is repeatedly failing properties, this could be an indicator of inconsistency across building officials.

In review of the inspections file sample, it was found that some properties were requiring re-inspections numerous times; one file required the framing to be re-inspected seven times.

Recommendations:

- 3.1.1 The OAG recommends HRM Administration review the current KPIs to ensure they are specifically related to performance and components the Building Standards Division can control.

- 3.1.2 The OAG recommends HRM Administration identify and review all data used to calculate the Building Standards Division KPIs to ensure appropriate data is being used.
- 3.1.3 The OAG recommends HRM Administration develop KPIs specific to the inspection process as a means of continuous improvement. One of these KPIs should be the number of re-inspections by inspection type, builder and building official.

3.2 Inadequate Management of Open Applications

As previously mentioned, building applications are maintained in Hansen. The applications in the system contain information with respect to the permits issued and their expiry date as well as the types of inspections required. The applications in the system also include the dates on which the application was submitted and approved, when the inspections were scheduled and completed and the file status. The electronic system is used by the Development Approvals Division as well as the Building Standards Division.

The options for inspection file status are 'open', 'closed' and 'stop work'. Open files require further action. Closed files are generally considered those where all inspections have been completed, a final permit (typically occupancy) has been issued and no further action is required. Stop work is when the application is finished and there is no further work on the file by HRM staff. A stop work status can only be authorized by a supervisor and electronically locks the file to all other staff.

Currently, the Building Standards Division has no KPIs related to file closing or inactive file maintenance. The Division reviews the electronic inspection files daily searching for expired permits and for files requiring action (for example, swimming pools are inspected 30 days post permit even without scheduled inspection). In addition to daily reviews, Management indicated they are also developing a new report to locate open files which have been inactive for a period of time.

It was concerning to the OAG to discover there were 14,919 open building application files in the Hansen system as of September 2014. Of those files, more than 4,600 were over five years old. When questioned, Management informed the OAG there are open files listed which do not require further action from the Building Standards Division but require further action from the Development Approvals Division related to engineering or development approvals. Management of the Development Approvals Division indicated

there are no procedures for managing open files and some files remain open for years because information has not been received from the applicant. The OAG found cases where the permits in open files had expired, but there was no clear indication of the next steps, some had site visits listed, while others did not.

**It was concerning to the OAG to discover there were 14,919
open building application files in the Hansen system as of
September, 2014.**

Even though HRM Management is developing a new report to locate open but inactive files, the OAG questions the usefulness of such a report if it is not developed in conjunction with the other user of the files.

The OAG understands there are valid reasons why files could remain open, but the volume of open files and the length of time files stay open is concerning. The OAG questions why there is no clear effort to determine why applications remain open and why there is no process in place to address and manage old files. This trend is especially concerning to the OAG as the Building Standards Division is moving to completely electronic files because the current system does not allow the Division to efficiently or effectively manage their applications. The electronic files hold valuable information and with so many different timelines for inspections, re-inspections and permit expiries, it is important the Building Standards Division be able to easily access and confidently identify all files requiring further action. If the Division cannot confidently identify the status of all files, the OAG questions the ability of the Division to demonstrate it is effectively administering the Building Code Act and demonstrating value for money.

Recommendation:

3.2.1 The OAG recommends HRM Administration implement a records management process for inspection files from the time the application is received and processed until the point the file is closed. The current status codes should be reviewed and updated or redefined as part of this process so both the Building Standards and Development Approvals Divisions can actively manage files appropriately and consistently.

3.3 Managing Training Requirements to Meet Strategic Needs

Specific training and certification is required in order to become a building official. There are three levels of Certified Building Official (CBO), Assistant Building official (ABO), CBOI and CBOII, with CBOII being the higher level of the two; the level of building official dictates which types of inspections they can perform. For example, CBOII are certified to perform inspections on all building types whereas CBOI can only inspect Part 9 of the Building Code (residential building and other buildings smaller than 600m²). Training for building official certification is made available through the Nova Scotia Building Officials Association (NSBOA).

When discussing training availability with Management, it was brought to the attention of the OAG the higher-level courses for certification are not offered as often, as the NSBOA is a provincial association and these courses are not as in-demand for rural building officials. HRM has a greater need for these higher-level courses as the Municipality has a more complex construction portfolio compared to the rest of the province.

The Building Standards Division maintains a spreadsheet by employee of all training, including date of certification. This spreadsheet includes the required courses for certification of each level of building official, the progress of each employee as well as other mandatory training such as Red Cross and other personal development training. The Building Standards Division is efficiently and effectively tracking the completed and upcoming training needs by employee. However, employees may be waiting long periods of time before being able to obtain required certification courses due to their availability and therefore, HRM is at risk of not having enough employees at each certification level to complete the required inspections based on the type of construction taking place within HRM. There is also the possibility of losing highly trained employees to other municipalities or organizations, which further increases this risk.

Management advised the OAG, ABOs are assigned to work with experienced CBOs in the field for a period of time before they can sign off on inspections alone. It is not clear if there is a documented follow-up review process to ensure once an ABO becomes a CBO they are completing inspections adequately. This part of the CBO training and mentoring process is not documented within the Building Standards Division although it appears to be an accepted practice. The OAG is concerned this practice may not continue or remain consistent in the Division if it is not documented and formalized as part of a development and retention strategy.

In discussions with Management and industry experts, it was indicated to the OAG, once employees have completed training, employees can leave to work for other municipalities and the private sector. Training is an investment and when the employee leaves, the investment is lost. It was also indicated to the OAG there have been issues with recruiting new staff. Even though there is a risk of turnover, HRM has not developed a recruitment and retention strategy to ensure an appropriate number of building officials is maintained at each level. Failing to plan resources and ensure training is available to meet the needs of the Municipality places the Municipality at risk of not being able to demonstrate the effectiveness of the program. If there are not enough building officials at the required levels, HRM may not be able to meet the established service standards. This lack of resource planning is concerning to the OAG.

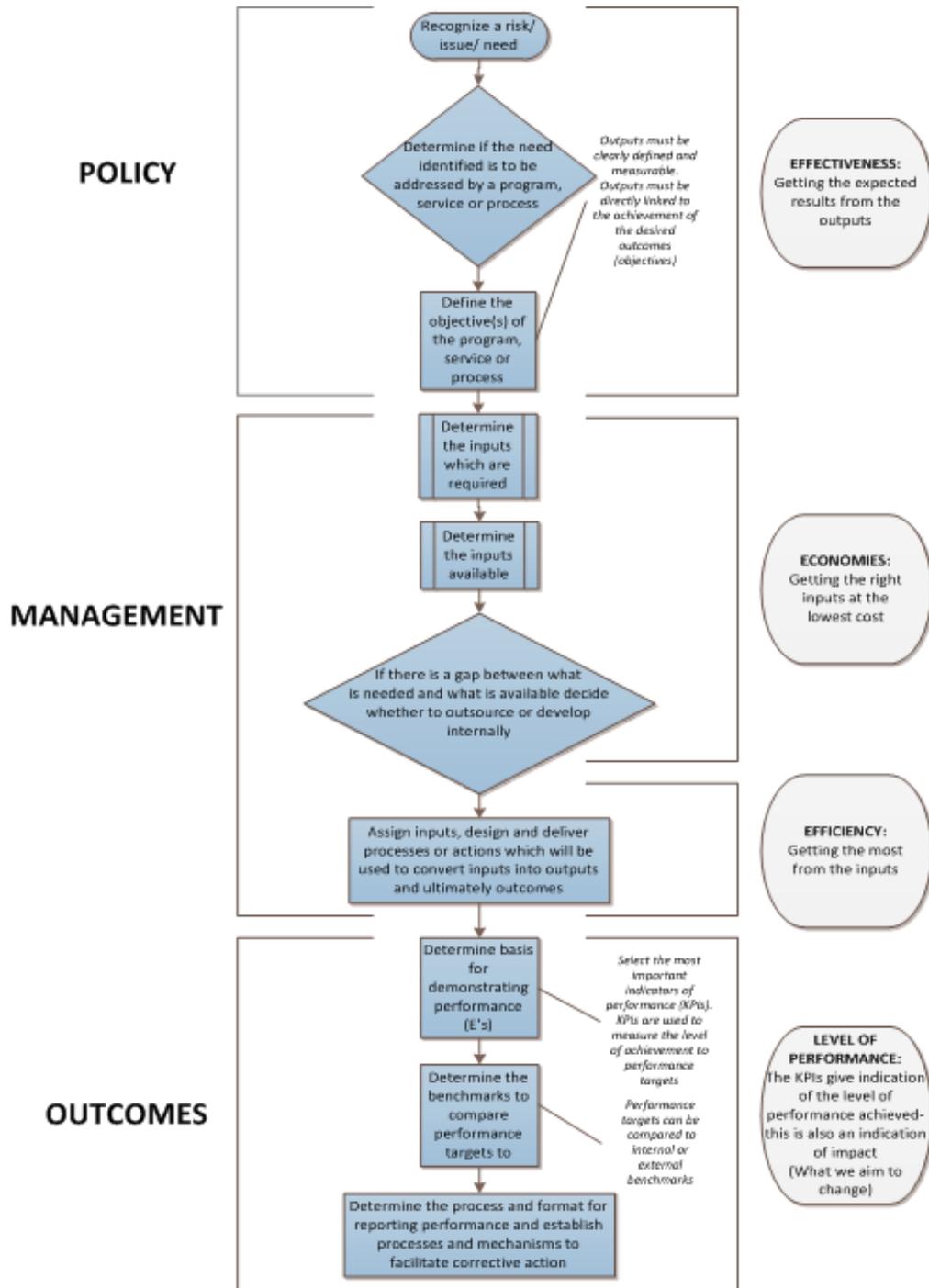
Recommendations:

- 3.3.1 The OAG recommends HRM Administration work with other larger cities and NSBOA to provide more in-house courses to ensure employees are keeping pace with their training needs.
- 3.3.2 The OAG recommends HRM Administration develop and document requirements of the mentoring program to ensure consistent training for Assistant Building Officials and designate a review period for follow up of newly assigned Certified Building Officials.
- 3.3.3 The OAG recommends HRM Administration develop a recruitment and retention strategy to ensure HRM has the optimal number of building officials at each level to satisfy both the current and expected future needs.

Appendix A: Value for Money Flowchart

Value For Money

The Public Sector has a responsibility to demonstrate value for money. The following flow chart are suggested steps to ensure the highest value for money is achieved- OAG HRM ©



Appendix B: Management Response

RICHARD BUTTS
CHIEF ADMINISTRATIVE OFFICER

September 3, 2015

Larry Munroe
HRM Municipal Auditor General
Belmont House, Suite 620
33 Alderney Drive
Dartmouth, Nova Scotia B3J 3A5

Re: A Performance Review of HRM's Building Standards – Permits and Inspections

Dear Mr. Munroe:

I have reviewed the report, *A Performance Review of HRM's Building Standards – Permits and Inspections* submitted to me on August 11, 2015 by your office. I am in general agreement with its content and the direction proposed. As with previous reports released by your office, HRM Administration will take the recommendations under consideration and develop a work plan to address the main issues identified in the report.

The themes identified in the report are consistent with several approaches currently being undertaken by our Municipal Compliance section to improve service delivery. These approaches include:

- Development of a new data management system to improve work flow and further digitize information;
- Participation in the process being led by Corporate Information Management to improve the corporate records management system;
- Encouraging a more specific focus on workforce planning to enhance recruitment, training and retention in the Building Standards area; and
- Establishment of documented procedures in relation to risk management, key performance indicators (KPI's) and other processes.

As always, HRM Administration will continue to ensure the findings presented by your office are addressed in a coordinated and appropriate manner, and strive to continuously improve our processes and management in this and other areas of the organization.

Sincerely,

Original Signed

Richard Butts
Chief Administrative Officer

HALIFAX

Halifax Regional Municipality
City Hall, 1841 Argyle Street, PO Box 1749
Halifax, Nova Scotia, Canada B3J 3A5

t. 902.490.4026
f. 902.490.4044
halifax.ca