

Chapter 12

Prairie Spirit School Division No. 206—Maintaining Facilities

1.0 MAIN POINTS

This chapter reports for the 12-month period ended November 30, 2015, the results of our audit of processes Prairie Spirit School Division No. 206 (Prairie Spirit, Division) uses to maintain its facilities.

In the last few years, the Division became aware of structural deficiencies in approximately 40% of its schools. The Division has investigated and determined the extent and estimated cost of structural deficiencies identified in those schools. Prairie Spirit did not keep documentation to support approximately \$13 million of \$22.6 million cost estimates. Prairie Spirit focused on addressing immediate maintenance priorities to keep students and staff safe.

Determining maintenance priorities over the short, medium, and long term, and having documented strategies to address them are critical components of an overall maintenance plan. We made seven recommendations surrounding Prairie Spirit's need to:

- › Develop a maintenance plan that defines what level of maintenance is needed, when, and at what cost
- › Obtain complete and accurate information about its facilities and significant components – including setting out expectations regarding how often to update information and the nature, extent, and frequency of inspections
- › Provide its Board with reports on the condition of all its facilities, timely completion of maintenance, and the nature and extent of deferred maintenance and its anticipated impact
- › Require the review of cost estimates against supporting information by someone other than preparer of the estimates

Effective maintenance processes help enhance the future viability and safety of schools, improve the quality of space, protect against loss of facility value or service life (i.e., replacing a facility earlier than intended), and limit repair costs in the future.

2.0 INTRODUCTION

Prairie Spirit School Division No. 206 is a public school division that operates 35 schools in the area surrounding the City of Saskatoon. See **Exhibit 5.1** for a map of the Division and its schools. Prairie Spirit is responsible for educating about 10,400 students.¹

¹ *Prairie Spirit School Division No. 206 Annual Report 2014-15*, p. 3.



Prairie Spirit was created in 2006 through the amalgamation of three existing school divisions. Prior to 2006, these divisions were responsible for maintaining the schools that are now part of Prairie Spirit's division.

2.1 Legislated Responsibility for Maintaining Schools

Prairie Spirit is one of Saskatchewan's 28 school divisions. *The Education Act, 1995* (Act) and regulations set out the roles and responsibilities of school divisions and of the Ministry of Education (Ministry). Elected boards of education (school boards) govern school divisions. School boards administer and manage school divisions, including schools.

Under the Act, school divisions are responsible for providing and maintaining schools, including equipment and facilities necessary for board-approved educational programs and instructional services (section 85). School divisions are also responsible for setting school-facility maintenance procedures for the purpose of maintaining satisfactory standards of comfort, safety, and sanitation for the students and other users of the accommodation (section 85).

The Act sets out approval processes for capital projects. For example, it requires school boards to obtain Ministry approval of all major capital projects² including major renovations and maintenance of schools. For approved projects, they must obtain the Ministry's approval at key project stages (e.g., project planning, design, tender).³

2.2 Facilities and Maintenance

Prairie Spirit's objective for school facilities is to provide safe, healthy, and inviting environments to encourage students to reach their full potential.⁴ Prairie Spirit is responsible for maintenance of about 132,000 square metres of school facilities in its school division. As noted in **Exhibit 5.2**, Prairie Spirit's facilities include:

- ▶ Thirty-five schools located in 26 communities. The average age of these schools is 47 years with ages ranging from 2 to 88 years old.⁵ Prairie Spirit opened its newest school in 2013.
- ▶ A school division office and school-services building located in Warman.⁶
- ▶ A bus garage located in Saskatoon,⁷ which Prairie Spirit plans to relocate due to an expansion of Saskatoon's city limits.

As shown in **Figure 1**, at August 31, 2015, these facilities had a net book value of \$127.3 million.⁸ In 2014-15, plant expense of \$17.7 million (2013-14: \$16.5 million) was Prairie Spirit's second largest expense, and was about 15% of its total annual expenses. Plant

² The Ministry defines major capital projects as those costing more than \$1 million.

³ Our 2013 Report – Volume 1, Chapter 8 reports on the effectiveness of the Ministry of Education's capital asset planning processes for facilities to house and support educational programs and instructional services for students in school divisions. It includes eight recommendations. Our 2015 Report – Volume 1, Chapter 20, reports the status of those recommendations.

⁴ Prairie Spirit School Division No. 206, *Facilities Strategic Planning Poster*.

⁵ Adapted from information provided by Prairie Spirit School Division No. 206.

⁶ *Prairie Spirit School Division No. 206 Annual Report 2014-15*, p. 35.

⁷ Ibid.

⁸ The majority of Prairie Spirit's investment in tangible capital assets is related to buildings (facilities).

expense includes costs to operate and maintain facilities such as related salaries, goods, services, and operating expenses. The Ministry approves Prairie Spirit's budget. For 2015-16, it approved budgeted plant expenses of \$14.4 million (2014-15: \$14.1 million).⁹

Figure 1 – Prairie Spirit Maintenance Expenses and Capital Assets

	2015 Actual	2014 Actual	2013 Actual	2012 Actual	2011 Actual
	(in millions)				
Plant Expense	\$17.7	\$16.5	\$12.7	\$11.5	\$11.1
Total Expenses	\$116.8	\$112.5	\$106.7	\$102.7	\$92.7
% of Total Expenses related to Plant Expense	15.2%	14.7%	11.9%	11.2%	12.0%
Buildings – Net Book Value ^A	\$127.3	\$112.3	\$102.4	\$86.4	\$75.7
Total Tangible Capital Assets – Net Book Value	\$145.2	\$130.0	\$118.5	\$102.7	\$93.0
% of Tangible Capital Assets Related to Buildings	87.6%	86.4%	86.4%	84.1%	81.4%

Source: *Prairie Spirit School Division No. 206 annual financial statements*.

^AIncludes net book value of buildings, buildings – short term, and assets under construction.

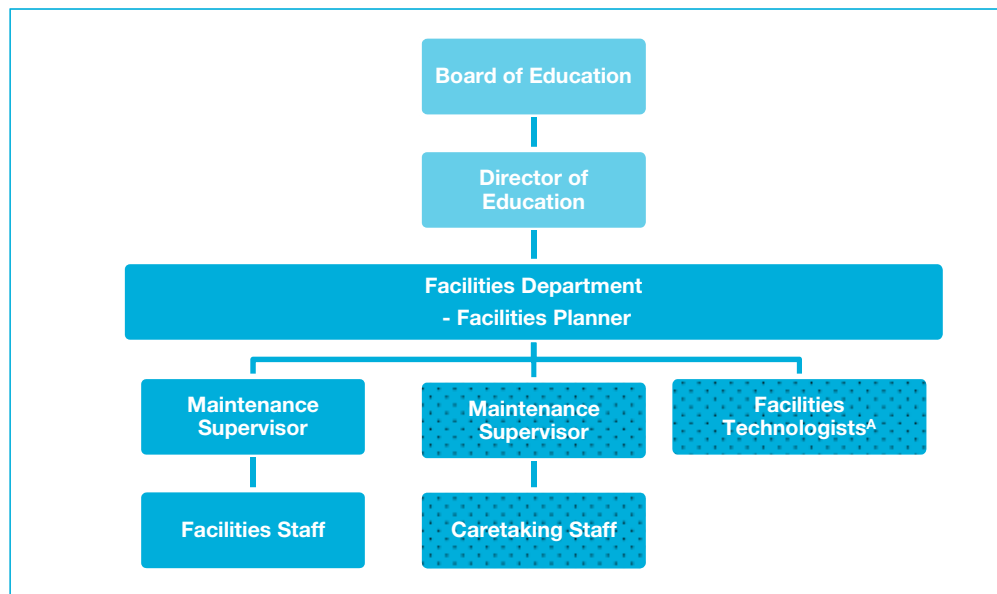
In 2014-15, Prairie Spirit spent \$6.2 million on capital projects; a portion of this spending was for major maintenance (e.g., renovations).¹⁰ Also at November 2015, two additional joint-use schools located in Warman and Martensville were under construction through a public-private partnership (P3) arrangement managed by the Ministry.

As reflected in **Figure 2**, the Division has a Facilities Department responsible for Prairie Spirit's maintenance and caretaking activities. The Department is also responsible for managing the construction of new schools, the renovation of existing schools, and the installation of portable classrooms.

The Facilities Planner leads the Facilities Department with direction from the Director of Education. Prairie Spirit created the Facilities Planner position in 2011. The Facilities Planner has the assistance of two maintenance supervisors – one responsible for nine facilities staff who conduct maintenance throughout the Division, and the other responsible for caretaking.

⁹ *Prairie Spirit School Division No. 206 Annual Report 2014-15*, p. 64.

¹⁰ *Ibid.*, p. 36.

**Figure 2—Prairie Spirit's Facilities Organizational Chart**

Source: Adapted from Prairie Spirit School Division's organizational chart.

^A The Facilities Technologists are responsible for maintaining, updating, and reviewing the architectural drawings associated with facilities throughout the school division.

The Ministry states, “the provision and maintenance of high quality learning facilities has a direct impact on the system’s ability to help students achieve optimal performance.”¹¹

The Division depends on its facilities to deliver its educational services and to fulfill its mandate.

Planning for and completing required maintenance is essential to the ongoing operation of the school division. Improper or untimely facility maintenance can lead to potential health and safety problems for students, staff, and the public accessing facilities. It can also result in reduced quality of space, loss of facility value or service life (i.e., replacing a facility earlier than intended), and higher repair costs in the future. Repairs can be disruptive and costly. Doing timely, required maintenance may reduce or potentially eliminate the need for, and the extent of, major repairs.

3.0 AUDIT OBJECTIVE, SCOPE, CRITERIA, AND CONCLUSION

The objective of this audit was to assess the effectiveness of Prairie Spirit’s processes to maintain its facilities for the 12-month period ended November 30, 2015.

For the purposes of this audit, maintenance is defined as the process of keeping existing facilities in good condition to meet service objectives.¹² Facilities include all buildings¹³ and significant components (e.g., heating and air conditioning units) owned by Prairie Spirit. Maintenance does not include caretaking services or the construction of new facilities (e.g., schools, portable classrooms). It does not include the functions and duties that caretaking and facilities technology staff carry out (see patterned boxes in **Figure 2**).

¹¹ *Ministry of Education 2012-13 Annual Report*, p. 17.

¹² Service objectives are the intended purpose of the facilities over a specified service life plan.

¹³ Buildings include school buildings, bus depots, storage facilities, etc.

For other key terms and definitions, see the Glossary in **Section 6.0**.

We examined Prairie Spirit's policies and procedures that relate to maintaining facilities, reviewed the school division's maintenance system and procedures, and tested a sample of maintenance items. We also interviewed Board members, as well as school division and school staff. We did not assess the condition of the Division's facilities, or its processes to allocate or secure resources to maintain its facilities.

To conduct this audit, we followed the standards for assurance engagements published in the *CPA Canada Handbook – Assurance*. To evaluate Prairie Spirit's processes, we used criteria based on our related work, reviews of literature including reports of other auditors, and consultations with management. Prairie Spirit's management agreed with the criteria (see **Figure 3**).

Figure 3—Audit Criteria

- 1. Keep reliable information on facilities**
 - 1.1 Identify the facilities, including components, that must be maintained
 - 1.2 Determine service objectives for long-term performance
 - 1.3 Maintain current, reliable information needed to manage facility maintenance (e.g., facility condition, remaining service potential, estimated maintenance costs, estimated replacement cost)
 - 1.4 Assess risk that facilities will not meet required service objectives
- 2. Develop a maintenance plan**
 - 2.1 Establish specific maintenance strategies to achieve service objectives
 - 2.2 Set maintenance priorities (short-, medium-, and long-term)
 - 2.3 Evaluate strategies against available resources (short-, medium-, and long-term costs)
- 3. Carry out maintenance effectively**
 - 3.1 Use recognized maintenance standards
 - 3.2 Implement maintenance procedures consistent with standards
 - 3.3 Provide staff with guidance on use of maintenance procedures
 - 3.4 Track maintenance activities
- 4. Monitor performance of maintenance**
 - 4.1 Analyze progress in carrying out maintenance plan
 - 4.2 Periodically report on maintenance activities (e.g., progress against maintenance plan, total deferred maintenance) to internal and external stakeholders (i.e., board, Ministry of Education, public)
 - 4.3 Adjust plans as new information becomes available

We concluded that for the 12-month period ended November 30, 2015, Prairie Spirit School Division No. 206 did not have effective processes to maintain its facilities. It needs to:

- › **Develop a written maintenance plan for all of its facilities and their significant components, including short- to long-term maintenance priorities, and track maintenance completed**
- › **Set out expectations about information, including service objectives, for staff to gather and record about its facilities and significant components**
- › **Give staff guidance on the nature, extent, and frequency of inspections of all its facilities and related significant components**
- › **Periodically give the Board comprehensive maintenance reports (e.g., condition of facilities, timely completion of maintenance, deferred maintenance and its anticipated impact)**



› **Require the review of estimated maintenance costs against supporting information by someone other than the preparer of the estimates**

A written maintenance plan for all of its facilities and their significant components would define what maintenance should be done, to what level, when, and at what cost over the short, medium, and long term. Having such a plan would help the Division assess the current and future impact on its facilities of delaying maintenance.

4.0 KEY FINDINGS AND RECOMMENDATIONS

In this section, we set out the criteria (expectations) in italics, and our key findings along with related recommendations.

4.1 Complete and Up-to-date Information on Facilities Needed

We expected Prairie Spirit to identify all of its facilities and significant facility components (e.g., air conditioning units) that it must maintain. We expected Prairie Spirit to keep current and reliable information about each of its facilities and components to manage maintenance (e.g., facility condition, estimated maintenance costs, estimated replacement costs).

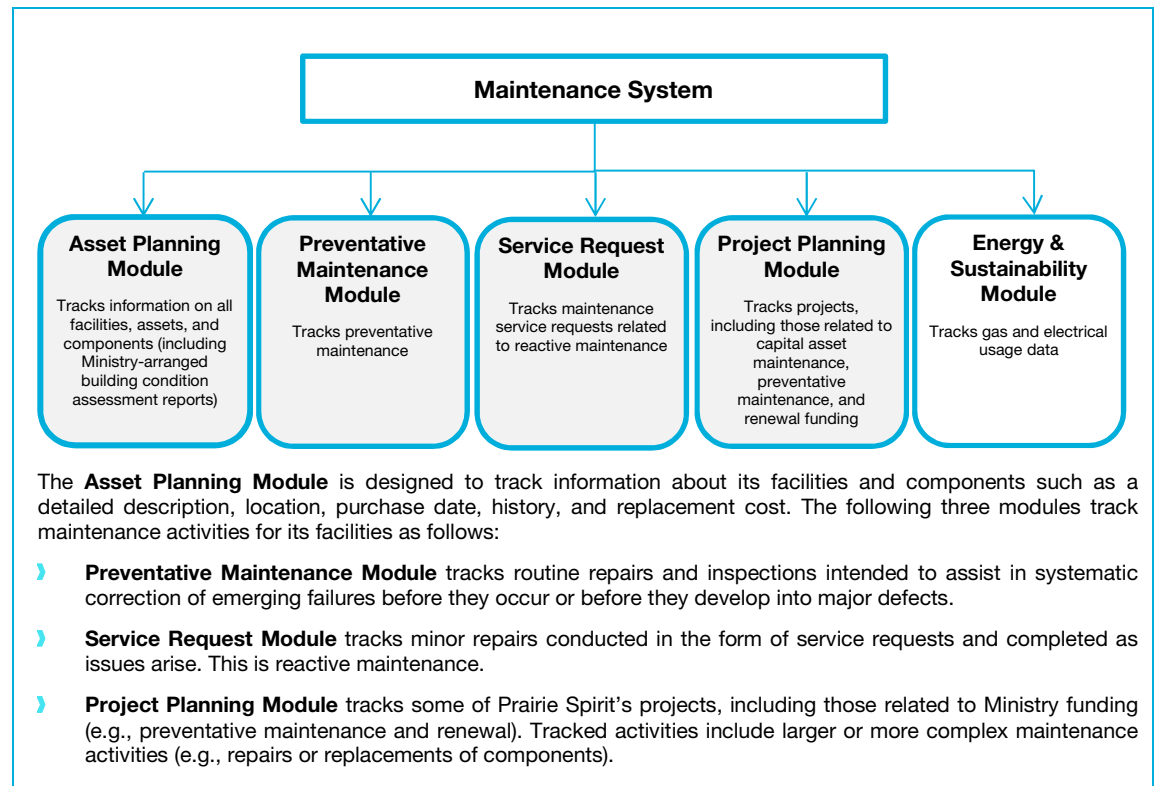
We expected Prairie Spirit to establish service objectives for long-term performance of facilities and components. Service objectives help define the importance and lifecycle of a facility or component to the organization's purpose so that an effective maintenance plan can be established.

We also expected it would assess the risk that facilities and components may not meet those service objectives.

4.1.1 Asset Maintenance System in Place But Not Fully Utilized

Prairie Spirit has an electronic asset maintenance system (Maintenance System) that is designed to manage and track its key maintenance activities. As shown in **Figure 4**, the Maintenance System has five modules, four of which relate to maintenance activities (gray shaded boxes). Information to be included in each of these modules is key to plan for and carry out required facility maintenance activities. The Maintenance System is the same system made available by the Ministry to all 28 school divisions in the province.

Figure 4—Prairie Spirit Maintenance System



Source: Prairie Spirit Maintenance System.

While the Maintenance System is designed to identify and track key information for planning and maintaining facilities, its functionality is diminished if the system does not have complete and accurate information. Prairie Spirit does not fully use the functionality of this system to help it plan for and monitor the maintenance of its facilities and their significant components (e.g., heating and cooling systems).

We found the information Prairie Spirit gathered in the Maintenance System about the facilities and their significant components was not complete. Although the Maintenance System contained information on each facility, it did not contain information on all significant components that Prairie Spirit must maintain. For example, we found that the Maintenance System includes only one component (i.e., fire sprinkler system) for the Stobart Community School built in 2012; it does not include any other components (e.g., furnaces, electrical components, water heater, windows) for this school.

We also found that information in the Maintenance System was outdated and not always accurate. Examples of missing or erroneous information include:

- ▶ The same component (e.g., a furnace) was listed in the Maintenance System twice; management was aware assets may have mistakenly been added twice when entering information from Ministry-arranged condition assessments.
- ▶ Old components replaced with new components (e.g., furnaces, hot water heaters) were not always removed from the system; management acknowledged this occurs.
- ▶ As noted in **Section 4.1.2**, information on condition of facilities was outdated or incomplete.



Prairie Spirit does not have written guidance that sets out what information it expects staff to collect and track in the Maintenance System. In addition, it does not have guidance or processes to make sure information recorded in the Maintenance System is complete, accurate, or up-to-date.

Not having complete and accurate information can contribute to maintenance activities being reactive instead of preventative. Over time, focusing primarily on reactive maintenance can contribute to poor facility conditions, and may lead to unsafe facilities or portions of facilities.

Lack of clear processes for gathering current and reliable information about facilities and components increases the risk that preventative maintenance may not be appropriately scheduled or completed, and may cause incorrect decisions about what maintenance to do and when. Documented processes enable knowledge transfer in the event of staff turnover, and assist staff in understanding and following consistent processes. It can also hold those responsible accountable for their actions since the expectations are clearly laid out.

- 1. We recommend that Prairie Spirit School Division No. 206 set out, in writing, what minimum information it expects staff to gather and record about its facilities and significant components.**

4.1.2 Expectations for Periodic Assessment of Facilities Unclear

Assessments about facility condition provide information key to effective maintenance planning. Prairie Spirit does not have policies regarding inspections of facilities or their related components. It has not set policies, and does not have documented procedures to guide staff in:

- › Determining how often to assess the condition of facilities and/or significant components so that they are inspected within a reasonable timeframe, and comply with related standards (e.g., building codes, fire codes, electrical codes), if any
- › Determining the nature and extent of condition assessments (e.g., visual inspection of exteriors)
- › Carrying out an inspection (e.g., information on how to assess the condition of facilities or components, sources of best practices)
- › Documenting work done and inspection results (e.g., use of standard inspection checklists or forms)
- › Updating inspection results in its Maintenance System (e.g., condition of each component, estimated remaining service life, maintenance needs, completed maintenance)

We found that the information in the Maintenance System about the condition of facilities and components was outdated. Information about the condition of existing

facilities and components (e.g., air conditioners, heating units) was only updated every five years during the Ministry-arranged condition assessments. The Asset Planning Module of the Maintenance System includes links to these condition assessment reports.

As described in **Figure 5**, the Ministry arranges for these facility-condition assessments about every five years; these are solely visual assessments of facilities.

Figure 5— Facility-condition Assessments

About every five years, the Ministry hires and pays for external experts to determine the condition of each school facility and its components within a school division.

These experts carry out visual assessments. Visual assessments do not include detailed inspections of the condition of facilities and components (e.g., detailed assessment of mechanical, plumbing, or electrical components).

These experts report the results of their work in condition assessment reports (sometimes referred to as condition audit reports). The reports include information on facility condition, and list specific maintenance that the external expert thinks should be done on each school. These experts prepare a report for each school facility and/or component inspected.

These experts provide the reports to the Ministry and related school division.

Source: Adapted from information provided by Prairie Spirit School Division.

Periodically, Prairie Spirit disagrees with views of the Ministry expert on what specific maintenance should be done on a school (e.g., timing to replace a boiler). In these cases, Prairie Spirit does not document its reasons for disagreeing, or update the Maintenance System with alternate maintenance activities it plans to undertake. The Division informed us that Ministry-arranged visual condition assessments done every five years provide it with insufficient information about the condition of its facilities. Prairie Spirit's last Ministry-arranged facility-condition assessments were done in October of 2013.

Well-designed facility assessments or inspections identify structural or functional deficiencies and conditions that are either potentially damaging to property or present safety risks, help define regular preventative maintenance requirements, and can identify potential renewal and replacement projects to reduce deferred maintenance.

Not requiring regular robust inspections increases the risk that information about the condition of facilities and significant components is not sufficiently robust or available for maintenance planning. Lack of guidance increases the risk staff may not carry out sufficient inspections at appropriate intervals.

- 2. We recommend that Prairie Spirit School Division No. 206 provide staff with written guidance on the nature, extent, and frequency of inspections of all of its facilities and related significant components.**

4.1.3 Service Objectives to Guide Expected Maintenance for Individual Facilities Not Set

Prairie Spirit has set an overall service objective for its facilities. However, it has not set measurable service objectives (e.g., a minimum acceptable facility conditions index [FCI])



rating, or facility life or condition needed to meet Prairie Spirit's future needs) for types of facilities¹⁴ or their significant components.

Prairie Spirit's overall service objective for facilities is to provide safe, healthy, and inviting environments to encourage students to reach their full potential.¹⁵ It uses this overall objective to guide some of its preventative maintenance activities (e.g., frequency of inspections of boilers and fire sprinkler systems) and to prioritize its requests for maintenance (service requests).

It documents the expected frequency of some, but not all, of its preventative maintenance in the Maintenance System for review by a supervisor. For these items, the Facilities Department uses the Preventative Maintenance Module to communicate to staff the expected frequency of the preventative maintenance. The Facilities Department communicates verbally preventative maintenance it expects contractors to do.

We found the Maintenance System does not include expected preventative maintenance tasks for all significant components, such as HVAC systems (i.e., furnaces, air handling units, exhaust fans, force flow heaters, air conditioners). The Division expects its maintenance contractors to perform maintenance for such systems, but has not formally documented the expected frequency of maintenance for these components (i.e., neither within nor outside of the Maintenance System).

Documenting the frequency of all required preventative maintenance within the Maintenance System would help the Division with scheduling and tracking completion of required maintenance.

When reviewing structural engineer assessments done in 2014 for Prairie Spirit's schools, we identified five schools where the assessments identified unaddressed recommendations made in assessments conducted from the 1980s to 2013. The estimated costs to complete both the previously-identified structural repairs, along with the repairs identified in the more recent structural assessments, at these five schools is approximately \$4.8 million. In all five instances, while the previous assessments recommended repairs, they did not indicate that structural conditions required closure or immediate reinforcement to allow for the continued use of the schools.

At November 2015, the Division had identified deferred maintenance totalling \$44 million related to school roofs and structural deficiencies (i.e., \$21.4 million for roofs and \$22.6 million for structural deficiencies). This information resides outside of its Maintenance System.

Also, Prairie Spirit does not determine or document the estimated remaining service life or condition rating for each facility, and significant components. Due to the lack of complete information about the Division's facilities captured in its Maintenance System, the Division cannot use this System to help identify and track total deferred maintenance.

Determining service objectives for types of facilities and significant components would enable Prairie Spirit to determine what future maintenance (preventative and reactive) to do and when. Not having complete information on maintenance that has been deferred increases the risk of incorrectly prioritizing maintenance (i.e., not doing the right

¹⁴ One type could be schools with similar construction.

¹⁵ Prairie Spirit School Division No. 206, *Facilities Strategic Planning Poster*.

maintenance at the right time). Also, without setting service objectives for individual facilities and significant components, the Division cannot determine resources needed (e.g., staff time) to perform maintenance activities over the short, medium, or long term, or assess the impact if timely maintenance is not performed.

3. **We recommend that Prairie Spirit School Division No. 206 establish service objectives for each type of facility and significant related components.**

4.1.4 Risks to Facilities Assessed

The Division took steps to assess significant risks to facilities, and provided this information to its Board. The Division hired experts to assess significant roofing and structural issues that presented risks to the Division's facilities, as follows:

- › In 2014, Prairie Spirit hired an expert to do a comprehensive roofing assessment on all facilities. **Exhibit 5.2** highlights Prairie Spirit schools identified as needing roofing repairs.

Management prepared a four-page information report on Roofing System requirements (Roofing System Report) based on the expert's detailed assessment of each facility. The Board received the Roofing System Report, for its information, in December 2014.

The Division gave the Ministry an eight-page Roofing Report in January 2015. The Report briefly summarized the expert's opinion on the remaining service lives for roofs throughout the school division, roofs requiring immediate replacement, and the estimated repair costs (e.g., \$21.4 million as of December 2014 for roofs with remaining service lives of 0 – 4 years).¹⁶

- › In 2014, because of structural problems identified during March 2013 repairs in some schools, Prairie Spirit hired an engineering firm to do a comprehensive assessment of the structural integrity of 15 high-risk schools. Management indicated that it identified the 15 schools as high-risk based upon their age and through consultations with the engineering firm. **Exhibit 5.2** highlights Prairie Spirit schools identified as needing repairs for structural deficiencies.

Figure 6 sets out the timeline of key events involving the comprehensive structural assessments.

Figure 6—Timeline of Key Events for Comprehensive Structural Assessments

March 2013: While completing structural repairs in some schools, Prairie Spirit became aware of structural deficiencies that it believed may exist in other schools throughout the Division (i.e., due to the similar age and construction of certain facilities). Upon learning of these deficiencies, the Board requested completion of comprehensive structural assessments of schools within the Division.

April 2014 – January 2015: Engineering firm hired by the Division carried out structural integrity assessments of 15 schools, and the firm gave management its report on each. Each report detailed the results of the structural assessment, described root causes of the structural deficiencies, and set out cost estimates to repair the identified deficiencies. Each report is about eight pages in length.

¹⁶ Prairie Spirit School Division, Roofing System Report, January 27, 2015.



December 2014: Management provided the Board with the Structural Restoration Report.

January 2015: Prairie Spirit shared the results of the structural assessments and updated cost estimates with the Ministry of Education.

Source: Adapted from information provided by Prairie Spirit School Division.

Using the results of the engineering firm's assessments of each of the 15 schools and related recommendations, management prepared a three-page report on the structural restoration requirements (Structural Restoration Report). The Structural Restoration Report provides a high-level summary of deficiencies identified, underlying reasons for the deficiencies at the 15 schools assessed, and estimated repair costs (i.e., \$12.7 million as of December 2014).¹⁷ Examples of structural deficiencies identified include aspects of school structures (e.g., joists, trusses) requiring reinforcement or replacement.

The Board received, for its information, the Structural Restoration Report in December 2014; Prairie Spirit gave the Ministry a one-page report in January 2015, along with updated estimated repair costs (i.e., \$22.6 million as of January 2015).¹⁸

Management indicated that they gave the Board a verbal update in January 2015; the Board minutes did not include a record of this update. As we describe in **Section 4.4.2**, the estimated costs to repair identified structural deficiencies in the Board and Ministry reports differ significantly.

Also, the Structural Restoration Report did not indicate that some of the underlying concerns and recommended repairs noted by the engineering firm in the 2014-15 assessments were identified in past engineering assessments the Division or its predecessor divisions had received.

Staff did not update the Maintenance System for the results of all these assessments.

4.2 Overall Maintenance Plan Needed

We expected Prairie Spirit to develop a maintenance plan. This plan would include its maintenance objectives and key maintenance strategies. We expected its strategies to reflect its short-, medium-, and long-term priorities for maintenance and availability of resources for maintenance.

4.2.1 Plan Focuses on Immediate Priorities with Medium- and Long-term Priorities and Related Strategies Missing

Prairie Spirit does not have a policy or documented procedures that set out its maintenance planning processes. Also, it does not have an overall maintenance plan that clearly sets out its maintenance objectives, strategies, and priorities (i.e., planned maintenance activities and the timing of these activities) over the short, medium, or long term.

¹⁷ Prairie Spirit School Division, Structural Restoration Cost Estimate, December 11, 2014.

¹⁸ Prairie Spirit School Division, Structural Restoration Cost Estimate, January 27, 2015.

As noted earlier, it does not fully use its Maintenance System to set out its planned maintenance. Instead, Prairie Spirit determines the maintenance requirements for each facility and component based on its maintenance staff's experience, results of the 2014 roofing and structural integrity assessments, the National Building Code, and other required codes (e.g., fire codes).

Prairie Spirit notes its immediate priority of addressing problems identified in the 2014-15 roofing and structural integrity assessments drives its current maintenance. It notes the estimated costs of roof and structural deficiency repairs of about \$44 million (\$21.4 million and \$22.6 million, respectively) greatly exceed its typical annual plant expense of about \$18 million (see **Figure 1**).

We found, as shown in **Figure 7**, Prairie Spirit has multiple documents related to funding for maintenance activities. Consistent with its immediate priority, these documents primarily reflect repairs identified in the roofing and structural assessments, and include only minimal preventative maintenance. The Division prepares the Ministry-required documents consistent with the parameters set by the Ministry, which have a short- to medium-term focus.

Figure 7—Documents Related Primarily to Requests for Maintenance and Capital Funding

Internal documents:

Annual List of Facilities Projects: Each year, the Division's annual operating budget includes funding for routine preventative maintenance tasks, service requests, and other maintenance projects. The Board approves this budget. The Facilities Department creates an internal list of maintenance projects that it plans to complete using the operating budget.

Facilities Strategic Directions Report: The Facilities Planner provides the Board with an annual report listing all major projects and their status, as well as projects that are still under review or require additional funding.

Ministry-required documents:

Major Capital Project Applications: Annually, the Division provides the Ministry with its list of Board-approved major capital projects, following the Ministry's guidelines. The Division can submit its top three major capital projects annually, and must prioritize the projects. Funding for major capital projects is not guaranteed, as the Ministry allocates its annual major capital funding after assessing applications received from each of the 28 school divisions within the province. For 2014-15 and 2015-16, Prairie Spirit submitted projects relating to the structural repairs addressed within the Structural Restoration Report described in **Section 4.1.4**. In 2014-15, the Division received \$14 million (2013-14: \$11 million)^A for major capital projects, which included funding for construction of new schools.

Three-year Preventative Maintenance and Renewal (PMR) Plan: The Ministry provides annual funding for minor preventative maintenance and renewal based on projects in the Division's approved three-year PMR Plan. The Division prioritized projects identified in the PMR Plan (e.g., put highest priority projects in year one, medium priority projects in year two, etc.). The Ministry's policies set criteria to determine which projects are eligible for funding. The Ministry approves the plan annually following the Board's approval. In 2015-16, the Division received \$1.4 million^B (2014-15: \$1.4 million)^C in PMR funding.

Emergent Funding Program Applications: The Ministry provides emergent funding to be used for unexpected projects that are too large to be funded by PMR funding. In 2014-15, the Division received \$1.3 million (2013-14: \$875,000) in emergent funding to address some of the structural restoration work identified.

Source: Adapted from information provided by Prairie Spirit School Division.

^A *Prairie Spirit School Division No. 206 Annual Report 2014-15*, p. 60.

^B Prairie Spirit School Division, Report to the Board, June 15, 2015.

^C Prairie Spirit School Division, 2014-15 PMR Reconciliation Report.

For significant maintenance projects, Prairie Spirit identified the same three major capital projects to submit to the Ministry (e.g., Major Capital Project Applications) in 2014-15 and 2015-16, all of which relate to structural deficiencies identified at schools in the Structural Restoration Report. Prairie Spirit has not documented the prioritization of



repairs of the schools identified in 2014-15 assessments supporting this Report beyond these three projects.

Prioritization of all projects with identified deficiencies would help Prairie Spirit identify the funding it will need to repair schools over time and when. Prairie Spirit indicated it fully recognizes that significant resources are needed to address the structural deficiencies identified in the Structural Restoration Report.

Other than the following two documents, Prairie Spirit has not documented its maintenance strategies over the medium or long term.

- ▶ First, the Facilities Department maintains a Facilities Continuous Improvement Plan. This Plan documents issues the Department encounters, possible solutions, the estimated timeframe for completion, and the staff responsible. The Facilities Planner indicated this Plan is shared with the Director of Education during their meetings throughout the year.
- ▶ Second, when communicating the results of the structural integrity assessments to the Ministry in January 2015, Prairie Spirit provided suggested alternatives on how to address the cost of the identified repairs (e.g., funding the maintenance over a period of time, developing a borrowing plan, tendering a project manager to develop a funding proposal and complete the work). While the Ministry provided Prairie Spirit with almost \$1.3 million of emergent funding in fiscal 2014-15 to address structural deficiencies, Prairie Spirit recognizes that significant work remains outstanding.

Maintenance staff informally determine the priority of maintenance projects and activities for school facilities consistent with Prairie Spirit's overall service objective (i.e., safe, healthy, and inviting environments). For 42 service requests (i.e., reactive maintenance) tested, we found staff addressed maintenance relating to health and safety concerns first, and completed other requests within a reasonable timeframe. For example, we found a service request indicating a natural gas smell in a school was addressed immediately, ahead of other service requests.

However, the prioritization of significant maintenance projects is not adequately documented. Determining the priorities of maintenance over the short, medium, and long term and strategies to address them are critical steps in developing an overall maintenance plan. Having an overall maintenance plan would assist the Division in determining the cost of its maintenance needs over the short, medium, and long term. It would demonstrate the Division's plans to reduce or potentially eliminate the need for, and the extent of, major repairs in the future. A maintenance plan would also help Prairie Spirit determine the impact on its facilities of delaying maintenance.

4. We recommend that Prairie Spirit School Division No. 206 develop a maintenance plan for all of its facilities and their significant components, including short-, medium-, and long-term maintenance priorities and planned preventative maintenance strategies.

4.3 Preventative Maintenance Not Documented

We expected Prairie Spirit to use recognized maintenance standards, implement procedures consistent with standards or plan, and provide staff with guidance on use of procedures. We expected Prairie Spirit to track its maintenance activities to verify maintenance is completed in a timely manner.

4.3.1 Professional Staff used for Maintenance

Prairie Spirit hires maintenance staff who are professionals in relevant trades (i.e., journey person), or who have relevant trades or maintenance experience. It may also hire contractors to perform maintenance. It expects maintenance staff to use recognized standards to carry out maintenance activities. For example, the Division uses the National Building Code, fire codes, and electrical codes.

Maintenance staff receive regular professional development when required (e.g., fall protection awareness, aerial work platforms safety), and new staff also receive on-the-job training from qualified staff in the Facilities Department.

Periodically, it engages experts, with suitable expertise, to carry out specialized maintenance activities (e.g., inspection of boilers, fire sprinkler systems, fire alarm systems, fire extinguishers).

4.3.2 Not All Maintenance Activities Tracked in Maintenance System

Consistent with its immediate priority and its overall service objective, Prairie Spirit focused its facilities maintenance on health and safety issues. Prairie Spirit has approximately 3,000 facilities and components identified within its Maintenance System.

As illustrated by **Figure 8**, documented maintenance work of the Facilities Department focused primarily on responding to service requests. Service requests fix problems that have occurred (reactive maintenance).

For the 12-month period ended November 30, 2015, the Division had over 3,100 service requests, with the majority completed by November 30, 2015. Over the same period, it documented within its Maintenance System about 100 preventative maintenance tasks, and managed 7 capital or preventative maintenance and renewal plan projects.

**Figure 8—Maintenance Activities for 12-Month Period Ended November 30, 2015 as compared to 2014**

Description	2015			2014
	Completed	Outstanding	Total	Total
Service Requests (i.e., reactive maintenance)	2,586	585	3,171	2,838
Preventative Maintenance Tasks	A	A	99	99
Projects (i.e., capital, PMR ^B)	3	4	7	14

Source: Prairie Spirit Maintenance System.

^A As described in **Section 4.1.3**, Prairie Spirit does not track the completion of preventative maintenance tasks in the system.

^B PMR projects are those projects identified within Prairie Spirit's Preventative Maintenance and Renewal Plan.

We found Prairie Spirit used the results of its 2014-15 roofing and structural integrity assessments to guide its facility management and certain maintenance activities. For example, based on the results and recommendations included in the Structural Restoration Report, it hired the engineering firm to commence inspections of specific schools in 2014 on an ongoing basis following heavy or wet snowfalls. The firm determines whether structural deterioration has progressed beyond acceptable limits.

The Division also, as recommended by the engineering firm, closed areas in schools and constructed temporary supports to ensure these areas were safe for students and staff. Temporary supports include the installation of wooden reinforcements to support existing structures until permanent repairs can occur. At November 30, 2015, to maintain the safety of staff and students, the Division had closed areas or installed temporary supports in 8 of the 15 high-risk schools.

For 42 service requests (i.e., reactive maintenance – issues identified by school staff) we examined, staff documented the completion of service requests in the Maintenance System. We found that staff completed the service requests in a timely manner, and kept the status (i.e., pending, work in progress, closed) of these requests in the maintenance system up to date. We also observed evidence that Facilities staff completed the maintenance as indicated in the service requests (e.g., repaired plumbing issues identified by school staff).

For 20 preventative maintenance tasks we examined, we found Prairie Spirit received, as it expected, inspection reports from contractors performing maintenance tasks of key components (e.g., inspection of boilers, seasonal maintenance of fire sprinkler systems). We also found staff did not enter or track the results of this maintenance in its Maintenance System.

For other expected preventative maintenance of key components such as inspections of air handling units and furnaces, we found the Division uses contractors to carry out this work. In common with its other preventative maintenance, it does not enter or track the results of this maintenance in its Maintenance System.

Management indicated that the information within its Maintenance System was not updated due to a lack of sufficient staff resources. At the time of the audit, the Facilities Department was training a member of its staff to become a building operator, with the expectation that he will be responsible for improving the Division's preventative maintenance program.

Lack of processes to track maintenance completed and when reduces the ability to readily monitor maintenance activities. This is particularly important in that maintenance occurs at over 35 facilities located throughout the Division. Not updating information on completed maintenance may result in inefficient use of resources (e.g., conducting inspections more frequently than required, unnecessary travel).

5. We recommend that Prairie Spirit School Division No. 206 track maintenance completed on facilities and significant components.

4.4 Better Information to Monitor Maintenance Needed

We expected Prairie Spirit to analyze the progress in carrying out its planned maintenance and take action as needed to meet its objectives. We expected it to periodically report about this progress to senior management, the Board, the Ministry, and the public.

We expected the periodic maintenance reports to be complete, accurate, and appropriately supported.

4.4.1 Reporting Focuses Primarily on Key Maintenance Projects

Prairie Spirit does not provide its staff with written guidance on what maintenance information to analyze and report, and how frequently. Regardless, senior management, the Ministry, the public, and the Board routinely receive some information about the Division's maintenance. However, this information focuses mainly on maintenance projects underway or anticipated, as opposed to reporting on whether the Division has focused its maintenance resources on the highest priority areas, and has eliminated or reduced the need for, and the extent of major repairs in the future.

We found:

- › School principals or their staff use information in the Maintenance System to monitor the status of service requests related to their school, and receive updates from the Facilities Department upon request.
- › Maintenance staff meet with the Facilities Planner each week to discuss the status of maintenance work underway or anticipated, and obtain guidance on priorities. Facilities staff, using the Maintenance System, monitor the number of service requests, and timeliness of completion. As previously noted in **Section 4.1.1**, the Maintenance System does not contain complete information about the status or condition of the Division's facilities and their components.
- › The Director of Education and the Facilities Planner meet at least once per month to discuss the general status of ongoing maintenance projects, as well as related issues (e.g., sufficiency of resources, potential sources of funding, maintenance staff turnover or changes).



- » Prairie Spirit gave the Ministry the results of roofing and structural integrity assessments to support requests for additional funding, and to assist the Ministry in understanding the Division's immediate maintenance needs (see **Figure 6** and **Figure 7**).
- » Prairie Spirit uses the Division's annual report, allows the public to attend its board meetings, and posts information on its website to advise the public of issues or concerns related to the condition of its schools. Its 2014-15 annual report includes reasons for differences between actual annual maintenance expenses and budgeted expenses, and the number of facilities and their average age.

In addition to documents primarily related to requests for maintenance and capital funding as set out in **Figure 7**, the Board receives the following reports as part of its Board meeting materials. In 2014-15, the Board received each of the reports in advance of their Board meetings to allow time to review and consider the reports prior to the meetings.

- » Capital Project Updates - These are provided about three to four times a year. They use a consistent format. They include a brief status of key activities for projects grouped under headings that align with funding categories it receives from the Ministry (i.e., major capital projects, PMR projects, emergent projects) along with portable classroom projects, and the Ministry-managed P3 projects. They include a bit more detail for major capital projects (i.e., key activities, schedule, and indicate if the project budget is within the Ministry budget allocation for the Division). They do not include financial information (e.g., budget, actual costs to date, forecasted costs to complete) or percentage of completion.
- » Quarterly financial information – This includes a comparison of current year-to-date actual plant expenses as compared to budget and prior year actual, along with a breakdown of key components of plant expenses (e.g., salaries, benefits, building operating expenses, professional development, amortization). The report does not include reasons for differences between planned and actual costs, and the estimated forecast for the year.
- » Information reports on the results of roof condition assessments and structural integrity assessments. As previously noted in **Section 4.1.4**, management prepared these reports in December 2014. They provided high-level summaries of the condition of school roofs, and structural condition of 15 high-risk schools along with estimated costs to repair.

Management and members of the Board indicated that they had robust discussions about potential options and strategies to address identified roof and structural deficiencies.

Because the Division does not have an overall maintenance plan, and the information in its Maintenance System is not complete, most of the information the Board receives relates to projects underway or in the near future.

The Board did not receive reports that compared planned maintenance activities, or planned project costs to actual results. It did not receive information on the trends in the number of service requests, or percentage of requests not yet completed.

Also, information it received on the condition of the Division's facilities and their significant components was incomplete. By November 2015, neither management nor the Board had determined whether the results of the 2014 roofing assessment and structural integrity assessment of 15 of its 35 schools represent the bulk of the Division's deferred maintenance.

Without complete information, the Board is unable to evaluate whether completed maintenance is sufficient or done in a timely manner. Without knowing the full extent of deferred maintenance, the Board cannot make informed decisions regarding the resources needed to maintain or improve the condition of its facilities over the medium and long term. It does not know the impact of delaying maintenance today on health and safety or future costs, and whether it is focusing its maintenance efforts in the right areas.

Without sufficient analysis and reporting of maintenance results, stakeholders (e.g., management, Board, Ministry, public) cannot assess if effective maintenance of facilities and components is occurring or if maintenance funding is sufficient and efficiently used.

6. We recommend that Prairie Spirit School Division No. 206 provide its Board with periodic comprehensive maintenance reports (e.g., condition of facilities, timely completion of maintenance, deferred maintenance and its anticipated impact) to inform decision-making.

4.4.2 Documentation to Support Estimated Repair Costs Not Kept

When we examined the information included in the reports provided to the Board, we found that, other than large cost estimates included in the Structural Restoration Report prepared by management, the reports, while brief, were consistent with supporting information.

The Structural Restoration Report given to the Board in December 2014 included estimated costs of \$12.7 million to repair identified structural deficiencies in schools. Management updated the cost estimates in January 2015. At this time, it gave the Ministry a report on structural issues, including updated estimated costs of \$22.6 million. As noted in **Section 4.1.4**, management indicated that they gave the Board a verbal update in January 2015. They gave the Board a written report on updated cost estimates in December 2015.

Management based the January 2015 cost estimates on internally-prepared cost estimates made by the Facilities Department totalling \$19.2 million, and on estimates made by a structural engineering firm totalling \$3.4 million. Management said that the internally-prepared cost estimates related to costs that were in addition to the engineer-identified structural repairs (e.g., removal and reinstallation of ceilings, mechanical and electrical components), as well to architectural and roofing costs directly associated with the structural repairs.

Prairie Spirit did not keep written documentation to support approximately \$13 million of the \$19.2 million of internally-prepared cost estimates. As such, management could not



have reviewed their accuracy and reasonableness prior to including them in reports to the Board or the Ministry.

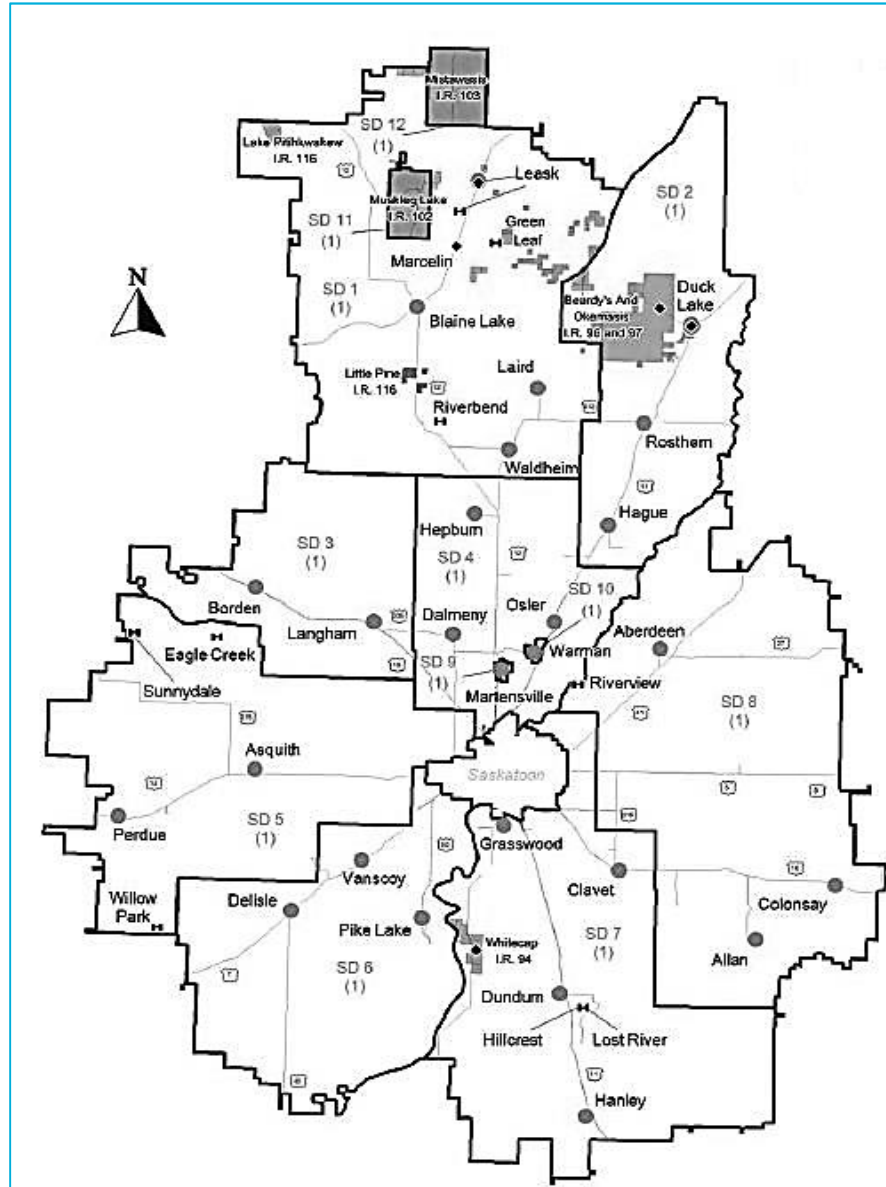
Without supporting documentation, we could not assess the estimates' reasonableness. When discussing these estimates with Facilities Department staff, we noted that about \$2 million of the \$13 million internally-prepared estimate was mistakenly double-counted, that is \$2 million of estimated costs was included in both the Structural Restoration Report and the Roofing System Report for the same repairs.

Preparation and retention of documentation to support internally-prepared estimates and review of these estimates could have helped management identify this oversight. Also, properly supported cost estimates enable management to assess the appropriateness and accuracy of estimates prior to including them in reports. Lack of adequate documentation to support estimates and their review increases the risk of providing inaccurate and incomplete information upon which stakeholders may base decisions.

7. We recommend that Prairie Spirit School Division No. 206 require estimated maintenance costs be reviewed against supporting information for reasonableness by someone other than the preparer of the estimates.

5.0 EXHIBITS

5.1 Map of Schools in Prairie Spirit



Source: Prairie Spirit School Division.



5.2 Facilities in Prairie Spirit by Year Built

Facility ^A	Year Built ^B	Enrolment at Sept. 2015	Need for Roofing Repair Identified in 2014 ^C	Structural Deficiencies Identified in 2014 ^D
Hepburn School	1927	270	Yes	No
Allan Composite School	1954	181	Yes	Yes
Blaine Lake Composite School	1954	162	No	Yes
Laird School	1957	73	Yes	Yes
Lord Asquith School	1957	253	Yes	No
Aberdeen Composite School	1959	333	Yes	Yes
Leask Community School	1960	174	Yes	Yes
Osler School	1960	288	Yes	No
Dalmeny High School	1961	228	Yes	Yes
Rosthern High School	1961	178	Yes	Yes
Hanley School	1961	231	No	Yes
Clavet Composite School	1962	644	Yes	Yes
Walter W. Brown School	1962	158	Yes	No
Borden School	1964	94	Yes	Yes
Colonsay School	1964	125	Yes	Yes
Delisle Composite School	1964	238	Yes	Yes
Perdue School	1964	144	Yes	No
Waldheim School	1964	312	Yes	No
Hague High School	1968	175	Yes	Yes
Rosthern Elementary School	1968	184	Yes	Yes
Delisle Elementary School	1970	191	Yes	No
Langham Elementary School	1970	177	Yes	No
Warman High School	1975	745	Yes	No
Prairie View School	1976	262	Yes	No
Dundurn School	1979	168	Yes	No
South Corman Park School	1979	111	Yes	No
Warman Elementary School	1980	736	Yes	No
Vanscoy School	1981	154	No	No
Martensville High School	1982	420	Yes	No
Valley Manor Elementary School	1983	752	Yes	No
Hague Elementary School	1984	248	Yes	Yes

Facility ^A	Year Built ^B	Enrolment at Sept. 2015	Need for Roofing Repair Identified in 2014 ^C	Structural Deficiencies Identified in 2014 ^D
Pike Lake School	1990	25	No	No
Venture Heights Elementary	1990	658	Yes	No
School Division Office	2008	NA	No	No
School Services Building	2009	NA	No	No
Stobart Community School	2012	366	No	No
Warman Community Middle School	2013	608	No	No
Bus Garage	NA ^E	NA	No	No

Source: Maintenance System (21 October 2015), adapted from information provided by Prairie Spirit School Division.

^A Colony schools and Valley Christian Academy are not owned by Prairie Spirit, so are not included in this list.

^B Prairie Spirit does not track years of renovation in its Maintenance System.

^C Based on comprehensive roofing assessment conducted by an expert, as of December 2014. These schools have sections of their roofs with a remaining service life of 0 – 4 years.

^D Based on comprehensive structural assessments conducted by an engineering firm, at January 2015.

^E The Maintenance System does not include information regarding the year that the bus garage was built.

6.0 GLOSSARY

Deferred Maintenance – work that has been postponed or phased for future action.

Facility Conditions Index (FCI) – the amount of deferred maintenance divided by the current replacement value (CRV).

Maintenance – the process of keeping existing facilities in good condition to meet service objectives.

Preventative Maintenance – repairs and inspections intended to assist in systematic correction of emerging failures before they occur or before they develop into major defects.

Reactive Maintenance – repairs that are in response to service requests and are completed as issues arise.

Service Objectives – the intended purpose of a facility over a specified service life plan.

7.0 SELECTED REFERENCES

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