Saskatchewan Rivers Public School Division

Excellence for Every Learner

Accountability Report

Facilities

Mike Hurd, Superintendent of Facilities

March 18, 2024

SOURCE DOCUMENTS:

- **SRPSD Policy 2: Role of the Board, item 8 states the following*:***

  "8.0 Fiscal Accountability
  8.2 Approve annually the Preventative Maintenance and Renewal Plan and amendments.
  8.3 Review facilities master plan and establish long-range capital priorities.
  8.4 Approve the submission of capital projects to the Ministry of Education.

- **SRPSD Policy 13: Role of the Director of Education**

  "6.0 Continuous Improvement Planning and Reporting
  6.1 Leads the strategic planning process including the development of Division goals, budget, student learning, facilities and transportation plans and implements plans as approved. Involves the Board appropriately (Board identification of priorities and outcomes, opportunity for Board input early in the process, final Board approval)."

- **SRPSD 2021 -2024 Strategic Plan**

  Core value related to the infrastructure and facilities indicates:
  "Effective Infrastructure and Facilities"

  Long Term Outcome
  Students will be supported in their learning by appropriate infrastructure and engaged communities.

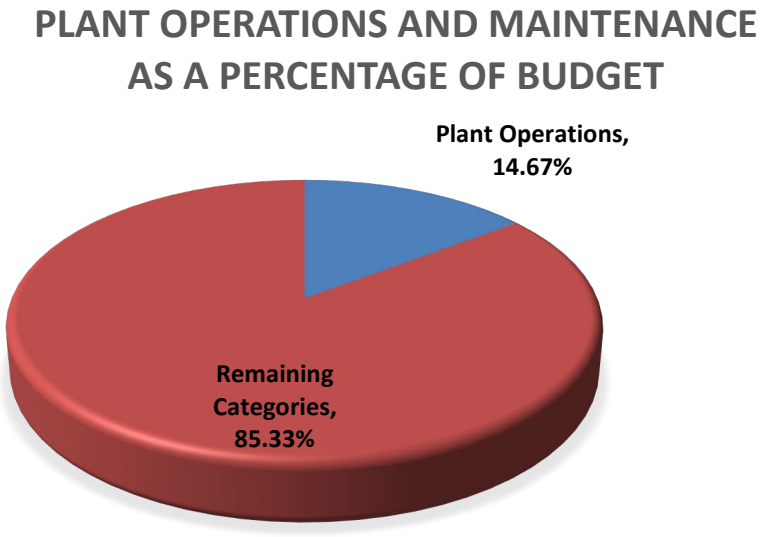
  Broad Strategies
  • Use of Asset Planner for facility management.
  • Engagement with community partners for shared facility usage.

- There are several Administrative Procedures that guide the work of the Facilities Department.

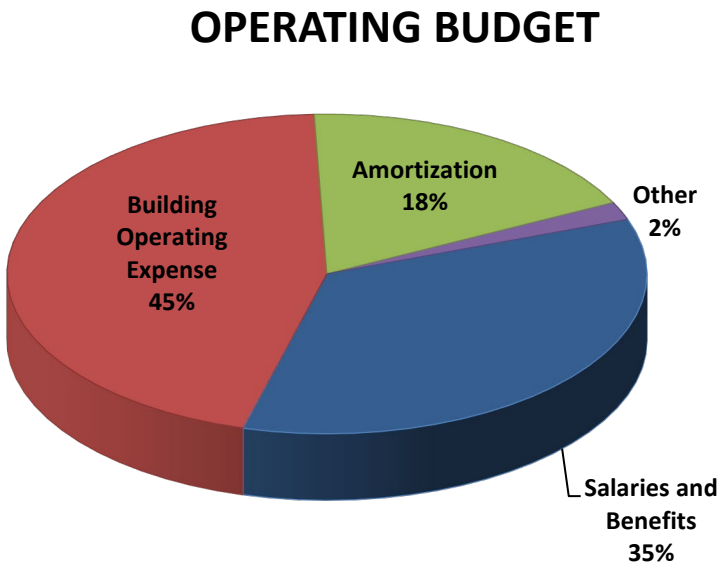
EVIDENCE:

A. Budget

- Facilities operating budget is $14.2 million.
- This includes PMR and capital expenditures.



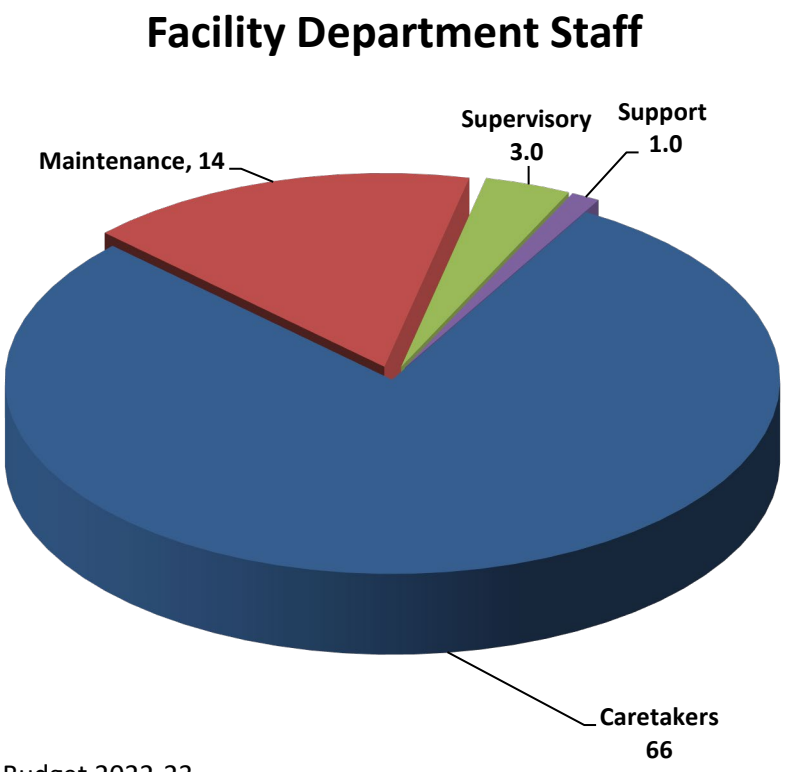
Source: Budget 2022-23



Source: Budget 2022-23

B. Staff

- Total number of staff in the department – see below.



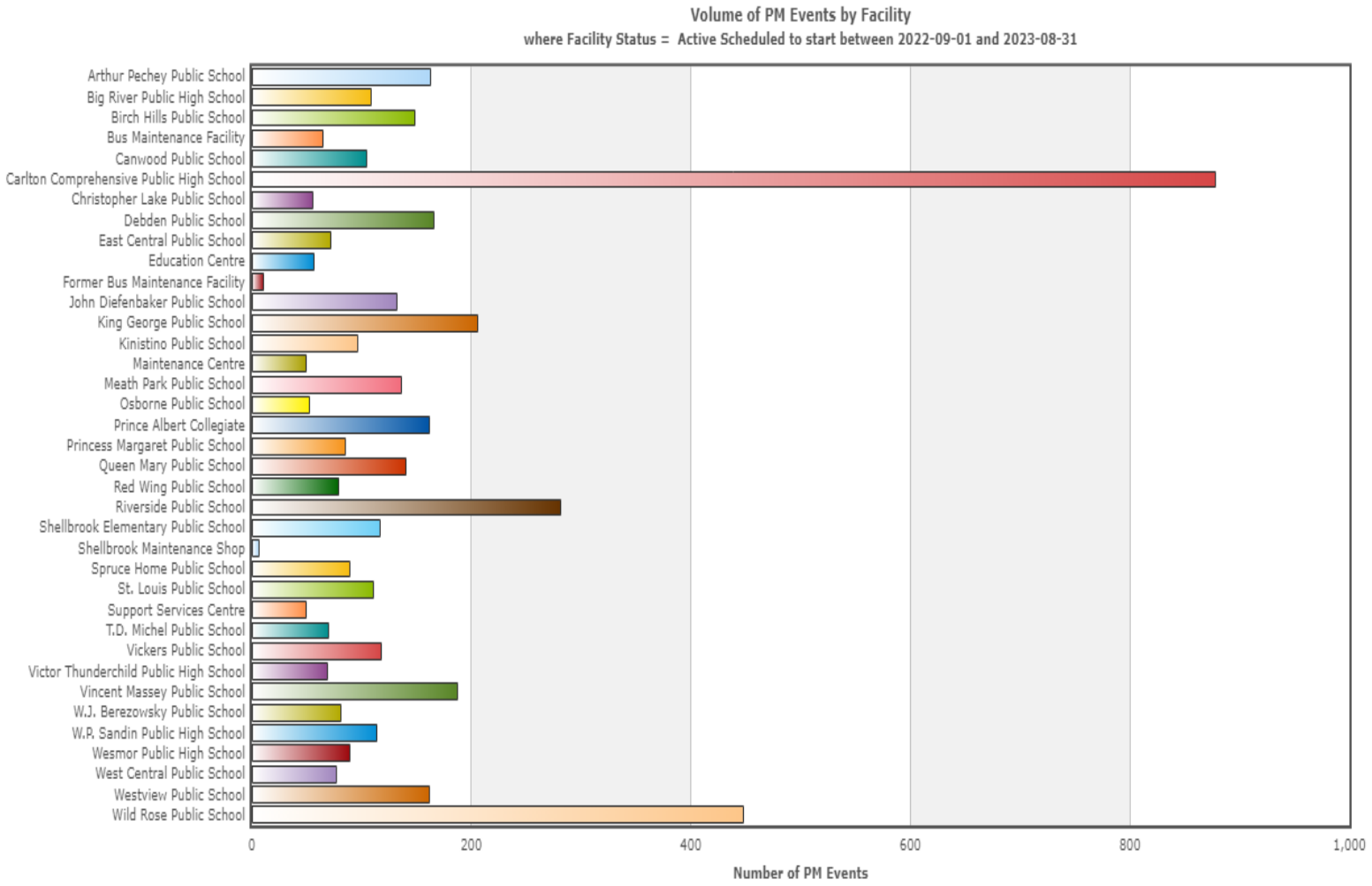
Source: Budget 2022-23

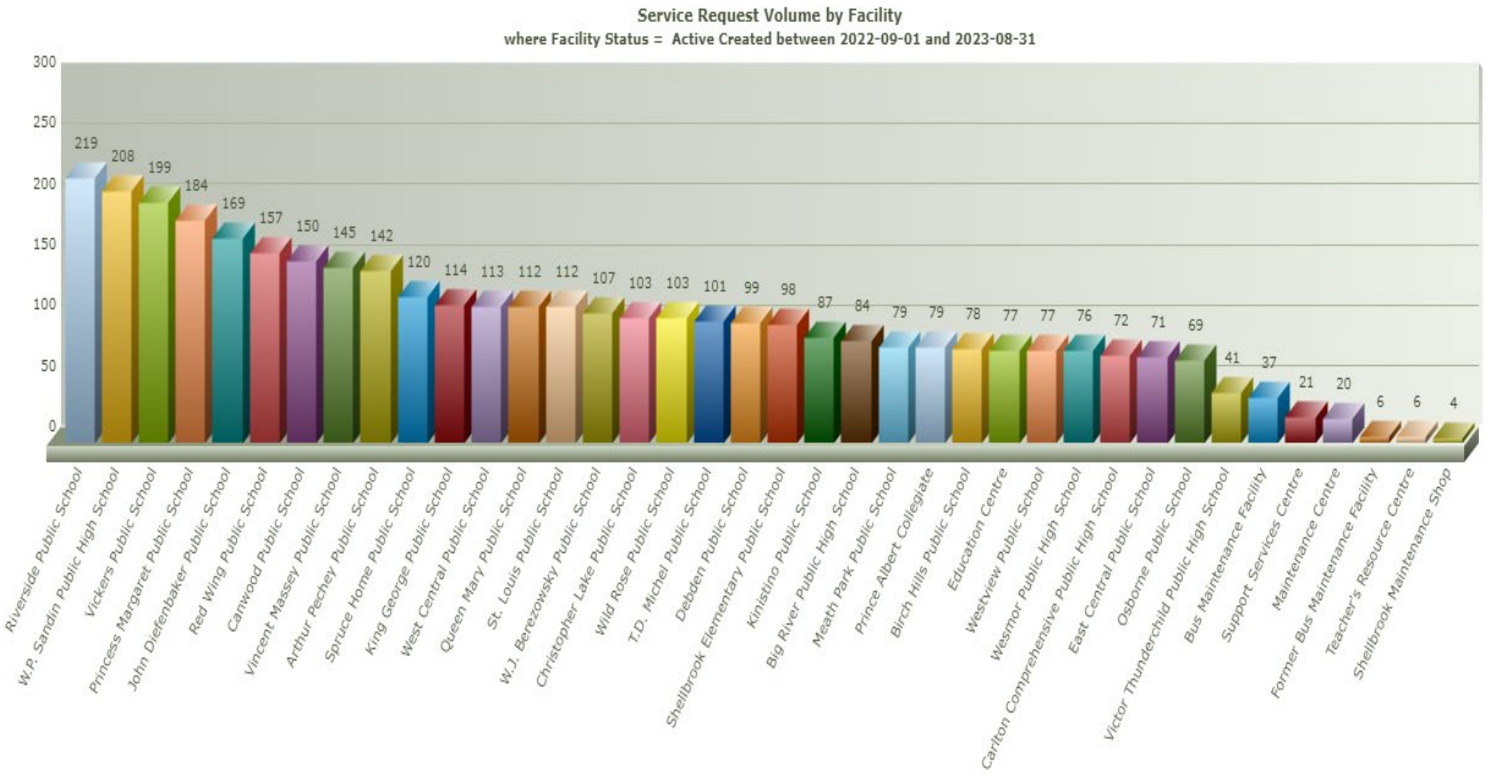
- Caretakers assigned to schools based on the size of the facility.
- Maintenance tradespersons (carpenters, plumbers, electrician, and welder) are assigned to the Maintenance Centre and service all facilities in the Division.
- Due to the size of facility, Carlton Comprehensive Public High School has three full time maintenance staff assigned to it permanently.

C. Maintenance Services Delivery Methods

- **Service Requests**
  - Service requests submitted electronically through the Asset Planner software by school administration and caretakers. The support person distributes the requests to the appropriate maintenance staff.
  - Approximately 250 service requests monthly.
  - Service requests reviewed quarterly to ensure targets for completion are being met.

- **Preventative Maintenance Requests**
  - Maintenance staff performs regularly scheduled maintenance on facility and components, i.e., boilers, furnaces, air-handling units.
  - Approximately 230 preventative maintenance requests monthly.
  - Preventative maintenance requests reviewed quarterly to ensure targets for completion are being met and discuss equipment that may be reaching the end of its lifecycle.





D. Projects

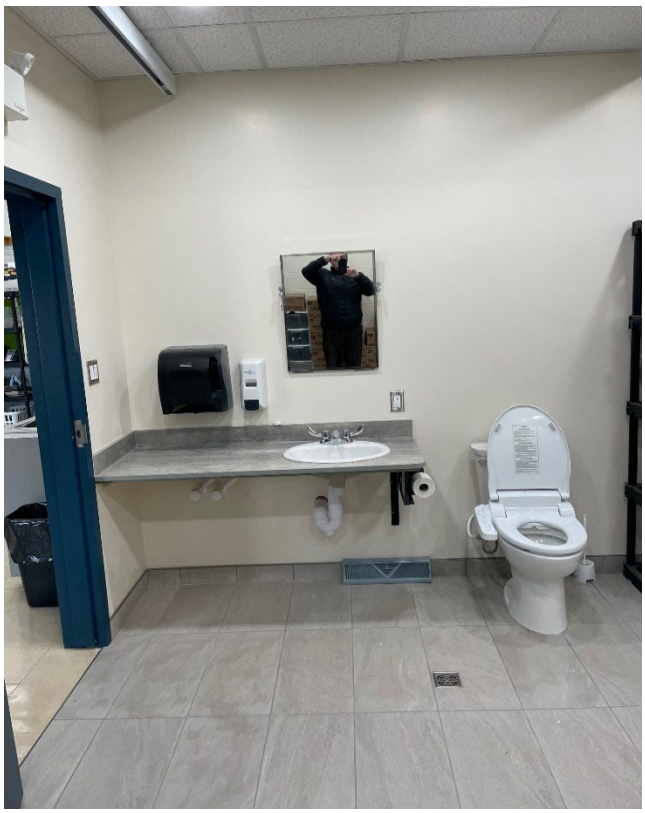
- **Annual Small Projects**
  - Work is determined by regular facility inspections and annual review meetings with principals and the use of the Asset Planner audit module.
  - Maintenance Centre staff undertook a large number of projects this past year, some examples are as follows:
    - Handicapped washroom facility at John Diefenbaker.
    - Handicapped washroom facility at Wesmor.
    - Refinishing of gym floors at Carlton, Riverside and St Louis.
    - Replace kindergarten floor at Vickers.
    - Replace floor in relocatable at John Diefenbaker.
    - Replace floor music room at Birch Hills.
    - Installation of new roller shades in St Louis, Birch Hills, PACI , Westview and Meath Park.
    - Refresh painting exterior at St. Louis.
    - Refresh painting interior Elementary wing at Birch Hills.
    - Refresh painting interior at Canwood and Wesmor.
    - Modifications to fire doors at École Vickers, Queen Mary and Riverside.
    - Replace gym light fixtures at École Debden.
    - Replace second floor windows north and south ends at Riverside.
    - Replaced heating coils in air handler at WP Sandin.
    - Renovations to gym change rooms at Birch Hills.
    - Renovations to high school hallway at Kinistino.
    - Wireless network upgrades to Spruce Home and Princess Margaret.

- Installation of AC in server rooms at Education Centre, École Debden, and Vincent Massey.
- Installation ac in daycare kitchen area at Riverside.
- Rebuild west stairs and railing at Carlton.
- Replaced CCTV system at Education Centre.
- Replaced carpet in library at Osborne.
- Constructed shade structure for PreK at École Arthur Pechey.
- Undertook concrete projects involving sidewalks steps, garage slabs in a number of schools including Kinistino, PACI, Big River.
- Constructed garage and shade structures at Victor Thunderchild.
- Constructed sensory room at École Debden.
- Applied sound attenuation to walls in mini gym at École Arthur Pechey.

<u>Some examples of small projects:</u>

Handicapped washrooms

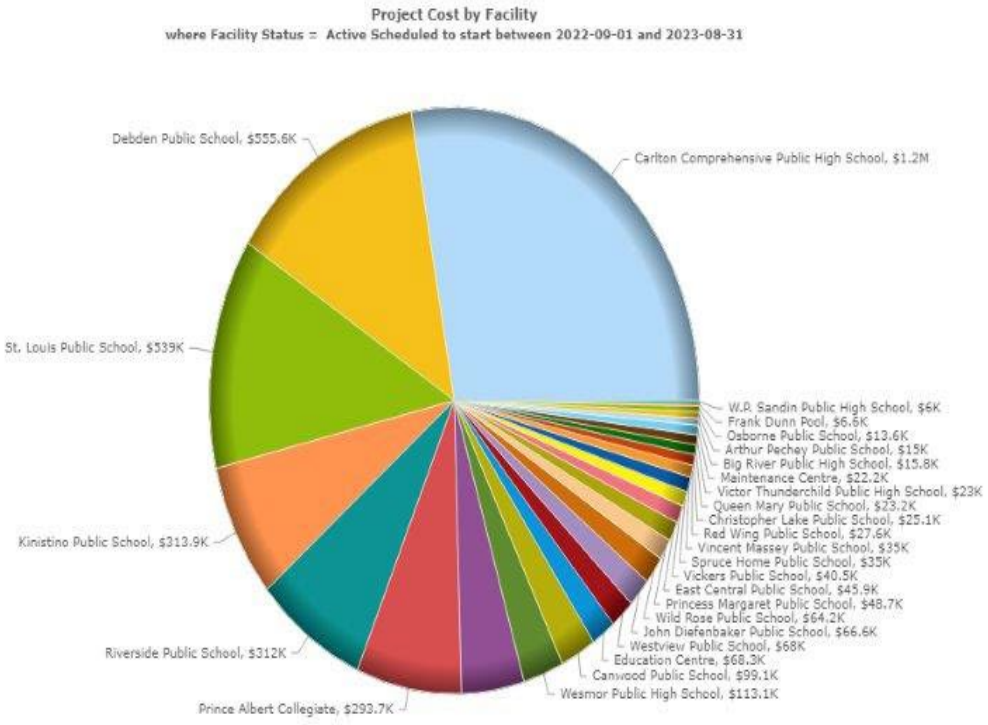
Wesmor



John Diefenbaker

Kinistino – high school wing renovations

- **<u>Preventative Maintenance and Renewal (PMR)</u>**
  - Ministry funding in addition to operating budget.
  - Based on square footage of facilities.
  - Board approved updated three-year PMR plan prior to May 31 of each year.
  - The division received $2,900,000.00 in 2022-23
  - Preventative Maintenance and Renewal Projects tracked on the Asset Planner software.



- **<u>Major Projects</u>**
  - Replacement of boilers at Birch Hills.
  - Replacement of boilers at Riverside.
  - Replace Boilers in CPAC Carlton.
  - Replacement of windows at St. Louis.
  - Installation of BMS (automated controls) at Spruce Home and Wild Rose.
  - Replace fire panel at Big River.
  - Complete PH IV washroom renovations at Carlton.
  - Replace roof at Education Centre.
  - Replace the roof of the library at Carlton.
  - Replaced east section of roof on HS wing at Kinistino.
  - Replaced gym floor at Princess Margaret.
  - Replaced gym floor at Westview.
  - Completed Phase III and Phase IV of Facilities Master Plan.

Riverside boiler replacement

CPAC boiler replacement

Carlton - Phase IV washroom modernization

Gym floor replacements

Westview

Princess Margaret

Carlton – library roof replacement

St. Louis – window and renovation

E. Capital Planning

- **Summary**

  The present level of the deferred maintenance backlog and facility renewal for the SRPSD portfolio is about $87 million. The replacement value of the assets estimated to be $410 million based on cost per square foot analysis projections (in current year dollars). Using these two numbers, without funding, we find that the overall portfolio is in the "Poor" range (20.1% FCI) based on industry standards.

  The current portfolio FCI of 20.1% is common among school boards & public infrastructure in Canada and can be effectively managed with adequate funding and the application of capital planning strategies. Without funding, the portfolio migrates to **"**Critical" by 2025 but with current funding the portfolio will reach "Critical" by 2054. The current estimated annual funding of $5.3 Million extends the life of the portfolio by 29 years.

- **Detailed Findings**

  - Age Profile

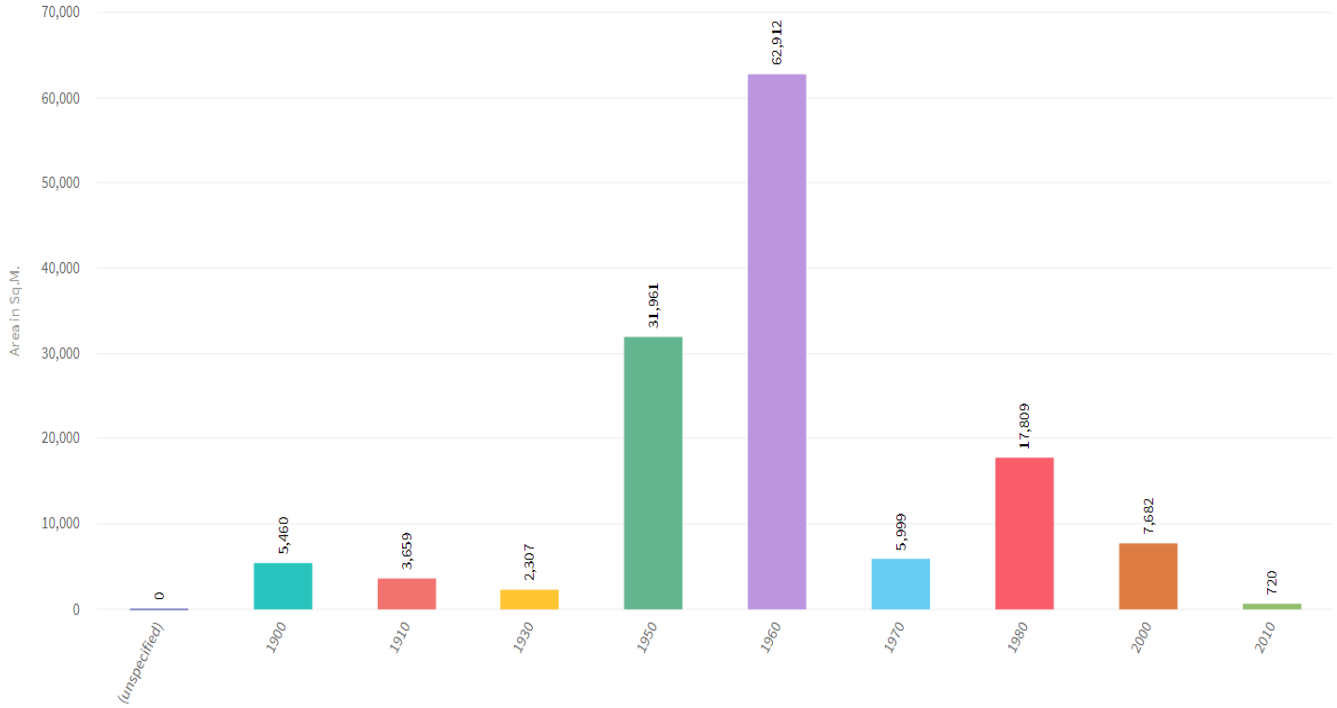


Figure 1: Age Profile of SRPSD Portfolio by Decade

The building ages vary from 1900 to 2012 with a weighted average portfolio age of 52 years (circa 1964). Over half of the portfolio – 25 facilities – representing 76% of the total portfolio size were constructed prior to 1970 while the remaining 19 facilities were constructed between 1970 and 2012.

As facilities age, they require increased maintenance and upkeep. The overall condition of the portfolio is directly attributable to the level of funding required for maintenance and building renewal.

Life Cycle Projections

Based on preliminary estimates of life cycle timing and costs, the present level of the "Deferred Maintenance Backlog" is estimated at approximately $87 million prior to any funding as shown in Figure 2 below. Life cycle renewal costs for the major building elements have been established for each building to determine the Capital Renewal budget requirements over the next 30 years. These repair and replacement values are in current year dollars.

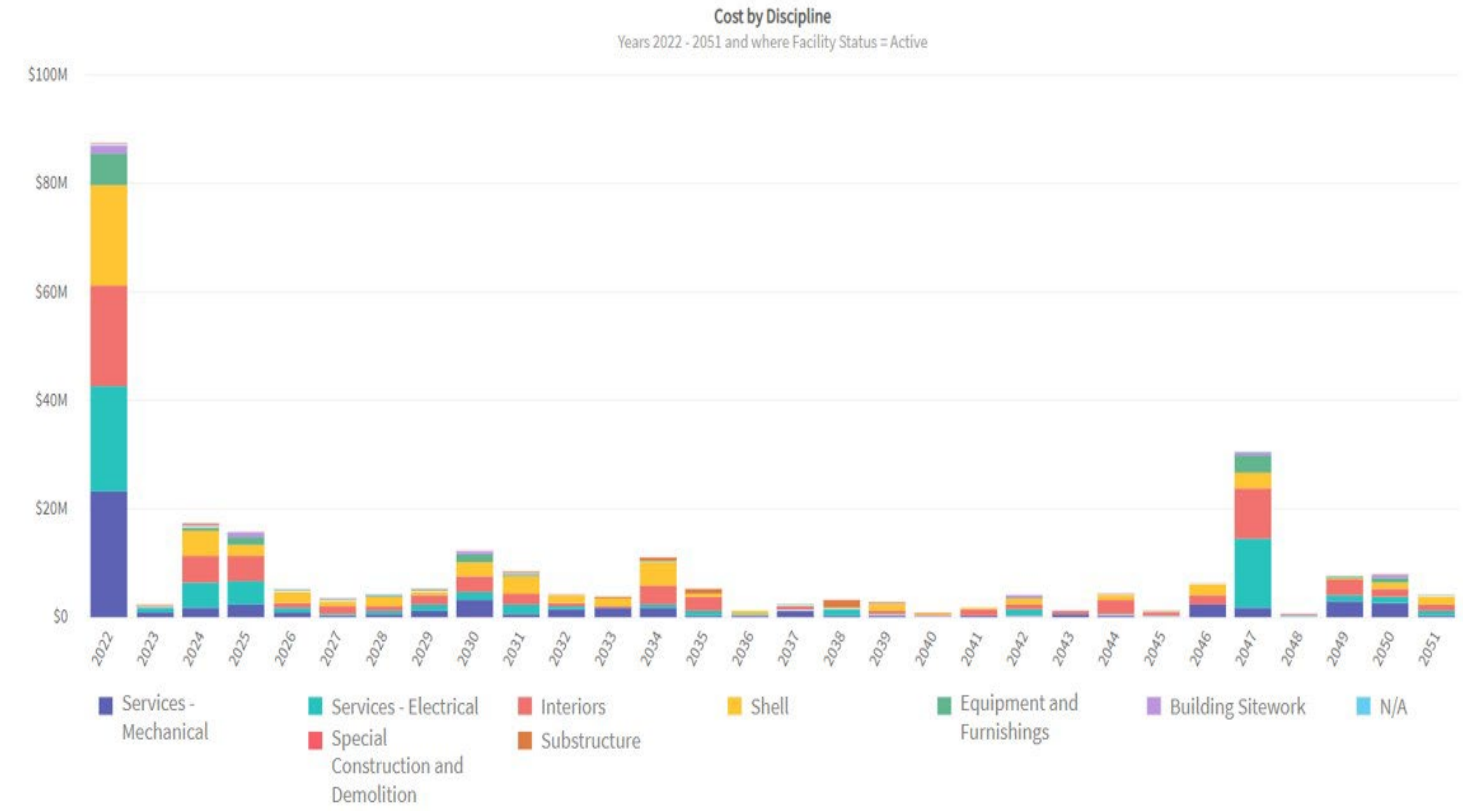


Figure 2: Current Deferred Backlog and 30-year Renewal Cost for all SRPSD Facilities

- Capital Funding Analysis

How much funding is required?
Industry guidelines recommend an annual funding amount between 2% to 4% of the facility replacement value to adequately maintain them. In addition to an annual funding amount, special funds should be allocated to reduce the backlog of deferred maintenance.

Excluding special funds, the renewal funding required for SRPSD portfolio would translate to $8.2 million annually (2% of $410M replacement value).

Presently, the average funding for the SRPSD portfolio, allocated to deferred maintenance and capital renewal, is estimated to be $5.3 million per year.

Figure 3 below provides a graphical comparison of the cumulative renewal costs (top line) and the cumulative assumed current funding allocation (dark blue). The unfunded liability gap (light blue) in 30 years is approximately $100 million.

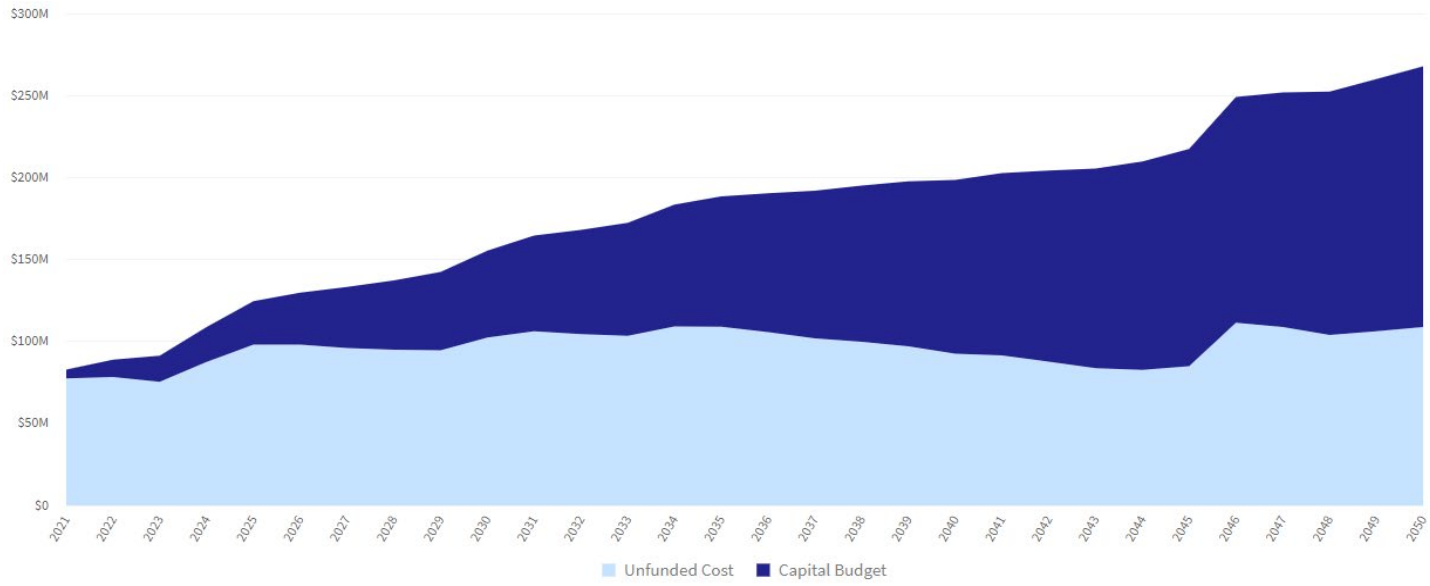


Figure 3: Cumulative Needs (top line) vs Available Funds (dark blue)

The unfunded figures represent the findings and results obtained from the life cycle renewal cost analysis.

Facility Condition Index (FCI)

The term Facility Condition Index (or FCI) is "a ratio of the cost of remedying capital deficiencies listed in the deferred maintenance backlog to the current replacement value". The formula used for determining the FCI for a facility, or a component of the facility, is as follows:

$$\text{F.C.I} = \frac{\text{Unfunded Liability (\$)}}{\text{Current Replacement Value (\$)}}$$

Where the "Unfunded liability" represents the sum value of all capital deficiencies and renewal costs (at any given point in time) less the funding applied to the asset(s) for capital renewal. "Current Replacement Value" is defined as the total amount of expenditure in current dollars that would be required to replace the institution's facilities to its optimal condition.

As the FCI rating increases, facilities will experience:

- Increased failure risk to components
- Increased maintenance and operating costs of facilities
- Negative impacts on building occupants; Quality of Teaching & Learning

Figure 4 below illustrates that the SRPSD Campus Portfolio has a deferred unfunded liability of 20.1% in the current year, which places the portfolio in the "Poor" range based on its current FCI rating and will migrate to the "Critical" range by 2025 (**black line**). With $5.3 million in annual funding the current FCI is 18.9% and will migrate to the "Critical" range by 2054 (blue line).

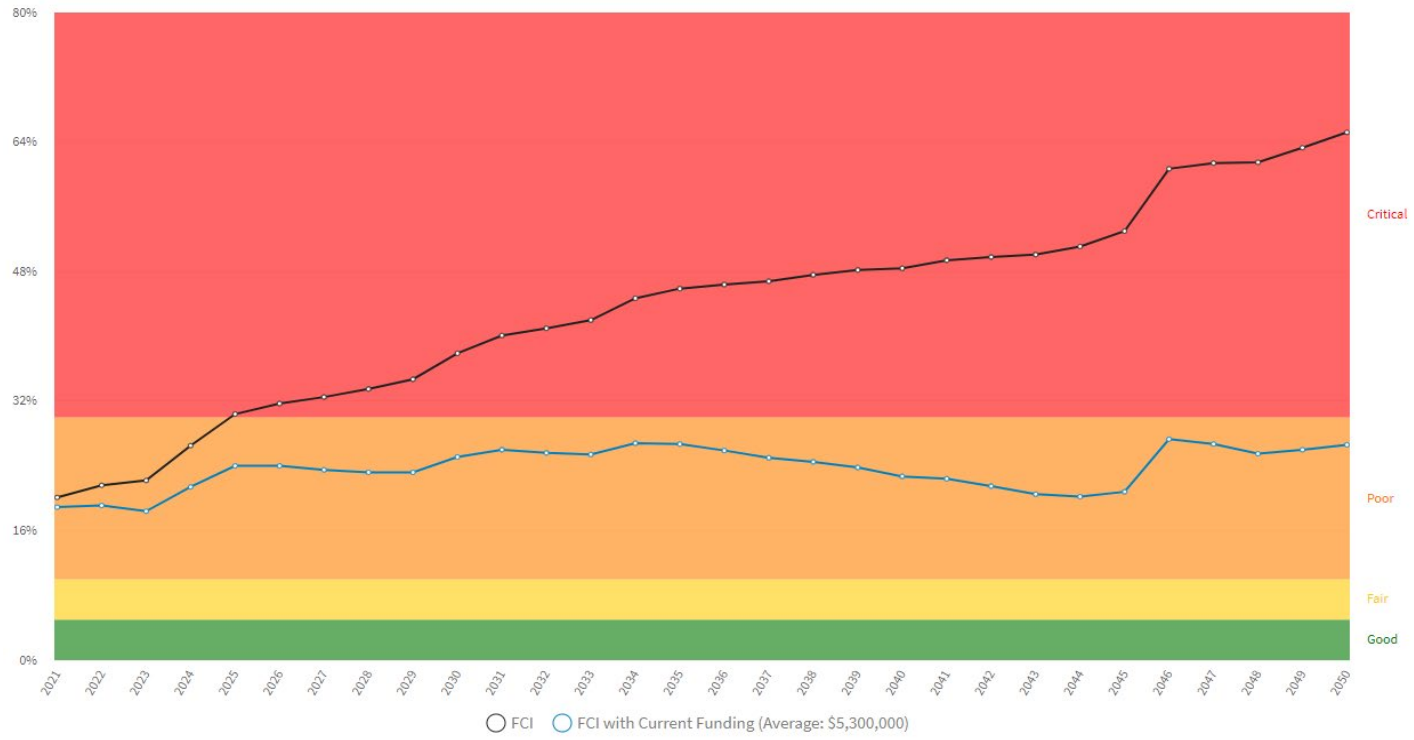


Figure 4: FCI & Backlog Funding Model for SRPSD Portfolio

Sustainability Target

Many Real Property Owners have begun using 10% as an appropriate FCI level for their portfolios, stating that it is acceptable to carry a deferred backlog of up to 10% of the replacement value of the asset.

If the deferred backlog can remain around 10%, then the assets will be continually "sustained" at an acceptable level of risk that preserves the initial capital investment and minimizes impacts to campus occupants. This Sustainability Target compared to the Unfunded Liability is shown below in Figure 5.

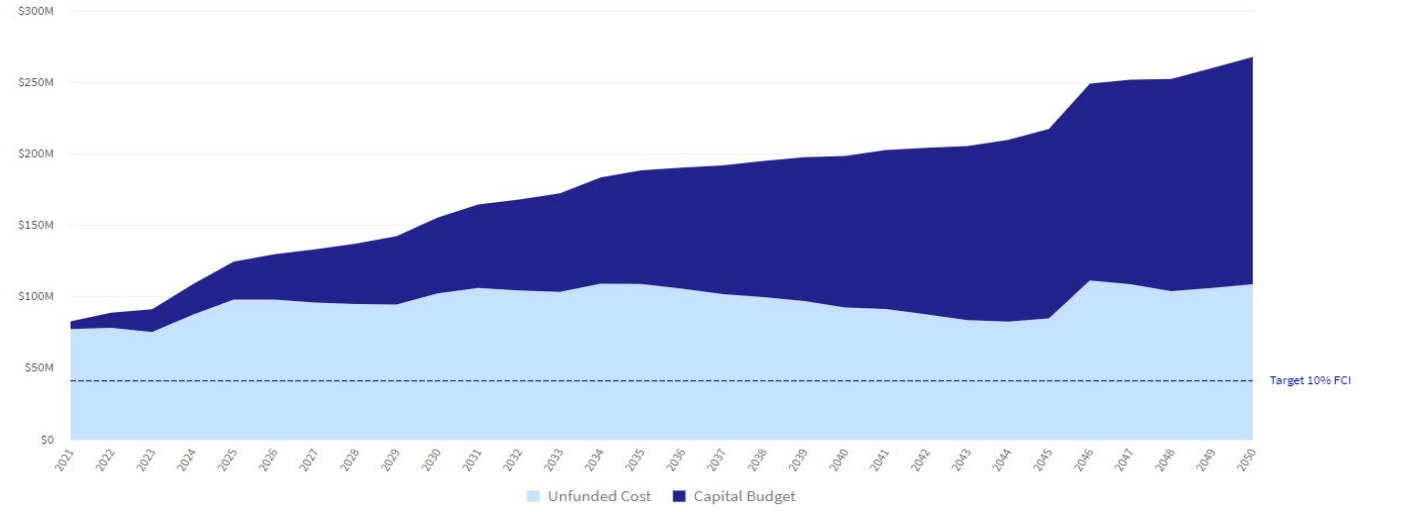


Figure 5: Unfunded Liability & Sustainability Target for SRPSD Portfolio

The Sustainability Target funding levels are illustrated below in Figure 6 in what is known as the Backlog Funding Model. Based on the projected future funding level a Facilities Condition Index (FCI) is calculated. To maintain the facilities in a "Fair" state of repair (based on a 10% FCI rating), about $7.5 million will need to be applied annually for the next 30 years.

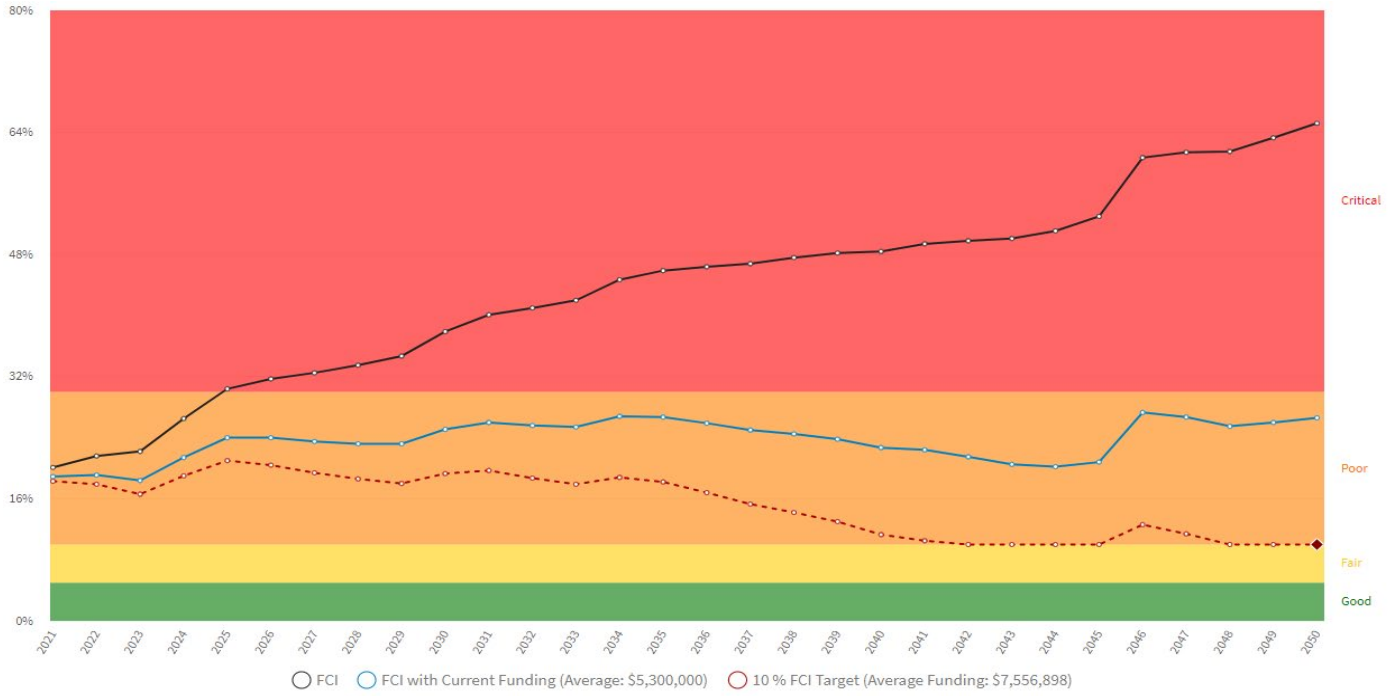


Figure 6: FCI and Funding Required to Maintain Assets

These levels of funding for capital and repair will ensure the building stock will be maintained at an acceptable level of risk, preserving the initial capital investment. If the level of facility renewal funding is reduced, the exposure to risk will increase and the probability of premium renewal expenditures will increase.

Impact Analysis of Current Funding

In addition to demonstrating the need for additional funding, we have performed an impact analysis to demonstrate the impact of the current funding level. The analysis demonstrates that the $5.3 million in annual capital funds does make a significant impact on the portfolio FCI and unfunded liability. The impact analysis is outlined below and demonstrated in Figure 7.

With funding, the current FCI is 18.9% and the portfolio approaches critical in 2054.
Without funding, the current FCI is 20.1% and the portfolio approaches critical in 2025.

This demonstrates that the current funding of $5.3 million annually extends the portfolio useful service life by 29 years, by utilizing the Critical range as our facility lifecycle benchmark (30% FCI).

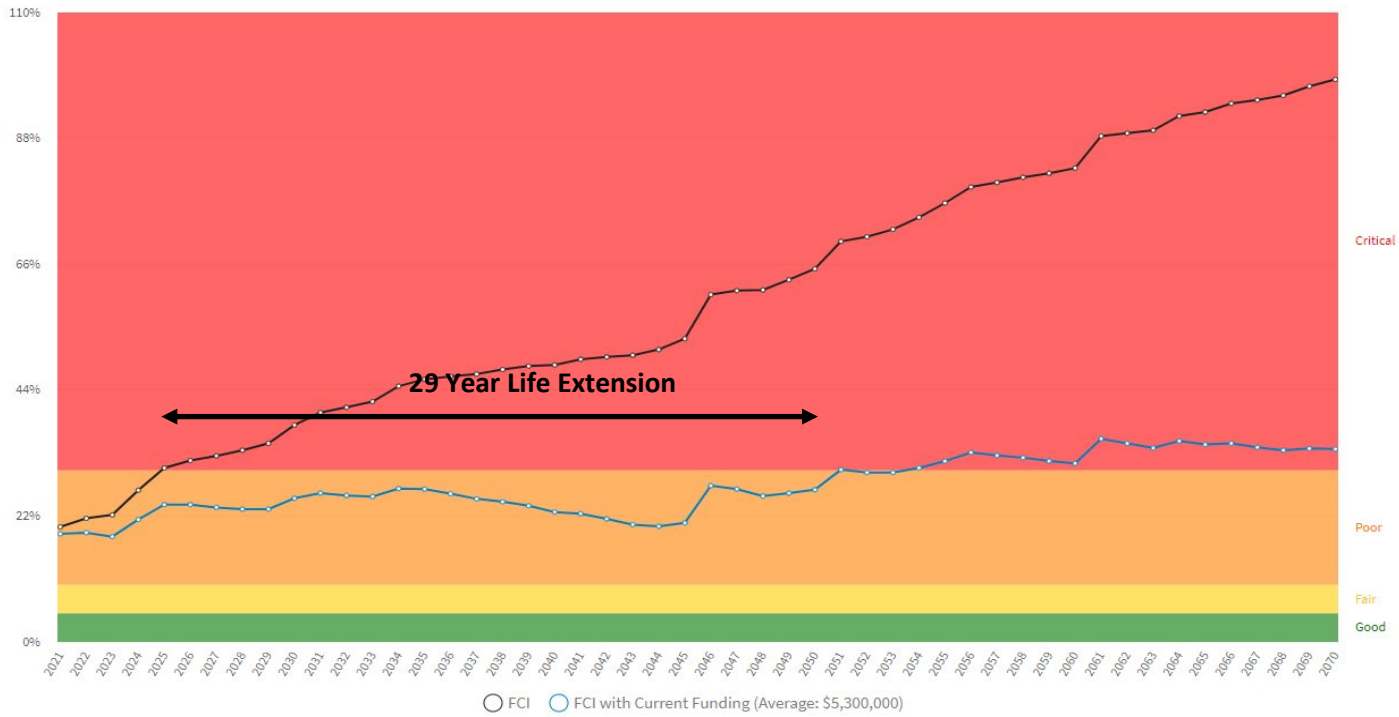


Figure 7: Impact Analysis & Useful Service Life Extension for SRPSD Portfolio

While additional funding would help to improve the FCI and sustain a 10% FCI, it is important to note that the current funding level does make a significant impact on the portfolio condition and the expected life of the facilities. If this funding level were to be reduced, it would have a clear impact on the FCI and the lifecycle of the SRPSD facilities.

F. Safety

- Active SRPSD safety program.
- COR status (Certificate of Recognition) for Maintenance Department.
- An internal audit was completed in the Maintenance Department in November 2023.
- Safe work practices and job procedures reviewed annually (October).
- Ongoing safety training for facilities staff.
- Weekly toolbox meetings – safety is always first and foremost.
- Safety Hub Video Training licenses were sent out to all high school Industrial arts programs to provide safety training videos for students. This program is used weekly by our maintenance team as well.

Division safety initiatives

- Review of asbestos management plan
  - Reviewed existing asbestos audit and upgraded maintenance plan. Undertook removal where recommended by asbestos management consultant.
  - Asbestos awareness training is provided to all maintenance and caretaking staff and supervisors.

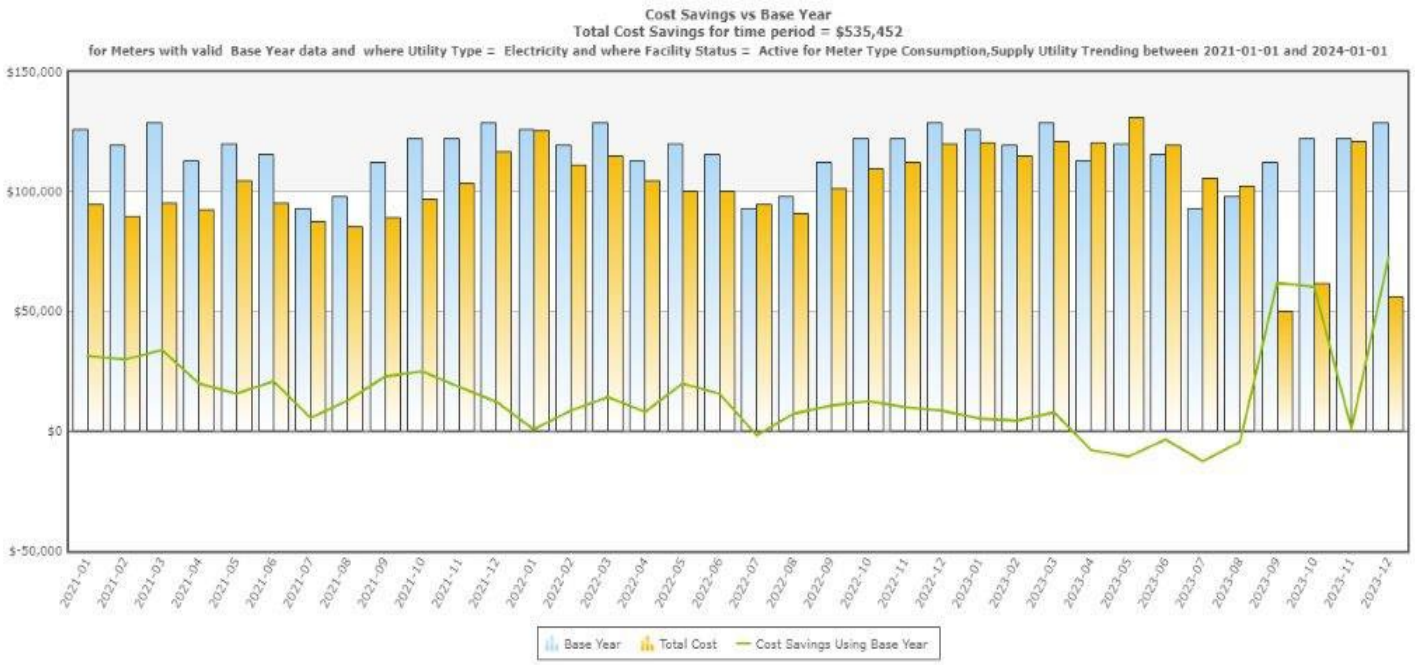
- Occupational, Health and Safety
  - Ensuring that all schools and support facilities have an active Occupational Health and Safety Committees and that the Co-Chairs are trained with Level I and II for compliance with the OH&S Regulations.
- Review of the Fire Safety Guidelines for Schools
  - Implementation of recommendations from the Fire Safety Audit and Inspections.
  - Fire officials and risk managers inspect all schools annually.

G. Professional Development

- Facility staff receive professional development in areas relating to their job – health and safety, first aid, etc.
- Mechanical maintenance staff received upgraded training on our building controls software. (Metasys)

H. Facility Department Initiatives

- In 2019 -2020 the division undertook a major LED lighting retrofit project in all facilities. We have tracked the electrical consumption over the past three years using the energy module in Asset Planner with pre project data from a baseline year 2019. The chart below shows the savings over the last three years compared to the baseline year allowing us to reduce our electrical budget accordingly. This project has proven to perform as projected and should continue to do so in years to come with the savings going back into the classrooms. The chart below shows the 2021-2023 savings.
- In addition to the cost savings on the chart below and additional 18% savings can be added to account for recent increases that were absorbed in the electrical saving for a total of $631,833.36



In 2022-2023 Phase III and IV of the SRPSD Facilities Master Plan was completed and the complete Master Plan was presented to the Board. This document will assist the Board with facilities planning going forward.

ADMINISTRATIVE IMPLICATIONS:

A. Successes

- Dedicated well-trained staff perform regularly scheduled maintenance and repair of SRPSD facilities allows for the delivery of educational programming in a clean safe and well-maintained environment.
- Consistent funding in PMR will assist in funding future projects.
- Current funding levels of PMR and the Board's commitment to maintaining its facilities have allowed us to undertake projects that will help in extending the life of the division facilities.
- Mechanical systems in many of our schools have been or are on the list for replacement.
- Addressing building envelope projects such as window replacements.
- Starting a new cycle of roof replacements.

B. Challenges

- The age of SRPSD facilities (20 to 115 years).
- Lack of funding for capital projects (i.e., W.P. Sandin Public High School).
- Reduction of PMR funding will have a negative impact on SRPSD facilities.
- The supply chain for major components i.e., rooftop units, boilers etc. has improved somewhat over the past year.
- Increases in costs for materials and supplies have had an impact on internal maintenance operations as well as tendered project pricing.

GOVERNANCE IMPLICATIONS

1. Based upon the report, it is recommended the Board maintain current direction for ensuring the facilities budget remains at the level that best serves our facilities.