



REPORT TO

CORPORATE SERVICES, STRATEGIC
PLANNING AND PROPERTY
COMMITTEE

TORONTO CATHOLIC DISTRICT SCHOOL BOARD FIELD STUDY UPDATE

*"I can do all things through HIM who strengthens me."
Philippians 4:13 (NRSVCE)*

Drafted	Meeting Date
May 24, 2023	June 8, 2023
Steph Pavan/Allison Quinn, Sustainable Outdoor Environments Supervisors Lyn Northey, Sr. Coordinator, Capital Development Milka Zlomislic, Superintendent, Capital Development, Asset Man. and Renewal	
INFORMATION REPORT	

Vision: *IN GOD'S IMAGE: Growing in Knowledge, with Justice and Hope.*

Mission: *Nurturing the faith development and academic excellence of our Catholic learning community through the love of God, neighbour, and self.*



MULTI-YEAR STRATEGIC PLAN
2022 - 2025

IN GOD'S IMAGE: Growing in Knowledge, with Justice and Hope



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A. EXECUTIVE SUMMARY

The TCDSB has over 207 active occupied school sites, 136 of which have playing fields. Due to the condition of many of these fields, and the challenges associated with keeping them in a state of good repair, a study was initiated to review the condition of all the Board's fields, and to provide recommendations for improving the longevity and condition of the fields.

This commissioned study assessed the Board's field inventory, provided recommendations for field construction methods, and provided associated estimated costs for future planning purposes.

The inventory data, analysis and information in this field study will inform an upcoming Field Renewal Strategy for all existing fields at the TCDSB and will provide the foundation for determination of field priorities and Renewal funding required in future Renewal Plans on an annual basis.

The cumulative staff time required to prepare this report was 20 hours.

B. PURPOSE

The purpose of this report is to provide the Board of Trustees a summary of the findings from the TCDSB Field Study report.

C. BACKGROUND

1. ***Historically, the Board has had many challenges preserving fields in good condition.*** These challenges occur because of inadequate drainage, poor grading, overdue renewal, and the inability of the field to support the level of use, regardless of maintenance practices.
2. ***Many of our schools have large student populations and small green (natural turf) spaces.*** As a result, these facilities are intensively used, which leads to their poor condition. This overuse of small grass fields is made worse by heavy foot traffic during the fall, winter and spring months when the surface and sub-base are saturated.
3. ***The net result is grass fields that are hard earth patches when the surface is dry, or mud bowls during the rainy season.*** Both conditions are not suitable for children to play on.
4. ***Over the years, at many of these sites, the Environmental Support Services team has endeavoured to rehabilitate the natural turf over the***

summer through reseeding. However, this unfortunately does not provide a long-term solution and these fields, because they have underlying problems, such as drainage, that cannot be addressed through reseeding, very quickly deteriorate to their former poor condition.

5. ***In addition, for grass to grow successfully, it requires a lengthy period of time to knit.*** Since schools need these playing spaces, it becomes difficult to cordon off the area for a period of 3 to 6 months, particularly on small sites.
6. ***For new Capital construction, the Site Plan Approval process has also impacted the configuration of sites and reduced green play surfaces with various requirements.*** These include items such as on-site parent and bus drop off. As a result of this reduction in natural turf area, some of these new school sites, which were already small prior to redevelopment, have continued to have challenges with the natural turf fields, similar to existing schools.
7. ***Environmental Support Services, Renewal and Capital staff regularly receive complaints about the condition of natural turf fields on many sites.*** Many school communities have sent requests for field remediation on their sites.
8. ***In response to all these challenges, and the need to develop a strategy for the renewal of school fields, on May 17, 2021, the Board issued an RFP for the TCDSB Field Study,*** which closed June 7, 2021 and the consultant contract for the study was awarded to RK & Associates Consulting Inc. This study included site field inspections for every site that has a field.
9. ***The study provided field inventory information which shall provide staff with a comprehensive record and understanding of the condition of all fields.*** The quantitative and qualitative data garnered will assist staff in prioritizing field renewal and field upgrades. The field design standards and specifications established through the study, with associated project costs, will assist in the determination of the budget for future projects in the Renewal Plan. Refer to appendices A and B.
10. ***The consultant conducted visual investigations at each field at 136 sites to determine the condition, size, and any site concerns such as drainage issues or poor turf grass coverage.*** The following characteristics were documented and analysed at each site:
 - School type: Primary or Secondary
 - Field type: Artificial or Natural
 - Turf grass coverage, observed as a percentage of turf cover versus weed growth in 1m x 1m sample plots.
 - Condition from poor to excellent based upon turf coverage, planarity, and exposed soil area.

- Square meters of turf per student based upon measured field size and student population.

11. ***In addition to the analysis of the fields at 136 properties, 3 sites were selected for case studies, which included a more comprehensive analysis of those specific sites.*** These sites were identified as problematic by local school staff, communities, and the Sustainable Outdoor Environment Team, and are a good representation of the types of challenges that are encountered at many Board properties across the City.
12. ***The three case study sites selected were Holy Cross, Madonna and St. Ambrose.***

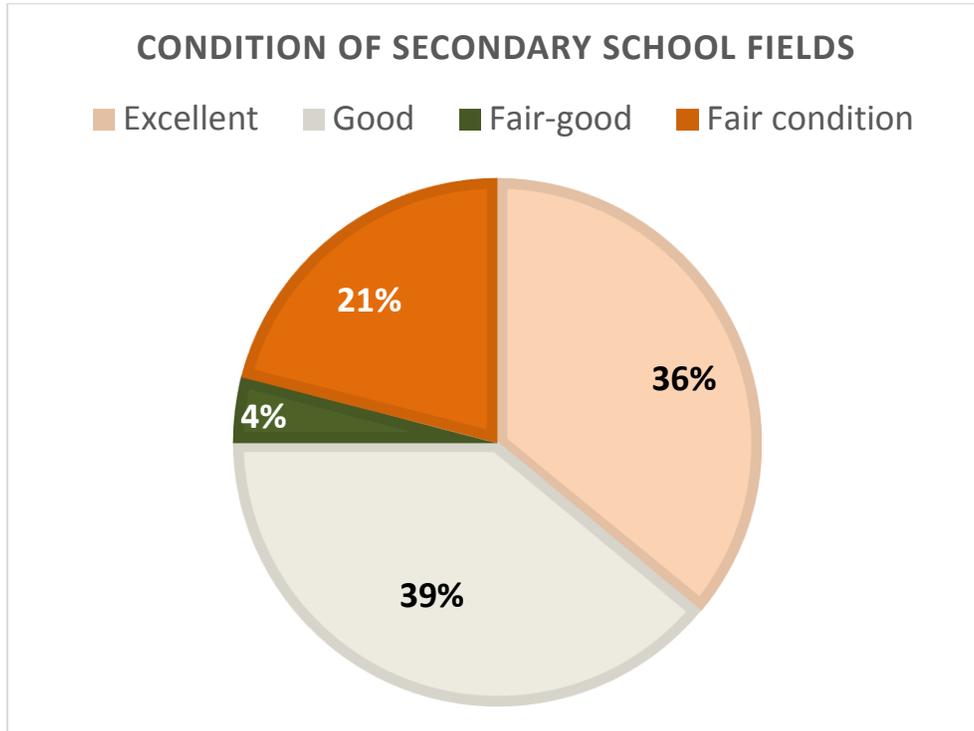
D. EVIDENCE/RESEARCH/ANALYSIS

1. ***Of the TCDSB 136 properties with fields that were studied, 104 were at elementary schools, 28 at secondary schools and 4 at other properties.***
2. ***Overall, secondary school fields are in better condition than elementary school fields with 75% of secondary fields being in excellent or good condition, as compared to 58% at the elementary panel.*** The study concluded that the condition of the natural turf fields has a direct correlation with the square meters of recreational space provided per student and other factors, such as drainage

Secondary School Field Findings

- For the 28 secondary schools with fields, their condition is noted in Table 1. It is noteworthy that none of the fields were in poor condition, as compared to elementary schools:

Table 1



- A further breakdown of the secondary fields by type and condition is noted in Table 2. The data indicates that natural turfs can achieve excellent or good condition. Therefore, the surface is not the primary factor in the condition.

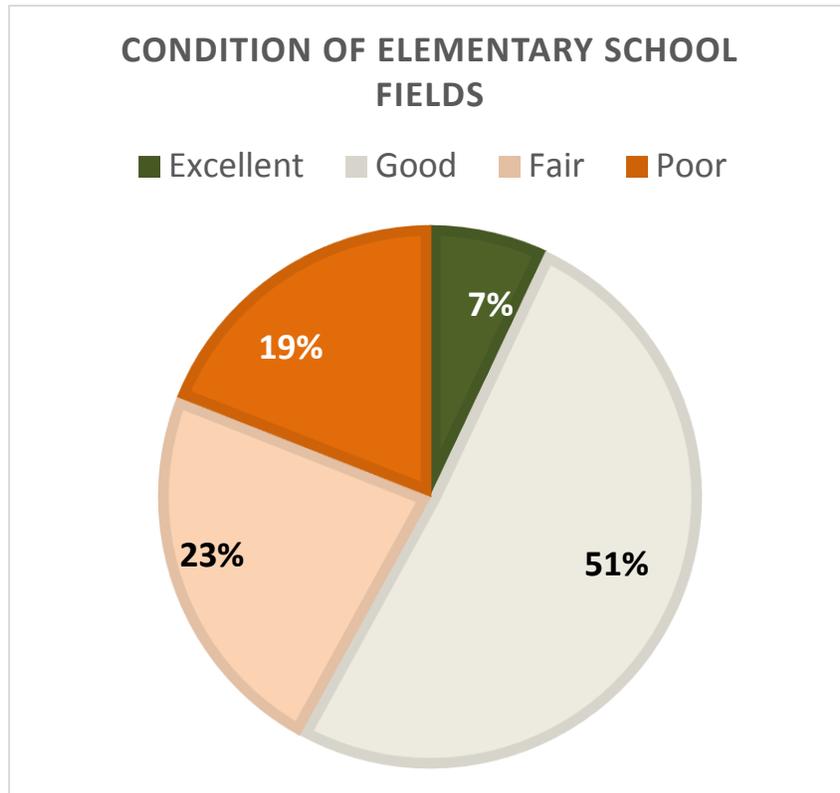
Table 2

Percentage	Condition	Type	
		Natural Turf	Artificial Turf
36%	Excellent	8	2
39%	Good	10	1
4%	Fair-Good	1	0
21%	Fair	6	0
100%	Varies	25	3

Elementary School Field Findings

5. For the 104 elementary schools with fields, their condition is noted in Table 3:

Table 3



6. A further breakdown of the elementary fields by type and condition is noted in Table 4. The data indicates that natural turfs can also achieve excellent or good condition at the elementary schools. However, there are a significant number of natural turf fields in poor condition, which necessitated a further probe into the reasons why.

Table 4

Percentage	Condition	Type	
		Natural Turf	Artificial Turf
7%	Excellent	6	1
51%	Good	51	2
23%	Fair	22	2
19%	Poor	18	2
100%	Varies	97	7

7. The student-to-field area metric showed that fields with a higher area per student are in better condition than those with a lower area per student:
 - a. 75% of schools in poor condition, have less than 10 square meters per student; and
 - b. 53% of schools in fair condition, have less than 10 square meters per student.,
 - c. A total of 42 schools (all elementary) have less than 10 square meters of field space per student. And the number of elementary schools with fair or poor natural turf fields is 40, which directly correlates to the condition-to-area per student ratios.

Therefore, this metric can be used to determine whether an elementary school field should be upgraded to artificial turf. This metric is also a useful guideline for new schools when designing the site.

Costing summary

8. ***The study provided very high-level construction cost estimates for normal/standard conditions based on current 2023 market pricing for planning purposes only.*** These high-level estimates did not include soft costs. The estimates will require seasonal revision based upon market trends at the time. These costs will fluctuate year to year based upon inflation, material costs, labour costs, construction timing and contractor availability.
9. ***The additional soft costs to be considered on a site-by-site basis,*** which were not included in the study include items such as testing and inspection including topographic, landscape architect, legal, and geotechnical surveys, soil chemical analysis as per the current more restrictive O. Reg 406/19 (On-Site and Excess Soil Management), permit fees, such as Forestry, Site Plan Approval, Site Alteration Permit, and additional study fees such as archaeological, heritage, and arborist to name a few.
10. ***The estimated construction varies based on size and type.*** The costing below in Table 5 is based on estimates for normal site conditions. In other words, the costing does not account for any unique site conditions, such as additional costs for additional storm water management systems if the site does not have adequate capacity.

Table 5: Construction Cost Only for Various Field Types

Field Type	Artificial Turf	Natural Turf
Regulation Senior 10,500 sm (11 v 11)	\$2,500,000	\$1,250,000 Category 3
Regulation Junior 6,000 sm (9 v 9)	\$1,200,000	\$750,000 Category 5

¹ Costs are based on 2023 values and are subject to change. An additional 25% should be added to account for the Total Project Cost to include soft costs.

² Artificial turf costing includes drainage, no additional requirements for storm water management.

³ Category 3 denotes it can be designed with or without irrigation and is suitable for high school and league playing.

⁴ Category 5 denotes there is no irrigation, is a basic field and lowest capital investment, as there is no imported soil or special features.

11. To understand the cost impact system wide, the **total project cost** to redevelop the fair and poor sites for all schools would be as follows:
- The estimated, approximate cost of upgrading all existing, fair and fair-good natural turf secondary school fields to artificial turf fields is **\$65,000,000.00**.
 - The estimated, approximate cost of renewing all existing, fair and fair-good natural turf secondary school fields to Category 3, natural fields is **\$31,200,000.00**.
 - The estimated, approximate cost of upgrading all existing, fair and poor natural turf elementary school fields to artificial turf fields is **\$90,000,000.00**.
 - The estimated, approximate cost of renewing all existing, fair and poor elementary school natural turf fields is **\$30,200,000.00**

Design Standards & Case Studies

12. *In addition to an analysis of fields and construction estimates, the study provided recommendations on design standards, and construction specifications, utilization schedules and maintenance protocols to address the challenges TCDSB is encountering on its playing fields.* This

information will be incorporated in Renewal site projects starting at the design phase and will provide guidance on the fields post construction.

13. ***The case study findings as noted below, will also provide guidance on similar projects going forward since the conditions and challenges at these sites are representative of many TCDSB sites.***

- a. ***Holy Cross Elementary School*** has presented maintenance difficulties for the Board having been seeded several times, poor existing drainage and is less than 8sm/per student. The urban location of this site contributes to high use of this field after hours by members of the community. As the field is often wet, students are unable to use the field many months of the year, crowding the students onto the pavement in an effort to protect the field and prevent mud from getting inside the school. This presents other health and safety issues with overcrowding on the hard surface.

Recommendation: artificial turf field.

Madonna Catholic Secondary School has limited outdoor recreational space, including a natural turf area with poor drainage that requires renovations to accommodate use for sports. The site will be further reduced by the expansion of the TTC bus stop at Dubray Ave and Wilson Avenue. This field is being reviewed further as part of the Gender Equity in Girls' Sports study currently underway.

Recommendation: natural turf

St. Ambrose Elementary School was constructed to meet the Toronto Green Standards, which required the inclusion of significant permeable surfaces on the site. The site is also limited by the building footprint, parking and a paved yard combined with bus and car drop-off loop. Many of the Board's elementary sites are comparable to St. Ambrose, especially smaller parcels, which are subject to the Toronto Green Standards when redeveloped.

Recommendation: artificial turf

E. METRICS AND ACCOUNTABILITY

1. ***The estimated high-level costing information outlined in the study will assist in cost planning***, following the prioritization of sites. This costing is significant and the annual proposed amount of funding for fields will be required to fit within the annual Renewal Plan budget, currently just over \$60M annually, and will be evaluated against other Renewal priorities. As per Ministry of Education guidelines, existing field redevelopment projects can only be

funded through the Renewal Funding, which is also required to fund roofs, boilers, air handling units, AODA upgrades, windows, doors, and so on.

2. ***The data and metrics specific to the condition of the fields will provide information to assist with the prioritization of fields for upcoming Renewal Plans.***
3. ***The specification and guidelines for design, construction, maintenance, and use shall provide the framework for developing existing sites in a manner that will keep them in a better state of repair and make them more sustainable.***
4. ***The information garnered from this study will also provide guidelines for the design of playing fields that are part of the Capital new school construction program.***
5. ***Following a motion by trustees at the Corporate Services, Strategic Planning and Property Committee meeting, on March 22, 2023, regarding gender equity in girls' sports,*** a follow up investigation has commenced to study in more depth opportunities for playing fields at the six all- girls' schools at the TCDSB. A consultant is currently assessing the site conditions, constraints, and considerations at the all-female schools. The analysis of these sites will be greater than the field study, which reviewed physical characteristics/conditions of the existing fields primarily. The results of this additional information will be presented in the fall as part of the Gender Equity in Sport report and will provide further guidance on the overall strategy for renewing fields.

F. CONCLUDING STATEMENT

This report is for the information of the Board of Trustees.