



DIVISION SCOLAIRE
LOUIS RIEL
SCHOOL DIVISION

296 Speers Road & 1015 Cottonwood Road: Renovations

Request for Approval | June 2023

Table of Contents

Introduction	3
1015 Cottonwood Road	3
296 Speers Road	4
The Solution Adopted by LRSD Board of Trustees: Building Exchange.....	4
Conceptual Design Recommendations	5
1015 Cottonwood Expansion & Renovation.....	5
296 Speers Demolition, Addition & Renovation.....	7
Urgent Action Required to Solve Enrolment Pressures.....	8
Key Targets.....	8
Appendices.....	10
Appendix A.....	10
Appendix B.....	21
Appendix C.....	22
Appendix D.....	24
Appendix F.....	27
Appendix G.....	28
Appendix H.....	29

Introduction

The Louis Riel School Division (LRSD) is submitting two multi-phased [conceptual design recommendations](#) (see Appendix H) for a project developed by Prairie Architects Inc. for the high school campus currently housing English program students at 1015 Cottonwood Road and French Immersion program students at 296 Speers Road.

Enrolment pressures have grown in the southeastern quadrant of the division, as new homes have been constructed in Sage Creek, Bonavista, and Waterside Estates. LRSD has worked collaboratively with community to optimize the use of existing facilities. With facility capacity now maximized, LRSD is now at the point in its journey where further investment in new infrastructure is required. For more information about the work LRSD and the community has undertaken, refer to Appendix A.

1015 Cottonwood Road

The building at 1015 Cottonwood Road, currently housing Windsor Park Collegiate (WPC), is a purpose-built high school constructed in 1959 with an area of 73,916 square feet. It received an addition of 10,162 square feet in 1966 and a second addition measuring 20,922 square feet in 1969, bringing the total area to 105,000 square feet. The school is currently a Grade 8-12 English program high school that serves approximately 732 students. In 2023-2024, it will serve Grade 9-12 English program students. Beginning in 2024-2025, Grade 9 students residing in Sage Creek will transition to J. H. Bruns Collegiate (JHBC). Consequently, WPC's enrolment is forecast to decline to 531 by 2027-2028, at which point it will stabilize.



296 Speers Road

The building at 296 Speers Road, currently housing Collège Béliveau (CB), first opened as a junior high school in 1957 with an area of 24,591 square feet. It received a series of additions to address increasing enrolment: 21,125 square feet in 1961; 9,635 square feet in 1964; 28,335 square feet in 1967; and portables equal to 2,701 square feet in 1993. The existing total area is 86,387 square feet. The school is currently a Grade 7-12 French Immersion program school that serves approximately 651 students. When the second LRSD elementary school opens in Sage Creek in 2025, the school will only serve Grade 9-12 students. Despite decreasing the number of grades that the building will serve, the anticipated enrolment is expected to grow to 912 students by 2029-2030.



The Solution Adopted by the LRSD Board of Trustees: Building Exchange

The current capacity of 296 Speers Road is 650 students; it clearly cannot accommodate the projected enrolment of 912 students. With a current capacity of 700 students, 1015 Cottonwood Road would have an abundance of space when enrolment declines in the near term to 531 students.

Faced with this dilemma, the Board of the Louis Riel School Division has exercised its fiduciary responsibility to manage resources judiciously and effectively by employing proactive demographic planning. An alternate solution to address the growing enrolment would be building a new high school, a far more costly proposition (see Appendix B for all the alternate solutions that were considered).

Accordingly, the Board has determined that the most sustainable, cost-effective solution to addressing enrolment pressures in the southeast quadrant of the division is to redesignate 1015 Cottonwood Road to serve the French Immersion program and 296 Speers Road to serve the English program. This decision was formalized by Board motion at the June 7, 2022 public meeting (see Appendix C).

This solution will see the larger and growing French Immersion student population attend the larger building at 1015 Cottonwood Road, optimizing use of existing resources. Recognizing that both 1015

Cottonwood Road and 296 Speers Road would require modifications in order to meet the needs of the new student population, the Board motion included a provision to designate renovations of each building as a capital project request with the provincial government.

Prairie Architects Inc. was commissioned to develop a conceptual design recommendation for each building.

Conceptual Design Recommendations

The conceptual design recommendations for each school aim to maximize the use of existing assets to the greatest extent possible (see Appendix D for current floor plans of each building). At the same time, they strive to achieve required functional space needs for each school and address non-compliant and non-functional spaces. Recall that neither building has seen a permanent addition since 1969.

From a construction phasing and site development perspective, a “campus approach” was considered. Ultimately, the design recommendations strive to respond to the individual need and identity of each school community.

LRSD and Prairie Architects Inc. engaged in a consultation process regarding design options for both buildings with staff, students, and community from WPC and CB from November 2022 to February 2023. All resulting feedback has been considered and incorporated into the chosen conceptual design recommendations.

1015 Cottonwood Expansion & Renovation

Based on an existing building condition assessment of 1015 Cottonwood Road, program and space utilization analysis of CB, and discussions with stakeholders, it was determined that an expansion is required. The expansion will provide band and music learning spaces that are accessible to all learners, a student cafeteria that is right sized to enrolment, and an entrance that is purposely situated to optimize movement within the school, supervision, and community access.

The remainder of learning spaces determined to be required can be achieved through renovations to the existing building.

The need for an expansion and renovation is substantiated by the following:

- School enrolment at CB is projected to increase significantly as the large population of elementary school students enrolled in French Immersion transitions to high school. Recall that a 900-space French Immersion elementary school is set to open in Sage Creek in 2025.
- Catchment area population continues to increase as new homes are constructed in Bonavista, Sage Creek, and Waterside Estates.
- Population growth is projected to continue as new developments occur in:
 - Precinct J (southeast of Southland Park)
 - Precinct K (south of Bonavista)
 - Water Urban Village (west of Waterside Estates), and
 - The Public Markets (south of Marion and east of Archibald)
- An increasing proportion of LRSD families are choosing French Immersion for their children.
- In contrast to other school divisions, a significantly higher number of students who register in French Immersion in elementary remain in the program through to graduation.

- Band and music programming takes place in inaccessible spaces (retrofitted amphitheatres).
- The existing change rooms are located in the basement, are difficult to supervise, and are inaccessible to students with mobility challenges.
- The existing fitness facility is located in the basement, has inadequate ventilation and is difficult to supervise.
- There is a lack of natural light throughout the school.

The [conceptual design recommendation](#) from Prairie Architects Inc. transforms the existing building to serve 180 additional students, in addition to upgrading the facility to meet the needs of 21st century learners, generally, and CB students, specifically.

The chosen conceptual design recommendation includes renovation of various existing spaces to serve the CB student community (see page 107-121 in the [conceptual design recommendations](#)):

Renovation
<ul style="list-style-type: none"> • Two existing Music/Guitar Rooms to become Regular Classrooms *NEW* • Existing Commons/Kitchen area to become Foods & Nutrition Lab and a Regular Classroom *NEW* • Existing Community Room to become Regular Classroom *NEW* • Existing Fitness Room to become Art Room *NEW* • Existing Foods & Nutrition Lab to become Biology & Chemistry Classrooms • Western Student Services Room to become a General Science Classroom *NEW* • Existing Individualized Programming Space to become Guitar Classroom *NEW* • Existing Administration to become General Science & Physics Classrooms • Two Science Classrooms to become Administration Offices • Existing Band Storage to become Resource Room • Eastern Crawl Space to become Storage • Existing Change Rooms to become Performing Arts Storage & Mechanical Room • Existing Pre-Engineering classroom combined with library to serve larger population
Expansion
<ul style="list-style-type: none"> • Cafeteria with kitchen and server • Band Room with office and three practice rooms • Fitness Room with offices, change rooms, and storage • Gender-Neutral Washroom and Change Room • New Exit Stairs

The proposed plan will see work carried out in three phases in order to minimize disruption to normal school operations and maximize safety during construction. This plan ensures that the school is able to remain occupied and functional over the entire construction duration. The phased nature of the plan ensures programming continuity by seeing certain spaces remain operational while others undergo renovation. (Refer to page 112 in the [conceptual design recommendations](#))

During the construction period, a shared campus concept will be implemented. Some WPC students will access programming in certain specialized spaces at 1015 Cottonwood Road; similarly, some CB students will access programming in certain specialized spaces at 296 Speers Road.

296 Speers Demolition, Addition & Renovation

Based on the assessment of the existing condition of 296 Speers Road, program and space utilization analysis of WPC, and discussions with stakeholders, it was determined to be necessary to:

- demolish a portion of the existing building;
- construct a new addition to accommodate:
 - a gymnasium to serve Grade 9 to 12 learners with related ancillary spaces;
 - a fitness space;
 - a stage and adjacent music learning space appropriate for performing arts;
 - a community/Indigenous space with kitchenette; and
 - administrative space, central to the school and adjacent to the main south entry.
- renovate the existing gymnasium into practical arts learning spaces and the existing administrative office and two classrooms into space for Individualized Programming

The need for an addition and renovation is substantiated by the following:

- The school has not seen a permanent addition since 1969.
- No designated space currently exists for Individualized Programming.
- The existing gymnasium does not meet provincial standards for high schools.
- Change rooms are not accessible to all students.
- Existing practical arts spaces are insufficient to meet student need.
- There is no theatre space or performing arts classrooms.
- Science labs lack functionality and storage; gas taps are not in a good location due to overhead millwork (fire safety).
- Staircase does not meet current building code.
- Electrical service will be inadequate to meet increased square footage.

The [conceptual design recommendation](#) from Prairie Architects Inc. prioritizes the programming needs of WPC students. It optimizes existing resources by upgrading an existing building to meet the needs of 21st century learners. The proposed project constitutes a fiscally responsible solution to growing enrolment in the southeast quadrant of the division. An alternate solution to address the growing enrolment would be building a new high school, a far more costly proposition (see Appendix C for all the alternate solutions that were considered).

The chosen conceptual design recommendation includes demolition and renovation of various existing spaces as well as construction of some new facilities to serve the WPC student community (see page 123-130 in the [conceptual design recommendations](#)):

Demolition
<ul style="list-style-type: none">• 1964 addition and 1993 portable
Renovation
<ul style="list-style-type: none">• Room 201 to become an Office• Room 211 to become Student Services• Room 215 to become the Textiles/Sewing Lab• Room 206 to become a Regular Classroom• Rooms 217 & 218 to become the Foods & Nutrition Lab• Room 110 to become Student Services with offices

<ul style="list-style-type: none"> • Rooms 107 & 109 to become Individualized Programming Space • Administration office to become an Individualized Programming Space with offices • Gymnasium to become a Woods Shop, Metals Shop, Pre-Engineering Lab & Graphics Lab • Expansion to Staff Room to serve larger staff complement • Existing Stairs to become a Gender-Neutral Washroom • New Windows in some classrooms
Addition (New Construction)
<ul style="list-style-type: none"> • Community/Indigenous Room with kitchen • Administration adjacent to main entrance • Fitness/Wellness Health Facilities • Career Internship Program • Performing Arts/Theatre with stage • Music/Guitar Room • Gymnasium with offices, storage, & change rooms

The proposed plan will see work carried out in five phases in order to minimize disruption to normal school operations and maximize safety during construction. This plan ensures that the school is able to remain occupied and functional over the entire construction duration. The phased nature of the plan ensures programming continuity by seeing certain spaces remain operational while others undergo renovation. Work to accommodate the individualized program will occur prior to populations shifting buildings. (Refer to page 128 in the [conceptual design recommendations](#))

During the construction period, a shared campus concept will be implemented. Some CB students will access programming in certain specialized spaces at 296 Speers Road; similarly, some WPC students will access programming in certain specialized spaces at 1015 Cottonwood Road.

Urgent Action Required to Solve Enrolment Pressures

LRSD is prioritizing a proactive and fiscally responsible approach to solve enrolment pressures in the southeast quadrant of the division. The building exchange and proposed renovations are needed now. Delay would result in:

- Severe over-crowding in one facility, under population in the other
- Current structure presenting safety issues regarding access and supervision
- Inadequate access to specialized learning facilities and programming

Key Targets

Timeline	Action Items	Responsible
June 2023	Authorization required to proceed to design of an addition and renovation and to conduct traffic study	Capital Planning & Project Delivery
March 2024	Authorization required to proceed to tender & award of project	Capital Planning & Project Delivery

June 2024	Construction to begin for addition and renovations at both sites concurrently using phased approach (buildings can be occupied during the construction phase)	LRSD along with Successful Consultant & Contractor
October 2025	Completion of expansion and renovation at 1015 Cottonwood Road	LRSD along with Successful Consultant & Contractor
August 2026	Completion of addition and renovation at 296 Speers Road	LRSD along with Successful Consultant & Contractor

We request a definitive answer for approval and funding by June 30, 2023, in order for construction to start by June 2024 for both sites with a completion date of October 2025 for 1015 Cottonwood Road and August 2026 for 296 Speers Road.

Appendices

Appendix A

Below, information is presented related to:

- 1.0 Background Information
- 2.0 Windsor Park Collegiate & Collège Béliveau Catchment, Boundaries & Enrolments
 - 2.1 WPC Elementary Catchment Schools
 - 2.2 WPC Catchment Boundary Map
 - 2.3 CB Elementary Catchment Schools
 - 2.4 CB Catchment Boundary Map
 - 2.5 Enrolment Patterns: 1998-2022
 - 2.6 WPC Enrolment History
 - 2.7 CB Enrolment History
 - 2.8 Enrolment Projections: 2023-2030
 - 2.9 WPC Projections
 - 2.10 CB Projections
 - 2.11 In Catchment Versus Out of Catchment/Out of Division Students: WPC
 - 2.12 In Catchment Versus Out of Catchment/Out of Division Students: CB
- 3.0 Actions Taken to Address Enrolment Pressures
 - 3.1 Sage Creek Community Over the Past 16 Years

1.0 Background Information

Enrolment pressures have grown in the southeastern quadrant of the division, as new homes have been constructed in Sage Creek, Bonavista, and Waterside Estates. LRSD has worked collaboratively with community to optimize the use of existing facilities. With facility capacity now maximized, LRSD is now at the point in its journey where further investment in new infrastructure is required. For more information, refer to this [link](#) about the work LRSD and the community has undertaken.

2.0 Windsor Park Collegiate & Collège Béliveau Catchment, Boundaries & Enrolments

LRSD is committed to responding to enrolment pressures in the southeast quadrant of the division in a proactive, sustainable, and fiscally responsible manner. The identified solution entails:

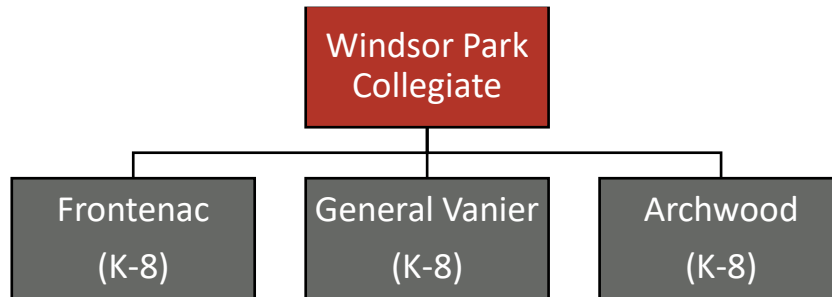
- a change of catchment area for WPC that will see students residing in Sage Creek attend JHBC, the high school in closest proximity to their home
- redesignation of 296 Speers Road to serve WPC's resulting smaller enrolment
- redesignation of 1015 Cottonwood Road to serve CB's growing enrolment

Below, information is presented related to:

- WPC Elementary Catchment Schools
- WPC Catchment Boundary Map
- CB Elementary Catchment Schools
- CB Catchment Boundary Map
- Enrolment Patterns & History
- In Catchment Versus Out of Catchment Students

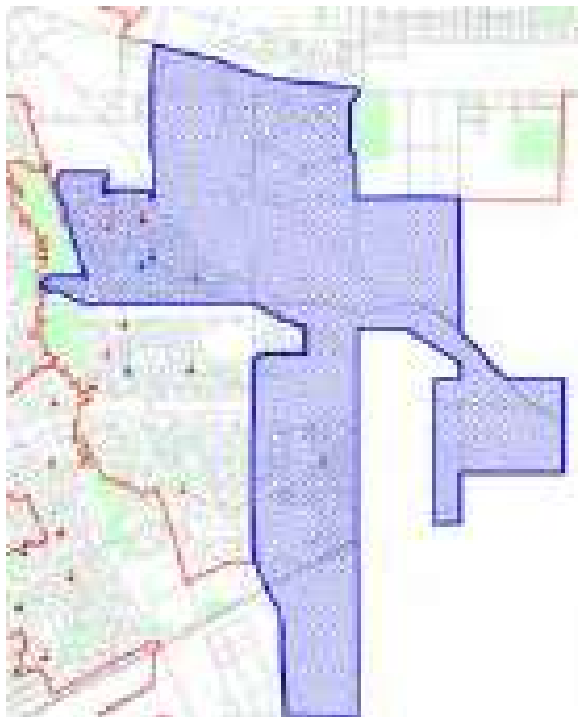
2.1 Windsor Park Collegiate Elementary Catchment Schools

Beginning in 2024, WPC will serve students from three elementary catchment schools:

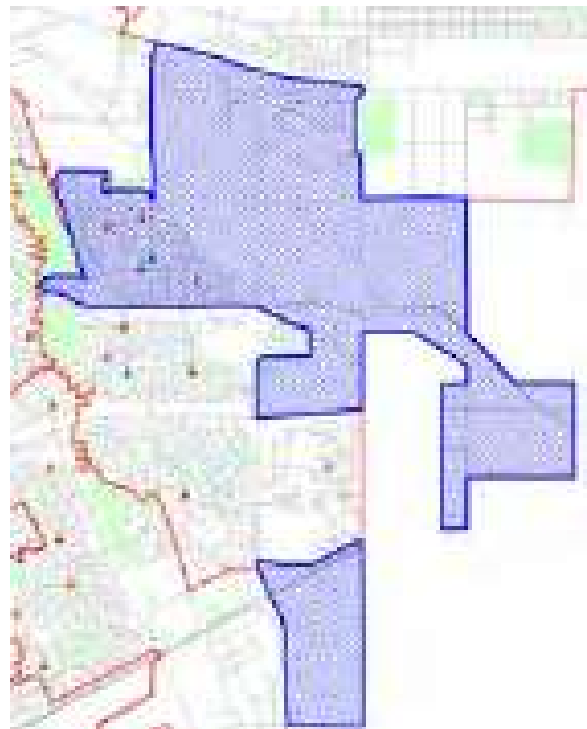


2.2 Windsor Park Collegiate Catchment Boundary Map

Beginning in 2024-2025, students residing in Sage Creek will attend JHBC for high school. Accordingly, the school's catchment area will decrease as shown:



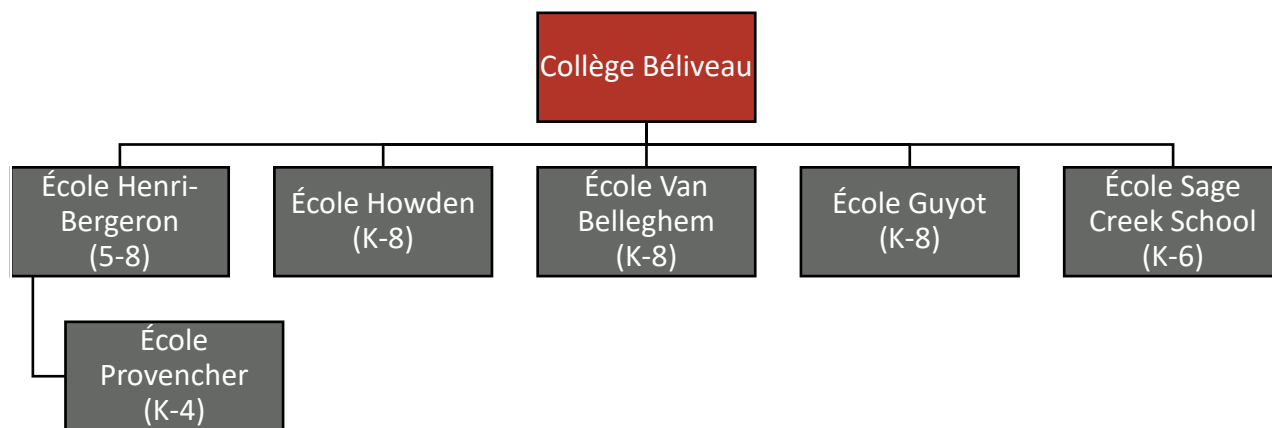
Current boundary



Boundary as of 2024

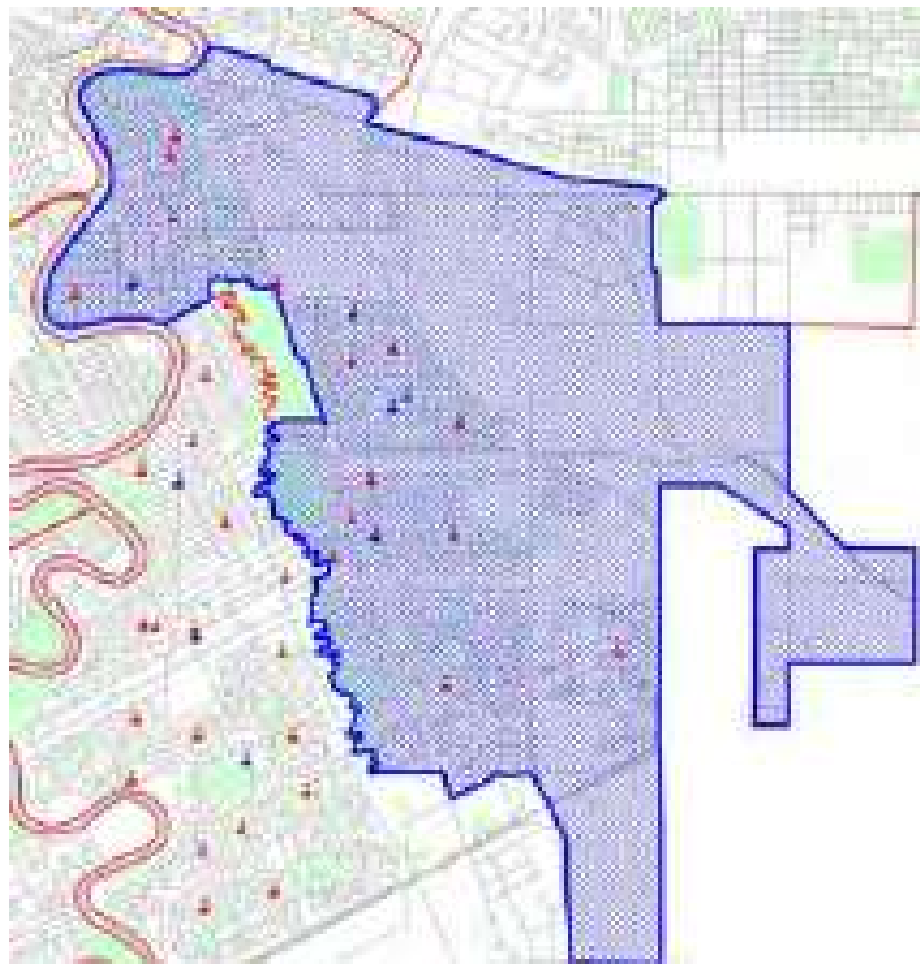
2.3 College Beliveau Elementary Catchment Schools

CB serves students from five elementary catchment schools:



2.4 CB Catchment Boundary Map

CB's catchment area is illustrated below:

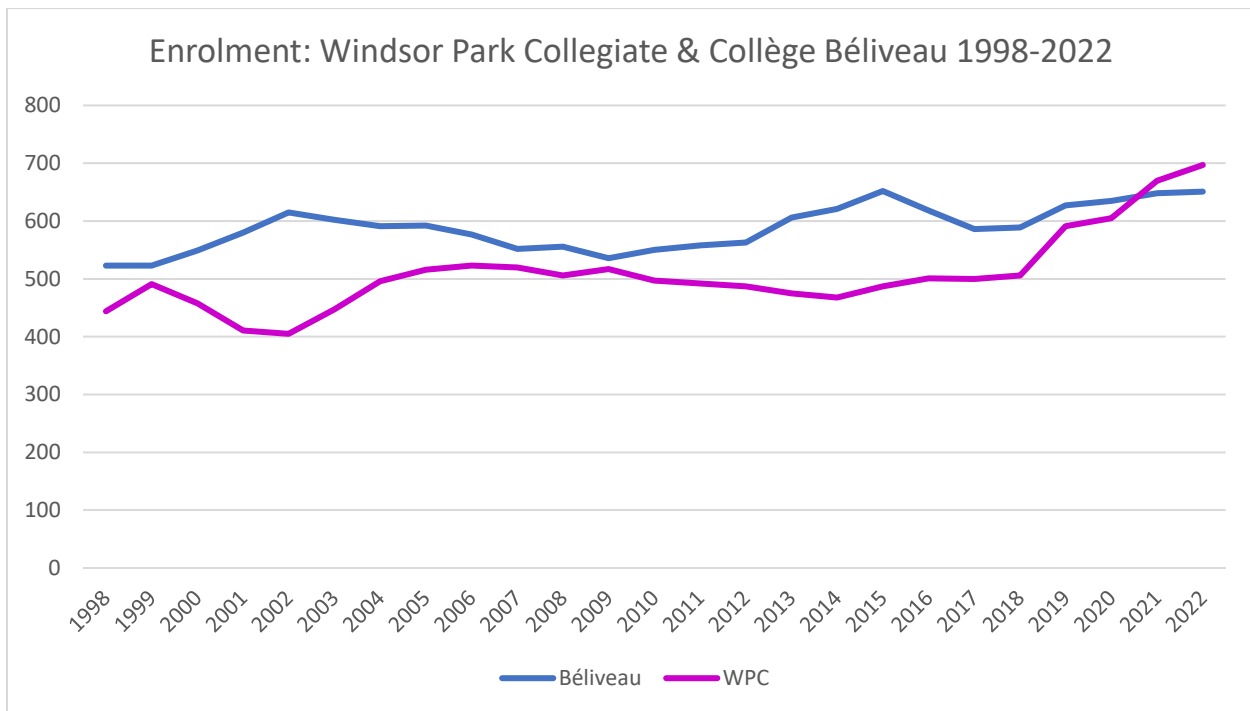


2.5 Enrolment Patterns: 1998-2022

Registration data were reviewed to understand enrolment patterns over a 25-year period.

2.6 Windsor Park Collegiate Enrolment History

From 1998-2003, enrolment at WPC fluctuated between 400 and 500 students. From 2004-2018, enrolment remained relatively stable at approximately 500 students. Beginning in 2019, enrolment grew sharply, Grade 7 & 8 English program students from the Sage Creek community were reassigned to WPC owing to enrolment pressures.

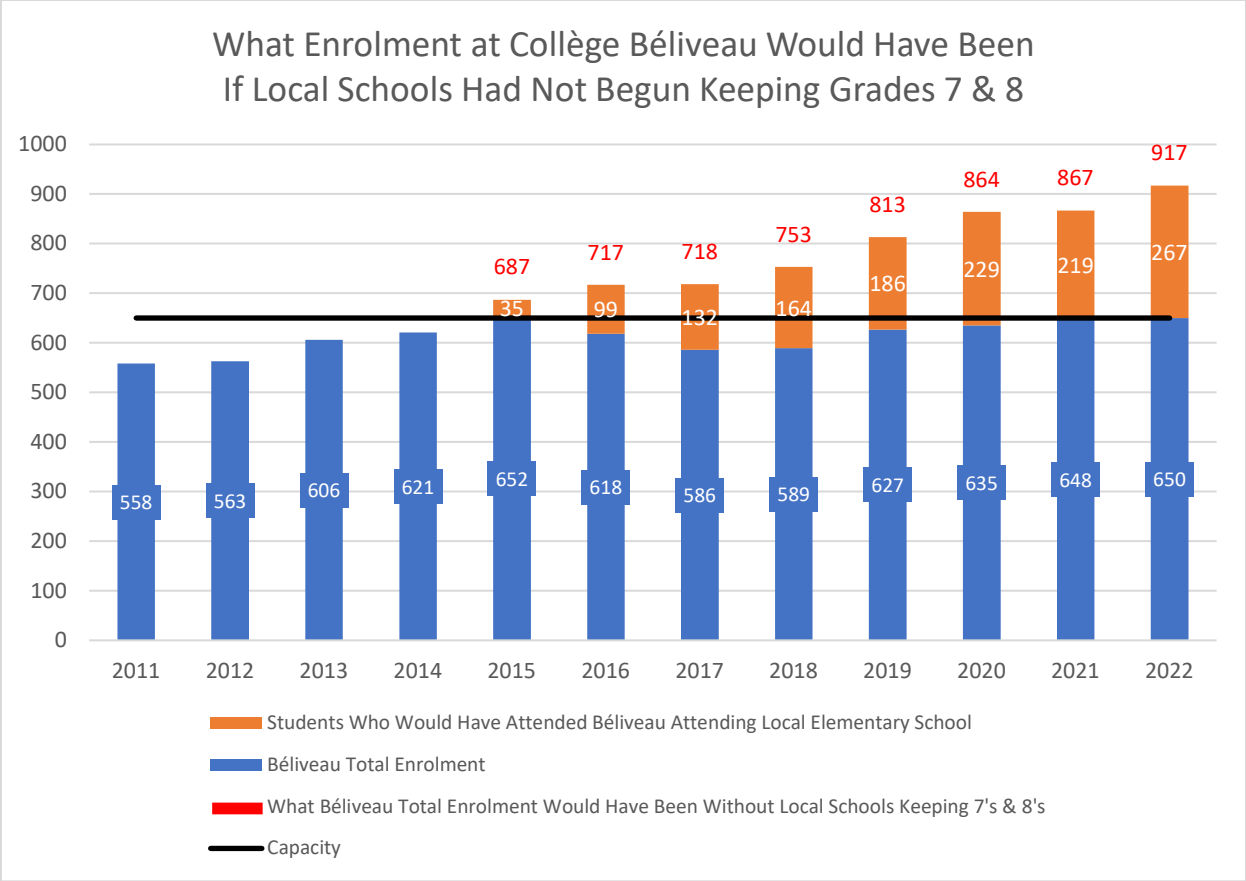


2.7 College Beliveau Enrolment History

From 1998-2002, enrolment at CB rose steadily from 523 to 615 students. Enrolment declined gradually to 536 in 2009 and then grew steadily to 652 in 2015. With enrolment forecast to continue climbing, LRSD implemented mitigation measures by transitioning Grade 7 and 8 students to their local elementary schools:

- École Henri-Bergeron kept their Grade 7s in 2015 and their Grade 8s in 2016
- École Van Belleghem kept their Grade 7s in 2016 and their Grade 8s in 2017
- École Guyot kept their Grade 7s in 2019 and their Grade 8s in 2020
- École Howden kept their Grade 7s in 2022 and will keep their Grade 8s in 2023
- École Sage Creek School kept their Grade 7s and 8s upon opening in 2017 but transitioned them back to CB in 2019 owing to enrolment pressures

Had LRSD not implemented such proactive measures, CB would have run out of space as early as 2015. Left unaddressed, enrolment at CB would have grown to 141 per cent of the building's capacity.



2.8 Enrolment Projections: 2023-2030

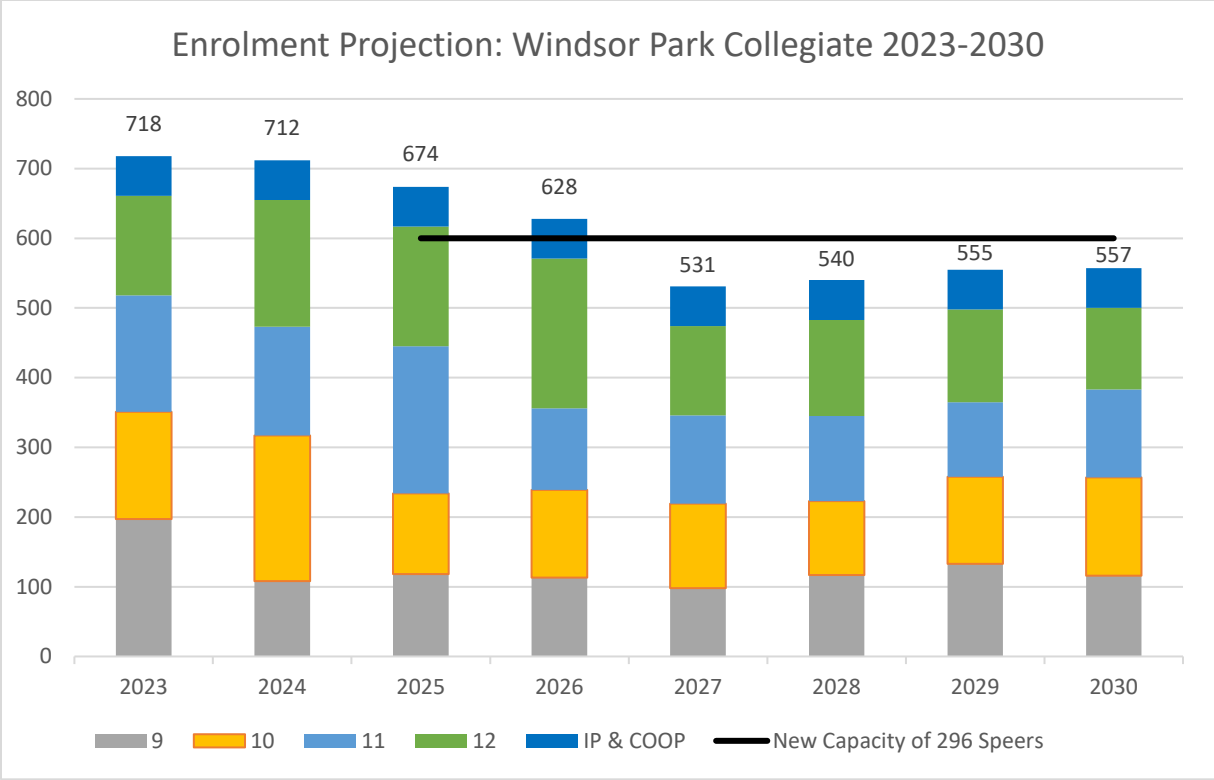
Enrolment projections are based on modelling from Baragar Systems, based on students currently enrolled in LRSD and historic inflow and outflow patterns.

2.9 Windsor Park Collegiate Projections

Beginning in 2024, the catchment area for WPC will change. In September of that year, Grade 9 students residing in Sage Creek will attend JHBC for the English program, alongside their peers from Shamrock School where they have attended since Grade 5, owing to enrolment pressures at École Sage Creek School.

Hence, the graph below:

- Includes Sage Creek students in Grades 9-12 in 2023
- Includes Sage Creek students in Grades 10-12 in 2024
- Includes Sage Creek students in Grades 11 & 12 in 2025
- Includes Sage Creek students in Grade 12 in 2026



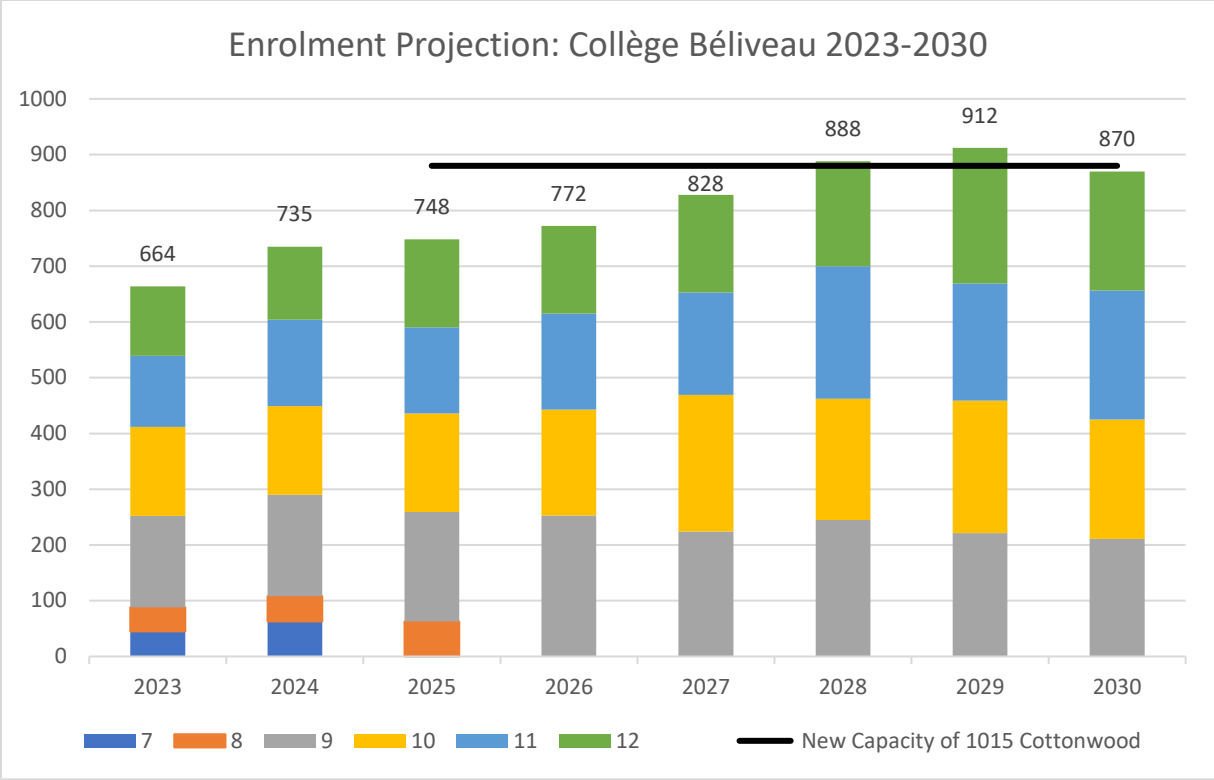
Beginning in 2027, all high school age students residing in Sage Creek will attend JHBC for the English program. During the transition, enrolment at WPC is projected to decline from 718 in 2023 to 531 in 2027. From that point, the population will remain relatively stable around 550 students. This number is slightly larger than the school’s historic enrolment of about 500 students from 2004-2018, prior to the temporary influx of students from Sage Creek. This population of students will be well-served in the renovated and upgraded building at 296 Speers Road with its capacity of 600 students.

2.10 College Beliveau Projections

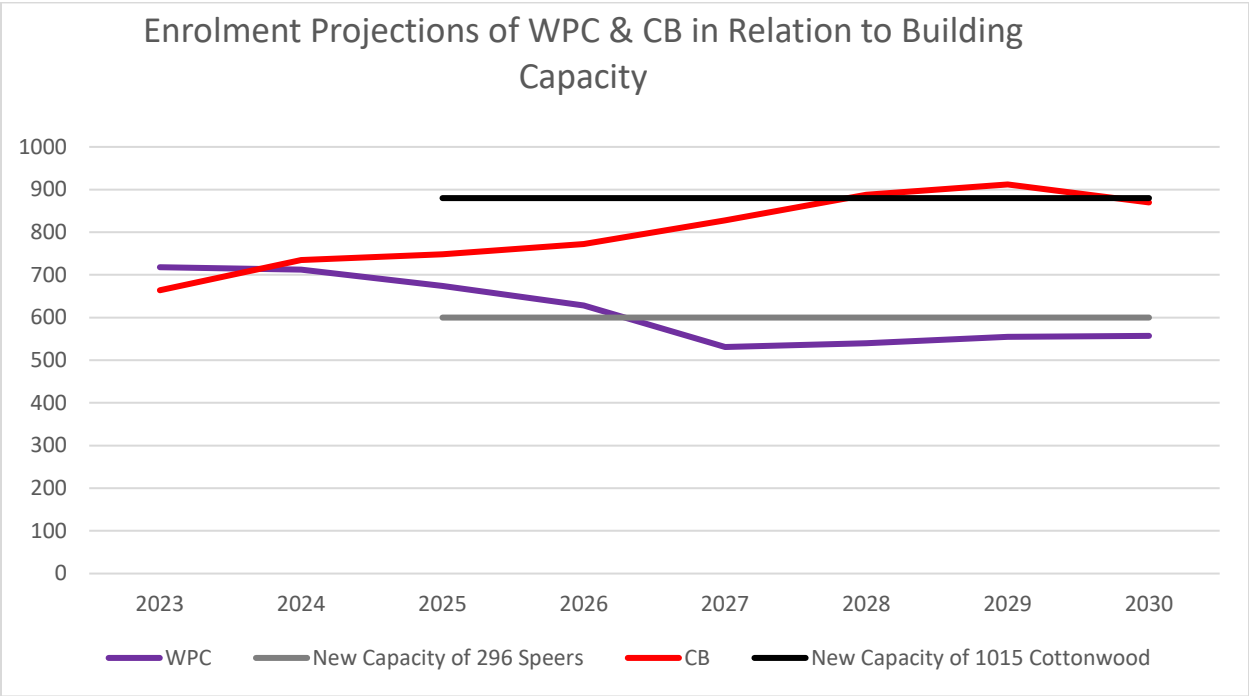
In recent years, the French Immersion program has grown in popularity across Canada. Enrolment trends in LRSD parallel the national trend. Consequently, a significantly larger cohort of elementary-aged students are poised to transition to high school. As shown on the graph below, enrolment at CB will continue to grow year over year, attaining 912 students in 2029.

Note that when the second LRSD elementary school opens in Sage Creek in 2025, Grade 7 students from that community will remain in their local school, followed by their Grade 8 peers the following year.

Through construction of a new cafeteria, fitness room and band room, and repurposing of renovated existing facilities, student capacity at 1015 Cottonwood Road will grow to 880 students. The larger footprint of this building, coupled with the enhancements proposed through this project, will serve French Immersion from northern and eastern regions of LRSD. Should population projections hold true, a change in catchment area will be considered, reassigned some neighbourhoods currently served by CB to Collège Jeanne-Sauvé.



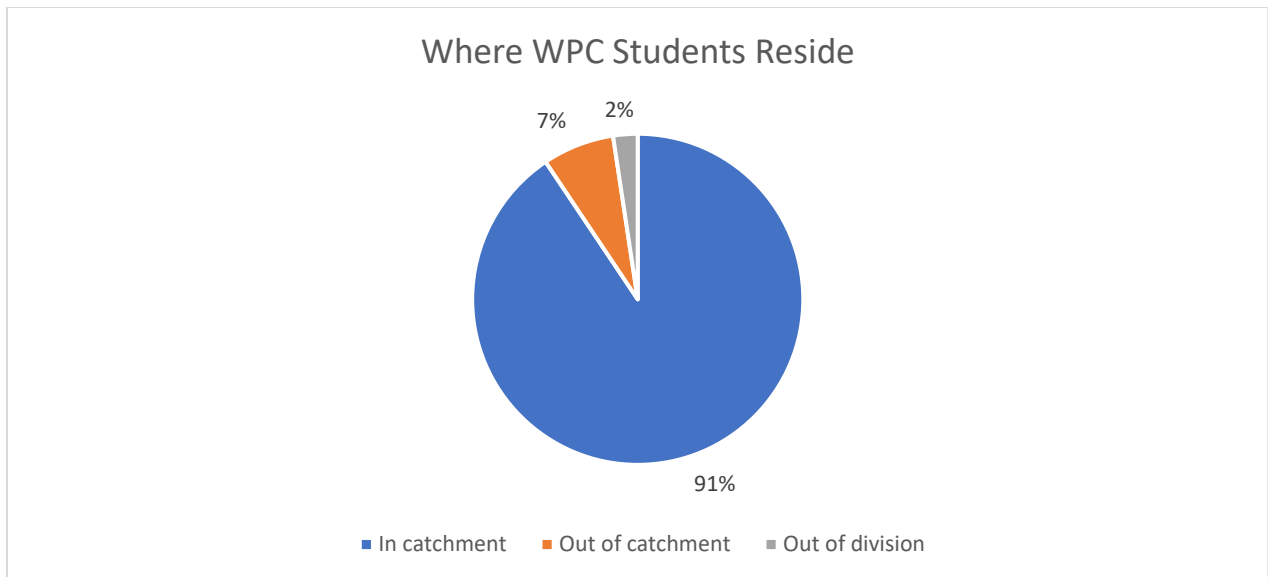
The following graph compares the projected student populations of WPC and CB through to 2030 and confirms that each school is assigned to the building whose capacity most closely matches its population.



2.11 In Catchment Versus Out of Catchment/Out of Division Students: Windsor Park Collegiate

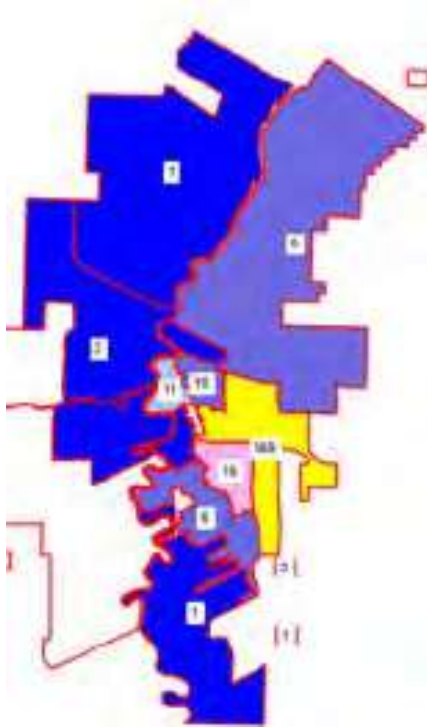
WPC enrolment data for the 2022-2023 school year show that:

- 569 students reside in catchment
- 10 reside in the Nelson McIntyre Collegiate/WPC shared catchment
- 11 reside in the Nelson McIntyre Collegiate catchment
- 16 reside in the JHBC catchment
- 6 reside in the Dakota Collegiate catchment
- 1 resides in the Glenlawn Collegiate catchment
- 15 reside out of division

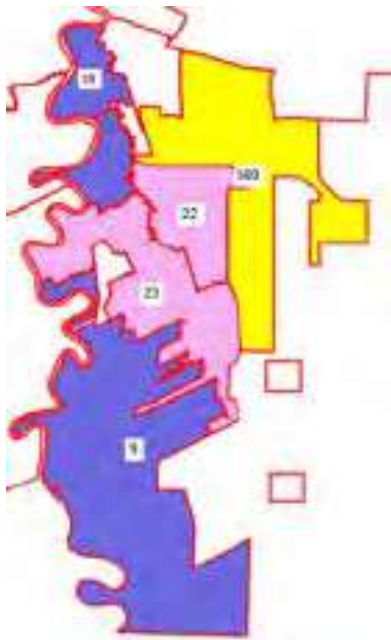


These data show that the vast majority of WPC students reside within catchment, including the ten students who live in the Nelson McIntyre Collegiate/WPC shared catchment. Thirty-four students who attend WPC reside in the catchment of other divisional English program high schools. Fifteen students reside in other school divisions and attend WPC as part of the provincial School of Choice program.

See map below which shows the number of out of catchment students attending WPC:



See map below which shows the number of students from WPC catchment attending other English program high schools in the division. Note that none attend high school in another school division:

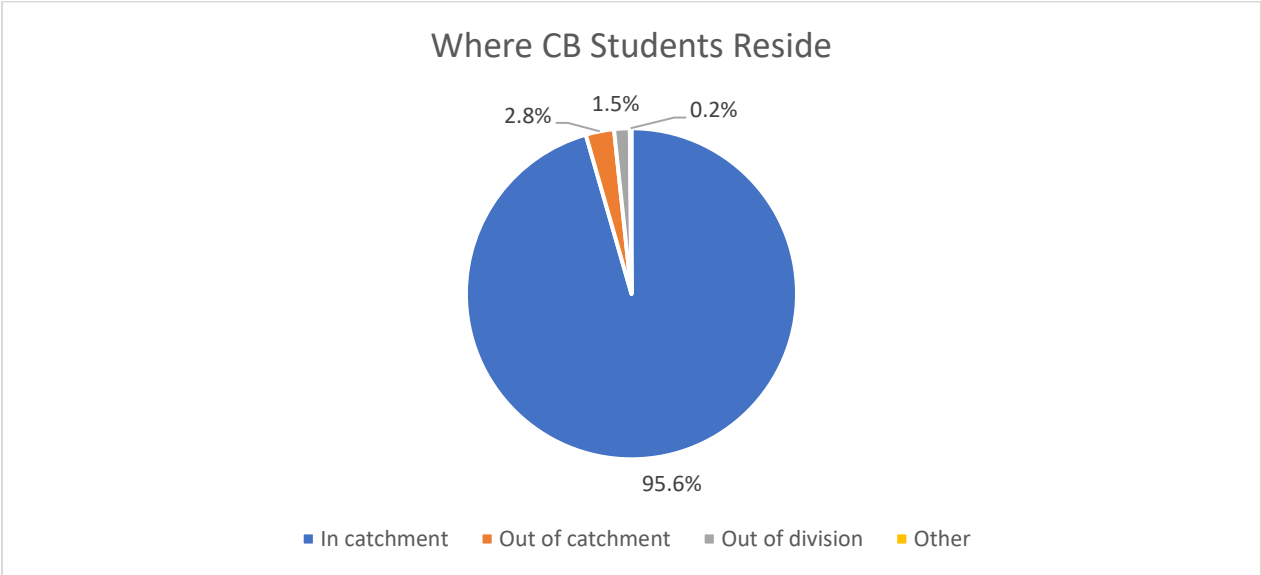


The map shows that ten students who live in the WPC catchment area attend Nelson McIntyre Collegiate, 23 attend Dakota Collegiate, nine attend Glenlawn Collegiate, and 22 attend JHBC.

The net impact of cross boundary migration is measured by total number of out of catchment students (49) minus total number of in catchment students (64) attending other schools. For WPC, the net impact of cross boundary migration is an outflow of 15 students from the WPC catchment to other high schools in the division.

2.12 In Catchment Versus Out of Catchment/Out of Division Students: College Beliveau
CB enrolment data for the 2022-2023 school year show that:

- 623 students reside in catchment
- 18 students reside in CJS catchment
- 9 students reside out of division
- 1 student is from overseas



These data show that the vast majority of CB students reside within catchment: 95.6 per cent. Approximately 2.8 per cent of students reside elsewhere in LRSD, while approximately 1 per cent reside out of division.

Enrolment data for Collège Jeanne-Sauvé indicate that 41 students reside within the CB catchment area. The number of students residing in the CB catchment area that attend a French Immersion program outside of LRSD is unknown. Based on available data, the net impact of cross boundary migration is an outflow of 13 students from CB.

3.0 Actions Taken to Address Enrolment Pressures

To proactively address student enrolment pressures and future proof in a fiscally responsible way, the Board approved an exchange of the WPC and CB buildings is the most optimal, sustainable, and achievable solution to the changing enrolment patterns in the southeast quadrant of the school division. (See Appendix B)

3.1 Sage Creek Community Over the Past 16 Years

2007

The first homes were constructed in Sage Creek in 2007. Based on population forecasts, LRSD requested that two elementary schools, each with a capacity of 450 students (with a core capacity of 600), be constructed in Sage Creek, one for the English program, the other for the French Immersion program.

As an interim measure and after thorough review of available space in nearby schools, the Board designated the following catchment schools for students moving into the area:

- Frontenac School for the K-8 English elementary school program
- École Howden for the K-6 French Immersion elementary school program
- Windsor Park Collegiate (WPC) for the Grade 9-12 English secondary school program
- Collège Béliveau (CB) for the Grade 7-12 French Immersion secondary school program.

2013

In 2013, LRSD received design authorization to build a dual-track (French Immersion and English programs) Kindergarten to Grade 8 school in Sage Creek for 450 students, with a core capacity of 600.

2017

In 2017, École Sage Creek School (ÉSCS) opened. It was built to its full capacity of 600, after extensive dialogue with the province. Historical enrolment data confirm that the school exceeded its capacity upon opening with an enrolment of 625, serving all Kindergarten to Grade 8 English and French Immersion program students residing within the Sage Creek community.

2018

Enrolment at ÉSCS grew sharply over the course of the first year, attaining an enrolment of 723 students on Sept. 30, 2018. In order to accommodate the increased enrolment, LRSD, at its own expense, repurposed Practical Arts spaces and the central commons area of ÉSCS to regular instruction.

2019

The enrolment in 2019-2020 would have grown to 819 students, more than 36 per cent above the school's designed capacity. To avoid this situation, the Board temporarily reassigned Grades 7 and 8 students from the Sage Creek community to WPC—the only English program school with space at the time—and CB, beginning in September 2019.

2020

To further alleviate student enrolment pressures in the 2020-2021 school year, English program students in Grades 5 and 6 began attending Shamrock School as a further temporary solution. Despite this temporary relocation, enrolment continued to grow at ÉSCS, reaching 769 students, serving K-4 English program and K-6 French Immersion. In December 2020, the provincial government authorized LRSD to purchase 7.22 acres of land at the southeast corner of Warde Avenue and Boulevard des Hivernants. Please see Appendix E which presents the Board Motion adopted on June 7, 2022.

2022

In the 2022-2023 school year, English program students in Grades 5, 6 and 7 continued attending Shamrock School. (See Appendix E)

2023

This April and May, the Board has adopted a motion capping enrolment at ÉSCS in the English program.

In the 2023-2024 school year, English program students in Grades 5, 6, 7 and 8 will attend Shamrock School due to unsustainable growth in the student population at WPC. (See Appendix F)

At its May 16 meeting, the Board closed the following schools to Schools of Choice applications:

- Island Lakes Community School
- J. H. Bruns Collegiate
- Shamrock School
- École Howden
- École Sage Creek School
- École Van Belleghem

2024

Beginning in 2024-2025, the school at 1015 Cottonwood Road will serve the students of Collège Béliveau, while the school at 296 Speers Road will serve the students of Windsor Park Collegiate. Please see Appendix C which presents the Board Motion adopted on June 7, 2022.

Beginning in 2024-2025, students residing in Sage Creek will transition to JHBC for high school, ensuring continuity of community with their peers from Shamrock School. Students residing in Sage Creek registered in Grades 10, 11, and/or 12 at WPC on September 3, 2024, will be permitted to remain at WPC through to the end of their high school studies. Please see Appendix G which presents a second Board Motion adopted on June 7, 2022.

2025

A second LRSD elementary school will open in Sage Creek:

- Kindergarten to Grade 8 English program students residing in Sage Creek will attend the existing school at 315 Sage Creek Boulevard.
- Kindergarten to Grade 8 French Immersion program students residing in Sage Creek and Bonavista will attend the new school.

Appendix B

Alternative Solutions Considered

Five alternative solutions related to the high school proposed solutions were considered as part of an ongoing study since 2014. Many of these solutions have also been brought forward by members of our community.

New High School

One alternative solution is to build another high school in LRSD's Southeast quadrant. This is not a necessary option currently. We would rather optimally use our existing high schools to balance enrolment pressures at this time. Future housing developments may likely compel the need for a new high school to the south of the division.

Send French Immersion Program Students to Nelson McIntyre Collegiate

Another alternative solution is to consider Nelson McIntyre Collegiate (NMC) for the French Immersion program. This is not a viable option.

NMC is located in the very north of our division and is not in close proximity to existing and future housing developments where the enrolment pressures are occurring.

Conversion of Monterey Board Office

Some have suggested converting the Monterey Board Office to a high school. This is not a viable option.

In 2014, LRSD commissioned an architectural firm to conduct a comprehensive feasibility study of the Monterey Board Office to determine whether it would be cost-effective to convert the building into a school serving grades 7 and 8. The intent of the study was to explore transforming the Monterey building back to a school suitable for up to 300 students. The cost to convert the Board Office in 2015 was \$10,355,400.

Based on the results of the study, the Board concluded that the facility should continue to serve as a Board Office and learning space for Individualized Programming (IP) and the International Student Program (ISP). We are planning enhancements to the learning space for both IP and ISP.

Addition to Collège Béliveau

An alternative solution that was explored was a significant addition to CB. This is not a viable or feasible option. Based on current demographics, square footage available and enrolment patterns, we do not need more infrastructure north of Fermor. This was discussed during the 2015 Feasibility Design Study of Monterey.

We do, however, require additional learning space at JHBC – the high school closest to where the enrolment pressures are occurring now and into the future. We will require more school infrastructure south of Abinojii Mikanah and east of Lagimodière as existing and new developments expand. We will continue to enhance existing spaces at both the WPC and CB buildings.

English Program “Mega Campus”

An alternative solution presented is a “mega campus” for English program students. This would mean that JHB would become the French Immersion high school for St. Boniface. This is not a viable option because of the disruption and displacements it would cause.

Dual-Track Programming

The most recent alternative being proposed is a dual-track program in LRSD as a solution to our demographic challenges. This is contrary to [Policy IHBEBA](#) and would jeopardise the success of our French Immersion program that was highlighted in the meetings with our community.

Appendix C

The following Board motion was adopted on June 7, 2022:

Change to Building Assignment of Windsor Park Collegiate and Collège Béliveau, Effective 2024-2025

WHEREAS Collège Béliveau has been experiencing enrolment pressures as a Grade 7 to 12 school since 2014; and,

WHEREAS the Louis Riel School Division Board of Trustees (the Board) has mitigated said pressures by transitioning elementary schools in the Collège Béliveau Family of Schools to serve Grades 7 and 8 students in their local neighbourhoods; and,

WHEREAS demographic projections indicate that Collège Béliveau will face even greater overcrowding after the last Grade 7 and 8 students have left (coincident with the opening of the new elementary school in Sage Creek in 2025-2026); and,

WHEREAS the changes to Windsor Park Collegiate's grade configuration and catchment area will effect a corresponding decline in student enrolment; and,

WHEREAS the enrolment of French Immersion students at Collège Béliveau will significantly surpass the enrolment of English program students at Windsor Park Collegiate beginning in 2024-2025; and,

WHEREAS Collège Béliveau currently occupies the 86,387 sq. ft. building at 296 Speers Road and Windsor Park Collegiate the 105,000 sq. ft. building at 1015 Cottonwood Road; and,

WHEREAS the Board and its divisional administration have reviewed current and historic enrolments, enrolment projections, school capacities, and planning scenarios to address enrolment pressures in schools in its southeast quadrant; and,

WHEREAS the Board and its divisional administration have engaged the Windsor Park Collegiate, J. H. Bruns Collegiate and Collège Béliveau Families of Schools in a series of 11 meetings, from March to May 2022, related to historic and future demographic changes and enrolment pressures in the southeast quadrant of the school division; and,

WHEREAS this consultation process has provided an opportunity for the community to review the results of our research, analysis, and criteria and to provide perspectives to inform the objective of developing an achievable sustainable solution to address current and projected enrolment challenges:

THEREFORE BE IT RESOLVED:

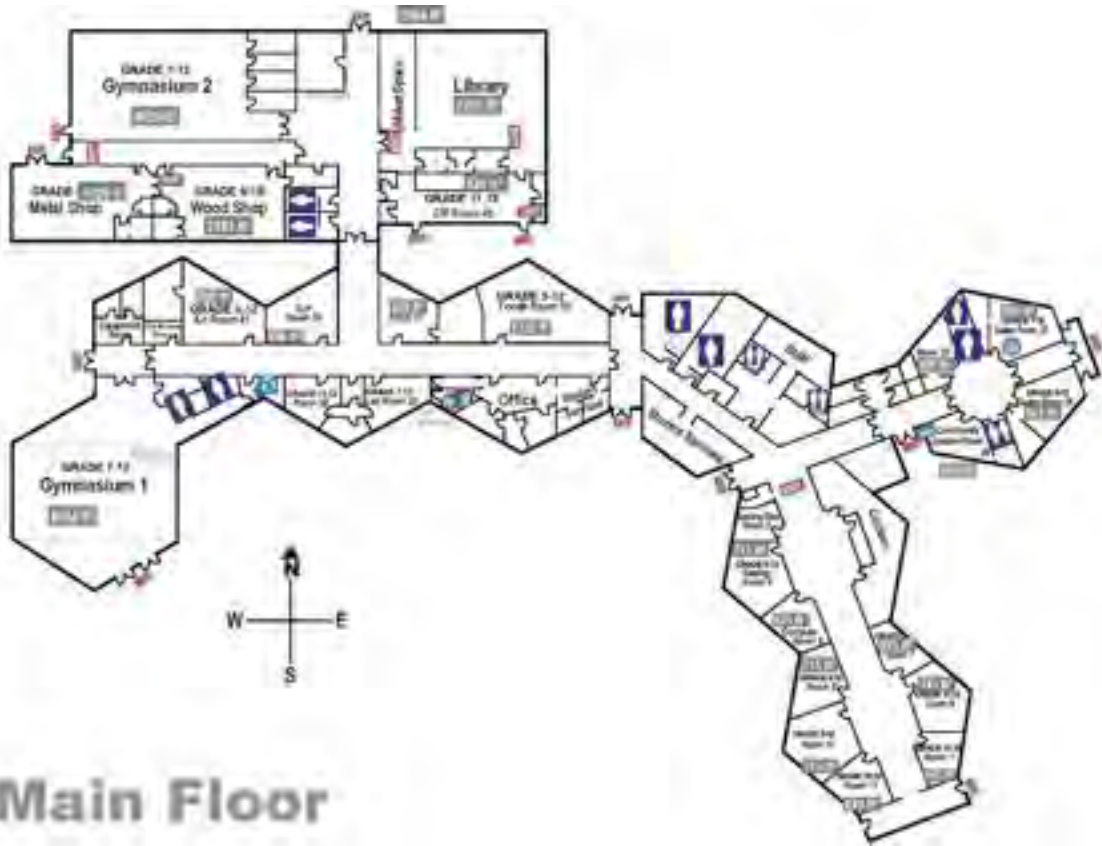
THAT an exchange of the Windsor Park Collegiate and Collège Béliveau buildings is the most optimal, sustainable, and achievable solution to the changing enrolment patterns in the southeast quadrant of the school division; and,

THAT this change be implemented effective Sept. 3, 2024; and,

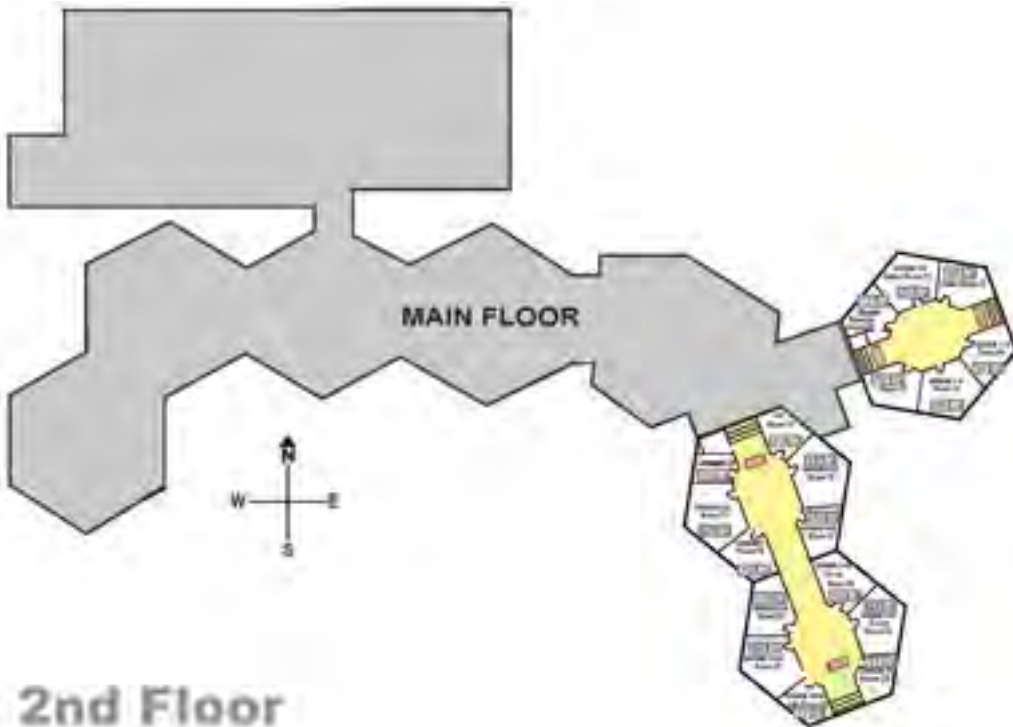
THAT the Board designate renovations of the Windsor Park Collegiate and Collège Béliveau buildings as a capital project request with the provincial government.

Appendix D

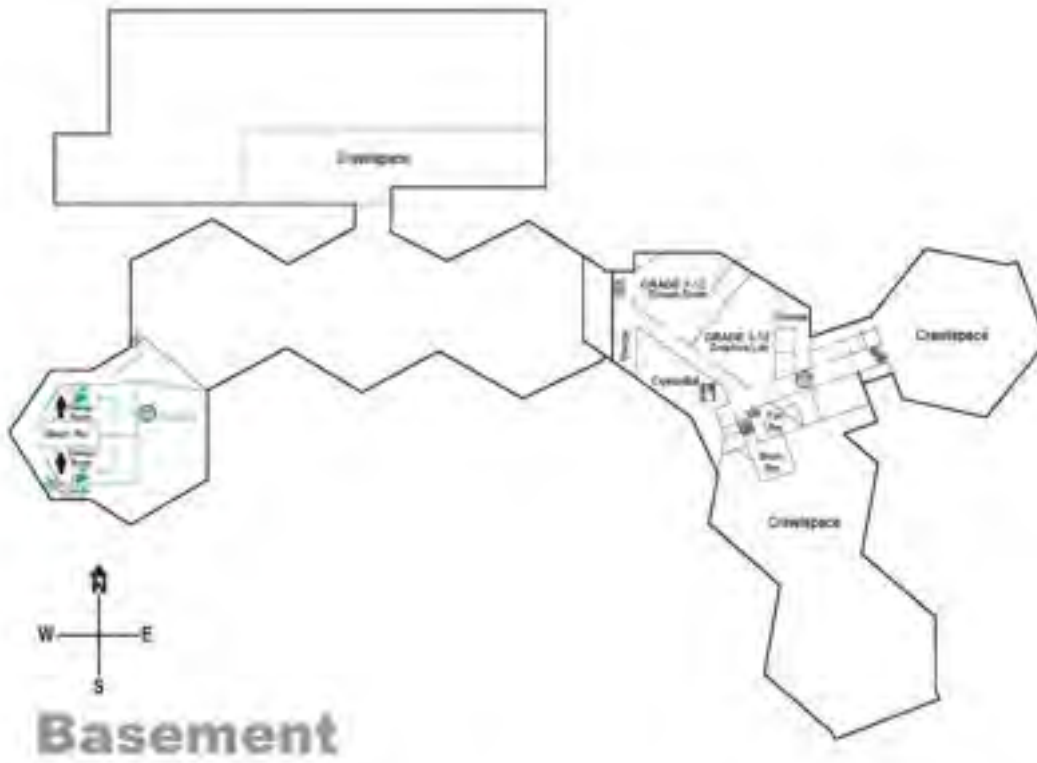
Current Floor Plans for 1015 Cottonwood Road



Main Floor

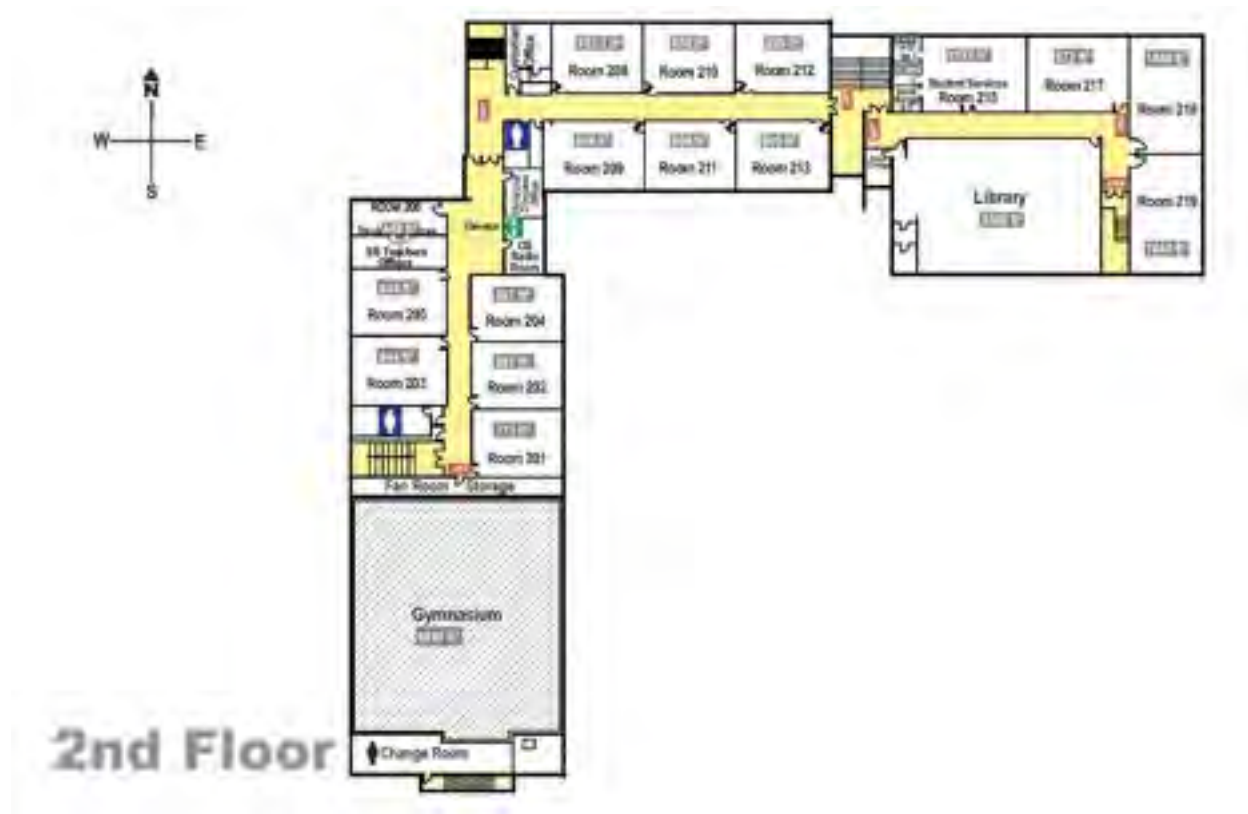


2nd Floor



Current Floor Plans for 296 Speers Road





Appendix E

The following Board motion was adopted on June 7, 2022:

WHEREAS the Louis Riel School Division Board of Trustees (the Board) and its divisional administration have consulted with government officials and community members about the need for a second elementary school in Sage Creek; and,

WHEREAS the provincial government authorized land acquisition for said school in December 2020 and the Board purchased 7.22 acres of land for said school in May 2021; and,

WHEREAS the Board currently awaits an announcement from the provincial government authorizing the design and construction of said school; and,

WHEREAS the Louis Riel School Division is experiencing unsustainable growth at Windsor Park Collegiate, and the school will experience overcrowding beginning in 2022- 2023 if left unchecked; and,

WHEREAS said overcrowding and unsustainable growth were forecast when English program students in Grades 7 and 8 living in Sage Creek were temporarily reassigned to Windsor Park Collegiate beginning in 2019-2020; and,

WHEREAS, at the time of said temporary reassignment, divisional administration advised of the need to develop and, if necessary, implement alternative solutions should a second elementary school in Sage Creek not open by 2022-2023; and,

WHEREAS English program students residing in Sage Creek have been temporarily attending Shamrock School for Grades 5 and 6 since 2020-2021; and,

WHEREAS the Board and its divisional administration have reviewed current and historic enrolments, enrolment projections, school capacities, and planning scenarios to address this specific challenge; and,

WHEREAS the Board and its divisional administration have engaged the Windsor Park Collegiate, J. H. Bruns Collegiate and Collège Béliveau Families of Schools in a series of meetings, from March to May 2022, related to historic and future demographic changes and enrolment pressures in the southeast quadrant of the school division; and,

WHEREAS this consultation process has provided an opportunity for the community to review the results of our research, analysis, and criteria and to provide perspectives to inform the objective of developing an achievable temporary solution to address current and projected enrolment challenges; and,

WHEREAS a timely decision is required in order to implement this solution for September 2022; and,

WHEREAS Shamrock School has ample room to accommodate additional students:

THEREFORE BE IT RESOLVED:

THAT the Board approve the temporary change to the catchment area for Shamrock School to include Grade 5, 6, & 7 English Program students residing in Sage Creek in 2022-2023; and,

THAT the Board approve the temporary change to the catchment area for Shamrock School to include Grade 5, 6, 7 & 8 English Program students residing in Sage Creek in 2023-2024 and until a second elementary school in Sage Creek opens its doors.

Appendix F

At its April 18, 2023 public board meeting, the Board of Trustees carried the following motion:

THAT the Board close enrolment in Grades 2, 3 and 4 of the English Program at École Sage Creek School for the balance of the 2022-2023 school year, and;

THAT the Board approve the temporary change to the catchment area for Shamrock School to include residents of Sage Creek newly registering for Grade 2, 3, & 4 of the English program, as well as residents of Sage Creek newly registering for Kindergarten or Grade 1 of the English program who have a sibling living at the same address who is newly registering for Grade 2 to 7 of the English program, and;

THAT this temporary change take effect immediately and remain in effect for the balance of the 2022-2023 school year, and;

THAT students affected by this temporary change continue at Shamrock School until such time as a second LRSD elementary school opens in Sage Creek at which time they will attend the English program at 315 Sage Creek Boulevard, and;

THAT school bus transportation be provided at no cost to families to students affected by this temporary change, and; THAT Senior Leadership monitor class size at Shamrock School and provide additional staff if required, and finally;

THAT Senior Leadership monitor enrolment at Grade 1 of the English program at École Sage Creek School and, should enrolment reach 27, the temporary change to the catchment area for Shamrock School outlined above be expanded to include residents of Sage Creek newly registering for Grade 1 of the English program with all of the same provisions applying.

Appendix G

At its June 7, 2022 public meeting, the Board of Trustees carried the following motion:

WHEREAS temporary changes to Shamrock School's catchment area will see Shamrock School serve Grade 5, 6, & 7 English Program students residing in Sage Creek in 2022-2023 and Grade 5, 6, 7 & 8 English Program students residing in Sage Creek in 2023-2024 and until a second elementary school in Sage Creek opens its doors; and,

WHEREAS Shamrock School is part of the J. H. Bruns Collegiate Family of Schools; and,

WHEREAS it is desirable for students residing in Sage Creek to continue on to high school with their classmates from Shamrock School residing in Southdale and Southland Park; and,

WHEREAS J. H. Bruns Collegiate is in closer proximity to Sage Creek than Windsor Park Collegiate; and,

WHEREAS Windsor Park Collegiate will no longer have sufficient capacity to welcome students residing in Sage Creek owing to changes to building designation; and,

WHEREAS the Louis Riel School Division Board of Trustees (the Board) and its divisional administration have reviewed current and historic enrolments, enrolment projections, school capacities, and planning scenarios to address this specific challenge; and,

WHEREAS the Board and its divisional administration have engaged the Windsor Park Collegiate, J. H. Bruns Collegiate and Collège Béliveau Families of Schools in a series of meetings, from March to May 2022, related to historic and future demographic changes and enrolment pressures in the southeast quadrant of the school division; and,

WHEREAS this consultation process has provided an opportunity for the community to review the results of our research, analysis, and criteria and to provide perspectives to inform the objective of developing an achievable sustainable solution to address current and projected enrolment challenges:

THEREFORE BE IT RESOLVED:

THAT redesignation of J. H. Bruns Collegiate as the catchment area high school for English program high school students is the most optimal, sustainable, and achievable solution to the changing enrolment patterns in the southeast quadrant of the school division; and,

THAT this change be implemented effective Sept. 3, 2024, for students residing in Sage Creek entering Grade 9; and,

THAT, notwithstanding the foregoing, the Board afford priority consideration to Schools of Choice requests from families residing in Sage Creek but wishing to attend Windsor Park Collegiate for Grades 9 to 12; and,

THAT students residing in Sage Creek registered in Grades 10, 11, and/or 12 at Windsor Park Collegiate on September 3, 2024 be permitted to remain at Windsor Park Collegiate through to the end of their high school studies; and,

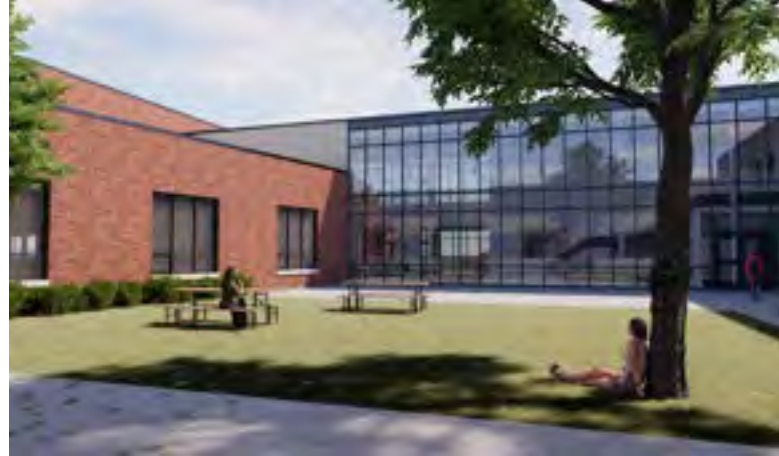
THAT the Board designate an expansion and renovations of J. H. Bruns Collegiate as a capital project request with the provincial government.

Appendix H

The following is the complete concept design study prepared by Prairie Architects.



DIVISION SCOLAIRE
LOUIS RIEL
SCHOOL DIVISION



WINDSOR PARK COLLEGIATE & COLLÈGE BÉLIVEAU TRANSITION FEASIBILITY STUDY

Preliminary Assessment & Conceptual Design Recommendations

APRIL 26, 2023

Prepared by:

prairie
architects inc.

Prairie Architects Inc.

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In collaboration with:

KGS Group
Wolfrom Engineering Ltd.
HTFC Planning & Design
Postma Quantity Surveying

TABLE OF CONTENTS

PART 1 - INTRODUCTION	7
PART 2 - EXISTING SITES AND BUILDINGS	9
2.1 - SITE LOCATION AND CONTEXT	9
2.2 - COTTONWOOD BUILDING	15
History of Construction	15
Exterior	16
Building Layout	18
Structural	27
Mechanical + Electrical	28
2.3 - SPEERS BUILDING	29
History of Construction	29
Exterior	30
Building Layout	32
Structural	40
Mechanical + Electrical	41
PART 3 - FUNCTIONAL SPACE PROGRAM	43
3.1 - EXISTING SPACE UTILIZATION	43
Background	43
Cottonwood Building	44
Speers Building	46
PART 4 - STAFF CONSULTATION & CONCEPTUAL DEVELOPMENT	49
4.1 - PRE-DESIGN CONSULTATION	49
4.2 - INITIAL CONCEPTUAL DEVELOPMENT	55
Combined Site	55
City of Winnipeg and Manitoba Hydro	55
Béliveau Transition to Cottonwood	56
WPC Transition to Speers	68
4.3 - FOLLOW-UP CONSULTATION & INPUT	80
PART 5 - COMMUNITY PRESENTATION & FEEDBACK	81
5.1 - BÉLIVEAU TRANSITION TO COTTONWOOD RD.	81
Concept A	82
Concept B	86
Community Feedback	90

5.2 - WPC TRANSITION TO SPEERS RD.	93
Concept A	94
Concept B	98
Community Feedback	101
PART 6 - FINAL CONCEPTUAL DESIGN RECOMMENDATIONS	103
6.1 - FINAL CONCEPTUAL SITE DESIGN	103
6.2 - FINAL CONCEPTUAL DESIGN FOR COLLÈGE BÉLIVEAU	107
Program	107
Building Design	109
New vs Renovated Spaces	111
Construction Phasing	112
Exterior Characteristics	116
Interior Characteristics	118
Systems	120
Cost Summary	120
6.3 - FINAL CONCEPTUAL DESIGN FOR WPC	123
Program	123
Building Design	125
New vs Renovated Spaces	127
Construction Phasing	128
Exterior Characteristics	131
Interior Characteristics	133
Systems	135
Cost Summary	135
PART 7 - NEXT STEPS	137

APPENDICES

- A Structural System Summaries, by Wolfrom Engineering Ltd.
- B Mechanical and Electrical Building Condition Assessments, by
KGS Group
- C HTFC Planning and Design correspondence with City of Winnipeg
- D Architectural, Landscape, Structural, Mechanical & Electrical Concept
Development Drawings and Basis of Design Package
- E Class D Cost Estimate, by Postma Consulting Ltd. & Class D Site
Development Budget, by HTFC Planning and Design



*the above chart and background data on the facing page is according to the LRSD's presentation "High School Reconfiguration in the Southeast Quadrant of the Louis Riel School Division: Planning for the Present and Future", March 1, 2023, <https://prezi.com/view/5pKmD0Cfd9fz9fHvxabd/>

PART 1 - INTRODUCTION

Background

The Louis Riel School Division (LRSD) Board of Trustees decided in June 2022 that an exchange of the Windsor Park Collegiate and Collège Béliveau buildings is the most optimal, sustainable, and achievable solution to the changing enrollment patterns in the southeast quadrant of the school division. The exchange is triggered by the fact that currently, based on enrollment data, the sizes of each building do not meet the projected school populations. Enrollment growth at Collège Béliveau is projected to continue, while enrollment for Windsor Park Collegiate, is projected to decline as a result of catchment changes.

1015 Cottonwood Road

The building at 1015 Cottonwood Road, which currently serves Windsor Park Collegiate, accommodates students from Sage Creek at present. However, in 2024 it is anticipated that these students will begin transitioning to another building. As a result, following upcoming catchment changes, the building at 1015 Cottonwood Road will have a surplus of learning space relative to the enrollment projections of approximately 550 students.

296 Speers Road

The building at 296 Speers Road, which currently serves Collège Béliveau, was originally built in 1956 with a number of subsequent additions to accommodate growth. The school site has now reached a point where there is no longer the sufficient space to accommodate another addition to support Collège Béliveau's projected enrollment growth of approximately 900 students.

Summary of Process

The LRSD engaged Prairie Architects Inc. and their development team consisting of Wolfrom Engineering Ltd., KGS Group, HTFC Planning and Design and Postma Quantity Surveying to design concepts with cost estimates for each

school, to accommodate the exchange of buildings. The work has included consultation with community, Divisional leadership, and school administration and staff teams.

The development team conducted existing building assessments of each school building and analyzed current need and utilization of spaces. The findings informed the development of two preliminary concepts for each building, which included:

- selective demolition of portions of existing building;
- new construction additions;
- renovation of the existing spaces; and
- site development.

The preliminary concepts were presented to community and based on input received, the development team produced conceptual drawings and outline specifications of the final concept design, from which a Class D cost estimate was based. Subsequent phases of this project will need to include a full design development stage, where additional consultation will be sought and operational logistics considered; finalization of the construction drawings and specifications; and the phased construction stages, where the vision of the school communities are fully realized.

Limitations

The on-site building reviews were conducted through visual observation and no destructive or exploratory investigations were undertaken to determine existing conditions within construction assemblies or concealed conditions.

In addition, testing to confirm the presence of hazardous materials was not a part of this study. A detailed hazardous materials inventory and assessment is recommended as part of the next stages of the project development and prior to

any building alteration or demolition.

Estimated Costs

As previously noted, a Class D cost estimate of probable construction costs was prepared based on the final preferred concept. Postma Quantity Surveying performed the costing, which is included as Appendix E to this report. A summary of the Class D cost is as follows:

Due to the preliminary nature of design documents at this early stage in the process, and the renovation scopes of work, a design and pricing contingency of 15% has been carried within the Class D price. In addition, an escalation allowance of 8% has been included to accommodate construction in a phased approach.

The pricing reflects probable construction costs obtainable in Winnipeg as of April 2023 and is a determination of fair market value for the construction of the projects and should not be taken as a prediction of low bid. Costs are inclusive of general contractor's general conditions, overhead, fee, permits, bonds and insurances. GST, professional fees and other soft costs noted are excluded from the estimate.

The pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor and assumes a minimum of four (4) general bidders. If fewer bids are received, the bid results can be expected to be higher.

Recommendations

The conceptual design recommendations for each school aim to maximize the use of existing assets to the greatest extent possible while at the same time achieving required functional space needs for each school and addressing non-compliant and out-dated spaces. From a construction phasing and site development perspective, a "campus approach" was considered. Ultimately, the design recommendations strive to respond to

the individual need and identity of each school community.

1015 Cottonwood Road

Based on an existing building condition assessment of 1015 Cottonwood Road, program and space utilization analysis of Collège Béliveau, and discussions with stakeholders, it was determined that a new construction addition is required to accommodate a Student Commons and band/music learning spaces, while at the same time creating a strong sense of entry and "heart" of the school. The remainder of learning spaces determined to be required can be achieved through renovations to the existing building.

296 Speers Road

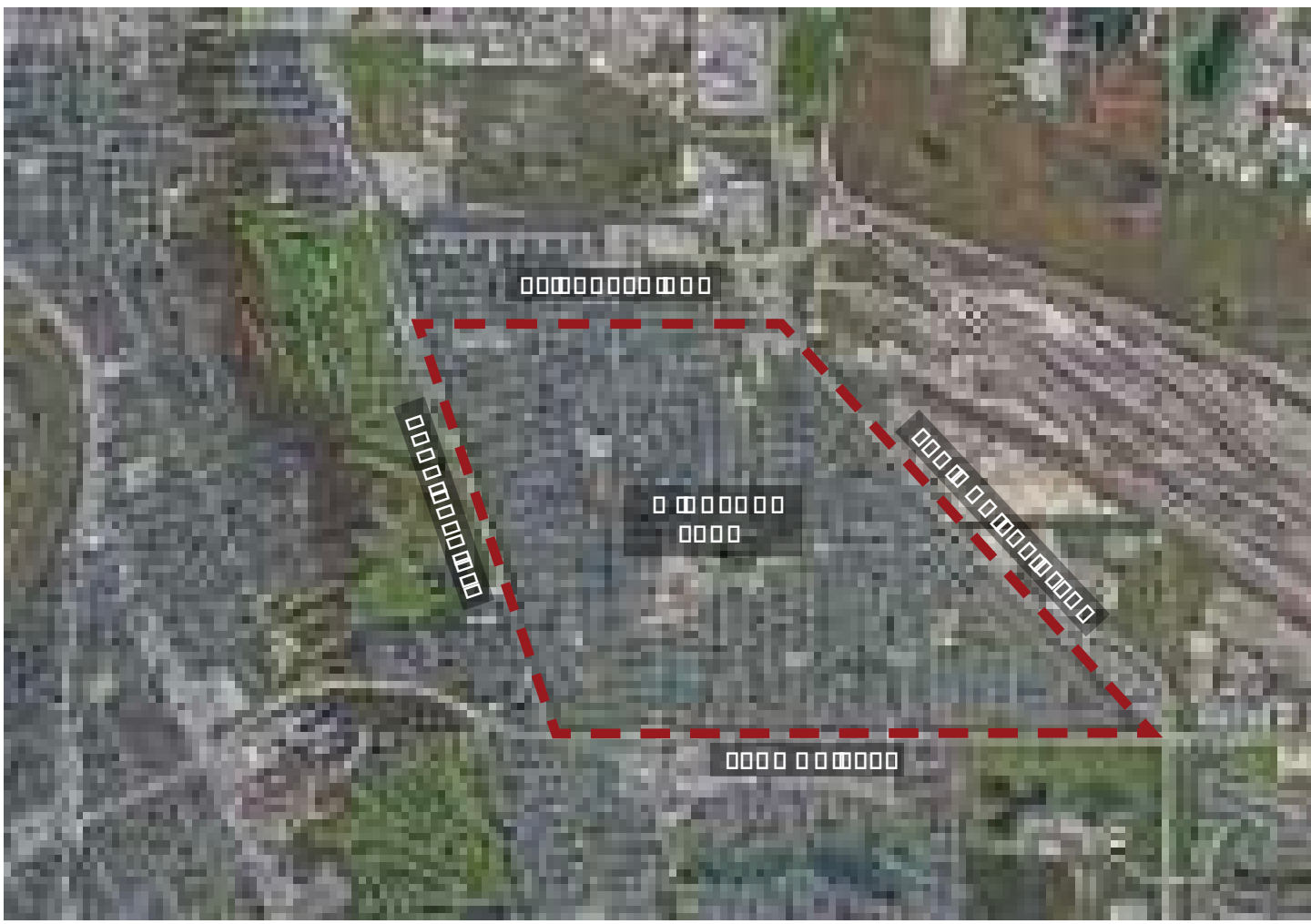
Based on existing building condition assessment of 296 Speers Road, program and space utilization analysis of Windsor Park Collegiate, and discussions with stakeholders, it was determined to be necessary to demolish a portion of the existing building in order to make way for a new construction addition to accommodate a gymnasium with related ancillary spaces; a fitness space; a stage and adjacent music learning space appropriate for performing arts; a community/indigenous space with kitchenette; and administrative space, central to the school and adjacent the main south entry. The remainder of learning spaces determined to be required can be achieved through renovations to the existing building, including provision of practical arts spaces in the existing gymnasium.

PART 2 - EXISTING SITES AND BUILDINGS

2.1 Site Location and Context

Neighborhood

The school sites are located in the Windsor Park neighborhood of St. Boniface, located southeast of Winnipeg’s downtown, bounded by Elizabeth Road to the north, Archibald Street to the west, Lagimodière Boulevard to the east and Fermor Avenue to the south.



Windsor Park Neighborhood



School Properties at 1015 Cottonwood Rd. and 296 Speers Rd.

Existing Site Conditions and Considerations

Cottonwood Site

1. Context and Adjacent Users

- The Cottonwood Road site is surrounded by commercial and mixed-use residential development to the west, single family residential to the south and east, the Speers Road School site to the north east, and the City's Winakwa Community Club complete with hockey rinks, sports fields, a community garden and an outdoor pool complex to the North. A new fire hall is being built on the corner of Autumnwood and Cottonwood in 2023-2024.

2. Vehicular Circulation

- Cottonwood Road and Autumnwood Drive are the two main roadways feeding to the school site. There is no parking or

stopping on Cottonwood at this time.

As a result pick up drop off and facility parking are clustered to the west and north-east of the school. It is not obvious where school buses drop off to this school right now.

- To the west a very busy north-south back lane accessed from Cottonwood on the south-west corner of the school site, running parallel to the adjacent mixed use commercial development and outlets onto Winakwa Road (north) very close to the Community Centre Access points and parking lots. This lane is heavily used by the school community with unregulated 2-way traffic and many conflicts in the parking lot and along the length of the lane.
- To the north and east access occurs from

the north-east corner of the property off of Speers Road very close to the community pool. Speers road is heavily used by the Cottonwood school staff at peak times and the Cottonwood school access point is very close to the staff parking lot and pick up drop off areas for the Speers Road School causing congestion and confusion at high traffic times of day. The City's Outdoor pool facility access lane exits at an unsafe angle back onto Speers at the same location as the school access lane meets the street.

- Parking lots on the property (+/-70 stalls west side and +/- 34 east side) are poorly organized with some wasted laneway and double loaded parking bay space to the east of the school by the City's tennis courts and cars backing out into the public lane to in the west marking lot. There seem to be minimal accessible parking stalls on site that are retrofitted into the existing parking lot and do not have a fully accessible route to the main doors of the facility. Loading to the school's Gym is also minimal and does not meet modern turning radius back-in loading access standards.
- There is a public transit bus stop on the south side of Cottonwood near the south-west corner of the school site. There is also a transit stop on the north side of Cottonwood just west of Speers Road.
- The City of Winnipeg has some concerns about upgrading the lane to the west of the school should it continue to serve as a pick up drop off and major entry for the Cottonwood School Site (Refer to Appendix C of this report)

3. Pedestrian and Active Transportation Circulation

- The site can be accessed from a public sidewalk on Cottonwood and has some well positioned internal paths that meet pedestrian desire lines to the main

entrances of the school on the south and west side.

- There is a pedestrian crossing across Cottonwood at the south-west corner of the school site (just past the back lane and Canberra street intersection) connecting the bus stop on the south side of the Cottonwood to the main school entry on the west side of the school.
 - There is no public sidewalk on the east side of the school through the parking lot, no sidewalk on the west side of Speers road and no sidewalk on the north side of the site running east-west between the schools or north-south between the cottonwood School and the Community Centre.
 - Speers Road between Winakwa and Jogues is a pedestrian and cyclist only environment. There is no evidence of bike racks on the existing site (but it was winter during this study and bike parking may have been covered by snow)
- ### 4. Orientation, Exposure and Microclimate
- The school has some excellent but underutilized south facing green spaces that can be developed into more active people spaces. The northwest side is well buffered by the existing building and the north and east side of the school can also be enhanced into comfortable outdoor rooms with additional tree planting.
 - Mature trees on the edge of the site and the public right of way along Cottonwood and Speers mitigate heat island affects, wind effects, road noise, and increase human comfort. They should be maintained wherever possible within the renovation/expansion plans for the school site
- ### 5. Outdoor Recreation and Education Amenities
- This school site has minimal exterior amenities on site. On site features include

an aging half basketball court on the southwest corner close to Cottonwood where balls can easily stray into the street or back lane, a large underutilized passive south facing lawn with precast concrete site furnishings, and tennis courts on the east side of the school property operated by the City for community use.

- The school utilizes the Winakwa Community Centre baseball diamonds, outdoor rinks, and turf fields immediately north of the school via an informal cross access agreement at this time.

6. Below and Above Grade Utilities

- Building water and sewer services to the school come from Cottonwood.
- Above grade hydro poles run north south along the west side of the back lane immediately west of the school site. Above grade hydro poles also run north to south along Speers from Cottonwood all the way to Winakwa. Manitoba Hydro has a substation on the corner of Speers and Winakwa accessed from Winakwa (as Speers has been converted to a pedestrian lane between Jogues and Winakwa). It is unlikely these hydro services will be moved below grade so the site planning must respect their location and setback requirements.

Speers Site

1. Context and Adjacent Users

- The Speers Road site is surrounded by single family residential development to the north, south and east, Sant Martyrs Canadiens Church on the north-east corner, a Manitoba Hydro Substation on the north west corner, a City of Winnipeg outdoor swimming pool complex on the south west corner, and Winakwa Community Centre grounds to the west.

2. Vehicular Circulation

- The Speers Road school site can be accessed from Speers and Jogues on the

south edge of the site and from Speers and Winakwa on the north west corner of the site. Speers has been closed to vehicles between Jogues and Winakwa. The main feeder roads to the school site are Cottonwood Road to the south and Autumnwood Drive to the west.

- Jogues road is narrow and residential in nature with residential driveways facing the school property. Parallel parking is allowed on the north side of Jogues just south of the school parking lot between 9am and 5:30pm (2hrs) but the school the parking lot access driveways limit the amount of drop off and parking available on the street. There is no clear circulation route for parent drop offs in the morning or any obvious area for school buses to deliver students.
- Those approaching the school from Winakwa and Speers do not have a clear or dedicated drop off space on the north west corner of the site. 280 Speers driveway is particularly close to where most parents are likely to want to stop to drop children off causing potential conflicts during peak pick up and drop off times (especially mornings). The Hydro substation has a driveway into their compound from Winakwa very close to this intersection.
- The south-west corner of the site accommodates a garbage pick-up zone whose drive isle is shared with the parking lot exit. The City's outdoor pool yard access lane aligns with the intersection of Speers and Jogues further adding to the congestion at the south west corner of the site.
- There is a good sized parking lot (+/- 85 stalls) along the south edge of the site with 2 and a half bays of parking. Due to the incremental manner in which the school has grown there is also an internal paved service lane accessed from the north east corner of the parking lot along the east side of the building into

an existing east facing 3-sided service courtyard.

- The closest public transit bus stops are on the north side of Cottonwood west of Speers and the south side of Cottonwood between Speers and Jogues.
- The City of Winnipeg has some concerns about bus and parent drop off conflicts with the hydro substation and residential property at the intersection of Speers and Winakwa. (Refer to Appendix C of this report)

3. Pedestrian and Active Transportation Circulation

- The main entrances to the school are not obvious or easy to find. The northwest corner entry lacks signage but is the only entry with an accessible ramp for that side of a split level school. The south entry that is used by most visitors and staff is recessed behind the mass of the gym in a link between two additions.
- The site can be accessed from Cottonwood along an east side public sidewalk on Speers that has a pedestrian crosswalk across Jogues. The sidewalk continues north parallel to the section of Speers road that has also been pedestrianized duplicating the pedestrian environment in this location. There is no designated grade separated sidewalk from the Jogues crossing to the south entry of the school. Pedestrians are required to walk across the staff parking lot to get to this entrance.
- The west side of the school should be repurposed to exterior school ground amenity while the existing Speers Road Pedestrian Corridor is enhanced to become the main At route and community walkway between Jogues and Winakwa.
- There is a community sidewalk running east-west along the north side of the building east of where Winakwa ends with a north-south connecting walkway

from Jubinville Bay that should be maintained.

- There is no evidence of bike racks on the existing site (but it was winter during this study and bike parking may have been covered by snow)

4. Orientation, Exposure and Microclimate

- Due to the incremental additions this school has an underdeveloped east facing courtyard with an excellent sheltered microclimate that should be maintained if possible in the renovation expansion plans. The school also has south, west, and east yards with good sunlight. Additional planting in the north-west corner of the site near the hydro substation should be considered for increased wind mitigation and noise buffering. The north side of the school is least desirable from a microclimate standpoint. This narrow strip of land should be considered for parking instead of green space.
- There are no trees on this school site. Trees should be added to mitigate heat island effect and increase biodiversity on the site.

5. Outdoor Recreation and Education Amenities

- This school site has a newly updated and resurfaced basketball court on the south west corner of the school site and an aging running track that requires resurfacing with an interior sports field on the east side of the site that should be maintained/upgraded with the renovation expansion of the facility. There is a community garden around the City's outdoor pool and along the pedestrianized section of Speers Road. There is no provision for exterior industrial arts spaces and the courtyard within the site is underdeveloped with a security gate on the east end to prevent vandalism. The site is lacking outdoor

learning environments and humane lounging spaces for students, staff, and visitors.

- The school utilizes the Winakwa Community Centre baseball diamonds, outdoor rinks, and turf fields immediately north of the school via an informal cross access agreement at this time.

6. Below and Above Grade Utilities

- Building water and sewer services to the school come from Winakwa and Jogues.
- Above grade hydro poles run north to south along Speers from Cottonwood all the way to Winakwa. There are also above grade hydro poles along the south side of Winakwa that intensify around the Manitoba Hydro substation. The poles continue east along the north edge of the school property all the way to Dussault Avenue. It is unlikely these hydro services will be moved below grade so the site planning must respect their location and setback requirements.

2.2 Cottonwood Building

History of Construction

The Cottonwood building, which currently serves Windsor Park Collegiate, was originally constructed between 1959 and 1960 with additions in 1966 and 1969. The original building and subsequent 1966 addition is comprised of a series of partial hexagonal units, joined by a central hallway. The 1969 addition at the back of the school is a departure from the hexagonal plan, and houses a second gymnasium, library and practical arts programming.

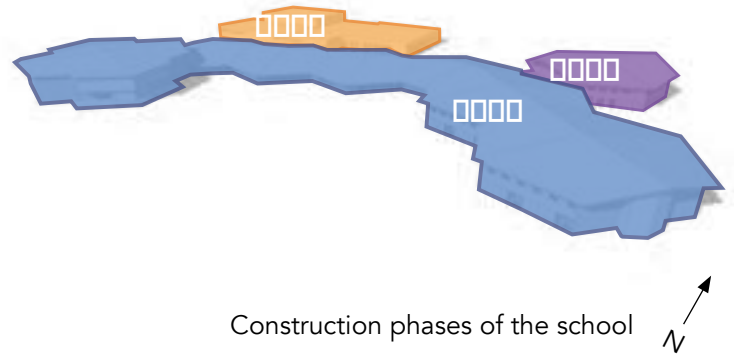


School property and building at 1015 Cottonwood Rd.

Cottonwood Building Exterior

The original building shown in blue in the diagram to the right, is comprised of seven hexagon pods. An eighth hexagon pod, highlighted in purple in the diagram to the right, was added in 1966. The exterior of these parts of the building are clad in pink-toned brick and beige stucco. The roofs are pitched and many of the original windows have been removed and stuccoed over.

The 1969 Addition shown in orange in the diagram to the right, breaks from the original hexagon design and is clad in red brick with a heavy grey metal top.



**Original construction - gymnasium, south facing



Current gymnasium, with original windows filled-in



**Original construction - 2-storey classroom hexagon pods



Current 2-storey classroom hexagon pod

**original photo from Winnipeg Architecture Foundation <https://winnipegarchitecture.ca/1015-cottonwood-road/>



1966 Addition of 8th 'hexagon pod'



1969 Addition of gymnasium, library and practical arts



North entry into original single-storey hexagon pod, with 1969 addition visible to the right (library space)



Link between original single-storey hexagon pod and 1969 addition (practical arts space)

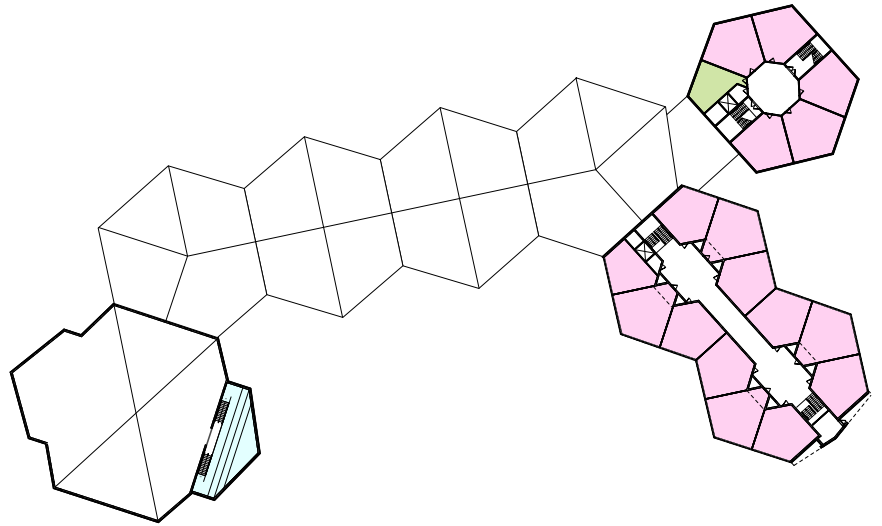


Front of school along Cottonwood Road, with gymnasium to the left; 2-storey classroom pod to the right, and central classroom and administration pods in the centre with main south entry

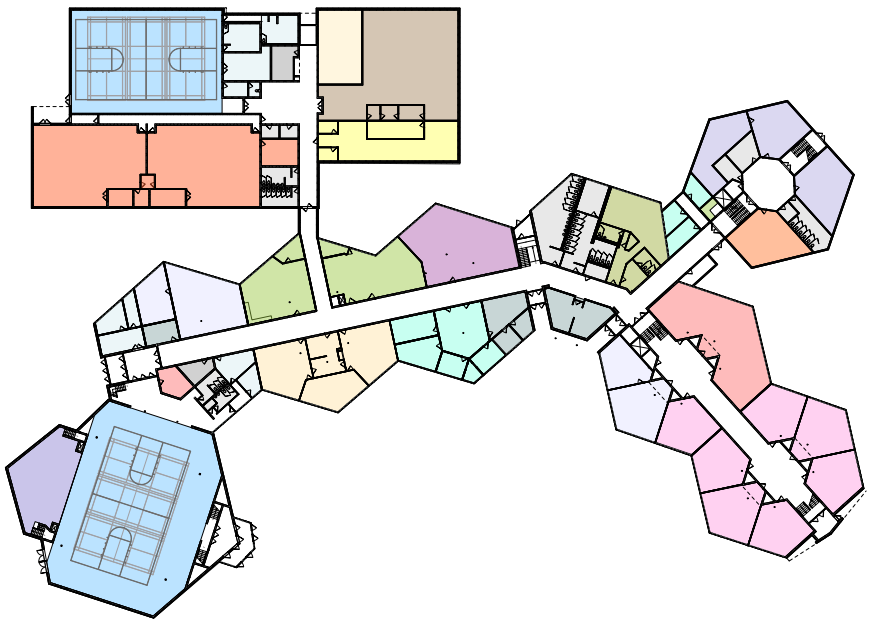
Cottonwood Building Layout

The building is predominately on one level with the exception of the three east-most hexagon pods, which are a two-storey split level. The layout generally consists of the following:

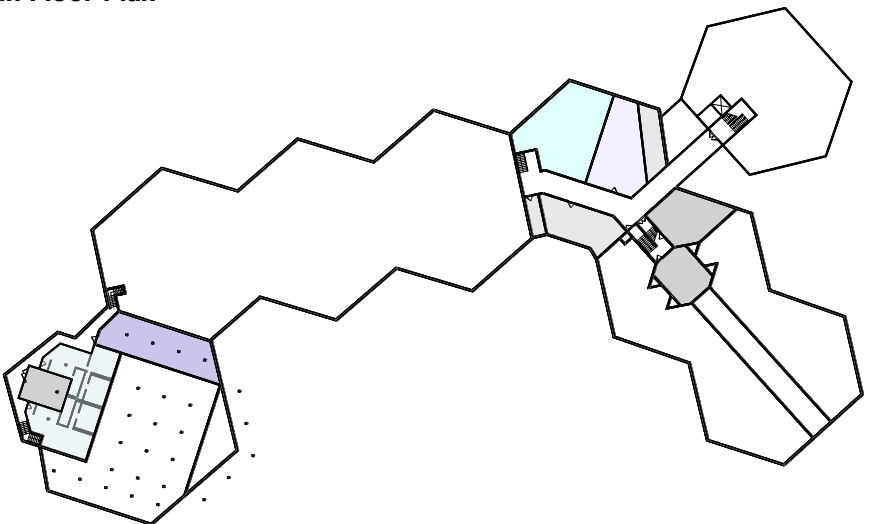
- general classrooms in the east two-storey hexagon pods;
- administration, staff, student services, individualized programming and science labs centrally located in single-storey pods;
- gymnasium #1, viewing mezzanine and stage in southwest hexagon pod, with change rooms in the basement below; and
- gymnasium #2 and associate ancillary spaces, library, and practical arts spaces in rectilinear addition to the north.



Second Floor Plan



Main Floor Plan



Basement Floor Plan

Cottonwood Building (current) Legend

- COMMONS
- COMMUNITY / INDIGENOUS ROOM

- ADMINISTRATION
- STUDENT SERVICES
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)

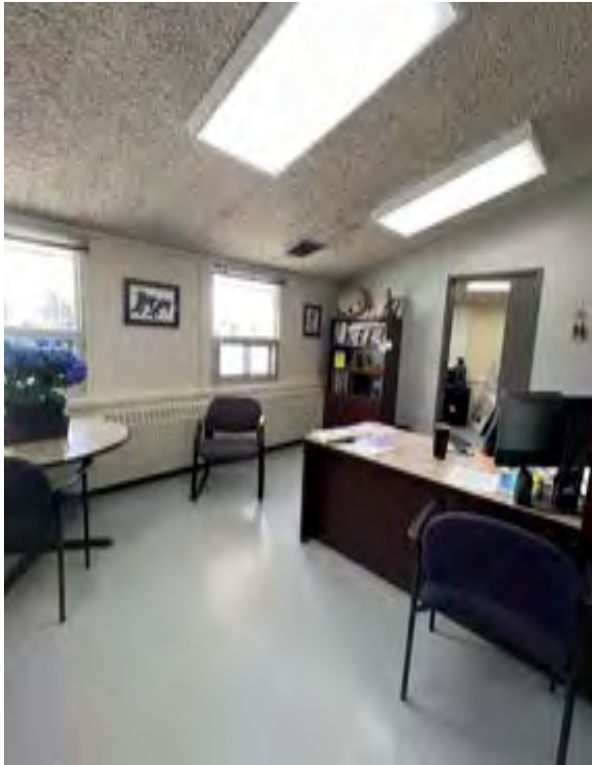
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY

- GYMNASIUM
- FITNESS
- GYM SUPPORT

- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT

Administration and Student Services

The administration area is centrally located on the main floor and contains a number of enclosed offices and open reception area.



Office (typical)



Open reception area

Staff Room

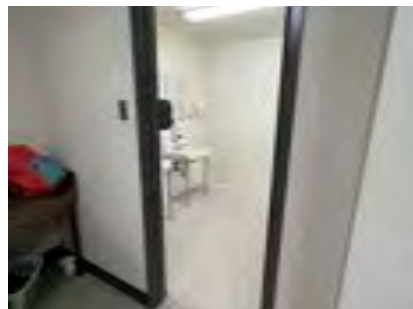
The existing Staff Room is centrally located on the main floor of the original building, across the corridor from Student Services.



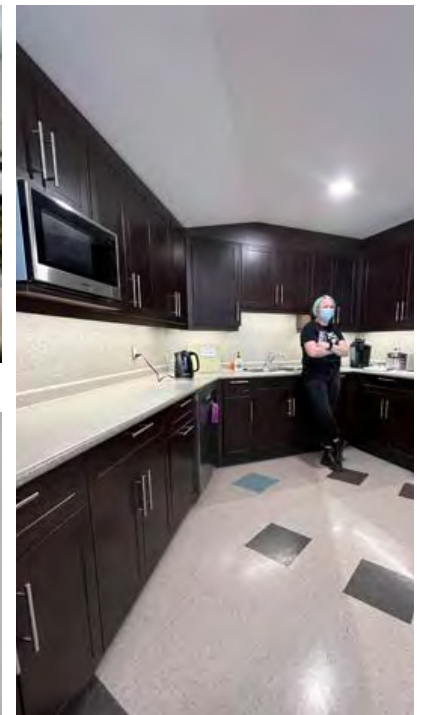
Staff Room, entry with staff mailboxes and storage



Staff Room, lounge



Staff Room, washrooms



Staff Room, kitchen

Gymnasium #1, Change Rooms, Viewing Mezzanine, Canteen and Raised Stage

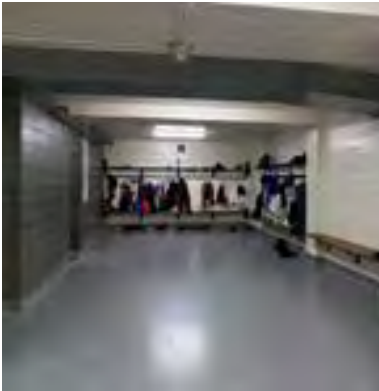
The southwest hexagon pod of the original 1959 building is comprised of Gymnasium #1 with associated ancillary spaces and canteen, a raised stage and viewing mezzanine. Additional change Rooms and Performing Arts Storage are located in the basement. Both the basement and mezzanine spaces are not accessible by elevator. Based on occupant feedback, the mezzanine and vestibule / storage space below are largely unused spaces and there are supervision concerns with both the vestibule and basement change rooms spaces.



Gymnasium #1



Raised stage, open to gymnasium



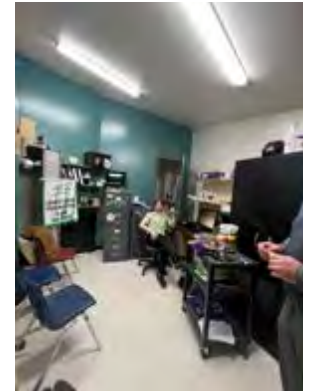
Basement Change Rooms



Stair to basement



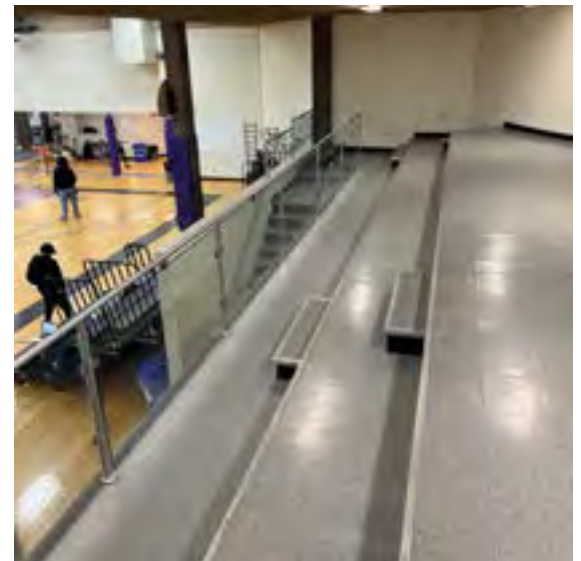
Canteen



Offices



Viewing mezzanine with doors to vestibule below



Inaccessible viewing mezzanine

Gymnasium #2, Change Rooms, Office and Storage

Gymnasium #2 is located on the main floor of the 1969 addition. The gym ancillary spaces include change rooms, equipment storage room and an office with washroom.



Gymnasium #2



Office



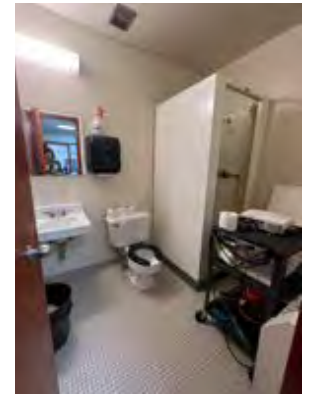
Change Room



Showers/ Washrooms



Storage



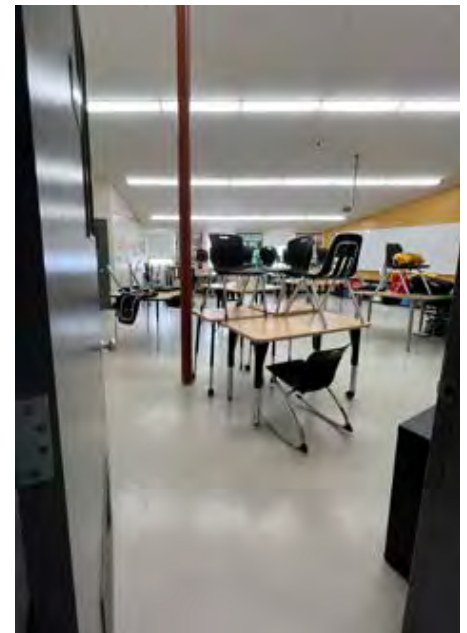
Washroom

Science Lab and Classroom

The existing Science Labs are centrally located on the main floor of the original building, adjacent to Administration. The spaces are outdated and were slated for renovation and upgrade. One space is



Science Lab, with sloped ceilings, exposed columns and built-in millwork



General Science Classroom

Classroom (typical)

Typically, general classrooms are located in the two-storey hexagon pods.



Typical Classroom spaces

Music / Band and Guitar Classrooms

The Music / Band and Guitar Classrooms are located on the main floor at the far east end of the 1966 addition, which is a half-level below the main level of the original building. Each room has tiered levels, which step down further. There are storage rooms accessed off the Music / Band room.



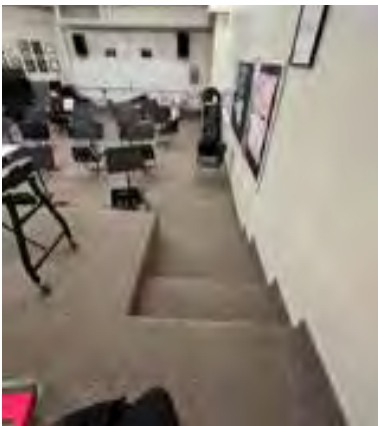
Guitar Room with tiers



Guitar Room with tiers



Entry to Music / Band at upper tier



Music / Band Classroom



Music / Band Storage

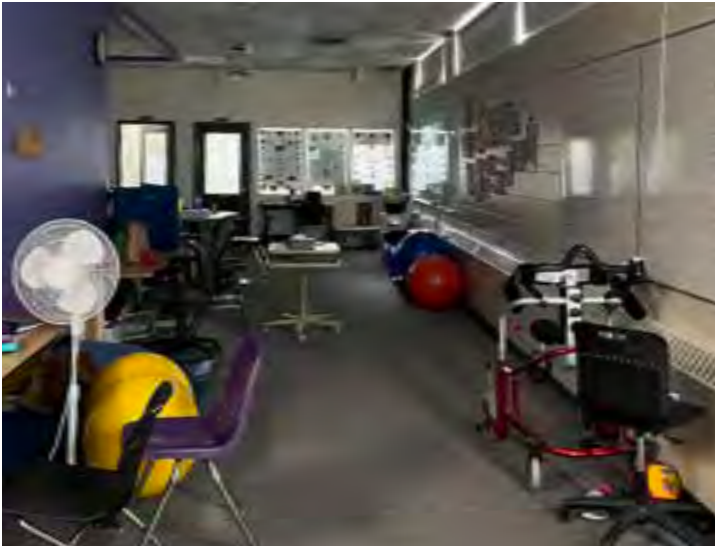


Framed space below Music / Band tiered levels

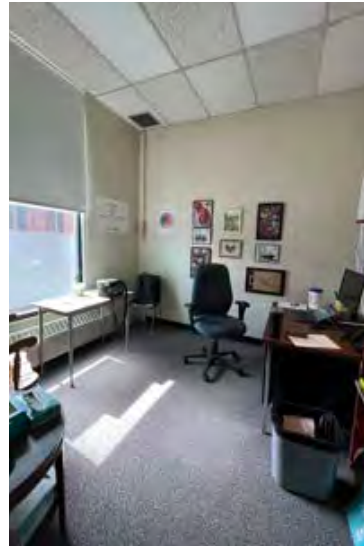


Career Internship Program (CIP)

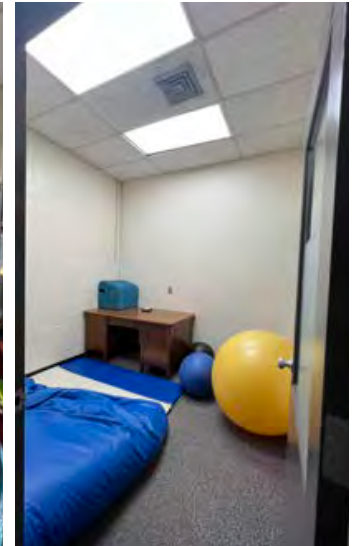
The existing CIP space is located on the main floor of the 1969 addition, adjacent to the Library. The space is comprised of both open classroom space and enclosed offices.



Open classroom space



Office



Office/ Storage

Individualized Programming (IP)

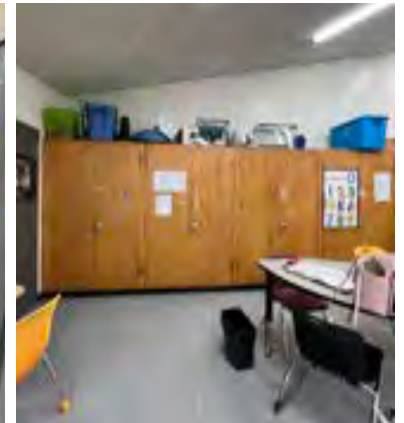
The existing IP spaces are disbursed throughout the school. The main classroom spaces are centrally located on the main floor and a portion of one of the existing elevator vestibules has been allocated for storage of wheelchairs and bikes for students. The Grooming Room is located on the second floor of the east-most classroom pod, however a current renovation is underway to locate a new Grooming Room adjacent to the IP Classrooms spaces on the main floor. IP bus drop-off occurs at the west parking lot entry.



IP Classroom space



IP Storage Room



IP Storage in Classroom



Wheelchair and bike storage in elevator vestibule

Foods / Nutrition

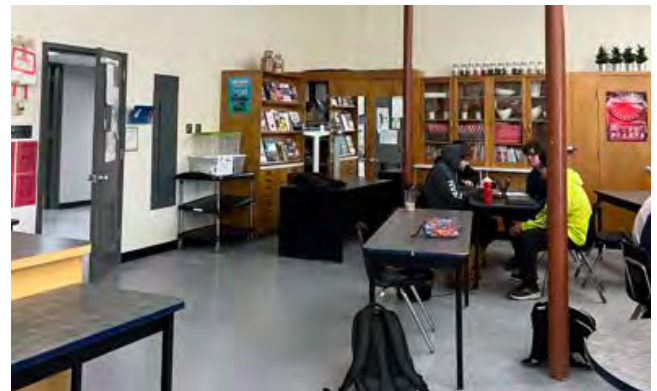
The Foods / Nutrition Lab is located on the main floor of the original 1959 building, located across the hallway from Administration.



Kitchenettes



Classroom Area / Storage



Classroom Area / Storage

Sewing / Textiles

The Sewing / Textiles Lab is located on the second floor of the original 1959 building.



Textiles Storage Room



Sewing / Textiles Classroom

Graphics Lab

The existing Graphics Lab is located in the basement of the original 1959 building, adjacent to the Fitness Room.



Graphics Lab, print / assembly area



Graphics Lab, computer area



Graphics Lab, storage



Graphics Lab, entry

Fitness Room

The existing Fitness Room is located in the basement of the original 1959 building. Based on occupant feedback, the space does not appear to have provision for adequate ventilation.



Fitness Room, entry



Fitness Room, exposed mechanical and electrical on concrete structure

Practical Arts - Woods and Metals
The existing.



Woods Classroom



Shared Office



Woods Storage



Metals Classroom



Paint Room



Metals Storage

Pre-Engineering

The Pre-Engineering program is located on the main floor of the 1969 addition, adjacent to the Library.



Pre-Engineering space

Cottonwood Building - Structure

Introduction

On November 28, 2022, Wolfrom Engineering Ltd. completed a site review of the building located at 1015 Cottonwood Road. The intent of the review was to provide overall commentary on the existing structural systems as they relate to the planned building addition/renovations. The Structural System Summary is included in Appendix A of this report.

Description of Structural System

- The original building was constructed from plans completed by GBR Architects dated March 1959. The geometric plan consists of seven conjoined hexagonal pods, with cast in place concrete foundation elements, concrete floors at main and second floor, and steel and timber roof superstructure.
- The original foundation system consists of 12" to 18" diameter cast-in-place concrete friction piles, complete with 24" deep pile caps, a perimeter 36" deep concrete grade beam, and 8" to 12" reinforced concrete walls at internal locations.
- The main floor is situated mainly over crawlspace, with a basement area located below the existing gym location. Crawlspace floor consists of 5" concrete slab supported on grade.
- The main floor at the gym is a two way 6.5" deep structural slab supported on a grid of 4" diameter pipe columns. Condition of pipe columns were not reviewed in-situ, but should be reviewed in subsequent site reviews prior to construction or modification.
- The remaining main floor utilizes a cast in place concrete waffle slab construction, which creates a ribbed pattern of 5" wide concrete joists with concrete topping continuous over the integral.
- The partial second floor is of similar cast in place waffle slab configuration.
- The majority of the roof system is a relatively complex crystalline grid consisting of both gluelam timber beams and structural steel wide flange beams supported on round steel columns. True 2x14 rough sawn timber joists act as infill between the various beams .
- The gym roof consists of trusses constructed from back to back steel angles of various size and thicknesses, with infill wood joists spanning between the trusses.
- An addition to the north of the original building was completed with drawings by Duncan Rattray Peters Searle Architects from June 1969.
- Existing drawings indicate the main floor consists of a cast in place structural slab supported on a grid of cast in place friction piles. The majority of piles are 16" and 18" diameter drilled to bear onto hardpan, or with lengths as noted on existing drawings. Hardpan was noted as approximately 55' below existing grade.
- A 12"x36" deep grade beam encompasses the building perimeter, with a 6" structural slab noted throughout.
- Roof framing consists of structural steel beams and open web steel joists, complete with 1.5" steel decking.
- The respective building farming appears stable and well maintained. No major signs of distress were noted during the walk through.
- The exterior wall and interior floor system appear to be generally in good condition for the building age and intended use.

Summary

At the time of visit, the building appears in generally good working condition and was noted as consistent with the existing structural drawings where structure was viewed. A subsequent structural review is recommended for all areas proposed for renovation prior to development of design drawings beyond design development stage. This review may require selective demolition for viewing current building structural systems where hidden by finishes.

Cottonwood Building - Mechanical and Electrical

Introduction

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 1015 Cottonwood Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations. The Building Condition Assessment is included in Appendix B of this report.

Executive Summary - Mechanical Systems

The existing mechanical systems in the building are generally operational with several systems near the end of their typical life expectancy. The domestic water, sewer and sanitary sewer services are anticipated to have adequate capacity to service the planned building addition/renovations. Piping within the scope of work area should be replaced as needed.

The existing buildings air handling equipment has the largest need for immediate replacement, with several portions of the system original to the building and inefficient. It is recommended the gymnasium air handling unit is replaced at a minimum complete with variable speed drives, economizer, cooling, and energy recovery for ventilation.

The buildings heating system was recently replaced in 2010 and is expected to be suitable for the planned building renovations. The perimeter heating system appeared to be in good condition.

The existing building is not sprinklered however a portion of the building is expected to require sprinklers for the new building addition/renovation to meet current building codes. The

existing water service is not sufficiently sized to accommodate a sprinkler system so as a result it is anticipated a new 6" water service will be required for the newly renovated portion of the building.

Executive Summary - Electrical Systems

The existing electrical systems in the facility are generally in operational condition but nearing their end-of- life. Large portions of the distribution equipment and building wiring is nearing the end of its life cycle.

The fire alarm control panel is an older panel and has reached the end of its useful life. All devices are conventional and the notification devices are bells. The fire alarm system would be considered as grandfathered; however, it does not meet current codes as manual pull stations are not at the required height and there are no strobes throughout the building. The panel and all notification and detection devices throughout the building should be upgraded during the building's next renovation.

Most of the emergency lighting system has been recently upgraded and complies with latest M.B.C. and Canadian Electrical Code. The exit lighting system does not comply with the latest M.B.C. due to the red exit signs however, this is considered as being grandfathered. The existing red exit lights should be replaced with new green pictogram exit lights during the building's next renovation.

The existing fluorescent and incandescent luminaries are old, inefficient, and have exceeded their life cycle. The entire lighting system and controls could be replaced to meet the Manitoba Hydro PowerSmart program and the Manitoba Energy Code for Buildings to reduce power consumption as well as to provide a longer life expectancy of the system.

2.3 Speers Building

History of Construction

The Speers building, which currently serves Collège Béliveau, was originally constructed between 1956-1957 with additions in 1961, 1964, 1967 and 1993. The original building and was expanded to the south in 1961 with classrooms and an activity room. A few short years later, a single-storey addition to the south was constructed for additional classroom space. In 1967 the activity room was expanded to the south in order to become a gymnasium and another classroom addition was constructed to the east of the original building. The final addition to the building was in 1993, when

the south east portion (shown in yellow in the diagram below) was added, which accommodates the Band program.

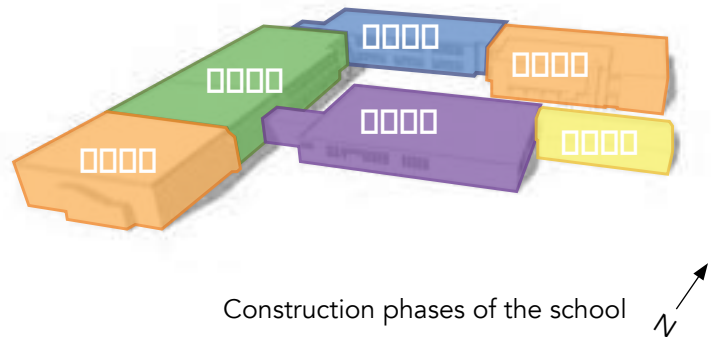


School property and building at 296 Speers Road

Speers Building Exterior

The original building was constructed as an elementary school and is now largely obscured by subsequent additions, except at the north-west corner at Speers Rd. and Winakwa Rd.

Each of the subsequent additions to the original building kept with the red brick exterior and accents of white stucco and dark green base.



**Originally constructed building on the left (north), with two-storey addition in 1961 to the right (south)

**original photo from Winnipeg Architecture Foundation <https://winnipegarchitecture.ca/296-speers-road/>



North-west facing corner, at the corner of Speers Rd. and Winakwa Rd. prior to Student Commons renovation (photo from Winnipeg Architecture Foundation <https://winnipegarchitecture.ca/296-speers-road/>)



West facing facade, along Speers Rd. after Student Commons renovation where the existing short windows were replaced with larger windows on the main floor.



South exit from Gymnasium



North facing facade, along City of Winnipeg easement. Original two-storey building in foreground with the 1967 Addition and track in the background and beyond.



South facing facade of one-storey 1964 Addition



Main entrance accessed from south parking lot, into 1964 Addition "link".



Main entrance at north of original building at the corner of Speers Rd. and Winakwa Rd.

Speers Building Layout

The building is predominately two levels with the exception of the south additions, which are a single-storeys. The layout generally consists of the following:

- administration space on the main floor at the north-west end of the building;
- Student Commons and standard classrooms on either side of the administration suite;
- Science and Pre-Engineering with a staff room and mechanical room on the main floor, east wing;
- Gymnasium, with associated ancillary space to the south-west;
- Band, guitar, fitness, sewing and art in the single-storey additions to the south-east; and
- standard classrooms and resource/offices on the second floor as well as the Library and Student Services in the east wing.



Second Floor Plan

Speers Building (current) Legend

- COMMONS
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- PRE-ENGINEERING
- LIBRARY
- GYMNASIUM
- FITNESS
- GYM SUPPORT
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT



Main Floor Plan

Administration and Student Services

The administration area is located in the north west corner of the main floor, in the originally constructed building. The space is adjacent to the north entry and contains a number of enclosed offices and open reception area.



Offices



Conference / Meeting Room



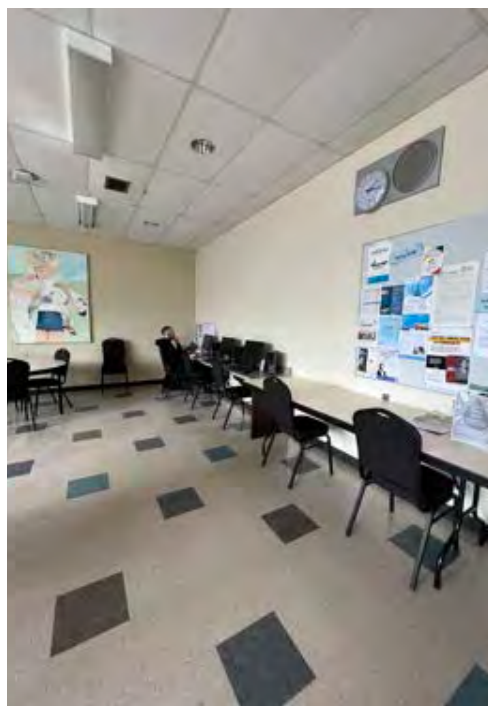
Open Reception Area

Staff Room

The Staff Room is located on the main floor of the 1967 east addition.



Staff Room - kitchen / dining



Staff Room - work area



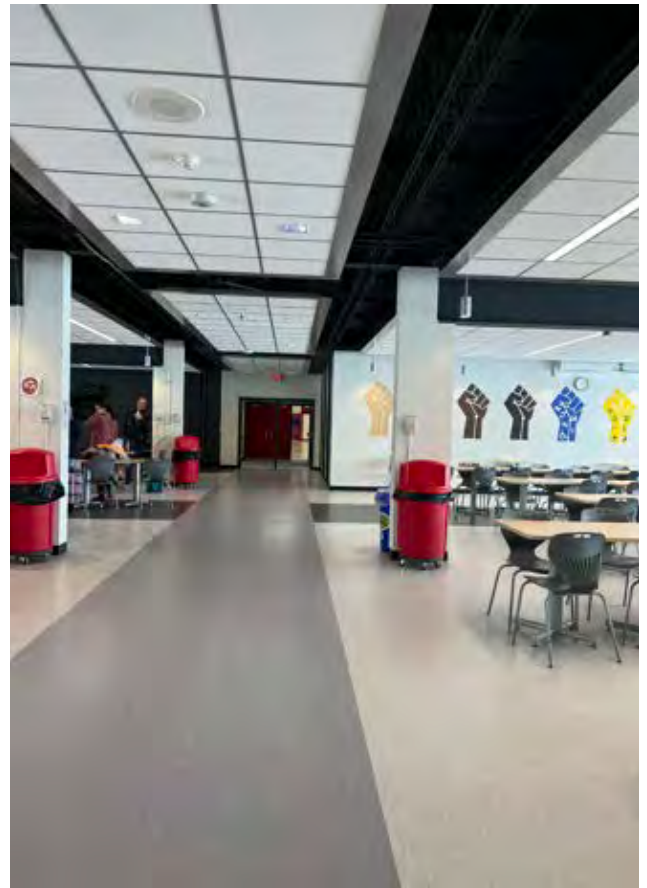
Storage

Student Commons, Kitchen and Servery

The 1961 Addition was initially constructed with classrooms on the main floor, but a recent renovation converted the space to an open Student Commons. The space looks on to the exterior central courtyard to the east and Speers Road and Winakwa Park to the west. There is a Kitchen and Servery at the north end of the Student Commons.



Student Commons, with view to west



Corridor through Student Commons



Separation between Commons & Servery



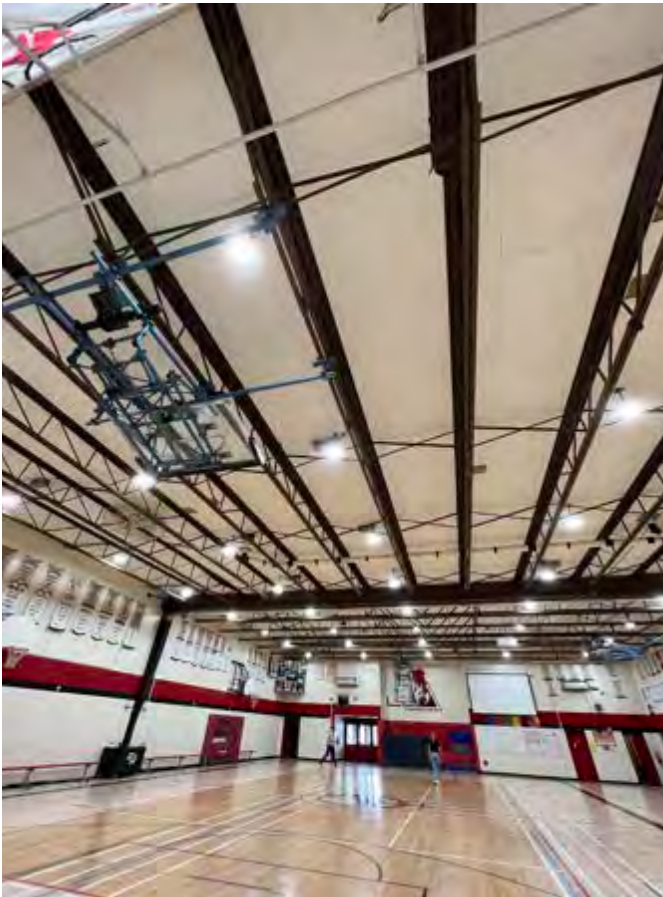
Servery



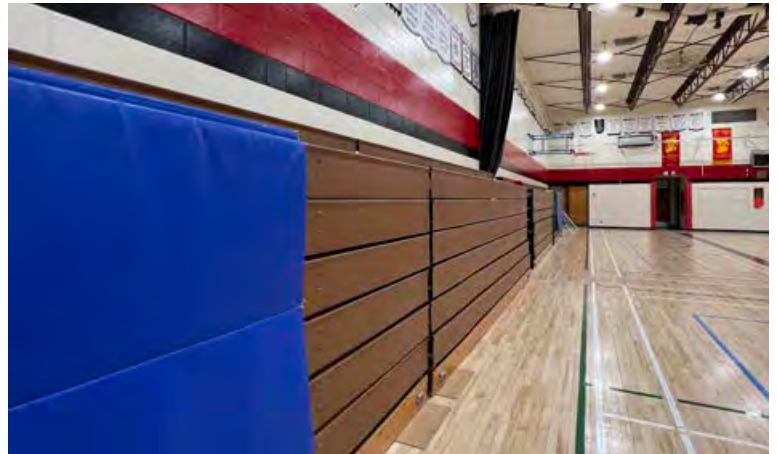
Commons, View to Courtyard

Gymnasium, Change Rooms, Offices and Storage

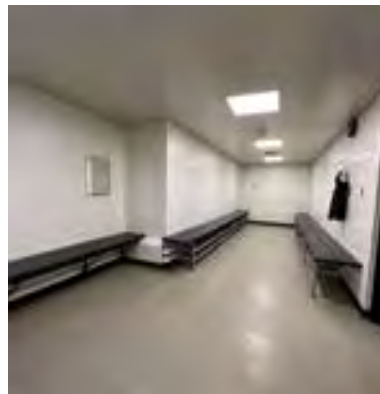
The Gymnasium was originally constructed as an "Activity Room" in the 1961 addition and was subsequently added onto in 1967. The gym ancillary spaces include equipment storage, offices, and change rooms on a mezzanine level.



Gymnasium



Gymnasium



Change Rooms



Storage

Science Labs and Classroom

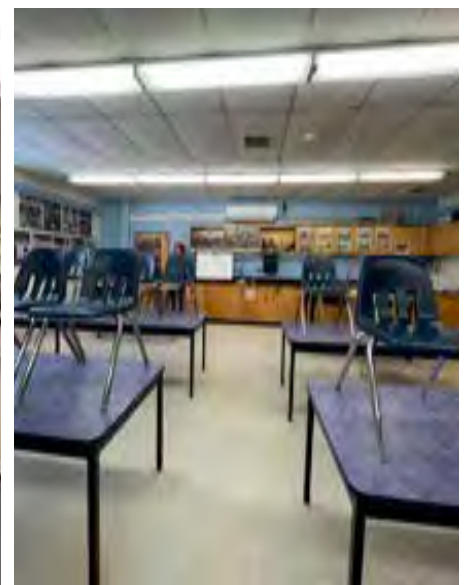
There are three Science rooms: a Biology Lab; a Chemistry Lab and a General Science Classroom, all located on the main floor of the 1967 east addition.



Biology Lab



Chemistry Lab



General Science Classroom

Classroom (typical)

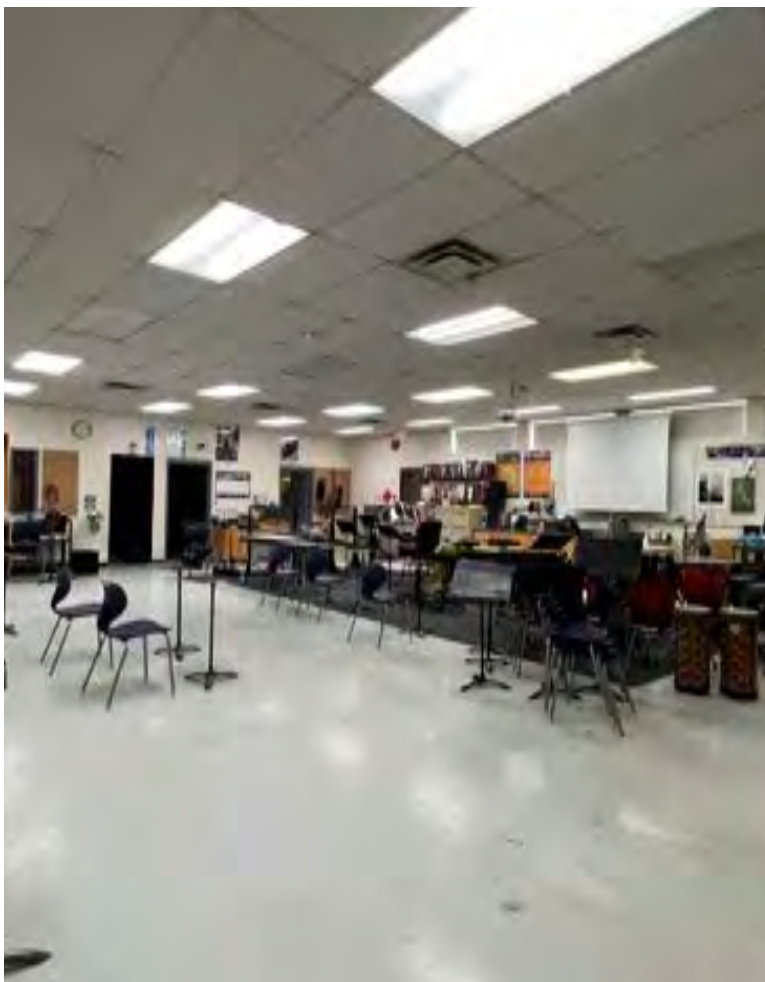
Typically, general classrooms are located on the second floor.



Typical Classroom spaces

Band Room

The Band Room is located in the 1993 one-storey addition and is comprised of an open area, practice rooms, storage and washrooms.



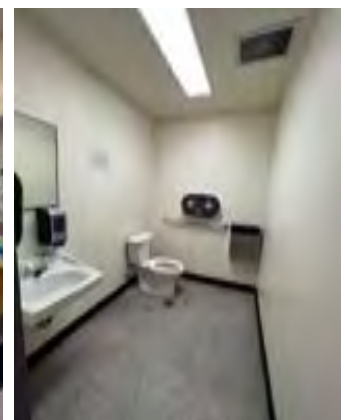
Music / Band Classroom



Practice Room/ Storage



Office



Washroom

Pre-Engineering

The Pre-Engineering Room is located on the main floor of the 1967 east addition, with the Science Rooms.



Pre-Engineering Classroom space



Storage



Storage in Classroom



Tool space

Library

The Library is located on the second floor of the 1967 east addition, south-facing.



Library



Library Storage



Library, work area

Foods / Nutrition

The Foods / Nutrition Lab is located in the 1964 one-storey addition.



Foods / Nutrition Lab



Storage



Laundry area

Sewing / Textiles

The Sewing / Textiles Lab is located in the 1964 one-storey addition.



Classroom space



Storage

Art

The Art Room is located in the 1964 one-storey addition.



Classroom space with art sink



Teacher station and front of classroom

Fitness Room

The Fitness Room is located in the 1964 one-storey addition. The space is comprised of open areas with equipment, an office and storage.



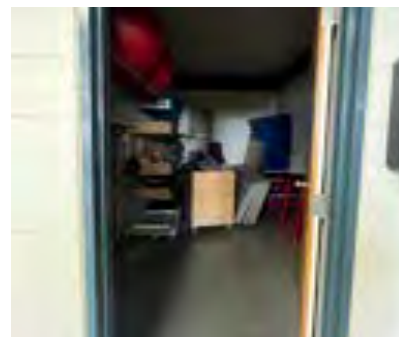
Open Fitness area



Cardio machine space



Storage



Storage

Speers Building - Structure

Introduction

On November 28, 2022, Wolfrom Engineering Ltd. completed a site review of the building located at 296 Speers Road. The intent of the review was to provide overall commentary on the existing structural systems as they relate to the planned building addition/renovations. The Structural System Summary is included in Appendix A of this report.

Description of Structural System

- The original building is noted as constructed in 1957, with multiple additions completed in the 1960s, with a smaller 1993 addition.
- Existing drawings for the original building were not available for review, however partial renovations to the original building were completed off drawings by Number Ten Architects dated June 2016. Structural drawings of the 2016 renovation were not provided for review.
- Roof assembly for the original building is schematically shown on architectural drawings as open web steel joists, with concrete block masonry bearing walls.
- Stairwells were noted on site as cast in place concrete.
- Existing two hour fire separation locations are also noted on the 2016 renovation drawings.
- An addition to the original building was constructed off drawings dated November 1961 by Zunic & Sobkowich Architects. The addition includes new classrooms and a gymnasium.
- The building is supported on cast in place concrete friction piles of 16" diameter, but of various depths. A large influx of water was noted in the soil log upon reaching hardpan. Note pile diameter are only described in section, not on plans.
- Piles support 36" deep perimeter and 24" deep interior corridor wall bearing cast in place concrete grade beams.
- Gymnasium floor consists of a 6" cast in place concrete structural slab designed for 100 psf, along with various stairwell and service areas.
- Corridor floor is similarly designed to 100 psf, but consists of 16" deep short span open web steel joists.
- Classroom also consists of 16" deep short span open web steel joists. 2.5" topping slab runs over corridor and classroom joists.
- Second floor is of similar framing to main floor, with concrete block walls providing the majority of bearing conditions, with some infill steel beam lintels over openings.
- Non load bearing 6" concrete block acts as separating walls between some classroom locations.
- S2x8 wood framing was noted along a corridor location adjacent to the gymnasium, described as auditorium in the drawings.
- A subsequent classroom addition to the original building and addition was completed off drawings by Etienne Gaboury dated December, 1964.
- The addition drawings describe the building founded on 12 and 14" diameter piles drilled to hardpan, approximately 47' below grade, with top of pile 3' below top of main floor.
- Perimeter and majority of interior cast in place concrete grade beams are 36" depth, which at classroom areas support open web steel joists within a crawlspace with concrete slab spanning over joists, and at east assembly area support a 5" structural slab.
- Joists span from exterior wall to corridor wall bearing lines.
- Live load allowances are noted as 60 psf at classroom areas, and 100 at corridor and assembly areas.
- Roof framing consists of open web steel joists in similar spanning orientation to main floor joists at classrooms, and short direction over the assembly area. All are noted as 22" deep, supporting transverse 1.5" steel decking.

- Perimeter and bearing walls are noted as concrete block, typically of 10" width.
- A subsequent larger addition was completed off drawings dated March 1967 by the same architectural firm. This addition encompasses two distinct wings, areas that now house the library and an enlargement of the existing gymnasium.
- Very similar framing strategies were utilized for these additions, with member sizes and depths adjusted to suit different span conditions.
- A 6" cast in place concrete structural slab forms the main floor of the new gym area.
- The classroom wing including mechanical area is of similar open web steel joists and crawlspace, with perimeter cast in place concrete grade beams. Perimeter grade beam is noted as 12x30, with interior corridor beams noted as 12"x18".
- Corridor floor framing is noted as 1.5" Terrazzo finish over 4.5" structural slab.
- Note piles for these additions are all 16" diameter installed to various depths, not to hardpan as previous addition indicated. It is assumed drilling conditions encountered during the previous construction were difficult, and piles may or may not have been installed as indicated.
- At the gym enlargement 42" bottom chord bearing open web steel joists clear span the full building width. Snow loading at all 1967 addition roof is noted as 36 psf throughout, slightly less than what current loading requires. Joists bear onto concrete block wall of unconfirmed thickness.
- A significant W33 beam spans at the previous opening between new and existing gym.
- Loading allowance at the existing gym mezzanine is noted as 100 psf live with additional allowance to suit mechanical equipment hung from the roof above.
- The entire building complex appears to be

stable and well maintained for the age and intended use of the building.

- The exterior wall and interior floor system appear to be generally in good condition for the age and intended use of the building.

Summary

At the time of visit, the building appears in generally good working condition and was noted as consistent with the existing structural drawings where structure was viewed. A subsequent structural review is recommended for all areas proposed for renovation prior to development of design drawings beyond design development stage. This review may require selective demolition for viewing current building structural systems where hidden by finishes.

Speers Building - Mechanical and Electrical

Introduction

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 1296 Speers Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations. The Building Condition Assessment is included in Appendix B of this report.

Executive Summary - Mechanical Systems

The existing mechanical systems in the building are generally operational with several systems near the end of their typical life expectancy. The domestic water, sewer and sanitary sewer services are anticipated to have adequate capacity to service the planned building addition/renovations. Piping within the scope of work area should be replaced as needed. Indoor air handling units serving the library and 1956

buildings are not anticipated to be in the scope of work for the building addition/renovations, but consideration should be taken to replacing these units soon.

The buildings heating system was recently replaced however an exact installation date could not be verified. The heating systems capacity and infrastructure is expected to be suitable for the planned building renovations. The perimeter heating system appeared to be in good condition.

The buildings cooling system also appears to be new and in good condition. The buildings cooling system primarily consists of individual wall mounted split system AC units in each classroom so the cooling systems are not capable of expansion however a similar approach can be considered for the new addition.

The existing building is not sprinklered however a portion of the building is expected to require sprinklers for the new building addition/renovation to meet current building codes. The existing water service is not sufficiently sized to accommodate a sprinkler system so as a result it is anticipated a new 6" water service will be required for the newly renovated portion of the building.

Executive Summary - Electrical Systems

The existing electrical systems in the facility are generally in operational condition but nearing their end-of- life. Large portions of the distribution equipment and building wiring is nearing the end of its life cycle, however, the main distribution panel was recently upgraded.

The fire alarm control panel is a newer panel; however, it may not have the capacity for additional zones. All devices are conventional and the notification devices are bells. The fire alarm system would be considered as grandfathered; however, it does not meet current codes as manual pull stations are not

at the required height and there are no strobes throughout the building. The panel and all notification and detection devices throughout the building should be upgraded during the building's next renovation.

Most of the emergency lighting system has been recently upgraded and complies with latest M.B.C. and Canadian Electrical Code. The exit lighting system does not comply with the latest M.B.C. due to the red exit signs however, this is considered as being grandfathered. The existing red exit lights should be replaced with new green pictogram exit lights during the building's next renovation.

The existing fluorescent and incandescent luminaries are old, inefficient, and have exceeded their life cycle. The entire lighting system and controls could be replaced to meet the Manitoba Hydro PowerSmart program and the Manitoba Energy Code for Buildings to reduce power consumption as well as to provide a longer life expectancy of the system.

PART 3 - FUNCTIONAL SPACE PROGRAM

3.1 Existing Space Utilization

Background

A functional space program was created to comprehensively account for each space and the existing space utilization of both the Cottonwood and Speers buildings. Base plans for each school were created through a review of existing plans and on-site observations. From these base plans, area calculations were derived to form the basis of the existing functional space programs. The existing functional space programs formed the baseline for comparison in analyzing the fit for each school in their proposed new building.

The base plans and existing functional space programs were subsequently reviewed with the school administration and staff teams to confirm any assumptions.

The following pages contain the existing functional space programs for each of the schools in their current buildings (i.e. Windsor Park Collegiate in the Cottonwood building and Collège Béliveau in the Speers building)

Cottonwood Building

Last Updated: 2023-04-20

EXISTING SPACE PROGRAM for WPC 1015 Cottonwood Road, Winnipeg, MB

No.	Room	Number of Spaces	Total Area (SF)	Notes
1.0 INSTRUCTIONAL SPACES				
1.1 CLASSROOMS				
	General Classrooms	24	16,918	Classroom size ranges from 660 - 840
	Community/ Indigenous Room	1	1076	
	Individualized Program (I.P.)	3	3,001	includes open storage in elevator vestibule
	Career Internship Program (C.I.P.)	1	1,542	includes offices
	Art Room	1	1,588	includes storage
1.2 SPECIALIZED CLASSROOMS				
	Science	2	2,266	Includes office / prep and chemical storage
	Sewing and Textile	1	1,200	includes storage
	Graphics Lab	1	1,558	storage included
	Foods and Nutrition	1	1,865	
	SUBTOTAL INSTRUCTIONAL		31,014	
2.0 SPECIALIZED SPACES				
2.1 GYM #1				
	Gym #1	1	7,123	
	Storage	1	565	
	Offices	2	350	
	Change Rooms	2	1,797	
	Canteen	1	284	
	Viewing Mezzanine	1	997	
2.2 GYM #2				
	Gym #2	1	4,320	
	Storage	1	373	
	Office	1	155	includes washroom
	Change Rooms	2	573	
2.3 SHOPS				
	Wood Shop	1	2,798	Includes storage and shared office
	Metal Shop	1	2,565	Includes storage, shared office, and paint room
2.4 PRE-ENGINEERING				
		1	933	
2.5 FITNESS				
		1	1,540	
2.6 MUSIC/ PERFORMING ARTS				
	Band Room	1	1,622	includes storage rooms
	Guitar	1	1,095	
	Raised Stage	1	1,585	
	Theatre Storage	1	1,185	
2.7 LIBRARY				
		1	3,300	
2.8 STUDENT COMMONS (Canteen)				
		1	2,140	
	SUBTOTAL SPECIALIZED SPACES		35,300	

No.	Room	Number of Spaces	Total Area (SF)	Notes
3.0 ADMINISTRATION & STAFF				
3.1 ADMINISTRATION				
	Admin Suite	1	1,631	
3.2 STAFF SPACES				
	Staff Room	1	1,370	includes kitchen, storage, and washrooms
3.3 SPECIALIST / STUDENT SERVICES				
	Specialist Offices	3	355	
	Student Services	2	1,204	
	SUBTOTAL ADMINISTRATION & STAFF		4,560	
4.0 BUILDING SERVICES / SUPPORT				
4.1 Support				
	Custodial /Supply Storage	6	1,143	
4.2 Dedicated M&E Rooms				
	Main Electrical room	1	150	
	Mechanical / Electrical	4	2,096	
4.2 WASHROOMS				
	Grooming Room	1	167	
	Student Washrooms	8	2,287	
	UTR	1	66	
	SUBTOTAL BUILDING SERVICES		5,909	
	NET TOTAL AREA		76,783	
	BUILDING GROSS UP		26,224	includes exterior & interior walls, horizontal and vertical circulation, etc.
	TOTAL GROSS AREA		103,007	

Gross Building Area (per plan drawings)	
Basement	12,050
Main	72,012
Second	18,945
Total	103,007

Speers Building

Last Updated: 2023-04-20

EXISTING SPACE PROGRAM for Collège Béliveau 296 Speers Road, Winnipeg, MB

No.	Room	Number of Spaces	Total Area (SF)	Notes
1.0 INSTRUCTIONAL SPACES				
1.1 CLASSROOMS				
	General Classrooms	20	15,149	Classroom size ranges from 715 - 1050 includes storage
	Art Rooms	1	1,090	
1.2 SPECIALIZED CLASSROOMS				
	Science	3	3,177	includes chemical storage
	Graphics Lab	0	0	
	Sewing and Textiles	1	1,200	includes storage
	Foods and Nutrition	1	1,120	
	Pre-Engineering	1	1,054	includes storage
	SUBTOTAL INSTRUCTIONAL		22,790	
2.0 SPECIALIZED SPACES				
2.1 GYM				
	Gym Area	1	7,260	
	Storage	1	428	
	Offices	3	313	
	Change Rooms	2	822	
2.2 FITNESS				
		1	2,435	includes storage
2.3 MUSIC				
	Band Room	1	2,367	includes office, storage and practice rooms
	Guitar	1	1,096	includes storage
2.4 Library				
		1	3,570	includes storage
2.5 COMMONS				
	Open Student commons space	1	5,100	
	Kitchen and Servery	1	512	
	SUBTOTAL SPECIALIZED SPACES		23,903	
3.0 ADMINISTRATION & STAFF				
3.1 ADMINISTRATION				
	Admin Suite	1	1,765	
3.2 STAFF SPACES				
	Staff Room	1	1,242	includes storage, kitchen, washrooms
3.3 SPECIALIST / STUDENT SERVICES / RESOURCE				
	Offices	2	360	
	Storage/ Print	2	265	
	Resource	1	728	
	Student Services	1	1,364	includes offices
	SUBTOTAL ADMINISTRATION & STAFF		5,724	

No.	Room	Number of Spaces	Total Area (SF)	Notes
4.0 BUILDING SERVICES / SUPPORT				
4.1 Support				
	Custodial /Supply Storage	2	143	
	Custodian Office	1	266	
4.2 Dedicated M&E Rooms		10	2,380	
4.3 WASHROOMS				
	Student washrooms	10	1,805	
	Staff washrooms (not already included in staff room area)	3	335	male and female on main floor and custodian on 2nd
	Grooming Room	1	342	
	SUBTOTAL BUILDING SERVICES		5,271	
	NET TOTAL AREA		57,688	
	BUILDING GROSS UP		19,119	
	TOTAL GROSS AREA		76,807	

Gross Building Area (per plan drawings)	
Main	49,608
Second	27,199
Total	76,807

PART 4 - STAFF CONSULTATION AND INPUT

4.1 Pre-Design Consultation

Process

Prior to developing conceptual options, Prairie Architects Inc. organized staff consultation / input sessions for each school. On November 15, 2022 the Windsor Park Collegiate team was consulted followed two days later by consultation with the Collège Béliveau team. The process gave Prairie Architects the opportunity to hear preferences, requirements and opinions first-hand from transition teams, comprised of representative staff groups that were selected by each school.

The transition teams from each school included approximately 6 staff representing different specialties, along with the school administration teams and LRSD leadership. The specific specialties that were represented included Individualized Programming, Music/Theatre, Shops/Pre-Engineering, Physical Education, Science and Math, along with general administration and classrooms.

The sessions were facilitated by Lindsay Oster from Prairie Architects Inc. Each session began with an introduction and a short summary of the project background including the unique nature of the project. Each group was then asked to share their thoughts on their current school space and consider what specific elements define their school community. Each group was also asked about their impressions of the building they were moving to and encouraged to highlight any programmatic need and/or requirements not met in the new building. The information gathered at these sessions is summarized on the following pages.

Windsor Park Collegiate Staff Consultation

1015 Cottonwood Road (Current Space)

Provides Benefit	Presents Challenge
Central breakout spaces within classroom pods with flex seating. Gathering creates a sense of belonging.	Some classrooms are isolated from the others
One main hallway with more opportunity to interact with peers.	Change rooms are in the basement and pose supervision challenges. There is also no elevator to provide universal access.
Multiple different gathering spaces to allow for similar people to group without feeling overwhelmed by large spaces.	Small cafeteria without a real kitchen. Location is far from gyms.
Dedicated guitar classroom	Community kitchen space is small and lacks storage.
Stage attached to gym	Basement spaces lack natural light
Good classroom size despite unique shape	No dedicated front entrance and lobby, lacks a welcoming experience.
Accessibility is good, large elevators, kitchenette for I.P. space.	Wellness/ fitness is in basement and far from gym. Should be more prominent because it is an important space for many.
Community kitchen provides food security to many students.	Lacks bike storage.
Large variety of spaces for hands on learning for I.P.	Hallways do not reflect diverse demographic of school (old graduating class pictures)
Gym becomes an after-school home because of its ability to be locked off from the rest of the school.	Space limitations for accessibility (bike storage, I.P. classrooms separated)
Natural light in classrooms with large windows	No designated meeting space that reflects the indigenous students and their values.
Flexible spaces that can change with the demographic	
Practical arts spaces separated from the rest of the school limiting noise.	

Windsor Park Collegiate Staff Consultation

296 Spears Road (Future Space)

Provides Benefit	Presents Challenge
Functional, spacious, and well-lit commons space, creates sense of belonging.	Availability of special practical arts spaces are lacking. (i.e. metal shop, wood shop)
Meeting room incorporated with administration suite	I.P. population does not have any designated spaces. <ul style="list-style-type: none"> - quiet room - physiotherapy room - bus drop off loop (which require +/- 6 busses) - narrow hallways for wheelchairs and bikes
Foods / Nutrition has been renovated recently	Location of parking lot entrance is distant from admin.
Eyes on gym from offices	Staff room will have to support +/- 50 support staff along with regular staff.
Community courtyard space	Not enough parking
Lots of lockers	Fitness room not attached to gym
Weight room closer to gym	Lacking theatre space and performing arts classrooms
Student services is set up well	Upgrades are needed for facilities, lighting, and gym
Air conditioning	Science labs lack functionality and storage. Gas taps are not in a good location due to overhead millwork (fire safety)
Lots of spaces for students to gather	Some classrooms are lacking enough outlets.

Collège Bèliveau Staff Consultation

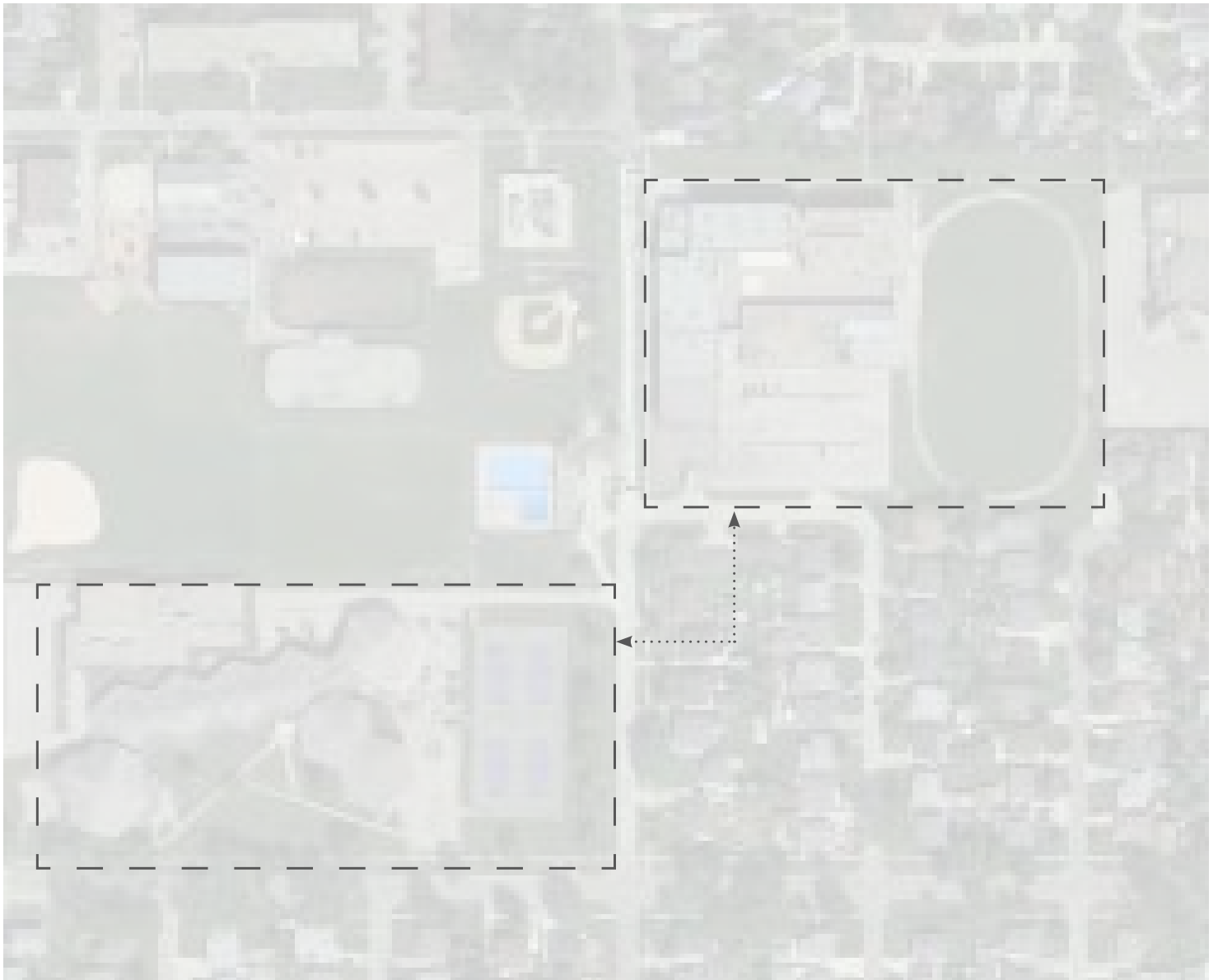
296 Speers Road (Current Space)

Provides Benefit	Presents Challenge
Cafeteria and Commons space brings students together in a central area. <ul style="list-style-type: none"> - Creates a sense of home/ community. - Open area with large windows that view into courtyard 	No clear entrance, door from parking lot is far from admin space. <ul style="list-style-type: none"> - Safety concern for intruders - Far for deliveries
Proximity of Phys. Ed spaces: weight room, storage area, and gym all within close range of one another.	Little supervision in change rooms, female change room is located on mezzanine level and is not accessible
Gym flooring was re-done recently	No theatre
Gym is adjacent to Student Commons and cafeteria which is good for a gathering space during after-hour tournaments	Gym is too small, roof in gym is too low.
Natural light in classrooms	Not enough bathrooms
Easy to get around in smaller building	No bus loop
Murals in commons	Lockers are old.
New air conditioning system	Commons is too small for number of students
T.V. mounted for announcements and communication with students	Emergency vehicles come to wrong door, which is locked after-hours, due to the closure of Speers Road as pedestrian corridor.
Courtyard is a great place for events, gatherings, and outdoor Phys. Ed. activities	Band room was originally practical arts (graphics) so the space is not necessarily purpose-built.
Interior cameras for supervision	Pre-engineering lab too small for demand.
Good flow, sight lines and accessibility of spaces. Creates a sense of community because you will eventually pass by everyone	Not enough classrooms for every teacher to have their own. No designated prep space so many teachers prep in the back of other classrooms
Size of classrooms	Do not like a fully paved courtyard, no shade, no movable furniture.
Proximity of classrooms with the same type of disciplines. (Separated by department)	Not a fully enclosed / secure courtyard so becomes a loitering zone after hours.
Recently renovated science rooms. <ul style="list-style-type: none"> - Proper ventilation: Multiple rooms with fume hoods - Chemical storage - Dishwasher 	No woods or metal program practical arts spaces.
Secure space for bikes within the courtyard	
Sight lines into courtyard from multiple spaces.	
Community outdoor basketball court	
Outdoor track	

Collège Bèliveau Staff Consultation

1015 Cottonwood Road (Future Space)

Provides Benefit	Presents Challenge
Has a raised stage in Gym 1 to facilitate theatre program (with storage in basement)	Venting of fitness area is concerning. Far away from gym and change rooms.
Would be able to organize departments nicely in “pod” arrangement. Contains breakout space in hallways for collaboration.	Does not have a Student Commons space, required to accommodate 300 students
Multiple gyms good for tournaments	Gym 1 is outdated
Existing furniture works well with unique shape / configuration of classrooms.	Some classrooms lack natural light
	Lots of hidden spaces and exit doors that all require supervision.
	Bathrooms are large and require updating.
	Not enough science lab space.
	Would love an outdoor classroom space for environmental club, outdoor education, and teepee. No courtyard for this program
	Outdated Pre-engineering space – too small for demand.



4.2 Initial Conceptual Development

Combined Site

Although the two school sites are located on distinct parcels of land they have different amenities, that combined with Winakwa Community Club and Park property, create a sports, education and recreation campus for the schools and broader community. Students at both schools are highly likely to share amenities across these properties throughout the school year. Community members benefit from diverse amenities across all three properties throughout the year and especially during the summer.

The close proximity of the schools and common vehicular access from the same busy arterial roads (Cottonwood, Autumnwood, and Winakwa) drive a need to carefully study vehicular and pedestrian circulation flows between the two schools to ensure student safety and reduce congestion.

These two major site design drivers have led the planning team to consider the site development for each school within the context of the adjacent school, the community centre lands and the surrounding community creating a comprehensive site master plan for the renovations/expansions. Should only one school proceed with expansion/renovations site plan assumptions should be carefully revisited to ensure the sit specific design and amenities optimize access and amenities for the entire neighborhood.

City of Winnipeg and Manitoba Hydro Input

The planning team reached out to the City of Winnipeg and Manitoba Hydro early in the planning process. Feedback and considerations provided by various departments can be found in Appendix C. The notes include comments from the planning, community services, transportation planning, and active transportation departments. For further conversations with the City please contact Stephanie Whitehouse Senior urban Designer Parks Planning City of Winnipeg at (204) 996-2530 and swhitehouse@winnipeg.ca. Manitoba Hydro proved to be more difficult to connect with and the planning team was unsuccessful in coordinating detailed discussion or reviews with the utility during this study. It is important for this work to occur early in the design process when the schools are approved for these capital projects.

Collège Béliveau Transition to Cottonwood Road

Three initial concepts were prepared for Collège Béliveau in the Cottonwood building, which largely centred around the placement of a new Student Commons.

Option 1 - Central Student Commons

Generally, this option proposes that the central “hexagon pod”, where the current Administration / Student Services and Foods Lab are located, be demolished and a new construction addition be built to accommodate a Student Commons and Administration suite. A new construction addition is also proposed to the southeast of the existing Gym #1 for Fitness and gym ancillary programs. The remaining school spaces receive varying degrees of renovation.

The double-height volume of the new Student Commons creates a strong street presence on Cottonwood Road and is ideal for unifying the school and creating a good sense of entry and identity. However, centrally locating the Student Commons doesn't create adjacencies with either Gym for after-hours use, and further:

- Causes mechanical and electrical complexities as it effectively cuts the school in half during construction. A temporary underground connection will be required to maintain operation of total school.
- Causes the classroom wings to be cut off from remainder of the school during the construction phase. A temporary connection bypassing the new construction, from the north exit to the existing Library would be recommended.

Option 1 proposes the Band Room be located on west side of school in current Art / Gym Storage area, directly opposite Gym #1, which provides an ideal adjacency for concerts. However, the existing space available doesn't account for a Guitar Room and Practice Rooms which are necessary for students that live in apartments and are unable to practice at home.

The Science Rooms are proposed to stay in their current location, with further addition of a third Science room across the hall in the existing IP space.

The new Foods / Nutrition Lab is proposed to be located in the existing Cafeteria space with good adjacency to the Textiles Lab across the hall.

Pre-Engineering is proposed to move to Metal Shop space, providing increased space for the program. The Library is then able to expand into the existing Pre-Engineering room.

A new construction addition to the east of Gym #1 is proposed, and:

- creates opportunity for corner glazing to create a presence on Cottonwood
- demolishes the existing viewing balcony, which has poor sight lines and is not accessible.
- eliminates the need for additional stairs and a lift / elevator.
- allows for a spectator area with bleachers along east side.

The existing stair in Gym #1 to the basement is proposed to be enclosed, to limit access for better supervision. The basement change rooms, which are a supervision/safety concern, would be abandoned and new change rooms and gender-neutral washroom would be located next to the gym entrance on main floor. There would be an opportunity to keep the basement change rooms as back up for tournaments, if desired.

OPTION 1

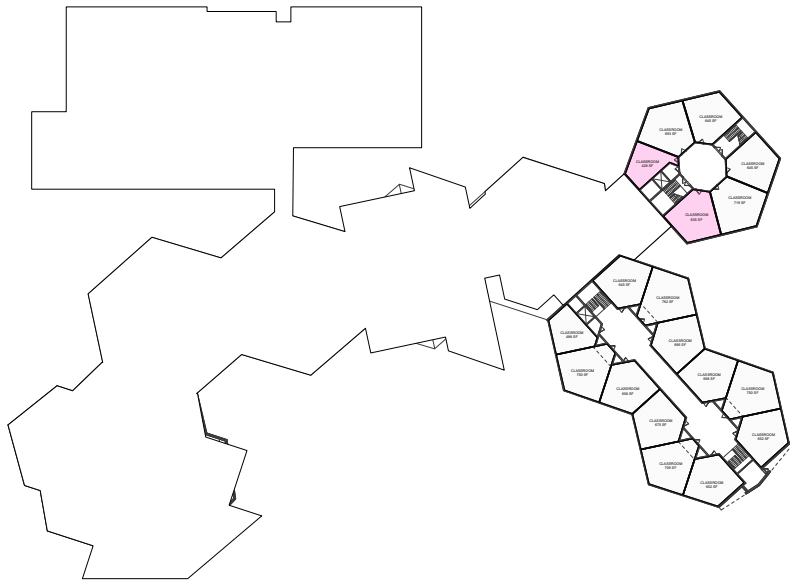
- COMMONS
- COMMUNITY / INDIGENOUS ROOM

- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)

- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY

- GYMNASIUM
- FITNESS
- GYM SUPPORT

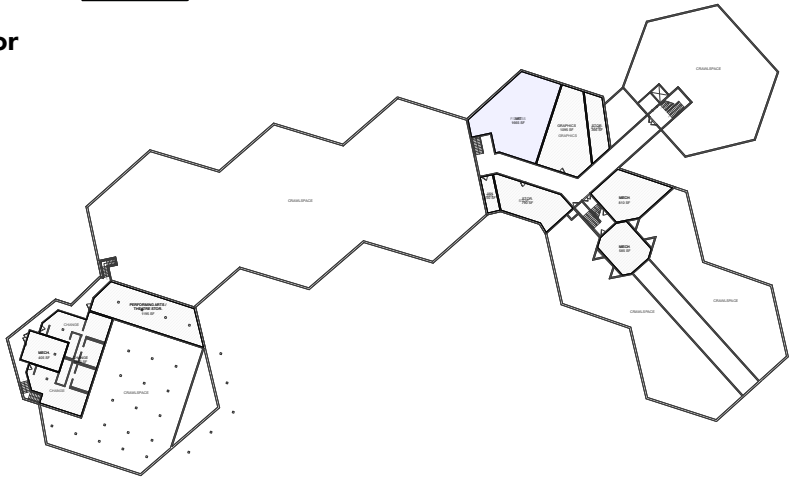
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- EXISTING PROGRAM / LAYOUT TO REMAIN



second floor



main floor



basement floor

Conceptual renderings of Option 1, which show the proposed building massing from different views.



West view



South view



North view

Cottonwood Option 1 Site Development Concept

The proposed site concept for Option 1 includes:

- Expanded parking and new drop off west side of the school
- New Arts Courtyard west side of building
- Upgrades to the south-west corner entrance
- Fitness deck outside of fitness room
- Main entries with canopies/arbours
- Community gardens, shown in yellow
- Outdoor theatre and student patio outside of Student Commons facing south
- Bike parking in several high profile locations
- Central courtyard
- East courtyard and food forest foraging garden
- Library patio connected to entry canopy by arbour
- New drop off and reconfigured/expanded parking



Option 2 - Student Commons along Gym #1

Generally, this option proposes that the west-most “hexagon pod”, where the current Art and gym ancillary spaces are located, be demolished and a new construction addition be infilled to accommodate the Band program and a new Student Commons directly adjacent to and alongside Gym #1. The addition wraps along the east side of Gym #1 to accommodate Fitness and gym ancillary programs. The remaining school spaces receive varying degrees of renovation.

The location of the Student Commons:

- connects the parking lot entrance through to the “front-yard” of the school.
- is ideal for operational functionality as well as ease of occupancy during construction
- Reduces mechanical / electrical complexities during construction. Currently, Gym #1 has its own mechanical and it is anticipated that the addition would also get its own new mechanical system. The rest of the school would be able to maintain existing mechanical throughout the construction duration. The existing electrical room, which is the main distribution would need to be relocated but the existing distribution is nearing end-of-life and will soon require upgrades, so relocation is feasible.
- provides beneficial adjacency to Gym #1 for after-hours use while the rest of the school can be closed off.

The Band Room and practice rooms are located to the north of the new Student Commons, with good adjacency to the stage in Gym #1 for performances.

Option 2 proposes that the Administration suite and Science Rooms be swapped to allow better adjacency of Administration and Student Commons and main entries.

Similar to Option 1, a third Science Room is proposed, but in the current IP space.

The existing Cafeteria space is proposed to be

renovated to classrooms and the existing Foods / Nutrition Lab would remain in place.

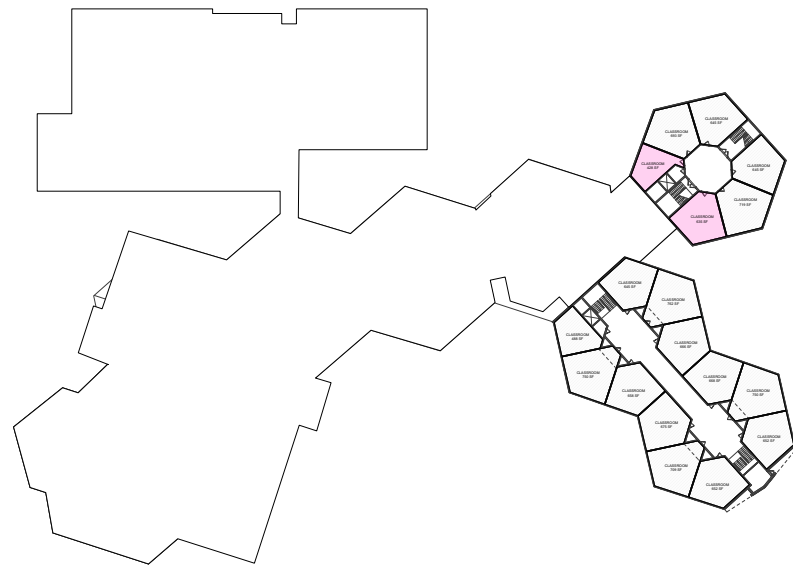
Pre-Engineering is proposed to move to Metal Shop space, providing increased space for the program. The Library is then able to expand into the existing Pre-Engineering room.

The existing stair to the basement from within Gym #1 is proposed to be demolished and relocated to east side of Gym #1, within the new addition. The basement change rooms, which are a supervision/safety concern, would be abandoned and new change rooms and gender-neutral washroom would be located next to the gym entrance on main floor. There would be an opportunity to keep the basement change rooms as back up for tournaments, if desired.

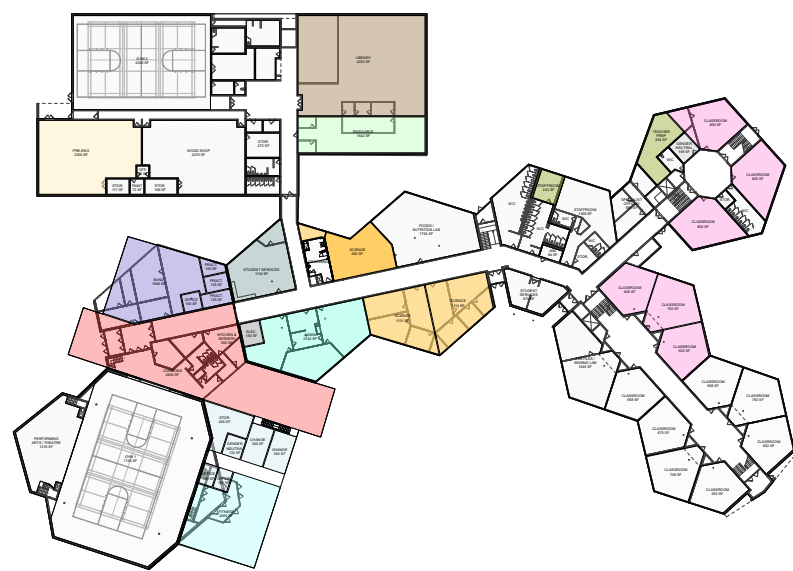
Similar to Option 1, the portion of the addition to the east of Gym #1 houses the Fitness and gym ancillary functions, and:

- creates opportunity for corner glazing to create a presence on Cottonwood
- demolishes the existing viewing balcony, which has poor sight lines and is not accessible.
- eliminates the need for additional stairs and a lift / elevator.
- allows for a spectator area with bleachers along east side.

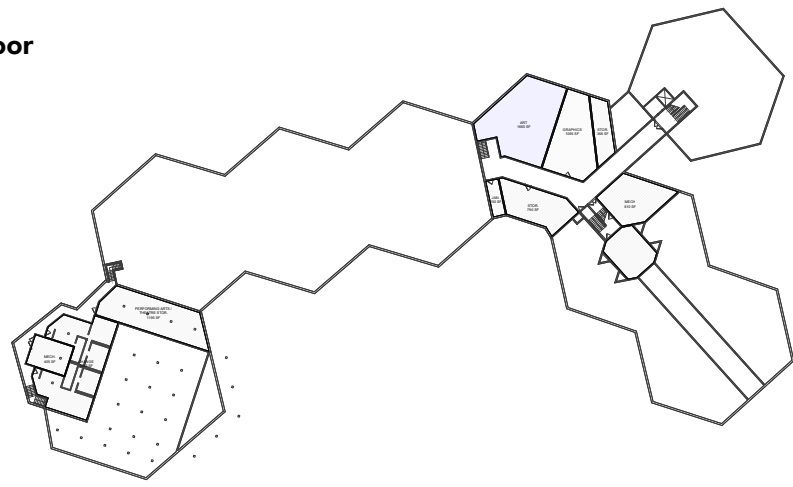
OPTION 2



second floor



main floor



basement floor

- COMMONS
- COMMUNITY / INDIGENOUS ROOM

- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)

- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY

- GYMNASIUM
- FITNESS
- GYM SUPPORT

- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT

- EXISTING PROGRAM / LAYOUT TO REMAIN

Conceptual renderings of Option 2, which show the proposed building massing from different views.



Cottonwood Option 2 Site Development Concept

The proposed site concept for Option 2 includes:

- Reconfigured west parking with small drop off and accessible stalls
- New Music Courtyard west side of building
- Fitness area
- Large bike parking zones in highly visible areas
- Sunken central lawn (south entry – could also be basketball court)
- Large arbour student eating area and relocated community gardens on diagonal walkway (south face of site)
- Reconfigured parking and drop off zone east and north side of the building
- Dedicated Library Courtyard facing east.
- Dedicated staff courtyard



Option 3 - Student Commons as Central Infill

Generally, Option 3 attempts to limit the amount of new construction addition and make the most use of existing space. Similar to Option 1, this option proposes a central Student Commons, but as an infill approach. In this option, the central “hexagon pod”, where the current Administration / Student Services and Foods Lab are located, wouldn’t be demolished, rather renovated, with the existing roof height and foundations maintained. The new construction addition would be infilled between the Library to the north, the hallway link to the west and the portion of Student Commons in the renovated “hexagon pod” to the south. The remaining school spaces receive varying degrees of renovation.

This option has the least impact in terms of constructing a Student Commons with form and massing noticeable from the front of the school along Cottonwood. The Student Commons also has a few other downsides, compared to the other options:

- The double height volume space is limited to a very small portion of the Commons. Even the extent proposed will necessitate structural upgrades to the existing roof due to the snow shadow.
- A assembly occupancy of a gathering space such as a Student Commons requires a higher structural loading than a classroom space, so likely foundation underpinning would be required.
- A significant portion of the budget would go towards building infill complexities without much the added benefit of building massing impact.
- High level of complexity of an infill approach and dealing with the intersection of two different vintages of building construction, on three sides.

In Option 3, the Fitness Room is relocated to mezzanine level of Gym #1 where the existing viewing platform is, with gym storage below.

Currently, this space is not accessible, so a lift would need to be constructed to facilitate universal access. Additionally, this location unfortunately doesn’t provide a Fitness Room with area comparable to what the school currently has.

Similar to Option 1, the Band Room is proposed to be located on west side of school in current Art / Gym Storage area, directly opposite Gym #1.

Similar to Option 1, the Science classes stay in current location, adding a third Science room across the hall in the existing IP space.

Similar to Option 1, the new Foods / Nutrition Lab is proposed to be located in the existing Cafeteria space with good adjacency to the Textiles Lab across the hall.

Pre-Engineering is again proposed to move to Metal Shop space, providing increased space for the program. Resource is able to move into the existing Pre-Engineering space and subsequently, the Library is then able to expand into the existing Career Internship Program space.

OPTION 3

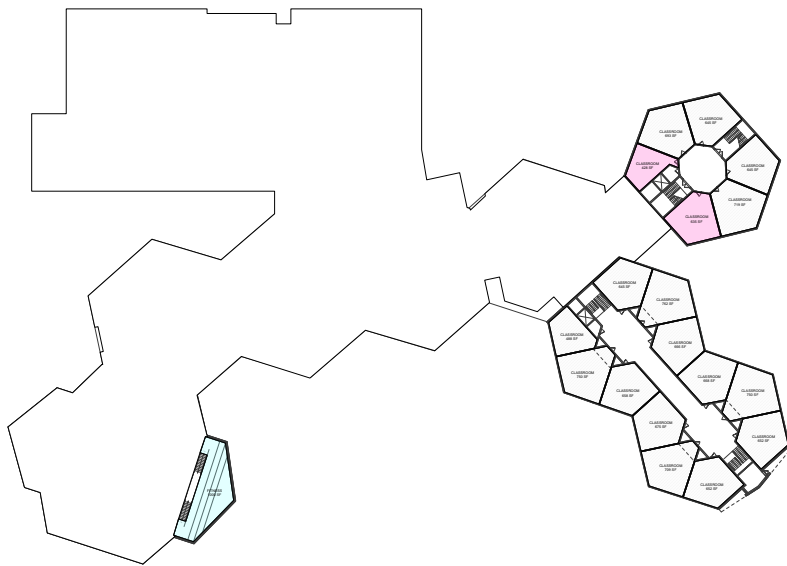
- COMMONS
- COMMUNITY / INDIGENOUS ROOM

- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)

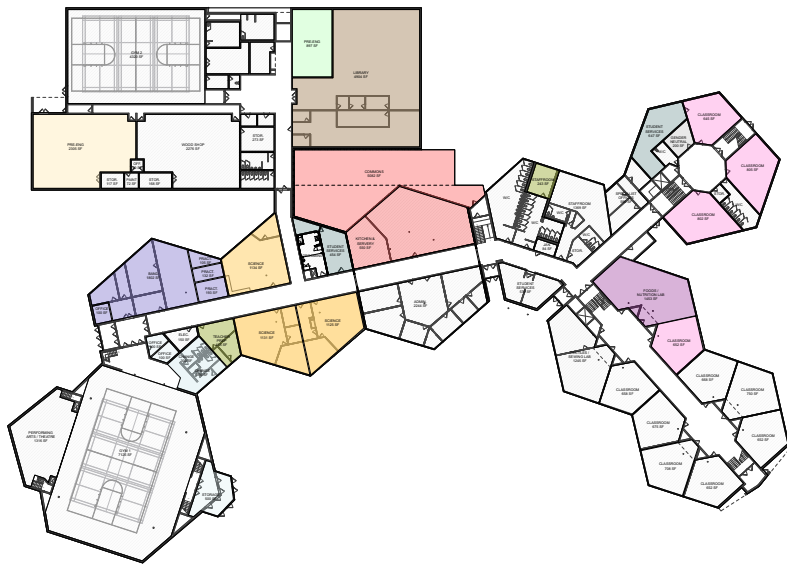
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY

- GYMNASIUM
- FITNESS
- GYM SUPPORT

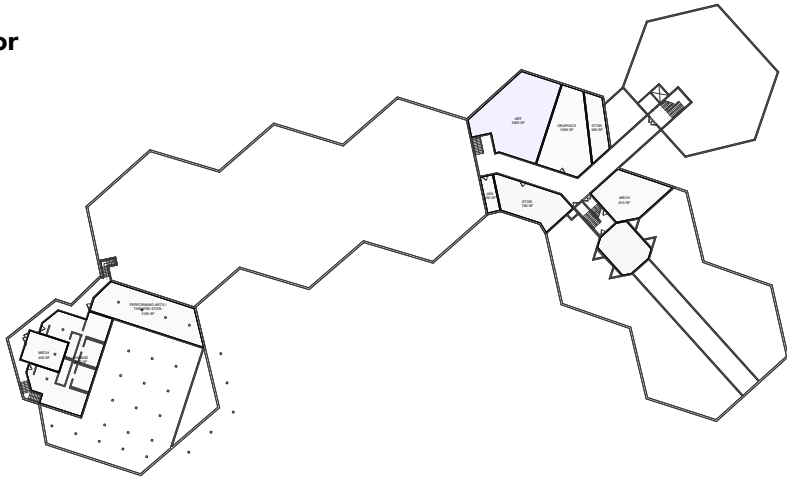
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- EXISTING PROGRAM / LAYOUT TO REMAIN



second floor



main floor



basement floor

Conceptual renderings of Option 3, which show the proposed building massing from different views.



Cottonwood Option 3 Site Development Concept

The proposed site concept for Option 3 includes:

- Expanded parking but no drop off on west side
- New Music and Science courtyard west side of building complete with outdoor stage and seating
- South facing pavement games area (can have basketball also if requested)
- South facing hexagon student and community gardens
- South facing outdoor cultural space at the centre of the commons
- Reconfigured east and north facing parking areas with drop off (smaller than option 1 and 2)
- Library and commons plaza with arbour opens up into east facing hard court basketball zone



Windsor Park Collegiate Transition to Speers Road

Three initial concepts were prepared for Windsor Park Collegiate in the Speers building, which largely centred around different options for the placement of Gymnasium, Shops, Band/ Performing Arts and Individualized Program (IP) spaces.

Option 1 - South addition with Link

Generally, this option proposes a new construction addition to the south and east of the existing Gym as well as to the south of the existing Band Room. The remaining school spaces receive varying degrees of renovation.

This option co-locates the existing Gym with a new construction addition that houses a second gym and fitness space. New gym ancillary space is located centrally between the two gyms, with easy access for the Fitness Room. In order to access Gym #2 and Fitness addition to the south of Gym #1, a new Student Commons space is proposed. The Student Commons is proposed to create a stronger sense of entry and identity for the building.

Gym #1 currently doesn't have regulation ceiling heights. If desired, the existing roof could be raised, but may not be the most effective use of capital. Additionally, it is complex from both a technical and phasing perspective.

The Administration suite is relocated off the new Student Commons, co-located with the Student Services space (renovation to current Foods / Textiles rooms).

The existing Band Room is renovated into the Metals Shop with a new construction addition directly to the for the Wood Shop.

Individualized Programming (IP) is in located at the northeast corner of the school (renovation to current Administration space as well as two classroom spaces). This allows for:

- The existing north entry to be used as a

separate entrance for loading and unloading buses for IP students.

- IP located with good proximity to existing grooming room.
- IP to be more central in the school, with close access to gym spaces.
- IP to be located in a portion of the existing school that has wider hallways than some other areas, which is crucial for IP wheelchairs, bikes, etc.

A Community / Indigenous Room is proposed to be located directly off new Student Commons space and with direct access to the courtyard, which allows for ease of after-hours access. (renovation to existing Guitar Room)

Option 1 proposes to relocate the existing south most stair to allow for direct exit through fire wall to Student Commons and out. The existing stair space on second floor would become a Universal Toilet Room (UTR). On the main floor, the space where the stairs currently are would transform into a hallway to access the gender-neutral washroom from the corridor.

A Performing Arts / Stage space is proposed to be centrally located, in the east portion of the current Student Commons, with the ability to open into the west portion of the existing Commons. In order to do this, an operable wall would be required, which would be acoustically treated at a higher cost. Further downsides to this option include:

- Renovation to space that was recently upgraded
- Break-up the Commons into two areas
- The stage is not located in the Gym, to allow for larger audiences
- If a raised stage is desired, it would have to be rented (i.e. no permanent raised stage)

A new construction link is proposed to enclose the courtyard and create better circulation throughout the building. This also solves some of the noted security concerns with undesired after-hours access to the courtyard space.

OPTION 1



second floor

- COMMONS
- COMMUNITY / INDIGENOUS ROOM
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY
- GYMNASIUM
- FITNESS
- GYM SUPPORT
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- EXISTING PROGRAM / LAYOUT TO REMAIN



main floor

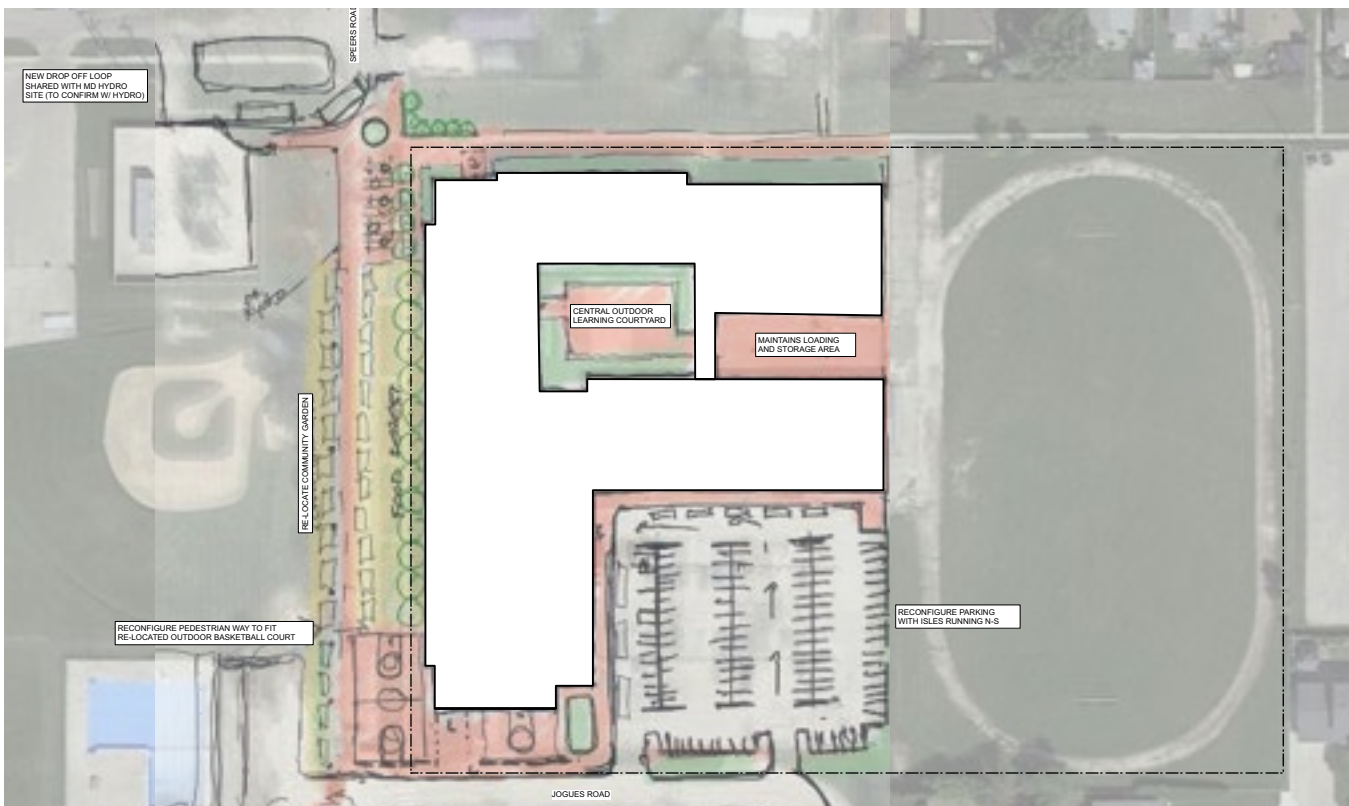
Conceptual renderings of Option 1, which show the proposed building massing from different views.



Speers Option 1 Site Development Concept

The proposed site concept for Option 1 includes:

- Reconfigured pedestrian way to fit a south-west corner outdoor basketball
- Relocated community gardens (moved from south of pool where new parking is)
- Clear pick up drop off along south and west building perimeter
- Reconfigured parking with isles running north-south
- New drop off shared with Manitoba Hydro site in north-west corner (requires permission and coordination with Manitoba Hydro)
- Central outdoor learning courtyard bounded by the link
- Maintains east facing loading and storage area and north walkways



Option 2 - South-facing Courtyard

Generally, this option proposes the demolition of the existing 1964 and 1993 additions and in its place, a new construction addition to the south of the current Staff Room, creating a south “front”-facing courtyard. This option also proposes new construction additions to the east of the existing Student Commons (to create a stronger sense of entry and identity for the building) and to the south of the existing Gym, for a raised stage. The remaining school spaces receive varying degrees of renovation.

In this option, the Administration suite is relocated to the west side of the existing Student Commons, with direct adjacency to new, expanded Commons.

The IP spaces are proposed in same location as shown in Option 1, at the north-west corner of the building, with access to a dedicated entrance for IP students.

The Student Services spaces are located adjacent to expanded Student Commons and could have direct connection, if desired.

A raised stage for Performing Arts is located directly off the existing gym. However, a firewall is required between the existing building and new construction addition, so the opening between the two spaces would require an expensive fire shutter design solution unless an alternative solution can be negotiated with the City of Winnipeg as the Authority Having Jurisdiction.

The existing Gym becomes the smaller Gym #2, with the existing ceiling height proposed to remain as is. The new, larger Gym #1 is proposed to be built with a higher, regulation ceiling height. The location of the new Gym #1, Fitness and Community / Indigenous Room allows for ease of after-hours access, with the ability for the remaining school to be locked-off.

Some downsides of this layout include:

- the Student Commons is not connected to

the after-hours use spaces.

- The separation of Gym spaces is not ideal.
- The existing Gym and new Fitness space are not close to each other.

The “U-shaped” configuration of the school creates longer commutes between the Gym, Fitness and Shops addition and the existing Gym and stage addition, which might not be ideal from an operational perspective. An exterior covered walkway is proposed between the Commons addition and Gym and Community / Indigenous Room addition to facilitate access, but necessitates walking outside.

Due to the fact that this option includes a large amount of demolition of existing program spaces, planning for construction phasing and temporary use spaces will be important considerations. The design limits most of the new construction to fewer critical locations compared to Option #1. The existing gym can remain operational until the new gym is completed, after which time the renovations to the existing gym can occur.

OPTION 2



- COMMONS
- COMMUNITY / INDIGENOUS ROOM
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY
- GYMNASIUM
- FITNESS
- GYM SUPPORT
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- EXISTING PROGRAM / LAYOUT TO REMAIN

second floor



main floor

Conceptual renderings of Option 2, which show the proposed building massing from different views.



West view



South view

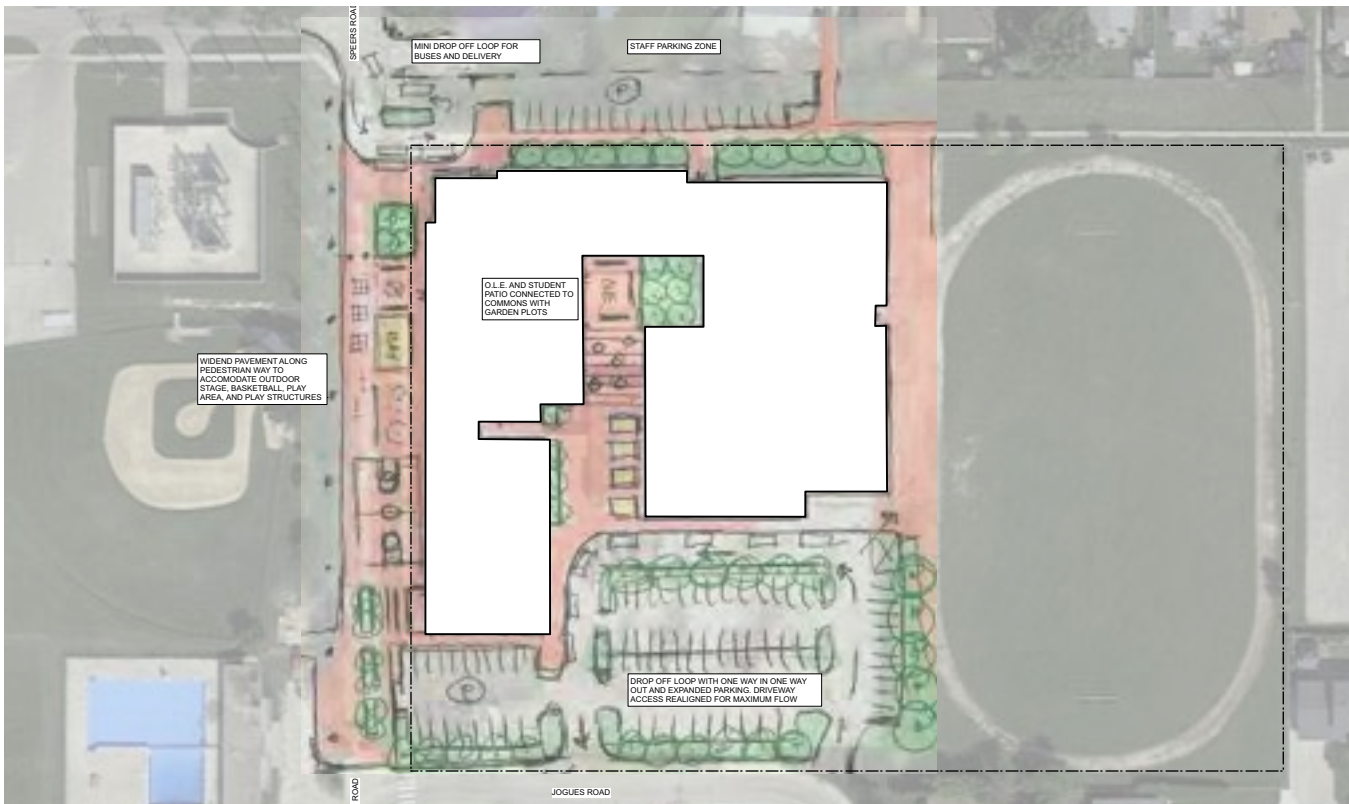


Courtyard view

Speers Option 2 Site Development Concept

The proposed site concept for Option 2 includes:

- Widened pavement area along the north-south pedestrian way (Speers Road, closed to traffic) to accommodate outdoor stage west of theatre, basketball, pavement games, play structures
- Dedicated drop off loop with one way in one way out and expanded parking in south-west corner. Driveway access realigned for maximum flow and minimal street congestion.
- South facing outdoor learning environment and student patio connected to the existing Student Commons complete with garden plots
- North-west corner mini drop off for buses and delivery vehicles.
- North staff parking zone.



Option 3 - Central, enclosed Courtyard

Generally, this option proposes the demolition of the existing 1963 / 1993 addition in similar fashion to Option 2. The new construction addition accommodates both Gym #1 and Gym #2, as well as a raised stage for Performing Arts, Music / Guitar space and Fitness Room. The addition also houses the Administration suite and the Community / Indigenous Room, connecting back to the existing Student Commons space and creating an enclosed outdoor courtyard.

This option places IP and the Wood and Metal Shops in the existing gym space, eliminating the need to raise the roof of this existing space. The remaining school spaces receive varying degrees of renovation.

The co-location of IP and Practical Arts spaces is not ideal for the following reasons:

- Noise from the adjacent Wood and Metal Shop
- The grooming room is not co-located with the IP although it is closer than WPC's current grooming room and IP in Cottonwood building
- This location would mean that the main south entrance would be used for IP bus drop off, which may make the area congested.
- This location is more ideally suited to the Foods Lab and IP instead located in northwest corner as proposed in other options

The Student Services spaces are shown in existing Administration space, but as discussed above, this space is more ideally suited for IP.

The recently renovated Student Commons spaces remains as is in Option 3. A new Entry Commons is proposed to connect the Student Commons with the south parking area and drop-off and to create a welcoming entrance with proper signage

The Administration suite is positioned in the new addition directly adjacent to the Entry Commons, centrally located in the school.

This option proposes one larger addition, which is beneficial in that it:

- Minimizes the extent, location complexity of fire walls;
- Eliminates need to raise roof height of existing gym;
- Allows for all the proper co-locations of program into the new construction addition (i.e. gyms, fitness, stage), without the requirement of fire wall separations.
- Allows for ease in phasing in that existing Practical Arts shops programs can continue to run out of the Cottonwood building, with the gym remaining operational at Speers until the new construction addition is complete.

An alternate version of Option 3 was discussed, which would combine the two gymnasium spaces into one larger gym. This would eliminate the need for excessive circulation space, which is challenging to supervise.

A second floor to the new addition for Textiles, Foods Lab and Classroom shown in this option, but was discussed to have the following downsides:

- It is expensive space to add as there is a high proportion of required circulation to access (long, single loaded corridor)
- Cuts down the amount of direct sunlight into courtyard

OPTION 3



- COMMONS
- COMMUNITY / INDIGENOUS ROOM
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY
- GYMNASIUM
- FITNESS
- GYM SUPPORT
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- EXISTING PROGRAM / LAYOUT TO REMAIN

second floor



main floor

Conceptual renderings of Option 3, which show the proposed building massing from different views.



West view



South view

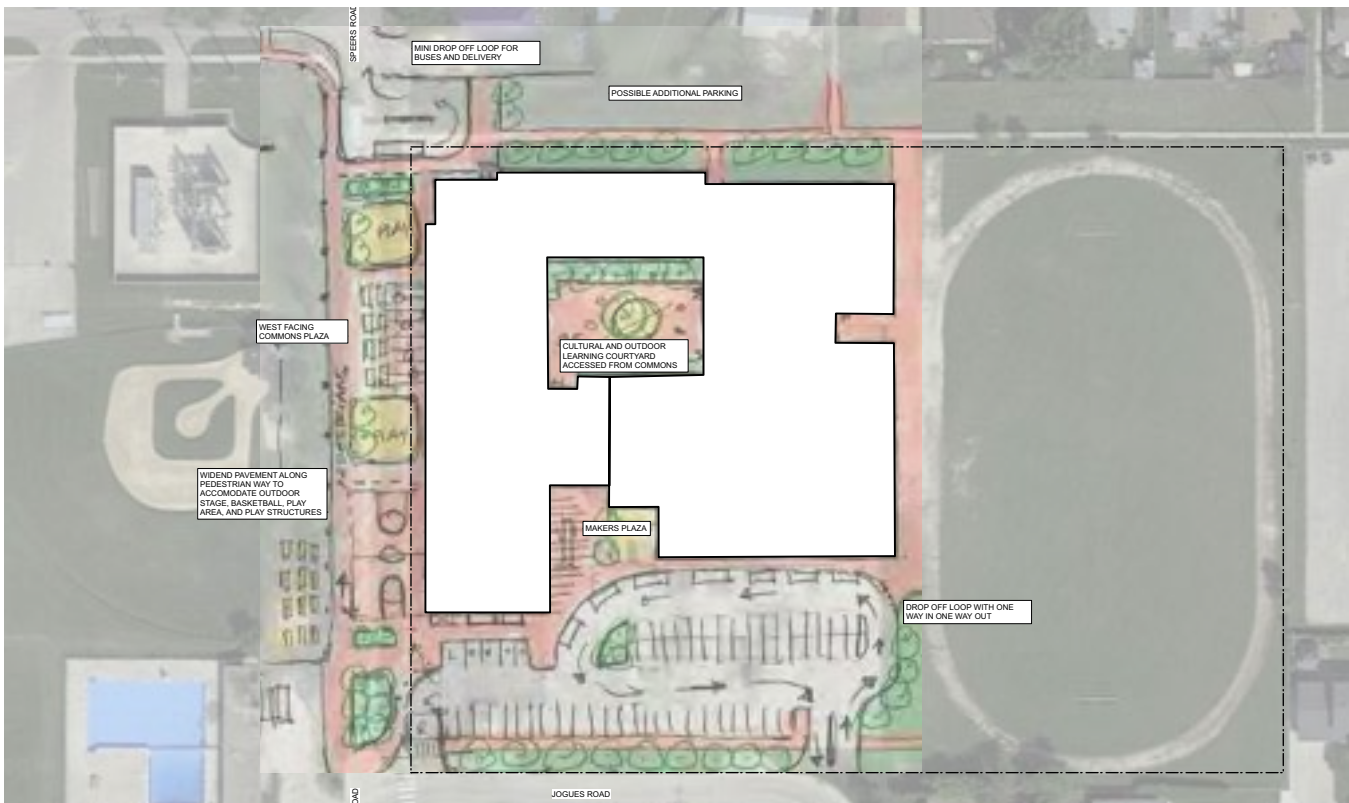


Courtyard view

Speers Option 3 Site Development Concept

The proposed site concept for Option 3 includes:

- Widened pavement area along north-south pedestrian way (Speers Road) to accommodate basketball, pavement games, play structures and west facing commons plaza complete with arbour and patio seating. (access to shops across basketball for authorized vehicles only (west facing overhead doors -spill out space)
- Dedicated drop off loop with single entry (smallest amount of parking of all 3 options).
- South and east facing makers plaza complete with arbour and harvest workshop table. (with direct access to the shops classrooms)
- Fully enclosed cultural and outdoor learning courtyard at the heart of the building visible and accessible from the Student Commons.
- North-west corner mini drop off for buses and delivery vehicles. (can also fit north staff parking lot in this option, if desired)
- Dedicated garbage and recycling location



4.3 Follow-Up Consultation & Input

Process & Feedback

Following the development of the initial concepts shown in Section 4.2 of this report, with varying approaches to addition and renovation scopes for each building, the staff and administration from each school community provided feedback.

In addition to comments specific to each option presented, the Windsor Park Collegiate team noted that the designs:

- Placed student needs at the forefront.
- Took into consideration all of the voices that have voiced input along the way.
- met the needs of the IP students.
- Understood that the community room is an integral part of the school community.
- Provided a Gym that can accommodate multiple classes and larger spectator viewing area.
- Met the needs of Kinesthetic learners through the relocation of Industrial Arts programming.
- Provided an amazing facility that Performing Arts students can showcase their talents in.

In addition to comments specific to each option presented, the Collège Béliveau team noted the following:

- Consideration of sustainable energy sources such as solar panels in future is a priority for staff and student council.
- Accommodation for a new Student Commons meets the needs of the school community.

- Increased ability for practical arts course offerings is great. Separation of metals shop and pre-engineering space will be necessary.
- Co-location of fitness and gym #1, as well as centralized change rooms and equipment storage is great.

Building from the feedback provided and based on the preferred initial option, the conceptual design options were refined into two options for each school and presented at staff meetings in early January. The next section of this report, Part 5 - Community Consultation, details these refined options and subsequent feedback.

PART 5 - COMMUNITY CONSULTATION

5.1 Collège Béliveau Transition to Cottonwood Building

Community Presentation

On February 1, 2023, the Louis Riel School Division hosted a Community Presentation and Consultation process at 1015 Cottonwood, in the school's gymnasium #1.

The evening began at 6:00pm with the opportunity for community to walk through the Cottonwood building and ask questions of current Windsor Park Collegiate staff that were available to give tours. Handout brochures were available and large presentation boards were set up showing two proposed conceptual design options for Collège Béliveau in the Cottonwood building, giving attendees an opportunity to familiarize themselves with the schemes prior to the presentation.

The presentation began at 7:00pm and opened with a Land Acknowledgment and welcome from Collège Béliveau Principal, Andrea Kolody and Vice-Principal, Diane Lamoureux. LRSD

Superintendent, Christian Michalik, introduced the Division's "Design With Us" process for the evening and recapped the Board of Trustee approval of an exchange of the Windsor Park Collegiate and Collège Béliveau buildings. Assistant Superintendent, Jeff Anderson discussed the forecasted milestones and next steps of the process.

The presentation was then handed over to Lindsay Oster of Prairie Architects Inc. to present the concepts with assistance from Monica Giesbrecht of HTFC Planning & Design.

Lindsay Oster began by describing the "block planning high-level design stage" that the project was currently at and then moved into a discussion of Collège Béliveau's Key Programs and spaces and which of those are currently provided for in the Cottonwood building and which are not.

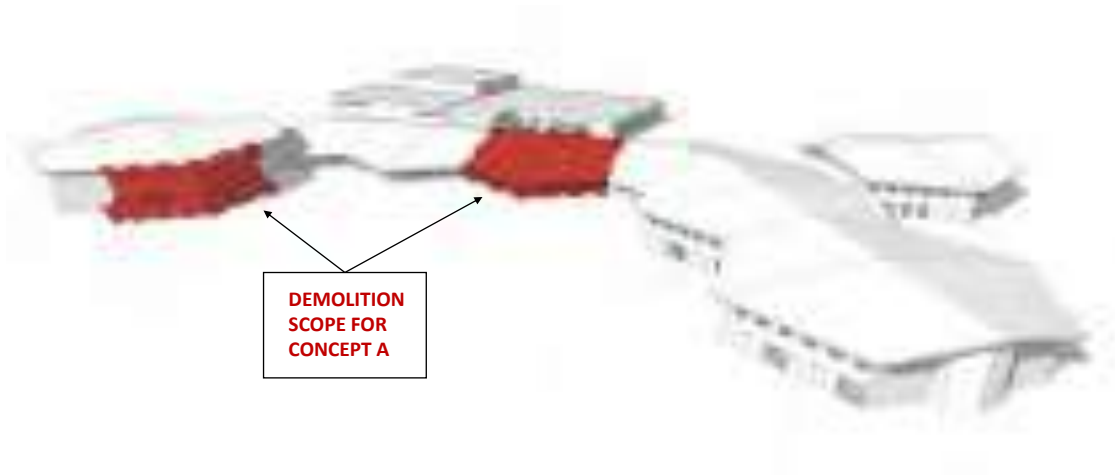
COTTONWOOD BUILDING	
Existing Spaces (Provided)	Required Spaces (Not Provided)
<ul style="list-style-type: none"> Increased classroom space appropriate to enrolment projections 	<ul style="list-style-type: none"> Student Commons – sized to accommodate enrolment projections
<ul style="list-style-type: none"> Gymnasium space with regulation ceiling heights 	<ul style="list-style-type: none"> Pre-Engineering – sized to accommodate enrolment projections
<ul style="list-style-type: none"> Practical Arts (Woods / Metals) 	<ul style="list-style-type: none"> Accessible Band and Guitar spaces
<ul style="list-style-type: none"> Raised Stage / Theatre 	

Slide from the presentation giving an overview of Collège Béliveau's Key Programs and Spaces

The following pages include materials from the Community Presentation that describe Concept A, followed by Concept B and then a summary of the feedback collected following the presentation.

CONCEPT A

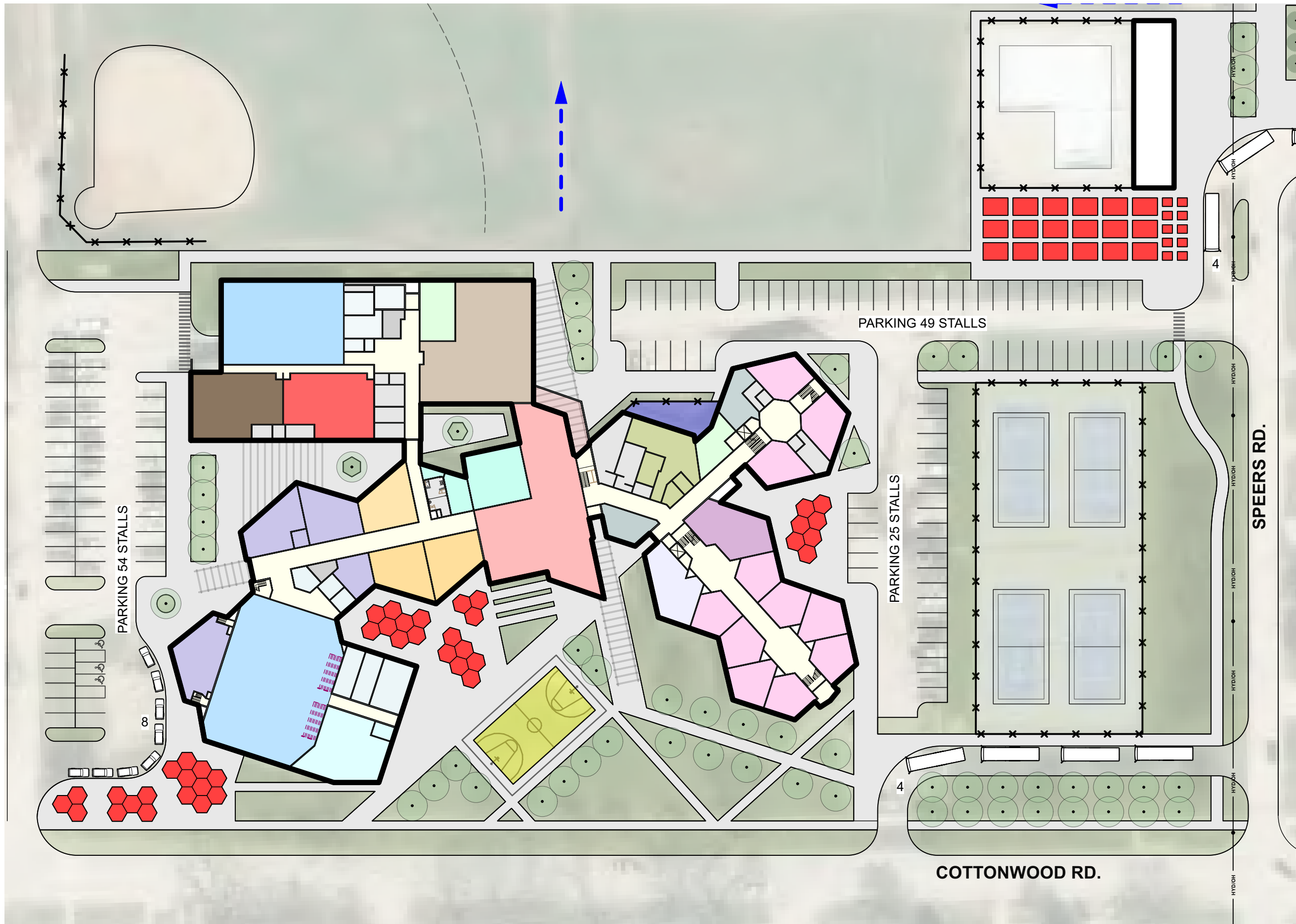
EXISTING BUILDING



Concept A - view from Cottonwood Road



Concept A - view from north parking lot toward entrance



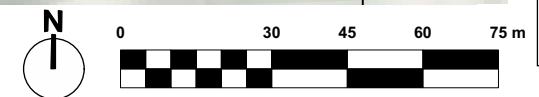
SITE LEGEND

- BUS DROP OFF
- CAR DROP OFF
- BIKE PARKING
- HARD SURFACE / PLAY SURFACE
- PLAY STRUCTURE / SPORTS COURT
- GREENSPACE / LAWN
- STAFF SPACE
- ARBOUR
- COMMUNITY GARDEN
- OVERHEAD HYDRO LINE
- FENCE LINE

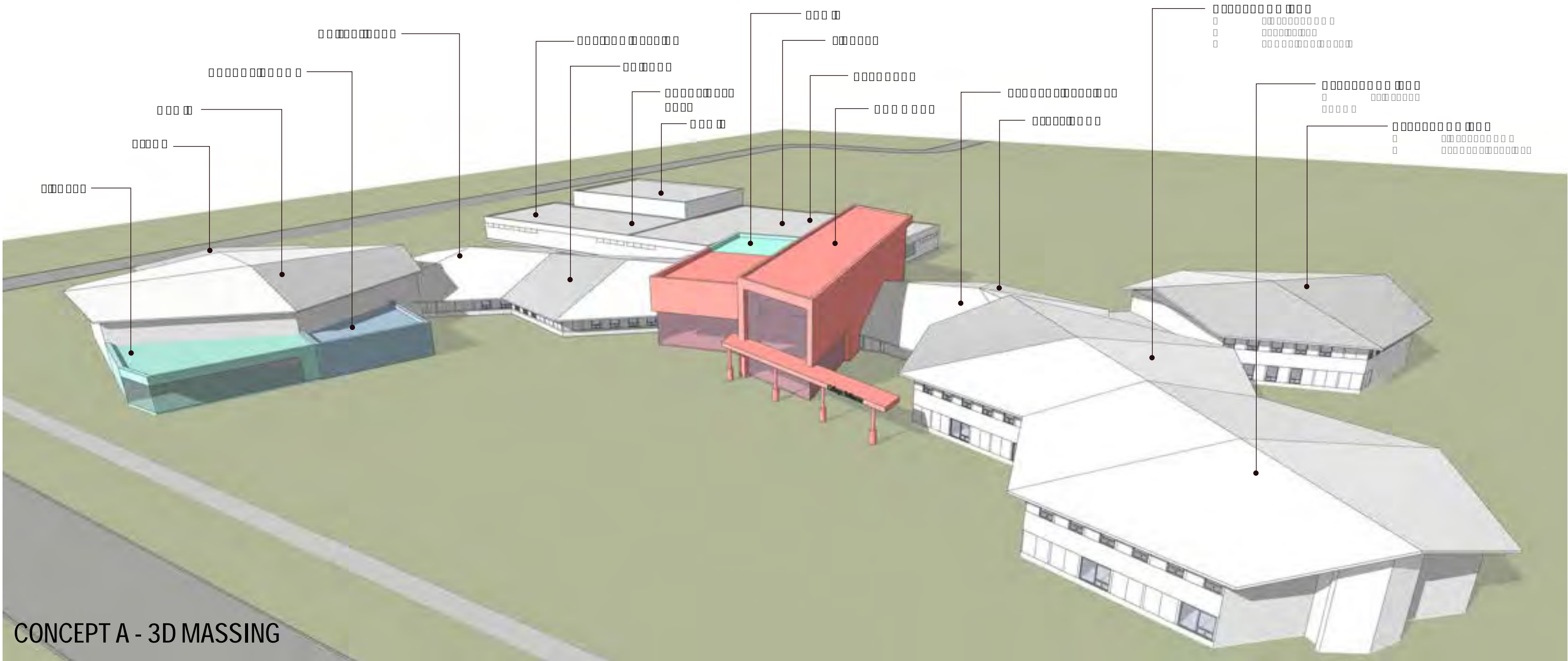
BUILDING LEGEND

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CONCEPT A - SITE PLAN

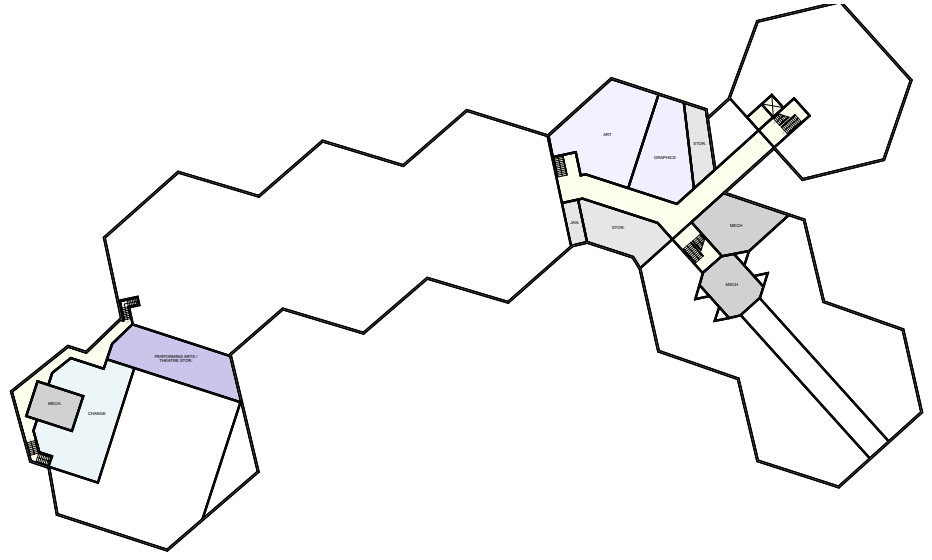
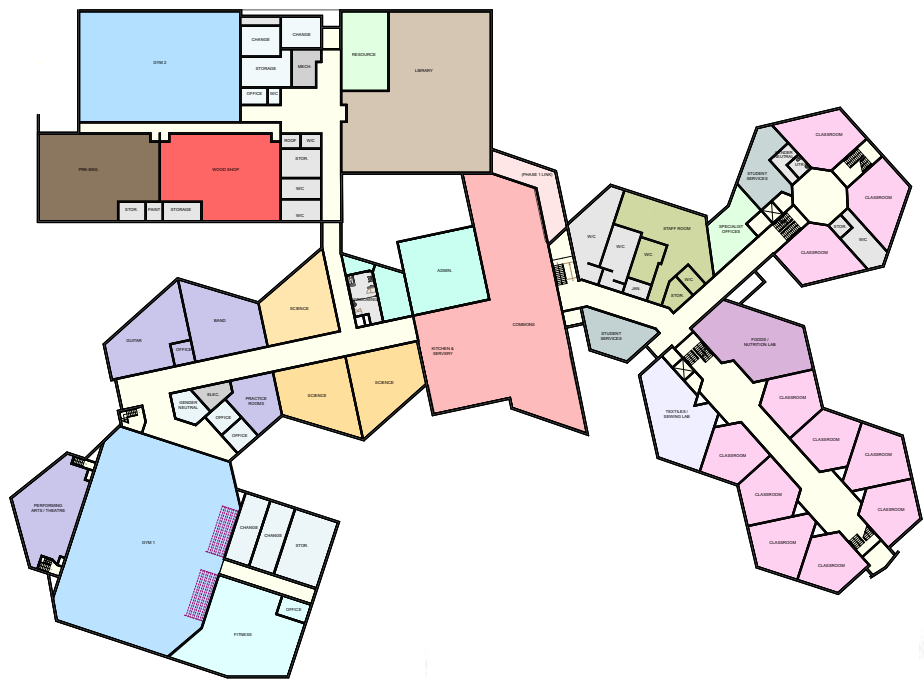
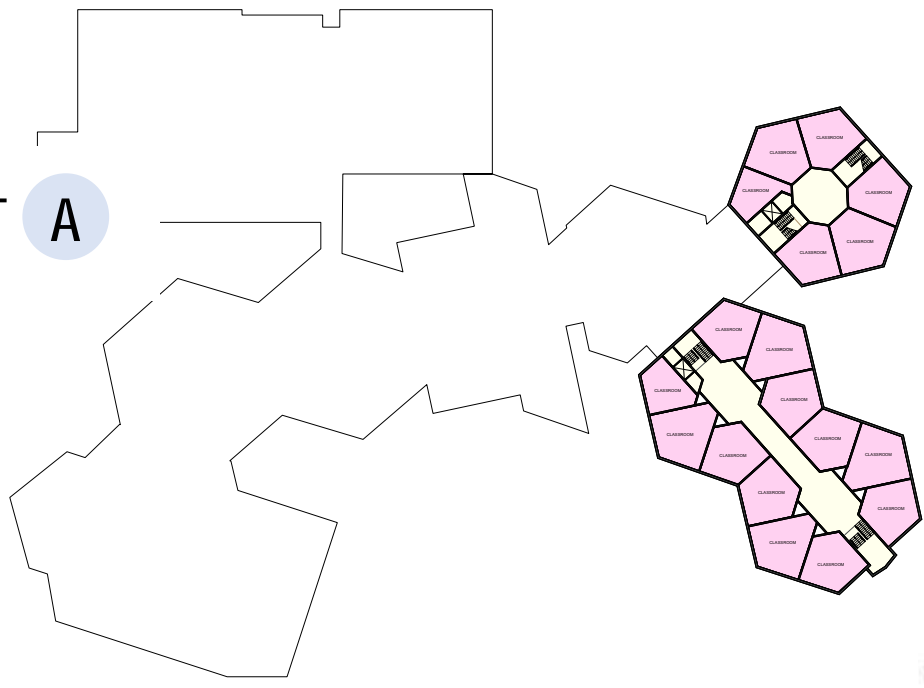


CONCEPT A



CONCEPT A - 3D MASSING

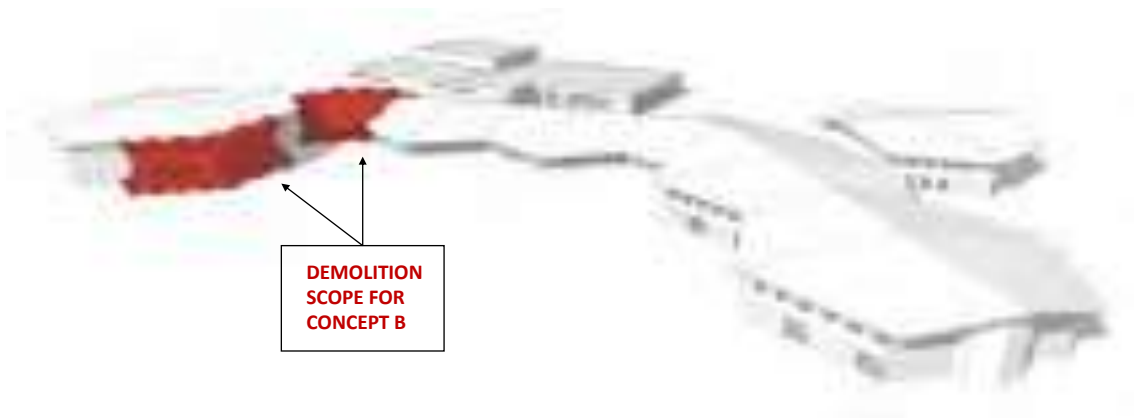
CONCEPT A



The following pages include materials from the Community Presentation that describe Concept B, followed by a summary of the feedback collected following the presentation.

CONCEPT **B**

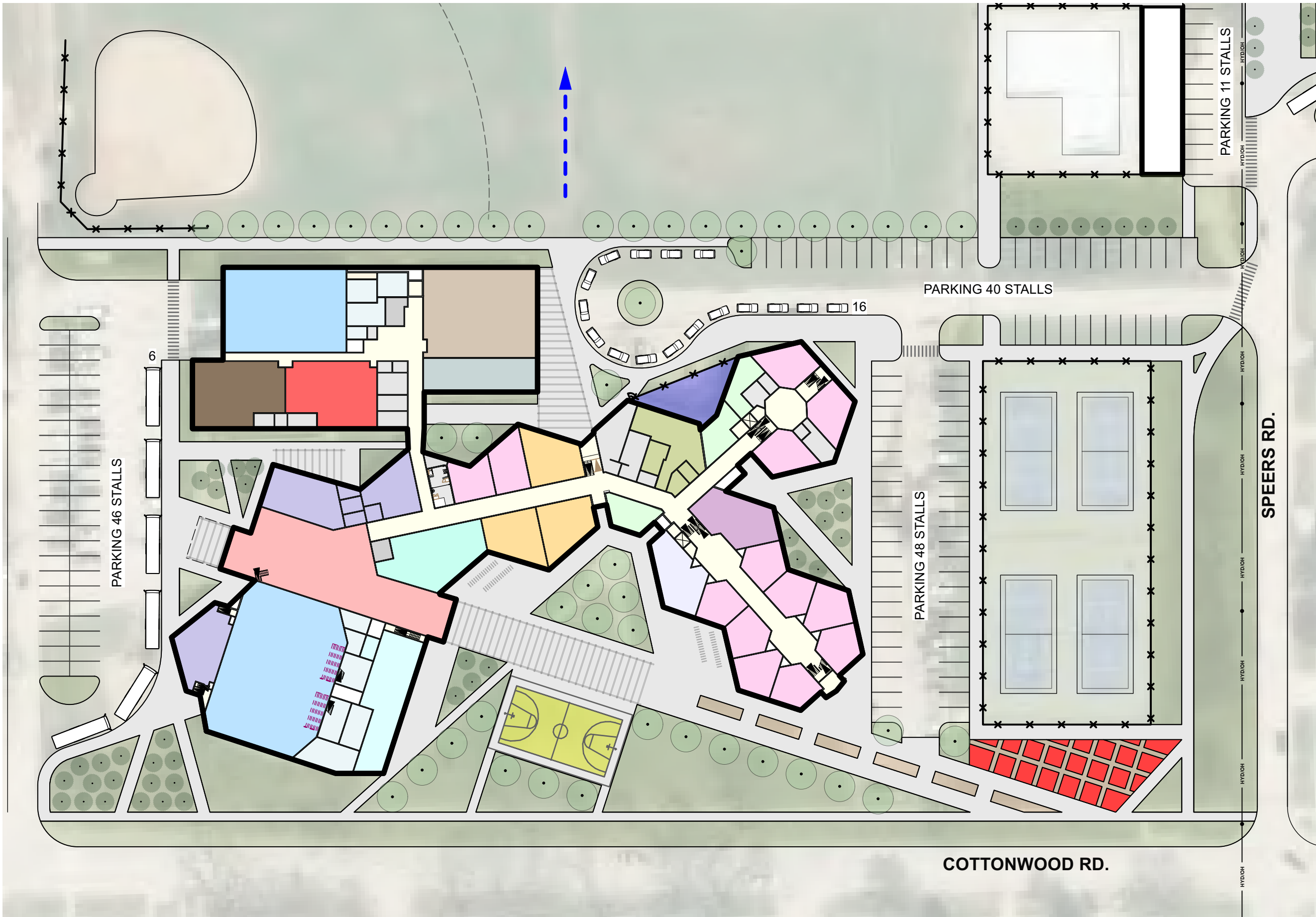
EXISTING BUILDING



Concept B - view from Cottonwood Road



Concept B - view from west parking lot toward entrance



SITE LEGEND

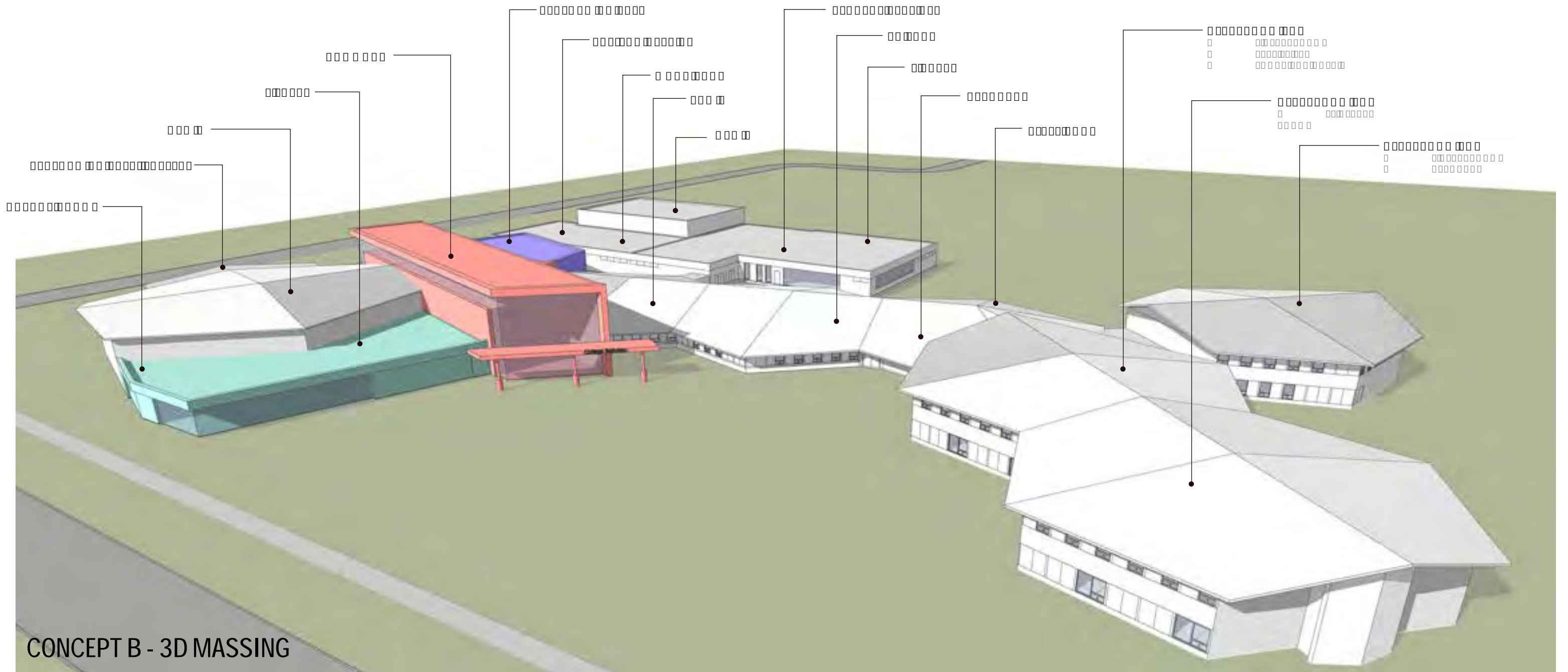
- BUS DROP OFF
- CAR DROP OFF
- BIKE PARKING
- HARD SURFACE / PLAY SURFACE
- PLAY STRUCTURE / SPORTS COURT
- GREENSPACE / LAWN
- STAFF SPACE
- ARBOUR
- COMMUNITY GARDEN
- OVERHEAD HYDRO LINE
- FENCE LINE

BUILDING LEGEND

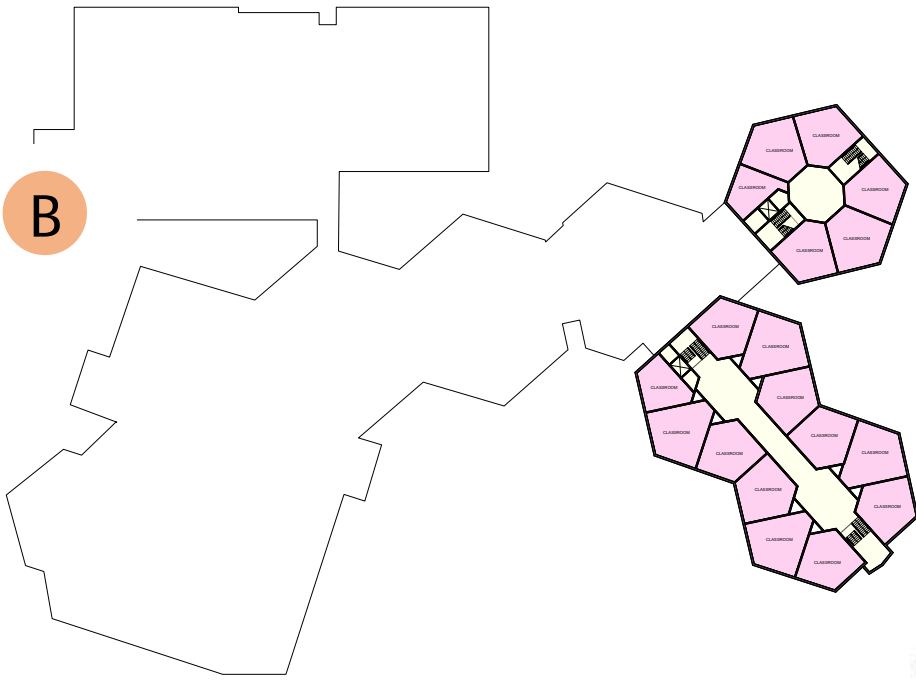
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CONCEPT B - SITE PLAN

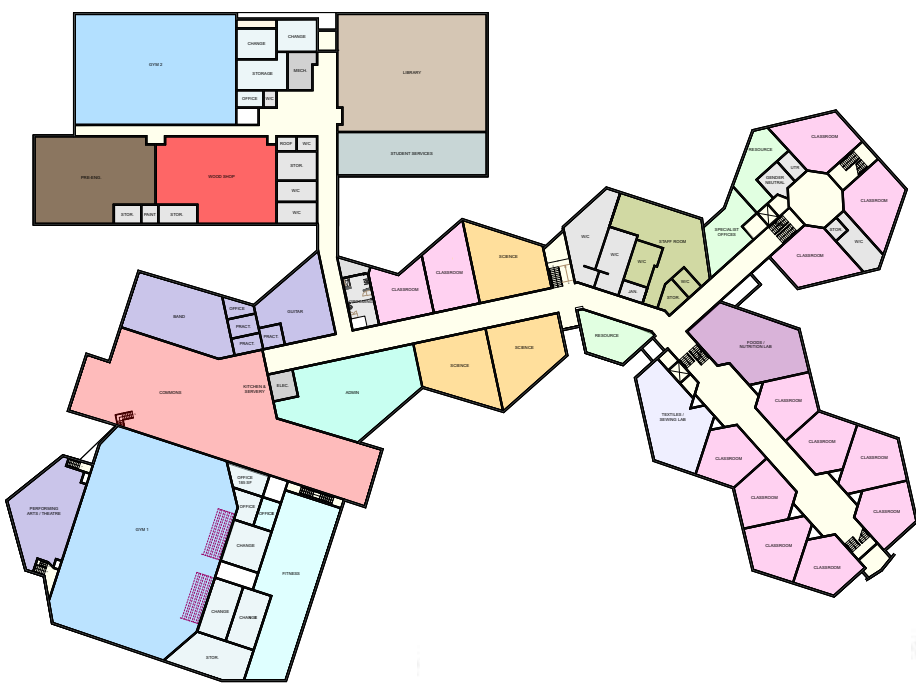
CONCEPT B



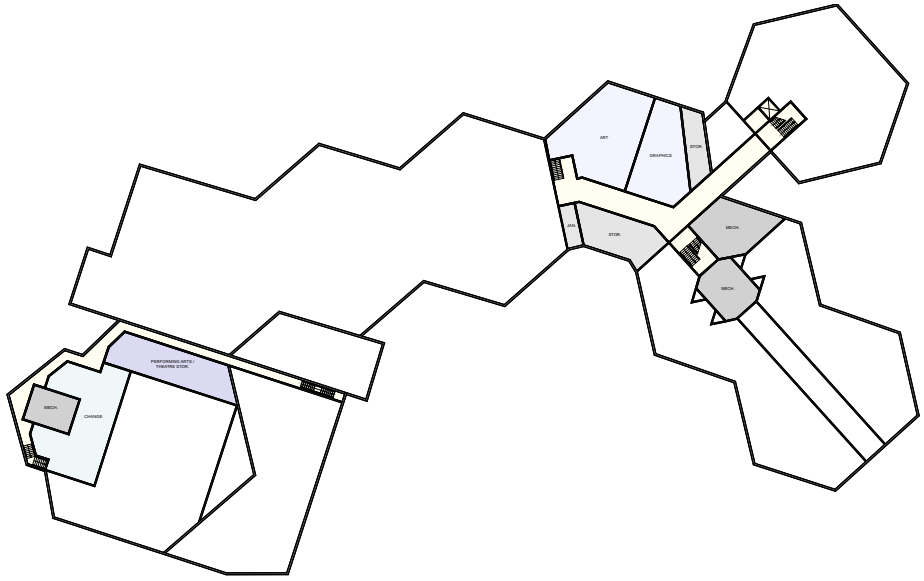
CONCEPT B



SECOND FLOOR PLAN



MAIN FLOOR PLAN



BASEMENT FLOOR PLAN

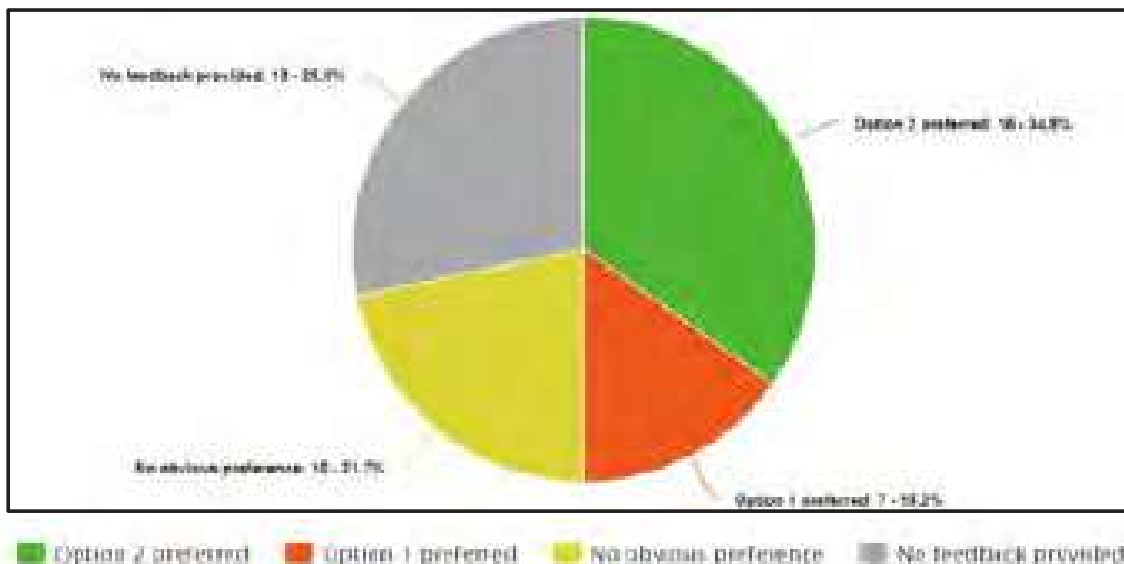
Community Feedback



Collège Béliveau – Major Renovation Feedback

Survey Results Collected after February 1, 2023 Consultation (n=46)

Respondents were placed in the “no obvious preference” category when they had comments and/or concerns related to both design options or they restated the same comments and/or concerns in response to reach design option.



Top thoughts:

Likes (Option 1):	Likes (Option 2):
<ul style="list-style-type: none"> • Commons area (10) <ul style="list-style-type: none"> ○ Student services proximity to commons • Green spaces/outdoor spaces/community gardens/courtyard (7) <ul style="list-style-type: none"> ○ Outdoor space is enclosed/safe (2) • Design and shape (4) <ul style="list-style-type: none"> ○ Natural light • Bus loop and parent drop off area (4) • Library/resource centre location (2) 	<ul style="list-style-type: none"> • Gym/stage location (12) <ul style="list-style-type: none"> ○ Flexibility with regards to community use (4) ○ Closer to the main office and commons (7) • Commons area (4) • Music/band space (4) • Bus loop, parent drop off and parking (4) • Green spaces (3) <ul style="list-style-type: none"> ○ Planters on walkways ○ Trees along soccer field • Design and shape (2) • Fitness area (2) • Student services location (2)



<p>Concerns/Suggestions (Option 1):</p> <ul style="list-style-type: none"> • More parking and bike parking needed (2) • Traffic congestion on Cottonwood (2) • Art and food lab need more natural light (2) • Gym should be closer to commons (2) 	<p>Concerns/Suggestions (Option 2):</p> <ul style="list-style-type: none"> • Two-story open space student commons – loud (3), wasted space <ul style="list-style-type: none"> ○ Suggestion to add second level or half-floor student lounge with glass wall ○ Phys. Ed. teachers will feel obligated to supervise the commons due to proximity to gym • Outdoor space – open to public, unsafe (2)
<p>Questions (Option 1):</p> <ul style="list-style-type: none"> • Will there be sound insulation to protect other spaces from music/band/guitar? • Will more natural light/opening windows be added to classrooms? • Has teacher storage space been considered to reduce visual distractions? • Another parking solution to decrease runoff and promote increased emissions? 	<p>Questions (Option 2):</p> <ul style="list-style-type: none"> • Will there be sound insulation to protect other spaces from music/band/guitar?

All thoughts:

<p>Likes (Option 1):</p> <ul style="list-style-type: none"> • Commons area (10) <ul style="list-style-type: none"> ○ Student services proximity to commons • Green spaces/outdoor spaces/community gardens/courtyard (7) <ul style="list-style-type: none"> ○ Outdoor space is enclosed/safe (2) • Design and shape (4) <ul style="list-style-type: none"> ○ Natural light • Bus loop and parent drop off area (4) • Library/resource centre location (2) • Addresses traffic congestion • Band/guitar close to gym • Main office location 	<p>Likes (Option 2):</p> <ul style="list-style-type: none"> • Gym/stage location (12) <ul style="list-style-type: none"> ○ Flexibility with regards to community use (4) ○ Closer to the main office and commons (7) • Commons area (4) • Music/band space (4) • Bus loop, parent drop off and parking (4) • Green spaces (3) <ul style="list-style-type: none"> ○ Planters on walkways ○ Trees along soccer field • Design and shape (2) • Fitness area (2) • Student services location (2) • Main office • Reduces traffic flow
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	<ul style="list-style-type: none"> • Opportunity for rain gardens or student directed presentation areas • Has more classrooms
<p>Concerns (Option 1):</p> <ul style="list-style-type: none"> • More parking and bike parking needed (2) • Traffic congestion on Cottonwood (2) • Art and food lab need more natural light (2) • Gym should be closer to commons (2) • Design and shape – feels cut in half • Add prairie grasses and native flowers • Add overhead/sliding doors to open classrooms to outside courtyard spaces • Move food/nutrition labs closer to other electives (shops, music, etc.) • Front courtyard • Gym addition – less barricaded, more of a feature • Swap main office and kitchen so the main office is closer to entrance • Student services is split 	<p>Concerns (Option 2):</p> <ul style="list-style-type: none"> • Two-story open space student commons – loud (3), wasted space <ul style="list-style-type: none"> ○ Suggestion to add second level or half-floor student lounge with glass wall ○ Phys. Ed. teachers will feel obligated to supervise the commons due to proximity to gym • Outdoor space – open to public, unsafe (2) • Traffic congestion on Speers (buses shouldn't go down alley) • Students are far main office • Student services and library disconnected • Move food/nutrition labs closer to other electives (shops, music, etc.) • Parent drop off at far side of parking lot • Design and shape • Front courtyard • More greenspaces <ul style="list-style-type: none"> ○ More canopy trees ○ Make landscaping sustainable for maintenance (what's good for planet, learning and upkeep) • Community gardens <ul style="list-style-type: none"> ○ Move to in front of the gym ○ Along sidewalk – damage and stealing produce • Entrance – not welcoming • Gym addition – geometry needs work

5.2 Windsor Park Collegiate Transition to Speers Building

Community Presentation

On January 31, 2023, the Louis Riel School Division hosted a Community Presentation and Consultation process at 296 Speers Road, in the school’s Commons.

The evening began at 6:00pm with the opportunity for community to walk through the Speers building and ask questions of current Collège Béliveau staff that were available to give tours. Handout brochures were available and large presentation boards were set up showing two proposed conceptual design options for Windsor Park Collegiate in the Speers building, giving attendees an opportunity to familiarize themselves with the schemes prior to the presentation.

The presentation began at 7:00pm and opened with a Land Acknowledgment and welcome from Windsor Park Collegiate’s Principal, Robbie Mager, and Vice-Principal, Carly Friesen. LRSD

Superintendent, Christian Michalik, introduced the Division’s “Design With Us” process for the evening and recapped the Board of Trustee approval of an exchange of the Windsor Park Collegiate and Collège Béliveau buildings. Assistant Superintendent, Marlene Murray discussed the forecasted milestones and next steps of the process.

The presentation was then handed over to Lindsay Oster of Prairie Architects Inc. to present the concepts with assistance from Monica Giesbrecht of HTFC Planning & Design.

Lindsay Oster began by describing the “block planning high-level design stage” that the project was currently at and then moved into a discussion of Windsor Park Collegiate’s Key Programs and spaces and which of those are currently provided for in the Speers building and which are not.

SPEERS BUILDING	
Existing Spaces (Provided)	Required Spaces (Not Provided)
<ul style="list-style-type: none"> • Student Commons (with Kitchen and Servery) 	<ul style="list-style-type: none"> • Gymnasium space with regulation ceiling heights
<ul style="list-style-type: none"> • Classroom space appropriate to enrolment projections 	<ul style="list-style-type: none"> • Individualized Programming (IP) Space accommodation
	<ul style="list-style-type: none"> • Raised Stage / Theatre
	<ul style="list-style-type: none"> • Wood and Metals Shops

Slide from the presentation giving an overview of Windsor Park Collegiate’s Key Programs and Spaces

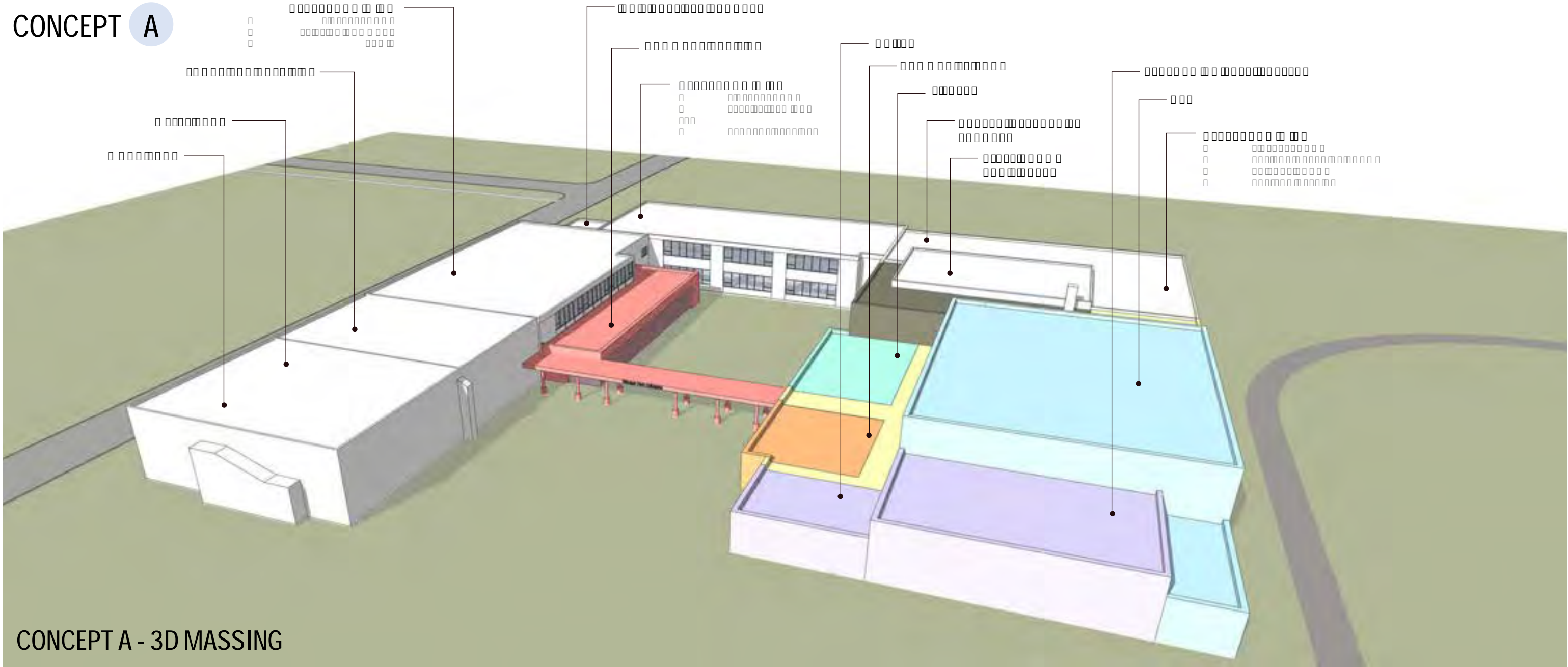
The following pages include materials from the Community Presentation that describe Concept A, followed by a summary of the feedback collected following the presentations.

CONCEPT A

EXISTING BUILDING



CONCEPT A



CONCEPT A - 3D MASSING

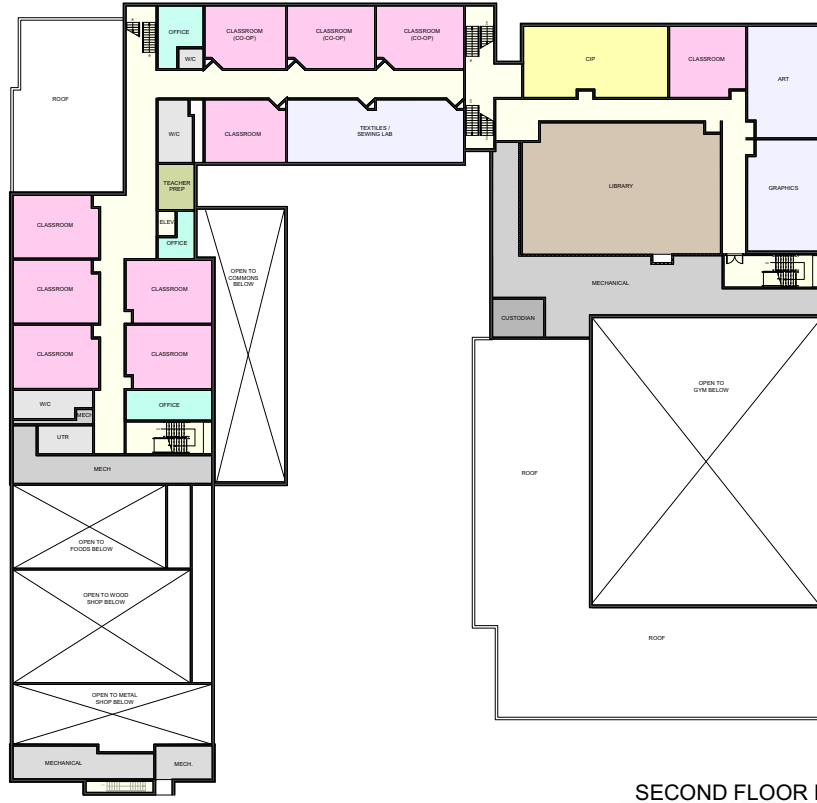


Concept A - view from south parking lot / Jogues Road

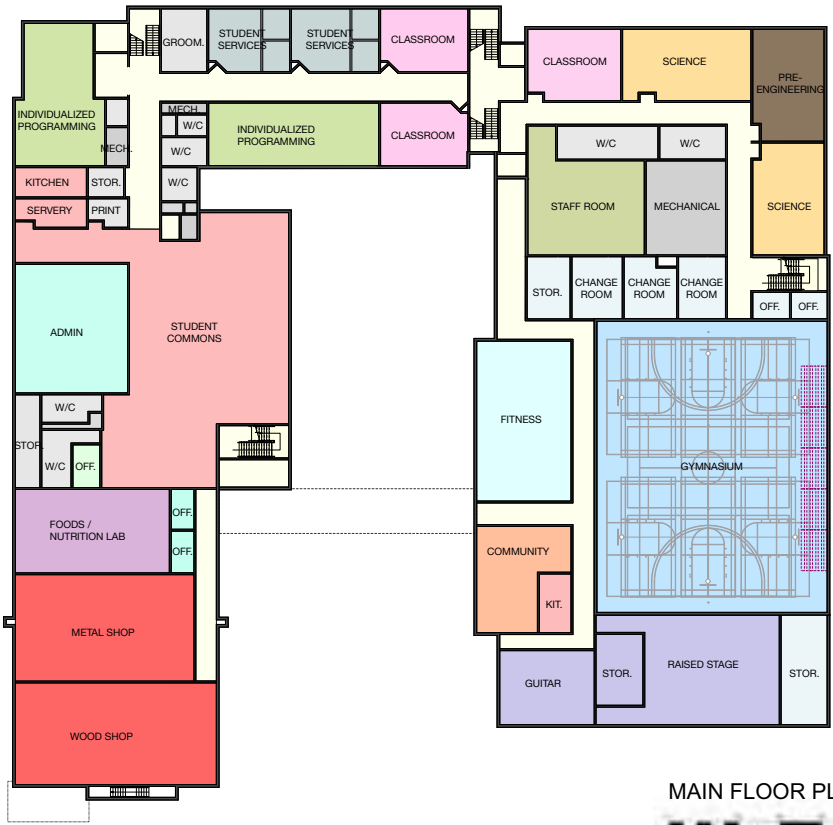


Concept A - view of courtyard

CONCEPT A



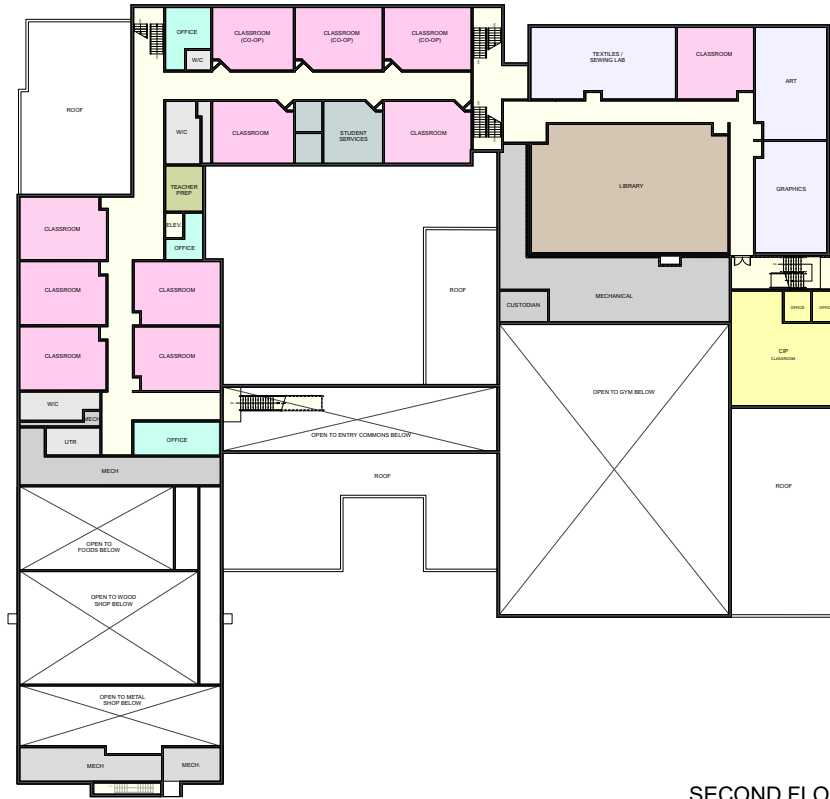
SECOND FLOOR PLAN



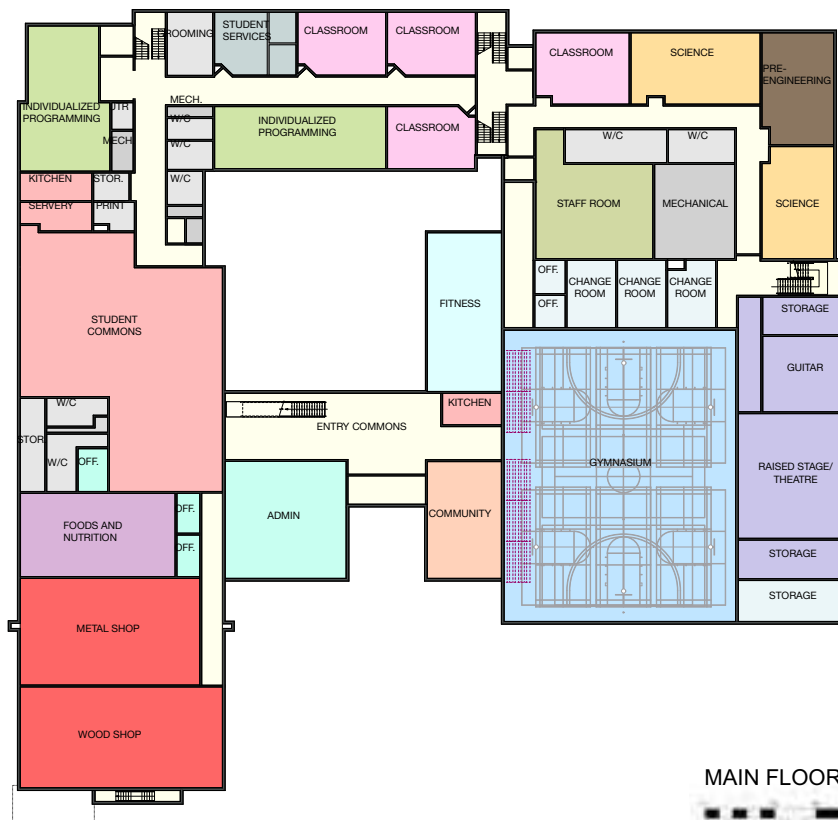
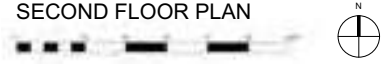
MAIN FLOOR PLAN



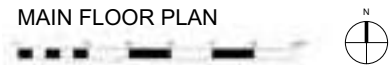
CONCEPT B

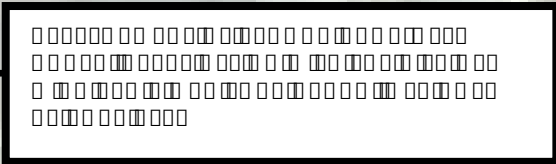
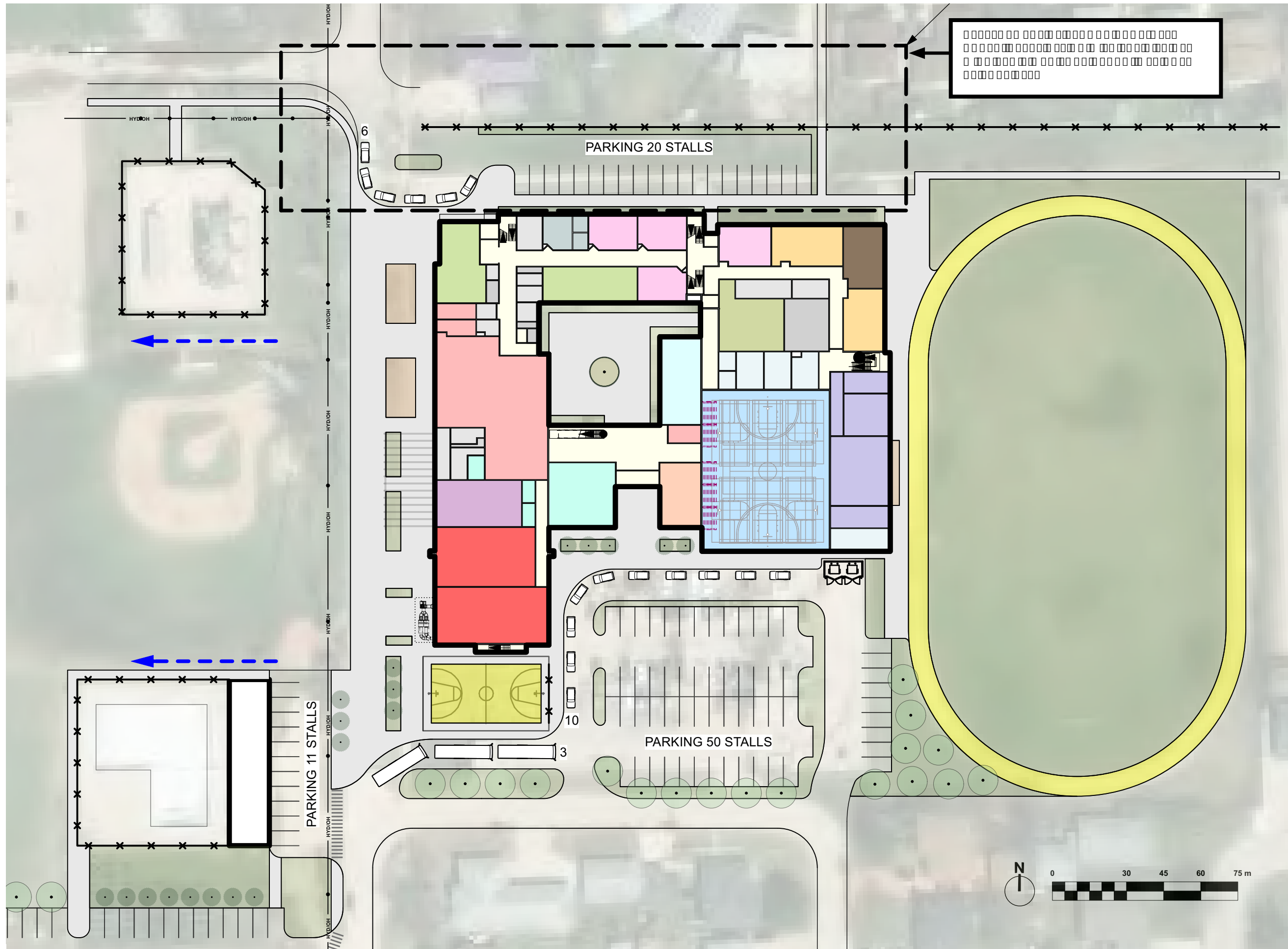


SECOND FLOOR PLAN



MAIN FLOOR PLAN





SITE LEGEND

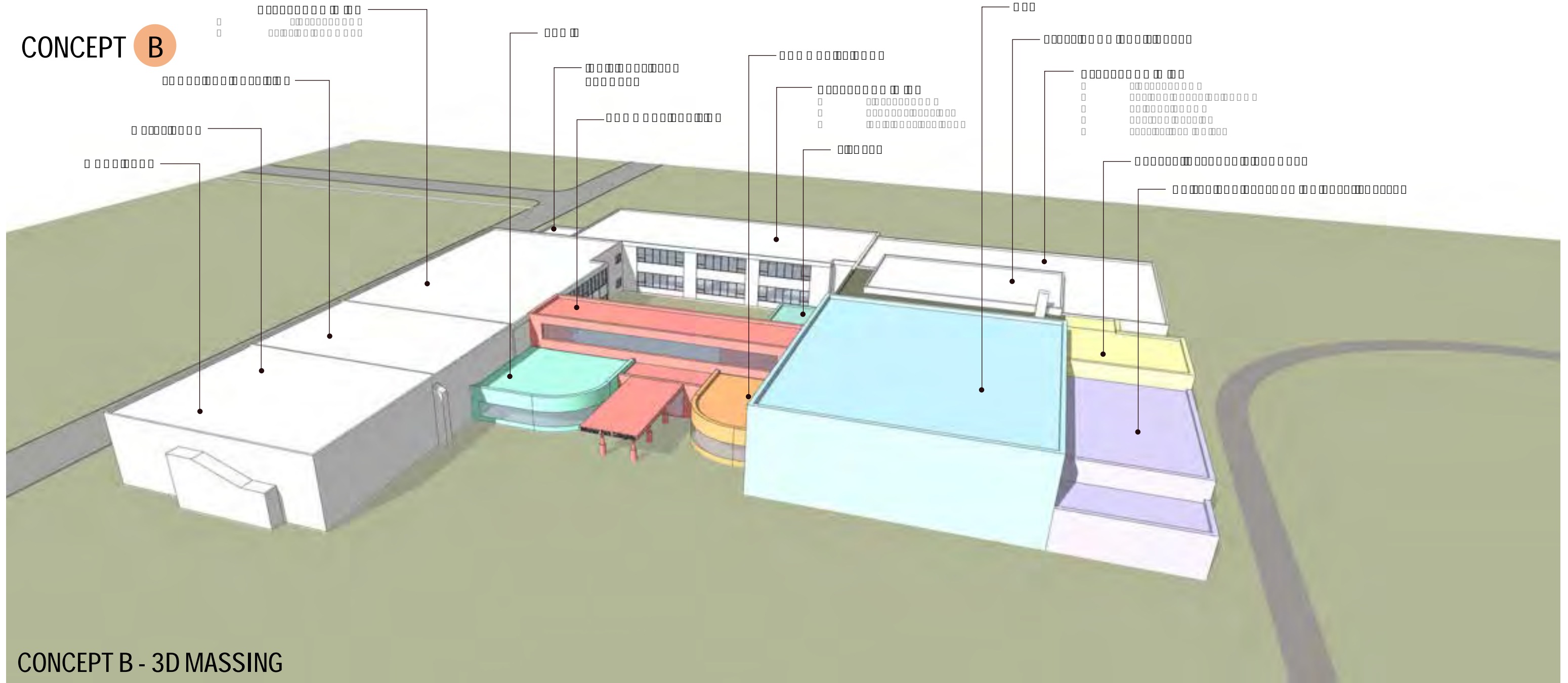
- BUS DROP OFF
- CAR DROP OFF
- BIKE PARKING
- HARD SURFACE / PLAY SURFACE
- PLAY STRUCTURE / SPORTS COURT
- GREENSPACE / LAWN
- STAFF SPACE
- ARBOUR
- COMMUNITY GARDEN
- OVERHEAD HYDRO LINE
- FENCE LINE

BUILDING LEGEND

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CONCEPT B - SITE PLAN

CONCEPT B



CONCEPT B - 3D MASSING



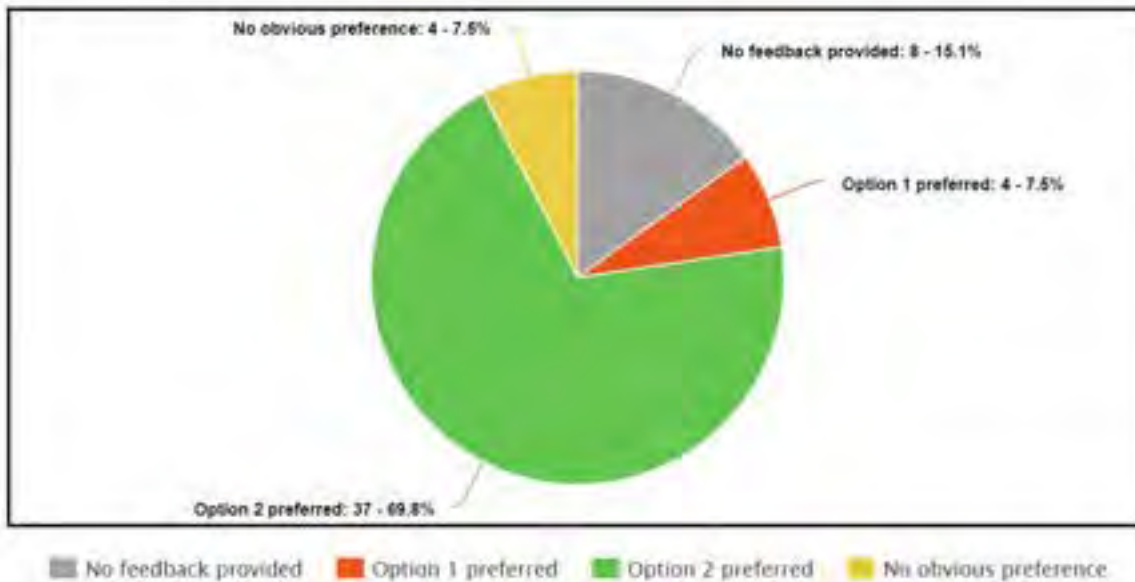
Concept B - view from south parking lot / Jogues Road



Concept B - view of courtyard

Community Feedback

Windsor Park Collegiate – Major Renovation Feedback (n=53)



Respondents were placed in the “no obvious preference” category when they restated the same comments or concerns in response to each design option. 1 of the 4 responses had likes and concerns for both designs, however it is not clear as to which design option they prefer. One of their concerns is mentioned for both design options.

Top thoughts:

<p>Likes (Option 1):</p> <ul style="list-style-type: none"> • Design, shape and flow (2) • IA/IP classroom location (2) • Gym and theatre (1) • Openness of outside (1) 	<p>Likes (Option 2):</p> <ul style="list-style-type: none"> • Design, shape and flow (12) • Entrance, foyer and staircase (10) • Gym and theatre (9) • Courtyard (4) • Accessibility (3)
<p>Concerns/Suggestions (Option 1):</p> <ul style="list-style-type: none"> • Design, shape and flow (5) • Main office is far from gym (2) • Graphics, engineering, woods, metal should be next to each other for collaboration (2) • Openair walkway – Winter? (2) 	<p>Concerns/Suggestions (Option 2):</p> <ul style="list-style-type: none"> • Gym seating should be on the side of the gym entrance (3) • IP classroom location – less inclusive (2) • Graphics, engineering, woods, metal should be next to each other for collaboration (2)
<p>Questions (Option 1):</p> <ul style="list-style-type: none"> • “When will it be done?” 	<p>Questions (Option 2):</p> <ul style="list-style-type: none"> • “What is the order of concessions when the province doesn’t approve the dream plan?”

All thoughts:

<p>Likes (Option 1):</p> <ul style="list-style-type: none"> • Design, shape and flow (2) • IA/IP classroom location (2) • Gym and theatre (1) • Openness of outside (1) 	<p>Likes (Option 2):</p> <ul style="list-style-type: none"> • Design, shape and flow (12) • Entrance, foyer and staircase (10) • Gym and theatre (9) • Courtyard (4) • Accessibility (3) • Student services on both floors (2) • Beneficial for student learning, welcoming (2) • Windows (2) • Outdoor stage (2) • IP classrooms (2) • Workout room • Arts section • More space for physical activity • Learning commons • Practical Arts • Breezeway • Bus lanes • Main offices
<p>Concerns (Option 1):</p> <ul style="list-style-type: none"> • Design, shape and flow (5) • Main office is far from gym (2) • Graphics, engineering, woods, metal should be next to each other for collaboration (2) • Openair walkway – Winter? (2) • Main office needs to be more prominent • Main office location may be too loud • Needs science lab update (chemical room prep area, double sided fume hood, remove cabinets for use of Bunsen burners) • Going outside to access the gym • The time to demolish and rebuild the buildings with students occupying the school 	<p>Concerns (Option 2):</p> <ul style="list-style-type: none"> • Gym seating should be on the side of the gym entrance (3) • IP classroom location – less inclusive (2) • Graphics, engineering, woods, metal should be next to each other for collaboration (2) • Needs science lab update (chemical room prep area, double sided fume hood, remove cabinets for use of Bunsen burners) • Community room at front of school - Students may not use it due to it being a focal point • Furniture needed for courtyard • Metals lab on exterior wall - Bay door for deliveries and small engine program • The time to demolish and rebuild the buildings with students occupying the school

PART 6 - FINAL CONCEPTUAL DESIGN RECOMMENDATIONS

6.1 Final Conceptual Site Design

Site Master Plan

Based on the feedback from the community open houses as well as internal review, the LRSD selected to develop the site following most of the features originally proposed in Option B with some modifications that optimize the distinct uses of each site and the cross access connections between them.

Individual Site Features

Cottonwood Building

1. Vehicular Circulation, Drop Off, Bus Drop Off, and Parking - Same as option B with the following adjustments:
 - Reconfigure parking lots to accommodate two additional pedestrian crossings to the outdoor pool area and 91 stalls on the north and east side of the site.
2. Pedestrian Circulation, Active Transportation Circulation and Bike Parking - Same as option B with the following adjustments:
 - Widen service access and delivery in the northeast corner of the west parking lot reducing the length of the bus drop off zone. Allow this drop off zone to function as a public pick up and drop off zone at non-peak times of day.
 - Add continuous east west sidewalk along the north side of the site and make this the active transportation route as originally proposed in option A.
 - Add safety/light bollards to delineate the drop off edges at the bus and parent drop off zones.
3. Exterior Amenity Spaces Renovations and Additions - Same as option B with the following adjustments:

- Buffer outdoor fitness courtyard with plantings and separate it from the more public south student spaces with a privacy wall and gated access.
- Add plantings around the new south basketball court to mitigate balls making their way onto Cottonwood.
- Sink south facing commons space and leave it as a gathering lawn/ assembly space.
- Add overhead canopy to the maker space over the science and music maker space in the west courtyard.
- Add ping pong tables to east facing courtyard south of the student centre.
- Keep existing community gardens south of the outdoor pool and expand them into vegetable gardens, food forests, and based learning and foraging areas on the Cottonwood site.
- Add land-based learning urban forest planting area south of the tennis courts.

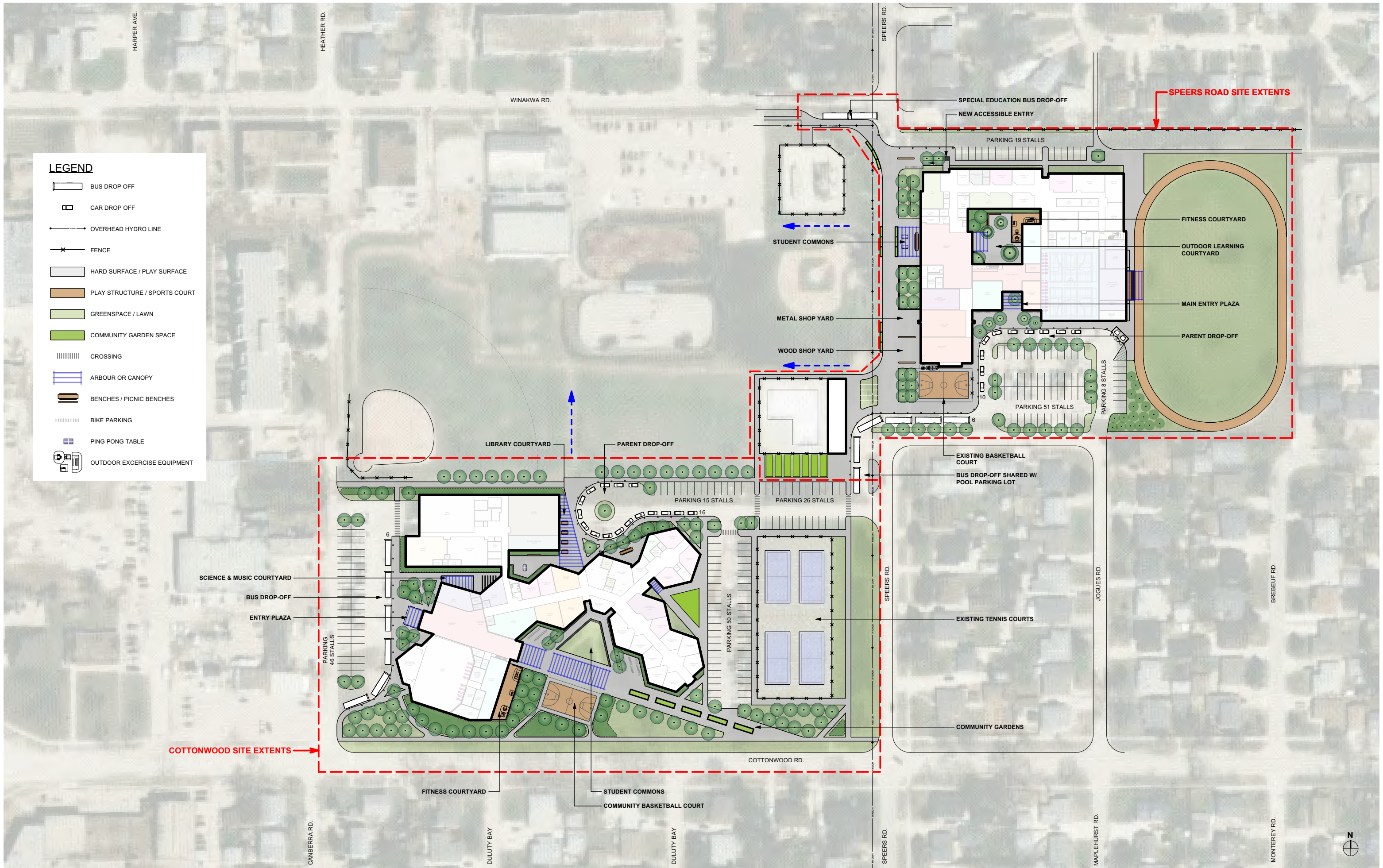
Speers Building

1. Vehicular Circulation, Drop Off, Bus Drop Off, and Parking - Same as option B with the following adjustments:
 - Widen Northwest Pedestrian plaza and further enhance accessible entrance ramp and steps on the Northwest corner of the building.
 - Add safety/light bollards along all pick up drop off zones to clearly delineate vehicular and pedestrian zones.
 - Straighten out and widen new west sidewalk on Speers between Cottonwood and Jogues to create an extension of the Speers Road Active transportation route

from Winakwa all the way to Cottonwood.

2. Pedestrian Circulation, Active Transportation Circulation and Bike Parking - Same as option B with the following adjustments:
 - Widen Northwest Pedestrian plaza and further enhance accessible entrance ramp and steps on the Northwest corner of the building.
 - Add safety/light bollards along all pick up drop off zones to clearly delineate vehicular and pedestrian zones.
 - Straighten out and widen new west sidewalk on Speers between Cottonwood and Jogues to create an extension of the Speers Road Active transportation route from Winakwa all the way to Cottonwood.

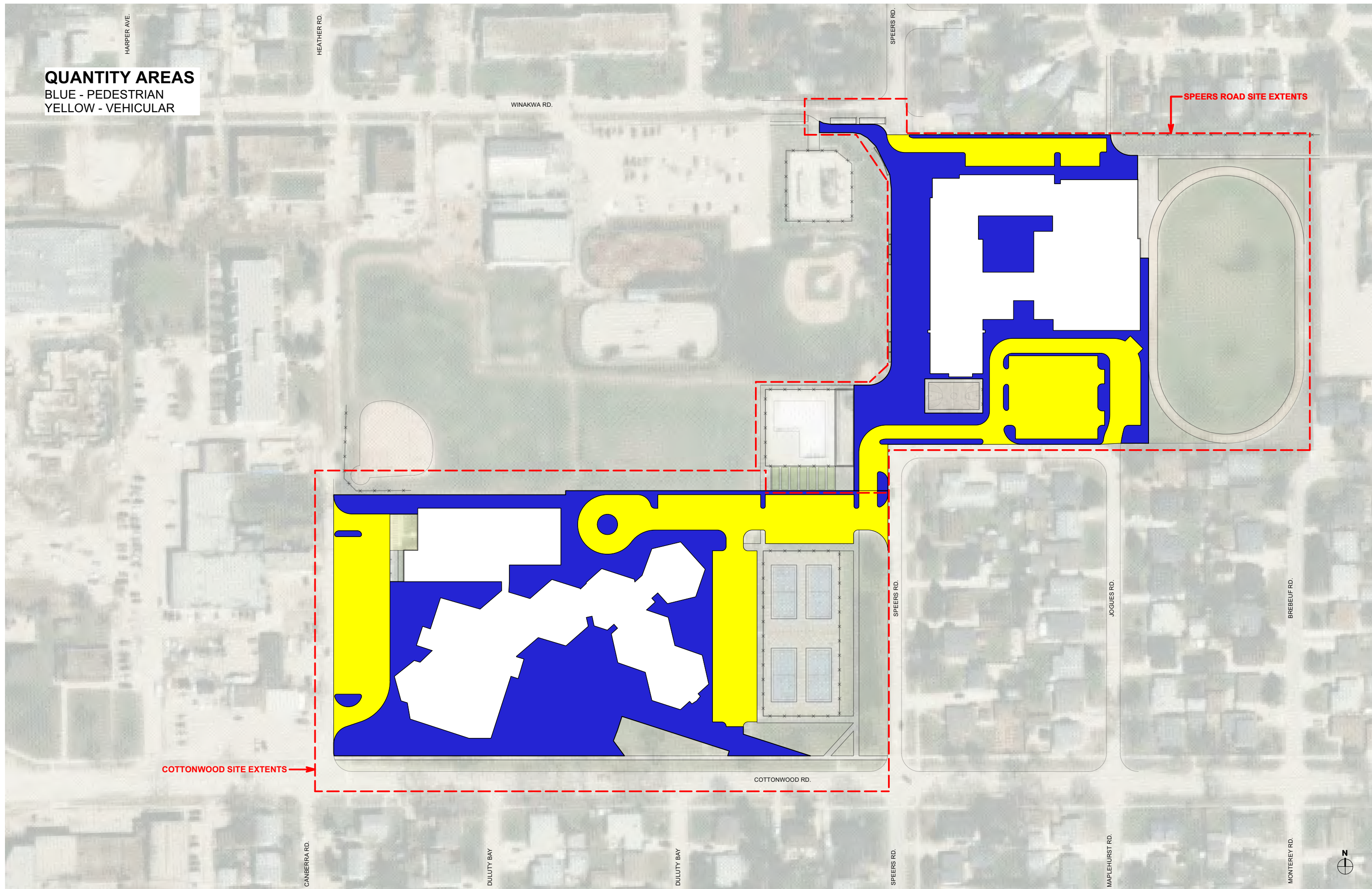
3. Exterior Amenity Spaces Renovations and Additions - Same as option B with the following adjustments:
 - Add more treed green spaces along the west side of the building maintaining outdoor education zones for the industrial art labs, combining the food sciences and commons eating/gathering space on the west side of the building and creating a green buffer around the special needs zone of the building.
 - Create a dedicated outdoor fitness zone with a screen and immediate access from the fitness room inside the interior courtyard.
 - Add shade structures and overhead canopies to extend the use of outdoor eating areas in the outdoor spaces to the east and west of the commons.
 - Expand the stage on the east side of the building to connect with the resurfaced track as the building expansion edge on this side is now further east.



LEGEND

- BUS DROP OFF
- CAR DROP OFF
- OVERHEAD HYDRO LINE
- FENCE
- HARD SURFACE / PLAY SURFACE
- PLAY STRUCTURE / SPORTS COURT
- GREENSPACE / LAWN
- COMMUNITY GARDEN SPACE
- CROSSING
- ARBOUR OR CANOPY
- BENCHES / PICNIC BENCHES
- BIKE PARKING
- PING PONG TABLE
- OUTDOOR EXERCISE EQUIPMENT

QUANTITY AREAS
BLUE - PEDESTRIAN
YELLOW - VEHICULAR



6.2 Final Conceptual Building Design for Collège Béliveau transition to Cottonwood

Functional Space Program

The following pages contain the functional space program for the preferred Concept B for the transition of Collège Béliveau to 1015 Cottonwood Road.

NEW SPACE PROGRAM FOR COLLEGE BELIVEAU 1015 Cottonwood Road, Winnipeg, MB

No.	Room	Number of Spaces	Total Area (SF)	new vs. existing	Notes
1.0 INSTRUCTIONAL SPACES					
1.1 CLASSROOMS					
	General Classrooms	29	21,435	new & existing	Classroom size ranges from 660 - 1095
	Art Room	1	1,538	new	includes storage
1.2 SPECIALIZED CLASSROOMS					
	Science	4	4,930	new	includes prep areas, storage and chemical storage
	Sewing and Textile	1	1,200	existing	includes storage
	Graphics Lab	1	1,558	existing	storage included
	Foods and Nutrition	1	1,461	new	
	SUBTOTAL INSTRUCTIONAL		32,122		
2.0 SPECIALIZED SPACES					
2.1 GYM #1					
	Gym #1	1	7,123	existing	
	Storage	1	555	new	
	Offices	2	325	new	
	Change Rooms	4	1,235	new	
2.2 GYM #2					
	Gym #2	1	4,320	existing	
	Storage	1	373	existing	
	Office	1	155	existing	includes washroom
	Change Rooms	2	573	existing	
2.3 SHOPS					
	Wood Shop	1	2,798	existing	Includes storage and shared office
2.4 PRE-ENGINEERING					
		1	2,565	new	Metal shop conversion to Pre-Engineering
2.5 FITNESS					
		1	2,412	new	includes storage and office
2.6 MUSIC/ PERFORMING ARTS					
	Band Room	1	2,072	new	includes office and 3 practice rooms
	Guitar	1	1,015	new	
	Raised Stage	1	1,585	existing	
	Theatre Storage	1	1,185	existing	
2.7 LIBRARY					
		1	4,280	existing & new	existing library with former pre-engineering space added
2.8 STUDENT COMMONS					
		1	5,820	new	includes kitchen and servery
	SUBTOTAL SPECIALIZED SPACES		38,391		

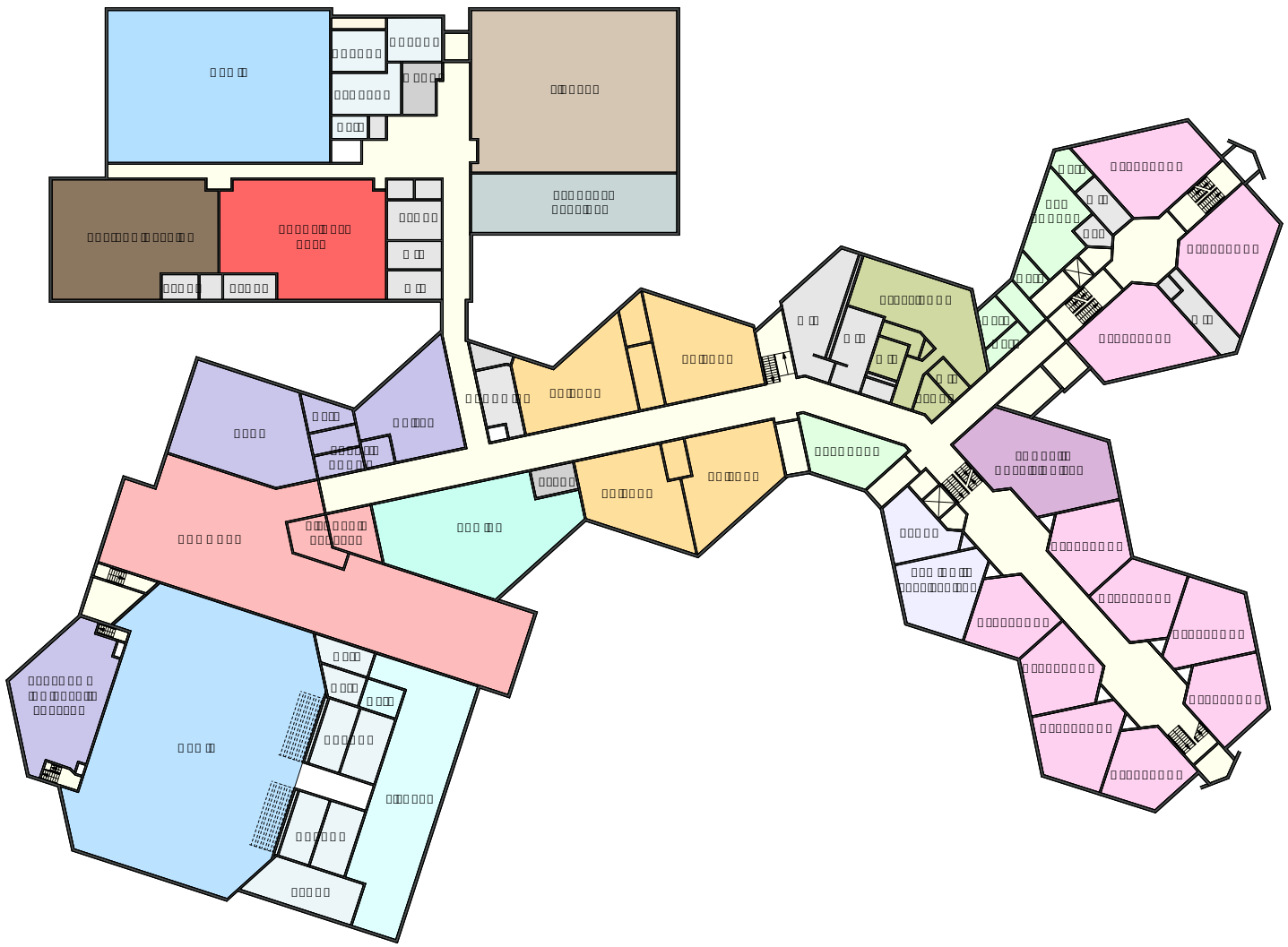
No.	Room	Number of Spaces	Total Area (SF)	new vs. existing	Notes
3.0 ADMINISTRATION & STAFF					
3.1 ADMINISTRATION					
	Admin Suite	1	2,075	new	
3.2 STAFF SPACES					
	Staff Room	1	1,780	existing & new	includes kitchen, storage, and washrooms
3.3 SPECIALIST / STUDENT SERVICES					
	Specialist Offices	3	355	existing	
	Student Services	1	1,542	existing	
	Resource	1	595	existing	
	SUBTOTAL ADMINISTRATION & STAFF		6,347		
4.0 BUILDING SERVICES / SUPPORT					
4.1 Support					
	Custodial /Supply Storage	6	1,143		
	Additional Storage below former tiered music/guitar	2	2,148		
4.2 Dedicated M&E Rooms					
	Main Electrical room	1	150		
	Mechanical / Electrical	4	3,905		
4.2 WASHROOMS					
	Grooming Room	1	167		
	Student Washrooms	8	2,287		
	UTR	1	66		
	SUBTOTAL BUILDING SERVICES		9,866		
	NET TOTAL AREA		86,726		
	BUILDING GROSS UP		26,862		includes exterior & interior walls, horizontal and vertical circulation, etc.
	TOTAL GROSS AREA		113,588		

Gross Building Area (per plan drawings)	
Basement	14,860
Main	79,783
Second	18,945
Total	113,588

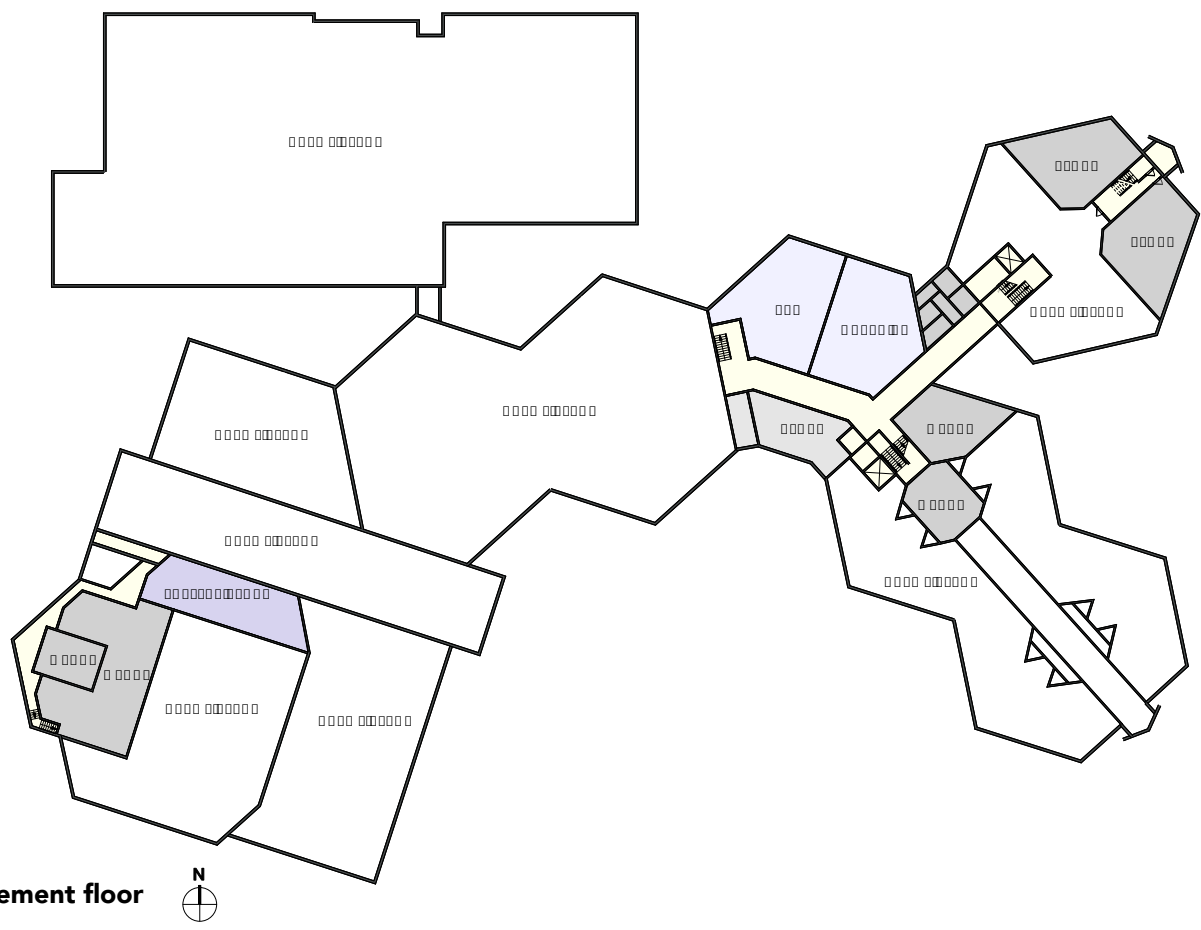
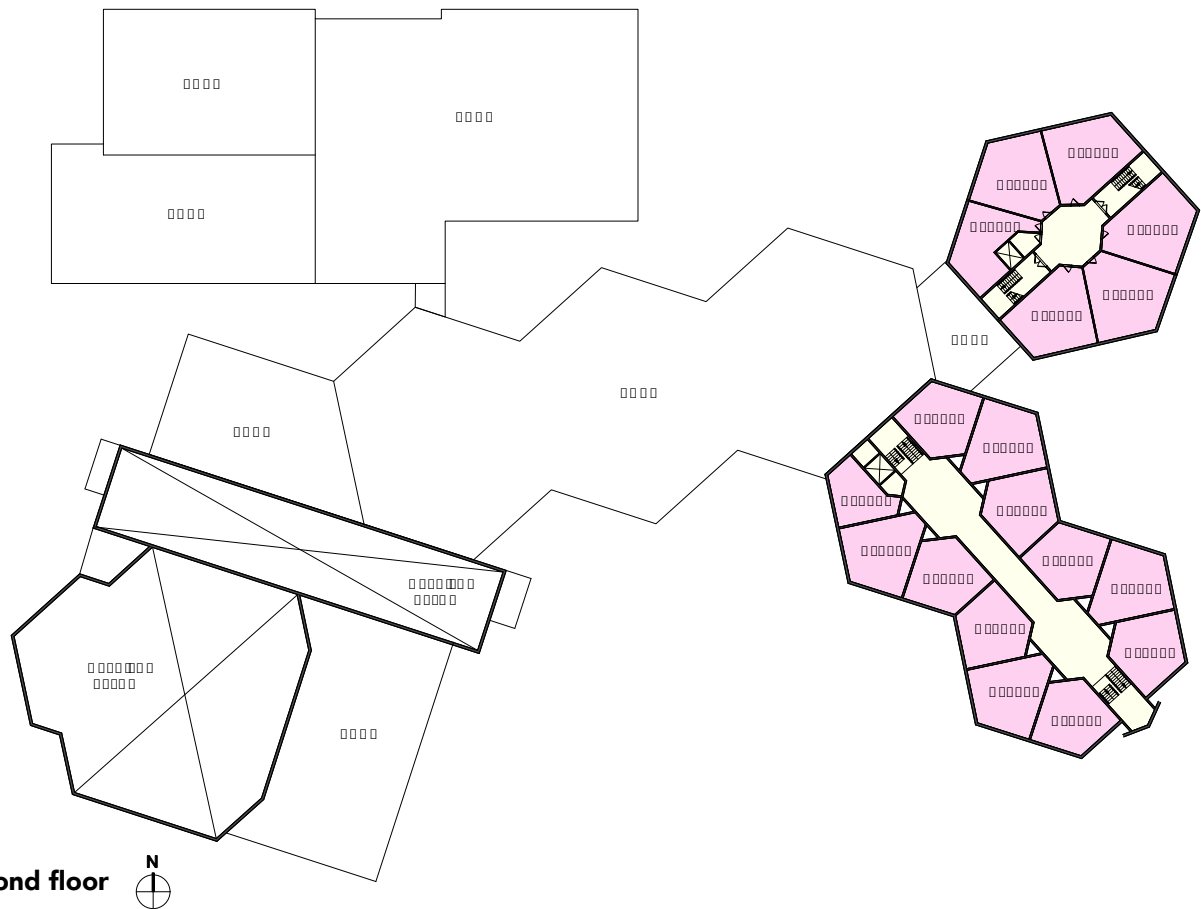
Building Design

The following pages highlight the design of the preferred Concept B for the transition of Collège Béliveau to 1015 Cottonwood Road.

- COMMONS
- COMMUNITY / INDIGENOUS ROOM
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY



main floor



Distribution of New vs. Renovated Spaces

The adjacent plan diagrams illustrate the distribution of spaces that are newly constructed; existing and receiving renovation; existing and remaining as-is; and existing and being demolished.

New Construction:

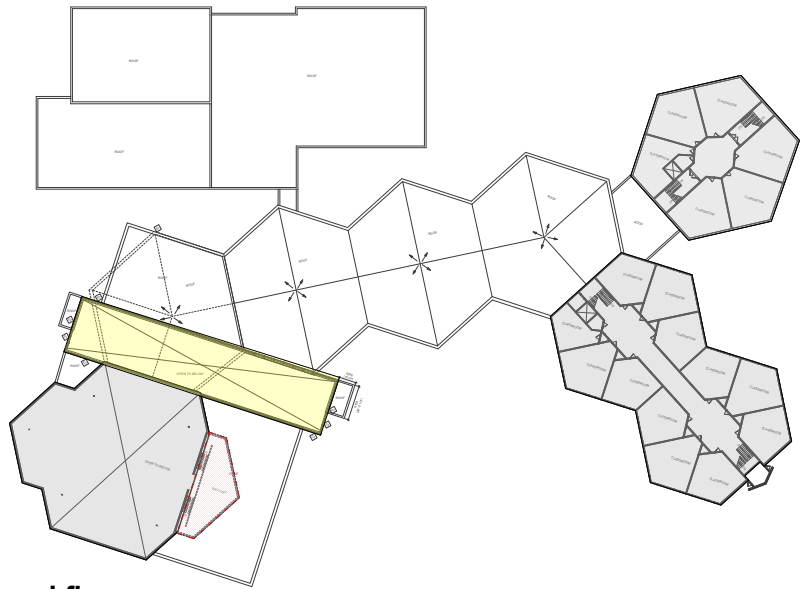
- Second Floor - N/A
- Main Floor - 14,000 sf
- Basement - 365 sf (not incl. crawlspace)

Existing Building Renovation:

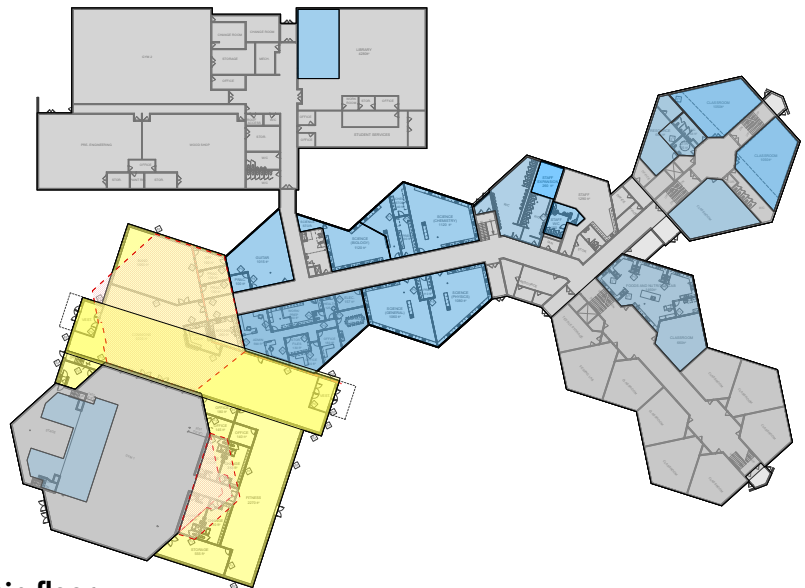
- Second Floor - N/A
- Main Floor - 16,250 sf
- Basement - 5,500 sf

Existing Building Demolition:

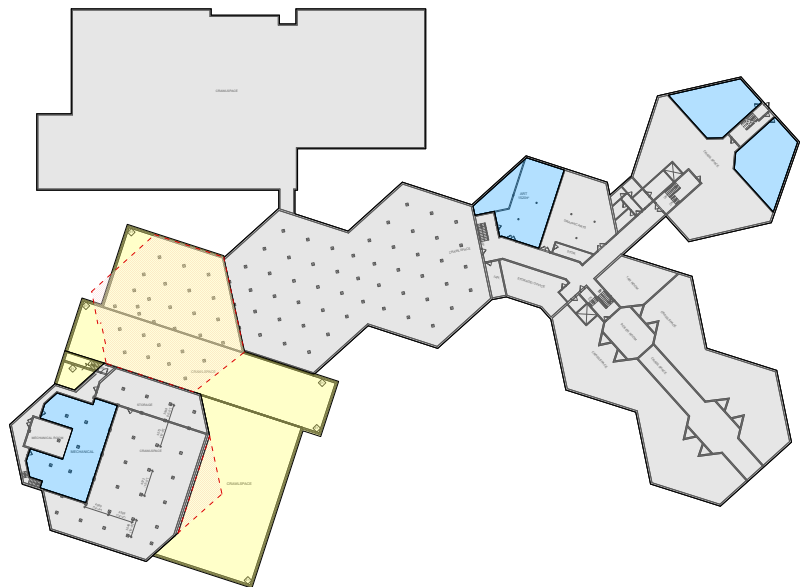
- Second Floor - 1,175 sf
- Main Floor - 6,240 sf
- Basement - N/A



second floor



main floor



basement floor

LEGEND

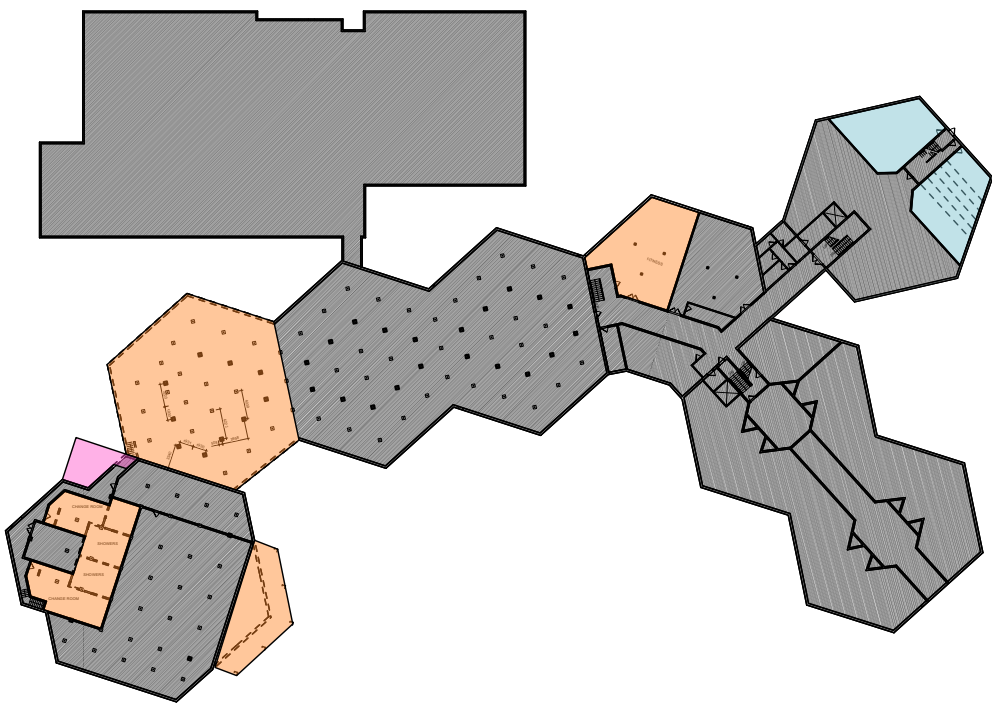
- NEW CONSTRUCTION
- EXISTING BUILDING RENOVATION
- EXISTING BUILDING DEMOLITION
- EXISTING BUILDING TO REMAIN

Construction Phasing / Move Management

Construction is anticipated to be executed in a phased approach. This is necessary not only due to the fact that it is necessary for the school to remain occupied over the entire construction duration, but also because there are a number of spaces that need to be operational prior to others receiving renovation.

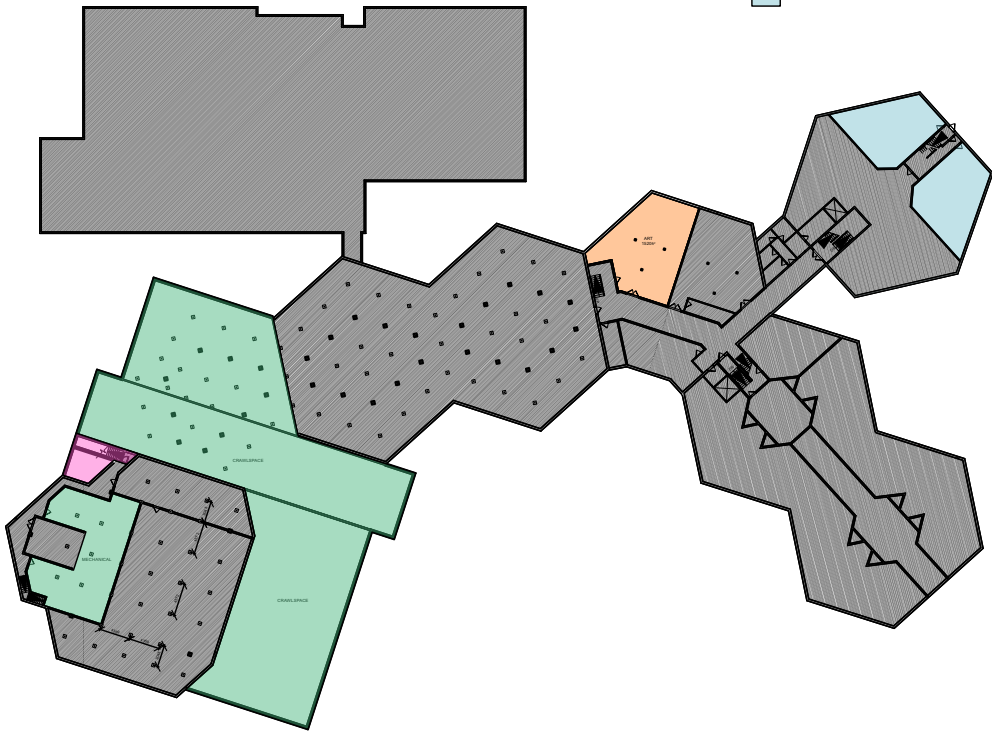
PHASE	START	END
PHASE 1A	01-Jun-24	30-Aug-24
PHASE 1B	01-Jun-24	30-Oct-24
PHASE 1C	01-Jul-24	30-Aug-24
PHASE 1D	01-Jul-24	30-Oct-24
PHASE 2	30-Aug-24	30-Aug-25
PHASE 3A	01-Jul-25	30-Aug-25
PHASE 3B	01-Jul-25	30-Oct-25
EXISTING (N/A)		

Room Name	PHASE	MOVE MANAGEMENT / PHASING NOTES
Gymnasium - new doors at south	PHASE 1A	
Food & Nutrition Lab	PHASE 1A	Renovation of existing Commons / Kitchen area to new Foods / Nutrition
Staff Room	PHASE 1A	Renovation of portion of existing female washroom into staff room expansion and all other staff room renovations
Classroom	PHASE 1A	Renovation of existing Commons / Kitchen area to standard classroom
New UTR and Gender Neutral Washrooms	PHASE 1A	Washrooms
Resource on Main in Classroom Pod	PHASE 1A	Renovation of Band Storage to Resource
New Exit stairs from basement / lift to stage	PHASE 1B	
Demolition of Gym east vestibule / Viewing Mezzanine	PHASE 1C	Can occur as soon as new gym doors are in place.
Demolition of existing building between GLA5 & GLB1	PHASE 1C	
Art Room	PHASE 1C	Renovation of existing Fitness to Art
Guitar	PHASE 1C	Renovation of existing IP classroom to Guitar Room
Demolition of Basement Change Rooms	PHASE 1C	
Science - Biology	PHASE 1D	Renovation of existing Foods/Nutrition to Biology
Science - Chemistry	PHASE 1D	Renovation of existing Foods/Nutrition to Chemistry
Commons	PHASE 2	
Kitchen / Servery	PHASE 2	
Band Room	PHASE 2	
Gym Offices	PHASE 2	
Gym Equipment Storage	PHASE 2	
Gym Change Rooms, Showers, WC	PHASE 2	
Fitness/Wellness Health Facility	PHASE 2	** TEMPORARY Fitness will be required from Sept. 2024 - June 2025 (assumes Art Room occurs in Phase 1C)
Existing Guitar/Music into Classrooms	PHASE 2	Both spaces to accommodate Band for 2024/25 year. Then renovate into standard classrooms (infill tiers) once new Band is completed in Phase 2.
Pre-Engineering Lab / Electronics	PHASE 3A	of 2025 school year. Then renovate to larger library.
Library	PHASE 3A	space moves.
Administration	PHASE 3B	Renovation of existing Science Rooms to Administration
Science - General	PHASE 3B	Renovation of existing Admin to General Science
Science - Physics	PHASE 3B	Renovation of existing Admin to Physics
Student Services	EXISTING (N/A)	Existing space off of Library to remain as is for Student Services. If renovations are required, move to Phase 1B
Resource on Main across from Staff Room	EXISTING (N/A)	Existing Student Services to remain as is for Resource. If renovations are required, move to Phase 1B
Specialist Offices	EXISTING (N/A)	
Standard Classrooms	EXISTING (N/A)	Unless otherwise noted, existing standard classrooms remain as-is
Graphics Lab	EXISTING (N/A)	
Sewing/Textiles Lab	EXISTING (N/A)	
Performing Arts (Stage)	EXISTING (N/A)	
Wood Shop	EXISTING (N/A)	

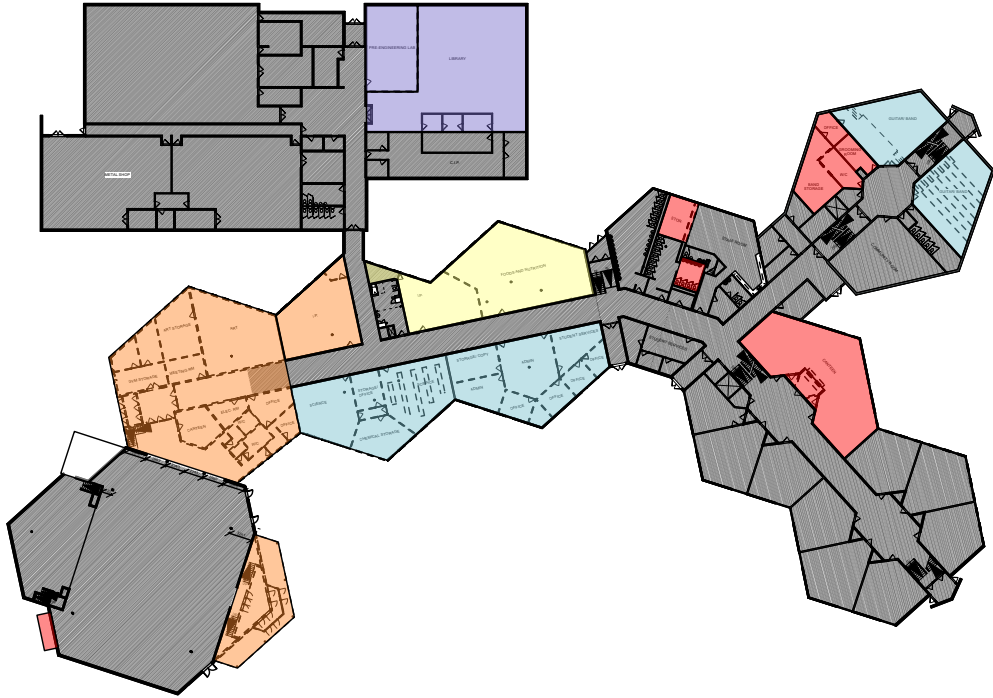


1 BASEMENT FLOOR PHASING PLAN - DEMO
PH1 Scale: 1:800

- PHASE 1A : JUNE 1, 2024 - AUGUST 30, 2024
- PHASE 1B : JUNE 1, 2024 - OCTOBER 30, 2024
- PHASE 1C : JULY 1, 2024 - AUGUST 30, 2024
- PHASE 1D : JULY 1, 2024 - OCTOBER 30, 2024
- PHASE 2 : AUGUST 1, 2024 - AUGUST 30, 2025
- PHASE 3A : JULY 1, 2025 - AUGUST 30, 2025
- PHASE 3B : JULY 1, 2025 - OCTOBER 30, 2025



2 BASEMENT FLOOR PHASING PLAN - NEW
PH1 Scale: 1:800

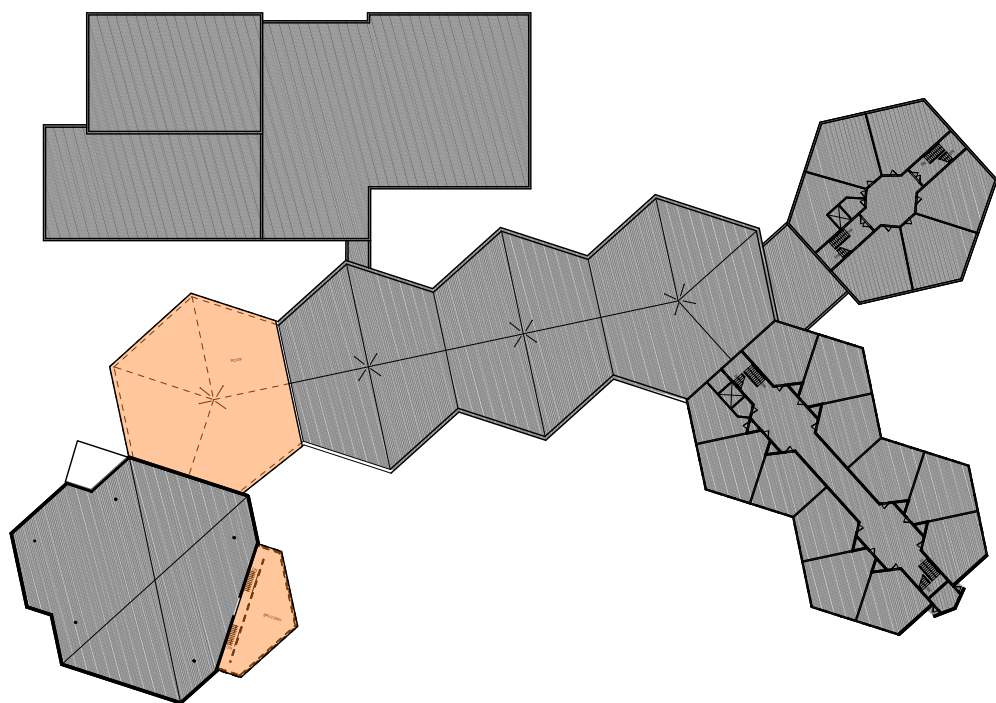


1 MAIN FLOOR PHASING PLAN - DEMO
PH2 Scale: 1:800

- PHASE 1A: JUNE 1, 2024 - AUGUST 30, 2024
- PHASE 1B: JUNE 1, 2024 - OCTOBER 30, 2024
- PHASE 1C: JULY 1, 2024 - AUGUST 30, 2024
- PHASE 1D: JULY 1, 2024 - OCTOBER 30, 2024
- PHASE 2: AUGUST 1, 2024 - AUGUST 30, 2025
- PHASE 3A: JULY 1, 2025 - AUGUST 30, 2025
- PHASE 3B: JULY 1, 2025 - OCTOBER 30, 2025

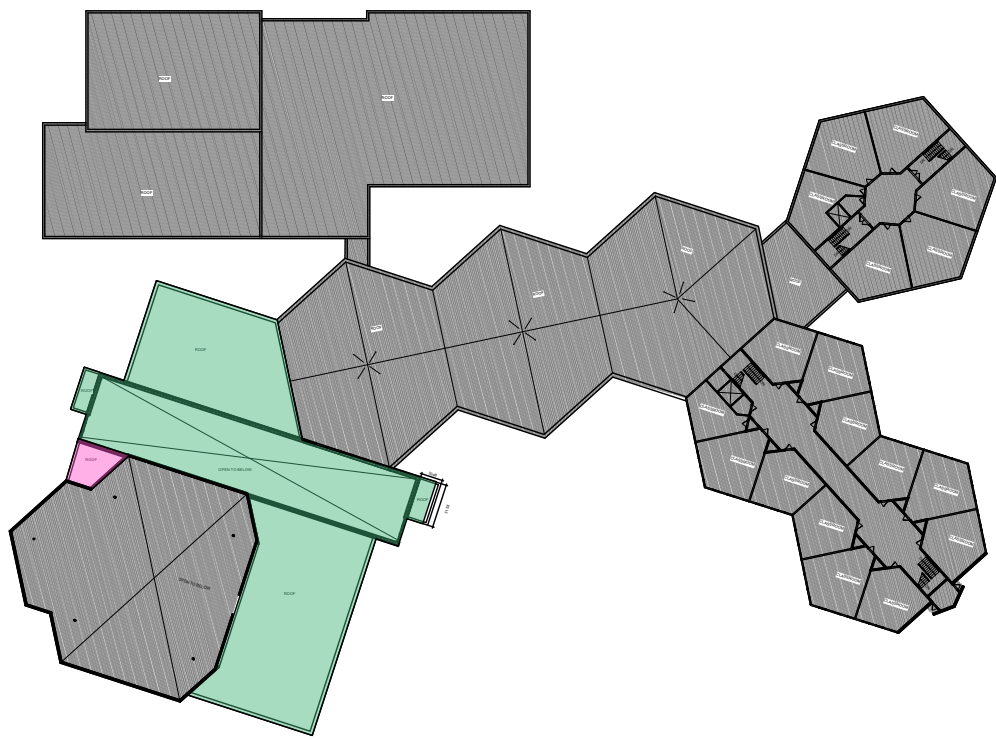


2 MAIN FLOOR PHASING PLAN - NEW
PH2 Scale: 1:800



1 SECOND FLOOR PHASING PLAN - DEMO
PH3 Scale: 1:800

- PHASE 1A : JUNE 1, 2024 - AUGUST 30, 2024
- PHASE 1B : JUNE 1, 2024 - OCTOBER 30, 2024
- PHASE 1C: JULY 1, 2024 - AUGUST 30, 2024
- PHASE 1D: JULY 1, 2024 - OCTOBER 30, 2024
- PHASE 2: AUGUST 1, 2024 - AUGUST 30, 2025
- PHASE 3A : JULY 1, 2025 - AUGUST 30, 2025
- PHASE 3B: JULY 1, 2025 - OCTOBER 30, 2025



2 SECOND FLOOR PHASING PLAN - NEW
PH3 Scale: 1:800

Exterior Characteristics

The existing building has multiple entrances that are regularly used, many of which feel secondary. The proposed addition Student Commons addition stretches a south/west axis along the existing gym and provides a clear and welcoming entrance accessed from both Cottonwood Road and the west parking lot, directly into the “heart” of the building.

The band and fitness portions of the addition use a similar brick color to tie into the existing building. This is punctuated by the taller portion of the addition, which houses the Student Commons and emphasizes the entrance on each side of the Student Commons.



Cottonwood Road Entrance

The new Student Commons addition allows for a strong presence along the street. This creates the opportunity for community spaces along the street, which include a basketball court and community garden boxes.



West Parking Lot Entrance

The Student Commons extends through the building on a diagonal axis aligning with the existing building's iconic hexagonal form, and creates a main entrance on both the south and west sides.



Fitness

The Fitness Room contains large east-facing windows and direct access to the front yard, directly adjacent to the Fitness and Gym spaces. The mix of grass and paved areas facilitates a variety of physical education activities and can be programmed more specifically for any number of activities.

Interior Characteristics

The existing Cottonwood building lacks a Student Commons space of a size that can accommodate a majority of student population. The new Student Commons addition provides students a space to relax and socialize outside of class and its location adjacent to the gymnasium facilitates opportunities for after-hours use.

The double height volume of the Student Commons allows for ample daylight penetration deep into the space and provides views toward the front yard and community gardens.

The Administration suite is located directly off of the Student Commons and there is visual connection to the fitness area and gymnasium.



Fitness

The addition includes a large fitness area adjacent to the gym with access to centralized change rooms and storage. The space is a one and a half story volume with large windows out into the front lawn and exterior fitness area.



Student Commons

The double-height portion of the addition includes the Student Commons, with kitchen and servery. The west and south ends contain entrances as well as large expanses of windows to facilitate both visual and physical connection.



Band Room

The Band Room is a portion of the addition that sits lower than the entry commons. This space can be included as part of the after school access to provide a space for kids to practice after hours as well as a backstage / preparation space during a theatre performance in the adjacent gymnasium.

Systems

Refer to Appendix D for a detailed description of the structural, mechanical and electrical systems for the renovation and addition to the Cottonwood building for Collège Béliveau.

Cost Summary

Based on investigation that was conducted on site, review of the various existing building drawings and reports, as well as consultation with the various LRSD, Collège Béliveau and community stakeholders, a final concept design was produced. Drawings and outline specifications were provided to Postma Quantity Surveying to provide Preliminary Class D Pricing. A detailed breakdown can be found in Appendix E. Due to the preliminary nature of the site development concepts, HTFC Planning & Design conducted preliminary pricing for Postma to carry as an allowance in the Class D Pricing.

The Preliminary Class D Pricing is presented as an all-inclusive value, assuming that all scope is completed in the phases presented. There is an economy of scale and efficiency to constructing the project in one single phase, however based on the need for the school to remain occupied throughout the school year, it simply is not a feasible option.

A general summary of the Preliminary Class D Pricing detailed in Appendix E is included on the following page. In addition, the following should be noted:

- **Demolition** - scope includes complete demolition of the mezzanine and vestibule structure to the east of Gym #1 as well as the hexagon pod north of Gym #1 and west of the pod with the existing Science Rooms. Minor selective interior and exterior demolition scopes are also required throughout the building, as renovation scopes necessitate.
- **Mechanical upgrades** - scope includes a combination of new and upgraded systems.

Separate Prices have been identified for replacing the main air handling unit as well as the gym air handling unit.

- **Electrical upgrades** - scope includes a combination of new and upgraded systems, including a new main electrical distribution.
- **Site Development** - a separate site development budget was created by HTFC Planning & Design, and was broken down into distinct categories. This value is carried in the overall cost estimate by Postma.
- **General and Special Conditions** - cost included to carry out the estimated phased construction duration (including Site Supervision, Overhead and Fees, Temporary Heating and Hoarding, Access Roads and temporary laydown areas, Bonds and Insurances, Permit costs, and Cash Allowances)
- **Project Contingency** at 15% (site development costs inclusive of contingency)
- **Project Escalation** at 8% (site escalation costs inclusive of escalation)

An additional escalation factor should be accounted for if construction is pushed to future years, beyond what is contemplated in this report.

Cash Allowances were established for foundation inspections, soil compaction and concrete testing, Manitoba Hydro service, MTS service, testing and air balancing, LEED air quality testing and signage. Cash allowances are included in the General and Special Conditions.

Collège Béliveau Class D Costing Breakdown

<i>General & Special Conditions</i>	\$1,787,444	
<i>Demolition</i>	\$270,939	
<i>Excavation & Backfill</i>	\$117,764	
<i>Structural Elements</i>	\$1,255,824	
<i>Masonry</i>	\$849,020	
<i>Vertical Elements & Misc. Metals</i>	\$103,800	
<i>Rough Carpentry, Arch. Woodwork</i>	\$749,725	
<i>Roofing, Siding, AVB, Insulation</i>	\$488,260	
<i>Windows and Doors</i>	\$439,370	
<i>Drywall, Acoustic, Flooring & Paint</i>	\$1,108,042	
<i>Specialties & Furnishings</i>	\$96,110	
<i>Mechanical</i>	\$2,701,365	
<i>Electrical</i>	\$1,210,100	
Sub Total New School & Renovation	\$11,177,763	
<i>Contingency</i>	\$1,810,798	15%
<i>Escalation</i>	\$894,221	8%
SUBTOTAL New and Renovation	\$13,882,781	
<i>Site Development</i>	\$4,500,00	
TOTAL	\$18,382,781	

Site Development Breakdown

<i>Drive Aisles, Drop-offs and Parking</i>	\$1,525,000
<i>Student & Community Outdoor Spaces</i>	\$2,975,000
Sub Total Site Development Costs	\$4,500,000
<i>Contingency</i>	Inc. Above
<i>Escalation</i>	Inc. Above
SUBTOTAL Site Development	\$4,500,000

Separate Prices

<i>Replace Main Air Handling Unit</i>	add \$187,679
<i>Replace Gym Air Handling Unit</i>	add \$114,960

6.3 Final Conceptual Building Design for Windsor Park Collegiate transition to Speers

Functional Space Program

The following pages contain the functional space program for the preferred Concept B for the transition of Windsor Park Collegiate to 296 Speers Road.

NEW SPACE PROGRAM FOR WPC 296 Speers Road, Winnipeg, MB

No.	Room	Number of Spaces	Total Area (SF)	new vs. existing	Notes
1.0 INSTRUCTIONAL SPACES					
1.1 CLASSROOMS					
	General Classrooms	13	9,415	existing	Classroom size ranges from 660 - 1095
	Community / Indigenous Room	1	1,360	new	includes kitchenette
	Individualized Progeamming (I.P.)	3	3,082	new	includes storage
	Career Internship Program (C.I.P.)	1	1,833	new	
	Art Room	1	1,065	existing	includes storage
1.2 SPECIALIZED CLASSROOMS					
	Science	4	4,237	new	includes prep areas, storage and chemical storage
	Sewing and Textile	1	1,365	new	includes storage
	Graphics Lab	1	1,000	new	includes storage
	Foods and Nutrition	1	1,798	new	includes storage
	SUBTOTAL INSTRUCTIONAL		25,155		
2.0 SPECIALIZED SPACES					
2.1 Gym Space					
	Gym Space	1	9,025	new	
	Storage	1	590	new	
	Offices	3	970	new	
	Change Rooms	4	1,235	new	
2.2 SHOPS					
	Woods	1	3,297	new	includes storage on main and second
	Metals	1	2,451	new	includes storage, office, paint
2.3 PRE-ENGINEERING					
		1	1,340	new	includes storage
2.4 FITNESS					
		1	1,620	new	
2.5 MUSIC/ PERFORMING ARTS					
	Band Room	1	2,072	new	includes office and 3 practice rooms
	Guitar	1	1,182	new	includes storage
	Raised Stage	1	1,880	new	
	Theatre Storage	1	1,094	new	includes 590 sf of storage over top of gym storage
2.6 LIBRARY					
		1	3,490	existing	
2.7 STUDENT COMMONS					
	Open Student commons space	1	5,100	existing	
	Kitchen and Servery	1	512	existing	
	SUBTOTAL SPECIALIZED SPACES		35,858		

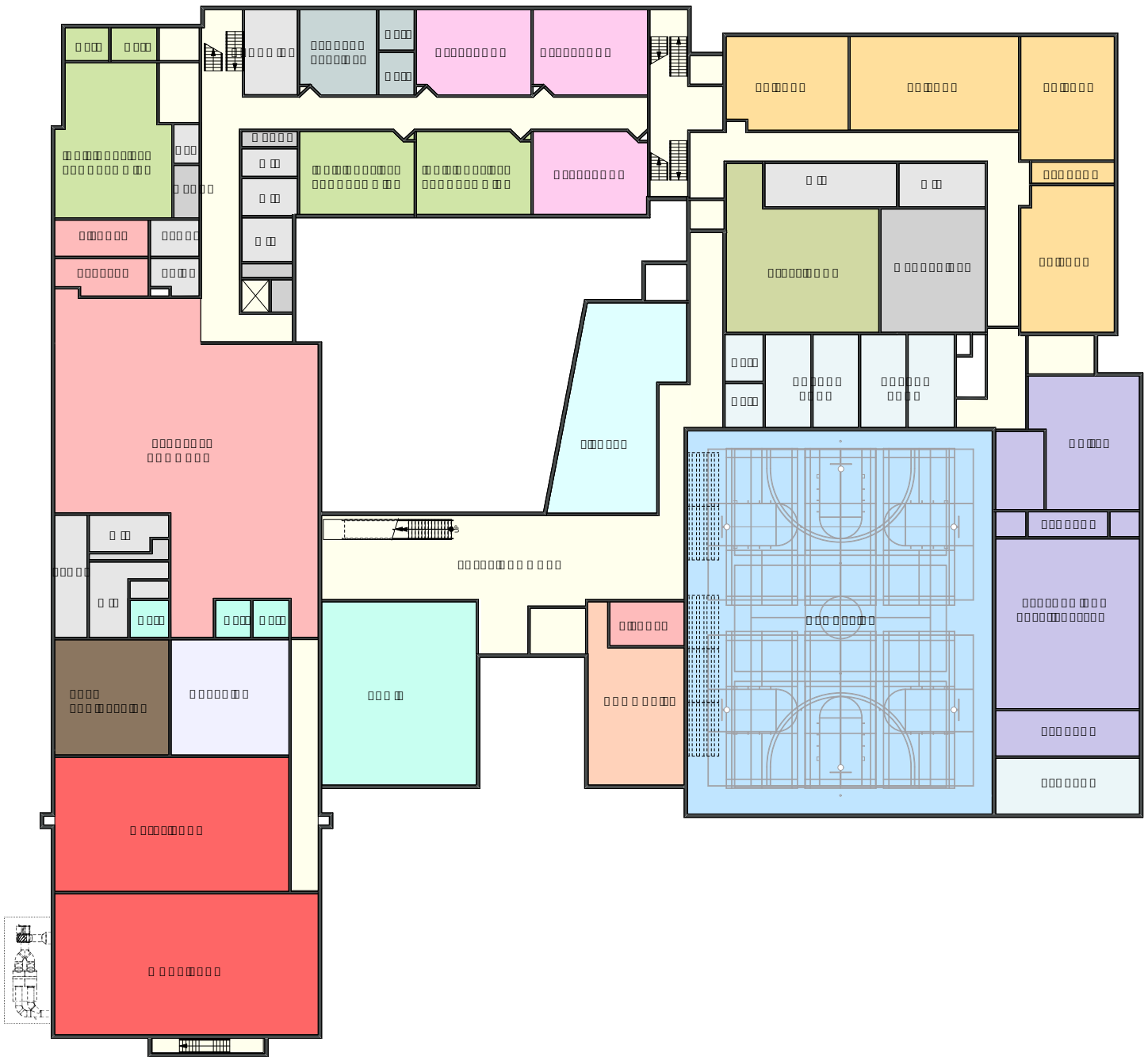
No.	Room	Number of Spaces	Total Area (SF)	new vs. existing	Notes
3.0 ADMINISTRATION & STAFF					
3.1 ADMINISTRATION					
	Admin Suite	1	2,194	new	
3.2 STAFF SPACES					
	Staff Room	1	1,639	existing & new	includes kitchen, storage, and washrooms
3.3 SPECIALIST / STUDENT SERVICES					
	Specialist Offices	7	1,307	new & existing	3 on main 4 on second
	Student Services	2	1,466	new	renovated classroom space
	SUBTOTAL ADMINISTRATION & STAFF		6,606		
4.0 BUILDING SERVICES / SUPPORT					
4.1 Support					
	Custodial /Supply Storage	2	143	existing	
	Custodian Office	1	210	new	
4.2 Dedicated M&E Rooms		11	4292	new & existing	
4.2 WASHROOMS					
	Grooming Room	1	342	existing	
	Staff washrooms (not already included in staff room area)	4	381	new & existing	
	Student Washrooms	5	1,332	new & existing	
	UTR	2	142	new	one on main and one on second
	SUBTOTAL BUILDING SERVICES		6,842		
	NET TOTAL AREA		74,461		
	BUILDING GROSS UP		21,885		includes exterior & interior walls, horizontal and vertical circulation, etc.
	TOTAL GROSS AREA		96,346		

Gross Building Area (per plan drawings)	
Main	63,732
Second	32,614
Total	96,346

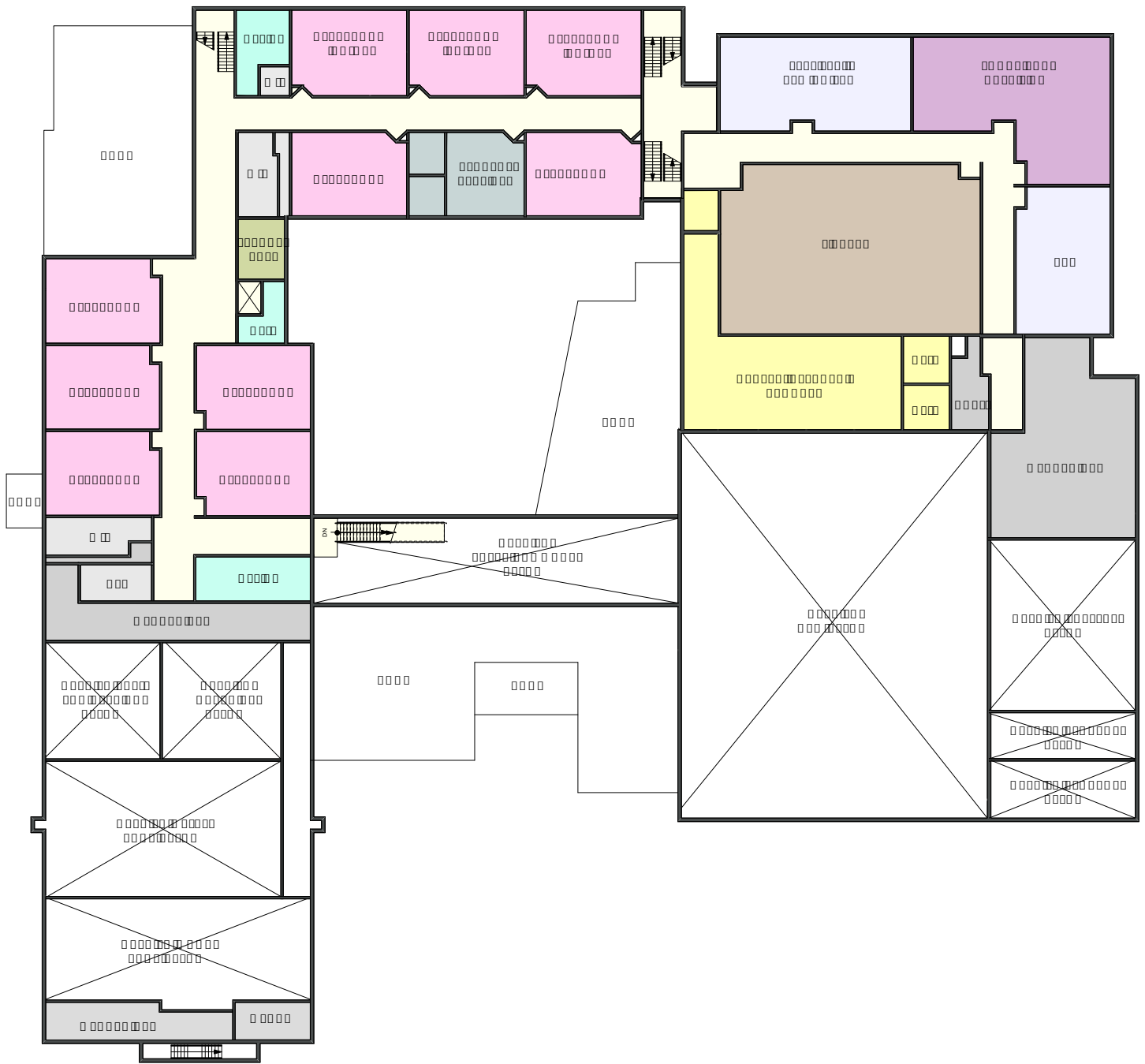
Building Design

The following pages highlight the design of the preferred Concept B for the transition of Windsor Park Collegiate to 296 Speers Road.

- COMMONS
- COMMUNITY / INDIGENOUS ROOM
- ADMINISTRATION
- STUDENT SERVICES
- STAFF
- RESOURCE
- INDIVIDUALIZED PROGRAMMING (IP)
- MECHANICAL / ELECTRICAL
- WASHROOMS / BUILDING SUPPORT
- CLASSROOM (TYPICAL)
- CLASSROOM (SPECIAL - ART, GRAPHICS, ETC.)
- BAND / PERFORMING ARTS
- FOODS
- SCIENCE
- SHOPS
- CAREER INTERNSHIP PROGRAM (CIP)
- PRE-ENGINEERING
- LIBRARY



main floor



second floor



Distribution of New vs. Renovated Spaces

The adjacent plan diagrams illustrate the distribution of spaces that are newly constructed; existing and receiving renovation; existing and remaining as-is; and existing and being demolished.

New Construction:

- Second Floor - 4,780 sf (not incl. open volume)
- Main Floor - 26,350 sf

Existing Building Renovation:

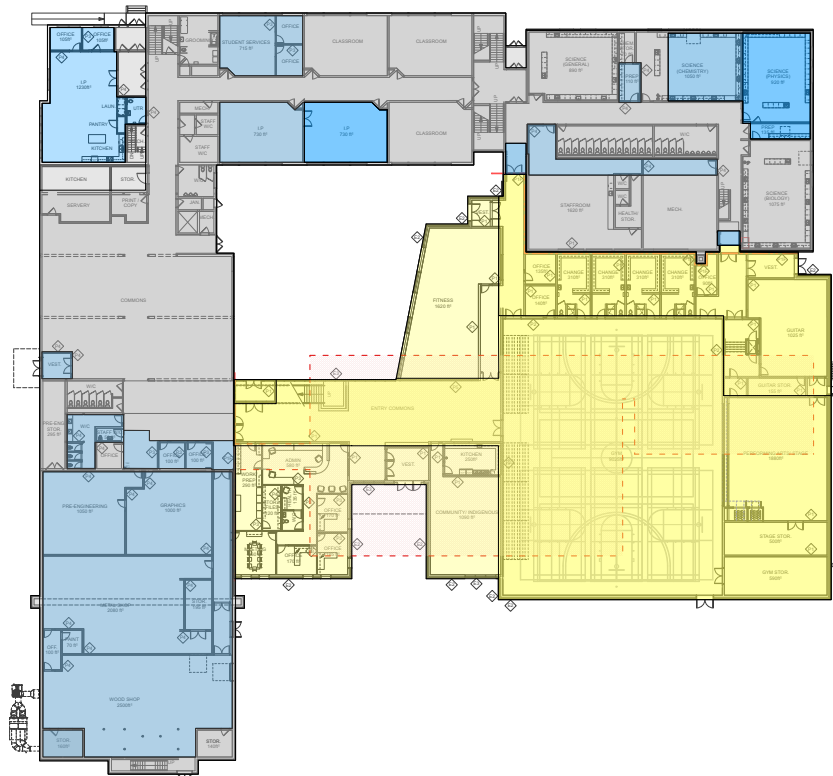
- Second Floor - 2,670 sf
- Main Floor - 14,380 sf

Existing Building Demolition:

- Second Floor - N/A
- Main Floor - 12,330 sf



second floor



LEGEND

- NEW CONSTRUCTION
- EXISTING BUILDING RENOVATION
- EXISTING BUILDING DEMOLITION
- EXISTING BUILDING TO REMAIN

main floor

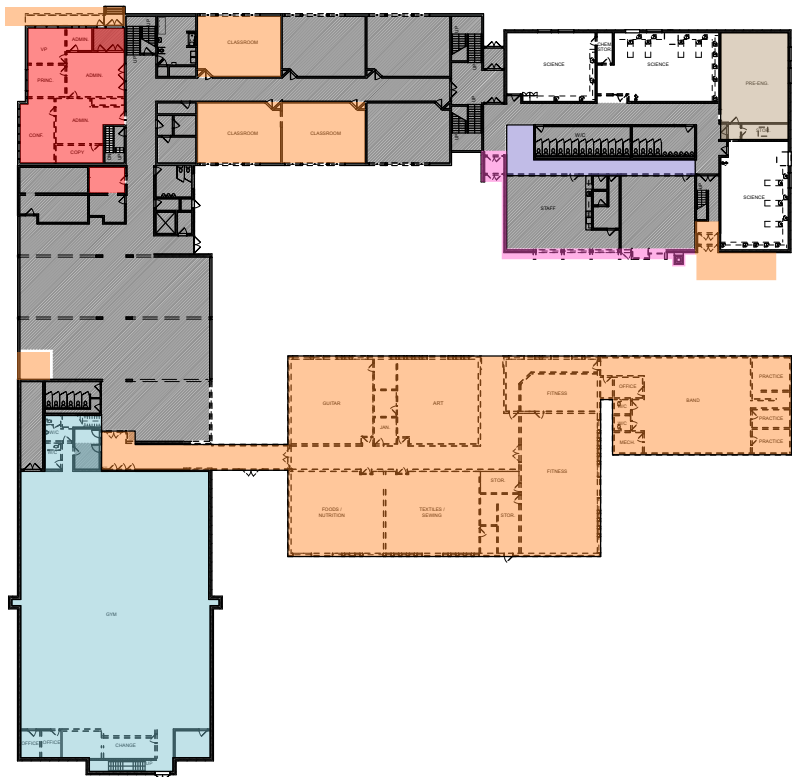


Construction Phasing / Move Management

Construction is anticipated to be executed in a phased approach. This is necessary not only due to the fact that it is necessary for the school to remain occupied over the entire construction duration, but also because there are a number of spaces that need to be operational prior to others receiving renovation.

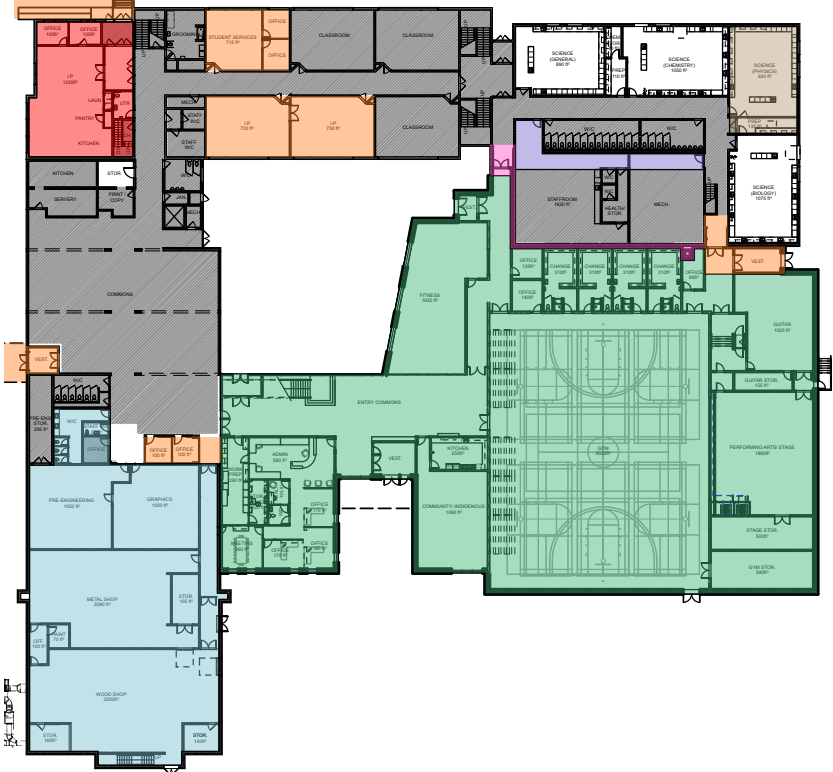
PHASE	START	END
PHASE 1A	01-Jun-24	30-Aug-24
PHASE 1B	01-Jun-24	30-Oct-24
PHASE 1C	01-Jul-24	30-Aug-24
PHASE 1D	01-Jul-24	30-Oct-24
PHASE 2	01-Nov-24	30-Dec-25
PHASE 3	01-Jul-25	30-Aug-25
PHASE 4	01-Jan-26	30-Jun-26
PHASE 5	01-Jul-26	30-Aug-26
EXISTING (N/A)		

Room Name	PHASE	MOVE MANAGEMENT / PHASING NOTES
Individualized Program (IP)	PHASE 1A	anticipated to commence at the end of Beliveau's 2024 school year, which will displace Administration for 1-2 months
Firewall Along Library/ Staff Room	PHASE 1B	
Vestibules (necessary for exiting)	PHASE 1C	
Sewing/Textiles Lab	PHASE 1C	
Specialist Office - Main Floor	PHASE 1C	
Standard Classrooms	PHASE 1C	unless otherwise noted, existing standard classrooms remain as-is, with exception of those that are receiveing new windows.
Co-op Classrooms	PHASE 1C	included in standard classrooms
Demolition of 1964 / 1994 Addition	PHASE 1C	can only occur once life safety elements are in place (i.e. new exit from Commons)
Student Services	PHASE 1C	Renovating existing main floor classroom
Accessible Entrance Ramp and Stairs	PHASE 1C	
Food & Nutrition Lab	PHASE 1D	
Entry Commons	PHASE 2	
Canteen / Kitchen	PHASE 2	
Community / Indigenous Room	PHASE 2	
Administration	PHASE 2	**TEMPORARY Administration accommodations will be required from June 1, 2024 - July 30, 2025 (affects both WPC and CB admin)
Gymnasium	PHASE 2	
Gym Offices	PHASE 2	
Gym Equipment Storage	PHASE 2	
Gym Change Rooms, Showers,WC	PHASE 2	
Music/Guitar Room	PHASE 2	
Performing Arts (Theatre)	PHASE 2	
Fitness/Wellness Health Facility	PHASE 2	** TEMPORARY Fitness will be required from Sept. 2024 - Aug. 2025
Career Internship Program (CIP)	PHASE 2	
New Mechanical Space for Addition	PHASE 2	
Specialist Offices - Second Floor	PHASE 2	3 existing offices to remain and 1 new office to be constructed as part of Phase 2
Staff Room	PHASE 3	expansion to staffroom along with any other upgrades to existing space
Graphics Lab	PHASE 4	** TEMPORARY Graphics lab will be required from Sept. 2024 - Dec. 2025
Wood Shop	PHASE 4	** TEMPORARY use of Cottonwood Shops will be required from Sept. 2024 - Dec. 2025
Metal Shop	PHASE 4	** TEMPORARY use of Cottonwood Shops will be required from Sept. 2024 - Dec. 2026
Pre-Engineering Lab / Electronics	PHASE 4	
New Gender Neutral Washrooms	PHASE 4	on main and second floor (replacing location of existing stair)
New Staff Washroom	PHASE 4	
New Mechanical Space for Shops	PHASE 4	
Science - Physics	PHASE 5	Renovation of existing Pre-Engineering room to Physics can only occur after Phase 3 is complete
Commons	EXISTING (N/A)	
Kitchen / Servery	EXISTING (N/A)	
Art Room	EXISTING (N/A)	Moves to existing Classroom on second floor for start of 2024 School Year.
Library	EXISTING (N/A)	
Science - General	EXISTING (N/A)	
Science - Chemistry	EXISTING (N/A)	
Science - Biology	EXISTING (N/A)	



1 MAIN FLOOR PHASING PLAN - DEMO
PH1 Scale: 1:600

- PHASE 1A : JUNE 1, 2024 - AUGUST 30, 2024
- PHASE 1B : JUNE 1, 2024 - OCTOBER 30, 2024
- PHASE 1C: JULY 1, 2024 - AUGUST 30, 2024
- PHASE 1D: JULY 1, 2024 - OCTOBER 30, 2024
- PHASE 2: NOV. 1, 2024 - DECEMBER 30, 2025
- PHASE 3: JULY 1, 2025 - AUGUST 30, 2025
- PHASE 4 : JAN 1, 2026 - JUNE 30, 2026
- PHASE 5: JULY 1, 2026 - AUGUST 30, 2026



2 MAIN FLOOR PHASING PLAN - NEW
PH1 Scale: 1:600

Exterior Characteristics

The existing building lacks an open and inviting entrance from the parking lot. The new construction addition provides creates a strong sense of entrance into an open and welcoming space.

The new Entry Commons, Administration, and Community / Indigenous room addition is expressed by a tyndall stone exterior facade providing contrast from the exterior red brick of the existing building.

The massing of the gym and fitness addition use a similar red brick to resemble the existing building, providing further emphasis to the entrance.



South Entrance

The south entrance sits in a protective alcove for student and parents to gather before entering the building. The drop off loop wraps the perimeter of the parking lot to allow students to be dropped off safely at the entrance.



Courtyard

The new addition creates an enclosed internal courtyard that can be accessed from all sides of the school, creating a central gathering space. A large wall of glazing blends the entry commons into the courtyard and increases supervision in the space.



Expansion of Windows

Existing classrooms are renovated to include larger windows that look into the courtyard. This gives the student access to views and daylight within the classrooms.

Interior Characteristics

Due to the renovation of the existing gym into shops the existing Student Commons will no longer have direct access to the gym in its new location. The Entry Commons addition becomes the space that facilitates gathering for after-hours events held in the new gym or theatre.

The Community / Indigenous Room is located directly off of the Entry Commons and its kitchenette can serve as a canteen for after-hours events.



Entry Commons

Double volume Entry Commons, with the new central stair from existing building and connection to the courtyard. The Administration suite is situated in the heart of this space, with direct adjacency to the main south entrance.



Gymnasium/ Stage

The new large gym allows for multiple classes to occupy the space at one time with a proper height roof for sports tournaments. The new raised stage opens up to the gym with the band/ guitar rooms serving as backstage areas.



Fitness

A large fitness room is located adjacent to the gym with visual connection to the entry commons. Large windows into the courtyard provide ample daylight.

Systems

Refer to Appendix D for a detailed description of the structural, mechanical and electrical systems for the renovation and addition to the Speers building for Windsor Park Collegiate.

Cost Summary

Based on investigation that was conducted on site, review of the various existing building drawings and reports, as well as consultation with the various LRSD, Windsor Park Collegiate and community stakeholders, a final concept design was produced. Drawings and outline specifications were provided to Postma Quantity Surveying to provide Preliminary Class D Pricing. A detailed breakdown can be found in Appendix E. Due to the preliminary nature of the site development concepts, HTFC Planning & Design conducted preliminary pricing for Postma to carry as an allowance in the Class D Pricing.

The Preliminary Class D Pricing is presented as an all-inclusive value, assuming that all scope is completed in the phases presented. There is an economy of scale and efficiency to constructing the project in one single phase, however based on the need for the school to remain occupied throughout the school year, it simply is not a feasible option.

A general summary of the Preliminary Class D Pricing detailed in Appendix E is included on the following page. In addition, the following should be noted:

- **Demolition** - scope includes complete demolition of the 1964 and 1994 existing building additions. Minor selective interior and exterior demolition scopes are also required throughout the building, as renovation scopes necessitate.
- **Mechanical upgrades** - scope includes a combination of new and upgraded systems. Separate Prices have been identified for adding a sprinkler system to the metal and wood shop areas, which is anticipated to be a life safety / Code requirement.
- **Electrical upgrades** - scope includes a combination of new and upgraded systems.
- **Site Development** - a separate site development budget was created by HTFC Planning & Design, and was broken down into distinct categories. This value is carried in the overall cost estimate by Postma.
- **General and Special Conditions** - cost included to carry out the estimated phased construction duration (including Site Supervision, Overhead and Fees, Temporary Heating and Hoarding, Access Roads and temporary laydown areas, Bonds and Insurances, Permit costs, and Cash Allowances)
- **Project Contingency** at 15% (site development costs inclusive of contingency)
- **Project Escalation** at 8% (site escalation costs inclusive of escalation)

An additional escalation factor should be accounted for if construction is pushed to future years, beyond what is contemplated in this report.

Cash Allowances were established for foundation inspections, soil compaction and concrete testing, Manitoba Hydro service, MTS service, testing and air balancing, LEED air quality testing and signage. Cash allowances are included in the General and Special Conditions.

Windsor Park Collegiate Class D Costing Breakdown

<i>General & Special Conditions</i>	\$2,170,953	
<i>Demolition</i>	\$417,927	
<i>Excavation & Backfill</i>	\$141,007	
<i>Structural Elements</i>	\$2,833,077	
<i>Masonry</i>	\$1,771,091	
<i>Vertical Elements & Misc. Metals</i>	\$135,710	
<i>Rough Carpentry, Arch. Woodwork</i>	\$625,585	
<i>Roofing, Siding, AVB, Insulation</i>	\$827,035	
<i>Windows and Doors</i>	\$1,179,150	
<i>Drywall, Acoustic, Flooring & Paint</i>	\$1,594,015	
<i>Specialties & Furnishings</i>	\$396,640	
<i>Mechanical</i>	\$3,557,472	
<i>Electrical</i>	\$1,815,169	
Sub Total New School & Renovation	\$17,464,831	
<i>Contingency</i>	\$2,829,303	15%
<i>Escalation</i>	\$1,397,186	8%
SUBTOTAL New and Renovation	\$21,691,320	

Site Development \$3,020,000

TOTAL \$24,711,320

Site Development Breakdown

Drive Aisles, Drop-offs and Parking \$1,025,000

Student & Community Outdoor Spaces \$1,995,000

Sub Total Site Development Costs \$3,020,000

Contingency Inc. Above

Escalation Inc. Above

SUBTOTAL Site Development \$3,202,000

Separate / Alternate Prices

Sprinklers to Shops Area add \$58,553

Add firewall between School & Shops add \$69,487

Keep Existing Science Rooms deduct \$840,000

PART 7 - NEXT STEPS

The report herein, containing Feasibility Options Analysis for the Windsor Park Collegiate and Collège Béliveau exchange, details preliminary design and transition planning. It is anticipated that this report and its findings will form the basis for capital request to the Province of Manitoba.

This report is intended for use by the Louis Riel School Division for capital planning purposes. Once funding approvals are in place, the next steps will be to confirm project scope(s) align with established budgets.

Further and ongoing consultation with administration, staff and students is anticipated as the process evolve and the design is further developed.

Due to the complex nature of these projects, early discussions on the approach to the construction contract will be critical. A Construction Management approach may be advantageous as it will facilitate more detailed planning for the various construction phases and sequencing as well as provide constructibility advice and the opportunity to pre-order long lead-time items.

This report assumes that both school projects are undertaken concurrently.

Site

This preliminary site master plan explored possibilities in conjunction with building expansion and renovation studies. This plan needs further study, research and refinement. The next steps in the site planning process are as follows and can be completed prior to the schematic design stage of an approved capital project or as the first step in the schematic design phase of an approved capital project:

1. Detailed Transportation Assessment and Traffic Impact Study
 - Retain a transportation engineer to conduct traffic counts, project traffic demand in the neighborhood, assess traffic circulation patterns, and recommend best practices for the two school sites and the surrounding community.
 - Ensure the traffic study meets Provincial and City requirements by building in consultation requirements within the vehicular and active transportation divisions within Public Works at the City.
2. Current Legal and Topographic Site Surveys:
 - Site plans for the schools were cobbled together from outdated architectural plans overlaid on the most current air photos available. While adequate for high level planning this type of base information is not reliable or detailed enough for further design and implementation.
 - Both sites and the impacted recreation roadway spaces around them should be surveyed by a professional land surveyor licensed to practice in Manitoba prior to the next stage of planning and design. Survey work should include detailed existing surface materials, features and conditions, underground utilities and structures, as well as geodetic elevation points and overall land drainage patterns topographic mapping required for detailed site grading.
3. Interior and Exterior Accessibility Audit and Recommendations
 - Civic projects within the City of Winnipeg including schools are coming under more and more scrutiny from the City of Winnipeg for compliance with the ever-

evolving City of Winnipeg Accessible Design Standards.

- Retain an accessible design expert such as Judy Redmond (former city accessibility coordinator now running a private consulting service for this purpose) to assess the existing building and site for accessibility and to act as the main liaison with City staff during the design process ensuring best practices and reasonable compliance on private property.

4. Manitoba Hydro Discussions & Coordination

- As noted in section 3.0 City and Hydro Input the planning team for this study was unable to connect with Manitoba Hydro within the project process and time line to have a meaningful discussion about the hydro substation and the above ground hydro lines immediately adjacent to both sites.
- These discussions will have a significant impact on the site planning parameters for the northwest corner, north and west edges of the Speers School Site. In addition there may be implications to the redevelopment of the west parking lot on the Cottonwood School Site where an above grade hydro line runs along the west edge of the existing public lane.
- Retaining an electrical engineer to assist the architectural team with this aspect of work would be prudent as they have built relationships with the utility and will have better insight into what departments and staff within Hydro should be contacted to set this project up for success.

5. More In-Depth City of Winnipeg Discussions, Coordination and Agreements

- Several cross access and reconfiguration suggestions for the two school sites have impacts on the adjacent City Recreational Properties. Work closely with City planning, community services,

public works, zoning, parks and forestry departments and the City Councilor for this ward to develop coordinated plans that leverage municipal investment and cross use agreements to provide an optimally integrated community education and recreation hub for this neighborhood and make everyone's dollars go further.

These steps would ideally run concurrently as they all inform site planning refinements as these projects move into implementation. As previously noted in City of Winnipeg and Manitoba Hydro input, it is recommended; that the schools be expanded and renovated together; and that the two sites be addressed as a campus in conjunction with adjustments to adjacent City of Winnipeg and Manitoba Hydro spaces. If for some reason one school goes ahead without the other, careful consideration of the impacts of developing only one site will be required and may have significant impacts to the site design approach.

APPENDIX A

Structural System Summaries, by Wolfrom
Engineering Ltd.

Structural System Summaries

For

Windsor Park Collegiate, 1015 Cottonwood Road

&

College Beliveau, 296 Speers Road

Winnipeg, MB

A. Introduction

We were retained by Prairie Architects Inc. to perform a site review of Windsor Park Collegiate located at 1015 Cottonwood Road, Winnipeg, Manitoba, and Collège Béliveau located at 296 Speers Road, Winnipeg, Manitoba, respectively on November 28, 2022.

Please note our review was a walk through and performed non-destructively, thus the section "Description" is largely based on a review of the existing drawings provided. Our walk through should not be taken as a full building inspection of framing system conditions.

B. Description

Windsor Park Collegiate

- The original building was constructed from plans completed by GBR Architects dated March 1959. The geometric plan consists of seven conjoined hexagonal pods, with cast in place concrete foundation elements, concrete floors at main and second floor, and steel and timber roof superstructure.
- The original foundation system consists of 12" to 18" diameter cast-in-place concrete friction piles, complete with 24" deep pile caps, a perimeter 36" deep concrete grade beam, and 8" to 12" reinforced concrete walls at internal locations.
- The main floor is situated mainly over crawlspace, with a basement area located below the existing gym location. Crawlspace floor consists of 5" concrete slab supported on grade.
- The main floor at the gym is a two way 6.5" deep structural slab supported on a grid of 4" diameter pipe columns. Condition of pipe columns were not reviewed in-situ, but should be reviewed in subsequent site reviews prior to construction or modification.
- The remaining main floor utilizes a cast in place concrete waffle slab construction, which creates a ribbed pattern of 5" wide concrete joists with concrete topping continuous over the integral.
- The partial second floor is of similar cast in place waffle slab configuration.
- The majority of the roof system is a relatively complex crystalline grid consisting of both gluelam timber beams and structural steel wide flange beams supported on round steel columns. True 2x14 rough sawn timber joists act as infill between the various beams .
- The gym roof consists of trusses constructed from back to back steel angles of various size and thicknesses, with infill wood joists spanning between the trusses.
- An addition to the north of the original building was completed with drawings by Duncan Rattray Peters Searle Architects from June 1969.
- Existing drawings indicate the main floor consists of a cast in place structural slab supported on a grid of cast in place friction piles. The majority of piles are 16" and 18" diameter drilled to bear onto hardpan, or with lengths as noted on existing drawings. Hardpan was noted as approximately 55' below existing grade.
- A 12"x36" deep grade beam encompasses the building perimeter, with a 6" structural slab noted throughout.
- Roof framing consists of structural steel beams and open web steel joists, complete with 1.5" steel decking.

- The respective building farming appears stable and well maintained. No major signs of distress were noted during the walk through.
- The exterior wall and interior floor system appear to be generally in good condition for the building age and intended use.

Collège Béliveau

- The original building is noted as constructed in 1957, with multiple additions completed in the 1960s, with a smaller 1993 addition.
- Existing drawings for the original building were not available for review, however partial renovations to the original building were completed off drawings by Number Ten Architects dated June 2016. Structural drawings of the 2016 renovation were not provided for review.
- Roof assembly for the original building is schematically shown on architectural drawings as open web steel joists, with concrete block masonry bearing walls.
- Stairwells were noted on site as cast in place concrete.
- Existing two hour fire separation locations are also noted on the 2016 renovation drawings.
- An addition to the original building was constructed off drawings dated November 1961 by Zunic & Sobkowich Architects. The addition includes new classrooms and a gymnasium.
- The building is supported on cast in place concrete friction piles of 16" diameter, but of various depths. A large influx of water was noted in the soil log upon reaching hardpan. Note pile diameter are only described in section, not on plans.
- Piles support 36" deep perimeter and 24" deep interior corridor wall bearing cast in place concrete grade beams.
- Gymnasium floor consists of a 6" cast in place concrete structural slab designed for 100 psf, along with various stairwell and service areas.
- Corridor floor is similarly designed to 100 psf, but consists of 16" deep short span open web steel joists.
- Classroom also consists of 16" deep short span open web steel joists. 2.5" topping slab runs over corridor and classroom joists.
- Second floor is of similar framing to main floor, with concrete block walls providing the majority of bearing conditions, with some infill steel beam lintels over openings.
- Non load bearing 6" concrete block acts as separating walls between some classroom locations.
- S2x8 wood framing was noted along a corridor location adjacent to the gymnasium, described as auditorium in the drawings.
- A subsequent classroom addition to the original building and addition was completed off drawings by Etienne Gaboury dated December, 1964.
- The addition drawings describe the building founded on 12 and 14" diameter piles drilled to hardpan, approximately 47' below grade, with top of pile 3' below top of main floor.
- Perimeter and majority of interior cast in place concrete gradebeams are 36" depth, which at classroom areas support open web steel joists within a crawlspace with concrete slab spanning over joists, and at east assembly area support a 5" structural slab.
- Joists span from exterior wall to corridor wall bearing lines.

- Live load allowances are noted as 60 psf at classroom areas, and 100 at corridor and assembly areas.
- Roof framing consists of open web steel joists in similar spanning orientation to main floor joists at classrooms, and short direction over the assembly area. All are noted as 22" deep, supporting transverse 1.5" steel decking.
- Perimeter and bearing walls are noted as concrete block, typically of 10" width.
- A subsequent larger addition was completed off drawings dated March 1967 by the same architectural firm. This addition encompasses two distinct wings, areas that now house the library and an enlargement of the existing gymnasium.
- Very similar framing strategies were utilized for these additions, with member sizes and depths adjusted to suit different span conditions.
- A 6" cast in place concrete structural slab forms the main floor of the new gym area.
- The classroom wing including mechanical area is of similar open web steel joists and crawlspace, with perimeter cast in place concrete grade beams. Perimeter grade beam is noted as 12x30, with interior corridor beams noted as 12"x18".
- Corridor floor framing is noted as 1.5" Terrazzo finish over 4.5" structural slab.
- Note piles for these additions are all 16" diameter installed to various depths, not to hardpan as previous addition indicated. It is assumed drilling conditions encountered during the previous construction were difficult, and piles may or may not have been installed as indicated.
- At the gym enlargement 42" bottom chord bearing open web steel joists clear span the full building width. Snow loading at all 1967 addition roof roof is noted as 36 psf throughout, slightly less than what current loading requires. Joists bear onto concrete block wall of unconfirmed thickness.
- A significant W33 beam spans at the previous opening between new and existing gym.
- Loading allowance at the existing gym mezzanine is noted as 100 psf live with additional allowance to suit mechanical equipment hung from the roof above.
- The entire building complex appears to be stable and well maintained for the age and intended use of the building.
- The exterior wall and interior floor system appear to be generally in good condition for the age and intended use of the building.

C. Summary

At the time of visit, both buildings appear in generally good working condition and were noted as consistent with the existing structural drawings where structure was viewed. A subsequent structural review is recommended for all areas proposed for renovation prior to development of design drawings beyond design development stage. This review may require selective demolition for viewing current building structural systems where hidden by finishes.

APPENDIX B

Mechanical and Electrical Building Condition
Assessments, by KGS Group

PRAIRIE ARCHITECTS INC.

Windsor Park Collegiate Building Condition Assessment

Revision:

Final Rev. 0

KGS Group Project:

23-1736-003

Date:

April 14, 2023

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EXECUTIVE SUMMARY

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 1015 Cottonwood Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

Mechanical Systems:

The existing mechanical systems in the building are generally operational with several systems near the end of their typical life expectancy. The domestic water, sewer and sanitary sewer services are anticipated to have adequate capacity to service the planned building addition/renovations. Piping within the scope of work area should be replaced as needed.

The existing buildings air handling equipment has the largest need for immediate replacement, with several portions of the system original to the building and inefficient. It is recommended the gymnasium air handling unit is replaced at a minimum complete with variable speed drives, economizer, cooling, and energy recovery for ventilation.

The buildings heating system was recently replaced in 2010 and is expected to be suitable for the planned building renovations. The perimeter heating system appeared to be in good condition.

The existing building is not sprinklered however a portion of the building is expected to require sprinklers for the new building addition/renovation to meet current building codes. The existing water service is not sufficiently sized to accommodate a sprinkler system so as a result it is anticipated a new 6" water service will be required for the newly renovated portion of the building.

Electrical Systems:

The existing electrical systems in the facility are generally in operational condition but nearing their end-of-life. Large portions of the distribution equipment and building wiring is nearing the end of its life cycle.

The fire alarm control panel is an older panel and has reached the end of its useful life. All devices are conventional and the notification devices are bells. The fire alarm system would be considered as grandfathered; however, it does not meet current codes as manual pull stations are not at the required height and there are no strobes throughout the building. The panel and all notification and detection devices throughout the building should be upgraded during the building's next renovation.

Most of the emergency lighting system has been recently upgraded and complies with latest M.B.C. and Canadian Electrical Code. The exit lighting system does not comply with the latest M.B.C. due to the red exit signs however, this is considered as being grandfathered. The existing red exit lights should be replaced with new green pictogram exit lights during the building's next renovation.

The existing fluorescent and incandescent luminaires are old, inefficient, and have exceeded their life cycle. The entire lighting system and controls could be replaced to meet the Manitoba Hydro PowerSmart program and the Manitoba Energy Code for Buildings to reduce power consumption as well as to provide a longer life expectancy of the system.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 OBJECTIVE	1
2.1 Assessment and Report Format	1
3.0 MECHANICAL SYSTEMS	1
3.1 Plumbing Systems	1
3.1.1 Domestic Water System	1
3.1.2 Sanitary and Storm Drainage Systems	2
3.2 Heating, Ventilating and Air Conditioning (HVAC) Systems	3
3.2.1 Heating and Cooling System	3
3.2.2 Ventilation and Air Distribution System	4
3.3 Fire Protection	5
3.3.1 Examination	5
3.3.2 Evaluation	5
3.3.3 Recommendation	5
4.0 ELECTRICAL SYSTEMS	1
4.1 Power Distribution System	1
4.1.1 Examination	1
4.1.2 Evaluation	1
4.1.3 Recommendation	2
4.2 Grounding System	2
4.2.1 Examination	2
4.2.2 Evaluation	2
4.2.3 Recommendation	2
4.3 Lighting	2
4.3.1 Examination	2
4.3.2 Evaluation	3
4.3.3 Recommendation	3

4.4 Emergency Lighting and Egress Signage 3

 4.4.1 Examination 3

 4.4.2 Evaluation..... 3

 4.4.3 Recommendation..... 3

4.5 Fire Alarm System 4

 4.5.1 Examination 4

 4.5.2 Evaluation..... 4

 4.5.3 Recommendation..... 4

STATEMENT OF LIMITATIONS AND CONDITIONS

Limitations

This report has been prepared for Prairie Architects Inc. in accordance with the agreement between KGS Group and Prairie Architects (the "Agreement"). This report represents KGS Group's professional judgment and exercising due care consistent with the preparation of similar reports. The information, data, recommendations and conclusions in this report are subject to the constraints and limitations in the Agreement and the qualifications in this report. This report must be read as a whole, and sections or parts should not be read out of context.

This report is based on information made available to KGS Group by Prairie Architects. Unless stated otherwise, KGS Group has not verified the accuracy, completeness or validity of such information, makes no representation regarding its accuracy and hereby disclaims any liability in connection therewith. KGS Group shall not be responsible for conditions/issues it was not authorized or able to investigate or which were beyond the scope of its work. The information and conclusions provided in this report apply only as they existed at the time of KGS Group's work.

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Any use a third party makes of this report or any reliance on or decisions made based on it, are the responsibility of such third parties. KGS Group accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions undertaken based on this report.

1.0 INTRODUCTION

Windsor Park Collegiate is located at 1015 Cottonwood Road in Winnipeg, MB. The building was originally constructed in 1959, with a building addition on the North side of the property constructed in 1969. Another 2-storey classroom pod addition was constructed to the Northeast end of the building however the date this building was constructed is unknown as drawings for this addition were not provided.

The original building consists of two storeys and a basement in the original portion of the school complete with several classrooms, offices, staff rooms, exercise, canteen, science labs and a gymnasium. The building addition on the north side is a single storey building complete with a second gymnasium, metal shop, wood shop and library areas.

2.0 OBJECTIVE

The objective of this Mechanical and Electrical Systems Assessment Report is to provide Prairie Architects with an assessment of the existing mechanical and electrical infrastructure. The evaluation will provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

2.1 Assessment and Report Format

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 1015 Cottonwood Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure and for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

The assessment is based upon a visual analysis of the existing building, as well as existing mechanical and electrical drawings of the building from previous renovations and upgrades made available.

3.0 MECHANICAL SYSTEMS

3.1 Plumbing Systems

3.1.1 DOMESTIC WATER SYSTEM

3.1.1.1 Examination

The building's domestic water system is served by a 4" copper water service. Located in the basement mechanical room is the main water meter complete with isolation valves, and backflow preventer. The building is served by several electric hot water tanks scattered throughout the building. There is an 80-gallon AO Smith electric hot water tank located in the basement mechanical room which provides hot water to majority of the original building. A hot water recirculation pump is installed beside the electric hot water tank. The pump circulates hot water throughout the building and discharges water back into the hot water tank.

There are also secondary John Wood electric hot water tanks located in the basement electrical room and the crawlspace. The Northern building addition is served by a 98-gallon AO Smith gas fired hot water tank located in the janitor room.

The domestic hot and cold-water services feed the buildings plumbing fixtures which serve washrooms, laboratories, drinking fountains and kitchenette fixtures. The domestic water piping is routed throughout the building basement and crawlspace. The majority of the domestic water piping observed was copper.

There is a central male/female washroom on the main floor of the original building as well as various other smaller staff washrooms, grooming rooms, kitchenette and laboratory/classroom sinks spread throughout the building. In the basement below the gymnasium there are additional washroom and shower facilities in the change rooms. Drinking fountains are also provided throughout the corridors of the school.

3.1.1.2 Evaluation

The water supply system to the building appears to be of adequate size to serve buildings domestic water needs. It is anticipated the domestic water size is also adequate to accommodate the planned future upgrades. The isolation valves and backflow prevention device are installed at the water meter; is in compliance with the City of Winnipeg's requirements. Majority of the domestic water system piping appeared to be insulated.

The AO Smith electric hot water tank in the basement mechanical room appeared to be new and in good condition, while the other John Wood electric hot water tanks appeared to be older and in fair to poor condition. Installation or manufacture dates could not be determined for this equipment. Hot water tanks are typically provided with a 10-year warranty, so the newer units are expected to be covered for the foreseeable future while the older tanks may need replacement soon. The associated hot water recirculation pump also appeared to be in good condition and is assumed to be newly installed when the tank was replaced. The capacity of the domestic hot water systems appears adequate for the building but are anticipated to not be

capable of serving the new building addition/renovation. Additional domestic hot water equipment will be required.

Plumbing fixtures throughout the building appeared to be original and showing signs of age except for the original building's main floor male and female washrooms. These washrooms appear to have been recently renovated complete with new plumbing fixtures. The washrooms and showers serving the gymnasium change rooms appear to be old and in poor condition. Some fixtures were out of order or appeared to have leaked in the past. Some drinking fountains throughout the school appeared to be original and in poor condition while others had been recently replaced with new complete with bottle filling stations.

3.1.1.3 Recommendations

The existing domestic water systems are anticipated to be sufficiently sized to service the new building addition/renovations. Main sections of piping in the scope of work area should be replaced as they are anticipated to have exceeded their life expectancy and will need replacement soon. Additional localized hot water facilities are anticipated for any additional plumbing fixtures. The existing washrooms and showers serving the gymnasium should not be reused and new facilities should be planned for the new construction.

3.1.2 SANITARY AND STORM DRAINAGE SYSTEMS

3.1.2.1 Examination

A main 6" diameter cast iron sewer leaves the original building in the basement janitor room South towards Cottonwood Road. The Northern addition has its own dedicated 6" cast iron drain leaving at the Southwest corner of the building towards the alleyway. Sanitary sewer piping is routed within the basement ceiling and crawlspace areas.

The original building has a sloped roof with gutters and downspouts for storm drainage. The downspouts connect to an internal storm drainage piping which leaves the building in the basement janitor room South towards Cottonwood Road. The Northern addition has a separate flat roof with roof drains and internal rainwater leaders. The storm drainage system for the Northern addition leaves the building on the West end of the building towards the alleyway.

3.1.2.2 Evaluation

The majority of the building's sanitary and storm drainage systems are cast iron piping with some of the newly renovated areas having PVC sanitary drains. Existing cast iron drainage piping appears to be original to the building with some locations having already been replaced with new such as the main floor washrooms. The sanitary sewer and storm drainage systems appeared to be in fair condition. Both services are anticipated to be adequately sized and suitable for the new addition/renovations.

3.1.2.3 Recommendations

The existing sanitary and storm drainage systems are sufficiently sized to service the new building addition/renovations. Main sections of drainage piping in the scope of work area should be replaced as they are anticipated to have exceeded their life expectancy and will need replacement soon.

3.2 Heating, Ventilating and Air Conditioning (HVAC) Systems

3.2.1 HEATING AND COOLING SYSTEM

3.2.1.1 Examination

The building is equipped with a 5 P.S.I gas service, located outdoors near the East end of the building. Steel gas piping is routed into the building to serve two hydronic boilers as well as four rooftop air handling units on the roof of the Northern building addition. The four rooftop units are complete with packaged DX cooling.

The building's heating needs are provided by gas fired appliances and a hydronic heating system. In the basement mechanical room there are two circulation pumps, a plate and frame heat exchanger complete with two glycol circulation pumps and two 3,000 MBH high efficiency condensing boilers complete with all associated glycol and chemical treatment ancillaries. The hydronic pumps serve the buildings perimeter hot water heating system consisting of convectors, perimeter wall fin, force flow heaters etc. while the glycol circulation pumps serve heating coils in the main building and gymnasium air handling units. Hydronic piping throughout the building appeared to be black steel.

The two indoor air handling units do not have any cooling coils to provide air conditioning to the school.

The Northeast classroom pod addition has perimeter unit ventilators in each classroom which provide heating, cooling and ventilation. It is believed there is an additional air handling unit in the second-floor ceiling space however the unit was not accessible during the time of the inspection.

3.2.1.2 Evaluation

The natural gas service is adequate for the existing building and will likely be adequate to serve any future renovations taking place in the building. It should be noted that a gas service upgrade may be required in the event of a significant addition to the building.

The boilers, heat exchanger, circulation pumps, hydronic piping and perimeter heating system all appear to have been installed back in 2010 to replace an existing steam heating system. Majority of the equipment appears to be in good condition. One of the hydronic circulation pumps was out of service during the time of inspection and appeared to be undergoing maintenance. The life expectancy for the natural gas boilers and circulation pumps are 25 and 20 years respectively. Both the boilers and pumps are within their expected operation lifetimes, with the boilers reaching their life expectancy in 2035 and the pumps in 2030. All hydronic piping in the mechanical room appeared to be insulated at the time of inspection.

The steel piping itself appears to be in good condition and should have a 30-year life expectancy. The life expectancy of hydronic radiant heaters is 25 years; these heaters are assumed to be installed in 2010 and are expected to last until 2035.

The four gas fired rooftop units serving the Northern building addition appeared to be older and in fair condition. The exact age of these units could not be determined as the nameplates have worn off. The typical life expectancy for rooftop units ranges from 15-20 years and they are anticipated to have reached or be reaching the end of their service life. During the site visit mechanical maintenance personnel were on site to address a lack of heating from one of the rooftop units.

The unit ventilators serving the Northeast classroom pod addition appear to be in good condition.

3.2.1.3 Recommendation

It is anticipated the existing hydronic heating system has sufficient capacity to accommodate the planned building addition/renovation. New hydronic units can be provided and connected into the existing heating system.

The indoor air handling units have no cooling coils to provide air conditioning to the gymnasium and classrooms. Consideration should be given to adding cooling coils to these units in the future when they are replaced if desired.

The four rooftop units are anticipated to need replacement in the near future. The library rooftop unit may require replacement if the space is renovated however the other three rooftop units are not anticipated to be impacted by the planned building addition/renovations at this time.

The unit ventilators and existing air handling unit serving the Northeast classroom pod addition appear to be suitable for the minor renovation scope however future investigations will be required.

3.2.2 VENTILATION AND AIR DISTRIBUTION SYSTEM

3.2.2.1 Examination

The original buildings air distribution system is provided by two constant volume indoor air handling units. One air handling unit is in the basement mechanical room and serves majority of building classrooms and office areas. The other is in the basement mechanical room beside the change rooms and serves the gymnasium areas.

The four rooftop units provide heating, cooling and ventilation for the Northern building addition. The metal shop, wood shop, gymnasium and library each are served by a dedicated rooftop unit respectively.

There are several exhaust fans throughout the building and on the roof which provide exhaust for washroom's, janitor rooms and other miscellaneous spaces.

3.2.2.2 Evaluation

The two indoor air handling units appear to be original to the building and are estimated to be over 50 years old. These units appear to have been well maintained over the years but have exceeded their typical life expectancy of 25 years and are in poor condition. The AHU filters had significant dust build up and need replacement. Their internal hydronic heating coils are assumed to have been replaced recently in 2010 as part of the heating system renovation project and are in good condition.

These air handling units are also constant volume which are not energy efficient. Newer air handling systems are typically provided with variable speed drives so they can operate at reduced speeds to save energy. Newer air handling units are also typically provided with economizer modes such that they can provide free cooling when outdoor air conditions are favorable.

Additionally, consideration should be given to install new energy recovery ventilators. Energy recovery ventilators are capable efficiencies up to 90% and pre-heat ventilation air to save operating costs.

The four rooftop units as mentioned previously appeared to be older and in fair condition. The exact age of these units could not be determined as the nameplates have worn off. The typical life expectancy for rooftop units ranges from 15-20 years and they are anticipated to be reaching the end of their service life.

The duct distribution system appears to be in fair condition and ductwork that could be visually examined was insulated in fair condition.

The majority of the exhaust fans located throughout the school and appeared to be in original and in fair to poor condition.

3.2.2.3 Recommendation

The two indoor air handling units serving the school should be replaced. Under the planned building renovation, it is highly recommended that the existing gymnasium air handling unit is replaced at a minimum as it is located within the scope of work area for the project. Distribution ductwork from the main building AHU can be reused to the greatest extent possible and replaced as needed to serve the classroom renovations but consideration should also be given to replacing this air handling unit as well.

The addition of energy recover ventilators should be considered when replacing these air handling units for improved efficiency and to reduce operating costs. As mentioned previously, adding cooling coils to these air handling units should also be considered to provide air conditioning to the school if desired.

The four rooftop units are anticipated to need replacement in the near future. The library rooftop unit may require replacement if the space is renovated however the other three rooftop units are not anticipated to be impacted by the planned building addition/renovations at this time.

The exhaust fans throughout the building can be replaced on an as needed basis and are not suitable for connecting to the for the new building renovations. Exhaust fans within the scope of work area should be replaced with new exhaust fans as necessary.

3.3 Fire Protection

3.3.1 EXAMINATION

There are no sprinkler systems or standpipe fire protection systems for the building. The building is currently protected by miscellaneous fire extinguishers located throughout the building.

3.3.2 EVALUATION

The existing 4" building water supply line is not large enough to support a new wet pipe sprinkler system for the planned building addition/renovation. It is anticipated that the building renovations will require a portion of the building to be sprinklered.

3.3.3 RECOMMENDATION

Provide a new 6" water main to the school addition/renovation to support a new wet pipe sprinkler system.

4.0 ELECTRICAL SYSTEMS

4.1 Power Distribution System

4.1.1 EXAMINATION

The existing building is serviced by a Manitoba Hydro owned 300kVA pad-mounted transformer and 2000A, 120/208V CSTE, located near the parking lot on the west side of the building, via two underground electrical service feeders. One feeder is connected to the existing main distribution in the electrical room of the original building. The second feeder is connected to the distribution in the electrical room of the 1969 addition. The peak demand load for this service could not be determined prior to report submission. The breakdown of the equipment is as follows:

The main electrical distribution in the original building consists of a 1000A switchgear assembly panel that feeds one (1) 600A, 120/208VAC/3Ø/4W and two (2) 400a, 120/208VAC/3Ø/4W CDPs within the switchgear as well a sub distribution panel. It was manufactured by “J.R. Stephenson”. The CDP’s serve multiple panels throughout the building, each with their own breakers as follows:

- Light CDP: seven (7) branch circuit panels
- Motor CDP: six (6) branch circuit panels
- Heat CDP: two (2) branch circuit

The sub-distribution panel feeds an additional nine (9) branch circuit panels. Many of the panels are original to the building and are manufactured by “J.R. Stephenson”.

The main electrical distribution in the 1969 addition consists of a newer 1200A distribution panel manufactured by “General Electric”. The main breaker has a 1000A trip unit. The distribution panel feeds the following:

- Seven (7) branch circuit panels
- Three (3) roof top units
- Dust collector

Many of the panels are original to the building and are manufactured by “Canadian General Electric”.

None of the equipment is sprinkler-proof or has any arc-flash labeling identifying any hazard levels.

Distribution equipment was serviced by various installation methods such as conduit, BX cable and Teck.

4.1.2 EVALUATION

The existing distribution equipment in the original building is original to the building and the equipment is obsolete and near the end of its useful service life. Finding replacement parts could become very difficult. There is no physical space in the switchgear for new loads to be added.

The existing distribution equipment in the 1969 addition is newer and still has a lot of useful life left. However, finding replacement parts could become very difficult in the future. There are four (4) breaker spaces available for future additions.

4.1.3 RECOMMENDATION

Upgrade the original building distribution equipment to a new modern system with digital customer metering and molded case circuit breakers c/w electronic trip breakers on main switchboard. Upgrade the branch circuit panels that are original to the building as spare parts are difficult to find.

The main distribution panel in the 1969 addition can be reused.

Provide Arc-Flash, Fault Current and Coordination study for the entire electrical distribution system to ensure proper arc flash protection levels, selection of equipment, overcurrent devices and trip settings. These studies are critical to the safety of personnel working on or near exposed energized electrical equipment. The analysis will quantify potential arc flash hazards and will describe safety recommendations. These studies can be done either now or at the time of a future distribution upgrade.

4.2 Grounding System

4.2.1 EXAMINATION

The building appears to have a main building grounding system.

4.2.2 EVALUATION

The grounding system requires testing to confirm functionality and performance.

4.2.3 RECOMMENDATION

Undertake testing of the grounding system, as required under the Canadian Electrical Code. Depending on the results of the testing, the grounding system may need to be modified to accommodate additional bonding point, increased wire size, additional ground rods etc.

Where the domestic water supply lines are not found to be bonded to the grounding system, this bond should be installed.

4.3 Lighting

4.3.1 EXAMINATION

The majority of interior luminaires are a combination of LED, fluorescent luminaires with T8 and T12 lamps, incandescent luminaires, and exterior H.I.D. luminaires.

Most luminaires appeared to be in good condition and lighting levels appeared to be adequate throughout the building.

Lighting control throughout the building consists of individual line voltage switches.

4.3.2 EVALUATION

In general, luminaires and controls are in good condition.

The fluorescent and incandescent lamps are inefficient compared to newer LED luminaires. These types of lamps are currently being phased out of the market and will not be available in a few years. Replacements and spare parts will be increasingly difficult and expensive to procure.

Lighting levels appeared adequate throughout the building.

Lighting controls do not meet the current Manitoba Energy Code for Buildings (MECB) which requires occupancy sensors and dimming controls.

4.3.3 RECOMMENDATION

In general, the majority of the luminaires in the building are inefficient. In order to meet the Hydro Power-Smart program and the MECB and reduce the energy consumption cost as well as to provide a longer life expectancy of the system, new LED lighting is recommended. Adding dimming switches and occupancy sensors will reduce the energy consumption even further and is also recommended.

4.4 Emergency Lighting and Egress Signage

4.4.1 EXAMINATION

Emergency lighting mostly consists of recently upgraded battery unit's c/w newer and older incandescent remote heads.

Egress signage consists of older style red exit signs.

4.4.2 EVALUATION

The majority of emergency battery units newer. However, the remote heads are still incandescent. The system still uses red exit signs instead of green pictogram exit signs, which are required by code. The system can be considered to have been "grandfathered in," and is not considered to be a deficiency that requires immediate action unless an addition or renovation is expected in an area greater than 15% of the building.

4.4.3 RECOMMENDATION

As the existing installation has been grandfathered in it is recommended to complete an upgrade of all egress signage to green pictogram signage and battery unit's c/w LED lamped remote heads to meet the current M.B.C. and C.E.C. requirements, during the building's next renovation.

4.5 Fire Alarm System

4.5.1 EXAMINATION

The main fire alarm control panel (FACP) is located in the main electrical room of the original building. The FACP is an older Sensiscan 2000 conventional system manufactured by Fire-Lite alarms. The building is not sprinklered. An annunciator is located near the main entrance.

The initiation devices consist of smoke detectors in corridors and heat detectors in rooms and open spaces throughout the building. The notification devices consist of fire alarm bells throughout the building. All the exit doors and stairwell entrances are complete with manual pull stations that appear to be mounted too high to meet the current M.B.C.

4.5.2 EVALUATION

The existing fire alarm panel is an older panel and is obsolete and near the end of its useful service life.

Notification is by bells only. The current M.B.C. requires strobes in additions to the bells in most rooms. This condition may be considered to be grandfathered and therefore is not a deficiency. However, additional strobes will need to be installed during a full fire alarm upgrade in the future.

4.5.3 RECOMMENDATION

Due to the age of the system, it is recommended that it be upgraded during the next renovation with a fully addressable system. To meet current codes, it is recommended that all devices be replaced and installed to meet CAN/ULC S524. New horn/strobes are recommended in each room to meet current codes.

KGS
GROUP

Experience in Action

PRAIRIE ARCHITECTS INC.

Collège Béliveau Building Condition Assessment

Revision:

Final Rev. 0

KGS Group Project:

23-1736-003

Date:

April 14, 2023

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EXECUTIVE SUMMARY

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 296 Speers Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

Mechanical Systems:

The existing mechanical systems in the building are generally operational with several systems near the end of their typical life expectancy. The domestic water, sewer and sanitary sewer services are anticipated to have adequate capacity to service the planned building addition/renovations. Piping within the scope of work area should be replaced as needed. Indoor air handling units serving the library and 1956 buildings are not anticipated to be in the scope of work for the building addition/renovations, but consideration should be taken to replacing these units soon.

The buildings heating system was recently replaced however an exact installation date could not be verified. The heating systems capacity and infrastructure is expected to be suitable for the planned building renovations. The perimeter heating system appeared to be in good condition.

The buildings cooling system also appears to be new and in good condition. The buildings cooling system primarily consists of individual wall mounted split system AC units in each classroom so the cooling systems are not capable of expansion however a similar approach can be considered for the new addition.

The existing building is not sprinklered however a portion of the building is expected to require sprinklers for the new building addition/renovation to meet current building codes. The existing water service is not sufficiently sized to accommodate a sprinkler system so as a result it is anticipated a new 6" water service will be required for the newly renovated portion of the building.

Electrical Systems:

The existing electrical systems in the facility are generally in operational condition but nearing their end-of-life. Large portions of the distribution equipment and building wiring is nearing the end of its life cycle, however, the main distribution panel was recently upgraded.

The fire alarm control panel is a newer panel; however, it may not have the capacity for additional zones. All devices are conventional and the notification devices are bells. The fire alarm system would be considered as grandfathered; however, it does not meet current codes as manual pull stations are not at the required height and there are no strobes throughout the building. The panel and all notification and detection devices throughout the building should be upgraded during the building's next renovation.

Most of the emergency lighting system has been recently upgraded and complies with latest M.B.C. and Canadian Electrical Code. The exit lighting system does not comply with the latest M.B.C. due to the red exit

signs however, this is considered as being grandfathered. The existing red exit lights should be replaced with new green pictogram exit lights during the building's next renovation.

The existing fluorescent and incandescent luminaires are old, inefficient, and have exceeded their life cycle. The entire lighting system and controls could be replaced to meet the Manitoba Hydro PowerSmart program and the Manitoba Energy Code for Buildings to reduce power consumption as well as to provide a longer life expectancy of the system.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 OBJECTIVE	1
2.1 Assessment and Report Format.....	1
3.0 MECHANICAL SYSTEMS	1
3.1 Plumbing Systems	1
3.1.1 Domestic Water System.....	1
3.1.2 Sanitary and Storm Drainage Systems.....	2
3.2 Heating, Ventilating and Air Conditioning (HVAC) Systems.....	3
3.2.1 Heating and Cooling System	3
3.2.2 Ventilation and Air Distribution System	4
3.3 Fire Protection	5
3.3.1 Examination	5
3.3.2 Evaluation.....	5
3.3.3 Recommendation.....	5
4.0 ELECTRICAL SYSTEMS	1
4.1 Power Distribution System	1
4.1.1 Examination	1
4.1.2 Evaluation.....	1
4.1.3 Recommendation.....	1
4.2 Grounding System.....	2
4.2.1 Examination	2
4.2.2 Evaluation.....	2
4.2.3 Recommendation.....	2
4.3 Lighting.....	2
4.3.1 Examination	2
4.3.2 Evaluation.....	2
4.3.3 Recommendation.....	2

4.4 Emergency Lighting and Egress Signage 3

 4.4.1 Examination 3

 4.4.2 Evaluation..... 3

 4.4.3 Recommendation..... 3

4.5 Fire Alarm System 3

 4.5.1 Examination 3

 4.5.2 Evaluation..... 3

 4.5.3 Recommendation..... 3

STATEMENT OF LIMITATIONS AND CONDITIONS

Limitations

This report has been prepared for Prairie Architects Inc. in accordance with the agreement between KGS Group and Prairie Architects (the “Agreement”). This report represents KGS Group’s professional judgment and exercising due care consistent with the preparation of similar reports. The information, data, recommendations and conclusions in this report are subject to the constraints and limitations in the Agreement and the qualifications in this report. This report must be read as a whole, and sections or parts should not be read out of context.

This report is based on information made available to KGS Group by Prairie Architects. Unless stated otherwise, KGS Group has not verified the accuracy, completeness or validity of such information, makes no representation regarding its accuracy and hereby disclaims any liability in connection therewith. KGS Group shall not be responsible for conditions/issues it was not authorized or able to investigate or which were beyond the scope of its work. The information and conclusions provided in this report apply only as they existed at the time of KGS Group’s work.

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1.0 INTRODUCTION

Collège Béliveau is located at 296 Speers Road in Winnipeg, MB. The building was originally constructed in 1956 with several additions and renovations over the years. Based on existing building drawings the major building additions are as follows:

- Two Storey South Classroom Wing Addition in 1961
- Single Storey South Central Classroom Addition in 1964
- Two Storey Northwest Wing Addition in 1967
- Single Storey Southwest Classroom Addition in 1993

It is also believed there was an addition to the 1961 Classroom wing addition to convert the southern space into a gymnasium.

2.0 OBJECTIVE

The objective of this Mechanical and Electrical Systems Assessment Report is to provide Prairie Architects with an assessment of the existing mechanical and electrical infrastructure. The evaluation will provide overall commentary on the status of major base building mechanical and electrical infrastructure as well as observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

2.1 Assessment and Report Format

On November 28, 2022, KGS Group completed a condition assessment of the mechanical and electrical systems throughout the building located at 296 Speers Road. The intent of the review was to provide overall commentary on the status of major base building mechanical and electrical infrastructure and observations for potential upgrades and suitability for reuse as they relate to the planned building addition/renovations.

The assessment is based upon a visual analysis of the existing building, as well as existing mechanical and electrical drawings of the building from previous renovations and upgrades made available.

3.0 MECHANICAL SYSTEMS

3.1 Plumbing Systems

3.1.1 DOMESTIC WATER SYSTEM

3.1.1.1 Examination

The building's domestic water system is served by a 4" copper water service. Located in the 1956 building basement mechanical room is the main water meter complete with isolation valves, and two backflow preventers. The building is served by several electric hot water tanks scattered throughout the building. There is a 112-gallon AO Smith electric hot water tank and secondary 119-gallon storage tank located in the 1967 mechanical room which provides hot water for that wing of the building. A hot water recirculation pump is installed beside the hot water storage tanks. The pump circulates hot water throughout the building and discharges water back into the hot water tank.

There is another John Wood electric hot water tank located in the band mechanical room.

The domestic hot and cold-water services feed the buildings plumbing fixtures which serve washrooms, classrooms, drinking fountains and kitchenette fixtures. The domestic water piping is routed throughout the building crawlspace and main floor ceiling space. Most of the domestic water piping observed was copper.

There are several plumbing facilities such as washrooms, a grooming room, a cafeteria kitchen, laboratory sinks, janitor rooms, and other various classroom sinks spread out throughout the building. Science classrooms also have emergency eyewash/shower facilities. There are also shower facilities serving the gymnasium change rooms. Drinking fountains are also provided throughout the corridors of the school.

3.1.1.2 Evaluation

Overall, the domestic water systems serving the building are in fair to poor condition. The water supply system to the building appears to be of adequate size to serve buildings domestic water needs. It is anticipated the domestic water size is also adequate to accommodate the planned future upgrades. The isolation valves and backflow prevention device are installed at the water meter which follows the City of Winnipeg's installation requirements.

Most of the domestic water piping appeared to have old, worn insulation along straight sections of piping and was missing insulation in various areas of the building. Several locations were noted to have damaged piping insulation.

The AO Smith electric hot water tank and secondary storage tank in the 1967 mechanical room appeared to be new and in good condition, while the other John Wood electric hot water tanks appeared to be older and in fair to poor condition. Installation or manufacture dates could not be determined for this equipment. Hot water tanks are typically provided with a 10-year warranty, so the newer units are expected to be covered for the foreseeable future while the older tanks may need replacement soon. The associated hot water recirculation pump also appeared to be in good condition and is assumed to be newly installed when the tank was replaced. The capacity of the domestic hot water systems appears adequate for the building but are

anticipated to not be capable of serving the new building addition/renovation. Additional domestic hot water equipment will be required.

Plumbing fixtures throughout the building appeared to be original and in fair to poor condition except for fixtures in the kitchen, science, and grooming room. The kitchen plumbing fixtures were installed under a renovation project in 2016. A date for the science and grooming room renovations could not be determined but from visual inspection the plumbing fixtures appeared to be in good condition. Majority of the drinking fountains throughout the school appeared to be original and in poor condition. A couple of the drinking fountains have been recently replaced complete with bottle filling stations.

3.1.1.3 Recommendations

The existing domestic water systems are anticipated to be sufficiently sized to service the new building addition/renovations. Main sections of piping in the scope of work area should be replaced as they are anticipated to have exceeded their life expectancy and will need replacement soon. Additional localized hot water facilities are anticipated for any new building plumbing fixtures.

It is recommended that the school division consider planning to replace old plumbing fixtures and reinsulating domestic water piping that has either damaged or missing insulation. When replacing plumbing fixtures consideration should be taken to replace with new low-flow fixtures to reduce water consumption.

3.1.2 SANITARY AND STORM DRAINAGE SYSTEMS

3.1.2.1 Examination

A main 6" diameter sewer leaves the North side of the 1956 original building. This sanitary service serves the original building as well as the 1967 Northwest classroom wing addition. There is also a secondary 6" sanitary service which leaves the West side of the 1961 classroom wing which serves the remainder of the building additions. Sanitary sewer piping is primarily routed within the main floor ceiling and crawlspace areas. Throughout the building there is a mixture of cast iron, copper, and PVC drainage piping. Drainage piping for science rooms were observed to have chemical resistant polypropylene piping.

All building areas have flat roofs complete with roof drains and internal rainwater leaders except for the 1993 Southwest classroom addition which has a sloped roof with gutters and downspouts. There are two 6" storm sewers that leave the North side of the 1956 and 1967 buildings as well as an 8" storm sewer that leaves the West side of the building towards Speers Road. The gymnasium roof drainage system drained to grade.

3.1.2.2 Evaluation

The majority of the building's sanitary and storm drainage systems are cast iron piping with some of the newer renovated areas having either PVC, copper, or polypropylene sanitary drains. Existing cast iron drainage piping appears to be original to the building. The sanitary sewer and storm drainage systems appeared to be in fair condition. Both services are anticipated to be adequately sized and suitable for the new addition/renovations.

The 1964 classroom addition only appeared to have a single roof drain which from a cursory review would not be sufficient to meet current building code standards. It is possible this installation may have met codes during the original installation and is grandfathered.

3.1.2.3 Recommendations

The existing sanitary and storm drainage systems are sufficiently sized to service the new building addition/renovations. Main sections of drainage piping in the scope of work area should be replaced as they are anticipated to have exceeded their life expectancy and will need replacement soon.

Based on preliminary conceptual layouts it is anticipated the 1964 classroom wing will be demolished for the renovation/addition and as a result the lack of roof drainage should not be a concern. If the project does not move forward consideration should be given to review and improve the roof drainage for this section of the building.

3.2 Heating, Ventilating and Air Conditioning (HVAC) Systems

3.2.1 HEATING AND COOLING SYSTEM

3.2.1.1 Examination

The building is equipped with a 5 P.S.I gas service, located outdoors near the Northwest corner of the building. Steel gas piping is routed into the building to serve two hydronic boilers, three gas fired rooftop units and gas turrets located in the science rooms.

The building's heating needs are provided by gas fired appliances and a hydronic heating system. In the basement mechanical room there are four variable speed circulation pumps and two 3,000 MBH high efficiency condensing boilers complete with all associated glycol and chemical treatment ancillaries. The hydronic pumps serve the buildings perimeter hot water heating system consisting of perimeter wall fin, unit ventilators, unit heaters, fan coils, force flow heaters etc. as well as hydronic heating coils for air handling units. Hydronic piping throughout the building appeared to be black steel.

Individual wall mounted split system air conditioning units are installed throughout the school to provide cooling. Associated condensing units are located on the roof complete with rubber c-port and Unistrut supports. The three rooftop units have packaged DX cooling and the band air handling unit has a remote condensing unit located at grade.

3.2.1.2 Evaluation

The natural gas service is adequate for the existing building and will likely be adequate to serve any future renovations taking place in the building. It should be noted that a gas service upgrade may be required in the event of a significant addition to the building.

The boilers, circulation pumps, hydronic piping and perimeter heating system all appear to have been installed within the last 10 years and appears to be in good condition. The life expectancy for the natural gas boilers and circulation pumps are 25 and 20 years respectively. Both the boilers and pumps are within their expected operation lifetimes. All hydronic piping in the mechanical room and throughout the school was insulated and labelled. The steel piping appears to be in good condition and should have a 30-year life expectancy.

The three gas fired rooftop units also appeared to be newer and in good condition. The exact age of these units could not be verified however the typical life expectancy for rooftop units ranges from 15-20 years. It is

believed these rooftop units are within their expected operating lifetime and are not anticipated to need replacement soon.

Wall mounted split AC units and associated condensing units appeared to be newer and in good condition. The exact age of these units could not be verified however the typical life expectancy for split AC units are 15 years. It is believed these split AC units are within their expected operating lifetime and are not anticipated to need replacement soon.

The air handling units service the gymnasium do not have any cooling coils to provide air conditioning.

3.2.1.3 Recommendation

It is anticipated the existing hydronic heating system has sufficient capacity to accommodate the planned building addition/renovation. New hydronic units can be provided and connected into the existing heating system.

The existing cooling systems are adequate for the building but are not capable of expansion. New cooling systems will need to be provided for the planned building addition/renovations.

3.2.2 VENTILATION AND AIR DISTRIBUTION SYSTEM

3.2.2.1 Examination

There are various air distribution systems which provide ventilation to the school. The original 1956 building has an indoor constant volume air handling unit in the basement which serves the main and second floor classrooms. The admin/office area is served by one of the packaged rooftop units.

The 1961, 1964 and 1967 classroom wings are served by perimeter unit ventilators. The 1967 building addition has a small indoor air handling unit and two packaged rooftop units which appear to serve the second-floor library. There is also an HRV located in the mechanical room which provides ventilation to the 1967 classrooms.

The gymnasium is served by two constant volume air handling units located on the North and South end mechanical rooms.

The 1993 building addition has a dedicated air handling unit which serves the band room.

There are several exhaust fans throughout the building and on the roof which provide exhaust for the washroom's, janitor rooms, kitchen, and other miscellaneous spaces. There are also two laboratory exhaust fans on the roof of the 1967 building which serve fume hoods in the science classrooms.

3.2.2.2 Evaluation

All indoor air handling units serving the 1956 building, library, gymnasium, and band room appear to be original and are all estimated to be over 30 years old. These units have exceeded their typical life expectancy of 25 years and are in poor condition. The internal hydronic heating coils are assumed to have been replaced recently as part of the heating system renovation project and are in good condition. These air handling units are also constant volume which is not energy efficient. Newer air handling systems are typically provided with variable speed drives so they can operate at reduced speeds to save energy. Newer air handling units are also typically provided with economizer modes such that they can provide free cooling when outdoor air conditions are favorable. Additionally, consideration should be given to install new energy recovery

ventilators. Energy recovery ventilators are capable efficiencies up to 90% and pre-heat ventilation air to save operating costs.

The three rooftop units, HRV and unit ventilators all appear to be newer and in good condition. The exact age of these units could not be determined. The typical life expectancy for rooftop units ranges from 15-20 years.

The duct distribution system appears to be in fair condition and ductwork that could be visually examined had damaged and missing insulation.

Most of the exhaust fans located throughout the school appeared to be in original and in fair to poor condition. A few exhaust fans on the roof appeared to be newer which serve the kitchen and fume hoods.

3.2.2.3 Recommendation

All indoor air handling units serving the school should be replaced. Under the planned building renovation, it is recommended that the existing gymnasium air handling units are replaced as it is anticipated this space will be converted into woods/metal shops. The indoor air handling units serving the library and 1956 buildings are not anticipated to be in the scope of work for the building addition/renovations at this time, but consideration should be taken to replacing these units in the near future.

The addition of energy recover ventilators should be considered when replacing these air handling units for improved efficiency and to reduce operating costs.

The three rooftop units, unit ventilators and HRV are not anticipated to need replacing soon. The three rooftop units and HRV are not anticipated to be impacted by the planned building addition/renovations at this time.

The exhaust fans throughout the building can be replaced on an as needed basis and are not suitable for connecting to the for the new building renovations. Exhaust fans within the scope of work area should be replaced with new exhaust fans as necessary.

3.3 Fire Protection

3.3.1 EXAMINATION

There are no sprinkler systems or standpipe fire protection systems for the building. The building is currently protected by miscellaneous fire extinguishers located throughout the building.

3.3.2 EVALUATION

The existing 4" building water supply line is not large enough to support a new wet pipe sprinkler system for the planned building addition/renovation. It is anticipated that the building renovations will require a portion of the building to be sprinklered.

3.3.3 RECOMMENDATION

Provide a new 6" water main to the school addition/renovation to support a new wet pipe sprinkler system.

4.0 ELECTRICAL SYSTEMS

4.1 Power Distribution System

4.1.1 EXAMINATION

The existing building is serviced by a Manitoba Hydro owned 300kVA pole-mounted transformer and 1200A, 120/208V CSTE, located near Spears Road on the west side of the building, via underground electrical service feeders. The feeder is connected to the 1200A main distribution panel in the electrical room. The peak demand load for this service could not be determined prior to report submission. The breakdown of the equipment is as follows:

The main electrical distribution consists of a newer 1200A distribution panel manufactured by Eaton. It feeds branch circuit panels and other loads as follows:

- 22 branch circuit panels
- Fire alarm panel
- Elevator
- Three (3) AHUs
- Two (2) AC units

Many of the panels are original to the building and are by different manufacturers depending on the age of the panel. Newer panel were installed during recent renovations.

Most of the equipment is not sprinkler-proof or has any arc-flash labeling identifying any hazard levels. Some of the newer panels are sprinkler proof.

Distribution equipment was serviced by various installation methods such as conduit, BX cable and Teck.

4.1.2 EVALUATION

The existing distribution equipment is newer and still has a lot of useful life left. However, finding replacement parts could become very difficult in the future for the older panels. There are four (4) breaker spaces available for future additions.

4.1.3 RECOMMENDATION

The main distribution panel in the 1969 addition can be reused. Upgrade the branch circuit panels that are original to the building as spare parts are difficult to find.

Provide Arc-Flash, Fault Current and Coordination study for the entire electrical distribution system to ensure proper arc flash protection levels, selection of equipment, overcurrent devices and trip settings. These studies are critical to the safety of personnel working on or near exposed energized electrical equipment. The analysis will quantify potential arc flash hazards and will describe safety recommendations. These studies can be done either now or at the time of a future distribution upgrade.

4.2 Grounding System

4.2.1 EXAMINATION

The building appears to have a main building grounding system.

4.2.2 EVALUATION

The grounding system requires testing to confirm functionality and performance.

4.2.3 RECOMMENDATION

Undertake testing of the grounding system, as required under the Canadian Electrical Code. Depending on the results of the testing, the grounding system may need to be modified to accommodate additional bonding point, increased wire size, additional ground rods etc.

Where the domestic water supply lines are not found to be bonded to the grounding system, this bond should be installed.

4.3 Lighting

4.3.1 EXAMINATION

Most interior luminaires are a combination of LED, fluorescent luminaires with T8 and T12 lamps, incandescent luminaires, and exterior H.I.D. luminaires. Some exterior lighting has been upgraded to LED.

Most luminaires appeared to be in good condition and lighting levels appeared to be adequate throughout the building.

Lighting control throughout the building consists of individual line voltage switches.

4.3.2 EVALUATION

In general, luminaires and controls are in good condition.

The fluorescent and incandescent lamps are inefficient compared to newer LED luminaires. These types of lamps are currently being phased out of the market and will not be available in a few years. Replacements and spare parts will be increasingly difficult and expensive to procure.

Lighting levels appeared adequate throughout the building.

Lighting controls do not meet the current Manitoba Energy Code for Buildings (MECB) which requires occupancy sensors and dimming controls.

4.3.3 RECOMMENDATION

In general, the majority of the luminaires in the building are inefficient. In order to meet the Hydro Power-Smart program and the MECB and reduce the energy consumption cost as well as to provide a longer life expectancy of the system, new LED lighting is recommended. Adding dimming switches and occupancy sensors will reduce the energy consumption even further and is also recommended.

4.4 Emergency Lighting and Egress Signage

4.4.1 EXAMINATION

Emergency lighting mostly consists of recently upgraded battery unit's c/w newer and older incandescent remote heads.

Egress signage consists of older style red exit signs.

4.4.2 EVALUATION

The majority of emergency battery units newer. However, the remote heads are still incandescent. The system still uses red exit signs instead of green pictogram exit signs, which are required by code. The system can be considered to have been "grandfathered in," and is not considered to be a deficiency that requires immediate action unless an addition or renovation is expected in an area greater than 15% of the building.

4.4.3 RECOMMENDATION

As the existing installation has been grandfathered in it is recommended to complete an upgrade of all egress signage to green pictogram signage and battery unit's c/w LED lamped remote heads to meet the current M.B.C. and C.E.C. requirements, during the building's next renovation.

4.5 Fire Alarm System

4.5.1 EXAMINATION

The main fire alarm control panel (FACP) is located near the main entrance. The FACP is a newer Series 1000 conventional system manufactured by Mircom. The building is not sprinklered.

The initiation devices consist of smoke detectors in corridors and heat detectors in rooms and open spaces throughout the building. The notification devices consist of fire alarm bells throughout the building. All the exit doors and stairwell entrances are complete with manual pull stations that appear to be mounted too high to meet the current M.B.C.

4.5.2 EVALUATION

The existing fire alarm panel is newer and appears to be in good condition. It is unclear if the panel has capacity for additional zones.

Notification is by bells only. The current M.B.C. requires strobes in additions to the bells in most rooms. This condition may be considered to be grandfathered and therefore is not a deficiency. However, additional strobes will need to be installed during a full fire alarm upgrade in the future.

4.5.3 RECOMMENDATION

The panel is in good condition and does not need to be upgraded until a larger addition to the building is planned which will require additional zones. To meet current codes, it is recommended that all devices be replaced and installed to meet CAN/ULC S524 during this renovation/addition. New horn/strobes are recommended in each room to meet current codes.

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Experience in Action

APPENDIX C

Design Correspondence with City of Winnipeg, with
HTFC Planning & Design

Windsor Park Collegiate & College Beliveau Site Redevelopment Planning_Comments 1-18-2023

From Parks & Urban Design:

- Winakwa CC has plans to develop a 10' wide walking/ice skating pathway system (see below) that may get quite close to the proposed Parking in Option 2. Looking a little closer at the concept plan for the CC's pathway system, it looks like perhaps the proposed pathway in the CC grounds will need to be moved to the N to better fit the property lines. Protective fencing to separate uses is recommended depending on how close the parking is to the proposed pathway.



- Option 1 does a better job of keeping an unobstructed main north/south path through the Speers closure and is less intrusive on the adjacent resident to the northeast. However, this plan relies on using Hydro land for their drop-off/turn around at the northwest corner of Beliveau's site.
- The back lane that connects Winakwa Rd to Cottonwood Rd acts more as a street than a back lane, since Speers is closed. It is usually busy with cars and students. Adding bus drop off in off that lane could be problematic.

From the Transportation:

Overall comments on both options:

- An AutoTurn analysis is required to confirm the type of vehicle intended to use the proposed loops/approaches can fit. All of the loops appear to be very tight.
- Note that any proposed approach within 1.5 m of a wooden pole (or any other obstruction) will need to have the obstruction relocated at the applicant's expense.

- Any approaches within 2 m of a tree require review by Forestry.

Option 1:

- Winakwa & Speers:
 - The property owner of 280 Speers would need to be notified of the proposed loop at Winakwa/Speers. If the loop is intended to operate one-way, then to access 280 Speers motorists would need to travel through the loop which is quite odd as the loop will be filled with busses at some points which would obstruct them from reaching their property. We also wouldn't be able to sign this as a "bus only" loop as motorists need to use it to access 280 Speers and the Hydro facility. If we can't sign it as "bus only" then there may be issues with parents trying to use the loop for loading as well.
 - The bus loop will create concerns for cyclists traveling along Speers. How will cyclists proceed through the loop when busses are present and students are loading? Cyclists traveling southbound on Speers would have to enter at the loop's exit which is an issue.
- What is the purpose of the loop shown on the west side of Speers at Jogues?
- Prefer the layout shown in Option 1 for the closed section of Speers as it maintains a straight path of travel for pedestrians and cyclists.
- Lane east of Autumnwood for Windsor Park
 - Is this drawing showing a proposed loading loop in the parking lot? What level of traffic volume increase can we expect in the lane by adding more parking and a loading loop? The lane is already constrained and busy.
- Where do busses for Windsor Park load in Option 1?

Option 2:

- Winakwa & Speers:
 - How are cyclists and pedestrians traveling north-south on Speers accommodated through the proposed loop? The addition of a parking lot on the north side will increase the risk of conflicts with cyclists/pedestrians traveling along Speers through Winakwa as more motorists will be traveling through the intersection.
 - It appears the loop and parking lot are on City-owned land – is this permitted?
 - It is difficult to tell from the conceptual-level drawing but it appears access to the property is provided through privately owned land at 280 Speers, which would not be permitted.
 - In order to access the proposed parking lot, motorists need to drive through the loop. With vehicles stopped loading in the loop, a queue would built up onto Speers and/or Winakwa which is not desirable.
- The closed section of Speers does not appear to provide a clear/straight path of travel for pedestrians and cyclists which is an accessibility issue.
- Option 2 parking lot layout off of Jogues for College Beliveau is preferred as motorists parking will not be backing up into the queue of loading vehicles.
- Lane east of Autumnwood for Windsor Park
 - Is this drawing showing a proposed loading loop in the parking lot? What level of traffic volume increase can we expect in the lane by adding more parking and a loading loop? The lane is already constrained and busy.
- Where do busses load for both schools in Option 2?

From AT Branch:

Background on Speers Rd for AT:

- Speers Rd is identified in the 2015 Pedestrian and Cycling Strategies (PCS) as an AT route. In the draft updated PCS, it is planned to be upgraded in priority to a primary route. Speers Rd connects the multi-use path on Fermor Ave through Windsor Park. Through the future approved development of the stock yards site to the north, Speers Ave will connect to Marion St and beyond via additional planned walking and cycling infrastructure.
- There has been recent investment in a multi-use path on Speers Rd north of Betournay St and the plan is to continue to improve the rest of Speers Rd for walking and cycling. This includes maintaining a clear path for walking and cycling through the leased area. This route will continue to evolve and become a key active transportation connection from southwest Winnipeg to other parts of the City.

Regarding the proposed options:

- The leased area requires a clear path for those walking, wheeling and cycling and should not encourage people to linger in the path of those cycling (ex. Those spectating a basketball game, errant basketballs and those chasing them, those working on raised planters etc). The options do not appear to be able to provide this and all the other programing as shown.
- As noted by Transportation, the northern and southern transitions between Speers Rd and the leased area for those cycling include multiple conflicts. This needs to be addressed to include an unobstructed path of travel and clear sightlines.

APPENDIX D

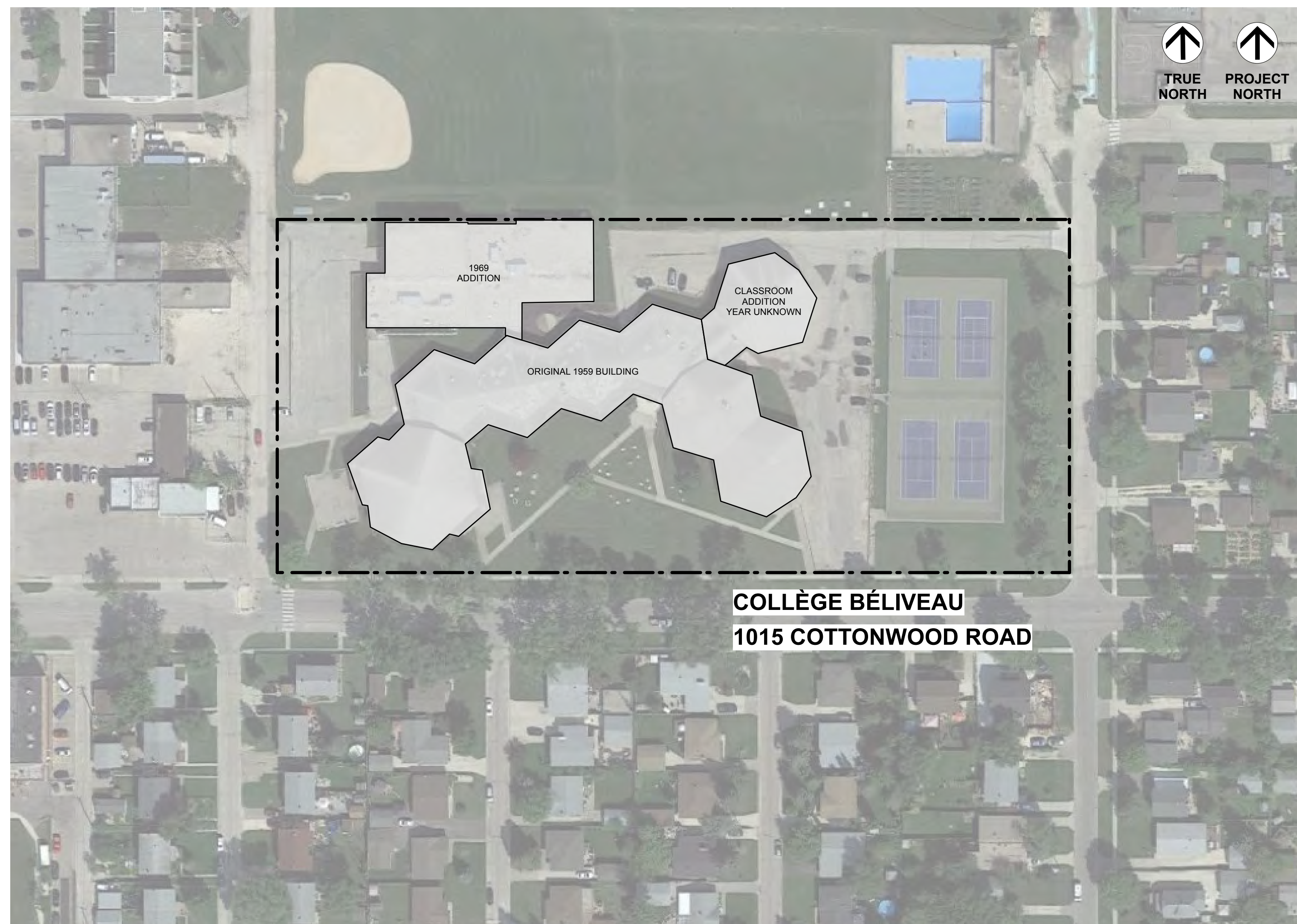
Architectural, Landscape, Structural, Mechanical &
Electrical Concept Development Drawings and Basis
of Design Package



COLLÈGE BÉLIVEAU TRANSITION TO COTTONWOOD RD.

OWNER	ARCHITECT	STRUCTURAL	MECHANICAL	ELECTRICAL	LANDSCAPE
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1015 COTTONWOOD SITE PLAN (N.T.S.)



DRAWING INDEX

- A0-00 TITLE SHEET
- A0-01 SCHEDULES/ PHASING PLAN
- ARCHITECTURAL DRAWINGS**
- A1-00 SITE PLAN - DEMOLITION
- A1-01 SITE PLAN - NEW CONSTRUCTION
- A2-01 DEMOLITION - BASEMENT FLOOR PLAN
- A2-02 DEMOLITION - MAIN FLOOR PLAN
- A2-03 DEMOLITION - SECOND FLOOR PLAN
- A2-04 NEW CONSTRUCTION - BASEMENT FLOOR PLAN
- A2-05 NEW CONSTRUCTION - MAIN FLOOR PLAN
- A2-06 NEW CONSTRUCTION - SECOND FLOOR PLAN
- A3-01 EXTERIOR ELEVATIONS - DEMO/NEW
- A3-02 EXTERIOR ELEVATIONS - DEMO/NEW
- A4-01 E-W BUILDING SECTIONS - DEMO/NEW
- A4-02 N-S BUILDING SECTIONS - DEMO/NEW

issue / rev.	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals

PRELIMINARY

DATE PLOTTED
2023 Mar 31

NOT FOR CONSTRUCTION

PRELIMINARY

DATE PLOTTED
2023 Mar 31


NOT FOR CONSTRUCTION

project information

**COLLÈGE BÉLIVEAU
TRANSITION TO
COTTONWOOD RD.**

1015 Cottonwood Road
Winnipeg, MB
Canada

client



Louis Riel School Division
900 St. Mary's Road
Winnipeg, MB

drawing information

TITLE SHEET

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued:
 proj. #: 2022.52
 rev. #:

This drawing must not be scaled. The contractor shall verify all dimensions and other data on this plan prior to commencement of work. All discrepancies, errors, and omissions are to be reported to the architect. Drawings and specifications are instruments of service, and their use is limited to the project for which they were prepared. No reproduction may be made without the permission of the architect, and when made, must bear the name. All prices to be returned to the architect on request.

1	2023-03-31	ISSUED FOR CLASS D PRICING
#	date	issue notes

professional seals



project information

COLLÈGE BÉLIVEAU
TRANSITION TO
COTTONWOOD RD.

1015 Cottonwood Road
Winnipeg, MB
Canada

client



Louis Riel School Division
900 St. Mary's Road
Winnipeg, MB

drawing information

SCHEDULES/
PHASING PLAN

drawn by: CR
approved by: LO

scale: AS NOTED
date issued:
proj. #: 2022.52
rev. #:

A0
01

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LIST OF ABBREVIATIONS

ACT	Acoustic Tile	D.F.	Drinking Fountain	H.D.	Hand Dryer	O/C	On Center	S.	Stove	W.	With
AB	Air Barrier	DIA.	Diameter	HB.	Hardboard	O.D.	Outside Diameter	S/A	Supply Air	W.B.	Whiteboard
ALUM.	Aluminum	D.W.	Dishwasher	HT	Height	O.H.	Overhead	S.D.	Soap Dispenser	W.C.	Water Closet
AF.F.	Above Finish Floor	ELEV.	Elevation	HWT	Hot Water Tank	O/O	Out to Out	SH.	Shelf	WD	Wood
ANOD.	Anodized	EQ	Equal	I.D.	Inside Diameter	OSB	Oriented Strand Board	S/S	Shower Partition	W.P.	Waterproofing
B.B.	Bulletin Board	EXT	Exterior	INT	Interior	O.W.S.J.	Open Web Steel Joist	STO	Sound Transmission Coefficient	W.R.	Waste Receptacle
B.F.	Barrier Free	F.D.	Floor Drain	INSUL	Insulation	P.T.D.	Paper Towel Dispenser	STL	Steel		
BLKG.	Blocking	F.E.	Fire Extinguisher	JST	Joist	P/C	Precast	Sq	Square		
CAB	Cabinet	F.E.C.	Fire Extinguisher Cabinet	MIC	Microwave	P.G.	Paint Grade	S.V.	Sheet Vinyl		
C.B.	Catch Basin	F.H.C.	Fire Hose Cabinet	M.B.C	Manitoba Building Code	PLAM	Plastic Laminate	Sect	Section		
C.J.	Control Joint	F/F	Face to Face	N.A.	Not Applicable	PLYWD	Plywood	Spec	Specifications		
CL	Closet	FIN	Finish	N.D.	Not in Contract	PREFAB	Prefabricated	Struct	Structural		
CL	Centre Line	F/O	Face of	N.T.S.	Not to Scale	PREFIN	Prefinished	T	Tread		
CLG.	Ceiling	F.A.P.	Fire Annunciator Panel	N.V.	Not in Contract	P.T.	Paint	T.B.	Towel Bar		
CLR	Clear	FLR	Floor	N.V.C.	Not in Contract	P.T.	Pressure Treated	Tbd	Tackboard		
C.M.U.	Concrete Masonry Unit	FTG	Footing	N.T.S.	Not to Scale	P.V.C.	Polyvinylchloride	T.I.	Tenant improvement		
CONC.	Concrete	GA.	Gauge	No.	Number	Q.T.	Quarry Tile	T & G.	Tongue & Groove		
Col.	Column	GALV.	Galvanized			R.	Riser	Top Of	Top Of		
CPT	Carpet	G.B.	Grab Bar			R/A	Return Air	T.P.	Toilet Partition		
C.T.	Ceramic Tile	G.C.	General Contractor			R.B.	Rubber Base	T.P.D.	Toilet Paper Dispenser		
CW	Complete With	G.L.	Glass/Glazing			RCP	Reflected Ceiling plan	TYP	Typical		
		G.1.S.	Good One Side			REQD	Required	UNFIN	Unfinished		
		GWB.	Gypsum WallBoard			REV.	Revision	U.N.O.	Unless Noted Otherwise		
						RFG	Refrigerator	V.B.	Vapour Barrier		
						R.D.	Roof Drain	V.T.	Vinyl Tile		
						R.H.	Robe Hook				
						R.O.	Rough Opening				
						R.S.	Rod & Shelf				

GENERAL NOTES

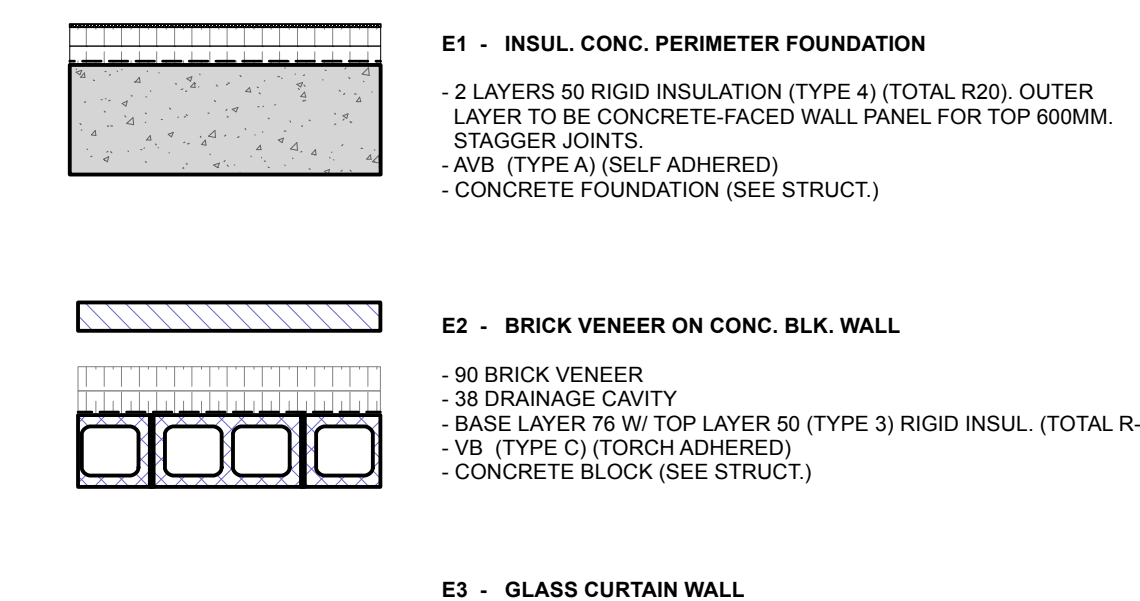
- A. THESE DRAWINGS SHALL NOT BE SCALED.
- B. THE CONTRACTOR IS TO SITE VERIFY ALL DIMENSIONS.
- C. SITE VERIFY EXISTING CONDITIONS TO COORDINATE WITH NEW CONSTRUCTION
- D. THE CONTRACTOR IS TO REPORT ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
- E. THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENINGS THROUGH FLOORS, WALLS, AND ROOFS.
- F. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE FIRE-STOPPED AND SEALED WITH ULC APPROVED FIRE-STOPPING SYSTEM TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION, AND PROVIDE A SMOKE-TIGHT BARRIER.
- G. ALL PRODUCTS AND MATERIALS ARE TO BE USED AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- H. PROVIDE TRANSITION STRIPS BETWEEN DIFFERENT FLOOR FINISHES AS REQUIRED. REFER TO SPEC.
- J. PROVIDE BLOCKING AS REQ'D FOR ALL WALL & CEILING MOUNTED EQUIPMENT, FIXTURES AND MILLWORK. CONTRACTOR TO CONFIRM MOUNTING HEIGHTS OF ALL EQUIPMENT, FIXTURES, MILLWORK WITH ARCHITECT WHERE NOT SHOWN.
- K. GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR COSTS ASSOCIATED WITH CONFIRMING EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO SEPARATE EXCAVATION FOR CONFIRMATION OF FOUNDATION UNITS AND EXISTING SERVICES, CONCRETE REINFORCING SCANNING, AND SELECTIVE DEMOLITION.
- L. NOTIFY OWNER AND CONSULTANT MINIMUM 7 (SEVEN) WORKING DAYS BEFORE REMOVING, CUTTING, DRILLING OR SLEEVING STRUCTURAL OR LOAD BEARING MEMBERS INCLUDING FLOOR SLABS. MARK OUT EXACT LOCATIONS AND DIMENSIONS TO ALLOW REVIEW. (SCAN CONCRETE FOR IN-SLAB SERVICES PRIOR TO CUTTING AND CORING. DO NOT PROCEED WITH CUTTING AND CORING UNTIL RESULTS OF SCAN HAVE BEEN REVIEWED BY OWNER AND CONSULTANT.)
- M. DIMENSIONS TYP. FROM FACE OF STUD, FACE OF CONCRETE OR GRID LINE.
- N. ROUGH-IN FOR ALL APPLIANCES IN CONTRACT, REFER TO MECH. & ELEC.
- O. PROVIDE INTERIOR MOUNTED BLINDS AT ALL EXTERIOR WINDOWS UNLESS NOTED OTHERWISE. REFER TO SPEC.

CONSTRUCTION TYPES SCHEDULE

EXTERIOR WALL TYPES

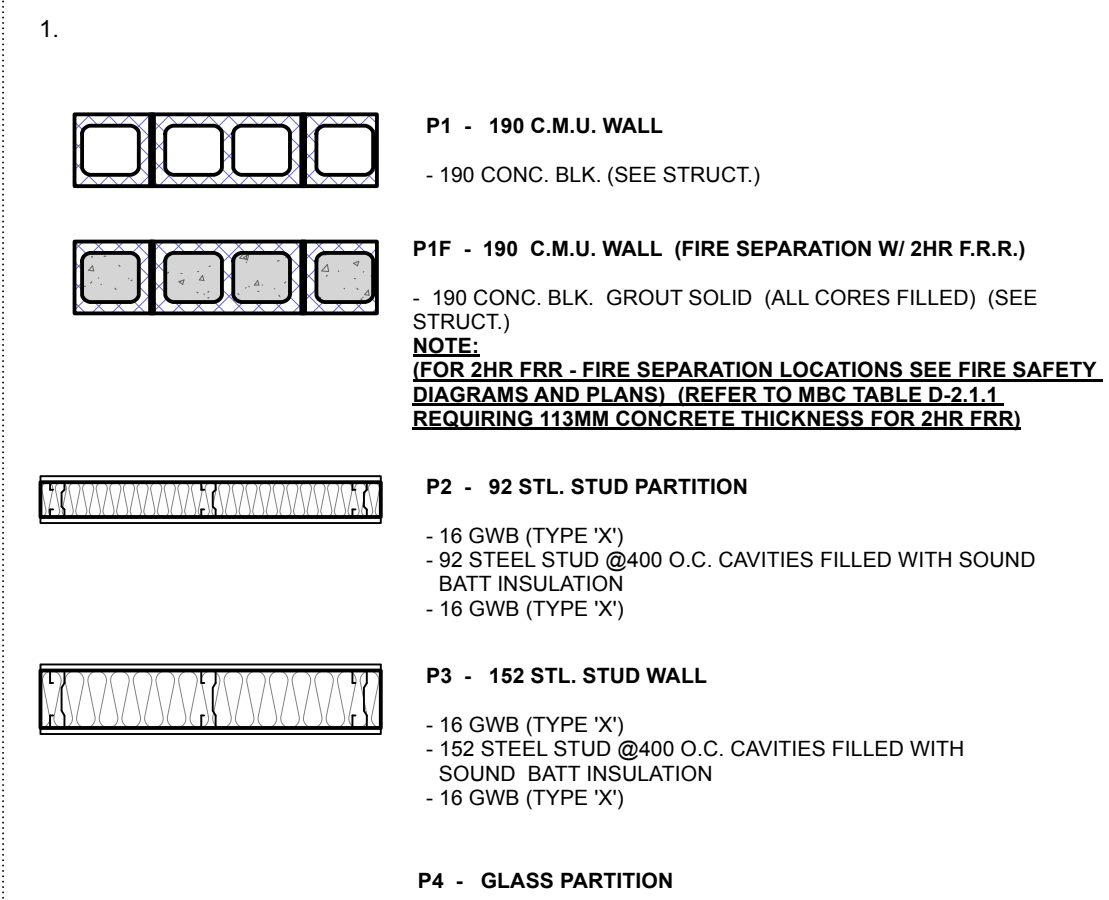
GENERAL NOTES:

1. SEAL AROUND BRICK TIES W/ MASTIC
2. SEAL INSULATION GAPS W/ CLOSED CELL SPRAY FOAM INSULATION
3. SEAL AROUND ALL PENETRATIONS



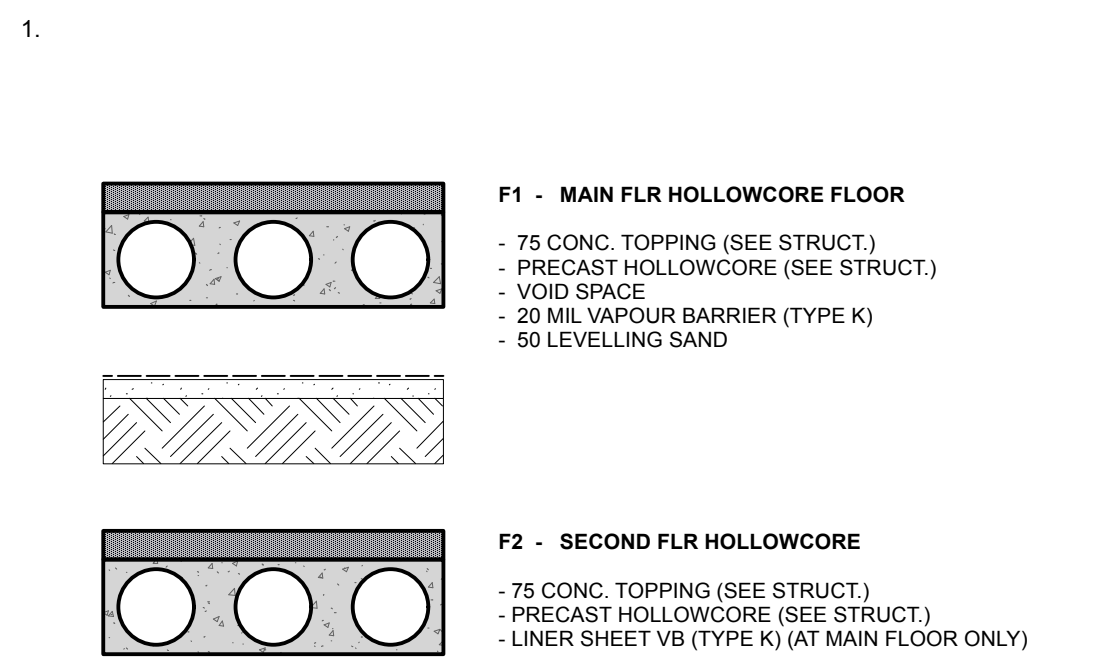
INTERIOR WALL TYPES

GENERAL NOTES:



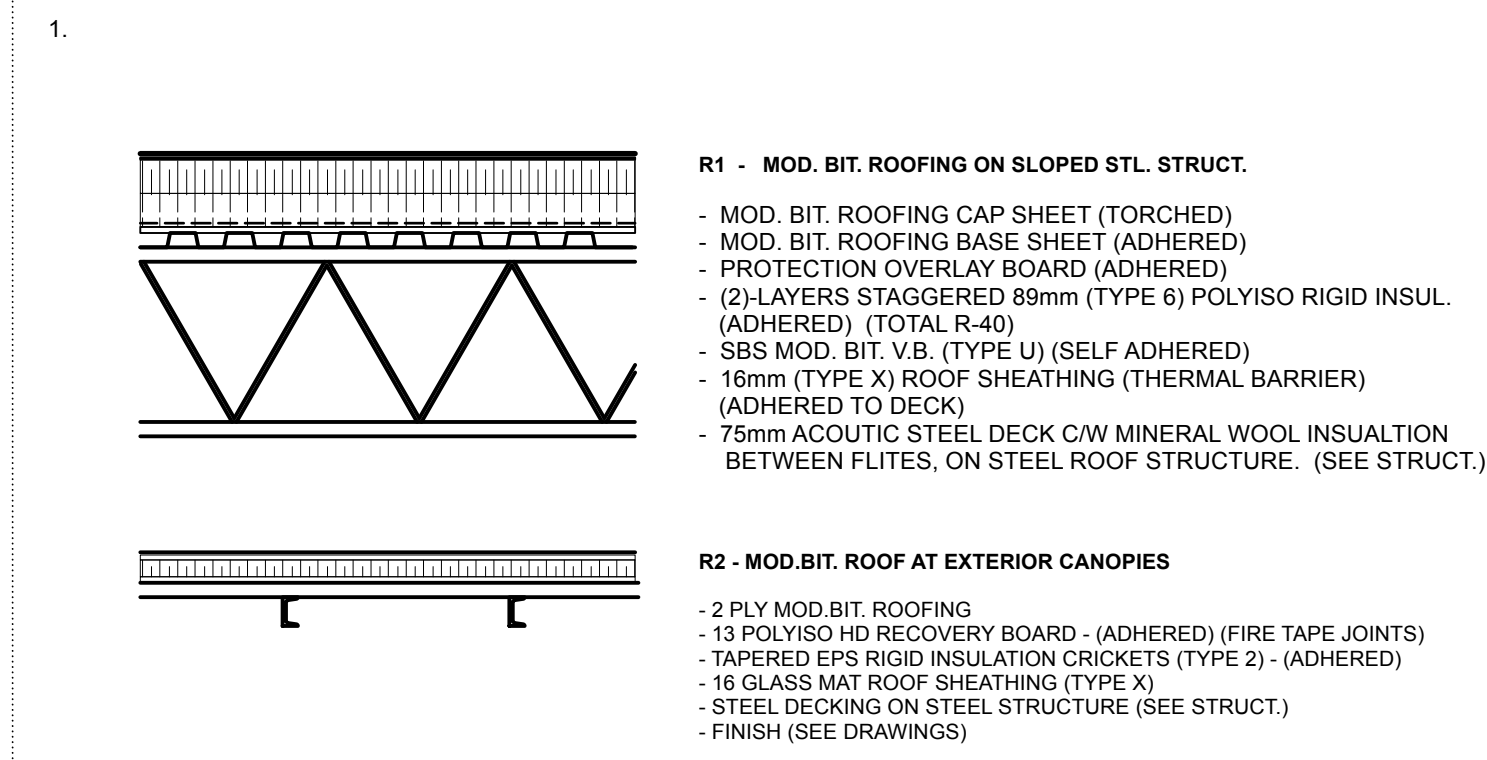
FLOOR TYPES

GENERAL NOTES:

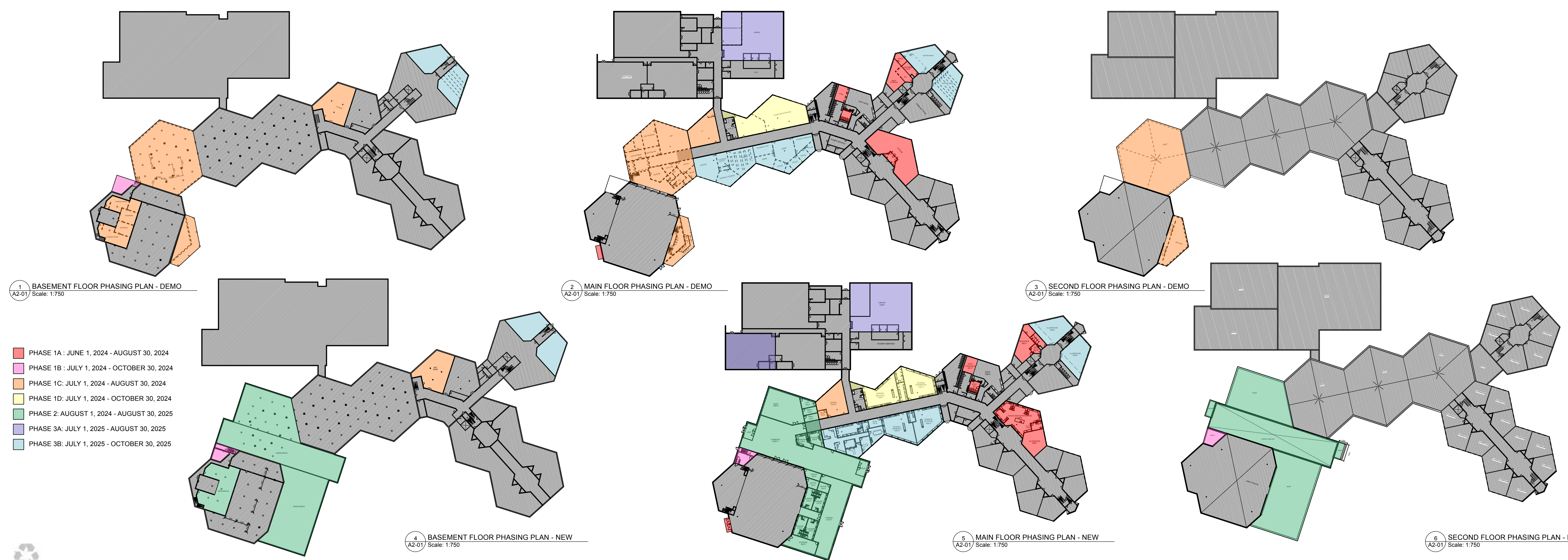


ROOF TYPES

GENERAL NOTES:



PHASING PLAN



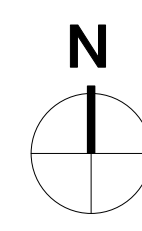
DEMOLITION GENERAL NOTES

- A. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BUILDING ELEMENTS SCHEDULED TO REMAIN.
- B. REPAIR ALL EXISTING CONSTRUCTION DAMAGES BY OVER-EXUBERANT DEMOLITION.
- C. CAREFULLY REMOVE ALL WHITE BOARDS, TACKBOARDS, PROJECTOR SCREENS AND PROJECTORS AND TURN OVER TO OWNER.



1 BASEMENT - DEMO
 A2-01 Scale: 1:250

- DEMOLITION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - EXISTING WALL - TO BE DEMOLISHED
 - EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - EXISTING DOOR - TO REMAIN
 - EXISTING DOOR - TO BE DEMOLISHED



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**DEMOLITION -
 BASEMENT
 FLOOR PLAN**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

**COLLÈGE BÉLIVEAU TRANSITION
 TO COTTONWOOD RD**

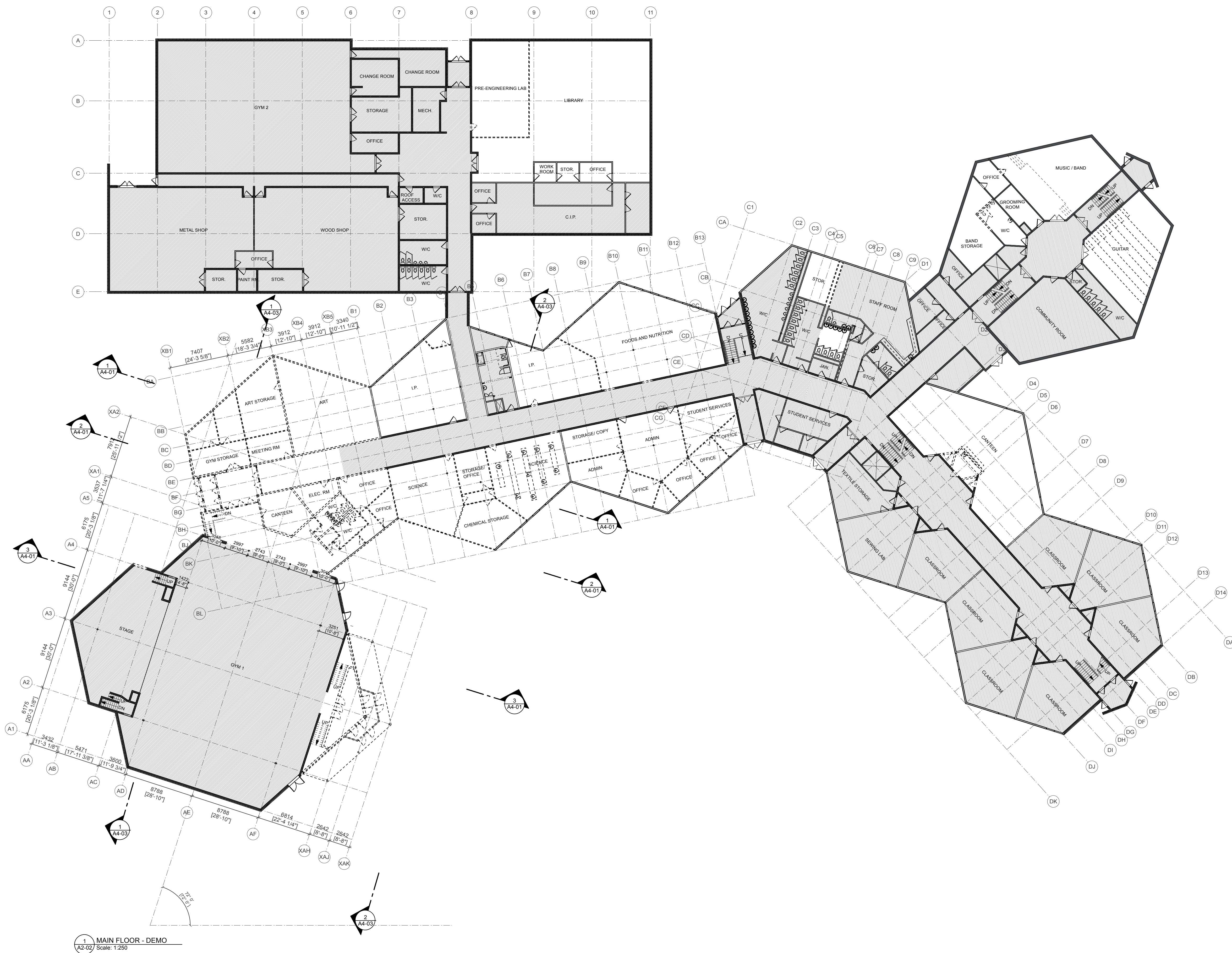
1015 Cottonwood Road, Winnipeg, MB

**A2
 01**

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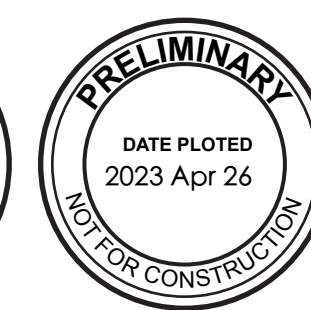
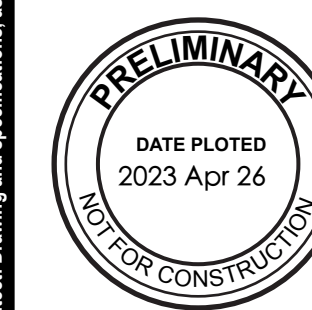


1 MAIN FLOOR - DEMO
 A2-02 Scale: 1:250

issue / rev.

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professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St. Mary's Road
 Winnipeg, MB

drawing information

**DEMOLITION-
 MAIN FLOOR
 PLAN**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

DEMOLITION - LEGEND:

- EXISTING WALL - TO REMAIN
- EXISTING WALL - TO BE DEMOLISHED
- EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
- EXISTING BUILDING - TO REMAIN, N.I.C.
- EXISTING DOOR - TO REMAIN
- EXISTING DOOR - TO BE DEMOLISHED



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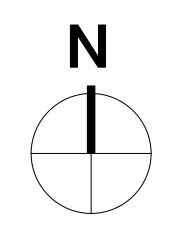
DEMOLITION GENERAL NOTES

- A. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BUILDING ELEMENTS SCHEDULED TO REMAIN.
- B. REPAIR ALL EXISTING CONSTRUCTION DAMAGES BY OVER-EXUBERANT DEMOLITION.
- C. CAREFULLY REMOVE ALL WHITE BOARDS, TACKBOARDS, PROJECTOR SCREENS AND PROJECTORS AND TURN OVER TO OWNER.



1 SECOND FLOOR - DEMO
 A2-03 Scale: 1:250

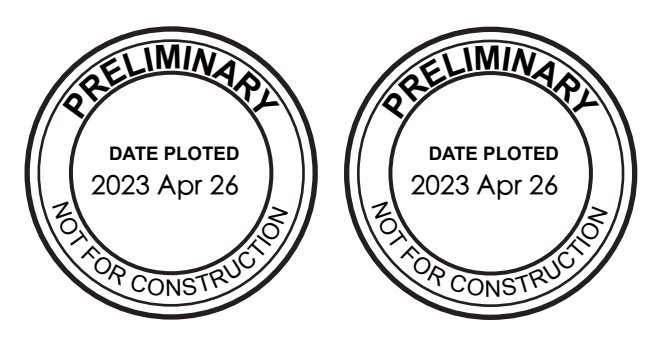
- DEMOLITION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - EXISTING WALL - TO BE DEMOLISHED
 - EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - EXISTING DOOR - TO REMAIN
 - EXISTING DOOR - TO BE DEMOLISHED



issue / rev.

#	date	issue notes
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project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**DEMOLITION -
 SECOND
 FLOOR PLAN**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

COLLÈGE BÉLIVEAU TRANSITION TO COTTONWOOD RD

**A2
 03**

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RENOVATION GENERAL NOTES

- A. NEW PAINT THROUGHOUT EXISTING BUILDING
- B. PATCH AND REPAIR EXISTING BUILDING AS REQUIRED AFTER DEMOLITION

NOTES

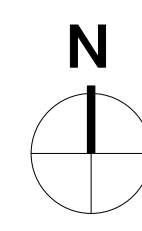
- 1. REPLACE FLOORING



1 BASEMENT - NEW
 A2-04 Scale: 1:250

NEW CONSTRUCTION - LEGEND:

- EXISTING WALL - TO REMAIN
- FIRE WALL
- NEW PARTITION
- NEW EXTERIOR WALL
- EXISTING BUILDING - TO REMAIN, N.I.C.
- NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
- PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
- EXISTING DOOR - TO REMAIN
- NEW DOOR



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

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project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**NEW CON. -
 BASEMENT
 FLOOR PLAN**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

**A2
 04**

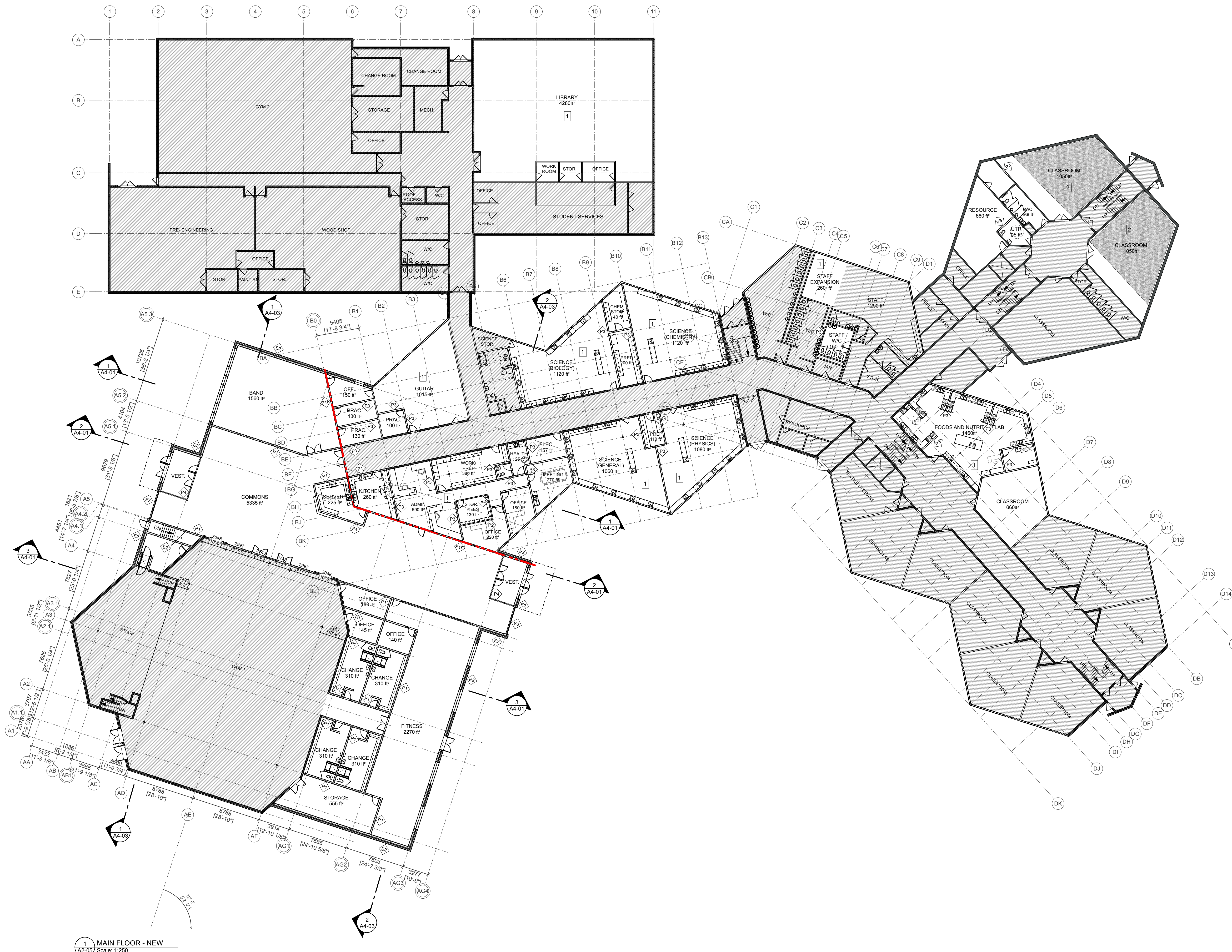
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- A. NEW PAINT THROUGHOUT EXISTING BUILDING
- B. PATCH AND REPAIR EXISTING BUILDING AS REQUIRED AFTER DEMOLITION

NOTES

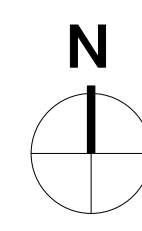
- 1. REPLACE FLOORING THROUGH OUT AREA OF RENOVATION
- 2. NEW BUILT UP FLOORING REFER TO STRUCTURAL. NEW FLOORING THROUGH OUT



1 MAIN FLOOR - NEW
 A2-05 Scale: 1:250

NEW CONSTRUCTION - LEGEND:

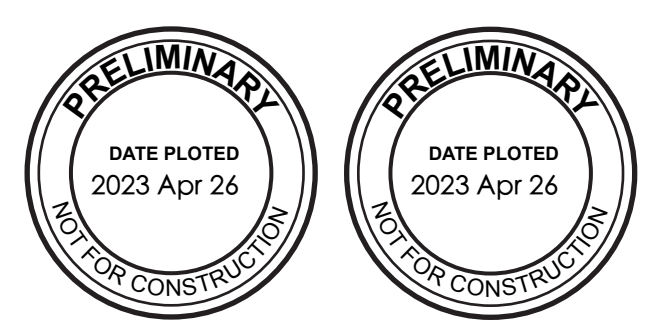
- EXISTING WALL - TO REMAIN
- FIRE WALL
- NEW PARTITION
- NEW EXTERIOR WALL
- EXISTING BUILDING - TO REMAIN, N.I.C.
- NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
- PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
- EXISTING DOOR - TO REMAIN
- NEW DOOR



issue / rev.

1	2023-03-31	ISSUED FOR CLASS D PRICING
#	date	issue notes

professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
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1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**NEW CON. -
 MAIN FLOOR
 PLAN**

drawn by: CR
 approved by: LO

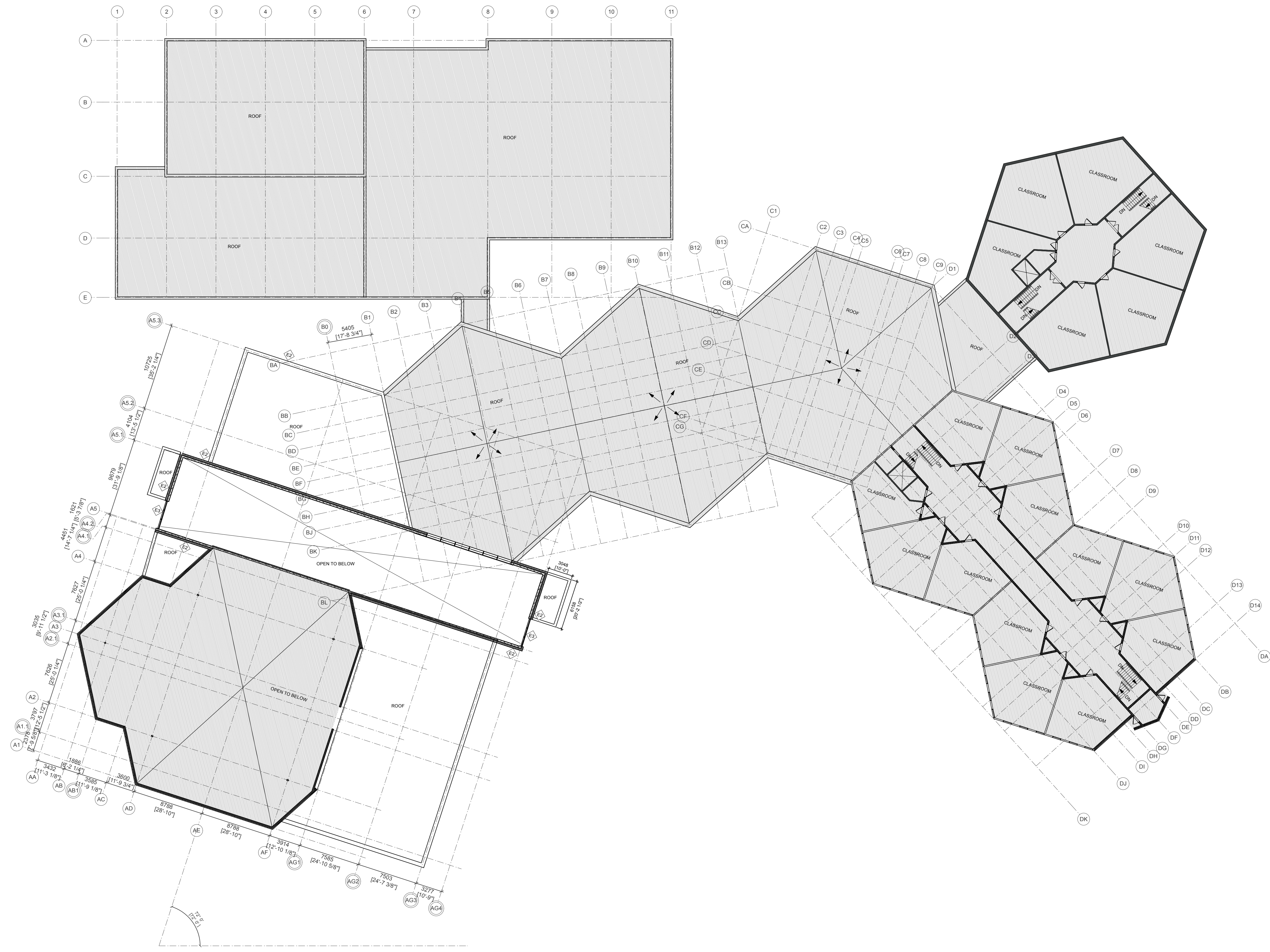
scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

COLLÈGE BÉLIVEAU TRANSITION TO COTTONWOOD RD

**A2
 05**

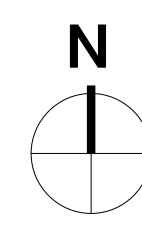
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RENOVATION GENERAL NOTES
 A. NEW PAINT THROUGHOUT EXISTING BUILDING
 B. PATCH AND REPAIR EXISTING BUILDING AS REQUIRED AFTER DEMOLITION



1 SECOND FLOOR - NEW
 A2-06 Scale: 1:250

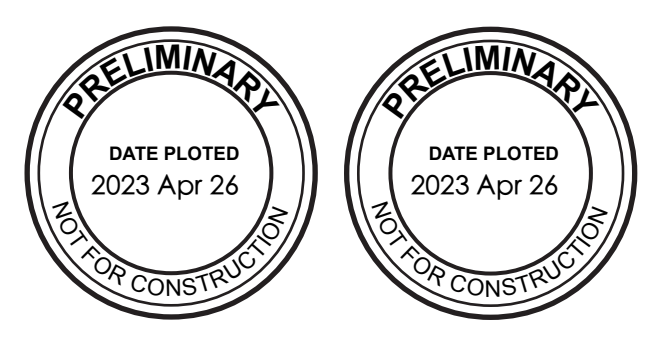
- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**
 1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**NEW CON. -
 SECOND
 FLOOR PLAN**
 drawn by: CR
 approved by: LO
 scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

COLLÈGE BÉLIVEAU TRANSITION TO COTTONWOOD RD
 1015 Cottonwood Road, Winnipeg, MB

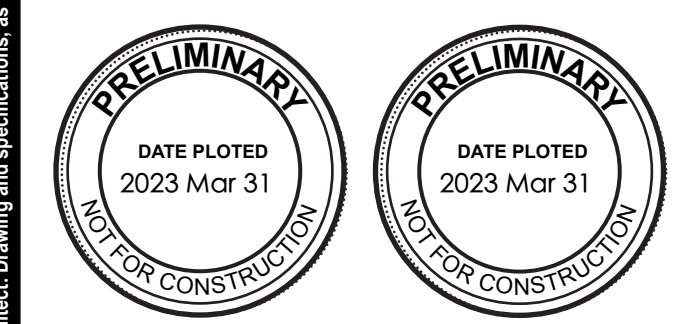
**A2
 06**

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drawing information

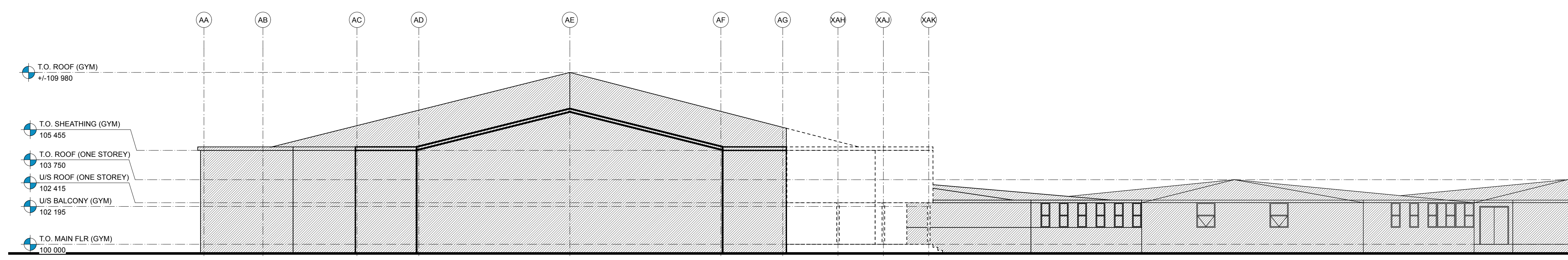
**EXT. BUILDING
ELEVATIONS
-DEMO/ NEW**

drawn by: CR
 approved by: LO

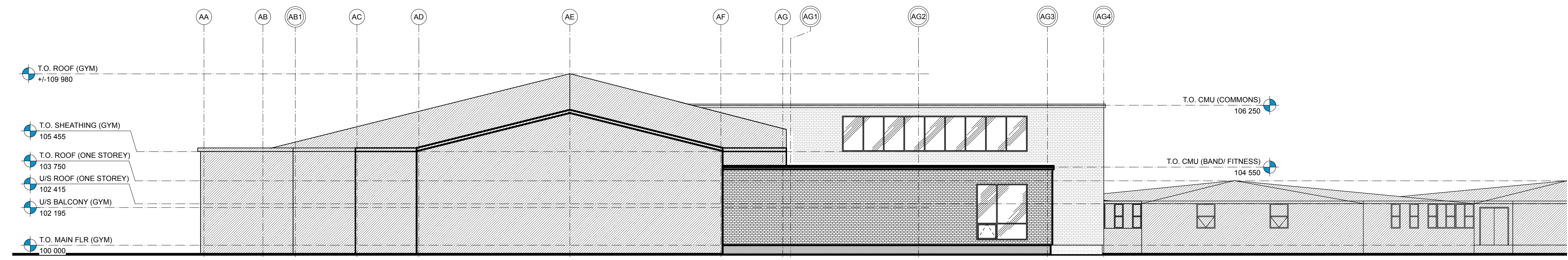
scale: AS NOTED
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 rev. #:

**A3
01**

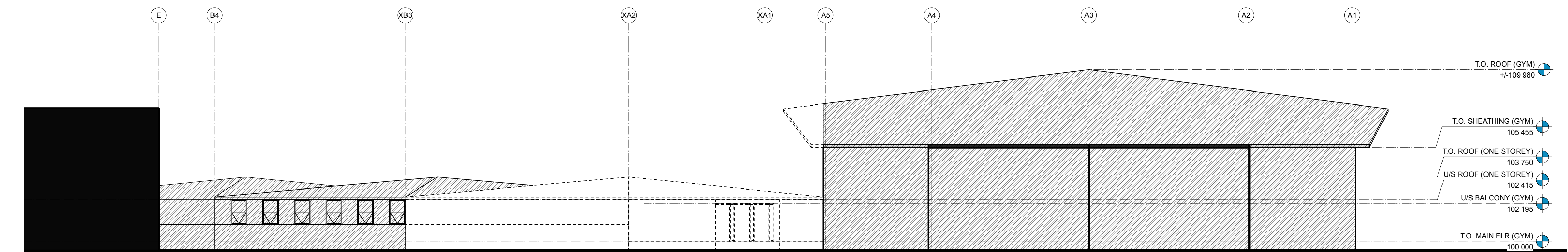
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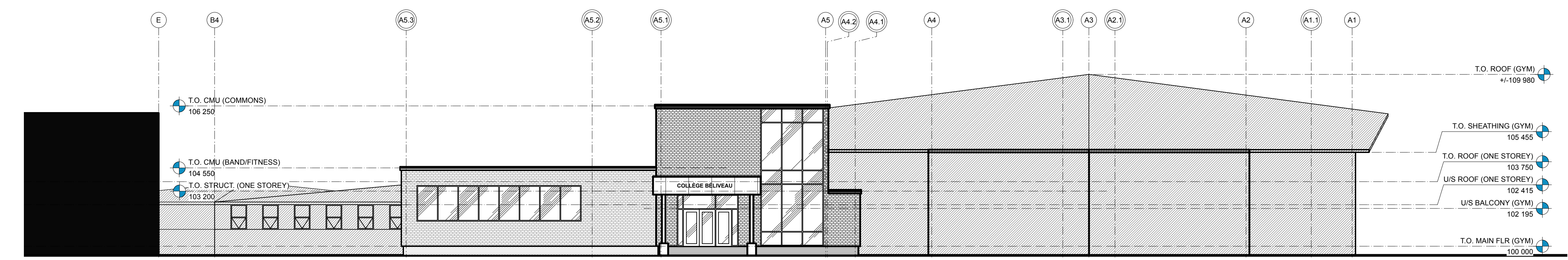
1 SOUTH ELEVATION - DEMO
 A3-01 Scale: 1:150



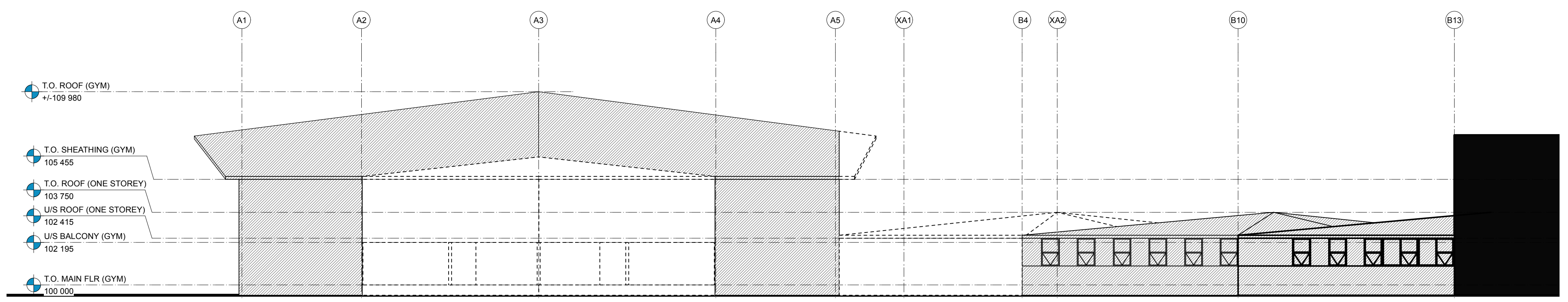
2 SOUTH ELEVATION - NEW
 A3-01 Scale: 1:150



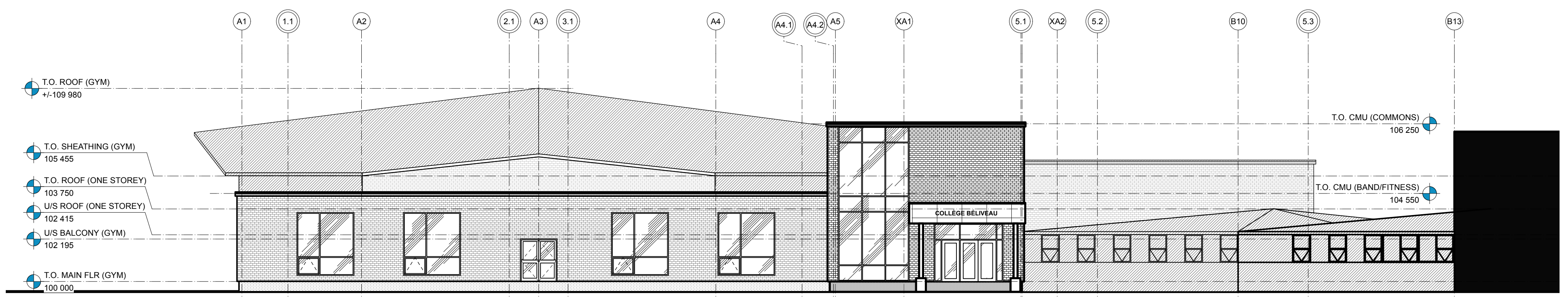
3 WEST ELEVATION - DEMO
 A3-01 Scale: 1:150



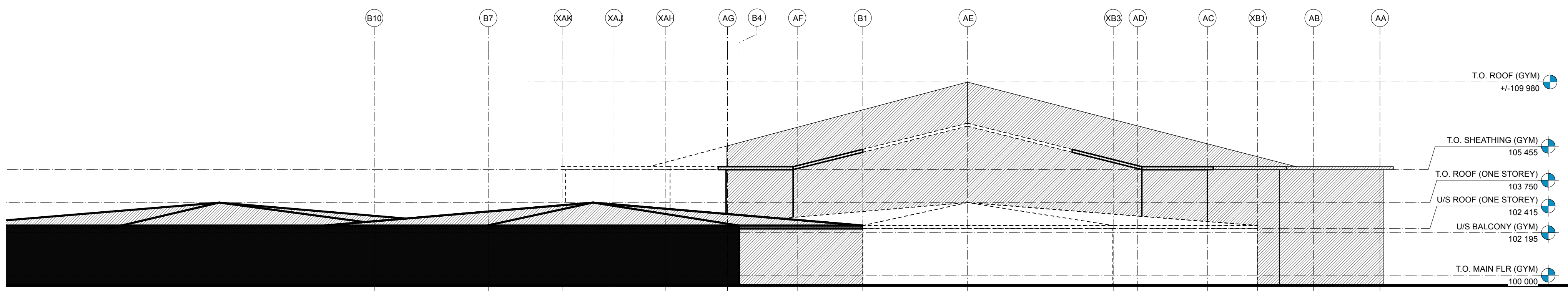
4 WEST ELEVATION - NEW
 A3-01 Scale: 1:150



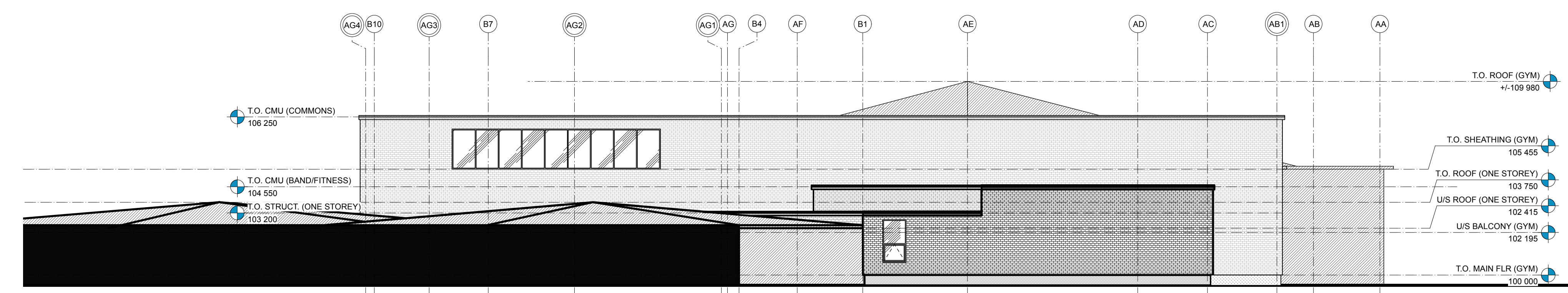
1 EAST ELEVATION - DEMO
 A3-02 Scale: 1:150



2 EAST ELEVATION - NEW
 A3-02 Scale: 1:150



3 NORTH ELEVATION - DEMO
 A3-02 Scale: 1:150

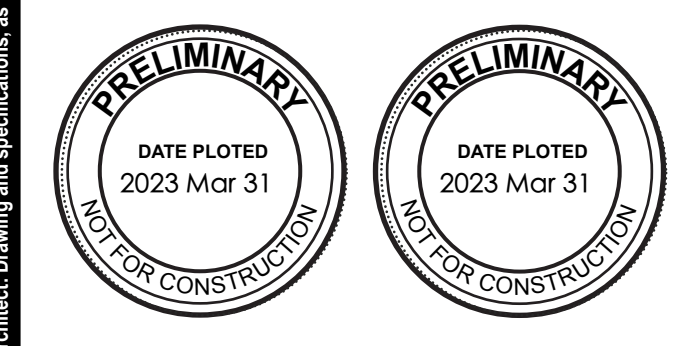


4 NORTH ELEVATION - NEW
 A3-02 Scale: 1:150

issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals

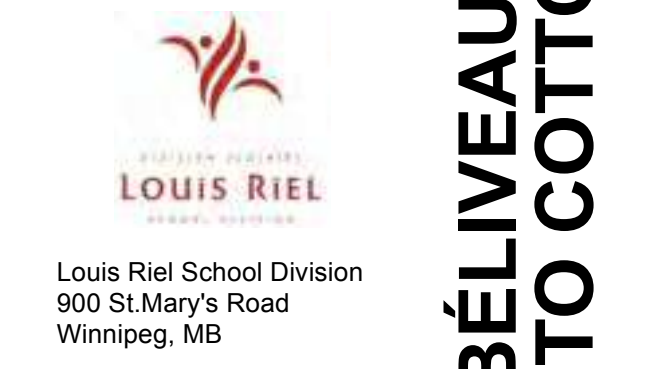


project information

**COLLEGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD.**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**EXT. BUILDING
 ELEVATIONS
 -DEMO/ NEW**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued:
 proj. #: 2022.52
 rev. #:

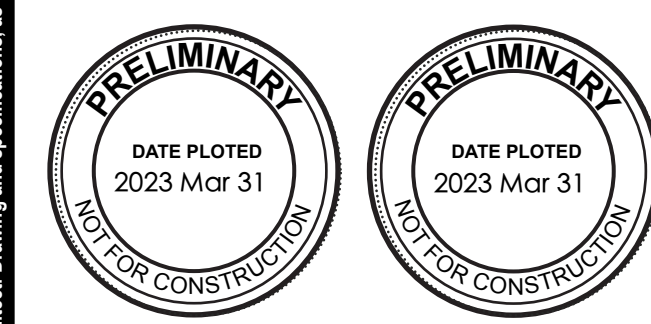
**A3
 02**

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issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**COLLÈGE BÉLIVEAU
TRANSITION TO
COTTONWOOD RD**

1015 Cottonwood Road
Winnipeg, MB
Canada

client



drawing information

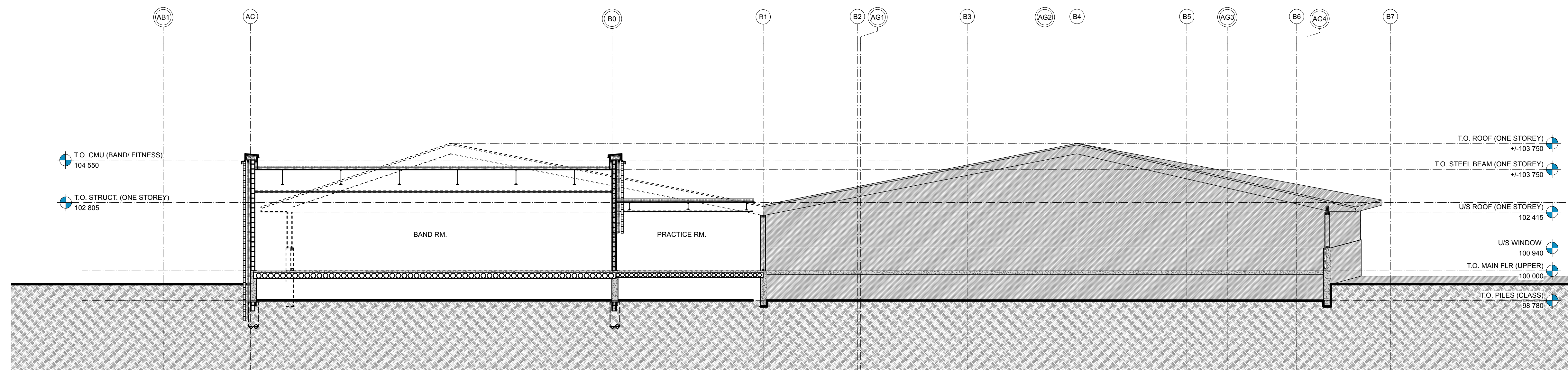
**E-W BUILDING
SECTIONS
-DEMO/ NEW**

drawn by: CR
 approved by: LO

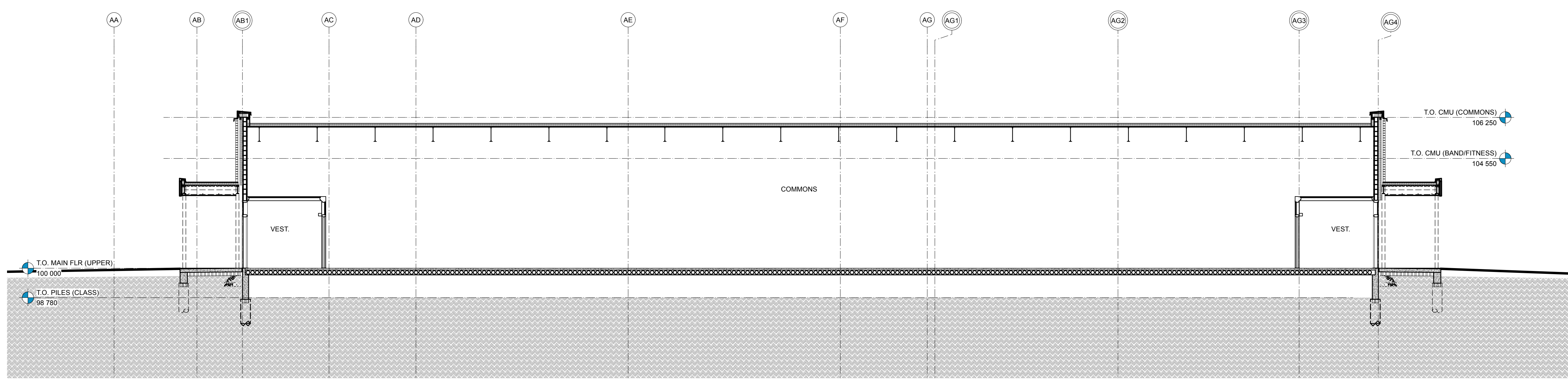
scale: AS NOTED
 date issued: 2023.03.31
 proj. #: 2022.52
 rev. #:

**A4
01**

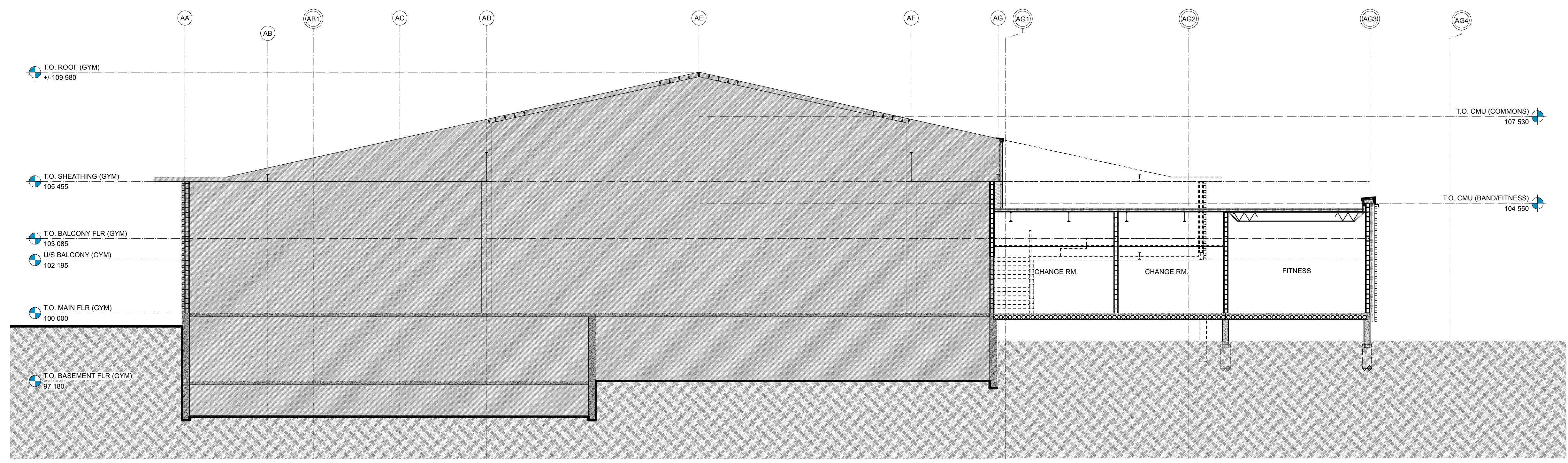
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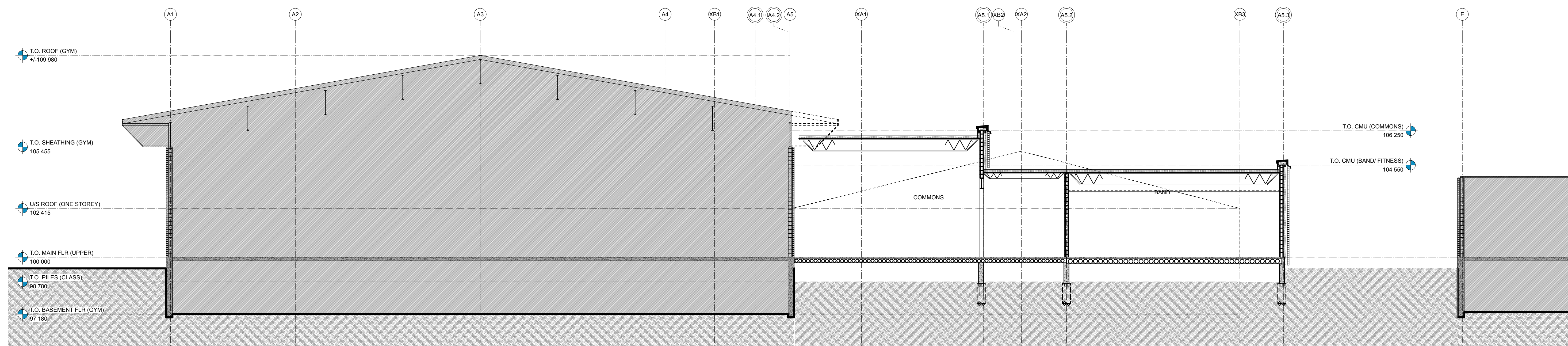
1 E-W SECTION BAND ROOM
 Scale: 1:100



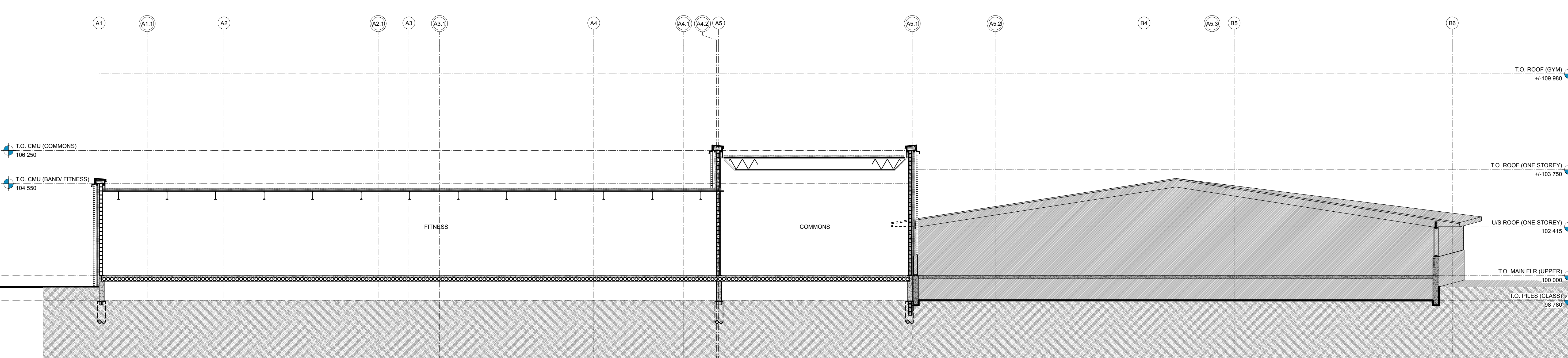
2 E-W SECTION COMMONS
 Scale: 1:100



3 E-W SECTION FITNESS
 Scale: 1:100



1 N-S SECTION COMMONS/BAND ROOM
 A4-03 Scale: 1:100

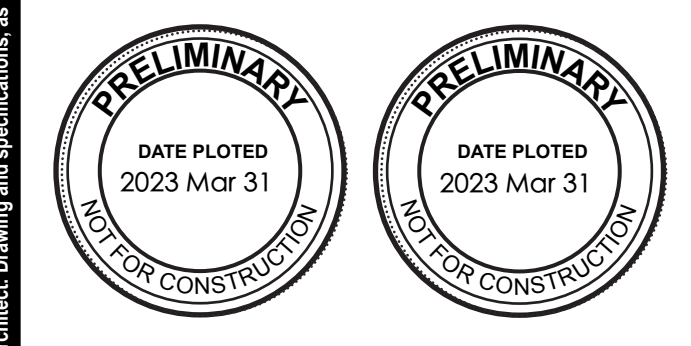


2 N-S SECTION FITNESS/ COMMONS
 A4-03 Scale: 1:100

issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION TO
 COTTONWOOD RD**
 1015 Cottonwood Road
 Winnipeg, MB
 Canada

client

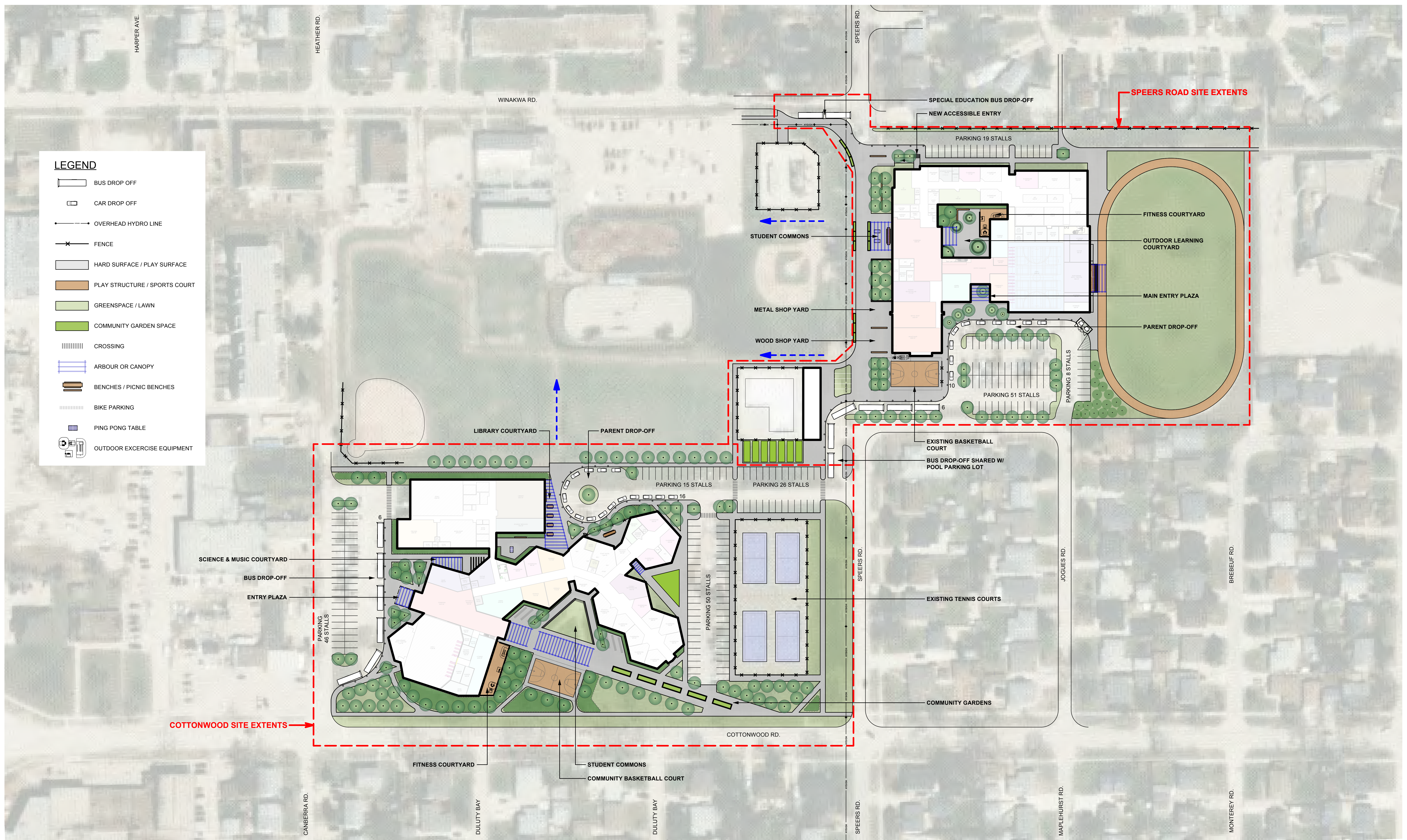


drawing information

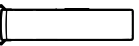

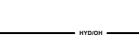
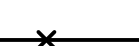









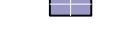
**N-S BUILDING
 SECTIONS
 -DEMO/ NEW**
 drawn by: CR
 approved by: LO
 scale: AS NOTED
 date issued:
 proj. #: 2022.52
 rev. #:

**A4
 03**

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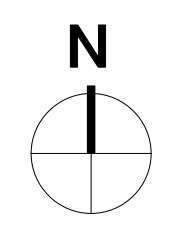
LEGEND

-  BUS DROP OFF
-  CAR DROP OFF
-  OVERHEAD HYDRO LINE
-  FENCE
-  HARD SURFACE / PLAY SURFACE
-  PLAY STRUCTURE / SPORTS COURT
-  GREENSPACE / LAWN
-  COMMUNITY GARDEN SPACE
-  CROSSING
-  ARBOUR OR CANOPY
-  BENCHES / PICNIC BENCHES
-  BIKE PARKING
-  PING PONG TABLE
-  OUTDOOR EXERCISE EQUIPMENT



1 BASEMENT - NEW
 A2-04 Scale: 1:250

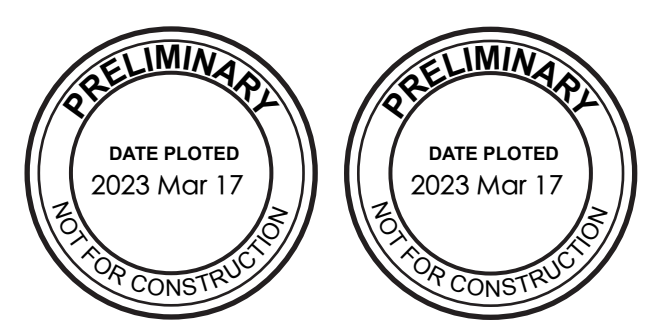
- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR



issue / rev.

#	date	issue notes

professional seals



project information

**COLLÈGE BÉLIVEAU
 TRANSITION
 TO COTTONWOOD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**BASEMENT FLOOR
 PLAN - NEW**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued:
 proj. #: 2022.52
 rev. #:

**COLLÈGE BÉLIVEAU
 TRANSITION TO COTTONWOOD**
 1015 Cottonwood Road, Winnipeg, MB

**A2
 04**

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STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21
COLLEGE BELIVEAU TRANSITION TO COTTONWOOD
Wolfram Job # W22433

A.GENERAL COSTING DISCUSSION

Refer to architectural for proposed demolition plans and project phasing and sequencing of existing Windsor park Collegiate renovations and addition for transitioning to new College Beliveau location.

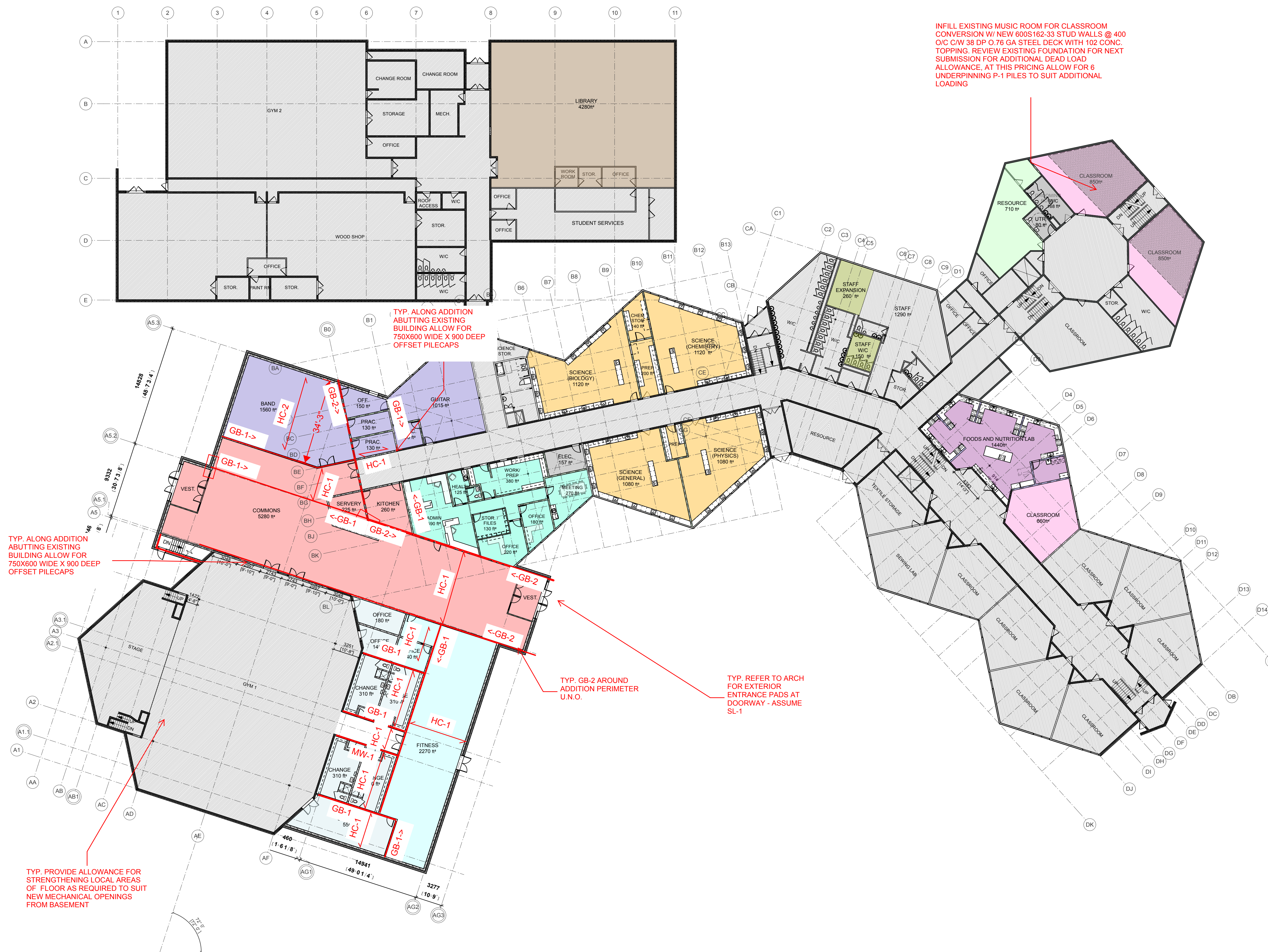
1.0 FOUNDATION & MAIN FLOOR FRAMING

DESIGN LOADS:

LIVE: 4.8 kPa TYP. THROUGHOUT EXCEPT
2.4 kPa @ CLASSROOMS AND WASHROOMS
SUPERIMPOSED DEAD: 1.0 kPa

- 1 Assumed 16" x 40' long (P-1) diameter cast in place, to be further developed upon receipt of geotechnical report. Approximate 8' spacing along perimeter, bearing walls and masonry fire walls. Assumed 16" x 25' long (P-2) diameter cast in place for support of any exterior shade canopies, approximately 20' spacing, to be further developed upon receipt of geotechnical report. Typ. r/w 5-15M full length of pile, with 10M rings @ 18" o/c
- 2 Assume 20" diameter x 40' long (P-3) cast in place piles when supporting full two storey load bearing masonry walls at approximate 6' spacing. r/w 7-15M full length of pile, with 10M rings @ 18" o/c, to be further developed upon receipt of geotechnical report.
- 3 Crawlspace floor assumed 5" cast in place concrete slab on grade over compacted granular, r/w 15M at 400/c each way mid.
- 4 SL-1: 152 dp broom finished C-1 exposure class cast in place concrete structural slab exterior entrance pads w/ 300x300 thickened edge around perimeter on P-2 as noted above. Allow for gavl. L 152x152x9.5 ledger angle along building faces, c/w 1102x102x7.9 back to back vertical spacer angles full depth of insulation. Slab reinforcing tbd.
- 5 HC-1: 200 dp precast hollowcore planks over crawlspace c/w 76 concrete topping. Provide 100 bearing keyway at gradebeam each end for all hollowcore.
- 6 Perimeter gradebeam assumed 250x1200 dp r/ 2-25m top and bottom w/ 10m stirrups at 300 o/c with additional 2-15m each face on 150 voidform.
- 7 Interior crawlspace gradebeams drawn in red to extend 600 below underside of hollowcore, and extend up to main floor adjacent structure. provide min. 2-25m top and bottom w/ 10m stirrups @ 300 o/c, with similar pile spacing as noted above.

INFILL EXISTING MUSIC ROOM FOR CLASSROOM
CONVERSION W/ NEW 600S162-33 STUD WALLS @ 400
O/C C/W 38 DP 0.76 GA STEEL DECK WITH 102 CONC.
TOPPING. REVIEW EXISTING FOUNDATION FOR NEXT
SUBMISSION FOR ADDITIONAL DEAD LOAD
ALLOWANCE. AT THIS PRICING ALLOW FOR 6
UNDERPINNING P-1 PILES TO SUIT ADDITIONAL
LOADING



TYP. ALONG ADDITION
ABUTTING EXISTING
BUILDING ALLOW FOR
750X600 WIDE X 900 DEEP
OFFSET PILECAPS

TYP. ALONG ADDITION
ABUTTING EXISTING
BUILDING ALLOW FOR
750X600 WIDE X 900 DEEP
OFFSET PILECAPS

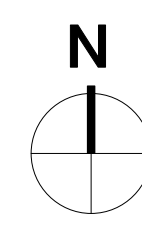
TYP. GB-2 AROUND
ADDITION PERIMETER
U.N.O.

TYP. REFER TO ARCH
FOR EXTERIOR
ENTRANCE PADS AT
DOORWAY - ASSUME
SL-1

TYP. PROVIDE ALLOWANCE FOR
STRENGTHENING LOCAL AREAS
OF FLOOR AS REQUIRED TO SUIT
NEW MECHANICAL OPENINGS
FROM BASEMENT

1 PROPOSED MAIN FLOOR & FOUNDATION FRAMING
A2-05/ Scale: 1:250

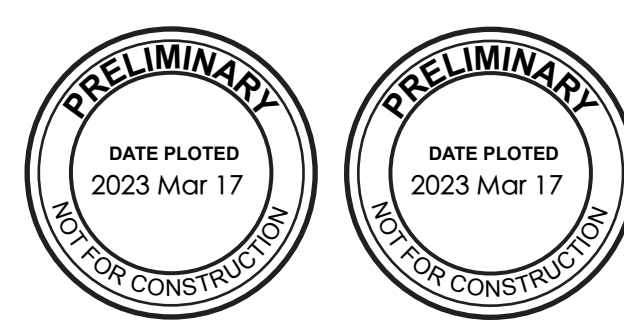
- FIRE WALL
- NEW PARTITION
- NEW EXTERIOR WALL
- EXISTING BUILDING - TO REMAIN, N.I.C.
- NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
- PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
- EXISTING DOOR - TO REMAIN
- NEW DOOR



issue / rev.

#	date	issue notes

professional seals



project information

COLLEGE BELIVEAU
TRANSITION TO COTTONWOOD

1015 Cottonwood Road
Winnipeg, MB
Canada

client



Louis Riel School Division
900 St. Mary's Road
Winnipeg, MB

drawing information

MAIN FLOOR
PLAN - NEW

drawn by: CR
approved by: LO

scale: AS NOTED
date issued:
proj. #: 2022.52
rev. #:

A2
05

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STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21

COLLEGE BELIVEAU TRANSITION TO COTTONWOOD

Wolf from Job # W22433

2.0 SECOND FLOOR AND LOW ROOF FRAMING

DESIGN LOADS:

LIVE: 4.8 kPa TYP. AT STAIRS AND CORRIDOR
2.4 kPa @ CLASSROOMS AND WASHROOMS
SUPERIMPOSED DEAD: 1.0 kPa
ROOF SNOW: 2.15 kPa + ACCUMULATION LOADING TO SUIT, APPROX. 7.2 kPa OVER 6M ASSUMED
HIGH IMPORTANCE FACTOR FOR CLIMATIC LOADING

1. COLUMN SCHEDULE

C-1: HSS152X152X9.5

2. GIRT SCHEDULE

G-1: C200X17 GIRT HORIZONTAL C/W 5/8" HANGER RODS
ALIGNED AT MULLIONS TBD

3. STEEL BEAM SCHEDULE

SB-1: W33X108
SB-2: W21X44
SB-3: W8X24
SB-4: W12X35

4. HOLLOWCORE SCHEDULE

HC-1: SEE PREVIOUS SHEET
HC-2: 254 DP PRECAST HOLLOWCORE W/ 76 TOPPING

5. JOIST SCHEDULE

J-1: 400 DP OWSJ @ 2400 O/C
J-2: 300 DP OWAJ @ 2400 O/C
J-3: 600 DP OSWJ @ 2400 O/C

6 TYP AT ALL NEW LOW ROOF JOISTS. PROVIDE 76 DEEP
0.91 GA STEEL DECK C/W PERIMETER L102X102X6.4
ANGLE, FASTENING TBD AT ADJACENT MASONRY WALLS

7. MASONRY WALL SCHEDULE

TYP. TWO COURSE BOND BEAM AT U/S EACH FLOOR AND
ROOF R/W 2-15M HORIZONTAL.
TYP. PROVIDE MATCHING DOWELS MIN 450 INTO CONC.
MEMBER BELOW ALL VERT. REINFORCING.
TYP. FILL SOLID ALL REINFORCED CORES W/ 15 MPa
GROUT, EXCEPT AT NON LOAD BEARING WALLS

MW-1: 190 H/15/A/M R/W 15M @ 400 O/C. SOLID FILL ALL
CORES WHEN FIREWALL

MW-2: 240 H/30/A/M R/W 20M @ 400 O/C INTO SOLID
GROUTED CORE

8. MASONRY COLUMN SCHEDULE

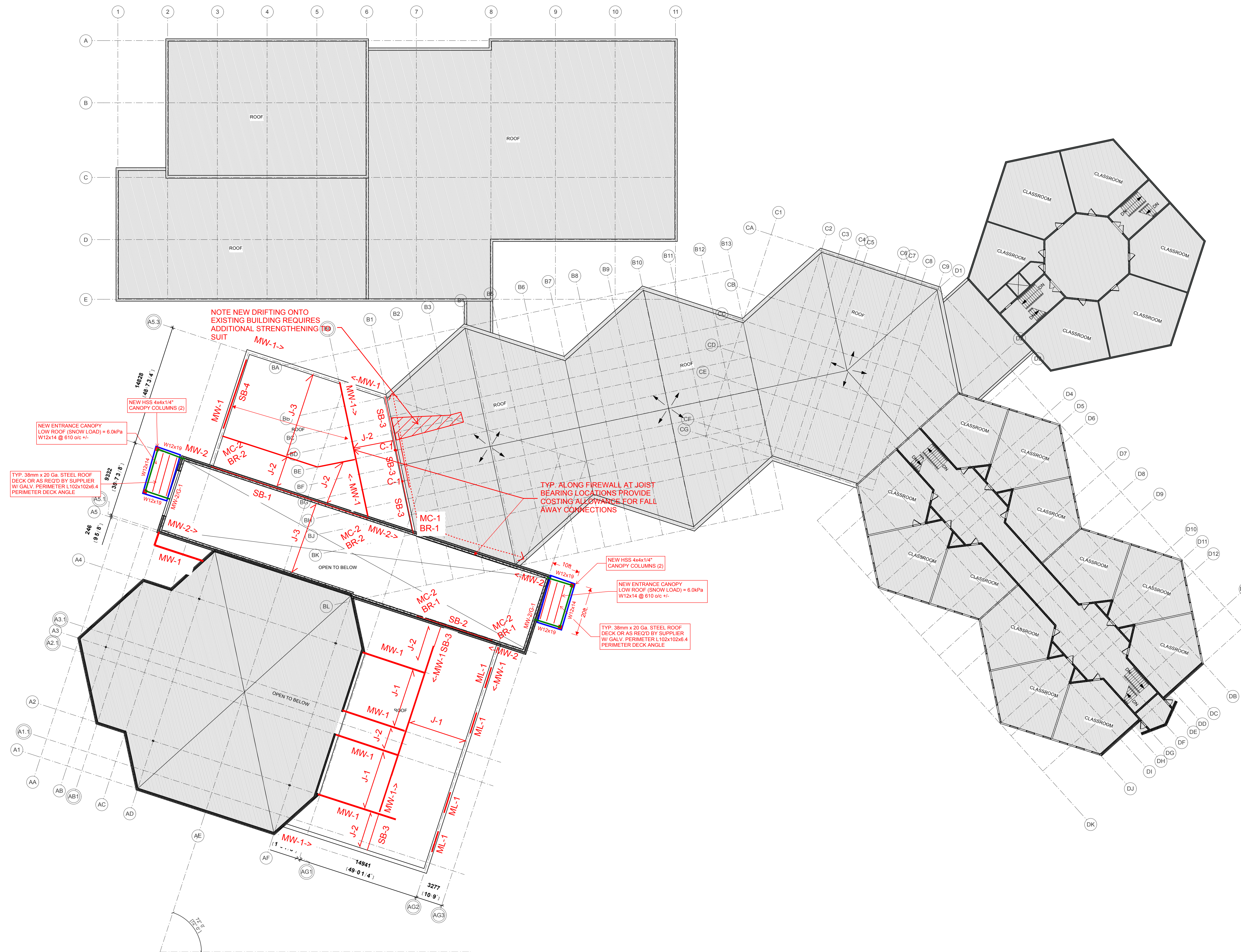
TYP. PROVIDE MC-1 ALL CORNERS C/W MATCHING
DOWELS. MATCH BLOCK AS PER ADJACENT WALL

MC-1: 190X400 R/W 2-15M WHEN SINGLE STOREY, 2-20M
WHEN TWO STOREYS

MC-2: 240X1000 W/ 5-20M VERT 1 PER CORE

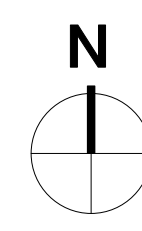
8. MASONRY LINTEL SCHEDULE

ML-1: 4 COURSE MASONRY LINTEL
R/W 2-15M BOTTOM, 1-15M TOP
SINGLE LEG STIRRUPS @ 200 O/C
W/ MC-1 EACH END



1 PROPOSED SECOND FLOOR/ LOW ROOF FRAMING
A2-06 Scale: 1:250

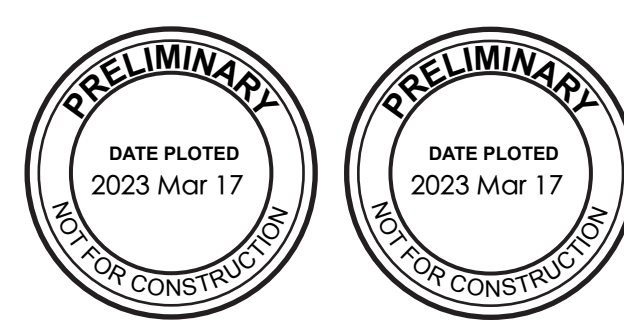
- EXISTING BUILDING - TO REMAIN, N.I.G.
- NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
- PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
- EXISTING DOOR - TO REMAIN
- NEW DOOR



issue / rev.

#	date	issue notes

professional seals



project information

COLLEGE BELIVEAU
TRANSITION
TO COTTONWOOD

1015 Cottonwood Road
Winnipeg, MB
Canada

client



drawing information

SECOND FLOOR
PLAN - NEW

drawn by: CR
approved by: LO

scale: AS NOTED
date issued:
proj. #: 2022.52
rev. #:

COLLEGE BELIVEAU
TRANSITION TO COTTONWOOD
1015 Cottonwood Road, Winnipeg, MB

A2
01

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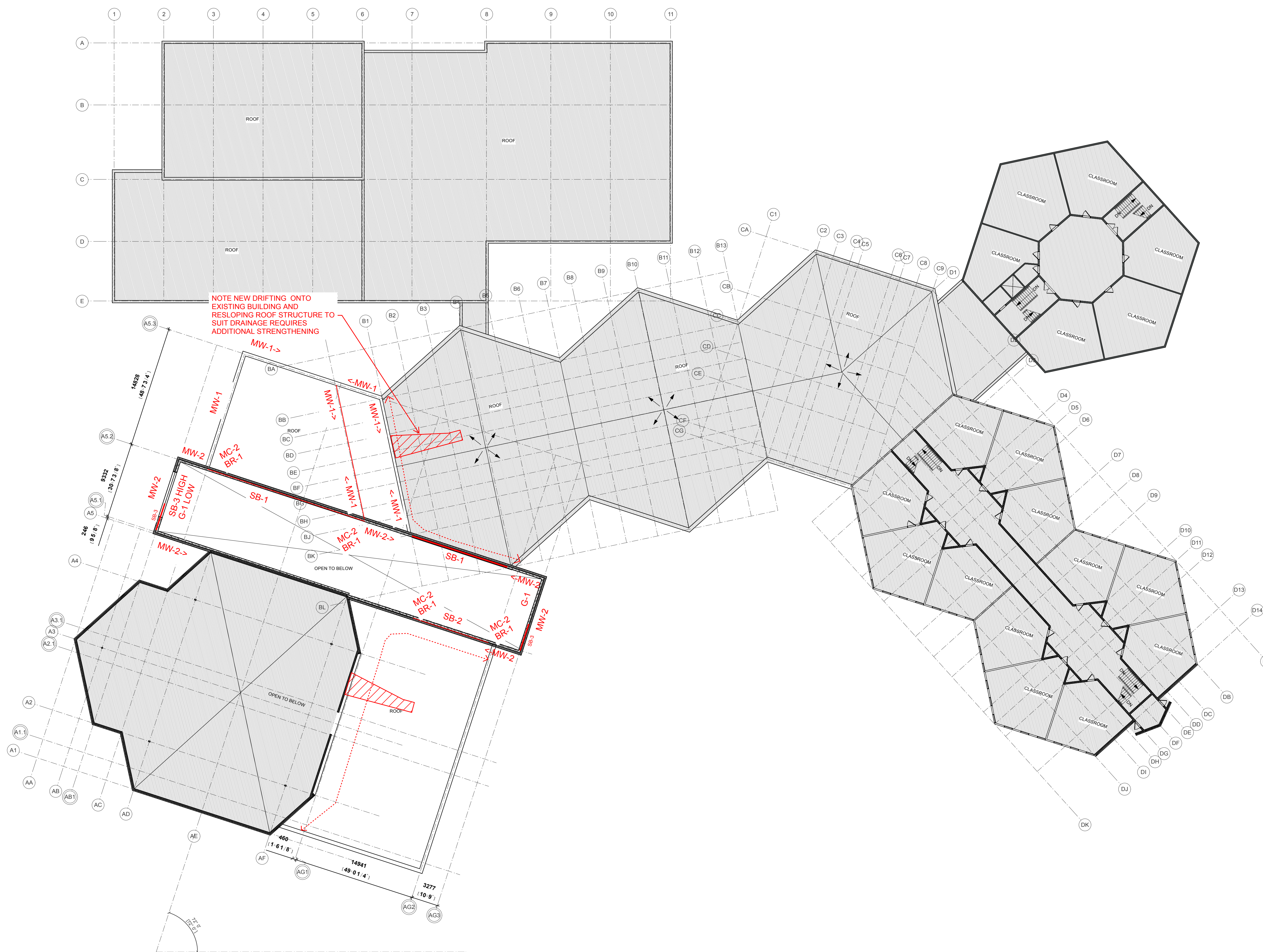
STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21
 COLLEGE BELIVEAU TRANSITION TO COTTONWOOD
 Wolfrom Job # W22433

3.0 UPPER ROOF FRAMING

DESIGN LOADS:

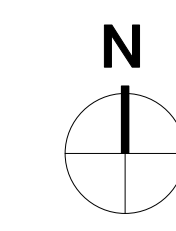
ROOF SNOW: 2.15 kPa
 HIGH IMPORTANCE FACTOR FOR CLIMATIC LOADING
 UPLIFT 0.7 kPa TYP., DETAILED UPLIFT DIAGRAM FOR
 NEXT SUBMISSION

.1 REFER TO PREVIOUS PAGE FOR STRUCTURAL
 MEMBER SCHEDULES



1 PROPOSED UPPER ROOF FRAMING
 A2-06 Scale: 1:250

- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR



issue / rev.

#	date	issue notes

professional seals



project information

**COLLEGE BÉLIVEAU
 TRANSITION
 TO COTTONWOOD**

1015 Cottonwood Road
 Winnipeg, MB
 Canada

client



drawing information

**SECOND FLOOR
 PLAN - NEW**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued:
 proj. #: 2022.52
 rev. #:

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Collège Béliveau transition to 1015 Cottonwood Road Winnipeg, Manitoba

PRELIMINARY OUTLINE SPECIFICATIONS

Date: **March 31, 2023**

Issued for: **Class D Pricing**

ARCHITECTURAL OUTLINE SPECIFICATION

The proposed base building architectural and engineering systems are summarized for the above project, which is intended to be occupied over a number of phases, commencing in June 2024. The objectives for this new school are:

- Make effective use of resources available and embody the principles of durable building construction to current Codes and to Government of Manitoba standards
- Be sustainable through effective and responsible use of materials and building systems
- Contribute to the long term well-being of the building occupants
- Achieve a minimum LEED V4 Silver rating
- Meet all related green building/sustainability practices outlined in the Province of Manitoba's Green Building Policy for Government of Manitoba Funded Projects (V2 December 2013)

In case of discrepancies between this document and the drawings, consult the Architect or assume the most costly option.

1.1 GENERAL DATA:

1.1.1. **LOCATION:** 1015 Cottonwood Road, Winnipeg, Manitoba

1.1.2. FLOOR AREAS:

Floor Level:	Occupancy type:	Gross floor area EXISTING:	Gross floor area NEW:
Basement:	Service, Storage, Classroom	14, 940 sq.ft./ 1,388 m ²	0 sq.ft./ 0 m ²
Ground floor:	Classrooms, Admin, Library, IP, Support, Gym, Stage, Shops, Fitness	63,930 sq.ft./5,939 m ²	13,225 sq.ft./1,228 m ²
Second floor	Classrooms, Support	16,323 sq.ft./1,603 m ²	0 sq.ft./0 m ²
Total		95,193 sq.ft./8,844 m²	13,225 sq.ft./1,228 m²

1.1.3. PHASING OF CONSTRUCTION:

Assume construction in the following phases:

Phase 1A: June 1, 2024 to Aug. 30, 2024

- New doors in south wall of existing Gym
- New exit stair from basement
- Demolition of basement change rooms
- Renovation of existing Canteen area into Foods / Nutrition.

Phase 1B: July 1, 2024 to Aug. 30, 2024

- Demolition of existing portion of building between existing Gym 1 (Gridline A5) and existing IP / Science (Gridline B1)
- Demolition of existing pre-engineering space in library.
- Demolition of viewing platform and vestibule in Gym 1
- Renovation of existing Fitness to Art
- Renovation of existing Guitar rooms into General Classrooms (infill tiered flooring)
- Renovation of portion of existing washroom to expand Staff Room. (And all other renovations associated with Staff Room)
- Renovation of Band Storage to Resource
- Renovation of Grooming Room and Washroom to UTR and Gender Neutral Washroom
- Renovation of existing Science Rooms to Administration
- Renovation of existing Administration to Science Rooms
- Renovation of existing Foods / Nutrition and IP to Science Rooms
- Renovation of existing IP space to Guitar Room

Phase 2: Jul. 1, 2024 – Jul. 30, 2025

- New construction addition

1.1.4. LAND AREA: 7 acres

Zoning: R1-M

1.1.4. BREAKDOWN OF SPACE:

Refer to attached Space Program.

1.1.5 ON-SITE PARKING: refer to HTFC Planning and Design Site Plan.

1.1.6 BUILDING CODE SUMMARY: (based on Part 3, 2020 NBC)

.1 **New School Addition with Existing Gym 1 (separated from existing, non-conforming school with firewall)** (building area = 2,037 sm, 2 storeys, facing 2 streets)

3.2.2.26 Group A, Division 2, up to 2 storeys, Increased Area, Sprinklered:

- 1) a) the building is sprinklered throughout,
- 1) b) it is not more than 2 storeys in building height, and
- 1) c) it has a building area not more than 2,400sm
- 2) Combustible or Non-combustible construction, and
 - 2) a) floor assemblies shall be fire separations with a fire-resistance rating 45 min.
 - 2) b) mezzanines shall have a fire-resistance rating of 45 min.
 - 2) c) loadbearing walls, columns, & arches shall have a fire-resistance rating not less than 45 min, or be of noncombustible construction.

.2 **Existing School (Separated from new addition with firewall) is nonconforming to current Code and to remain as is with no changes to occupancy or use.** The F2 occupancy is an existing condition and not being affected in this project. Assumed to remain as is.

1.1.7 PLANNING AND DESIGN ASSUMPTIONS:

- .1 Zoning Requirements: R1-M
- .2 Conditional Use: Senior High School
- .3 Setbacks: Front Yard: 15', Rear Yard: 25', Side Yard: 4', Reverse Corner Side Yard: 4'
- .4 Parking Spaces: 1 per ea. 2 faculty plus 1 for each 4 employees and 1 for each 10 students – existing condition, and a parking management plan between both schools may be required – refer to HTFC drawings for proposed number of parking spaces
- .5 Bicycle Spaces: 1 per ea. 10 automobile spaces – Refer to HTFC drawings
- .6 Loading Spaces: None required
- .7 Encroachments: N/A
- .8 Maximum Lot Coverage: 45%

1.1.8 CASH ALLOWANCES:

.1 Foundation/pile inspections	\$ 20,000
.2 Soil compaction, conc. & mortar testing	\$ 10,000
.3 Manitoba Hydro Service	\$ 30,000
.4 MTS Service	\$ 10,000
.5 Testing & air balancing services	\$ 40,000
.6 LEED Air Quality Testing	\$ 12,000
.7 Exterior and Interior signage	\$ 15,000
Total	\$137,000

1.1.9 SEPARATE PRICES

- .1 N/A

1.1.10 GENERAL REQUIREMENTS

- .1 Notwithstanding the terms of the contract between the Owner and the Contractor, the general terms, definitions of the contract shall be in accordance with CCDC 2 2020, Stipulated Price Contract.
- .2 General notes and specifications on one drawing apply to all drawings unless specifically noted otherwise. If there is a conflict within the contract documents the specifications govern over the drawings, drawings of a larger scale govern over those of smaller scale of the same date; later dated documents govern over earlier documents of the same type.
- .3 Do not scale these drawings. Perform the work according to figured dimensions only. The drawings are dimensioned in metric and imperial units.
- .4 In the Contract Documents, Supply means: deliver to the site and place as directed by the Contractor. Install means: accommodate in the Work, receive, store, assemble, adjust, trim, and fit as necessary to make fully operational. Provide means: supply and install.

1.1.11 EXECUTION OF THE WORK

- .1 The Contractor is solely responsible for construction safety at the place of work and for compliance to all rules, regulations, and practices required by construction health and safety legislation.
- .2 The Contractor shall be solely responsible for all the work, construction means, methods, techniques, sequences, and procedures and for co-ordinating all aspects of the work.
- .3 All work shall conform to C.S.A. standards, the Manitoba Building Code, and all applicable codes, regulations and by-laws of authorities having jurisdiction.
- .4 All products and materials shall be new, of the best quality, suitable for the purposes for which they are required, and be as specified in the Contract Documents.
- .5 Report any discrepancies noted within the contract documents to the Architect and obtain clarification before proceeding with the work. The Contractor shall be responsible for any deviation from the drawings without written approval from the Architect.
- .6 Verify existing site conditions and measurements and report any discrepancies between the drawings and site conditions and measurements to the Architect and obtain clarification prior to commencing work. The Contractor shall be responsible for any deviation from the drawings without written approval from the Architect.

-
- .7 The Contractor is responsible for all fees and permits and is responsible for all inspections required by authorities having jurisdictions, including permit closeout.
 - .8 The Contractor shall provide and pay for all temporary supports, structures, facilities and utilities (including but not limited to; scaffolding, electricity, lighting, water, telephone, fire protection & sanitary facilities) required for the work and for all trades, and remove them upon completion of the work.
 - .9 The Contractor shall be responsible for notification and co-ordination of all necessary public and private utility companies required to complete the work as indicated on the drawings and specifications. This includes but is not limited to telephone, water, sewage and hydro.
 - .10 The contractor shall maintain a clean place of work, free from accumulated debris, waste and materials through the contract time.
 - .11 The Contractor shall take measure to isolate the area(s) under construction to protect and keep clean other areas of the building that are not under construction.
 - .12 The Contractor shall protect the Work during construction from damage; provide protection as required to protect work in progress and other property from damage. The Contractor shall take reasonable measures, including those required by authorities having jurisdiction to protect the public and those employed on the Work.
 - .13 The Contractor shall perform all cutting and remedial work to make all the parts of the work come together. The Contractor is responsible for co-ordinating the work to keep remedial work at a minimum. Specialists in working with the materials and methods, so as not to endanger the work, shall perform cutting and remedial work.
 - .14 Cut and fit components for alteration of existing work and installation of new work. Patch disturbed areas to match adjacent material and finishes. After patching, apply finish to the entire surface extending to a point where the surface is intersected by an adjacent surface. Patching shall be made invisible to the eye.
 - .15 The Contractor shall provide shop drawings. The contractor and all subcontractors shall be experts in their respective fields and shall be responsible for the shop drawings conforming to the contract documents.
 - .16 The Contractor is to provide and maintain a construction schedule throughout the contract time. The schedule shall be binding after all parties have approved it. Changes to the construction schedule shall be presented to the Architect and Owner at the first site meeting after the extension is requested.
 - .17 The Contractor shall notify the Owner in good time when items to be supplied by the Owner will be required and shall arrange and be responsible for delivery and installation.
 - .18 The Contractor will co-ordinate the installation & shall notify the Owner in good time when pre-wiring & finish installation of the systems will be required on site.

1.2 SITE

- .1 Refer to Landscape Architecture outline specification.

1.3 EXTERIOR CLOSURE

1.3.1 DESIGN CALCULATIONS

-
- .1 Thermal Requirements to meet MECB 2013
Steinbach = 5670 +/- degree days (Zone 7A)
 - .1 Requirement: Div.B Table 3.2.2.2 Above grade opaque assemblies
Exterior walls - above grade U 0.210 **(R27)**
Roofs - U 0.162 **(R35)**
Floors - above grade U 0.162 **(R35)**
 - .2 Requirement: Div.B Table 3.2.3.1 assemblies in contact w/ ground
Exterior walls - below grade U 0.284 **(R20)**
Floors - on grade (less than 600 below grade) U 0.757 **(R7.5) for 1.2m** around
perimeter or 3.2.3.3. (1) entire floor if in-floor heat
 - .3 Requirement: Div.B 3.2.1.4 (1) max fenestration and door area FDWR = 0.28
(28%)
 - .4 Requirement: Div.B Table 3.2.2.3 , 3.2.2.4 fenestration and doors - U 2.0 **(R2.8)**
MB Amendment
 - .2 Fire fighter access facing:
 - .1 3 streets for existing building
 - .2 2 streets presumed for new addition and existing Gym 1, on west side of firewall

1.3.2 EXTERIOR WALL TYPES SCHEDULE

- .1 Refer to Architectural drawings.

1.3.3 EXTERIOR WINDOW FRAME TYPES AND GLAZING

- .1 Refer to Elevation drawings for exterior & interior window types and exterior window locations. Refer to Floor Plan drawings for interior window locations.
- .2 W1 **Exterior punched window frames:** Thermally broken extruded anodized aluminium (or fibreglass) with openers & sizes as shown on drawings. Kawneer 5525 Isoweb, Alumicor 970E, or approved equal.
- .3 W2 **Interior windows:** tempered safety glass in hollow metal frames (rated ceramic glass where required for fire rating).
- .4 W3 **Curtain wall:** Aluminium curtain wall frame system with steel reinforcement and enhanced thermal break in anodized finish; Kawneer 7550 series, Alumicor Thermawall 2600 series, or approved equal.
- .5 G **Typical Glazing:** Glazing to be hermetically sealed, triple-glazed with low E x 2, argon gas, and superspacers, for a min. VT of 0.50 and SHGC of 0.35 or lower. All exterior glazing less than 2400mm above main floor level, to be tempered safety glass.
- .6 TGU **Translucent Glazing Units:** double glazed unit w/ honeycomb insulation core and translucent veils; Advanced Glazings Ltd. Solera 'L', or approved equal.

1.3.4 EXTERIOR AND INTERIOR DOORS

- .1 D1A **Exterior entry doors and frames:** Thermally broken, insulated hollow metal doors with upper and lower tempered dual pane glass, in thermally broken, insulated hollow metal frames. Include hinges, panic bars with keyed cylinder, electric strike, and surface door closers with auto opener, weatherstripping, and threshold.
- .2 D1B **Interior entry doors and frames:** Hollow metal with upper and lower tempered glass panes in hollow metal frames. Include hinges, panic bars, and surface door closers with auto opener.
- .3 D2A **Exterior Exit Stair:** Thermally broken, insulated hollow metal door in a thermally broken, insulated hollow metal frame; include hinges, panic bar with keyed cylinder, surface door closer, weatherstripping, and threshold.

-
- | | | |
|----|-----|---|
| .4 | D2B | Interior Exit Stair: Fire-rated hollow metal door with rated glass lite in a hollow metal frame with ULC label; include hinges, panic bar, surface door closer, seals, & door btm. |
| .5 | D3 | Interior Classrooms and Offices: Solid core wood doors (clear finish) with a tempered glass lite where indicated, in a hollow metal frame (painted) with full-height, 300 mm wide sidelight. Include hinges and lockset, and surface door closer (where scheduled). |
| .6 | D4 | Interior Washrooms: Solid core wood doors (clear finish) in a hollow metal frame (painted) with hinges, privacy set, and surface door closer. Include auto door operators and actuators at multiple stall washroom doors, where doors are present. |
| .7 | D5 | Interior Service rooms and where fire ratings are required: Hollow metal doors in a hollow metal frame (painted). Include hinges, lockset, & surface door closer. Fire labels when required. |
| .8 | D6 | Interior sound rated doors and frames: Acoustical hollow metal door in a hollow metal frame (painted) to STC 43; Overly, KreigerSonic, Industrial Acoustics, Lambton, and approved equals. Include hinges, lockset, door closer, sound weatherstripping, automatic door bottom, and threshold. Locations: Guitar and Band rooms. |
| .9 | D9 | Rolling counter shutter between Kitchen & Commons: Non-fire rated, manual push up operation with clear maple slats; Amstel # ASH400MA-M, or approved equal. |

1.3.5 ROOF TYPES (refer to Structural for roof structure and substrate)

1. Refer to Architectural drawings.

1.3.6 SOFFIT TYPES

- .1 Refer to Architectural drawings.

1.3.7 ROOF ACCESSORIES

- .1 Flashings: 24 gauge prefinished sheet metal from 8000 series.

1.4 INTERIOR SEPARATION

1.4.1 DESIGN REQUIREMENTS

- .1 Fire Separations and Fire Resistance Ratings:
 - .1 Fire separations at floors, mezzanines, & loadbearing structure: 45 min
 - .2 Exit stair shafts, elevator shaft, and vertical service shafts: 45 min
 - .3 Fire separation between classrooms and corridors: no f.s. if sprinklered
 - .4 Fire separation between a service room with a fuel fired appliance(s) and the building: 1 hour
 - .5 Fire Separation between Custodian room and building: no f.r.r. if sprinklered
- .2 Smoke Separations: Smoke barriers and containment areas: to be determined
- .3 Acoustic Requirements:
 - .1 Sound control between classrooms and at floors: STC 50 minimum
 - .2 Sound control between Music & Guitar room from remainder of school: STC 56 minimum
- .4 Security considerations:
 - .1 Refer to electrical
- .5 Finishes Quality:
 - .1 Entry Vestibules, Commons: high.
 - .2 Corridors, Classrooms, Offices, and Band and Music: medium.
 - .3 Service rooms: low

1.4.2 INTERIOR VERTICAL SEPARATION WALLS:

- .1 Refer to Architectural drawings.

1.4.3 FLOOR ASSEMBLIES:

- .1 Refer to Architectural drawings.

1.4.4 INTERIOR FINISHES

- .1 General:
 - .1 Walls:
 - .1 Gypsum board (abuse resistant type where less than 2440 above floor), primed and painted, all locations unless noted otherwise.
 - .2 Concrete block, primed and painted, in Gym only, to 3650 above floor.
 - .2 CE Ceramic Wall Tile
 - .1 Material: 50 x 50 (2" x 2") mosaic w/ cove base trim.
 - .2 Product: Daltile 'Colour Scheme', Olympia 'Ontario', or approved equal.
 - .3 Locations: Backsplash areas, washrooms areas to 1800 above floor.
 - .3 Acoustic Wall Panel Types
 - .1 Tectum Finale wall panels (NRC 0.75), in 3 custom colours: Gym, 2400 mm high band to all four walls, starting at 3650 above floor.
 - .2 Tectum Fabri-tough or Soundseal S-4000: Commons.
 - .3 Sound Concepts Interact Barrel Diffusers & Reflectors, 4'x4': Band and Guitar Rooms.
- .2 Floor Finishes: (100 high rubber base typical except: coved base at wet areas, and as indicated in Room Finish Schedule)

SV1 Sheet Vinyl

- .1 Material: 2mm thick sheet vinyl, with heat welded seams
- .2 Products: Tarkett Standard Plus, Polyfor XL PUR, Armstrong Medley, or approved equal.
- .3 Dimension: 2000mm wide rolls
- .4 Locations: Vestibules, Corridors, Classrooms, Offices, Washrooms, General storage rooms, and Custodian rooms and all other locations not otherwise noted.

SSV Safety Sheet Vinyl

- .1 Material: 2mm thick slip-resistant sheet vinyl, with heat welded seams
- .2 Products: Altro Suprema, Polysafe Mosaic PUR, or approved equal
- .3 Dimension: 2000mm wide rolls
- .4 Locations: Kitchens, Health rooms, Change rooms and Stair landings & treads.
- .5 Base of same flooring to be coved up wall by 150mm w/ Altro cap.

RT Rubber Tile (Detectable Warning Surface)

- .1 Material: 3 (1/8") thick x 610 (2') x 610 (2') tiles, with hammered surface texture. Johnsonite HRT or approved equal.
- .2 Locations: Stair landings.

CT Modular Carpet Tile

-
- .1 Product: Interface Viewpoint or Viva collection; Shaw Contract Group Light series, Virtual Spaces, Catalyst, Hybrid, Diffuse/Disperse; or approved equal.
 - .2 Dimensions: 500 x 500mm
 - .3 Locations: Admin area, Band and Guitar Room
- SC1 **Sealed Concrete**
- .1 Material: exposed concrete finished with 3 coats clear sealer.
 - .2 Locations: Service rooms.
- .3 Ceiling Finishes:
- GWB **Gypsum board**
- .1 Material: Gypsum board
 - .2 Finish: primed and painted
 - .3 Locations: Vestibules and wet areas including Washrooms, Kitchens, Health room and Change Rooms.
- ACT **Suspended Acoustic Ceiling Tile and t-bar**
- .1 Material: suspended acoustic white ceiling tile with exposed tees
 - .2 Size: 610 x 1220 (2'x4') with (2' x 2') look
 - .3 Locations: Corridors, Classrooms, Offices, Seminar rooms, Admin areas, Offices, and storage rooms.
 - .4 Provide loose lay R-12 batt insulation about t-bar in Band and Guitar locations.
- EXP **Exposed Structure**
- .1 Material: exposed metal or concrete structure
 - .2 Locations: Service rooms, Gym, Gym storage rooms, Server rooms, and Stairwells.
- WD **Wood Feature Ceilings/Soffits**
- .1 Material: 19 x 89 clear AA grade maple boards
 - .2 Finish: clear sealer
 - .3 Locations: Commons

1.4.5 INTERIOR SPECIALTIES

- .2 Fireproofing and firestopping at all openings through fire rated floors/walls/ceilings to ULC labels: mineral fibre packing, and fire-stopping sealant.
- .3 Exterior and Interior Expansion Joints:
 - .1 At Floor Joints: Extruded aluminium type, with integral and continuous smoke stop.
 - .2 At Roof, Wall and Ceiling Joints: extruded aluminium type.
- .4 Millwork: **Refer to drawings for extent of millwork by room/functional area.**
 - .1 **Cabinets:** flush, overlay style. Doors, drawer fronts, & exposed casework: G2S maple veneer on combination core w/ solid maple edge banding. Concealed casework: white melamine on combination core w/ 3mm PVC edge banding (add maple veneer end gables where exposed).
 - .2 **Countertops and backsplashes:** GP grade plastic laminate finish on MDF core, and solid clear maple nosing with clear shop finish.
 - .3 **Window sills:** 19 thick clear AA grade maple stock w/ maple nosing and clear finish.
- .5 Power door operators and actuators at all new main entrances (4), exterior and interior Vestibule doors. Mount actuators into aluminium frames or 1200mm high prefinished aluminium bollards as indicated on drawings; include an exterior aluminium guardrail outside the main entry door.

1.4.6 SPECIALTIES

- .1 Miscellaneous:
 - Whiteboards and Tackboards in Classrooms.
 - HDPE toilet & urinal partitions, change stall partitions, floor mounted, overhead braced, 25 mm thick. Doors to be 1397 mm high, mounted at 355 mm above floor; pilasters to be 2083 mm high, fastened into 76 mm high stainless-steel pilaster shoes.
 - Commercial washroom accessories
 - Exterior and interior signage (see cash allowance)
 - Fire extinguishers at all exits, exit stairs, and Mechanical room
 - Flagpole
 - Steel support channels for data projectors
 - Roof access hatches
 - Exterior detectable warning surfaces

- .5 Roller shades: manually operated type with spring loaded tube, 1% openness factor; Solarfective Teleshade system, SunProject Toro #DK S-70, or approved equal. To all new interior windows other than Commons and Gym spaces.

2.1 STRUCTURAL, MECHANICAL, & ELECTRICAL

- .1 Refer to attached Structural, Mechanical, and Electrical system descriptions.

3.1 DESCRIPTION OF EQUIPMENT – ELEVATOR #1

- .1 Type: One Roped Hydraulic LULA Elevator Garaventa Elvoron or Savaria Orion
- .2 Operation: Selective Collective
- .3 Type of Hydraulics: Cantilevered Roped Hydraulic
- .4 Capacity: 1400 pounds
- .5 Speed: 30 FPM
- .6 Travel: Main floor to Stage (approximately 4')
- .7 Number of Landings: 2
- .8 Openings: Front 1 , Rear 1
- .9 Power Supply: 208 Volts/ 3 Phase/ 60 Cycles
- .10 Clear Inside Car: 42" wide x 60" front-to-back
- .11 Car Enclosure: Plastic laminate walls on two sides with stainless steel trim and 6" high stainless steel base, fluorescent lighting above suspended ceiling, stainless steel car doors, door frame and front and rear returns, battery emergency cab lighting and alarm bell. Car phone
- .12 Door:
 - .1 Type: Two Speed
 - .2 Size: 36" x 80" high
- .13 Hoist way Entrance Finish: Prime coat at all floors (ready for painting on site by Others)
- .14 Signals: Car Position Indicator with 2 1/2" characters and direction arrows, located 5'-10" aff
Main floor Position Indicator with 2 1/2" characters and direction arrows, located 6'-0" aff above the hall push buttons
Illuminated Car and Hall Push Buttons,

- Security key switches to activate hall call push buttons, keyed switch to override security keyed switches and allow normal hall push button activation
- .15 Machine Room Location: Adjacent to elevator hoistway
 - .16 Additional Features: Firefighters Emergency Operation Phase I
 - .17 Maintenance: 12 Months

END OF THIS SECTION

Mechanical Outline Specification

To:	College Beliveau Transition to Cottonwood	Date:	March 31, 2021
		Project No.:	23-1736-003
Prepared By:	Misty Klassen, P.Eng.	Reviewed By:	Devin Windeatt, P.Eng.
Revision:	0		

1.0 SCOPE OF WORK

The mechanical scope of work includes the plumbing, heating, ventilation and air conditioning (HVAC) and fire protection for the alterations to the existing school located at 1015 Cottonwood Road to transition from Windsor Park Collegiate to Collège Béliveau.

2.0 CODES & PERMITS

The complete installation shall be in accordance with the current edition of the Manitoba Building Code, the Manitoba Energy Code for Buildings, the Manitoba Plumbing Code, the Manitoba Fire Code, and local municipal bylaws.

3.0 ASSUMPTIONS

The following assumptions have been made during this design process:

- The existing sanitary sewer and domestic water systems within the building are adequate and no major modifications are anticipated except what is required to accommodate the new fixtures as outlined below.
- The existing hydronic heating system within the building is sufficiently sized to accommodate the modified heating equipment as defined herein.
- The existing gas service is of suitable size and capacity to accommodate the described renovations.
- The building is not currently sprinklered and a new 6" water service will be required to accommodate a new sprinkler system within the portion of the building to the West of the new fire wall.

4.0 DEMOLITION

Demolition shall include the following items located in the scope of work area:

- Demolition of existing plumbing fixtures throughout the basement change room and main floor areas per the demolition plans and associated plumbing piping (domestic cold water, domestic hot water, domestic hot water return, sanitary and vent) back to nearest mains. Cap pipes at mains.
- Demolition of all existing HVAC equipment (fans, branch ductwork, diffusers, grilles, registers, radiation heaters, unit ventilators, hydronic heating supply and return piping, controls, etc.) serving the basement and main floor areas being renovated per the demolition plans. Cap hydronic heating supply and return piping at mains.
- Demolition of the gas piping in the science room being converted to the admin area. Cap piping air mains.

5.0 DIV 22 – PLUMBING SYSTEMS

5.1 Domestic Water & Water Heating

Connect new fixtures to existing domestic cold water, domestic hot water, and domestic hot water recirculation lines located in the crawlspace. Domestic Water Piping shall be copper Type L c/w fiberglass insulation and ASJ.

Provide reduced pressure zone backflow preventers on the hot and cold water lines serving the science classroom, located in the science prep rooms. Locate outside of millwork for adequate maintenance access. Provide pipe to drain. Provide motorized control valves c/w switches at the teacher desk to control water flow to the student desks.

5.2 Sanitary Sewer Drainage

New sanitary sewer piping will be routed to tie into nearest adequately sized existing sanitary sewer piping. Drainage piping for laboratory sinks will be polypropylene up to the laboratory waste treatment system (see section 3.3). Remaining drainage piping shall be PVC-DWV, except where it runs in a ceiling air plenum, where it shall be PVC-DWV-XFR.

5.3 Laboratory Waste Treatment

Provide a new acid dilution tank with sediment interceptor in the crawlspace. Connect all new science room lab sinks to the inlet of the sediment interceptor, then to the acid dilution tank. Tie outlet of the acid dilution tank to the sanitary sewer system.

Provide a digital pH monitoring system for the acid dilution tank c/w monitor in the main floor science prep room.

5.4 Plumbing Fixtures

Provide plumbing fixtures as per the following schedule. Refer to the architectural plans for quantities.

Plumbing Fixture Schedule			
Tag	Description	Locations	Specification
WC-1	Barrier Free Water Closet	Universal Washroom	Flush tank, vitreous china, floor mounted. ADA compliant.
WC-2	Water Closet	Washrooms	Flush tank, vitreous china, floor mounted.
LAV-1	Barrier Free Counter Mounted Lavatory	Washrooms	Contactless, hardwired, chrome plated solid brass faucet. Counter mounted vitreous china basin. ADA compliant.
LAV-2	Barrier Free Wall Hung Lavatory	Washrooms	Contactless, hardwired, chrome plated solid brass faucet. Wall hung c/w carrier, vitreous china basin. ADA compliant.
LAV-3	Counter Mounted Lavatory	Washrooms	Contactless, hardwired, chrome plated, solid brass faucet. Counter mounted vitreous china basin.
LAV-4	Wall Hung Lavatory	Washrooms	Contactless, hardwired, chrome plated, solid brass faucet. Wall hung c/w carrier, vitreous china basin.
SK-1	Laboratory Sink	Science Classrooms	Counter-top mounted, stainless steel single compartment sink. Chrome plated solid brass gooseneck faucet, vacuum breaker, serrated hose nozzle.
SK-2	Foods Sink	Foods and Nutrition	Counter-top mounted, stainless steel double compartment sink. Chrome plated solid brass, single lever swivel faucet.
SK-3	Health Sink	Health Room	Counter-top mounted, stainless steel single compartment sink. Chrome plated solid brass gooseneck faucet, blade handles.
SK-4	Meeting Room Sink	Meeting Room	Counter-top mounted, stainless steel single compartment sink. Chrome plated solid brass, single lever swivel faucet.
SH-1	Shower	Changerooms	Barrier-free, fiberglass enclosure c/w shower head, shower valve, grab bars and curtain.

Plumbing Fixture Schedule			
Tag	Description	Locations	Specification
LT-1	Laundry Tub	Foods and Nutrition Laundry Room	Floor mounted plastic basin, chrome plated brass swivel faucet.
EWS-1	Emergency Eyewash/Shower Combination	Science Classrooms	Plastic basin and shower head, galvanized steel frame, c/w domestic water thermostatic mixing valve.
DF-1	Drinking Fountain/Bottle Filler Combination	Fitness, Corridors	Stainless steel.
FD	Floor Drain	Science Classrooms, Washrooms, Laundry Room, Mechanical Room	Round nickel bronze strainer, epoxy coated cast iron body.
GT	Natural Gas Turret	Science Classrooms	Deckmount, chrome plated.

Provide stainless steel triple compartment sink, hand wash sink, dishwasher and grease interceptor(s) as required to suit the commercial kitchen equipment and Manitoba Health and Safety Guidelines of a Food Handling Establishment.

5.5 Sump Pump Packages

Provide new duplex sump pump packages as required to serve new weeping tile c/w pump removal rails and disconnects. Provide pump control panel and tie into existing DDC system. Run sump pump discharge piping to two locations c/w isolation valves on each line. Run a discharge line to the exterior wall and discharge to grade. Discharge piping shall be PVC Sch. 40.

5.6 Roof Drainage

Provide new roof drains (Watts model RD-100) where indicated on the architectural plans. Run new insulated rain water leader piping through the building to splash on grade where indicated on architectural plans. New piping shall be PVC-DWV-XFR where installed in ceiling plenums and PVC-DWV where installed elsewhere.

6.0 DIV 23 - HEATING VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS

6.1 New Wing HVAC Equipment

Provide new indirect gas fired air handling unit (AHU-1) (Acceptable Manufacturer: Engineered Air) located in the new basement mechanical room to serve the new commons and fitness room. The unit shall be configured as per the following table:

Air Handling Unit (AHU-1)	
Section	Description
Mixing Section	Outdoor air intake sized for full unit airflow for economizer operation.
Filter Section	MERV 8 Pre-Filter MERV 13 Filter
Gas Heat	750 MBH Capacity
DX Cooling Coil	40 Ton Capacity
Supply Fan	16,000 CFM airflow rate at 1.5" E.S.P c/w VFD

Install new rooftop mounted condensing unit (CU-1) (Acceptable Manufacturer: Engineered Air) to suit the new refrigerant coil in AHU-1.

Provide new energy recovery ventilator (ERV-1) (Acceptable Manufacturer: Tempeff) in the new mechanical room. Run insulated outside air and exhaust air duct connections to the exterior wall c/w aluminum louver (Acceptable Manufacturer: Price). Tie in supply air connection to AHU-1 outdoor air duct. Run exhaust air duct to main floor change rooms.

Run supply air ductwork from AHU-1 to the diffusers (Price model SCD) and grilles (Price model 520), as appropriate, in each space (commons, the fitness room and the supporting offices). Provide return air grilles (Price model 530) in each space ducted back to AHU-1 in the basement mechanical room.

Provide new exhaust air grilles at the ceiling partition in each changeroom. Run exhaust ductwork from the grilles to the exhaust air connection of ERV-1 in the new mechanical room c/w backdraft damper.

6.2 Renovated Spaces HVAC

HVAC for renovated areas such as the new science rooms, new admin area, classrooms, guitar, resource, staff expansion, and foods and nutrition to tie into existing hydronic heating and ventilation systems serving the existing spaces.

6.3 Fume Hood Exhaust

Provide two new fume hood exhaust systems for two new 4-foot fume hoods in each science room (chemistry and biology). Each exhaust system shall be complete with rooftop mounted exhaust fan (EF-1 & EF-2) (Greenheck model Vektor H, Capacity: 800 CFM, E.S.P.: 1.5"), exhaust ductwork, and associated controls.

For each installation: run exhaust ductwork from the fume hood to the rooftop exhaust fan. Provide 10 ft of duct insulation on the exhaust duct before the ceiling penetration. The exhaust ductwork shall be welded stainless steel. Provide a stainless steel insulated motorized damper prior to the exhaust duct ceiling penetration.

6.4 Band Room HVAC

Provide a small new rooftop unit (RTU-1) (Acceptable Manufacturer: York) to serve the new band room area. The unit shall be configured with a mixing section c/w economizer, 5-ton capacity DX cooling, 125 MBH input gas heat, supply fan with a capacity of 2,000 CFM at 0.5" E.S.P. and filter section.

Provide new supply air duct distribution to diffusers (Price model SCD). Provide egg crate return air grille (Price model 80) and acoustically lined return air elbow at high level. Duct up to rooftop unit.

Provide a new DDC thermostat c/w CO2 sensor within the band room for control of RTU-1 and its outdoor air damper.

6.5 Commercial Kitchen HVAC

Provide new Type 1 (grease) wall-mounted canopy style exhaust hood above cooking equipment complete with removable grease baffles, LED lighting and wet chemical fire suppression system (Acceptable Manufacturer: CaptiveAire). Provide new upblast rooftop exhaust fan (Acceptable Manufacturer: Greenheck), ULC listed for grease applications.

Provide new indirect gas fired make-up air handling unit to offset the kitchen hood exhaust. The unit shall be configured with a supply fan, DX cooling and gas heat to temper the air, and metal mesh filter (Acceptable Manufacturer: Engineered Air).

6.6 Terminal Heating Equipment

Provide the following terminal heating equipment:

- Hydronic force flow heaters (Acceptable Manufacturer: Rittling) in each new entrance vestibule.

- Electric unit heater (Acceptable Manufacturer: Ouellet, Capacity: 5 kW) in the new mechanical room. Mount at high level to underside of ceiling.
- Hydronic unit heaters (Acceptable Manufacturer: Rittling) in the new crawlspace. Mount at high level to underside of ceiling.
- Hydronic wall fin heaters (Acceptable Manufacturer: Rittling) along exterior walls in the renovated rooms, the new commons and fitness room, in each of the changerooms and in the new admin washroom.

Provide wall mounted DDC thermostats for each terminal unit complete with vandal proof cover.

6.7 Hydronic Heating Distribution Piping

Run supply and return piping from the nearest adequately sized hydronic heating piping in the crawlspace to the new hydronic terminal heating equipment. Run insulated piping in the crawlspace. Provide balancing valves (Bell and Gossett model CB) and shutoff valves for all equipment connections.

6.8 HVAC Controls

Provide a new DDC control panel in the mechanical room to serve new equipment. Tie in the new control panel into the existing DDC system.

The new control panel shall be tied into the following equipment:

- Air Handling Unit (AHU-1) and Condensing Unit (CU-1)
- Heat Recovery Ventilator (ERV-1)
- Rooftop Unit (RTU-1)
- Commercial Kitchen Ventilation System
- Fume Hood Exhaust Fans (EF-1 & EF-2)
- Force Flow Heaters
- Unit Heaters
- Wall Fin Heaters
- DDC thermostats c/w CO2 detectors in each new/renovated space.

6.9 Natural Gas Piping

Provide new gas piping from the existing meter location new science classrooms.

Provide a manual shutoff valve c/w recessed valve cabinet on the natural gas branch lines serving each science classroom. Valves shall be located at the entrance to each science room.

Gas to be piped to desk mounted turrets c/w manual shut off valve.

All new gas piping will be schedule 40 black steel. Provide pipe identification to CSA B149.

6.10 Natural Gas Detection System

Provide a natural gas detection system (Honeywell model E3 Point) in each science classroom. The natural gas detection system shall be tied into an electronic shutoff valve installed on the natural gas branch line serving the science classrooms. In the event of a natural gas alarm, the electronic shutoff valve shall close.

7.0 FIRE PROTECTION

Provide a new 6"Ø water service complete with dual backflow prevention into the basement mechanical room to serve a new wet pipe sprinkler system. The sprinkler system shall serve then entire building area West of the new fire wall. Each sprinkler zone stations shall be complete with butterfly isolation valve c/w tamper switch, flow switch, pressure gauge and test/drain. Zoning shall be as per the following:

- Zone 1 - Basement/Crawlspace
- Zone 2 - Main Floor Gym/Stage, Fitness, Offices, Changerooms, Storage, Commons, Band and Servery

Provide concealed plate heads in rooms with ceilings. Provide upright heads in the mechanical room and basement areas with no ceiling. Provide wire guards on the sprinkler heads in the gym, fitness room and mechanical rooms. Sprinkler system installation shall be in accordance with NFPA 13.

Fire extinguishers shall be installed throughout the building with size and rating as required by NFPA 10 - Standard for Portable Fire Extinguishers. Type ABC fire extinguishers shall be installed in public areas complete with recessed cabinets.

8.0 SEPARATE PRICE – MAIN BUILDING EXISTING AHU REPLACEMENT

Provide a separate price to replace the existing main building air handling unit (ventilation unit F-1) that serves the areas being renovated, i.e. the science rooms, the admin area and the foods and nutrition room. Replacement AHU shall have an approximate capacity of 24,000 CFM at 3" E.S.P. and have a heating coil connected to the existing hydronic heating piping. Connect to existing ductwork.

9.0 SEPARATE PRICE – GYM EXISTING AHU REPLACEMENT

Provide a separate price to replace the existing gym air handling unit (ventilation unit F-2). Replacement AHU shall have an approximate capacity of 12,000 CFM at 1.5" E.S.P. and have a heating coil connected to the existing hydronic heating piping. Connect to existing ductwork.

Electrical Outline Specification

Project:	College Beliveau Transition to Cottonwood	Date:	March 31, 2023
		Project No.:	23-1736-003
Prepared By:	Daniel Loewen, P.Eng.	Reviewed By:	Lucien Lalonde, P.Eng.
Revision:	0		

1.0 SCOPE OF WORK

The electrical scope of work includes the power distribution, lighting, life safety, telecommunications and security systems for the design and construction of the interior renovation and new addition to the College Beliveau. The project will include both a renovation to a portion of the existing building as well as a new single-storey addition. The existing building renovations will include renovating some existing rooms into science rooms, a foods and nutrition room and admin areas. The new addition will include a new fitness area, band room and commons area.

2.0 ASSUMPTIONS

The following assumptions were made during the preparation of the outline specification:

- The new additions will have a wet sprinkler system and the fire detection can be limited to the corridors and stairwells as required by code.
- The 1000A existing electrical service distribution panel has the electrical capacity for the new renovations and addition.
- Existing power panels that have reached their end-of-life and are within areas that are to be renovated will be replaced with new.
- The existing fire alarm panel does not have the capacity for the addition and will need to be replaced with a new addressable panel.

3.0 DIV 26 – ELECTRICAL SYSTEMS

3.1 Electrical Design Criteria and Standards

This report outlines the main electrical systems and components for the project, considering compliance with the Canadian Electrical Code (CEC), the National Building Code (NBC) and all applicable regulations and codes.

The latest edition of the following codes, standards and methodologies at time of tender shall be utilized for the project, including all pertinent addendums and appendices:

- Canadian Electrical Code (CEC)
- Canadian Standards Association (CSA)
- National Building Code (NBC)
- National Energy Code of Canada for buildings (NECB)
- American National Standards institute (ANSI)
- Institute of Electrical and Electronics Engineers. (IEEE)
- National Electrical Manufactures Association (NEMA)
- National Fire Protection Association (NFPA)
- Underwriters' Laboratories of Canada (ULC)
- Illuminating Engineering Society of North America (IESNA)

Products considered toxic or environmental hazards are not acceptable. This includes but is not limited to PCB compounds, halon gas and asbestos. Special attention will be dedicated to the implementation of materials and devices that exhibit no environmental hazard.

The following is a list of the major electrical systems that will be addressed in the project.

- Electrical distribution system
- Lighting system
- Fire alarm system
- Life safety systems
- Commissioning

3.2 Demolition

- Demolish power, systems and lighting devices in the addition that is to be demolished.
- Demolish power, systems and lighting devices in the renovated areas of the existing building.

3.3 New Power Distribution

- Replace the following existing panels:
 - Main Distribution: 1000A, 120/208V/3P/4W. Re-feed from CSTE.

- Panel AA: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel D: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel H: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel J: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel K: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel M: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel R: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Panel SH: 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- Refeed an additional 10 panels from the new main distribution panel. Extend wiring as required.
- New panelboards are to be provided in the addition as follows:
 - 225A, 120/208V/3P/4W for general power loads.
- CDP to be provided with thermal magnetic breakers. CDP will be minimum 84 circuits. CDP(s) tub having large feeders will be oversized to accommodate entry of large feeders.
- Panel boards will be minimum 42 circuit, copper bussed with full door enclosure trim and key lockable doors. Breakers will be full size, bolt-on type.
- Each CDP or panel board will be equipped with a main circuit breaker where required by code or as circumstances dictate.
- Each CDP or panel board will have spare capacity for 20% additional circuits.
- Separate neutrals will be provided for all receptacle branch circuits.
- Motors will be fed as follows:
 - Motors 1/2HP and less will be 120V/1Ø. Motors 3/4HP or more will be 208V/3Ø unless otherwise required by the equipment manufacturer or where circumstances dictate otherwise.
- Combination magnetic starters, motor circuit protectors, breakers plus fully rated contactors and overload heaters complete with transformers with primary and secondary fusing, LED push-to-test pilot lights, oil tight devices, and NO/NC spare contacts will be provided.
- Motors will have disconnect switches in the circuit located near the motor.
- VFDs will be provided as directed by the Mechanical Consultant. Wiring from the VFD to the motor will be drive cable type. All motors with VFD's to be provided with purpose-built drive isolation transformers.
- All wiring will be copper. Minimum wire size will be #12 AWG for power and luminaires. And minimum #14 AWG for control wiring.
- All wiring to be run in conduit as follows:
 - Electrical metal tubing (EMT) for feeder and branch circuits in dry areas only.

- Threaded rigid galvanized steel (RGS) for surface mounted conduit in wet/damp locations.
- Minimum conduit size will be 21mm (¾”).
- All EMT conduit fittings and couplings to be set screw type.
- PVC conduit will be used only when encased in concrete or within floor slab. All conduit penetrations through walls and floors to be sealed as per architectural details.
- AC90 (BX) or RW90 conductors in flexible metal conduit will be used only for connections to recessed luminaires, suspended luminaires or luminaires mounted on stud partitions, electrified furniture systems, motor connections (from disconnect to motor) and equipment subject to movement or vibration.
- All flexible metal conduit connections to motors to be liquid tight flex type.

3.4 New Wiring Devices

- Wall switches and duplex receptacles to be specification grade. 15/20A receptacles to be installed a maximum 9.0m (30 ft) on center in corridors.
- GFCI receptacles to be installed when located within 1.5m of sinks, showers or any water source or wet locations.
- Weatherproof GFCI cast metal when-in-use covers to be provided for receptacles installed outdoors or in wet locations.
- Stainless steel, gasketed, weather-proof coverplates will be provided for devices in wet/damp environments.
- Receptacles will be 20A, 120V/1Ø duplex type, parallel slot, U ground and double wipe contacts with non-riveted grounding contacts.
- All receptacles are to be tamper-proof type.
- Cover plates will be stainless steel and tamper proof screws.
- Cover plates for light switches in resident areas are to be complete with stainless steel lockout wallplates complete with tamper resistant screws.
- Dedicated circuits will be provided for new kitchen equipment.

3.5 Grounding Systems

- A complete building grounding system will be provided in accordance with the requirements of the Canadian Electrical Code (CEC).
- Grounding of systems shall include telecommunications equipment, Wiremold and raceway, owner's equipment, distributions, CDP's and panel boards.

3.6 Lighting Systems

- Interior lighting systems will be consistent with building standards and security recommendations. Appropriate lighting levels supported by point-by-point photometric patterns will dictate uniformity of design to support the visual tasks to be performed in a particular area of the building.

- The Illuminating Engineering Society of North America (IESNA) guidelines will be implemented to provide acceptable illumination levels and uniformity ratios.
- Lighting throughout the facility will be fed at 120V in order to reduce overall costs and achieve efficiency.
- Luminaires chosen will be the most efficient type and practical for each area given the operational requirements, task requirements and architectural ceiling finishes. The primary lamp source throughout the building will be LED with 4000° Kelvin color temperature and a minimum CRI of 80. LED lighting provides long life, instant on, no lamp re-strike, reduced maintenance and lower energy costs. The use of LED lighting will maximize energy efficiency of the building and to comply with security requirements and restrictions of luminaires re-striking time in event of power failure.

3.7 General Interior and Support Areas

- Luminaire types within and outside the building will generally be as follows depending on ceiling finishes:
 - Corridors will be provided with recessed style luminaires and downlights where there is a drywall or t-bar ceiling design.
 - Corridors will be provided with a combination of suspended, direct/indirect style luminaires and pendants where there is an open ceiling design.
 - Storage rooms an electrical/mechanical service areas will be provided with industrial type, chain or cable suspended luminaires, mounted to unistrut for alignment where necessary.
 - Lighting in washroom / change rooms to be a combination of recessed and vanity lighting.
 - Offices, classrooms, kitchen and similar spaces will be provided with recessed style luminaires or a combination of suspended, direct/indirect style luminaires and pendants where there is an open ceiling design.
 - The Commons area will be provided with suspended linear/cylinder luminaires.
 - Exterior lighting to consist of a combination of wallpacks and downlights located within soffits, over exterior doors, and to cover all exterior areas as required for security, safety, and convenience.
 - All exterior lighting shall be dark sky compliant.

3.8 Lighting Controls

- Lighting control system to consist of a digitally addressable control system complete with wired devices for ease of use, flexibility, and future expandability (open source).
- Each light fixture will be addressable and can be individually controlled.
- Corridor lighting shall be dimmed when unoccupied. Occupancy sensors shall be provided to bring the lights to full brightness when occupied.
- Daylight harvesting incorporating daylight sensors will be utilized in select areas and will incorporate dimming to achieve energy savings and increased user comfort.
- Occupancy sensors will be utilized throughout the building other than service rooms where maintenance might be conducted to achieve energy savings, convenience, and ease of use.
- Exterior lighting to be controlled by timeclock and occupancy sensors.

- Training for programming and use of the lighting control system is to be provided.

3.9 Emergency Lighting

- Emergency lighting levels of 10 lux (1FC) average or greater as required by code to be maintained in principal egress routes to exits, corridors and rooms where the public may congregate.
- Select luminaires in areas accessible to the residents will include integral emergency lighting battery packs.
- Emergency lighting battery packs will provide 10 lux (1 FC) for a minimum duration of 30 minutes maintained in principal egress routes for the second floor.
- Battery operated lighting to consist of remote mounted 12V, 6.0W, MR-16 housing style LED lamped dual head units powered by centrally located battery units to provide minimum 30 minutes back-up time. Units to be c/w wireless real-time monitoring system.
- Exit signage with “Pictogram” will be provided throughout the building in accordance with local codes requirements. All Exit signs must be continuously illuminated and connected to emergency lighting battery banks. All exit lights will be LED type with green background.
- All exit signs in the existing building will be replaced with new “Pictogram” exit signs.

3.10 Fire Alarm System

- A new Fire alarm system will be required to be fully addressable type with Class A wiring. The new design should enforce compliance with CAN/ULC S524-latest edition– “Standard for the Installation of Fire Alarm Systems” and NFPA 72 National Fire Alarm Code latest edition as well as the CAN/ULC S537-latest edition “Verification Standards for Fire Alarm Systems”.
- Provide a new annunciator panel by main entrance.
- Modules to connect the existing conventional devices will be provided.
- System shall be a fully addressable, micro-processor based configuration, single stage.
- Power source is normal building power with emergency battery back-up power. Fire alarm wiring to be Class A, FAS rated and installed in labeled red color conduit.
- Fire detectors will be installed in storage rooms, service rooms, janitor rooms and corridors in un-sprinklered areas. Where the building is sprinklered, smoke detectors will be provided in corridors and stairwells.
- Signal circuits will include horns and strobes to meet code compliant audibility throughout the building. Strobes to be located in every room at a minimum to meet code.
- Detectors to be photoelectric type, low profile sensitive to visible and invisible products of combustion.
- Manual emergency egress pull stations will be provided for evacuation protocols at every exit as per code c/w clear tamper guard with audible sound.

3.11 Commissioning

- Commissioning will be included for major distribution equipment, life-safety electrical systems, and telecommunications systems, including testing, circuit verifications, etc. Written certifications are required.
- Commissioning will be performed by the Electrical Contractor in concert with the Consultant.

4.0 DIV 27 AND 28 – TELECOMMUNICATIONS AND SECURITY SYSTEMS

4.1 Telecommunications and Security Design Criteria and Standards

This report outlines the telecommunications and security systems and components for the project. The latest edition of the following codes, standards and methodologies at time of tender shall be utilized for the project, including all pertinent addendums and appendices:

- Canadian Electrical Code (CEC)
- Canadian Standards Association (CSA)
- National Building Code (NBC)
- American National Standards institute (ANSI)
- Institute of Electrical and Electronics Engineers. (IEEE)
- National Electrical Manufactures Association (NEMA)
- Underwriters' Laboratories of Canada (ULC)
- Telecommunications Industry Association (TIA)
- Electronic Industry Alliance (EIA)
- International Electrotechnical Commission (IEC)
- Building Industry Consulting Services International (BICSI)

The following is a list of the telecommunications and security systems will be included in the project.

- Telecommunications Backbone cabling system
- Telecommunications Horizontal cabling system
- Telecommunications Grounding system
- Intrusion Alarm
- Access control
- Video Surveillance
- Public Address system

4.2 Telecommunications Entrance Facility

- The design intent is to reuse the existing telecommunications infrastructure and expand it into the new addition.

- A new wall mounted rack will be provided in the addition.

4.3 Telecommunications Grounding and Bonding

- The telecommunications grounding and bonding system will be provided and is to be used for all telecommunications infrastructure. Telecommunications grounding and bonding is an additional grounding system installed specifically for telecommunications systems.
- Provide #3/0 copper grounding conductor from main electrical room to new Telecom Room.
- Provide #6 AWG copper grounding/bonding conductors for all rack, equipment, cable tray and conduit pathway system.

4.4 Telecommunications Backbone Cabling

- The telecommunications backbone cabling consists of the physical cable connecting media between the existing main communications room and the Telecom Room via the pathway.
- Backbone cabling will consist of OM4 multimode fibre and multi-pair Category 3 cabling.

4.5 Telecommunications Horizontal Cabling

- The telecommunications horizontal cabling consists of the physical wire and connecting media between the work area and the Telecom Room via the pathway.
- Voice/Data systems will utilize category 6 cabling. As a general rule each telecom outlet will consist of 2 Category 6 cables.
- The minimum size of conduit for Telecommunications will be 27mm; this will be installed from the wall outlet and terminating in the zone raceway and back to new TR.
- Provide cable tray down the main corridor for data cable distribution.
- Terminate cable in the rack mount patch panel in comms room and 4-port stainless steel face plate for the wall outlets.
- Provide grounding and bonding for conduit.

4.6 Intrusion Alarm System

- Provide new intrusion alarm devices for exterior doors and connect to existing system.
- Provide keypads, door contacts, motion sensors, glass breaks and sirens for a complete system.

4.7 Access Control System

- Provide new access control devices for specified doors and connect to existing system.
- Provide card readers, door controllers, wiring and terminations for a complete system.

4.8 Video Surveillance System

- Provide cameras on the exterior of the building and at all entrance points into the building.

- Connect to existing video surveillance system.

4.9 PA System

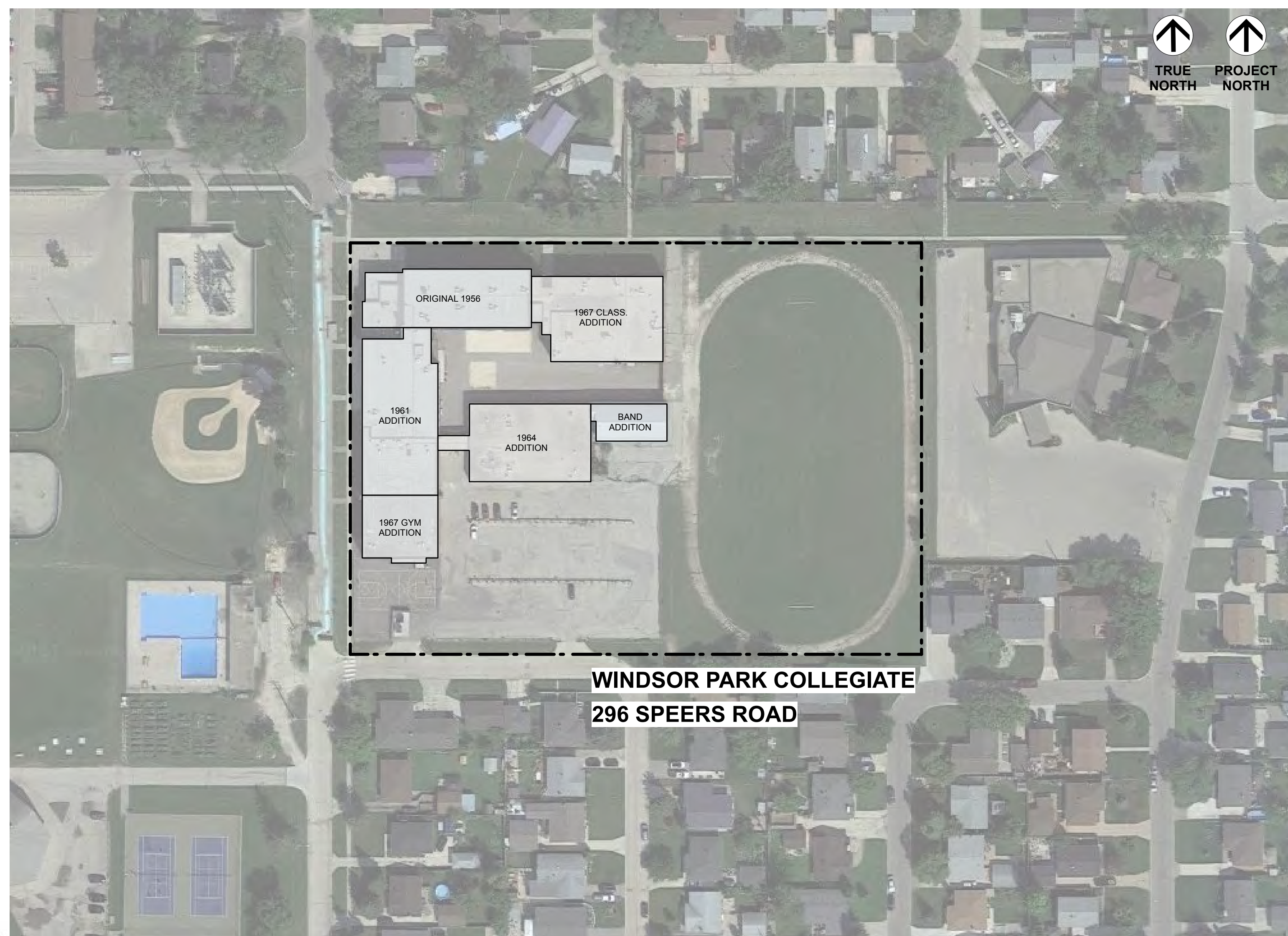
- Provide new PA speakers and call switches in new classrooms, gym and admin area.
- Connect to existing PA head end unit.



WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

OWNER	ARCHITECT	STRUCTURAL	MECHANICAL	ELECTRICAL	LANDSCAPE
LOUIS RIEL SCHOOL DIVISION 900 ST.MARY'S RD. WINNIPEG, MANITOBA R2M 3R3 T. 204 - 257 - 7827 CONTACT: AMARBEER BHANDARI amarbeer.bhandari@rsd.net	PRAIRIE ARCHITECTS 101-139 MARKET AVE. WINNIPEG, MANITOBA R3B 0P5 T. 204 - 956 - 0938 CONTACT: LINDSAY OSTER lindsay@prairiearchitects.ca	WOLFROM ENGINEERING 345 WARDLAW AVE. WINNIPEG, MANITOBA R3L 0L5 T. 204 - 452 - 0041 JON REID jonr@wolfromeng.com	KGS GROUP 865 WAVERLEY ST. WINNIPEG, MANITOBA R3T 5P4 T. 204 - 896 - 1209 CONTACT: DEVIN WINDEATT dwindeatt@ksgroup.com	KGS GROUP 865 WAVERLEY ST. WINNIPEG, MANITOBA R3T 5P4 T. 204 - 896 - 1209 CONTACT: DAN LOEWEN dloewen@ksgroup.com	HTFC PLANNING & DESIGN 115 BANNATYNE AVE WINNIPEG, MANITOBA R3B 0R3 T. 204 - 944 - 9907 CONTACT: MONICA GIESBRECHT mgiesbrecht@htfc.ca

296 SPEERS ROAD SITE PLAN (N.T.S.)



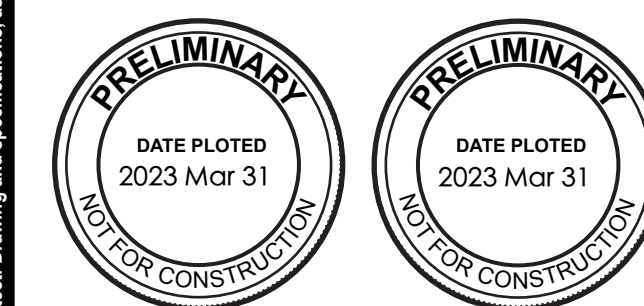
DRAWING INDEX

- A0-00 TITLE SHEET
- A0-01 PHASING / SCHEDULES
- ARCHITECTURAL DRAWINGS**
- A1-00 SITE PLAN - DEMOLITION
- A1-01 SITE PLAN - NEW CONSTRUCTION
- A2-01 DEMOLITION - MAIN FLOOR PLAN
- A2-02 DEMOLITION - SECOND FLOOR PLAN
- A2-03 NEW CONSTRUCTION - MAIN FLOOR PLAN
- A2-04 NEW CONSTRUCTION - SECOND FLOOR PLAN
- A3-01 EXTERIOR ELEVATIONS - DEMO/ NEW
- A4-01 BUILDING SECTIONS - NEW
- A4-02 BUILDING SECTIONS - NEW

issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

296 Speers Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St.Mary's Road
 Winnipeg, MB

drawing information

TITLE SHEET

drawn by: CR
 approved by: LO

 scale: AS NOTED
 date issued:
 proj. #: 2022.55
 rev. #:

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

**A0
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This drawing must not be scaled. The contractor shall verify all dimensions and other data on site prior to commencement of work. All discrepancies, errors and omissions are to be reported to the architect. Drawings and specifications are instruments of service, and the property of the architect. No reproduction may be made without the permission of the architect, and when made, must bear the name. All prices to be returned to the architect on request.

LIST OF ABBREVIATIONS

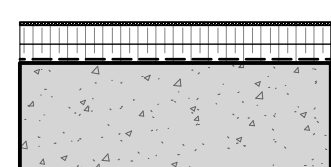
ACT Acoustic Tile	D.F. Drinking Fountain	H.D. Hand Dryer	O/C On Center	S. Stove	W/ With
AB Air Barrier	DIA. Diameter	HB. Hardboard	O.D. Outside Diameter	S/A Soap Dispenser	W.B. Whiteboard
ALUM. Aluminum	D.W. Dishwasher	HT. Height	O/H Overhead	S.D. Shelf	W.C. Water Closet
AFF Above Finish Floor	ELEV. Elevation	HWT. Hot Water Tank	O/O Out to Out	S.H. Shower Partition	WD. Wood
ANOD. Anodized	EQ. Equal	I.D. Inside Diameter	OSB Oriented Strand Board	S/S Stainless Steel	W.P. Waterproofing
B.B. Bulletin Board	EXT. Exterior	I/I Inside to Inside	O.W.S.J. Open Web Steel Joist	STC Sound Transmission Coefficient	W.R. Waste Receptacle
B.F. Barrier Free	F.D. Floor Drain	INT. Interior	P.T.D. Paper Towel Dispenser	STL. Steel	
BLKG. Blocking	FE. Fire Extinguisher	INSUL. Insulation	P/C Precast	Sq. Square	
CAB. Cabinet	F.E.C. Fire Extinguisher Cabinet	JST. Joist	P.G. Paint Grade	S.V. Section	
C.B. Catch Basin	F.H.C. Fire Hose Cabinet	MIC. Microwave	P.L.A.M. Plastic Laminated	Spec. Specifications	
C.J. Control Joint	F/F Face to Face	M.B.C. Manitoba Building Code	P.L.Y.W.D. Plywood	Struct. Structural	
CL. Closet	FIN. Finish	N.A. Not Applicable	PREFAB. Prefabricated	T. Tread	
CL. Centre Line	F/O Face of	N.D. Not Applicable	PREFIN. Prefinished	T.B. Tack Board	
CLG. Ceiling	F.A.P. Fire Annunciator Panel	N.I.C. Not in Contract	P.S. Paint	Tbd. Tackboard	
CLR. Clear	FLR. Floor	N.T.S. Not to Scale	P.T. Pressure Treated	T.I. Tenant improvement	
C.M.U. Concrete Masonry Unit	FTG. Footing	N.O. Unless Noted Otherwise	P.V.C. Polyvinylchloride	T & G. Tongue & Groove	
CONC. Concrete	GA. Gauge	R. Riser	Q.T. Quarry Tile	T.O. Top of	
COL. Column	GALV. Galvanized	R/A Return Air	R. Riser	T.P. Toilet Partition	
CPT. Carpet	G.B. Grab Bar	R.B. Rubber Base	R.A. Return Air	T.P.D. Toilet Paper Dispenser	
C.T. Ceramic Tile	G.C. General Contractor	RCP. Reflected Ceiling plan	R.C. Rubber Ceiling	TYP. Typical	
C/W Complete With	GL. Glass/Glazing	REQ'D. Required	R.D. Roof Drain	UNFIN. Unfinished	
	G.1.S. Good One Side	REV. Revision	R.H. Robe Hook	U.N.O. Unless Noted Otherwise	
	GWB. Gypsum Wallboard	RFG. Refrigerator	R.O. Rough Opening	VB. Vapour Barrier	
		R.D. Roof Drain	R.S. Rod & Shelf	VT. Vinyl Tile	

CONSTRUCTION TYPES SCHEDULE

EXTERIOR WALL TYPES

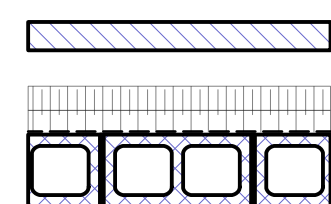
GENERAL NOTES:

- SEAL AROUND BRICK TIES W/ MASTIC
- SEAL INSULATION GAPS W/ CLOSED CELL SPRAY FOAM INSULATION
- SEAL AROUND ALL PENETRATIONS



E1 - INSUL. CONC. PERIMETER FOUNDATION

- 2 LAYERS 50 RIGID INSULATION (TYPE 4) (TOTAL R-20). OUTER LAYER TO BE CONCRETE-FACED WALL PANEL FOR TOP 500MM. STAGGER JOINTS.
- AVB (TYPE A) (SELF ADHERED)
- CONCRETE FOUNDATION (SEE STRUCT.)



E2 - BRICK VENEER ON CONC. BLK. WALL

- 90 BRICK VENEER
- 38 DRAINAGE CAVITY
- BASE LAYER 75 W/ TOP LAYER 50 (TYPE 3) RIGID INSUL. (TOTAL R-25)
- VB (TYPE C) (TORCH ADHERED)
- CONCRETE BLOCK (SEE STRUCT.)

E3 - GLASS CURTAIN WALL

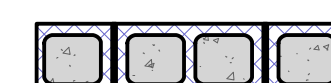
INTERIOR WALL TYPES

GENERAL NOTES:

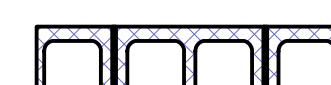
1.



P1 - 190 C.M.U. WALL
- 190 CONC. BLK. (SEE STRUCT.)



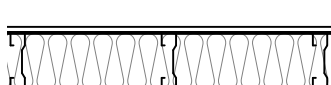
P1F - 190 C.M.U. WALL (FIRE SEPARATION W/ 2HR F.R.R.)
- 190 CONC. BLK. GROUT SOLID (ALL CORES FILLED) (SEE STRUCT.)



P2 - 240 C.M.U. WALL
- 240 CONC. BLK. (SEE STRUCT.)



P3 - 92 STL. STUD PARTITION
- 16 GWB (TYPE 'X')
- 92 STEEL STUD @400 O.C. CAVITIES FILLED WITH SOUND BATT INSULATION
- 16 GWB (TYPE 'X')



P4 - 152 STL. STUD PARTITION
- 16 GWB (TYPE 'X')
- 152 STEEL STUD @400 O.C. CAVITIES FILLED WITH SOUND BATT INSULATION
- 16 GWB (TYPE 'X')

P5 - GLASS PARTITION

GENERAL NOTES

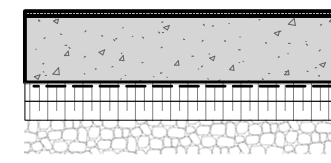
- THESE DRAWINGS SHALL NOT BE SCALED.
- THE CONTRACTOR IS TO SITE VERIFY ALL DIMENSIONS.
- SITE VERIFY EXISTING CONDITIONS TO COORDINATE WITH NEW CONSTRUCTION
- THE CONTRACTOR IS TO REPORT ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENINGS THROUGH FLOORS, WALLS, AND ROOFS.
- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES ARE TO BE FIRE-STOPPED AND SEALED WITH ULC APPROVED FIRE-STOPPING SYSTEM TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION, AND PROVIDE A SMOKE-TIGHT BARRIER.
- ALL PRODUCTS AND MATERIALS ARE TO BE USED AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- PROVIDE TRANSITION STRIPS BETWEEN DIFFERENT FLOOR FINISHES AS REQUIRED. REFER TO SPEC.
- PROVIDE BLOCKING AS REQ'D FOR ALL WALL & CEILING MOUNTED EQUIPMENT, FIXTURES AND MILLWORK. CONTRACTOR TO CONFIRM MOUNTING HEIGHTS OF ALL EQUIPMENT, FIXTURES, MILLWORK WITH ARCHITECT WHERE NOT SHOWN.

- GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR COSTS ASSOCIATED WITH CONFIRMING EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO SEPARATE EXCAVATION FOR CONFIRMATION OF FOUNDATION UNITS AND EXISTING SERVICES, CONCRETE REINFORCING SCANNING, AND SELECTIVE DEMOLITION.
- NOTIFY OWNER AND CONSULTANT MINIMUM 7 (SEVEN) WORKING DAYS BEFORE REMOVING, CUTTING, DRILLING OR SLEEVING STRUCTURAL OR LOAD BEARING MEMBERS INCLUDING FLOOR SLABS. MARK OUT EXACT LOCATIONS AND DIMENSIONS TO ALLOW REVIEW. (SCAN CONCRETE FOR IN-SLAB SERVICES PRIOR TO CUTTING AND CORING. DO NOT PROCEED WITH CUTTING AND CORING UNTIL RESULTS OF SCAN HAVE BEEN REVIEWED BY OWNER AND CONSULTANT.)
- DIMENSIONS TYP. FROM FACE OF STUD, FACE OF CONCRETE OR GRID LINE.
- ROUGH-IN FOR ALL APPLIANCES IN CONTRACT. REFER TO MECH. & ELEC.
- PROVIDE INTERIOR MOUNTED BLINDS AT ALL EXTERIOR WINDOWS UNLESS NOTED OTHERWISE. REFER TO SPEC.

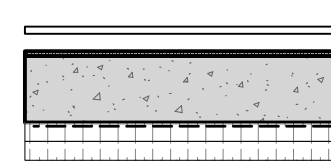
FLOOR TYPES

GENERAL NOTES:

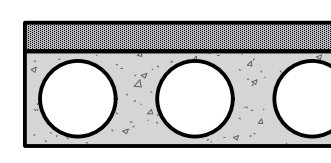
1.



F1 - FIRST FLR STRUCTURAL SLAB
- FINISHED FLOORING - REFER TO SPECIFICATION AND SCHEDULE
- STRUCTURAL CONC. SLAB (SEE STRUCT.)
- 20 MIL. V.B. LINER SHEET (TYPE K)
- 100 RIGID INSULATION (TYPE 4) (TOTAL R-20) (MECH. FASTEN TO CONC. SLAB)
- VOID FORM ON COMPACTED SUBGRADE (SEE STRUCT.)
*NOTE: SEAL V.B. LINER SHEET TO GRADE BEAMS / CONC. FOUNDATION WALLS. PROVIDE 150MM CONT. FOLD IN V.B. AT PERIMETER FOR SLACK. REFER TO SECTIONS.



F2 - GYM STRUCTURAL SLAB
- FINISHED FLOORING - REFER TO SPECIFICATION AND SCHEDULE
- STRUCTURAL CONC. SLAB (SEE STRUCT.)
- 20 MIL. V.B. LINER SHEET (TYPE K)
- 100 RIGID INSULATION (TYPE 4) (TOTAL R-20) (MECH. FASTEN TO CONC. SLAB)
- VOID FORM ON COMPACTED SUBGRADE (SEE STRUCT.)
*NOTE: SEAL V.B. LINER SHEET TO GRADE BEAMS / CONC. FOUNDATION WALLS. PROVIDE 150MM CONT. FOLD IN V.B. AT PERIMETER FOR SLACK. REFER TO SECTIONS.

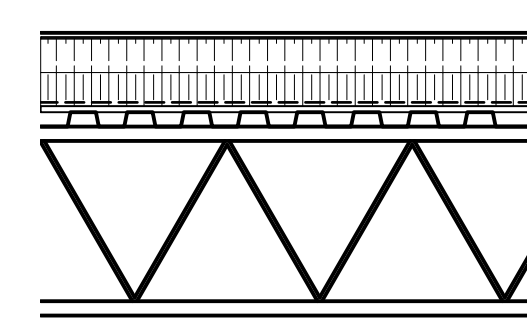


F3 - SECOND FLR HOLLOWCORE
- 75 CONC. TOPPING (SEE STRUCT.)
- PRECAST HOLLOWCORE (SEE STRUCT.)
- LINER SHEET VB (TYPE K) (AT MAIN FLOOR ONLY)

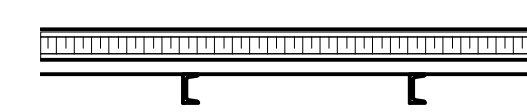
ROOF TYPES

GENERAL NOTES:

1.



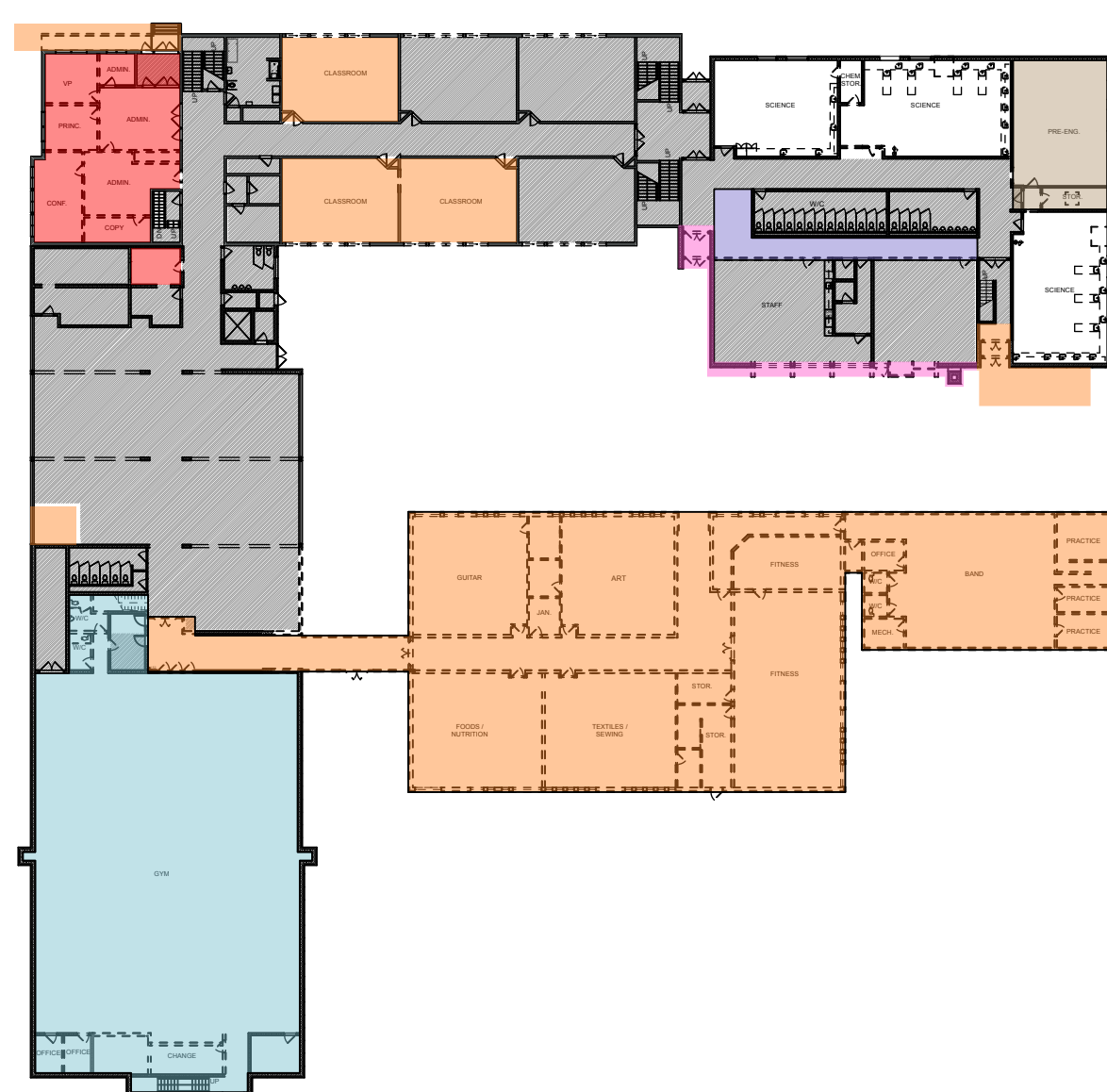
R1 - MOD. BIT. ROOFING ON SLOPED STL. STRUCT.
- MOD. BIT. ROOFING CAP SHEET (TORCHED)
- MOD. BIT. ROOFING BASE SHEET (ADHERED)
- PROTECTION OVERLAY BOARD (ADHERED)
- (2)-LAYERS STAGGERED 89mm (TYPE 6) POLYISO RIGID INSUL. (ADHERED) (TOTAL R-40)
- SBS MOD. BIT. V.B. (TYPE U) (SELF ADHERED)
- 16mm (TYPE X) ROOF SHEATHING (THERMAL BARRIER) (ADHERED TO DECK)
- 75mm ACOUSTIC STEEL DECK C/W MINERAL WOOL INSULATION BETWEEN FLUTES, ON STEEL ROOF STRUCTURE. (SEE STRUCT.)



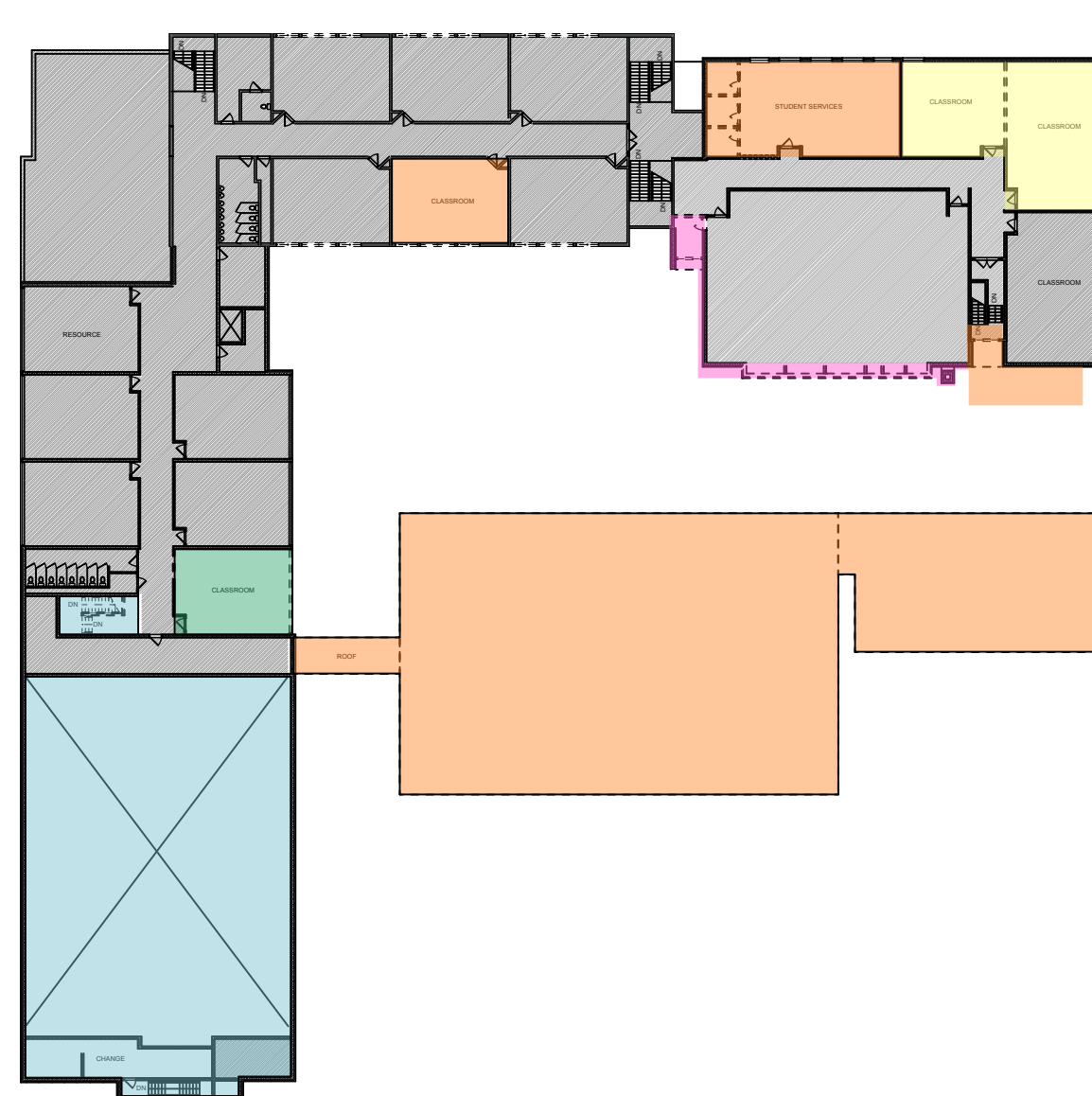
R2 - MOD. BIT. ROOF AT EXTERIOR CANOPIES
- 2 PLY MOD. BIT. ROOFING
- 13 POLYISO HD RECOVERY BOARD - (ADHERED) (FIRE TAPE JOINTS)
- TAPERED EPS RIGID INSULATION CRICKETS (TYPE 2) - (ADHERED)
- 16 GLASS MAT ROOF SHEATHING (TYPE X)
- STEEL DECKING ON STEEL STRUCTURE (SEE STRUCT.)
- FINISH (SEE DRAWINGS)

PHASING PLAN

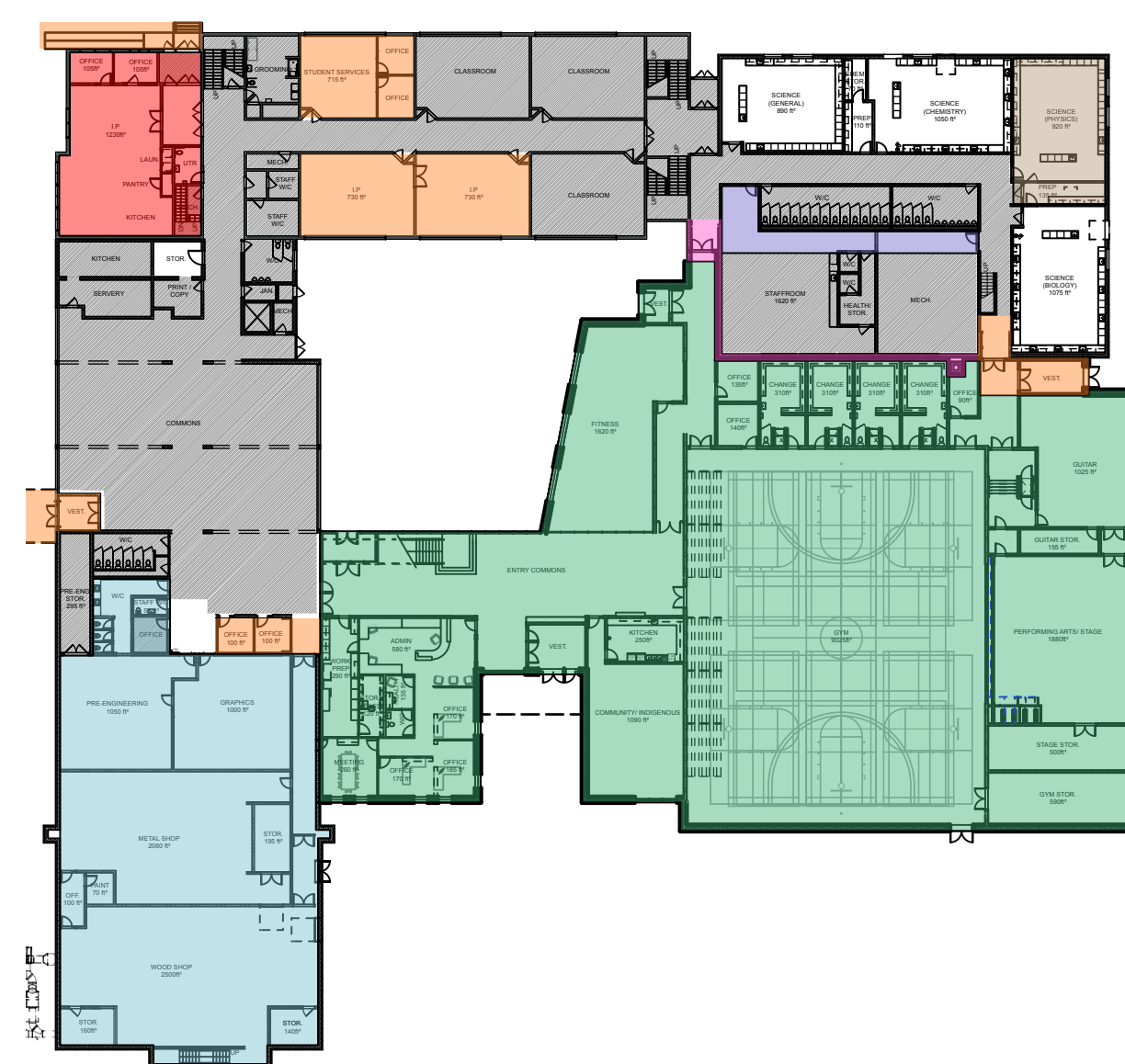
- | | |
|---|--|
| ■ PHASE 1A : JUNE 1, 2024 - AUGUST 30, 2024 | ■ PHASE 2: NOV. 1, 2024 - DECEMBER 30, 2025 |
| ■ PHASE 1B : JUNE 1, 2024 - OCTOBER 30, 2024 | ■ PHASE 3: JULY 1, 2025 - AUGUST 30, 2025 |
| ■ PHASE 1C: JULY 1, 2024 - AUGUST 30, 2024 | ■ PHASE 4 : JAN 1, 2026 - JUNE 30, 2026 |
| ■ PHASE 1D: JULY 1, 2024 - OCTOBER 30, 2024 | ■ PHASE 5: JULY 1, 2026 - AUGUST 30, 2026 |



1 MAIN FLOOR PHASING PLAN - DEMO
A0-01 Scale: 1:600



2 SECOND FLOOR PHASING PLAN - DEMO
A0-01 Scale: 1:600



3 MAIN FLOOR PHASING PLAN - NEW
A0-01 Scale: 1:600



4 SECOND FLOOR PHASING PLAN - NEW
A0-01 Scale: 1:600

issue / rev.		
1	2023-03-31	ISSUED FOR CLASS D PRICING
#	date	issue notes

professional seals

PRELIMINARY

DATE PLOTTED
2023 Apr 26

NOT FOR CONSTRUCTION

PRELIMINARY

DATE PLOTTED
2023 Apr 26

NOT FOR CONSTRUCTION

project information

**WINDSOR PARK COLLEGIATE
TRANSITION TO SPEERS RD.**

296 Speers Road
Winnipeg, MB
Canada

client

LOUIS RIEL
SCHOOL DIVISION

Louis Riel School Division
900 St. Mary's Road
Winnipeg, MB

drawing information

**SCHEDULES &
PHASING PLAN**

drawn by: CR
approved by: LO

scale: AS NOTED
date issued:
proj. #: 2022.55
rev. #:

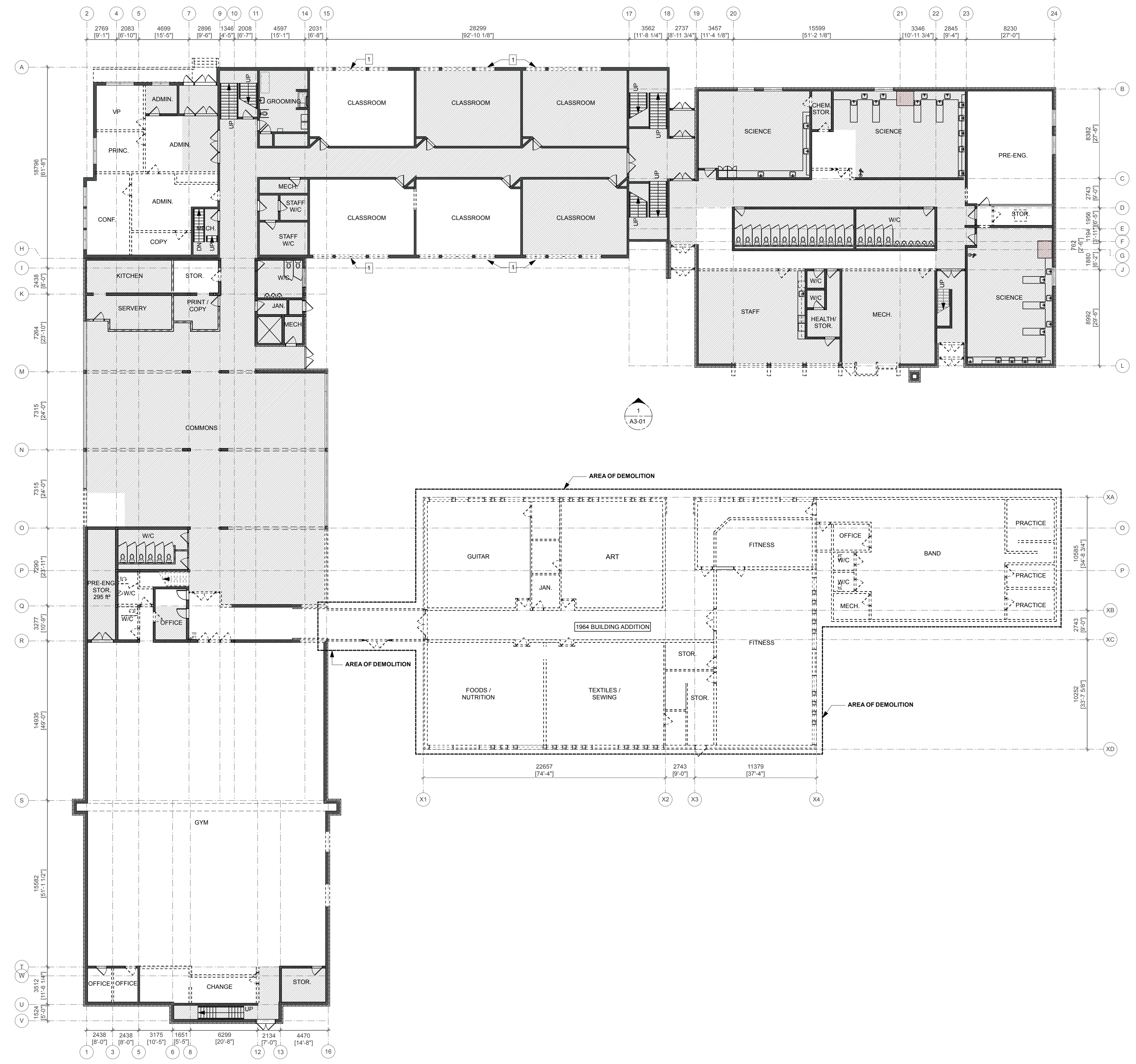
**WINDSOR PARK COLLEGIATE
TRANSITION TO SPEERS RD.**

DEMOLITION GENERAL NOTES

- A. FULL DEMOLITION OF ENTIRE 1964 BUILDING INCLUDING ENTRY LINK AND BAND ROOM.
- B. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BUILDING ELEMENTS SCHEDULED TO REMAIN.
- C. REPAIR ALL EXISTING CONSTRUCTION DAMAGES BY OVER-EXUBERANT DEMOLITION.
- D. CAREFULLY REMOVE ALL WHITE BOARDS, TACKBOARDS, PROJECTOR SCREENS AND PROJECTORS AND TURN OVER TO OWNER.

Notes

- 1. REMOVE EXISTING WINDOW AND ENLARGE OPENING



1 MAIN FLOOR PLAN - DEMO
 A2-01 Scale: 1:200

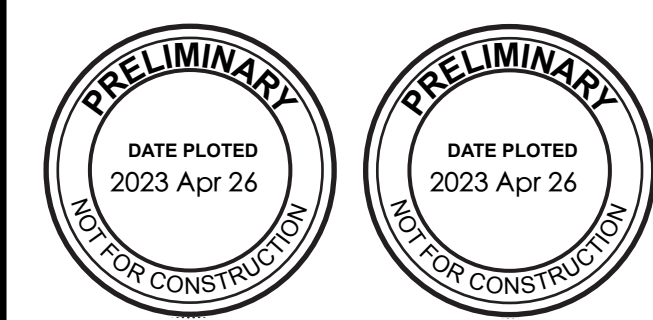
DEMOLITION - LEGEND:

- EXISTING WALL - TO REMAIN
- - - - - EXISTING WALL - TO BE DEMOLISHED
- ▨ EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
- ▨ EXISTING BUILDING - TO REMAIN, N.I.C.
- ⌣ EXISTING DOOR - TO REMAIN
- ⌣ EXISTING DOOR - TO BE DEMOLISHED

issue / rev.

1	2023-03-31	ISSUED FOR CLASS D PRICING
#	date	issue notes

professional seals



project information

**WINDSOR PARK COLLEGIATE
 TRANSITION
 TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

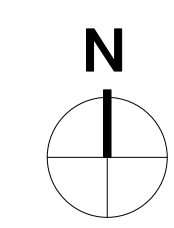
**MAIN FLOOR
 DEMO PLAN**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 rev. #:

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**
 296 Speers Road, Winnipeg, MB

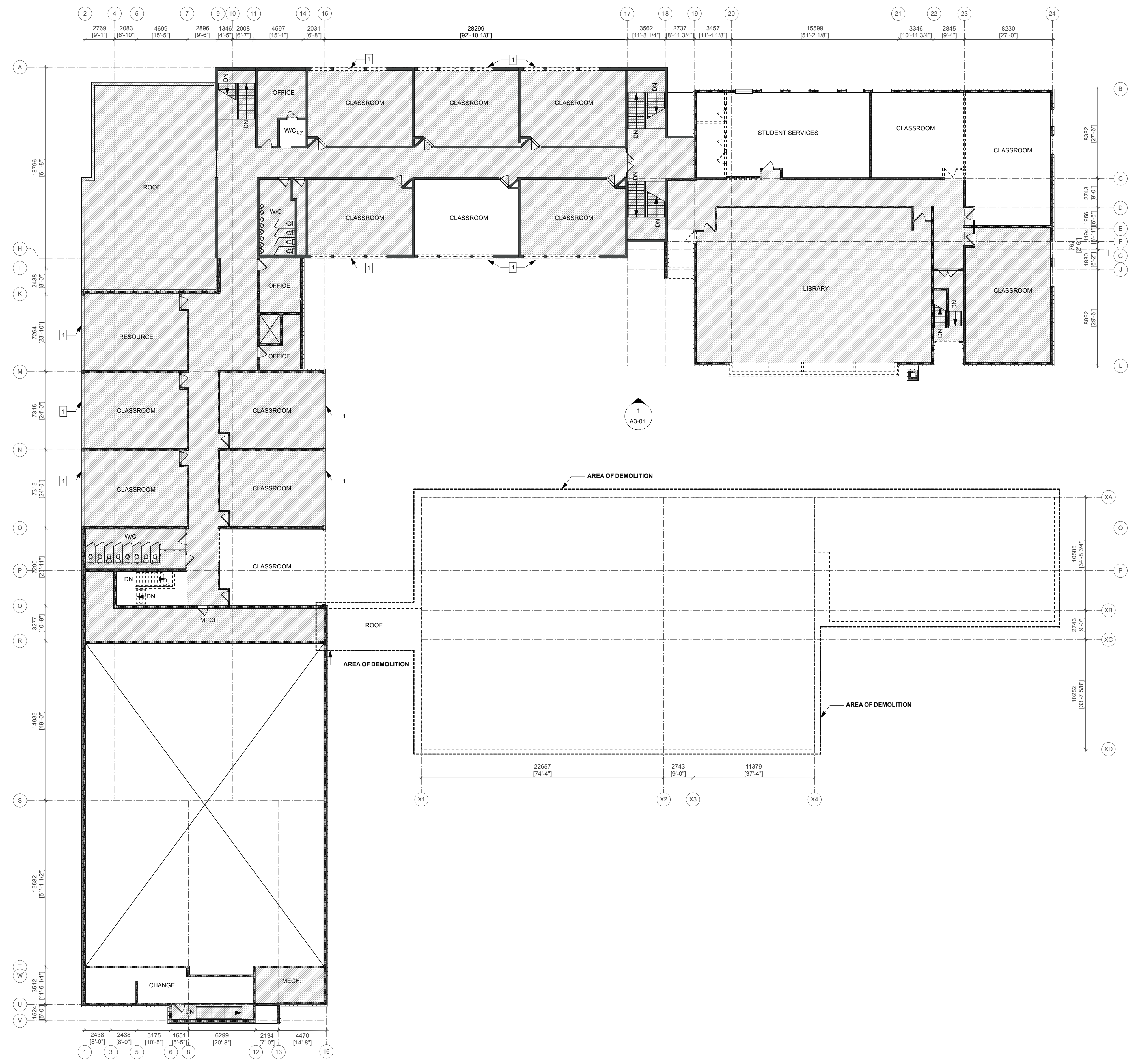
**A2
 01**



This drawing must not be scaled. The contractor shall verify all dimensions and other data on site prior to commencement of work. All discrepancies, errors, and omissions are to be reported to the architect. Drawing and specifications, as instruments of service, are the property of the architect, and when made, must bear his name. All prints to be returned to the architect on request.

- DEMOLITION GENERAL NOTES**
- FULL DEMOLITION OF ENTIRE 1964 BUILDING INCLUDING ENTRY LINK AND BAND ROOM.
 - TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BUILDING ELEMENTS SCHEDULED TO REMAIN.
 - REPAIR ALL EXISTING CONSTRUCTION DAMAGES BY OVER-EXUBERANT DEMOLITION.
 - CAREFULLY REMOVE ALL WHITE BOARDS, TACKBOARDS, PROJECTOR SCREENS AND PROJECTORS AND TURN OVER TO OWNER.

- Notes**
- REMOVE EXISTING WINDOW AND ENLARGE OPENING



1 SECOND FLOOR PLAN - DEMO
 A2-02 Scale: 1:200

- DEMOLITION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - EXISTING WALL - TO BE DEMOLISHED
 - EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - EXISTING DOOR - TO REMAIN
 - EXISTING DOOR - TO BE DEMOLISHED

issue / rev.	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals

PRELIMINARY
DATE PLOTTED
2023 Apr 26
NOT FOR CONSTRUCTION

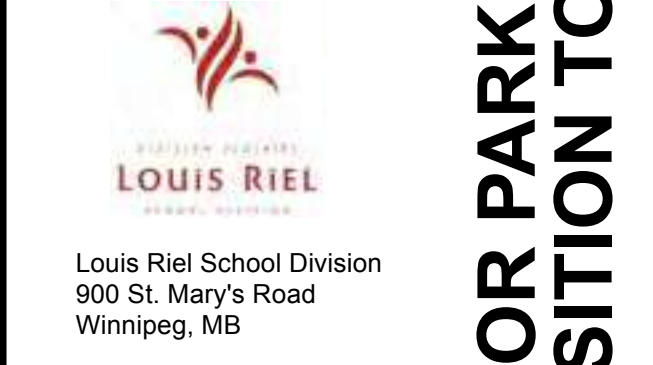
PRELIMINARY
DATE PLOTTED
2023 Apr 26
NOT FOR CONSTRUCTION

project information

**WINDSOR PARK COLLEGIATE
 TRANSITION
 TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

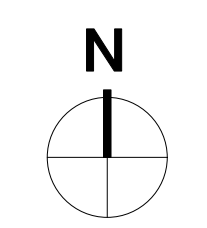
**SECOND FLOOR
 PLAN - DEMO**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 proj. #: 2022.55
 rev. #:

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

**A2
 02**



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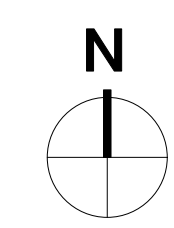
RENOVATION GENERAL NOTES
 A. NEW PAINT THROUGHOUT EXISTING BUILDING
 B. PATCH AND REPAIR EXISTING BUILDING AS REQUIRED AFTER DEMOLITION

NOTES
 1. REPLACE FLOORING
 2. NEW LARGE WINDOWS



1 MAIN FLOOR PLAN - NEW
 A2-03 Scale: 1:200

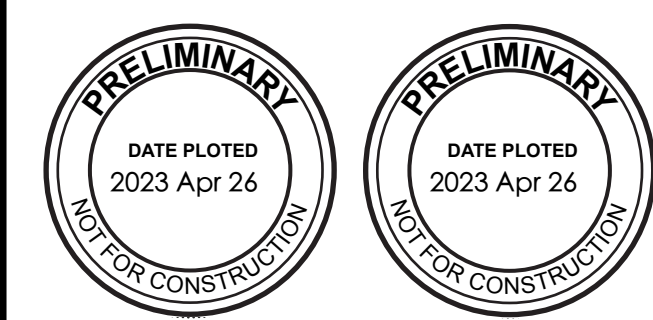
- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St. Mary's Road
 Winnipeg, MB

drawing information

**MAIN FLOOR
 PLAN - NEW**

drawn by: CR
 approved by: LO

scale: 1:100
 date issued: 2022.55
 rev. #:

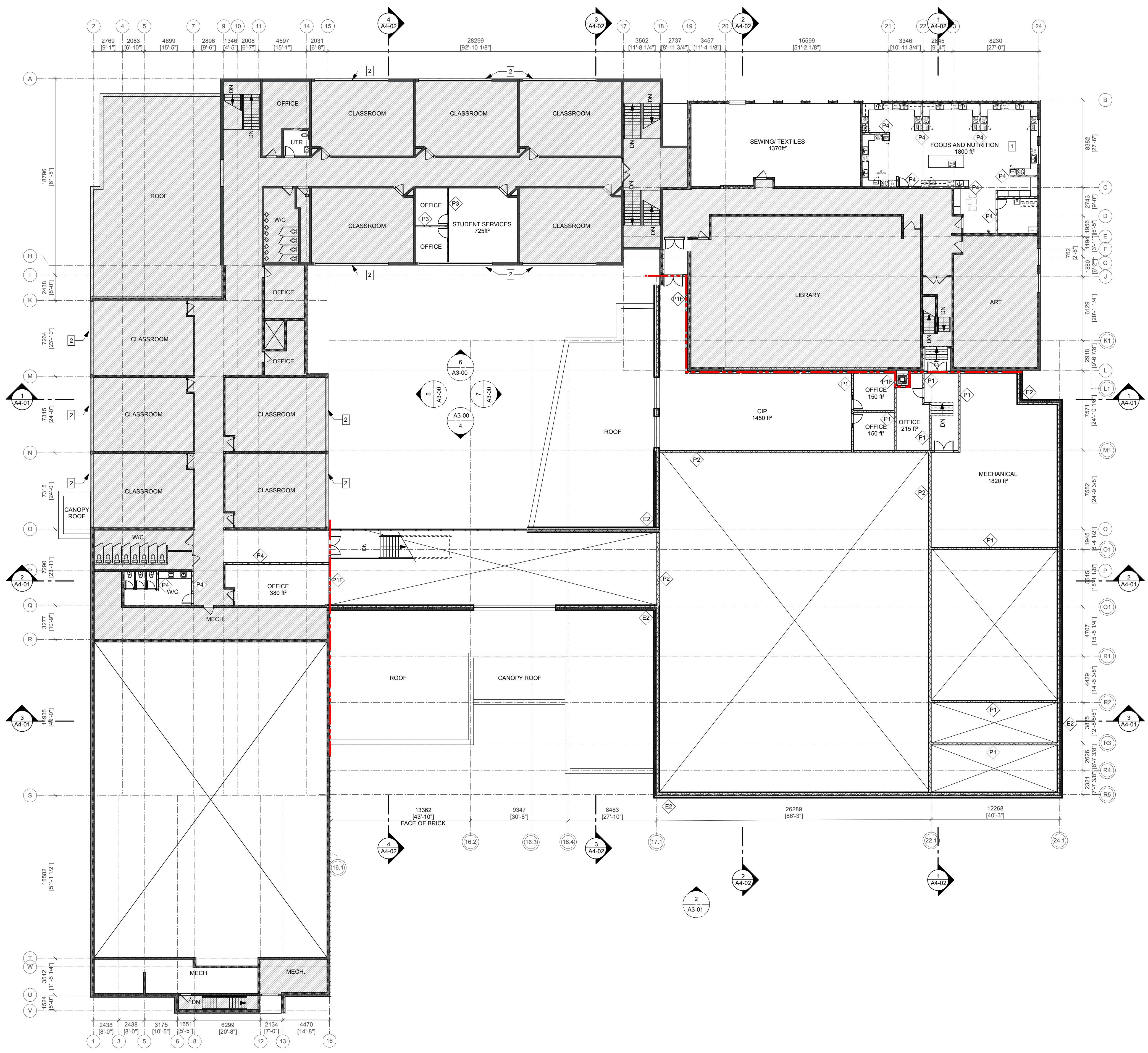
**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**
 206 Speers Road, Winnipeg, MB

**A2
 03**

This drawing must not be scaled. The contractor shall verify all dimensions and other data on site prior to commencement of work. All discrepancies, errors, and omissions are to be reported to the architect. Drawing and specifications, as instruments of service, are the property of the architect. No reproduction may be made without the permission of the architect, and when made, must bear his name. All prints to be returned to the architect on request.

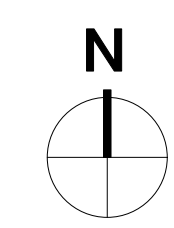
RENOVATION GENERAL NOTES
 A. NEW PAINT THROUGHOUT EXISTING BUILDING
 B. PATCH AND REPAIR EXISTING BUILDING AS REQUIRED AFTER DEMOLITION

NOTES
 1. REPLACE FLOORING
 2. NEW LARGE WINDOWS



1 SECOND FLOOR PLAN - NEW
 A2-04 Scale: 1:200

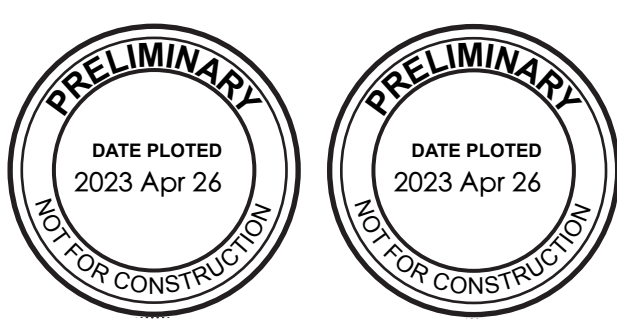
- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St. Mary's Road
 Winnipeg, MB

drawing information

**SECOND FLOOR
 PLAN - NEW**

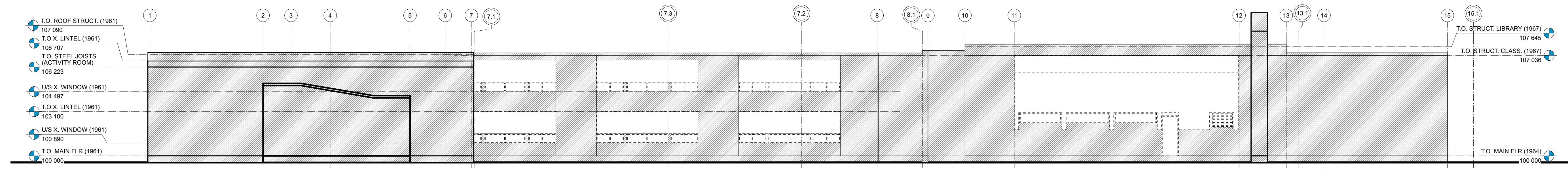
drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 rev. #:

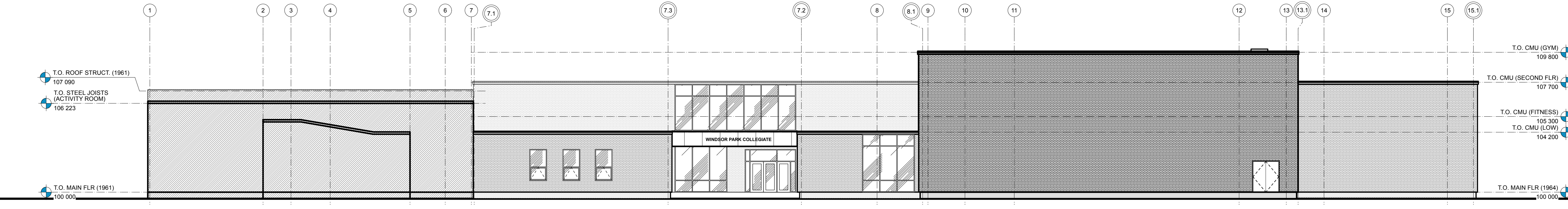
**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**
 296 Speers Road, Winnipeg, MB

**A2
 04**

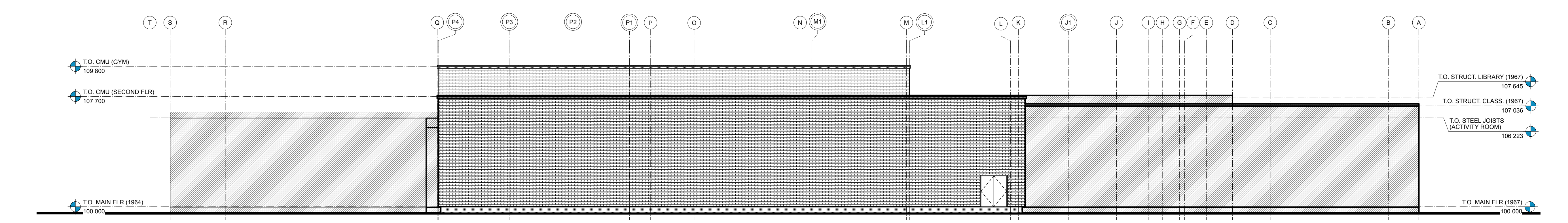
This drawing must not be scaled. The contractor shall verify all dimensions and other data on site prior to commencement of work. All discrepancies, errors, and omissions are to be reported to the architect. Drawing and specifications, as instruments of service, are the property of the architect. No reproduction may be made without the permission of the architect, and when made, must bear his name. All prints to be returned to the architect on request.



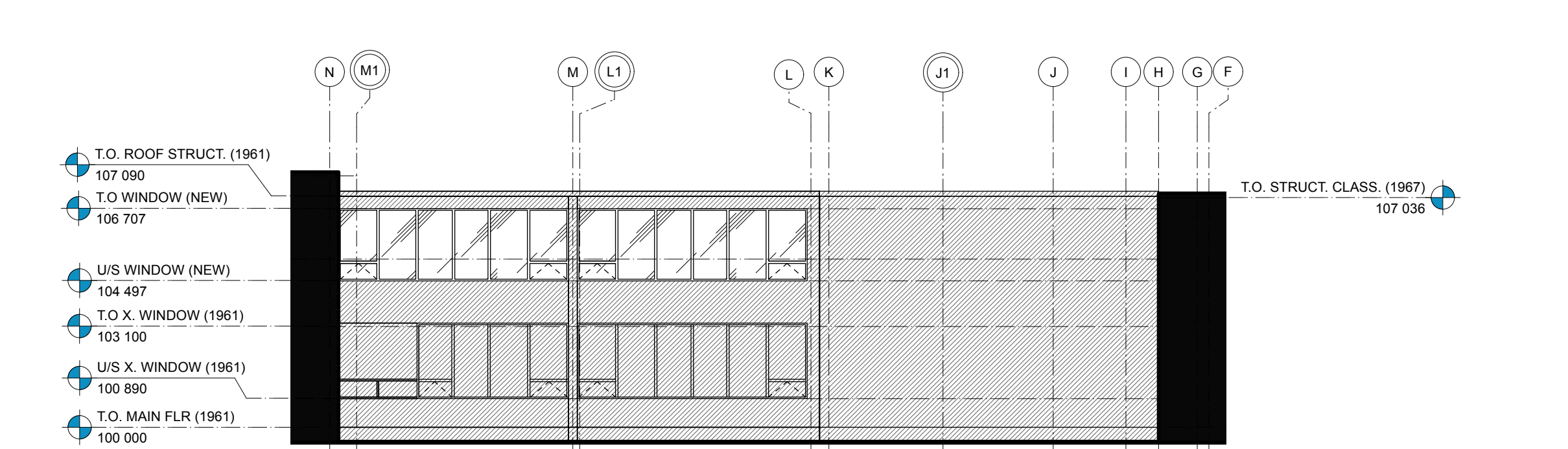
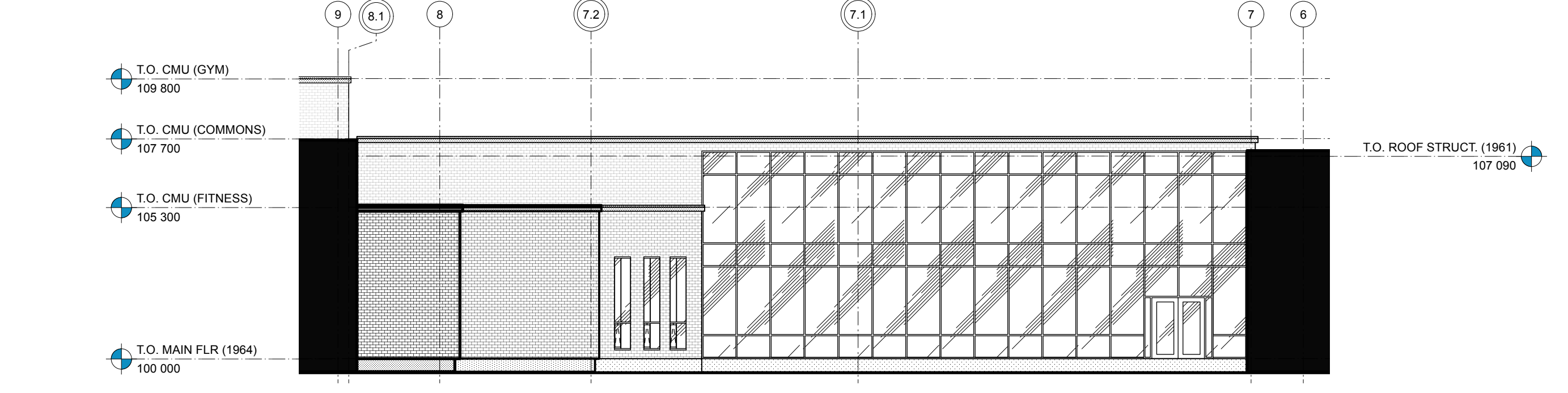
1 SOUTH ELEVATION - DEMO
 A3-01 Scale: 1:150



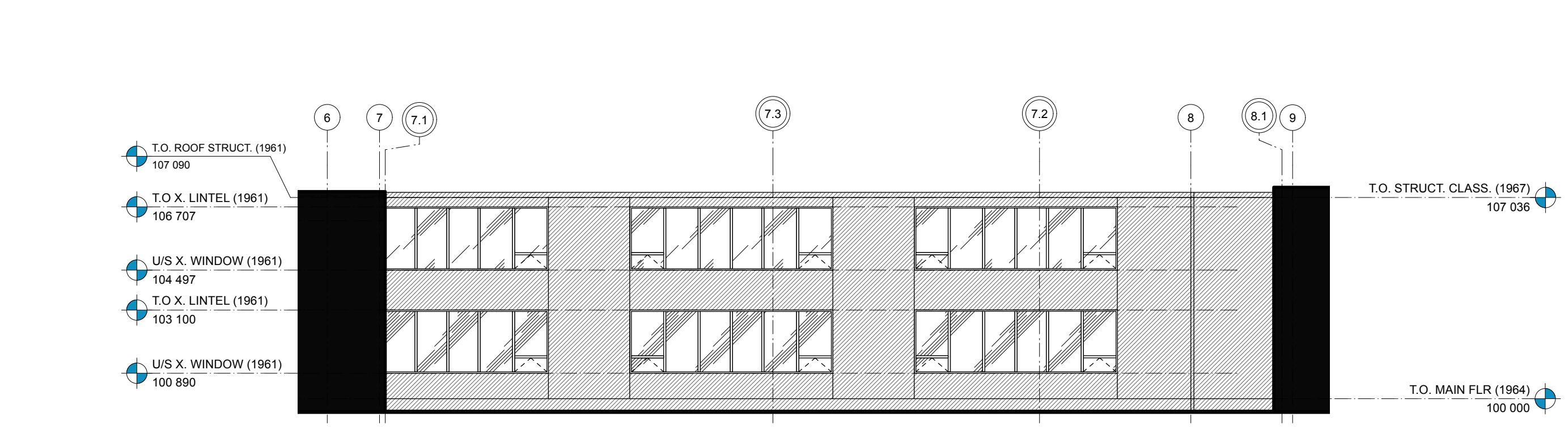
2 SOUTH ELEVATION - NEW
 A3-01 Scale: 1:150



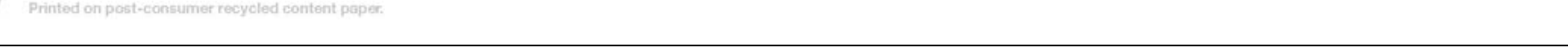
3 WEST ELEVATION - NEW
 A3-01 Scale: 1:150



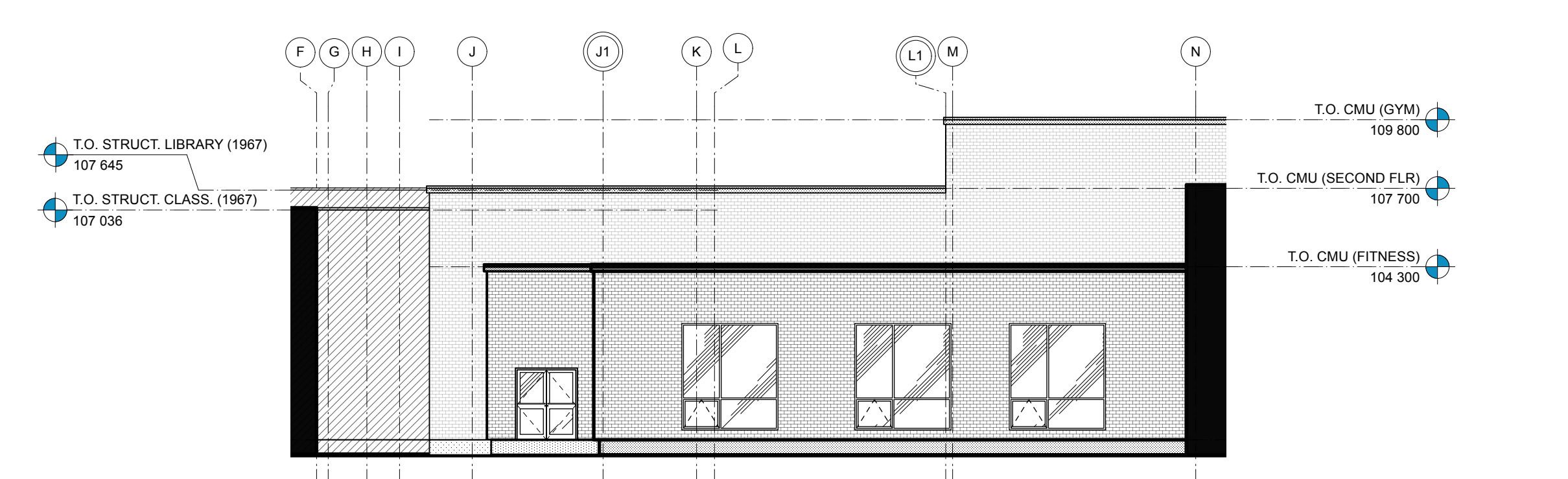
4 SOUTH COURTYARD ELEVATION - NEW
 A3-01 Scale: 1:150



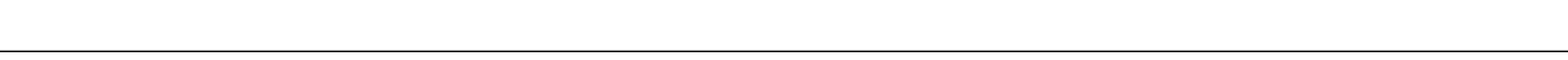
6 NORTH COURTYARD ELEVATION - NEW
 A3-01 Scale: 1:150



5 WEST COURTYARD ELEVATION - NEW
 A3-01 Scale: 1:150



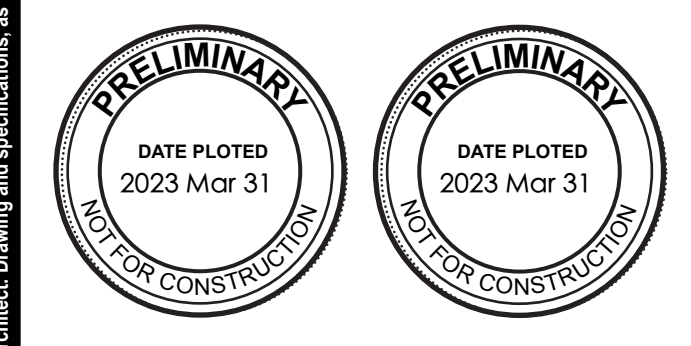
7 EAST COURTYARD ELEVATION - NEW
 A3-01 Scale: 1:150



issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

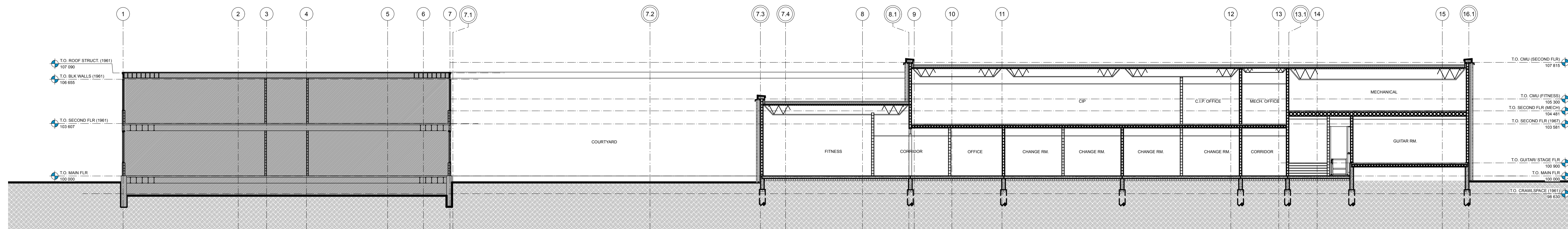
**ELEVATIONS
 - DEMO/ NEW**

drawn by: CR
 approved by: LO

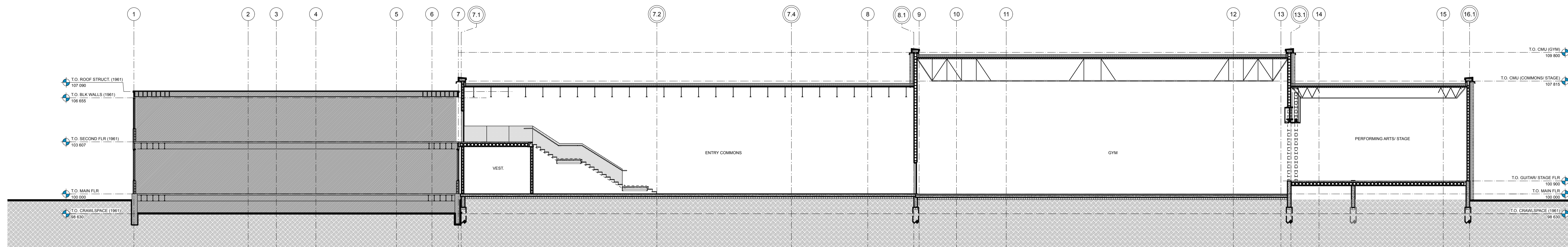
scale: AS NOTED
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 proj. #: 2022.55
 rev. #:

WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.
 296 Speers Road, Winnipeg, MB

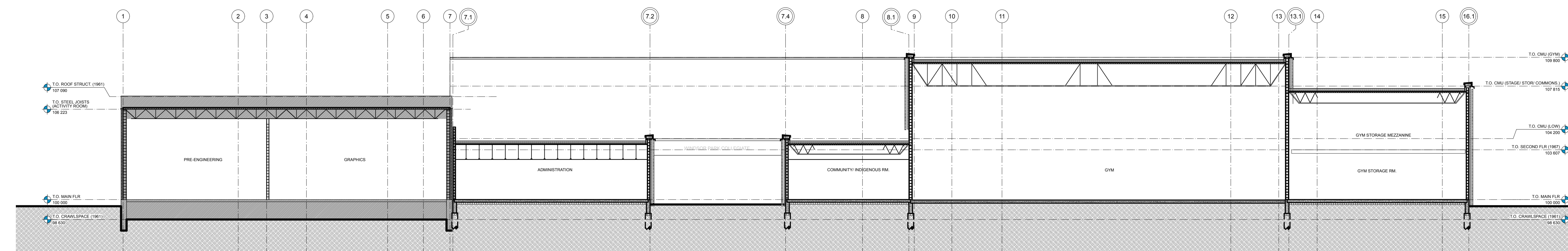
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1 E-W FITNESS/ GUITAR ROOM SECTION
 A4-01 Scale: 1:150



2 E-W ENTRY COMMONS/ GYM/ STAGE SECTION
 A4-01 Scale: 1:150

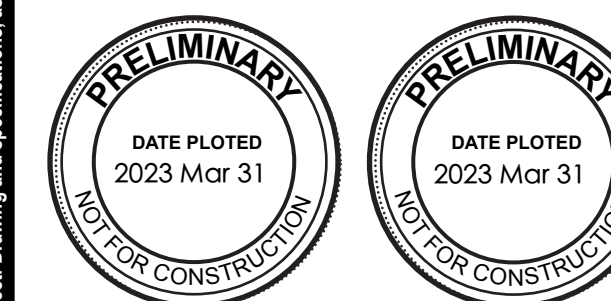


3 E-W ADMIN/ COMMUNITY ROOM/ GYM SECTION
 A4-01 Scale: 1:150

issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

296 Speers Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St. Mary's Road
 Winnipeg, MB

drawing information

BUILDING SECTIONS - NEW

drawn by: CR

approved by: LO

scale: AS NOTED

date issued:

proj. #: 2022.55

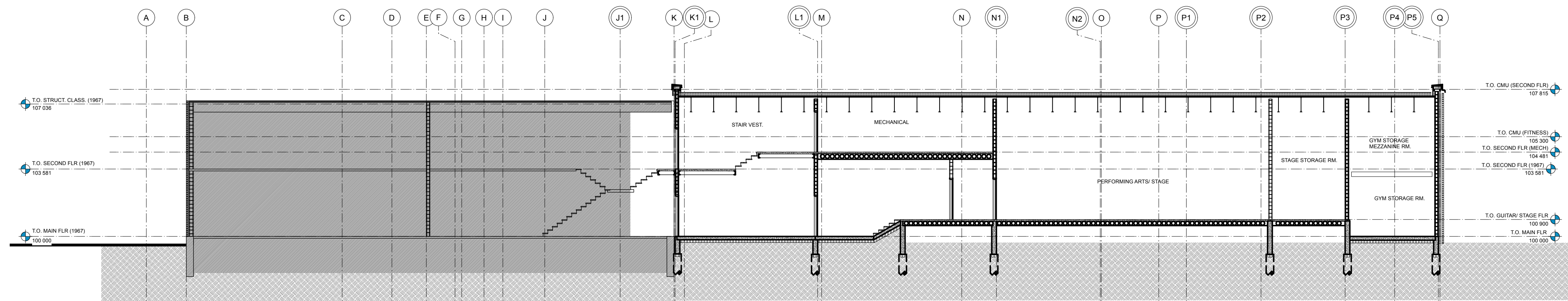
rev. #:

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.
 296 Speers Road, Winnipeg, MB

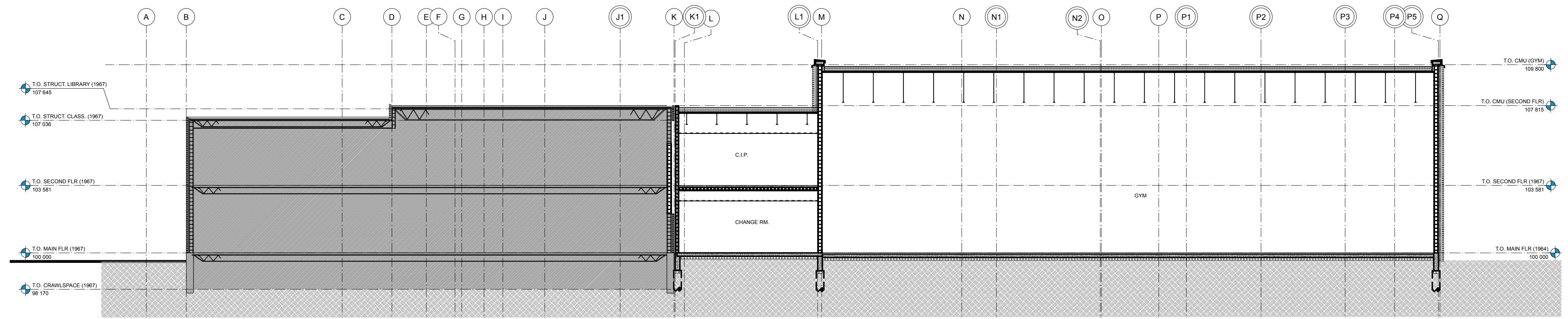
**A4
01**



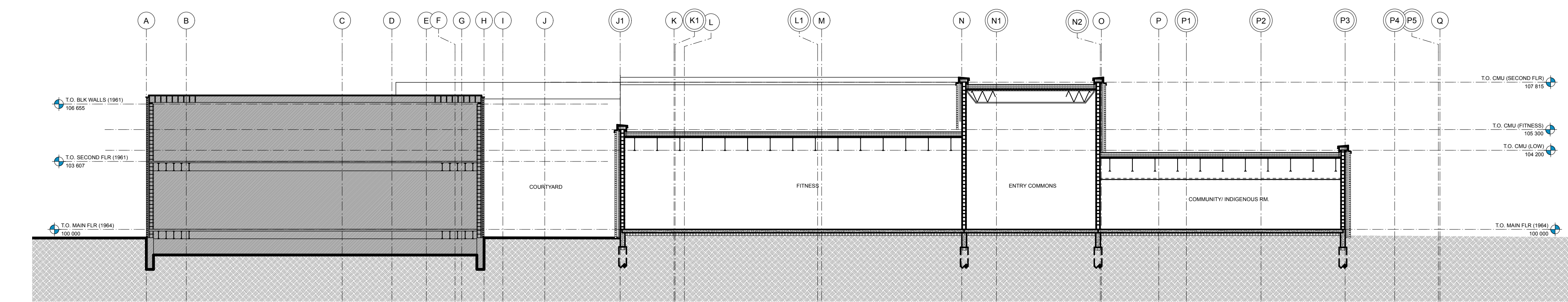
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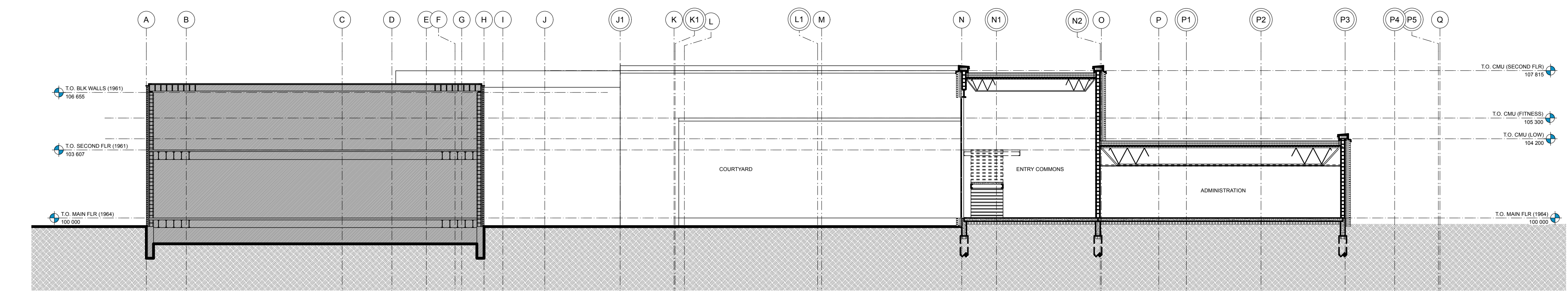
1 N-S MECHANICAL/STAGE/STORAGE SECTION
 A4-02 Scale: 1:150



2 N-S GYM/CLASSROOM SECTION
 A4-02 Scale: 1:150



3 N-S FITNESS/ENTRY COMMONS/COMMUNITY ROOM SECTION
 A4-02 Scale: 1:150

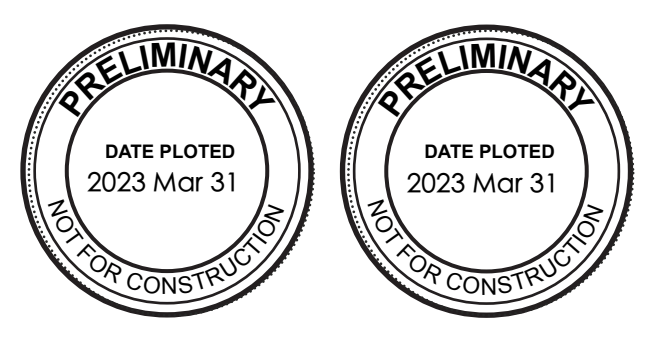


4 N-S ENTRY COMMONS/ADMIN SECTION
 A4-02 Scale: 1:150

issue / rev.

#	date	issue notes
1	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.
 296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

BUILDING SECTIONS - NEW

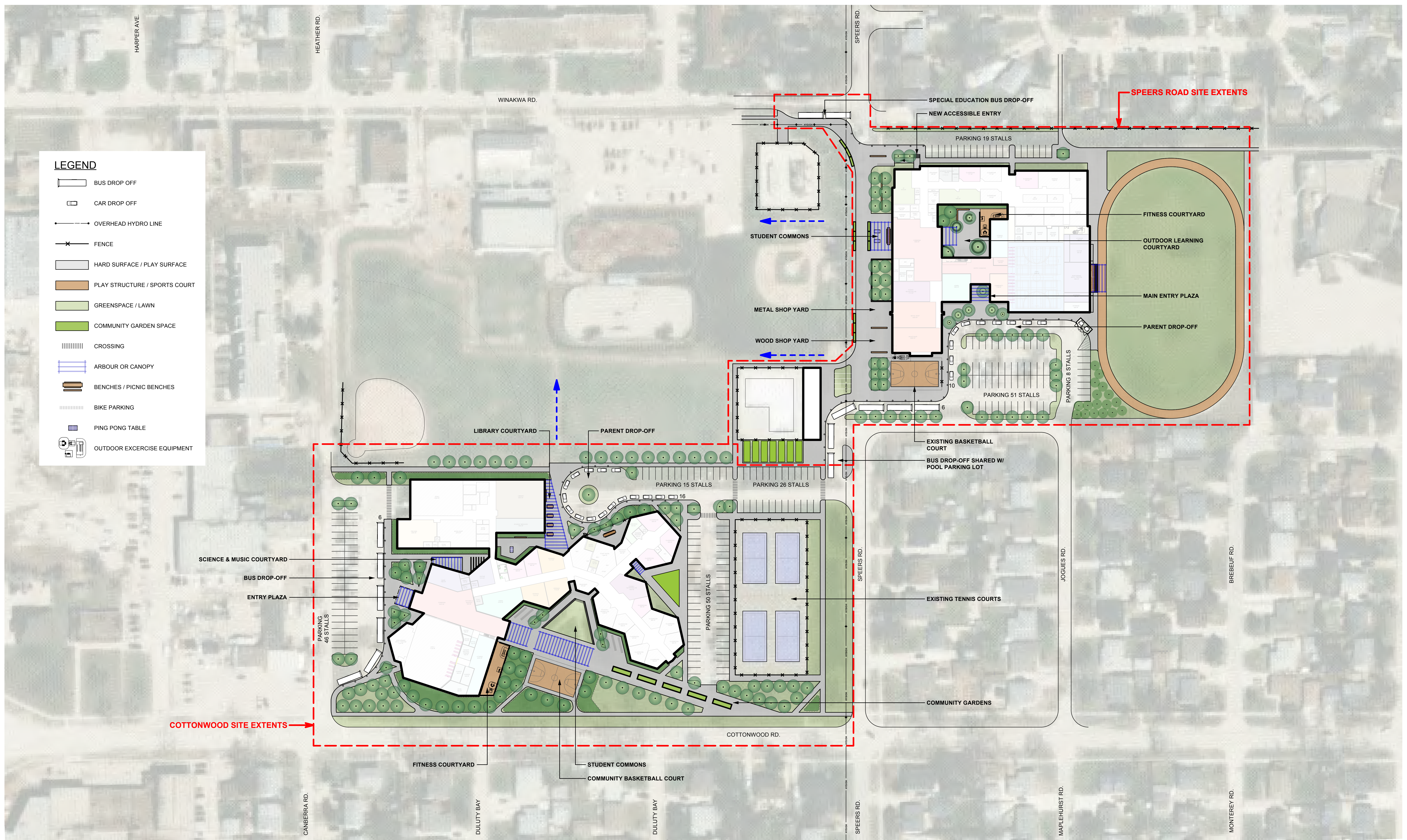
drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued:
 proj. #: 2022.55
 rev. #:

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

**A4
02**

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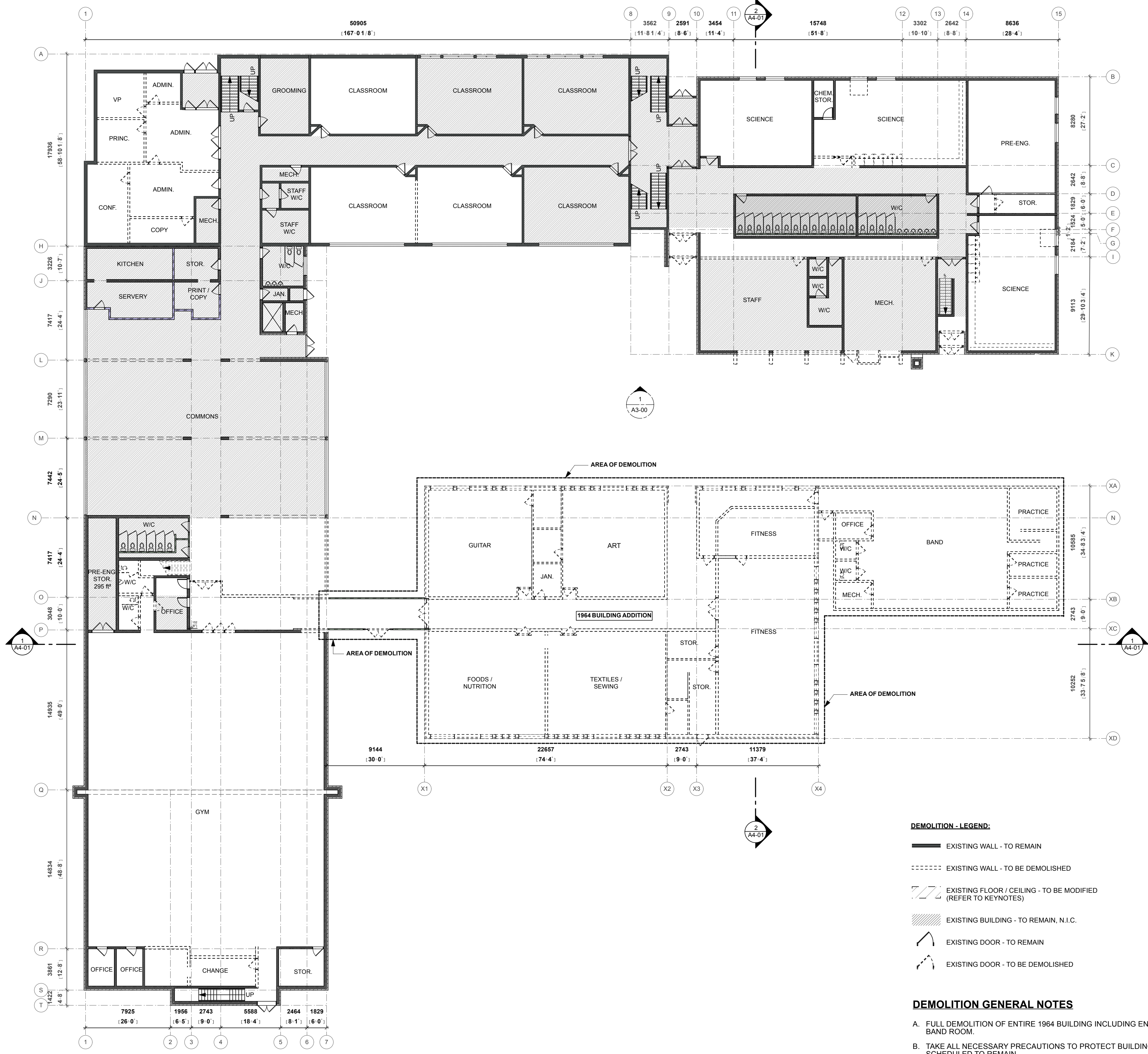


LEGEND

- BUS DROP OFF
- CAR DROP OFF
- OVERHEAD HYDRO LINE
- FENCE
- HARD SURFACE / PLAY SURFACE
- PLAY STRUCTURE / SPORTS COURT
- GREENSPACE / LAWN
- COMMUNITY GARDEN SPACE
- CROSSING
- ARBOUR OR CANOPY
- BENCHES / PICNIC BENCHES
- BIKE PARKING
- PING PONG TABLE
- OUTDOOR EXERCISE EQUIPMENT

COTTONWOOD SITE EXTENTS

SPEERS ROAD SITE EXTENTS



1 MAIN FLOOR PLAN - DEMO
Scale: 1:200

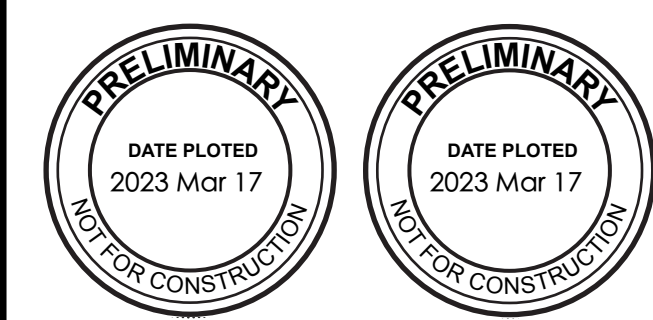
- DEMOLITION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - - - - - EXISTING WALL - TO BE DEMOLISHED
 - /// EXISTING FLOOR / CEILING - TO BE MODIFIED (REFER TO KEYNOTES)
 - ▨ EXISTING BUILDING - TO REMAIN, N.I.C.
 - ⤴ EXISTING DOOR - TO REMAIN
 - ⤴ EXISTING DOOR - TO BE DEMOLISHED

- DEMOLITION GENERAL NOTES**
- A. FULL DEMOLITION OF ENTIRE 1964 BUILDING INCLUDING ENTRY LINK AND BAND ROOM.
 - B. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT BUILDING ELEMENTS SCHEDULED TO REMAIN.
 - C. REPAIR ALL EXISTING CONSTRUCTION DAMAGES BY OVER-EXUBERANT DEMOLITION.
 - D. CAREFULLY REMOVE ALL WHITE BOARDS, TACKBOARDS, PROJECTOR SCREENS AND PROJECTORS AND TURN OVER TO OWNER.

Issue / rev.

#	date	issue notes
A	2023-03-31	ISSUED FOR CLASS D PRICING

professional seals



project information

**WINDSOR PARK COLLEGIATE
TRANSITION
TO SPEERS RD.**

296 Speers Road
Winnipeg, MB
Canada

client

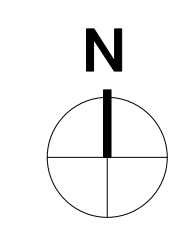


drawing information

**MAIN FLOOR
DEMO PLAN**

drawn by: CR
approved by: LO

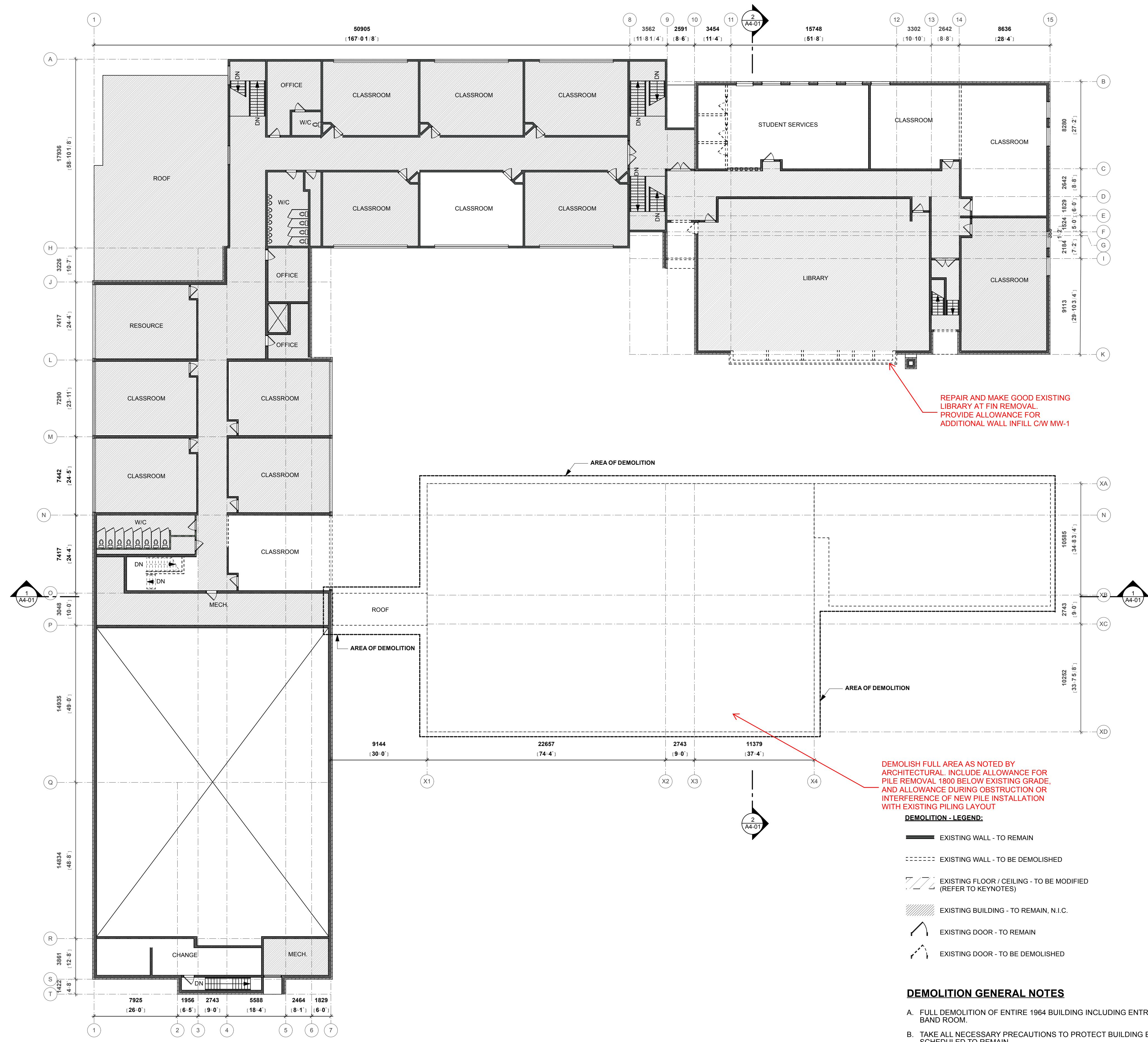
scale: AS NOTED
date issued:
proj. #: 2022.55
rev. #:



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**WINDSOR PARK COLLEGIATE
TRANSITION TO SPEERS RD.**
Winnipeg, MB

**A2
01**

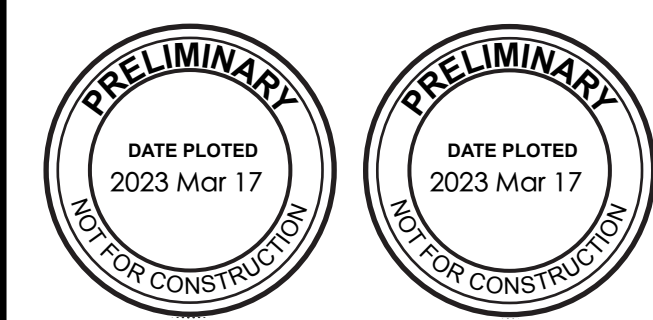


1 SECOND FLOOR PLAN - DEMO
 A2-02 Scale: 1:200

issue / rev.

#	date	issue notes

professional seals

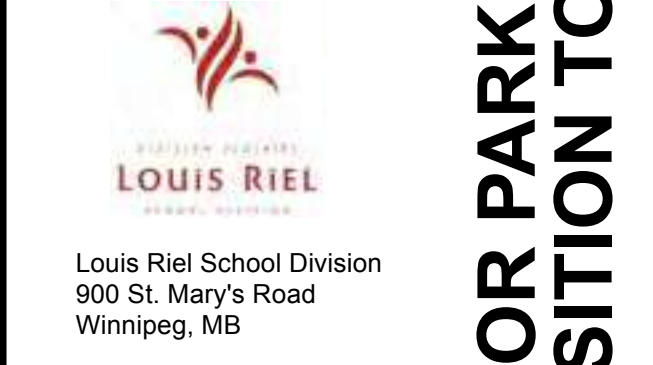


project information

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

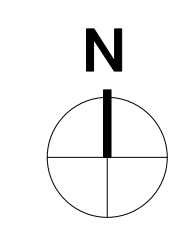
**SECOND FLOOR
 PLAN - DEMO**

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 proj. #: 2022.55
 rev. #:

**WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.**

**A2
 02**



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NO EXISTING DRAWINGS AVAILABLE FOR REVIEW FOR THIS PORTION OF THE EXISTING SCHOOL. PROVIDE ALLOWANCE FOR ADDITIONAL COLUMNS WITHIN SPACE AND/OR STRUCTURAL STRENGTHENING TO SUIT CLIENT REQUIREMENTS UPON DESTRUCTIVE REVIEW, INCLUDING AT BASEMENT AREA

NEW BRICK LEDGER AND STEEL BEAM LINTELS AT INCREASED OPENINGS, C/W HSS COLUMNS EACH SIDE

TYP. ALONG FIREWALLS ABUTTING EXISTING BUILDING ALLOW FOR 750X600 WIDE X 900 DEEP OFFSET PILECAPS

NEW CAST IN PLACE CONCRETE FEATURE STAIR

Raised stage area adjacent the gym - guitar band room also at same elevation (backstage), refer to arch for elevations and increase surrounding conc. grade beams to suit.

REUSE EXISTING G/M SLAB FOR NEW SHOPS AREAS REINFORCE LOCALLY TO SUIT EQUIPMENT IF AS REQUIRED

TYP. REFER TO ARCH FOR EXTERIOR ENTRANCE PADS AT DOORWAY - ASSUME SL-3

STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21

WPC TRANSITION TO SPEERS ROAD

Wolf from Job # W22434

A. GENERAL COSTING DISCUSSION

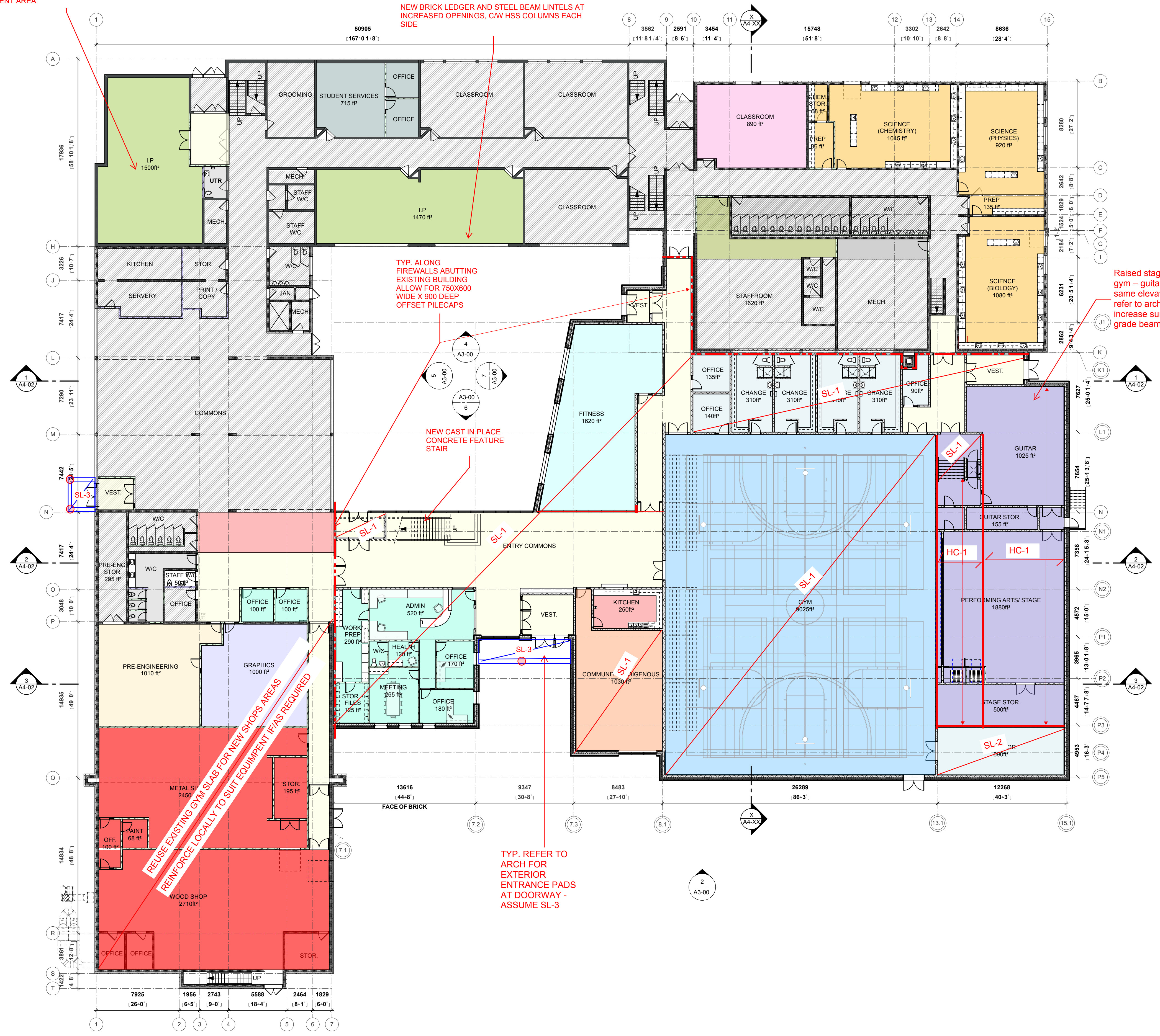
Refer to architectural for proposed demolition plans and project phasing and sequencing of existing College Beliveau renovations and addition for transitioning to new Windsor Park Collegiate location.

1.0 FOUNDATION & MAIN FLOOR FRAMING

DESIGN LOADS:

LIVE: 4.8 kPa TYP. THROUGHOUT EXCEPT 2.4 kPa @ CLASSROOMS AND WASHROOMS SUPERIMPOSED DEAD: 1.0 kPa

- 1 Assumed 16" x 40" long (P-1) diameter cast in place, to be further developed upon receipt of geotechnical report. Approximate 8' spacing along perimeter, bearing walls and masonry fire walls. Assumed 16" x 25" (P-2) diameter cast in place for support of exterior shade canopies, approximately 20' spacing, to be further developed upon receipt of geotechnical report. Typ. r/w 5-15M full length of pile, with 10M rings @ 18" o/c
- 2 Assume 20" diameter x 40" long (P-3) cast in place piles when supporting full two storey load bearing masonry walls at approximate 6' spacing. r/w 7-15M full length of pile, with 10M rings @ 18" o/c, to be further developed upon receipt of geotechnical report.
- 3 Crawlspace floor below guitar and performing arts stage and storage (and potentially if any at utilidor) assumed 5" cast in place concrete slab on grade over compacted granular
- 4 SL-1: 176 deep cast in place reinforced concrete structural slab r/w 15M top and bottom each way at 300 o/c w/ P-1 at approximately 4000x4000 p-1 grid spacing, provide DP-1 & TM-1 at each interior slab support pile DP-1: 1200x1200x150 deep TM-1: Additional twelve 15m top bars x 4000 lg each way
- 5 SL-2: 200 dp reinforced concrete structural slab r/w 20M upper top and bottom short span direction and 15M top and bottom long direction at 400 o/c, no additional interior piles
- 6 SL-3: 152 dp broom finished C-1 exposure class cast in place concrete structural slab exterior entrance pads w/ 300x300 thickened edge around perimeter on P-2 as noted above. Allow for galv. L152x152x9.5 ledger angle along building faces, c/w 1102x102x7.9 back to back vertical spacer angles full depth of insulation. Slab reinforcing tbd.
7. allow for SL-3 at exterior equipment pads such as dust collector, c/w P-2 at each pad corner or at spans greater than 5000.
- 7 HC-1: 200 dp precast hollowcore planks over 150 voidform c/w 76 concrete topping. Provide 100 bearing keyway at gradebeam each end.
- 8 Perimeter gradebeam assumed 250x750 dp r/ 3-25m top and bottom w/ 10m stirrups at 300 o/c on 150 voidform.
- 9 Interior gradebeams drawn in red to extend 600 below underside of slab, and extend up to main floor adjacent structure. provide min. 2-25m top and bottom w/ 10m stirrups @ 300 o/c. provide additional 15m each face at 300 o/c when beam deeper than 750. locate on 150 voidform, with similar pile spacing as noted above.



PROPOSED MAIN FLOOR & FOUNDATION FRAMING Scale: 1:200

issue / rev.

#	date	issue notes

professional seals

project information

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD. 296 Speers Road Winnipeg, MB Canada

client LOUIS RIEL School Division 900 St. Mary's Road Winnipeg, MB

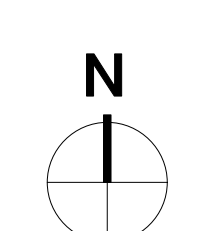
drawing information

MAIN FLOOR PLAN - NEW

drawn by: CR approved by: LO

scale: 1:100 date issued: 2022.55 proj. #: 2022.55 rev. #:

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD. 206 Speers Road, Winnipeg, MB



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STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21

WPC TRANSITION TO SPEERS ROAD

Wolf from Job # W22434

2.0 SECOND FLOOR AND LOW ROOF FRAMING

DESIGN LOADS:

LIVE: 4.8 kPa TYP. AT STAIRS AND CORRIDOR
 2.4 kPa @ CLASSROOMS AND WASHROOMS
 SUPERIMPOSED DEAD: 1.0 kPa
 ROOF SNOW: 2.15 kPa + ACCUMULATION LOADING TO SUIT, APPROX. 7.2 kPa OVER 6M ASSUMED
 HIGH IMPORTANCE FACTOR FOR CLIMATIC LOADING

1 COLUMN SCHEDULE

C-1: HSS152X152X9.5
 C-2: HSS203 DIA. X 9.5 FULL HEIGHT

2 GIRT SCHEDULE

G-1: C250X23 GIRT HORIZONTAL C/W 5/8" HANGER RODS ALIGNED AT MULLIONS TBD

3 STEEL BEAM SCHEDULE

SB-1: W18X40
 SB-2: W16X26
 SB-3: W24X103 C/ ADDITIONAL MISC. METAL FRAMING TO SUIT OPERABLE PARTITION WALLS, INCL. WALL STORAGE
 SB-4: W12X35
 SB-5: W16X40 W/ 15M VERT. X 36" LG. WELDABLE REBAR @ 400 o/c WELDED TO TOP OF BEAM

4 HOLLOWCORE SCHEDULE

HC-1: SEE PREVIOUS SHEET
 HC-2: 305 DP PRECAST HOLLOWCORE W/ 76 TOPPING

5 JOIST SCHEDULE

J-1: 1600 DP OWSJ @ 1600 O/C
 J-2: 800 DP OWAJ @ 1200 O/C C/W ADDITIONAL CAPACITY AND PERP. ANGLE BRACING TO SUIT LIGHTING RIG OF APPROX. 1 kPa
 J-3: 600 DP OSWJ @ 1600 O/C
 J-4: 300 DP OWSJ @ 1600 O/C
 J-5: 1000 DP OWSJ @ VARIOUS WIDTH TO SUIT DRIFTING LOAD, AVERAGE OF 900 O/C OVER AREA
 J-6: 700 DP OWSJ @ 1200 O/C
 J-7: 600 DP OSWJ @ 1600 O/C w/ bottom chord tie joist extension all joists. Provide flush frame vert. weld plate cast into wall

6 TYP AT ALL NEW LOW ROOF JOISTS, PROVIDE 38 DEEP 0.91 GA STEEL DECK C/W PERIMETER L102X102X6.4 ANGLE, FASTENING TBD AT ADJACENT MASONRY WALLS C/W

7 MASONRY WALL SCHEDULE

TYP. TWO COURSE BOND BEAM AT U/S EACH FLOOR AND ROOF R/W 2-15M HORIZONTAL.
 TYP. PROVIDE MATCHING DOWELS MIN 450 INTO CONC. MEMBER BELOW ALL VERT. REINFORCING.
 TYP. FILL SOLID ALL REINFORCED CORES W/ 15 MPa GROUT, EXCEPT AT NON LOAD BEARING WALLS

MW-1: 190 H/15/A/M R/W 15M @ 400 O/C. SOLID FILL ALL CORES WHEN FIREWALL

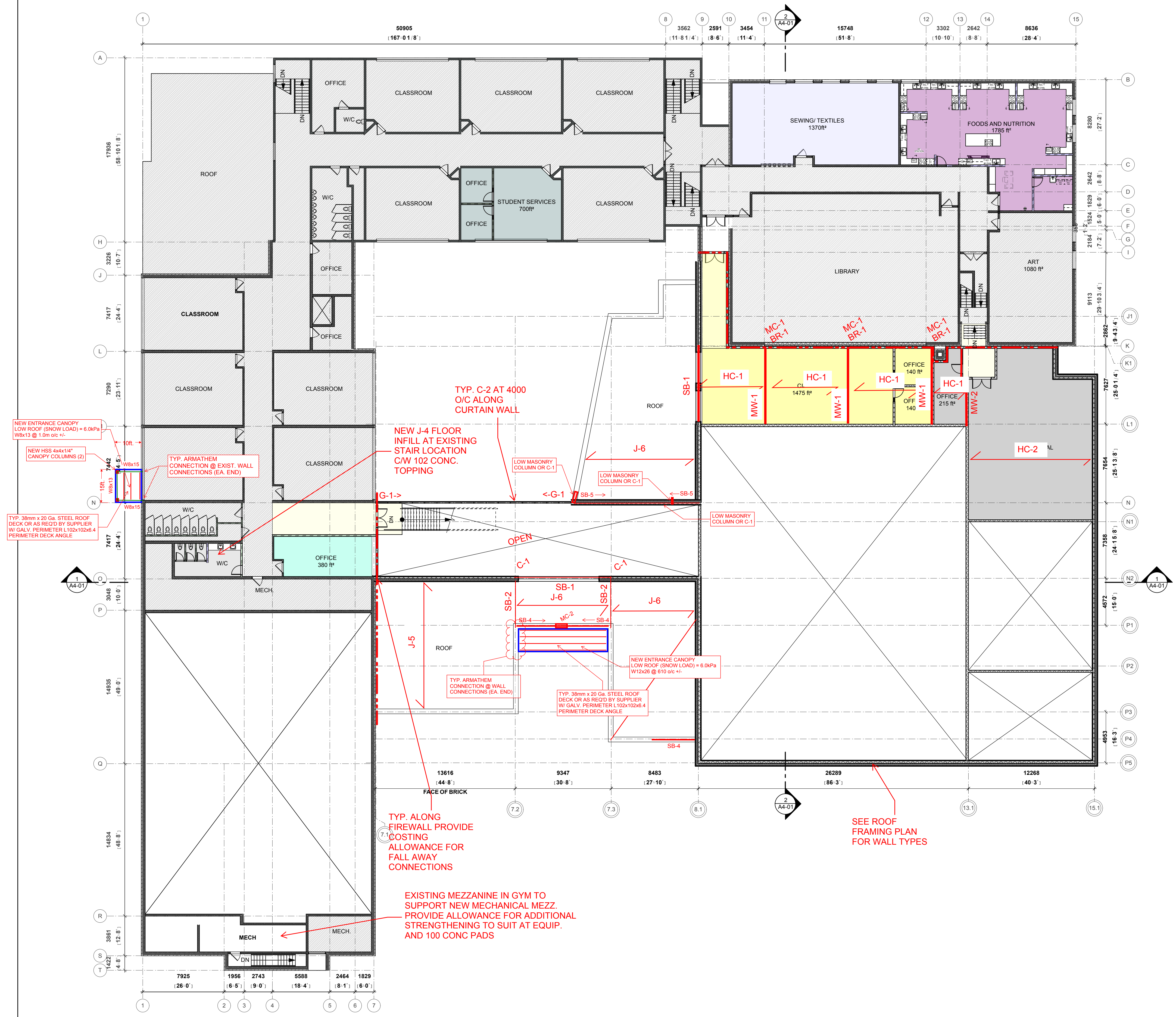
MW-2: 240 H/30/A/M R/W 20M @ 400 O/C INTO SOLID GROUTED CORE

8 MASONRY COLUMN SCHEDULE

TYP. PROVIDE MC-1 ALL CORNERS C/W MATCHING DOWELS. MATCH BLOCK AS PER ADJACENT WALL

MC-1: 190X400 R/W 2-15M WHEN SINGLE STOREY, 2-20M WHEN TWO STOREYS

MC-2: 240X1000 W/ 5-20M VERT 1 PER CORE

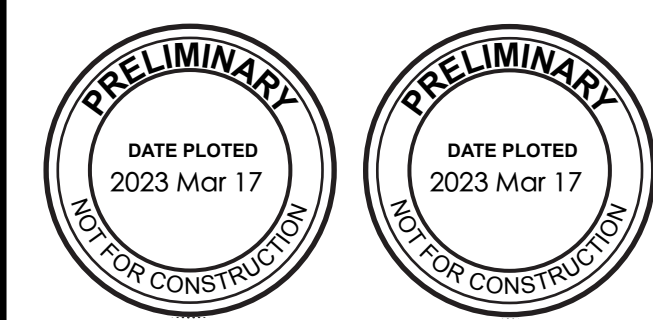


PROPOSED SECOND FLOOR/ LOW ROOF FRAMING
 Scale: 1:200

issue / rev.

issue / rev.	date	issue notes

professional seals



project information

WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.

296 Speers Road
 Winnipeg, MB
 Canada

client



Louis Riel School Division
 900 St. Mary's Road
 Winnipeg, MB

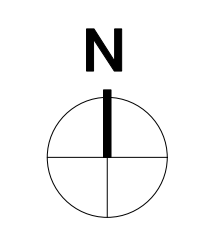
drawing information

SECOND FLOOR
 PLAN - NEW

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 proj. #: 2022.55
 rev. #:

WINDSOR PARK COLLEGIATE
 TRANSITION TO SPEERS RD.
 296 Speers Road, Winnipeg, MB



STRUCTURAL OUTLINE SPECIFICATIONS 2023 03 21

WPC TRANSITION TO SPEERS ROAD

Wolfrom Job # W22434

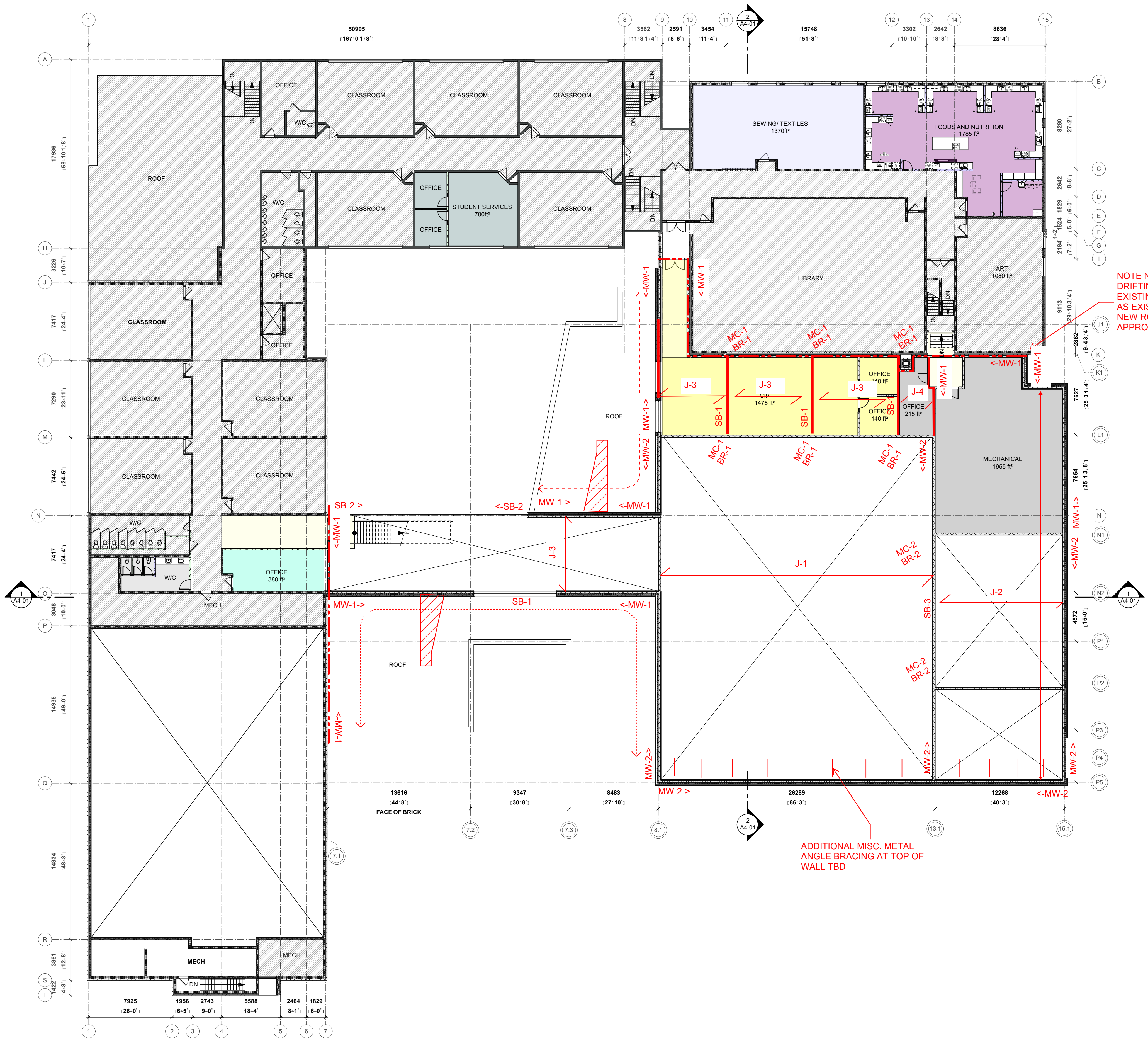
3.0 UPPER ROOF FRAMING

DESIGN LOADS:

ROOF SNOW: 2.15 kPa
 HIGH IMPORTANCE FACTOR FOR CLIMATIC LOADING
 UPLIFT 0.7 kPa TYP., DETAILED UPLIFT DIAGRAM FOR NEXT SUBMISSION

.1 REFER TO PREVIOUS PAGE FOR STRUCTURAL MEMBER SCHEDULES

NOTE NO NEW DRIFTING ONTO EXISTING BUILDING AS EXISTING AND NEW ROOF LEVELS APPROX. EQUAL



1 PROPOSED UPPER ROOF FRAMING
 A2-04/ Scale: 1:200

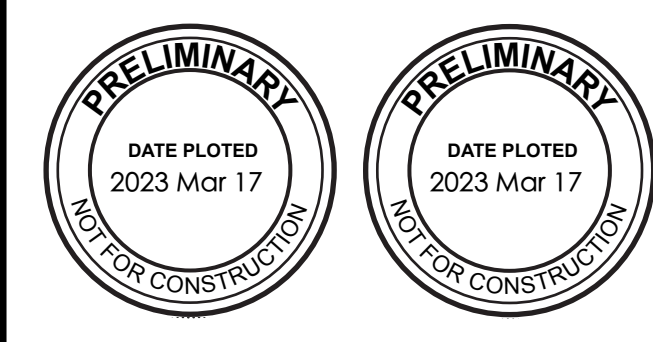
- NEW CONSTRUCTION - LEGEND:**
- EXISTING WALL - TO REMAIN
 - FIRE WALL
 - NEW PARTITION
 - NEW EXTERIOR WALL
 - EXISTING BUILDING - TO REMAIN, N.I.C.
 - NEW FLOOR + STRUCTURE (REFER TO SECTIONS)
 - PROVIDE NEW AND / OR REPAIR FLOOR FINISH (REFER TO KEYNOTES & SPEC.)
 - EXISTING DOOR - TO REMAIN
 - NEW DOOR

ADDITIONAL MISC. METAL ANGLE BRACING AT TOP OF WALL TBD

issue / rev.

#	date	issue notes

professional seals



project information

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

296 Speers Road
 Winnipeg, MB
 Canada

client



drawing information

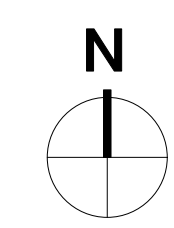
SECOND FLOOR PLAN - NEW

drawn by: CR
 approved by: LO

scale: AS NOTED
 date issued: 2022.55
 proj. #: 2022.55
 rev. #:

WINDSOR PARK COLLEGIATE TRANSITION TO SPEERS RD.

A2 02



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Windsor Park Collegiate transition to 296 Speers Road Winnipeg, Manitoba

PRELIMINARY OUTLINE SPECIFICATIONS

Date: **March 31, 2023**

Issued for: **Class D Pricing**

ARCHITECTURAL OUTLINE SPECIFICATION

The proposed base building architectural and engineering systems are summarized for the above project, which is intended to be occupied over a number of phases, commencing in June 2024. The objectives for this new school are:

- Make effective use of resources available and embody the principles of durable building construction to current Codes and to Government of Manitoba standards
- Be sustainable through effective and responsible use of materials and building systems
- Contribute to the long term well-being of the building occupants
- Achieve a minimum LEED V4 Silver rating
- Meet all related green building/sustainability practices outlined in the Province of Manitoba's Green Building Policy for Government of Manitoba Funded Projects (V2 December 2013)

In case of discrepancies between this document and the drawings, consult the Architect or assume the most costly option.

1.1 GENERAL DATA:

1.1.1. **LOCATION:** 296 Speers Road, Winnipeg, Manitoba

1.1.2. FLOOR AREAS:

Floor Level:	Occupancy type:	Gross floor area EXISTING:	Gross floor area NEW:
Basement:	Service	1,126 sf / 105 sm	0 sf / 0 sm
Ground floor:	Classrooms, Admin, IP, Science, Support, Gym, Shops, Fitness	35,983 sf / 3,343 sm	25,231 sf / 2,344 sm
Second floor	Classrooms, Library, Service, IP, CIP	25,082 sf / 2,330 sm	4,409 sf / 410 sm
Total		62,191 sf / 5,778 sm	29,640 sf / 2,754 sm

1.1.3. PHASING OF CONSTRUCTION:

Assume construction in the following phases:

Phase 1A: June 1, 2024 to Aug. 30, 2024

- Renovation of existing Administration area and 2 classrooms to IP spaces
- Renovation/ expansion of staff room and mechanical room

Phase 1B: July 1, 2024 to Aug. 30, 2024

- Site works at north of school to accommodate accessible student drop-off (including new concrete ramp to north doors)
- Renovation of existing classrooms to Student Services (main and second floor)

- Renovation of two of the existing science rooms and converting the third to a general classroom on main floor
- Renovation of existing Student Services and Classrooms on second floor (east wing) to Sewing / Textiles and Foods / Nutrition.
- Demolish portion of existing building and new provisions for exiting for life safety:
 - addition of exit in existing Commons
 - firewall construction and east exit vestibule

Phase 2: once Phase 1B life safety exiting is in place – Jul. 30, 2025

- New construction addition

Phase 3: Aug. 1 (once new addition is Ready-for-Takeover) – Dec. 15, 2025

- Renovation of existing Gym into Wood and Metal Shops, Pre-Engineering and Graphics
- Renovation of existing Pre-Engineering to General Classroom

1.1.4. DEMOLITION AREA:

Refer to Architectural Demo drawings for scope of demolition. Area of building to be demolished is 11,718 sf / 1,089 sm

1.1.5. LAND AREA: 5.3 acres

Zoning: R1-M

1.1.4. BREAKDOWN OF SPACE:

Refer to attached Space Program.

1.1.5 ON-SITE PARKING: refer to HTFC Planning and Design Site Plan.

1.1.6 BUILDING CODE SUMMARY: (based on Part 3, 2020 NBC)

.1 **New School Addition (separated from existing, non-conforming school with firewalls)** (building area = 2,400 sm, 2 storeys, facing 1 street)

3.2.2.26 Group A, Division 2, up to 2 storeys, Increased Area, Sprinklered:

- 1) a) the building is sprinklered throughout,
- 1) b) it is not more than 2 storeys in building height, and
- 1) c) it has a building area not more than 2,400sm
- 2) Combustible or Non-combustible construction, and
- 2) a) floor assemblies shall be fire separations with a fire-resistance rating 45 min.
- 2) b) mezzanines shall have a fire-resistance rating of 45 min.
- 2) c) loadbearing walls, columns, & arches shall have a fire-resistance rating not less than 45 min, or be of noncombustible construction.

.2 **Existing School (Separated from new addition with firewalls) is nonconforming to current Code and to remain as is. However, due to the renovation of the existing A-2 Gym into a F-2 Woods/Metal Shops Area, the following applies** (building area =

3,481 sm, 2 storeys, facing 2 street) area of F2 is 498sm which is >10% of floor

3.2.2.78 Group F, Division 2, up to 3 storeys:

- 1) a) it is not more than 3 storeys in building height, and
- 1) c) it has a building area not more than 1,500 s.m, if 2 storeys
- 2) Combustible or noncombustible construction, and
- 2) a & b) floors and mezzanines shall be fire separations with a fire-resistance rating of 45 min.
- 2) c) roof assemblies
- 2) d) loadbearing walls, columns, and arches shall have a fire-resistance rating not less than 45 min or be on noncombustible construction; and
- 2) e) loadbearing walls, columns, and arches supporting a fire separation shall have a fire-resistance rating not less than that required for the fire separation.

The F2 requirements are more restrictive than the A2 requirements and therefore, would apply to the whole existing building, if newly constructed. Table 3.1.3.1: Required Fire Separation between A2 and F2 Major Occupancy is **2-hour f.r.r.**

1.1.7 PLANNING AND DESIGN ASSUMPTIONS:

- .1 Zoning Requirements: R1-M
- .2 Conditional Use: Senior High School
- .3 Setbacks: Front Yard: 15', Rear Yard: 25', Side Yard: 4', Reverse Corner Side Yard: 4'
- .4 Parking Spaces: 1 per ea. 2 faculty plus 1 for each 4 employees and 1 for each 10 students – existing condition, and a parking management plan between both schools may be required – refer to HTFC drawings for proposed number of parking spaces
- .5 Bicycle Spaces: 1 per ea. 10 automobile spaces – Refer to HTFC drawings
- .6 Loading Spaces: None required
- .7 Encroachments: N/A
- .8 Maximum Lot Coverage: 45%

1.1.8 CASH ALLOWANCES:

.1 Foundation/pile inspections	\$ 20,000
.2 Soil compaction, conc. & mortar testing	\$ 10,000
.3 Manitoba Hydro Service	\$ 30,000
.4 MTS Service	\$ 10,000
.5 Testing & air balancing services	\$ 40,000
.6 LEED Air Quality Testing	\$ 12,000
.7 Exterior and Interior signage	\$ 15,000
Total	\$137,000

1.1.9 SEPARATE PRICES

The following items are not to be included in the base price. Provide a Separate Price for each of the following items, to **Add** the work to the base Contract.

- .1 Sprinklering the Wood and Metal Shops area. Refer to Mechanical.
- .2 Addition of a Firewall in existing Gym, between the F2 occupancy of the Metal and Wood Shops and the A2 occupancy of the rest of the existing school. Refer to Structural.

1.1.10 GENERAL REQUIREMENTS

- .1 Notwithstanding the terms of the contract between the Owner and the Contractor, the general terms, definitions of the contract shall be in accordance with CCDC 2 2020, Stipulated Price Contract.
- .2 General notes and specifications on one drawing apply to all drawings unless specifically noted otherwise. If there is a conflict within the contract documents the specifications govern over the drawings, drawings of a larger scale govern over those of smaller scale of the same date; later dated documents govern over earlier documents of the same type.
- .3 Do not scale these drawings. Perform the work according to figured dimensions only. The drawings are dimensioned in metric and imperial units.
- .4 In the Contract Documents, Supply means: deliver to the site and place as directed by the Contractor. Install means: accommodate in the Work, receive, store, assemble, adjust, trim, and fit as necessary to make fully operational. Provide means: supply and install.

1.1.11 EXECUTION OF THE WORK

- .1 The Contractor is solely responsible for construction safety at the place of work and for compliance to all rules, regulations, and practices required by construction health and safety legislation.
- .2 The Contractor shall be solely responsible for all the work, construction means, methods, techniques, sequences, and procedures and for co-ordinating all aspects of the work.
- .3 All work shall conform to C.S.A. standards, the Manitoba Building Code, and all applicable codes, regulations and by-laws of authorities having jurisdiction.
- .4 All products and materials shall be new, of the best quality, suitable for the purposes for which they are required, and be as specified in the Contract Documents.
- .5 Report any discrepancies noted within the contract documents to the Architect and obtain clarification before proceeding with the work. The Contractor shall be responsible for any deviation from the drawings without written approval from the Architect.
- .6 Verify existing site conditions and measurements and report any discrepancies between the drawings and site conditions and measurements to the Architect and obtain clarification prior to commencing work. The Contractor shall be responsible for any deviation from the drawings without written approval from the Architect.
- .7 The Contractor is responsible for all fees and permits and is responsible for all inspections required by authorities having jurisdictions, including permit closeout.
- .8 The Contractor shall provide and pay for all temporary supports, structures, facilities and utilities (including but not limited to; scaffolding, electricity, lighting, water, telephone, fire protection & sanitary facilities) required for the work and for all trades, and remove them upon completion of the work.
- .9 The Contractor shall be responsible for notification and co-ordination of all necessary public and private utility companies required to complete the work as indicated on the drawings and specifications. This includes but is not limited to telephone, water, sewage and hydro.
- .10 The contractor shall maintain a clean place of work, free from accumulated debris, waste and materials through the contract time.
- .11 The Contractor shall take measure to isolate the area(s) under construction to protect and keep clean other areas of the building that are not under construction.
- .12 The Contractor shall protect the Work during construction from damage; provide protection as required to protect work in progress and other property from damage. The Contractor shall take reasonable measures, including those required by authorities having jurisdiction to protect the public and those employed on the Work.
- .13 The Contractor shall perform all cutting and remedial work to make all the parts of the work come together. The Contractor is responsible for co-ordinating the work to keep remedial work at a minimum. Specialists in working with the materials and methods, so as not to endanger the work, shall perform cutting and remedial work.
- .14 Cut and fit components for alteration of existing work and installation of new work. Patch disturbed areas to match adjacent material and finishes. After patching, apply finish to the entire surface extending to a point where the surface is intersected by an adjacent surface. Patching shall be made invisible to the eye.
- .15 The Contractor shall provide shop drawings. The contractor and all subcontractors shall be experts in their respective fields and shall be responsible for the shop drawings conforming to the contract documents.

- .16 The Contractor is to provide and maintain a construction schedule throughout the contract time. The schedule shall be binding after all parties have approved it. Changes to the construction schedule shall be presented to the Architect and Owner at the first site meeting after the extension is requested.
- .17 The Contractor shall notify the Owner in good time when items to be supplied by the Owner will be required and shall arrange and be responsible for delivery and installation.
- .18 The Contractor will co-ordinate the installation & shall notify the Owner in good time when pre-wiring & finish installation of the systems will be required on site.

1.2 SITE

- .1 Refer to HTFC Planning and Design drawings.

1.3 EXTERIOR CLOSURE

1.3.1 DESIGN CALCULATIONS

- .1 Thermal Requirements to meet MECB 2013
Winnipeg = 5670 +/- degree days (Zone 7A)
 - .1 Requirement: Div.B Table 3.2.2.2 Above grade opaque assemblies
Exterior walls - above grade U 0.210 **(R27)**
Roofs - U 0.162 **(R35)**
Floors - above grade U 0.162 **(R35)**
 - .2 Requirement: Div.B Table 3.2.3.1 assemblies in contact w/ ground
Exterior walls - below grade U 0.284 **(R20)**
Floors - on grade (less than 600 below grade) U 0.757 **(R7.5) for 1.2m** around perimeter or 3.2.3.3. (1) entire floor if in-floor heat
 - .3 Requirement: Div.B 3.2.1.4 (1) max fenestration and door area FDWR = 0.28 **(28%)**
 - .4 Requirement: Div.B Table 3.2.2.3 , 3.2.2.4 fenestration and doors - U 2.0 **(R2.8)**
MB Amendment
- .2 Fire fighter access facing:
 - .1 2 streets for existing building
 - .2 1 street presumed for new addition

1.3.2 EXTERIOR WALL TYPES SCHEDULE

- .1 Refer to Architectural drawings.

1.3.3 EXTERIOR WINDOW FRAME TYPES AND GLAZING

- .1 Refer to Elevation drawings for exterior & interior window types and exterior window locations. Refer to Floor Plan drawings for interior window locations.
- .2 W1 **Exterior punched window frames:** Thermally broken extruded anodized aluminium (or fibreglass) with openers & sizes as shown on drawings. Kawneer 5525 Isoweb, Alumicor 970E, or approved equal.
- .3 W2 **Interior windows:** tempered safety glass in hollow metal frames (rated ceramic glass where required for fire rating).
- .4 W3 **Curtain wall:** Aluminium curtain wall frame system with

-
- .5 G steel reinforcement and enhanced thermal break in anodized finish; Kawneer 7550 series, Alumicor Thermawall 2600 series, or approved equal.
Typical Glazing: Glazing to be hermetically sealed, triple-glazed with low E x 2, argon gas, and superspacers, for a min. VT of 0.50 and SHGC of 0.35 or lower. All exterior glazing less than 2400mm above main floor level, to be tempered safety glass.
- .6 TGU **Translucent Glazing Units:** double glazed unit w/ honeycomb insulation core and translucent veils; Advanced Glazings Ltd. Solera 'L', or approved equal.

1.3.4 EXTERIOR AND INTERIOR DOORS

- .1 D1A **Exterior entry doors and frames:** Thermally broken, insulated hollow metal doors with upper and lower tempered dual pane glass, in thermally broken, insulated hollow metal frames. Include hinges, panic bars with keyed cylinder, electric strike, and surface door closers with auto opener, weatherstripping, and threshold.
- .2 D1B **Interior entry doors and frames:** Hollow metal with upper and lower tempered glass panes in hollow metal frames. Include hinges, panic bars, and surface door closers with auto opener.
- .3 D2A **Exterior Exit Stair:** N/A.
- .4 D2B **Interior Exit Stair:** N/A.
- .5 D3 **Interior Classrooms and Offices:** Solid core wood doors (clear finish) with a tempered glass lite where indicated, in a hollow metal frame (painted) with full-height, 300 mm wide sidelight. Include hinges and lockset, and surface door closer (where scheduled).
- .6 D4 **Interior Washrooms:** Solid core wood doors (clear finish) in a hollow metal frame (painted) with hinges, privacy set, and surface door closer. Include auto door operators and actuators at multiple stall washroom doors, where doors are present.
- .7 D5 **Interior Service rooms and where fire ratings are required:** Hollow metal doors in a hollow metal frame (painted). Include hinges, lockset, & surface door closer. Fire labels when required.
- .8 D6 **Interior sound rated doors and frames:** Acoustical hollow metal door in a hollow metal frame (painted) to STC 43; Overly, KreigerSonic, Industrial Acoustics, Lambton, and approved equals. Include hinges, lockset, door closer, sound weatherstripping, automatic door bottom, and threshold. Locations: Theatre / Guitar.
- .9 D7 **Operable Acoustic Partition between Gym & Theatre:** Folding panel system, manually operated, panels of acoustical substrate on steel face & frame w/ reinforced vinyl wall-covering finish; minimum STC of 50. Moderco Excel 700, Modernfold Acousti-Seal Encore, Corflex 5500, or approved equal.
- .10 D8 **Rolling counter shutter between Kitchenette & Entry Commons:** Non-fire rated, manual push up operation with clear maple slats; Amstel # ASH400MA-M, or approved equal.

1.3.5 ROOF TYPES (refer to Structural for roof structure and substrate)

1. Refer to Architectural drawings.

1.3.6 SOFFIT TYPES

- .1 Refer to Architectural drawings.

1.3.7 ROOF ACCESSORIES

-
- .1 Flashings: 24 gauge prefinished sheet metal from 8000 series.

1.4 INTERIOR SEPARATION

1.4.1 DESIGN REQUIREMENTS

- .1 Fire Separations and Fire Resistance Ratings:
- .1 Fire separations at floors, mezzanines, & loadbearing structure: 45 min.
 - .2 Exit stair shafts, elevator shaft, and vertical service shafts: 45 min.
 - .3 Fire separation between classrooms and corridor: no f.s. if sprinklered
 - .4 Fire separation between A2 & F2: 2-hour
 - .5 Fire separation between a service room with a fuel fired appliance(s) and the building: 1 hour
 - .6 Fire Separation between Custodian room and building: no f.r.r. if sprinklered
- .2 Smoke Separations: Smoke barriers and containment areas: to be determined
- .3 Acoustic Requirements:
- .1 Sound control between classrooms and at floors: STC 50 minimum
 - .2 Sound control between Music room from remainder of school: STC 56 minimum
- .4 Security considerations:
- .1 Refer to electrical
- .5 Finishes Quality:
- .1 Entry Vestibules, Entry Commons areas: high.
 - .2 Corridors, Classrooms, Offices, Gym and Fitness: medium.
 - .3 Service rooms and Shops: low

1.4.2 INTERIOR VERTICAL SEPARATION WALLS:

- .1 Refer to Architectural drawings.

1.4.3 FLOOR ASSEMBLIES:

- .1 Refer to Architectural drawings.

1.4.4 INTERIOR FINISHES

- .1 General:
- .1 Walls:
 - .1 Gypsum board (abuse resistant type where less than 2440 above floor), primed and painted, all locations unless noted otherwise.
 - .2 Concrete block, primed and painted, in Gym only, to 3650 above floor.
 - .2 CE Ceramic Wall Tile
 - .1 Material: 50 x 50 (2" x 2") mosaic w/ cove base trim.
 - .2 Product: Daltile 'Colour Scheme', Olympia 'Ontario', or approved equal.
 - .3 Locations: Backsplash areas, washrooms, to 1800 above floor.
 - .3 Acoustic Wall Panel Types
 - .1 Tectum Finale wall panels (NRC 0.75), in 3 custom colours: Gym, 2400 mm high band to all four walls, starting at 3650 above floor.
 - .2 Tectum Fabri-tough or Soundseal S-4000: IP Rms. and entry commons.
 - .3 Sound Concepts Interact Barrel Diffusers & Reflectors, 4'x4': Guitar Room and Theatre.
- .2 Floor Finishes: (100 high rubber base typical except: coved base at wet areas, and as indicated in Room Finish Schedule)
- SV1 Sheet Vinyl
- .1 Material: 2mm thick sheet vinyl, with heat welded seams

-
- .2 Products: Tarkett Standard Plus, Polyfor XL PUR, Armstrong Medley, or approved equal.
 - .3 Dimension: 2000mm wide rolls
 - .4 Locations: Vestibules, Atrium, MPRs, Corridors, Classrooms, Offices, Washrooms, General storage rooms, and Custodian rooms and all other locations not otherwise noted.
- SSV **Safety Sheet Vinyl**
- .1 Material: 2mm thick slip-resistant sheet vinyl, with heat welded seams
 - .2 Products: Altro Suprema, Polysafe Mosaic PUR, or approved equal
 - .3 Dimension: 2000mm wide rolls
 - .4 Locations: Kitchens, Health rooms, Change rooms and Stair landings & treads.
 - .5 Base of same flooring to be covered up wall by 150mm w/ Altro cap.
- RT **Rubber Tile (Detectable Warning Surface)**
- .1 Material: 3 (1/8") thick x 610 (2') x 610 (2') tiles, with hammered surface texture. Johnsonite HRT or approved equal.
 - .2 Locations: Stair landings.
- WD **Hardwood sport flooring**
- .1 Material: Low profiled, cushioned hardwood gym floor system, vapour barrier, rubber pads, 2 layers of 13 plywood subfloor, and maple strip flooring with a factory finish.
 - .2 Products: Aire-1 floor system, Tarkett Sports Clutch Court Performance system, Robbins BioCushion Classic hardwood floor system, or approved equal. Base to be vented cove rubber base type.
 - .3 Locations: Gymnasium
- CT **Modular Carpet Tile**
- .1 Product: Interface Viewpoint or Viva collection; Shaw Contract Group Light series, Virtual Spaces, Catalyst, Hybrid, Diffuse/Disperse; or approved equal.
 - .2 Dimensions: 500 x 500mm
 - .3 Locations: Admin area, Guitar Room
- SC1 **Sealed Concrete**
- .1 Material: exposed concrete finished with 3 coats clear sealer.
 - .2 Locations: Service rooms.
- .3 Ceiling Finishes:
- GWB **Gypsum board**
- .1 Material: Gypsum board
 - .2 Finish: primed and painted
 - .3 Locations: Vestibules and wet areas including Washrooms, Kitchens, Health room and Change Rooms.
- ACT **Suspended Acoustic Ceiling Tile and t-bar**
- .1 Material: suspended acoustic white ceiling tile with exposed tees
 - .2 Size: 610 x 1220 (2'x4') with (2' x 2') look
 - .3 Locations: Corridors, Classrooms, Offices, Seminar rooms, Admin areas, Offices and storage rooms.
 - .4 Provide loose lay R-12 batt insulation about t-bar in Guitar Rm. location.

EXP **Exposed Structure**

- .1 Material: exposed metal or concrete structure
- .2 Locations: Service rooms, Gym, Gym storage rooms, Server rooms, and Stairwells.

EXP-A **Exposed Acoustic Deck Structure**

- .1 Material: exposed acoustic deck, painted
- .2 Locations: Gym

WD **Wood Feature Ceilings/Soffits**

- .1 Material: 19 x 89 clear AA grade maple boards
- .2 Finish: clear sealer
- .3 Locations: Entry Commons

.4 Specialty Finishes and Assemblies:

- .1 Feature Stair in Entry Commons:
 - .1 Steel framed stairs, stringers, landings, channels, & posts (see Struct).
 - .2 Stair treads to be wood with safety nosing w/ abrasive strips; Wooster Supergrit.
 - .3 Steel pipe guardrails, handrails, pickets and support posts (primed and painted).

1.4.5 INTERIOR SPECIALTIES

- .1 Fireproofing and firestopping at all openings through fire rated floors/walls/ceilings to ULC labels: mineral fibre packing, and fire-stopping sealant.
- .2 Exterior and Interior Expansion Joints:
 - .1 At Floor Joints: Extruded aluminium type, with integral and continuous smoke stop.
 - .2 At Roof, Wall and Ceiling Joints: extruded aluminium type.
- .3 Millwork: **Refer to drawings for extent of millwork by room/functional area.**
 - .1 Cabinets: flush, overlay style. Doors, drawer fronts, & exposed casework: G2S maple veneer on combination core w/ solid maple edge banding. Concealed casework: white melamine on combination core w/ 3mm PVC edge banding (add maple veneer end gables where exposed).
 - .2 Countertops and backsplashes: GP grade plastic laminate finish on MDF core, and solid clear maple nosing with clear shop finish.
 - .3 Window sills: 19 thick clear AA grade maple stock w/ maple nosing and clear finish.
- .4 Power door operators and actuators at all main entrances (4), exterior and interior Vestibule doors. Mount actuators into aluminium frames or 1200mm high prefinished aluminium bollards as indicated on drawings; include an exterior aluminium guardrail outside the main entry door.

1.4.6 SPECIALTIES

- .1 Miscellaneous:
 - Whiteboards and Tackboards in Classrooms.
 - HDPE toilet & urinal partitions, change stall partitions, floor mounted, overhead braced, 25 mm thick. Doors to be 1397 mm high, mounted at 355 mm above floor; pilasters to be 2083 mm high, fastened into 76 mm high stainless-steel pilaster shoes.
 - Commercial washroom accessories
 - Exterior and interior signage (see cash allowance)
 - Fire extinguishers at all exits, exit stairs, and Mechanical room
 - Steel support channels for data projectors

- Roof access hatches
 - Exterior detectable warning surfaces
- .2 IP Room Equipment: electric fixed ceiling lift and swivel arm with ceiling suspended "H" track system, BHM/Arjo Huntleigh Medical fixed ceiling lift, MaxiSky 2 by Medichair; Wall mounted, fold-up Physiotherapy table, Premier Wall-Mount Mat Platform 5'x7', product #35294 by Flaghouse.
 - .3 Gymnasium equipment including basketball backstops, volleyball/badminton standards and floor sockets, gym divider curtain, games lines, mats and mat hangers.
 - .4 Roller shades: manually operated type with spring loaded tube, 1% openness factor; Solarfective Teleshade system, SunProject Toro #DK S-70, or approved equal. To all interior windows other than Commons and Gym spaces. Note that a majority of existing windows are being enlarged (refer to elevations), so new roller shades are required throughout.

2.1 STRUCTURAL, MECHANICAL, & ELECTRICAL

- .1 Refer to attached Structural, Mechanical, and Electrical system descriptions.
- .2 Provide a reinforced concrete 'Utilidor' space for servicing below the main floor, in areas where washrooms and plumbing occur in Gym changerooms. Also utilize for other mechanical and electrical services. Slope floor of this space to floor drains.

3.1 DESCRIPTION OF EQUIPMENT – ELEVATOR #1

- .1 Type: One Roped Hydraulic LULA Elevator Garaventa Elvoron or Savaria Orion
- .2 Operation: Selective Collective
- .3 Type of Hydraulics: Cantilevered Roped Hydraulic
- .4 Capacity: 1400 pounds
- .5 Speed: 30 FPM
- .6 Travel: Main floor to Stage (approximately 4')
- .7 Number of Landings: 2
- .8 Openings: Front 1 , Rear 1
- .9 Power Supply: 208 Volts/ 3 Phase/ 60 Cycles
- .10 Clear Inside Car: 42" wide x 60" front-to-back
- .11 Car Enclosure: Plastic laminate walls on two sides with stainless steel trim and 6" high stainless steel base, fluorescent lighting above suspended ceiling, stainless steel car doors, door frame and front and rear returns, battery emergency cab lighting and alarm bell. Car phone
- .12 Door:
 - .1 Type: Two Speed
 - .2 Size: 36" x 80" high
- .13 Hoist way Entrance Finish: Prime coat at all floors (ready for painting on site by Others)
- .14 Signals: Car Position Indicator with 2 1/2" characters and direction arrows, located 5'-10" aff Main floor Position Indicator with 2 1/2" characters and direction arrows, located 6'-0" aff above the hall push buttons
Illuminated Car and Hall Push Buttons,
Security key switches to activate hall call push buttons, keyed switch to override security keyed switches and allow normal hall push button activation

- .15 Machine Room Location: Adjacent to elevator hoistway
- .16 Additional Features: Firefighters Emergency Operation Phase I
- .17 Maintenance: 12 Months

END OF THIS SECTION

Mechanical Outline Specification

To:	Windsor Park Collegiate Transition to Speers Road	Date:	March 31, 2023
		Project No.:	23-1736-003
Prepared By:	Misty Klassen, P.Eng.	Reviewed By:	Devin Windeatt, P.Eng.
Revision:	0		

1.0 SCOPE OF WORK

The mechanical scope of work includes the plumbing, heating, ventilation and air conditioning (HVAC) and fire protection for the alterations to the existing school located at 296 Speers Road to transition from Collège Béliveau to Windsor Park Collegiate.

2.0 CODES & PERMITS

The complete installation shall be in accordance with the current edition of the Manitoba Building Code, the Manitoba Energy Code for Buildings, the Manitoba Plumbing Code, the Manitoba Fire Code, and local municipal bylaws.

3.0 ASSUMPTIONS

The following assumptions have been made during this design process:

- The existing sanitary sewer and domestic water systems within the building are adequate and no major modifications are anticipated except what is required to accommodate the new fixtures as outlined below.
- The existing hydronic heating system within the building is sufficiently sized to accommodate the modified heating equipment as defined herein.
- The existing gas service is of suitable size and capacity to accommodate the described renovations.
- The building is not currently sprinklered and a new 6" water service will be required to accommodate a new sprinkler system within the portion of the building between the new fire walls.

- The kitchen in the new addition will only be used for re-heating food and no cooking operations will be conducted that will produce grease-laden vapours.

4.0 DEMOLITION

Demolition shall include the following items located in the scope of work area:

- Demolition of existing plumbing fixtures throughout the 1964 building addition wing of the building and associated plumbing piping (domestic cold water, domestic hot water, domestic hot water return, weeping tile, sanitary and vent) back to mains in the crawlspace. Cap pipes at mains in crawlspace.
- Demolition of all existing HVAC equipment (fans, ductwork, grilles, registers, radiation heaters, unit ventilators, hydronic heating supply and return piping, controls, etc.) serving the 1964 building addition wing. Cap hydronic heating supply and return piping at mains in crawlspace area to remain.
- Demolition of existing gas piping serving the 1964 building addition wing back to main. Cap pipe at main in crawlspace.
- Demolition of all existing plumbing fixtures in the washrooms adjacent to the existing gym as per demolition plans and associated plumbing piping back to mains in crawlspace. Cap pipes at mains in crawlspace.
- Demolition of both existing air handling units serving the gym, including ductwork and grilles. Cap existing hydronic heating pipe connections for future.
- Demolition of the existing plumbing and gas piping in the science room being converted to a classroom. Cap piping at mains.
- Demolition of all existing HVAC equipment (fans, branch ductwork, diffusers, grilles, registers, radiation heaters, unit ventilators, hydronic heating supply and return piping, controls, etc.) serving the main and second floor areas being renovated per the demolition plans. Cap hydronic heating pipes at mains.
- Demolition of ductwork, diffusers, and grilles within the existing admin office area back to the rooftop unit connections.

5.0 DIV 22 – PLUMBING SYSTEMS

5.1 Domestic Water & Water Heating

Connect new domestic cold water line to the nearest existing adequately sized domestic water pipe in the crawlspace. Run new domestic cold water, domestic hot water, and domestic hot water recirculation lines through the corridor ceiling spaces. Run domestic cold and domestic hot water branch lines to serve new plumbing fixtures as applicable. Domestic Water Piping shall be copper Type L c/w fiberglass insulation and ASJ.

Provide reduced pressure zone backflow preventers on the hot and cold water lines serving the science classroom, located in the science prep room. Locate outside of millwork within accessible cabinets for

adequate maintenance and access. Provide pipe with indirect connection to drain. Provide motorized control valves c/w switches at the teacher desk to control water flow to the student desks.

Provide a new gas domestic hot water tank (HWT-1) (Bradford White model EF-60T-125E-3N) in the new mechanical room c/w concentric vent to serve the new change rooms. The new tank shall be 60 gallon, 125 MBH input. Provide a new potable water expansion tank (EXP-1) (Bell and Gossett model PT) in the new mechanical room. New domestic hot water tank shall serve the new change room plumbing fixtures and showers.

Provide a domestic hot water recirculation pump (P-1) (Acceptable Manufacturer: Bell and Gossett) in the mechanical room complete with aqua stat. Provide balancing valves (Bell and Gossett model CB) at the end of the domestic hot water recirculation header.

Connect the new admin area washroom fixtures to the capped lines from the demolition of the 1964 building addition wing.

5.2 Sanitary Sewer Drainage

New sanitary sewer piping for the new change room and admin area fixtures will be routed to tie into the capped 4"Ø existing sanitary sewer piping that served the 1964 building addition wing.

New sanitary sewer piping for the foods and nutrition area as well as the outlet of the laboratory waste treatment system will be routed to tie into the nearest adequately sized existing sanitary sewer piping located in that wing of the building.

Drainage piping for laboratory sinks will be polypropylene up to the laboratory waste treatment system (Refer to Section 5.3).

Remaining drainage piping shall be PVC-DWV, except where it runs in a ceiling air plenum, where it shall be PVC-DWV-XFR.

5.3 Laboratory Waste Treatment

Provide a new acid dilution tank with sediment interceptor in the crawlspace. Connect all new science room lab sinks to the inlet of the sediment interceptor, then to the acid dilution tank. Tie outlet of the acid dilution tank to the sanitary sewer system.

Provide a digital pH monitoring system for the acid dilution tank c/w monitor in the main floor science prep room.

5.4 Shops Area Waste Treatment

Provide new 3 compartment grit interceptor for the shops area drainage system.

5.5 Plumbing Fixtures

Provide plumbing fixtures as per the following schedule. Refer to the architectural plans for quantities.

Plumbing Fixture Schedule			
Tag	Description	Locations	Specification
WC-1	Barrier Free Water Closet	Universal Washroom	Flush tank, vitreous china, floor mounted. ADA compliant.
WC-2	Water Closet	Washrooms	Flush tank, vitreous china, floor mounted.
LAV-1	Barrier Free Counter Mounted Lavatory	Washrooms	Contactless, hardwired, chrome plated solid brass faucet. Counter mounted vitreous china basin. ADA compliant.
LAV-2	Barrier Free Wall Hung Lavatory	Washrooms	Contactless, hardwired, chrome plated solid brass faucet. Wall hung c/w carrier, vitreous china basin. ADA compliant.
LAV-3	Counter Mounted Lavatory	Washrooms	Contactless, hardwired, chrome plated, solid brass faucet. Counter mounted vitreous china basin.
LAV-4	Wall Hung Lavatory	Washrooms	Contactless, hardwired, chrome plated, solid brass faucet. Wall hung c/w carrier, vitreous china basin.
SK-1	Laboratory Sink	Science Classrooms	Counter-top mounted, stainless steel single compartment sink. Chrome plated solid brass gooseneck faucet, vacuum breaker, serrated hose nozzle.
SK-2	Foods Sink	Foods and Nutrition	Counter-top mounted, stainless steel double compartment sink. Chrome plated solid brass, single lever swivel faucet.
SK-3	Kitchen Sink	Kitchen	Counter-top mounted, stainless steel triple compartment sink, swivel faucet c/w reach to all compartments.
SH-1	Shower	Changerooms	Barrier-free, fiberglass enclosure c/w shower head, shower valve, grab bars and curtain.
LT-1	Laundry Tub	Foods and Nutrition Laundry Room	Floor mounted plastic basin, chrome plated brass swivel faucet.
EWS-1	Emergency Eyewash/Shower Combination	Science Classrooms & Shops Area	Plastic basin and shower head, galvanized steel frame, c/w domestic water thermostatic mixing valve.
DF-1	Drinking Fountain/Bottle Filler Combination	Fitness, Corridors	Stainless steel.

Plumbing Fixture Schedule			
Tag	Description	Locations	Specification
FD	Floor Drain	Science Classrooms, Washrooms, Laundry Room, Mechanical Room	Round nickel bronze strainer, epoxy coated cast iron body.
GT	Natural Gas Turret	Science Classrooms	Deckmount, chrome plated.

5.6 Sump Pump Packages

Provide new duplex sump pump packages as required to serve new weeping tile c/w pump removal rails and disconnects. Provide pump control panel and tie into existing DDC system. Run sump pump discharge piping to two locations c/w isolation valves on each line. Run a discharge line to the exterior wall and discharge to grade. Discharge piping shall be PVC Sch. 40.

5.7 Roof Drainage

Provide new roof drains (Watts model RD-100) where indicated on the architectural plans. Run new insulated rain water leader piping through the building to splash on grade where indicated on architectural plans. New piping shall be PVC-DWV-XFR where installed in ceiling plenums and PVC-DWV where installed elsewhere. Provide PVC jacket on all exposed rainwater leader piping.

6.0 DIV 23 - HEATING VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS

6.1 Gym HVAC System

Provide new indirect gas fired air handling unit (AHU-1) (Acceptable Manufacturer: Engineered Air) located in the new mechanical room to serve the gym. The unit shall be configured as per the following table:

Air Handling Unit (AHU-1)	
Section	Description
Mixing Section	Outdoor air intake sized for full unit airflow for economizer operation.
Filter Section	MERV 8 Pre-Filter MERV 13 Filter
Gas Heat	400 MBH Capacity
DX Cooling Coil	20 Ton Capacity
Supply Fan	8,000 CFM airflow rate at 1.5" E.S.P c/w VFD

Install new rooftop mounted condensing unit (CU-1) (Acceptable Manufacturer: Engineered Air) to suit the new refrigerant coil in AHU-1.

Provide new dual core reverse flow energy recovery ventilator (ERV-1) (Acceptable Manufacturer: Tempeff) in the new mechanical room. Run insulated outside air and exhaust air duct connections to the exterior wall c/w aluminum louver (Acceptable Manufacturer: Price). Tie in supply air connection to AHU-1 outdoor air duct. Run exhaust air duct to the main floor change rooms.

Run spiral supply air ductwork from AHU-1 to the gym at high level c/w high-capacity drum louvers (Price model HDC) as well as to gym supporting office diffuser (Price model SCD). Return via low-level heavy duty return grilles (Price model 90) in gym ducted back to AHU-1 in mechanical room.

Provide new exhaust air grilles at the ceiling partition in each changeroom. Run exhaust ductwork from the grilles to the exhaust air connection of ERV-1 in the new mechanical room c/w backdraft damper.

6.2 Northeast Wing HVAC

New HVAC for renovated areas such as the new science rooms, classrooms, sewing/textiles, and foods and nutrition to match existing and tie into existing hydronic heating and ventilation systems serving the existing spaces.

6.3 Fume Hood Exhaust

Provide two new fume hood exhaust systems for two new 4-foot fume hoods in each science room (chemistry and biology). Each exhaust system shall be complete with rooftop mounted exhaust fan (EF-1 & EF-2) (Greenheck model Vektor H, Capacity: 800 CFM, E.S.P.: 1.5”), exhaust ductwork, and associated controls.

For each installation: run exhaust ductwork from the fume hood up to the rooftop exhaust fan along the exterior wall of each science room. The exhaust ductwork shall be welded stainless steel. Provide a stainless steel insulated motorized damper prior to the exhaust duct ceiling penetration.

6.4 Performing Arts and CIP Area HVAC

Provide small new air handling unit (AHU-2) (Acceptable Manufacturer: Engineered Air) located in the new mechanical room to serve the performing arts/stage, the guitar room, CIP room and supporting offices/storage rooms. The unit shall be configured with a mixing section c/w an outdoor intake sized for full unit airflow for economizer operation, DX cooling, gas heat, supply fan and filters.

Install new rooftop mounted condensing unit (CU-2) (Acceptable Manufacturer: Engineered Air) to suit the new refrigerant coil in AHU-2.

Run supply duct to diffusers (Price model SCD) in each room. Provide louvered return air grilles (Price model 530) in each space ducted back to AHU-2 in mechanical room.

6.5 Admin/Entry Commons Area HVAC

Provide a new VRF system c/w ceiling mounted fan coils to serve the new admin area, entry commons, community/indigenous space, fitness room and supporting office.

Provide new supply air duct distribution from each fan coil to diffusers (Price model SCD). Provide egg crate return air grilles (Price model 80) and acoustically lined return air elbow for each fan.

Provide a new Dedicated Outdoor Air System (DOAS) system to provide ventilation to each space via the fan coil return ducts. The DOAS system shall be a new dual core reverse flow energy recovery ventilator (ERV-2) located on the roof. The DOAS system shall pull exhaust from the washrooms, kitchen and general exhaust for these spaces.

Provide new DDC thermostats c/w CO2 sensors for control of the fan coils and DOAS system.

Provide a dedicated exhaust fan for the cultural/indigenous space c/w timer switches for smudging ceremonies.

6.6 Shop Area HVAC

Provide a new air handling unit (AHU-3) in the mechanical room on the North side of existing gym to serve the new Pre-Eng and Graphics rooms. The unit shall be configured with a mixing section c/w economizer, 65 MBH capacity heating coil, supply fan with a capacity of 2,000 CFM at 0.5" E.S.P. and filter section. Connect heating coil to existing hydronic heating pipe connections. Run supply air ductwork from AHU to diffusers (Price model SCD) in each room. Provide louvered return air grilles (Price model 530) in each room ducted back to same existing AHU. Provide independent split AC units in each room with roof mounted condensing unit to provide cooling.

Provide a new air handling unit (AHU-4) in the mechanical room on the South side of the existing gym to serve the new wood shop. The unit shall be configured with a mixing section c/w economizer, 150 MBH capacity heating coil, supply fan with a capacity of 5,000 CFM at 0.5" E.S.P. and filter section. Connect heating coil to existing hydronic heating pipe connections. Run spiral supply duct at high level c/w heavy-duty louvered supply grilles (Price model 150) as well as diffusers (Price model SCD) in each of the two supporting offices and the storage room. Provide louvered return air grille at mechanical room wall ducted back to same existing AHU.

Provide new air handling unit (AHU-5) located in the new mechanical room above the wood shop to serve the new metal shop. The unit shall be configured with a mixing section c/w economizer, 150 MBH capacity heating coil, supply fan with a capacity of 5,000 CFM at 0.5" E.S.P. and filter section. Run hydronic heating supply and return pipes from crawlspace and connect to AHU-5 heating coil. Run spiral supply duct at high level c/w heavy-duty louvered supply grilles (Price model 150) as well as diffusers (Price model SCD) in the supporting office and storage room. Provide louvered return air grille at high level ducted back to AHU-3 in new mechanical room.

Provide new floor mounted tank type air compressor for the woodshop complete with quick connect compressed air drops throughout the woodshop.

Provide new dust collection system to serve the woodworking equipment. Locate dust collection system outdoors on a concrete pad within a fenced in enclosure. All dust collection system ductwork shall have smooth interior complete with long sweep 45 degree bends and clean outs. Provide all appurtenances for a complete and operational code compliant system including, but not limited to, blast gate, spark arrestor, isolation damper and return back into space.

Provide new inline fume extraction exhaust fan c/w explosion proof motor to serve welding hoods located in the metal shop. Run exhaust ductwork from hoods to exhaust fan and from exhaust fan to exterior wall c/w louver, backdraft damper and birdscreen.

6.7 Terminal Heating Equipment

Provide the following terminal heating equipment:

- Hydronic force flow heaters (Acceptable Manufacturer: Rittling) in each new entrance vestibule.
- Electric unit heater (Acceptable Manufacturer: Ouellet, Capacity: 5 kW) in the new mechanical room. Mount at high level to underside of ceiling.
- Hydronic unit heaters (Acceptable Manufacturer: Rittling) in the new crawlspace. Mount to ceiling.
- Hydronic wall fin heaters (Acceptable Manufacturer: Rittling) along exterior walls in the new admin area, entry commons, community/indigenous space, and fitness room, in each of the changerooms and in the new admin washroom.

Provide wall mounted DDC thermostats for each terminal unit complete with vandal proof cover.

6.8 Hydronic Heating Distribution Piping

Run supply and return piping from the nearest adequately sized hydronic heating piping in the crawlspace to the new hydronic terminal heating equipment. Run insulated piping in the crawlspace. Provide balancing valves (Bell and Gossett model CB) and shutoff valves for all equipment connections.

6.9 HVAC Controls

Provide a new DDC control panel in the mechanical room to serve all new equipment. Tie in the new control panel into the existing DDC system.

The new control panel shall be tied into the following equipment:

- Air Handling Unit (AHU-1) and Condensing Unit (CU-1)
- Air Handling Unit (AHU-2) and Condensing Unit (CU-2)
- Air Handling Units (AHU-3, AHU-4 & AHU-5)
- Energy Recovery Ventilator (ERV-1)
- Energy Recovery Ventilator (ERV-2)
- VRF Systems
- Fume Hood Exhaust Fans (EF-1 & EF-2)
- Force Flow Heaters

- Unit Heaters
- Wall Fin Heaters
- Domestic Hot Water Recirculation Pump (P-1)
- DDC thermostats c/w CO2 detection in each new/renovated space.

6.10 Natural Gas Piping

Provide new gas piping from the existing meter location on the Northwest side of the building to the new gym air handling unit (AHU-1) and the new hot water tank in the new mechanical room, and to the science classrooms.

Provide a manual shutoff valve c/w recessed valve cabinet on the natural gas branch lines serving each science classroom. Valves shall be located at the entrance to each science room.

Gas to be piped to desk mounted turrets c/w manual shut off valve.

All new gas piping will be schedule 40 black steel. Provide pipe identification to CSA B149.

6.11 Natural Gas Detection System

Provide a natural gas detection system (Honeywell model E3 Point) in each science classroom. The natural gas detection system shall be tied into an electronic shutoff valve installed on the natural gas branch line serving the science classrooms. In the event of a natural gas alarm, the electronic shutoff valve shall close.

7.0 FIRE PROTECTION

Provide a new 6"Ø water service complete with dual backflow prevention into a new main floor mechanical room to serve a new wet pipe sprinkler system. The sprinkler system shall serve then entire addition South of the new fire wall as well as the area converted from a gym to a shop area. Each sprinkler zone stations shall be complete with butterfly isolation valve c/w tamper switch, flow switch, pressure gauge and test/drain. Zoning shall be as per the following:

- Zone 1 - Crawlspace beneath Shop Area
- Zone 2 - Main Floor
- Zone 2 - Second Floor

Provide concealed plate heads in rooms with ceilings. Provide upright heads in the mechanical room and basement areas with no ceiling. Provide wire guards on the sprinkler heads in the gym, fitness room and mechanical rooms. Sprinkler system installation shall be in accordance with NFPA 13.

Fire extinguishers shall be installed throughout the building with size and rating as required by NFPA 10 - Standard for Portable Fire Extinguishers. Type ABC fire extinguishers shall be installed in public areas complete with recessed cabinets.

Electrical Outline Specification

Project:	Windsor Park Collegiate Transition to Speers Road	Date:	March 31, 2023
		Project No.:	23-1736-003
Prepared By:	Daniel Loewen, P.Eng.	Reviewed By:	Lucien Lalonde, P.Eng.
Revision:	0		

1.0 SCOPE OF WORK

The electrical scope of work includes the power distribution, lighting, life safety, telecommunications and security systems for the design and construction of the interior renovation and new addition to the Windsor Park Collegiate. The project will include both a renovation to a portion of the existing building as well as a new single-storey addition. The existing building renovations will include converting the gymnasium into a new metal and wood shops and renovating some existing rooms into science rooms, a foods and nutrition room and admin areas. The new addition will include a new gym with attached performing arts stage, kitchen, admin area, fitness area and community/indigenous room.

2.0 ASSUMPTIONS

The following assumptions were made during the preparation of the outline specification:

- The new additions will have a wet sprinkler system and the fire detection can be limited to the corridors and stairwells as required by code.
- The 1200A existing electrical service distribution panel has the electrical capacity for the new renovations and addition.
- Existing power panels that have reached their end-of-life and are within areas that are to be renovated will be replaced with new.
- The existing fire alarm panel does not have the capacity for the addition and will need to be replaced with a new addressable panel.

3.0 DIV 26 – ELECTRICAL SYSTEMS

3.1 Electrical Design Criteria and Standards

This report outlines the main electrical systems and components for the project, considering compliance with the Canadian Electrical Code (CEC), the National Building Code (NBC) and all applicable regulations and codes.

The latest edition of the following codes, standards and methodologies at time of tender shall be utilized for the project, including all pertinent addendums and appendices:

- Canadian Electrical Code (CEC)
- Canadian Standards Association (CSA)
- National Building Code (NBC)
- National Energy Code of Canada for buildings (NECB)
- American National Standards institute (ANSI)
- Institute of Electrical and Electronics Engineers. (IEEE)
- National Electrical Manufactures Association (NEMA)
- National Fire Protection Association (NFPA)
- Underwriters' Laboratories of Canada (ULC)
- Illuminating Engineering Society of North America (IESNA)

Products considered toxic or environmental hazards are not acceptable. This includes but is not limited to PCB compounds, halon gas and asbestos. Special attention will be dedicated to the implementation of materials and devices that exhibit no environmental hazard.

The following is a list of the major electrical systems that will be addressed in the project.

- Electrical distribution system
- Lighting system
- Fire alarm system
- Life safety systems
- Commissioning

3.2 Demolition

- Demolish power, systems and lighting devices in the addition that is to be demolished.
- Demolish power, systems and lighting devices in the renovated areas of the existing building.

3.3 New Power Distribution

- Replace the following existing panels:
 - Panel A (Admin Area): 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.

- Motor Panel #2 (Gym): 225A, 120/208V/3P/4W. Re-feed panel from main distribution and provide a new 200A breaker.
- New panelboards are to be provided in the addition as follows:
 - 600A, 120/208V/3P/4W sub distribution panel.
 - 225A, 120/208V/3P/4W for general power loads.
 - 225A, 120/208V/3P/4W for general power loads.
 - 225A, 120/208V/3P/4W for lighting loads.
 - 225A, 120/208V/3P/4W for mechanical loads.
 - 225A, 120/208V/3P/4W for general power loads in the new foods and nutrition room.
 - New 225A, 120/208V/3P/4W for general power loads in the new metal and woods shops.
 - 225A, 120/208V/3P/4W for general power loads in the new foods and nutrition room.
- CDP to be provided with thermal magnetic breakers. CDP will be minimum 42 circuits. CDP(s) tub having large feeders will be oversized to accommodate entry of large feeders.
- Panel boards will be minimum 42 circuit, copper bussed with full door enclosure trim and key lockable doors. Breakers will be full size, bolt-on type.
- Each CDP or panel board will be equipped with a main circuit breaker where required by code or as circumstances dictate.
- Each CDP or panel board will have spare capacity for 20% additional circuits.
- Separate neutrals will be provided for all receptacle branch circuits.
- Motors will be fed as follows:
 - Motors 1/2HP and less will be 120V/1Ø. Motors 3/4HP or more will be 208V/3Ø unless otherwise required by the equipment manufacturer or where circumstances dictate otherwise.
- Combination magnetic starters, motor circuit protectors, breakers plus fully rated contactors and overload heaters complete with transformers with primary and secondary fusing, LED push-to-test pilot lights, oil tight devices, and NO/NC spare contacts will be provided.
- Motors will have disconnect switches in the circuit located near the motor.
- VFDs will be provided as directed by the Mechanical Consultant. Wiring from the VFD to the motor will be drive cable type. All motors with VFD's to be provided with purpose built drive isolation transformers.
- All wiring will be copper. Minimum wire size will be #12 AWG for power and luminaires. And minimum #14 AWG for control wiring.
- All wiring to be run in conduit as follows:
 - Electrical metal tubing (EMT) for feeder and branch circuits in dry areas only.
 - Threaded rigid galvanized steel (RGS) for surface mounted conduit in wet/damp locations.
 - Minimum conduit size will be 21mm (¾").
 - All EMT conduit fittings and couplings to be set screw type.
- PVC conduit will be used only when encased in concrete or within floor slab. All conduit penetrations through walls and floors to be sealed as per architectural details.
- AC90 (BX) or RW90 conductors in flexible metal conduit will be used only for connections to recessed luminaires, suspended luminaires or luminaires mounted on stud partitions, electrified furniture

systems, motor connections (from disconnect to motor) and equipment subject to movement or vibration.

- All flexible metal conduit connections to motors to be liquid tight flex type.

3.4 New Wiring Devices

- Wall switches and duplex receptacles to be specification grade. 15/20A receptacles to be installed a maximum 9.0m (30 ft) on center in corridors.
- GFCI receptacles to be installed when located within 1.5m of sinks, showers or any water source or wet locations.
- Weatherproof GFCI cast metal when-in-use covers to be provided for receptacles installed outdoors or in wet locations.
- Stainless steel, gasketed, weather-proof coverplates will be provided for devices in wet/damp environments.
- Receptacles will be 20A, 120V/1Ø duplex type, parallel slot, U ground and double wipe contacts with non-riveted grounding contacts.
- All receptacles are to be tamper-proof type.
- Cover plates will be stainless steel and tamper proof screws.
- Cover plates for light switches in resident areas are to be complete with stainless steel lockout wallplates complete with tamper resistant screws.
- Dedicated circuits will be provided for new kitchen, foods room and metal/woods shops equipment.

3.5 Grounding Systems

- A complete building grounding system will be provided in accordance with the requirements of the Canadian Electrical Code (CEC).
- Grounding of systems shall include telecommunications equipment, Wiremold and raceway, owner's equipment, distributions, CDP's and panel boards.

3.6 Lighting Systems

- Interior lighting systems will be consistent with building standards and security recommendations. Appropriate lighting levels supported by point-by-point photometric patterns will dictate uniformity of design to support the visual tasks to be performed in a particular area of the building.
- The Illuminating Engineering Society of North America (IESNA) guidelines will be implemented to provide acceptable illumination levels and uniformity ratios.
- Lighting throughout the facility will be fed at 120V in order to reduce overall costs and achieve efficiency.
- Luminaires chosen will be the most efficient type and practical for each area given the operational requirements, task requirements and architectural ceiling finishes. The primary lamp source throughout the building will be LED with 4000° Kelvin color temperature and a minimum CRI of 80. LED lighting provides long life, instant on, no lamp re-strike, reduced maintenance and lower energy costs. The use

of LED lighting will maximize energy efficiency of the building and to comply with security requirements and restrictions of luminaires re-striking time in event of power failure.

3.7 General Interior and Support Areas

- Luminaire types within and outside the building will generally be as follows depending on ceiling finishes:
 - Corridors will be provided with recessed style luminaires and downlights where there is a drywall or t-bar ceiling design.
 - Corridors will be provided with a combination of suspended, direct/indirect style luminaires and pendants where there is an open ceiling design.
 - Storage rooms an electrical/mechanical service areas will be provided with industrial type, chain or cable suspended luminaires, mounted to unistrut for alignment where necessary.
 - Lighting in washroom / change rooms to be a combination of recessed and vanity lighting.
 - Offices, classrooms, kitchen and similar spaces will be provided with recessed style luminaires or a combination of suspended, direct/indirect style luminaires and pendants where there is an open ceiling design.
 - Metal and wood workshops will be provided with hazardous area rated luminaires as required.
 - The gym will be provided with high bay luminaires.
 - Exterior lighting to consist of a combination of wallpacks and downlights located within soffits, over exterior doors, and to cover all exterior areas as required for security, safety, and convenience.
 - All exterior lighting shall be dark sky compliant.

3.8 Lighting Controls

- Lighting control system to consist of a digitally addressable control system complete with wired devices for ease of use, flexibility, and future expandability (open source).
- Each light fixture will be addressable and can be individually controlled.
- Corridor lighting shall be dimmed when unoccupied. Occupancy sensors shall be provided to bring the lights to full brightness when occupied.
- Daylight harvesting incorporating day light sensors will be utilized in select areas and will incorporate dimming to achieve energy savings and increased user comfort.
- Occupancy sensors will be utilized throughout the building other than service rooms where maintenance might be conducted to achieve energy savings, convenience, and ease of use.
- Exterior lighting to be controlled by timeclock and occupancy sensors.
- Training for programming and use of the lighting control system is to be provided.

3.9 Emergency Lighting

- Emergency lighting levels of 10 lux (1FC) average or greater as required by code to be maintained in principal egress routes to exits, corridors and rooms where the public may congregate.

- Select luminaires in areas accessible to the residents will include integral emergency lighting battery packs.
- Emergency lighting battery packs will provide 10 lux (1 FC) for a minimum duration of 30 minutes maintained in principal egress routes for the second floor.
- Battery operated lighting to consist of remote mounted 12V, 6.0W, MR-16 housing style LED lamped dual head units powered by centrally located battery units to provide minimum 30 minutes back-up time. Units to be c/w wireless real-time monitoring system.
- Exit signage with “Pictogram” will be provided throughout the building in accordance with local codes requirements. All Exit signs must be continuously illuminated and connected emergency lighting battery banks. All exit lights will be LED type with green background.
- All exit signs in the existing building will be replaced with new “Pictogram” exit signs.

3.10 Fire Alarm System

- A new Fire alarm system will be required to be fully addressable type with Class A wiring. The new design should enforce compliance with CAN/ULC S524-latest edition– “Standard for the Installation of Fire Alarm Systems” and NFPA 72 National Fire Alarm Code latest edition as well as the CAN/ULC S537-latest edition “Verification Standards for Fire Alarm Systems”.
- Provide a new annunciator panel by main entrance.
- Modules to connect the existing conventional devices will be provided.
- System shall be a fully addressable, micro-processor based configuration, single stage.
- Power source is normal building power with emergency battery back-up power. Fire alarm wiring to be Class A, FAS rated and installed in labeled red color conduit.
- Fire detectors will be installed in storage rooms, service rooms, janitor rooms and corridors in un-sprinklered areas. Where the building is sprinklered, smoke detectors will be provided in corridors and stairwells.
- Signal circuits will include horns and strobes to meet code compliant audibility throughout the building. Strobes to be located in every room at a minimum to meet code.
- Detectors to be photoelectric type, low profile sensitive to visible and invisible products of combustion.
- Manual emergency egress pull stations will be provided for evacuation protocols at every exit as per code c/w clear tamper guard with audible sound.

3.11 Commissioning

- Commissioning will be included for major distribution equipment, life-safety electrical systems, and telecommunications systems, including testing, circuit verifications, etc. Written certifications are required.
- Commissioning will be performed by the Electrical Contractor in concert with the Consultant.

4.0 DIV 27 AND 28 – TELECOMMUNICATIONS AND SECURITY SYSTEMS

4.1 Telecommunications and Security Design Criteria and Standards

This report outlines the telecommunications and security systems and components for the project. The latest edition of the following codes, standards and methodologies at time of tender shall be utilized for the project, including all pertinent addendums and appendices:

- Canadian Electrical Code (CEC)
- Canadian Standards Association (CSA)
- National Building Code (NBC)
- American National Standards institute (ANSI)
- Institute of Electrical and Electronics Engineers. (IEEE)
- National Electrical Manufactures Association (NEMA)
- Underwriters' Laboratories of Canada (ULC)
- Telecommunications Industry Association (TIA)
- Electronic Industry Alliance (EIA)
- International Electrotechnical Commission (IEC)
- Building Industry Consulting Services International (BICSI)

The following is a list of the telecommunications and security systems will be included in the project.

- Telecommunications Backbone cabling system
- Telecommunications Horizontal cabling system
- Telecommunications Grounding system
- Intrusion Alarm
- Video Surveillance System
- Public Address systems
- Access control
- AV System

4.2 Telecommunications Entrance Facility

- The design intent is to reuse the existing telecommunications infrastructure and expand it into the new addition.
- A new wall mounted rack will be provided in the addition.

4.3 Telecommunications Grounding and Bonding

- The telecommunications grounding and bonding system will be provided and is to be used for all telecommunications infrastructure. Telecommunications grounding and bonding is an additional grounding system installed specifically for telecommunications systems.

- Provide #3/0 copper grounding conductor from main electrical room to new TR.
- Provide #6 AWG copper grounding/bonding conductors for all rack, equipment, cable tray and conduit pathway system.

4.4 Telecommunications Backbone Cabling

- The telecommunications backbone cabling consists of the physical cable connecting media between the existing main communications room and the Telecom Room via the pathway.
- Backbone cabling will consist of OM4 multimode fibre and multi-pair Category 3 cabling.

4.5 Telecommunications Horizontal Cabling

- The telecommunications horizontal cabling consists of the physical wire and connecting media between the work area and the Telecom Room via the pathway.
- Voice/Data systems will utilize category 6 cabling. As a general rule each telecom outlet will consist of 2 Category 6 cables.
- The minimum size of conduit for Telecommunications will be 27mm; this will be installed from the wall outlet and terminating in the zone raceway and back to new TR.
- Provide cable tray down the main corridor for data cable distribution
- Terminate cable in the rack mount patch panel in comms room and 4-port stainless steel face plate for the wall outlets.
- Provide grounding and bonding for conduit.

4.6 Intrusion Alarm System

- Provide new intrusion alarm devices for exterior doors and connect to existing system.
- Provide keypads, door contacts, motion sensors glass breaks and sirens for a complete system.

4.7 Video Surveillance System

- Provide cameras on exterior of the building and at all entrance points into the building.
- Connect to existing video surveillance system.

4.8 PA System

- Provide new PA speakers and call switches in new classrooms, gym and admin area.
- Connect to existing PA head end unit.

4.9 Access Control System

- Provide new access control devices for specified doors and connect to existing system.
- Provide card readers, door controllers, wiring and terminations for a complete system.

4.10 AV System

- Provide new AV system and theatrical lighting infrastructure in for the stage attached to the gym including but not limited to the following:
 - Theatrical lighting power and DMX control system.
 - Speakers.
 - AV input plates.
 - AV rack.
 - AV touchscreen controller.
 - Projector and electric projector screen.

APPENDIX E

Class D Preliminary Concept Pricing, by Postma Consulting Ltd.

Class D Site Development Budget, by HTFC Planning & Design



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Prairie Architects Inc.
 101 – 139 Market St
 Winnipeg, Man.
 R3B 0P5

Attention: Lindsay Oster, Principal Architect
 MAA, OAA, SAA, CPHD, LEED AP, FRAIC

Re: **College Beliveau Transition to Cottonwood Road
 Winnipeg, Manitoba
 Class D Estimate**

We are pleased to attach our class D estimate for the above noted project and do hereby certify the values as noted below which includes a 15% design & pricing contingency, and 8% for escalation.

	Base Estimate	Escalation	Contingency	Total
New School & Renovation	\$11,177,763	\$894,221	\$1,810,798	\$13,882,781
School Sitework as per HTFC		Assume included	Assume included	\$4,500,000
Total				\$18,382,781

Separate Prices

- Separate Price #1 – replace main building air handling unit ADD \$187,679
- Separate Price #2 – replace gym air handling unit ADD \$114,960

Estimate Exclusions:

- GST
- Cash allowances (unless noted)
- Supply chain constraints
- Hazardous material abatement
- Consulting fees
- Soft costs
- FF&E
- Construction contingency

The pricing reflects probable construction costs obtainable in the location of the project as of the date of this estimate and is a determination of fair market value for the construction of this project and should not be taken as a prediction of low bid.

This pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor and assumes a minimum of four (4) general bidders. If fewer bids are received, the bid results can be expected to be higher.

It is recognized, however, that Postma Consulting does not have control over the cost of labour, material or equipment, over a contractor's methods of determining bid prices, or over competitive bidding, market or negotiation conditions.

Accordingly, Postma Consulting cannot and does not warrant or represent that bids or negotiated prices will not vary from this or any subsequent estimate of construction cost or evaluation prepared or agreed to by Postma Consulting. It is generally acknowledged that a Class D estimate is within the range of plus or minus twenty to thirty percent.

We hope this meets to your satisfaction. If you have any questions, please do not hesitate to call.

POSTMA CONSULTING LTD.

A handwritten signature in blue ink, appearing to read 'Wes Postma', followed by a stylized flourish or initial.

Wes Postma, CET, GSC, PQS
Senior Advisor

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 General & Special Conditions				
2 Site supervision & Administration 3 phases	months	15	\$35,000.00	\$525,000
3 Indirect Site Costs	months	15	\$20,000.00	\$300,000
4 Overhead & Fee	%	3.5	\$10,537,000	\$368,795
5 Temporary heating and hoarding	months	10	\$7,500.00	\$75,000
6 Access roads & temporary laydown	m2	500	\$40.00	\$20,000
7 Bonds, Insurance	thous.	10,906	\$25.00	\$272,645
8 Permits renovations	thous.	5,100	\$12.00	\$61,200
9 Permits addition	m2	1,324	\$21.00	\$27,804
10 Cash Allowances				
11 Foundation inspections	item	1	\$20,000.00	\$20,000
12 Soil compaction, conc and mortar testing	item	1	\$10,000.00	\$10,000
13 Manitoba Hydro service	item	1	\$30,000.00	\$30,000
14 MTS Service	item	1	\$10,000.00	\$10,000
15 Testing and air balancing	item	1	\$40,000.00	\$40,000
16 LEED air quality testing	item	1	\$12,000.00	\$12,000
17 Exterior and interior signage	item	1	\$15,000.00	\$15,000
18			Subtotal	\$1,787,444
19 Demolition				
20 Demolition portion of existing school	m3	2,144	\$42.00	\$90,048
21 Gut existing school	m2	2,473	\$67.00	\$165,691
22 Door openings exist block walls for doors	no	8	\$900.00	\$7,200
23 Door openings double exist block walls	no	5	\$1,600.00	\$8,000
24			Subtotal	\$270,939
25 Excavation & Backfill				
26 Excavation/backfill, crawlspace, grade beams	m2	1,211	\$65.00	\$78,715
27 Foundation drainage, exterior	m	110	\$52.00	\$5,720
28 Foundation drainage, interior	m	53	\$79.00	\$4,187
29 Sump pit	no	1	\$2,500.00	\$2,500
30 Sand 50, vb to crawlspace	m2	1,211	\$22.00	\$26,642
31			Subtotal	\$117,764

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Structural Elements				
P1 pile 400 dia x 12 metres	no	131	\$2,100.00	\$275,100
P2 pile 400 dia x 7.6 metres	no	4	\$1,350.00	\$5,400
P1 underpin piles	no	6	\$4,500.00	\$27,000
Pile caps 760 x 600 x 900	no	29	\$750.00	\$21,750
Grade beams 250 x 1200	m3	33	\$1,750.00	\$57,750
Grade beams 250 x 1200 susp	m3	14	\$2,100.00	\$29,400
Grade beams 250 x 1200 at exist wall	m3	9	\$1,700.00	\$15,300
Grade beams 250 x 800 susp	m3	20	\$2,300.00	\$46,000
Grade beams 250 x 800 sups at exist wall	m3	6	\$2,200.00	\$13,200
Rebar to grade beams, caps	kg	9,300	\$4.00	\$37,200
200 precast hollowcre	m2	1,066	\$150.00	\$159,900
250 precast hollowcore	m2	145	\$155.00	\$22,475
Topping 75 to hollowcore	m2	1,211	\$55.00	\$66,605
Entrance pads	m2	32	\$340.00	\$10,880
Allowance strengthen gym floor for mech openings new	item	1	\$10,000.00	\$10,000
Music room struc stud frame, 38 mm deck, topping	m2	104	\$440.00	\$45,760
Steel roof decking - acoustic	m2	1,364	\$66.00	\$90,024
Structural steel & OWSJ at addition	kg	16,800	\$11.60	\$194,880
Shelf support angle	m	110	\$420.00	\$46,200
Upgrade exist roof for added snow load	m	30	\$2,500.00	\$75,000
Fall away anchors at firewall	no	24	\$250.00	\$6,000
			Subtotal	\$1,255,824
Masonry				
Ext wall - CMU 190	m2	644	\$292.00	\$188,048
Addition interior 190 CMU walls	m2	946	\$292.00	\$276,232
Renovation 240 CMU walls	m2	33	\$340.00	\$11,220
Masonry veneer 90, rigid 125, avb	m2	644	\$545.00	\$350,980
Anti-graffiti coating	m2	644	\$35.00	\$22,540
			Subtotal	\$849,020

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Vertical Elements & Miscellaneous Metal				
Lift, 2 stops - 2 doors 1400 kg	item	1	\$78,000.00	\$78,000
Metal stair, concrete filled, 100 wide	no	20	\$575.00	\$11,500
Metal handrail	m	15	\$380.00	\$5,700
Crawlspace hatch	no	1	\$2,500.00	\$2,500
Roof hatch	no	1	\$2,500.00	\$2,500
Roof access ladder	m	4	\$900.00	\$3,600
			Subtotal	\$103,800
Rough Carpentry, Architectural Woodwork				
Misc. rough carpentry	item	1	\$80,000.00	\$80,000
Lower cupboards with counter	m	191	\$1,350.00	\$257,850
Upper cabinets	m	131	\$675.00	\$88,425
Cubbie & bench at change room	m	34	\$700.00	\$23,800
Servery counter	m	4	\$750.00	\$3,000
Reception desk	m	7	\$2,200.00	\$15,400
Counters	m	12	\$700.00	\$8,400
Storage units	m	6	\$1,100.00	\$6,600
Science island	m	13	\$1,600.00	\$20,800
Home Ec island 1.2 wide	m	4	\$1,600.00	\$6,400
1x4 maple ceiling suspended	m2	496	\$475.00	\$235,600
Window sills	m	30	\$115.00	\$3,450
			Subtotal	\$749,725
Roofing, Siding, AVB, Insulation				
Two ply mod bit roofing R40	m2	1,324	\$315.00	\$417,060
Roofing canopy	m2	36	\$200.00	\$7,200
Cladding canopy	m2	24	\$900.00	\$21,600
Soffit canopy	m2	36	\$420.00	\$15,120
Parapet cap flashing	m	110	\$50.00	\$5,500
CFI 100, waterproofing at grade beam	m2	132	\$165.00	\$21,780
			Subtotal	\$488,260

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Windows, Doors				
Aluminum curtainwall, triple glazed	m2	66	\$1,600.00	\$105,600
Fiberglass windows, triple glazed	m2	117	\$910.00	\$106,470
Gym doors double interior	no	3	\$7,100.00	\$21,300
Vestibule exterior doors with cont. hinge, panics	no	6	\$6,000.00	\$36,000
Vestibule interior doors	no	6	\$4,100.00	\$24,600
Double exit ext	no	2	\$9,700.00	\$19,400
Change and washroom doors	no	6	\$3,000.00	\$18,000
Storage & elect doors	no	11	\$3,300.00	\$36,300
Sound rated doors	no	3	\$2,500.00	\$7,500
Ext exit single	no	1	\$5,400.00	\$5,400
Office/kitchen doors, classroom	no	19	\$1,700.00	\$32,300
Rolling shutter kitchen 2 metres wide	no	2	\$5,000.00	\$10,000
Auto door operators	no	6	\$2,750.00	\$16,500
			Subtotal	\$439,370
Drywall, Acoustics, Flooring & Painting				
Parapet - Ext dw b/s, steel studs, batt	m2	75	\$160.00	\$12,000
P3 partition	m2	485	\$136.00	\$65,960
P4 partition	m2	55	\$148.00	\$8,140
Patching wall allowance	item	1	\$30,000.00	\$30,000
Acoustic panels to band & guitar room	m2	88	\$500.00	\$44,000
Drywall suspended ceilings	m2	213	\$96.00	\$20,448
Acoustic tile ceilings with reveal edge 2x2 look 16mm tile	m2	2,676	\$82.00	\$219,432
R12 batt at ceiling	m2	287	\$27.00	\$7,749
Ceramic tile backsplash	m2	71	\$275.00	\$19,525
Ceramic tile washrooms	m2	101	\$140.00	\$14,140
Safety vinyl flooring c/w cove base	m2	203	\$118.00	\$23,954
Modular carpet with base	m2	413	\$64.00	\$26,432
Sheet vinyl flooring with base	m2	3,039	\$79.00	\$240,081
Patch existing floors	m2	2,473	\$28.00	\$69,244
Painting renovations	m2	2,473	\$54.50	\$134,779
Painting addition	m2	1,324	\$54.50	\$72,158
Firestopping	item	1	\$100,000.00	\$100,000
			Subtotal	\$1,108,042

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Specialties & Furnishings				
Whiteboards and tackboards	classroom	9	\$2,000.00	\$18,000
Flagpole with base	no	1	\$5,000.00	\$5,000
Steel support for data projectors	no	9	\$750.00	\$6,750
Toilet partitions, changerooms & washrooms	stalls	8	\$1,800.00	\$14,400
Washroom accessories	item	1	\$20,000.00	\$20,000
Shower stalls	no	4	\$2,500.00	\$10,000
Roller blinds	m2	183	\$120.00	\$21,960
Appliances	item	1	\$0.00	NIC
FF&E	item	1	\$0.00	NIC
			Subtotal	\$96,110
Mechanical				
Mechanical as per attached worksheets	item	1	\$2,524,640.00	\$2,524,640
RST	%	7	\$2,524,640.00	\$176,725
			Subtotal	\$2,701,365
Electrical				
Electrical as per attached worksheets	item	1	\$1,130,935.00	\$1,130,935
RST	%	7	\$1,130,935.00	\$79,165
			Subtotal	\$1,210,100
Subtotal				\$11,177,763
Escalation			8.00%	\$894,221
SUBTOTAL				\$12,071,984
Design & Pricing Contingency			15.00%	\$1,810,798
TOTAL				\$13,882,781

College Beliveau Transition to Cottonwood Road

Class D Estimate - Separate Pricing

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 Separate Price No. 1 replace main building AHU				
2 Mechanical & electrical as per attached worksheets	item	1	\$146,000.00	\$146,000
3 Overhead & fee	%	4		\$5,110
4 Escalation	%	8.00		\$12,089
5 Design & Pricing Contingency	%	15		\$24,480
			Subtotal	\$187,679
7 Separate Price No. 2 replace gym AHU				
8 Mechanical & electrical as per attached worksheets	item	1	\$89,000.00	\$89,000
9 Overhead & fee	%	4		\$3,560
10 Escalation	%	8.00		\$7,405
11 Design & Pricing Contingency	%	15		\$14,995
			Subtotal	\$114,960
12				

Windsor Park Collegiate & Beliveau Schools

Site Redevelopment Class D Budget

HTFC April 4, 2023

A. Cottonwood Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	6,100	\$ 1,525,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	8,500	\$ 2,975,000.00
Total					\$ 4,500,000.00

B. Speers Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	4,100	\$ 1,025,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	5,700	\$ 1,995,000.00
Total					\$ 3,020,000

Postma Consulting
 College Beliveau
 Class D estimate

New	1324	sm
Renov.	2473	sm
Total	3797	sm

Building Areas

C1 Mechanical

C11 Plumbing & Drainage

1	Fixtures	3797	sm	19.49	74,000
	Water closet	14	ea.	850.00	11,900
	Lavatory counter	14	ea.	750.00	10,500
	Lavatory wall hung	2	ea.	875.00	1,750
	Sink	51	ea.	700.00	35,700
	Mop sink	2	ea.	1,000.00	2,000
	Shower	4	ea.	750.00	3,000
	Emergency eye wash	3	ea.	950.00	2,850
	Drinking fountain	2	ea.	3,150.00	6,300
2	Domestic Water	3797	sm	32.18	122,200
	Connect to existing	3	no	500.00	1,500
	Domestic water pipe	1	sum	70,000.00	70,000
	Thermal pipe insulation	1	sum	25,000.00	25,000
	Fixture connection	92	ea.	250.00	23,000
	NFHB	2	ea.	350.00	700
	Trap seal primer	10	ea.	200.00	2,000
3	Sanitary Waste and Vents	3797	sm	39.06	148,300
	Sanitary drain & vents	1	sum	104,000.00	104,000
	Condensate drain	1	sum	5,000.00	5,000
	Fixture connection	92	ea.	225.00	20,700
	Floor drain	10	ea.	185.00	1,850
	Excavation and backfill	1	sum	15,000.00	15,000
	Vent flashing through roof	10	no	175.00	1,750

	Postma Consulting				
	College Beliveau				
	Class D estimate	New	1324	sm	
		Renov.	2473	sm	
	Building Areas	Total	3797	sm	
4	Storm Drains		3797	sm	7.67
					29,125
	Storm drain	1	sum	15,000.00	15,000
	Thermal pipe insulation	1	sum	2,000.00	2,000
	Excavation and backfill	1	sum	3,000.00	3,000
	Sump pit	1	no	7,500.00	7,500
	Roof drain fitting	5	no	325.00	1,625
5	Natural gas		3797	sm	8.10
					30,750
	Natural gas pipe	1	sum	22,000.00	22,000
	Connections/valves	25	ea.	350.00	8,750
6	Miscellaneous		1	sm	32,525.00
					32,525
	Remove fixtures	29	no	125.00	3,625
	Remove floor drains	10	no	110.00	1,100
	Remove plumbing	1	sum	15,000.00	15,000
	Scan & firestop	40	no	320.00	12,800
	C11 Plumbing & Drainage	Total : \$	3797	sm	115.06
					436,900
C12 Fire Protection					
1	Fire extinguishers		3797	sm	1.20
					4,550
	Cabinet mounted fire extinguisher FEX	13	no	350.00	4,550
2	Sprinklers		3797	sm	71.03
					269,715
	New service BFP, 6" water service	1	ls	70,000.00	70,000
	Sprinkler header / Siamese	1	ls	7,500.00	7,500
	Alarm zone	1	no	1,500.00	1,500
	Sprinkler head crawlspace	10	no	220.00	2,200
	Adjust sprinkler heads renovated areas	2473	no	55.00	136,015
	Sprinkler head new addition	150	no	350.00	52,500
	C12 Fire Protection	Total : \$	3797	sm	72.23
					274,265

Postma Consulting
 College Beliveau
 Class D estimate

New	1324	sm
Renov.	2473	sm
Total	3797	sm

Building Areas

C13 HVAC

1	Liquid transfer - heating and cooling	3797	sm	54.25	206,000
	Heating piping, rads	1	sum	100,000.00	100,000
	Thermal pipe insulation	1	sum	32,000.00	32,000
	Radiation	1	sum	30,000.00	30,000
	Radiation connection	4	no	1,000.00	4,000
	Unit ventilator connection	2	no	1,000.00	2,000
	Fan coil unit connection	4	no	2,000.00	8,000
	Force flow / connection	12	no	2,500.00	30,000
2	Air distribution Equipment	3797	sm	147.35	559,500
	Unit ventilator	2	no	15,000.00	30,000
	Fan coil	21	no	3,500.00	73,500
	AHU 1 MBH 750, 40 ton cooling, 16,000 cfm	1	no	275,000.00	275,000
	AHU small and CU2 for performance	1	no	25,000.00	25,000
	AHU small with AC	1	no	22,000.00	22,000
	Fume hood and exhaust	2	no	20,000.00	40,000
	ERV-1	1	no	55,000.00	55,000
	MUA unit	1	no	10,000.00	10,000
	Exhaust fan	2	no	2,000.00	4,000
	Kitchen hood, fan and welded ductwork	1	no	25,000.00	25,000

	Postma Consulting					
	College Beliveau					
	Class D estimate	New	1324	sm		
		Renov.	2473	sm		
	Building Areas	Total	3797	sm		
3	Air distribution ductwork		3797	sm	183.16	695,475
	Galvanized ductwork		16000	kg	26.00	416,000
	Thermal insulation		3700	sm	45.00	166,500
	Supply air diffuser		210	no	235.00	49,350
	VAV box		48	no	1,000.00	48,000
	Return grill		75	no	155.00	11,625
	Exhaust grill		32	no	125.00	4,000
4	Miscellaneous		3797	sm	29.76	113,000
	Vibration isolation		1	ls	3,000.00	3,000
	Tag and label		1	ls	2,000.00	2,000
	Sleeving		1	ls	6,000.00	6,000
	Fire stopping		1	ls	6,000.00	6,000
	Demolition HVAC		1	ls	85,000.00	85,000
	Cutting & patching		1	ls	11,000.00	11,000
5	Balancing & commissioning		3797	sm	11.06	42,000
	Air balancing		1	ls	16,000.00	16,000
	Water balancing		1	ls	16,000.00	16,000
	Commissioning		1	ls	10,000.00	10,000
	C13 HVAC	Total : \$	3797	sm	425.59	1,615,975

Postma Consulting
 College Beliveau
 Class D estimate

New	1324	sm
Renov.	2473	sm
Total	3797	sm

Building Areas

C14 Controls

1	Controls	3797	sm	52.01	197,500
	Demolish existing	1	ls	13,000.00	13,000
	Radiation CV	9	no	1,000.00	9,000
	Fan coil	32	no	1,500.00	48,000
	Unit ventilator	3	no	1,500.00	4,500
	Force flow	13	no	1,000.00	13,000
	AHU / ERV	5	no	10,000.00	50,000
	BAS / head end, programing	1	ls	60,000.00	60,000
	C14 Controls	Total : \$ 3797	sm	52.01	197,500
	Mechanical	Total : \$ 3797	sm	664.90	2,524,640

Postma Consulting
Windsor Park Collegiate
Class D estimate

	Separate Price replace main bldg AHU	1	sm		
2	Air distribution Equipment	1	sm	146,000.00	146,000
	Remove existing AHU, patching	1	no	7,500.00	7,500
	New AHU 24,000 cfm	1	no	120,000.00	120,000
	Hook up hydronic	1	no	1,500.00	1,500
	Controls	1	no	10,000.00	10,000
	Electrical work	1	no	2,000.00	2,000
	Balancing	1	no	5,000.00	5,000
	Separate Price replace gym AHU	1	sm		
2	Air distribution Equipment	1	sm	89,000.00	89,000
	Remove existing AHU	1	no	7,500.00	7,500
	New AHU 12,000 cfm	1	no	65,000.00	65,000
	Hook up hydronic	1	no	1,500.00	1,500
	Controls	1	no	7,000.00	10,000
	Electrical work	1	no	2,000.00	2,000
	Balancing	1	no	3,000.00	3,000

Postma Consulting			
College Beliveau			
Class D estimate	New	1324	sm
	Renov	2473	sm
Building Area - New Construction	Total	3797	sm

C2 Electrical

C21 Service and Distribution		3797	sm	27.82	105,625
1	New service - utility charge	1	no	40,000.00	NIC
2	Upgrade service / connect to existing	1	no	75,000.00	NIC
3	New MSB 1,000A	1	no	50,000.00	50,000
4	Panel	9	no	3,500.00	31,500
5	Panel feeders	25	m	45.00	1,125
6	Refeed existing panels	10	no	2,000.00	20,000
7	Testing	1	sum	1,500.00	1,500
8	Grounding	1	sum	1,500.00	1,500
C21 Service and Distribution	Total	3797	sm	27.82	105,625

C22 Lighting, devices and heating

1	Light fixtures	3797	sm	132.39	502,675
	Light fixture	580	no	420.00	243,600
	Demolition fixtures	1	sum	35,000.00	44,000
	Wall mount exterior light fixture	6	no	500.00	3,000
	Pole light	8	no	5,500.00	44,000
	Buried feeders	250	m	20.00	5,000
	Emergency battery	16	no	550.00	8,800
	Emergency head	16	no	225.00	3,600
	Exit sign	6	no	450.00	2,700
	Wall switch / OC	50	no	175.00	8,750
	Switch	13	no	140.00	1,820
	Occupancy sensor	79	ea.	195.00	15,405
	Branch wiring	1	sum	72,000.00	72,000
	Lighting control system / low voltage wiring	1	sum	50,000.00	50,000

	Postma Consulting					
	College Beliveau					
	Class D estimate	New	1324	sm		
		Renov	2473	sm		
	Building Area - New Construction	Total	3797	sm		
2	Power outlets, devices and connections		3797	sm	39.53	150,100
	15A wall receptacle		350	no	135.00	47,250
	20A wall receptacle Tee		7	no	140.00	980
	GFI receptacle		60	no	145.00	8,700
	Parking receptacle		20	no	750.00	15,000
	Drinking fountain		2	no	185.00	370
	Hand dryer		6	no	750.00	4,500
	ADO door		6	no	550.00	3,300
	Branch wiring		1	sum	70,000.00	70,000
3	Mechanical power		3797	sm	34.24	130,000
	Allowance		1	no	80,000.00	80,000
	Branch wiring		1	sum	50,000.00	50,000
	C22 Lighting, devices & heating	Total	3797	sm	206.16	782,775

Postma Consulting			
College Beliveau			
Class D estimate	New	1324	sm
	Renov	2473	sm
Building Area - New Construction	Total	3797	sm

C23 Systems & Ancillaries

1	Fire Alarm	3797	sm	14.92	56,660
	New fire alarm panel	1	sum	20,000.00	20,000
	Pull station	5	no	225.00	1,125
	Relocate existing	24	no	225.00	5,400
	Smoke detector	12	no	395.00	4,740
	Horn/strobe	11	no	515.00	5,665
	Horn	1	no	455.00	455
	Strobe	1	no	275.00	275
	Verification	1	sum	6,000.00	6,000
	Wiring	1	sum	13,000.00	13,000
2	Voice and data	3797	sm	19.15	72,700
	Data outlet	85	no	100.00	8,500
	Cable outlet	2	no	100.00	200
	WAP	40	no	750.00	30,000
	Data rack	3	no	3,000.00	9,000
	Wiring / cable tray	1	sum	25,000.00	25,000
3	Public address	3797	sm	9.01	34,200
	PA speaker	40	no	325.00	13,000
	Call station	12	no	350.00	4,200
	Relocations incl wire	60	no	200.00	12,000
	Conduit and wire	1	sum	5,000.00	5,000
4	Security / intrusion	3797	sm	19.42	73,725
	Motion detector	15	no	395.00	5,925
	Barrier free washroom alarm	1	no	1,500.00	1,500
	Relocations incl wire	30	no	250.00	7,500
	Door contact	8	no	225.00	1,800
	Cameras incl rough in	12	no	3,500.00	42,000
	Card reader/door control	5	no	2,000.00	10,000
	Conduit and wire	1	sum	5,000.00	5,000
5	Clock	3797	sm	1.38	5,250
	Relocations incl wire	8	no	250.00	2,000
	Clock	5	no	650.00	3,250
	C23 Systems & Ancillaries	3797	sm	63.88	242,535
	Electrical	3797	sm	297.85	1,130,935



400 – 93 Lombard Ave.
 Winnipeg, MB R3B 3B1
 Phone: (204) 415-3700
 Email: info@postmaqs.ca
www.postmaconsulting.ca

April 22, 2023

Prairie Architects Inc.
 101 – 139 Market St
 Winnipeg, Man.
 R3B 0P5

Attention: Lindsay Oster, Principal Architect
 MAA, OAA, SAA, CPHD, LEED AP, FRAIC

Re: **Windsor Park Collegiate Transition to Speers Road
 Winnipeg, Manitoba
 Class D Estimate updated**

We are pleased to attach our class D estimate for the above noted project and do hereby certify the values as noted below which includes a 15% design & pricing contingency, and 8% for escalation.

	Base Estimate	Escalation	Contingency	Total
New School & Renovation	\$17,464,831	\$1,397,186	\$2,829,303	\$21,691,320
School Sitework as per HTFC		Assume included	Assume included	\$3,020,000
Total				\$24,711,320

Separate Prices

- Separate Price #1 – sprinkler system to metal and wood shops area ADD \$58,553
- Separate Price #2 – add firewall between gym and metal/wood shops ADD \$69,487

Estimate Exclusions:

- GST
- Cash allowances (unless noted)
- Supply chain constraints
- Hazardous material abatement
- Consulting fees
- Soft costs
- FF&E
- Construction contingency

The pricing reflects probable construction costs obtainable in the location of the project as of the date of this estimate and is a determination of fair market value for the construction of this project and should not be taken as a prediction of low bid.

This pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor and assumes a minimum of four (4) general bidders. If fewer bids are received, the bid results can be expected to be higher.

It is recognized, however, that Postma Consulting does not have control over the cost of labour, material or equipment, over a contractor's methods of determining bid prices, or over competitive bidding, market or negotiation conditions.

Accordingly, Postma Consulting cannot and does not warrant or represent that bids or negotiated prices will not vary from this or any subsequent estimate of construction cost or evaluation prepared or agreed to by Postma Consulting. It is generally acknowledged that a Class D estimate is within the range of plus or minus twenty to thirty percent.

We hope this meets to your satisfaction. If you have any questions, please do not hesitate to call.

POSTMA CONSULTING LTD.

A handwritten signature in blue ink, appearing to read 'Wes Postma', followed by a stylized flourish or initial.

Wes Postma, CET, GSC, PQS
Senior Advisor

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 General & Special Conditions				
2 Site supervision & Administration 3 phases	months	15	\$35,000.00	\$525,000
3 Indirect Site Costs	months	15	\$20,000.00	\$300,000
4 Overhead & Fee	%	3.5	\$16,462,700	\$576,195
5 Temporary heating and hoarding	months	10	\$7,500.00	\$75,000
6 Access roads & temporary laydown	m2	500	\$40.00	\$20,000
7 Bonds, Insurance	thous.	17,039	\$25.00	\$425,972
8 Permits renovations	thous.	4,300	\$12.00	\$51,600
9 Permits addition	m2	2,866	\$21.00	\$60,186
10 Cash Allowances				
11 Foundation inspections	item	1	\$20,000.00	\$20,000
12 Soil compaction, conc and mortar testing	item	1	\$10,000.00	\$10,000
13 Manitoba Hydro service	item	1	\$30,000.00	\$30,000
14 MTS Service	item	1	\$10,000.00	\$10,000
15 Testing and air balancing	item	1	\$40,000.00	\$40,000
16 LEED air quality testing	item	1	\$12,000.00	\$12,000
17 Exterior and interior signage	item	1	\$15,000.00	\$15,000
18			Subtotal	\$2,170,953
19 Demolition				
20 Demolition portion of existing school	m3	9,031	\$18.00	\$162,558
21 Gut existing school	m2	3,107	\$67.00	\$208,169
22 Remove windows, enlarge openings	m2	262	\$150.00	\$39,300
23 Door openings exist block walls for doors	no	7	\$900.00	\$6,300
24 Door openings double exist block walls	no	1	\$1,600.00	\$1,600
25			Subtotal	\$417,927
26 Excavation & Backfill				
27 Excavation/backfill, slab on grade, grade beams	m2	2,401	\$49.00	\$117,649
28 Foundation drainage, exterior	m	192	\$52.00	\$9,984
29 Foundation drainage, interior	m	106	\$79.00	\$8,374
30 Sump pit	no	2	\$2,500.00	\$5,000
31			Subtotal	\$141,007

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
32 Structural Elements				
33 P1 pile 400 dia x 12 metres	no	238	\$2,100.00	\$499,800
34 P2 pile 400 dia x 7.6 metres	no	3	\$1,350.00	\$4,050
35 P1 500 dia x 12 metres	no	142	\$2,500.00	\$355,000
36 Pile caps 760 x 600 x 900	no	30	\$750.00	\$22,500
37 Grade beams 250 x 750	m3	29	\$1,800.00	\$52,200
38 Grade beams 250 x 1650	m3	38	\$1,650.00	\$62,700
39 Grade beams 250 x 600	m3	9	\$1,900.00	\$17,100
40 Grade beams 250 x 600 at exist wall	m3	13	\$1,800.00	\$23,400
41 CIP feature stair - 10 m2 landings, 65 m2 throat/tread - 15 m3	item	1	\$30,000.00	\$30,000
42 SL1 slab 176 mm with drops, void form	m2	1,963	\$180.00	\$353,340
43 Crawlspace slab 125 thick on gravel	m2	376	\$146.00	\$54,896
44 SL2 slab 200 thick	m2	62	\$192.00	\$11,904
45 SL3 slab exterior	m2	32	\$340.00	\$10,880
46 200 precast hollowcre	m2	376	\$150.00	\$56,400
47 300 precast hollowcore	m2	193	\$160.00	\$30,880
48 Topping 75 to hollowcore	m2	569	\$55.00	\$31,295
49 Rebar for concrete	kg	88,000	\$4.00	\$352,000
50 Allowance strengthen gym floor for shop equipment new	item	1	\$20,000.00	\$20,000
51 Mezzanine gym - strengthen floor for mech equipment	item	1	\$30,000.00	\$30,000
52 Steel roof decking - acoustic	m2	2,452	\$66.00	\$161,832
53 Structural steel & OWSJ at addition	kg	51,000	\$10.00	\$510,000
54 Shelf support angle	m	245	\$420.00	\$102,900
55 Steel beams and columns for new exist wall openings - allow	item	1	\$40,000.00	\$40,000
			Subtotal	\$2,833,077
57 Masonry				
58 Ext wall - CMU 190	m2	1,072	\$292.00	\$313,024
59 Addition interior 190 CMU walls	m2	1,685	\$292.00	\$492,020
60 Addition interior 240 CMU walls	m2	763	\$316.00	\$241,108
61 Renovation 190 CMU walls	m2	362	\$287.00	\$103,894
62 Masonry veneer 90, rigid 125, avb	m2	1,101	\$545.00	\$600,045
63 Anti-graffiti coating	m2	600	\$35.00	\$21,000
			Subtotal	\$1,771,091

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
65 Vertical Elements & Miscellaneous Metal				
66 Lift, 2 stops - 2 doors 1400 kg	item	1	\$78,000.00	\$78,000
67 Metal stair, concrete filled, 100 wide	no	18	\$575.00	\$10,350
68 Metal handrail	m	12	\$380.00	\$4,560
69 Wood tread/insert common stair 2 metres wide (conc base)	no	27	\$750.00	\$20,250
70 Common area guardrail	m	15	\$930.00	\$13,950
71 Crawlspace hatch	no	1	\$2,500.00	\$2,500
72 Roof hatch	no	1	\$2,500.00	\$2,500
73 Roof access ladder	m	4	\$900.00	\$3,600
			Subtotal	\$135,710
75 Rough Carpentry, Architectural Woodwork				
76 Misc. rough carpentry	item	1	\$130,000.00	\$130,000
77 Lower cupboards with counter	m	152	\$1,350.00	\$205,200
78 Upper cabinets	m	99	\$675.00	\$66,825
79 Cubbie & bench at change room	m	52	\$700.00	\$36,400
80 Vanity	m	6	\$800.00	\$4,800
81 Reception desk	m	7	\$2,200.00	\$15,400
82 Counters	m	13	\$700.00	\$9,100
83 Storage units	m	7	\$1,100.00	\$7,700
84 Science island	m	8	\$1,600.00	\$12,800
85 Home Ec island 1.2 wide	m	3	\$1,600.00	\$4,800
86 1x4 maple ceiling suspended	m2	243	\$475.00	\$115,425
87 Window sills	m	149	\$115.00	\$17,135
			Subtotal	\$625,585
89 Roofing, Siding, AVB, Insulation				
90 Two ply mod bit roofing R40	m2	2,413	\$315.00	\$760,095
91 Roofing canopy	m2	39	\$200.00	\$7,800
92 Cladding canopy	m2	10	\$900.00	\$9,000
93 Soffit canopy	m2	39	\$420.00	\$16,380
94 Parapet cap flashing	m	200	\$50.00	\$10,000
95 CFI 100, waterproofing at grade beam	m2	144	\$165.00	\$23,760
			Subtotal	\$827,035

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
97 Windows, Doors				
98 Aluminum curtainwall, triple glazed	m2	277	\$1,600.00	\$443,200
99 Fiberglass windows, triple glazed	m2	63	\$910.00	\$57,330
100 Fiberglass windows, triple glazed renovations	m2	262	\$910.00	\$238,420
101 Interior glazing partitions	m2	39	\$700.00	\$27,300
102 Office/kitchen doors	no	30	\$1,700.00	\$51,000
103 Classroom doors	no	15	\$1,700.00	\$25,500
104 Storage doors	no	13	\$3,300.00	\$42,900
105 Washroom & change room doors	no	9	\$3,000.00	\$27,000
106 Vestibule interior	no	9	\$4,100.00	\$36,900
107 Exit exterior	no	3	\$5,400.00	\$16,200
108 Operable partition	m2	50	\$1,400.00	\$70,000
109 Acoustic doors	no	3	\$2,500.00	\$7,500
110 Corridor doors	no	10	\$4,000.00	\$40,000
111 Vestibule exterior - cont hinge	no	7	\$6,000.00	\$42,000
112 Gym interior	no	6	\$3,600.00	\$21,600
113 Gym exterior	no	2	\$5,400.00	\$10,800
114 Rolling shutter kitchen 2 metres wide	no	1	\$5,000.00	\$5,000
115 Auto door operators	no	6	\$2,750.00	\$16,500
116			Subtotal	\$1,179,150

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
117 Drywall, Acoustics, Flooring & Painting				
118 Parapet - Ext dw b/s, steel studs, batt	m2	150	\$160.00	\$24,000
119 P3 partition	m2	335	\$136.00	\$45,560
120 P4 partition	m2	388	\$148.00	\$57,424
121 Patching wall allowance	item	1	\$40,000.00	\$40,000
122 Acoustic panels to band & guitar room	m2	44	\$500.00	\$22,000
123 Acoustic panels to gym	m2	240	\$300.00	\$72,000
124 Drywall suspended ceilings	m2	200	\$96.00	\$19,200
125 Acoustic tile ceilings with reveal edge 2x2 look, 16mm tile	m2	3,126	\$82.00	\$256,332
126 R12 batt at ceiling	m2	95	\$195.00	\$18,525
127 Ceramic tile backsplash	m2	54	\$275.00	\$14,850
128 Ceramic tile washrooms	m2	113	\$140.00	\$15,820
129 Safety vinyl flooring c/w cove base	m2	203	\$118.00	\$23,954
130 Modular carpet with base	m2	262	\$64.00	\$16,768
131 Gym hardwood flooring	m2	839	\$182.00	\$152,698
132 Sheet vinyl flooring with base	m2	3,617	\$79.00	\$285,743
133 Patch existing floors	m2	2,629	\$28.00	\$73,612
134 Painting renovations	m2	3,107	\$54.50	\$169,332
135 Painting addition	m2	2,866	\$54.50	\$156,197
136 Firestopping	item	1	\$130,000.00	\$130,000
137			Subtotal	\$1,594,015

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Specialties & Furnishings				
138 Whiteboards and tackboards	classroom	15	\$2,000.00	\$30,000
139 Patient lift	no	2	\$8,000.00	\$16,000
141 Steel support for data projectors	no	15	\$750.00	\$11,250
142 Toilet partitions, changerooms	stalls	10	\$1,800.00	\$18,000
143 Washroom accessories	item	1	\$20,000.00	\$20,000
144 Shower stalls	no	4	\$2,500.00	\$10,000
145 Roller blinds	m2	602	\$120.00	\$72,240
146 Gym equipment - highschool	item	1	\$160,000.00	\$160,000
147 Gym divider curtain - motorized	m2	182	\$325.00	\$59,150
148 Appliances	item	1	\$0.00	NIC
149 FF&E	item	1	\$0.00	NIC
			Subtotal	\$396,640
Mechanical				
152 Mechanical as per attached worksheet	item	1	\$3,324,740.00	\$3,324,740
153 RST	%	7	\$3,324,740.00	\$232,732
			Subtotal	\$3,557,472
Electrical				
156 Electrical as per attached worksheets	item	1	\$1,696,420.00	\$1,696,420
157 RST	%	7	\$1,696,420.00	\$118,749
			Subtotal	\$1,815,169
Subtotal				\$17,464,831
160 Escalation			8.00%	\$1,397,186
SUBTOTAL				\$18,862,017
162 Design & Pricing Contingency			15.00%	\$2,829,303
TOTAL				\$21,691,320

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate - Separate Pricing

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 Separate Price No. 1 Sprinklers to shop area				
2 Mechanical as per attached worksheet	item	1	\$45,550.00	\$45,550
3 Overhead & fee	%	4		\$1,594
4 Escalation	%	8.00		\$3,772
5 Design & Pricing Contingency	%	15		\$7,637
			Subtotal	\$58,553
7 Separate Price NO. 2 firewall between gym and shop area				
8 Firewall - concrete block	m2	168	\$292.00	\$49,056
9 Extra foundation work	item	1	\$5,000.00	\$5,000
10 Overhead & fee	%	4		\$1,892
11 Escalation	%	8.00		\$4,476
12 Design & Pricing Contingency	%	15		\$9,064
			Subtotal	\$69,487
13				

Windsor Park Collegiate & Beliveau Schools

Site Redevelopment Class D Budget

HTFC April 4, 2023

A. Cottonwood Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	6,100	\$ 1,525,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	8,500	\$ 2,975,000.00
Total					\$ 4,500,000.00

B. Speers Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	4,100	\$ 1,025,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	5,700	\$ 1,995,000.00
Total					\$ 3,020,000.00

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C1 Mechanical

C11 Plumbing & Drainage

1	Fixtures	5973	sm	9.87	58,975
	Water closet	13	ea.	850.00	11,050
	Lavatory counter	5	ea.	750.00	3,750
	Lavatory wall hung	11	ea.	875.00	9,625
	Sink	35	ea.	700.00	24,500
	Mop sink	2	ea.	1,000.00	2,000
	Shower	4	ea.	750.00	3,000
	Emergency eye wash	2	ea.	950.00	1,900
	Drinking fountain	1	ea.	3,150.00	3,150
2	Domestic Water	5973	sm	17.55	104,800
	Connect to existing	3	no	500.00	1,500
	Domestic water heater 60 gal c/w exp tank, pump	1	no	5,500.00	5,500
	Domestic water pipe	1	sum	56,000.00	56,000
	Thermal pipe insulation	1	sum	21,000.00	21,000
	Fixture connection	73	ea.	250.00	18,250
	Washer connection	1	ea.	250.00	250
	NFHB	2	ea.	350.00	700
	Trap seal primer	8	ea.	200.00	1,600
3	Sanitary Waste and Vents	5973	sm	18.99	113,430
	Sanitary drain & vents	1	sum	83,000.00	83,000
	Condensate drain	1	sum	5,000.00	5,000
	Fixture connection	73	ea.	225.00	16,425
	Floor drain	8	ea.	185.00	1,480
	Washer connection	1	ea.	125.00	125
	Excavation and backfill	1	sum	6,000.00	6,000
	Vent flashing through roof	8	no	175.00	1,400

Postma Consulting
Windsor Park Collegiate
Class D estimate

		New	2866	sm		
		Renov.	3107	sm		
	Building Areas	Total	5973	sm		
4	Storm Drains		5973	sm	8.19	48,925
	Storm drain		1	sum	24,000.00	24,000
	Thermal pipe insulation		1	sum	3,000.00	3,000
	Excavation and backfill		1	sum	4,000.00	4,000
	Sump pit		2	no	7,500.00	15,000
	Roof drain fitting		9	no	325.00	2,925
5	Natural gas		5973	sm	7.70	46,000
	Natural gas pipe		1	sum	32,000.00	32,000
	Connections/valves		40	ea.	350.00	14,000
6	Miscellaneous		1	sm	36,225.00	36,225
	Remove fixtures		33	no	125.00	4,125
	Remove floor drains		10	no	110.00	1,100
	Remove plumbing		1	sum	15,000.00	15,000
	Scan & firestop		50	no	320.00	16,000
	C11 Plumbing & Drainage	Total : \$	5973	sm	68.37	408,355
C12 Fire Protection						
1	Fire extinguishers		5973	sm	1.17	7,000
	Cabinet mounted fire extinguisher FEX		20	no	350.00	7,000
2	Sprinklers		5973	sm	62.21	371,585
	New service BFP, 6" water service		1	ls	70,000.00	70,000
	Sprinkler header / Siamese		1	ls	7,500.00	7,500
	Alarm zone		1	no	1,500.00	1,500
	Sprinkler head crawlspace		60	no	220.00	13,200
	Adjust sprinkler heads renovated areas		3107	m2	55.00	170,885
	Sprinkler head new addition		310	no	350.00	108,500
	C12 Fire Protection	Total : \$	5973	sm	63.38	378,585

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C13 HVAC

1	Liquid transfer - heating and cooling	5973	sm	52.82	315,500
	Heating piping, rads	1	sum	160,000.00	160,000
	Thermal pipe insulation	1	sum	48,000.00	48,000
	Radiation	1	sum	40,000.00	40,000
	Radiation connection	5	no	1,000.00	5,000
	Unit ventilator connection	3	no	1,000.00	3,000
	Fan coil unit connection	6	no	2,000.00	12,000
	Force flow / connection	19	no	2,500.00	47,500
2	Air distribution Equipment	5973	sm	121.55	726,000
	Unit ventilator	3	no	15,000.00	45,000
	Fan coil	32	no	3,500.00	112,000
	Gym AHU 400 MBH, 20 ton cooling, 8,000 cfm	1	no	125,000.00	125,000
	AHU small and CU2 for performance	1	no	25,000.00	25,000
	AHU small 3 to 5	3	no	15,000.00	45,000
	VRF system for admin area, entry commons	1	no	75,000.00	75,000
	Fume hood and exhaust	1	no	20,000.00	20,000
	ERV-1	1	no	55,000.00	55,000
	ERV-2	1	no	40,000.00	40,000
	Dust collector equipment system	1	no	150,000.00	150,000
	Tank compressor	1	no	5,000.00	5,000
	Exhaust fan	2	no	2,000.00	4,000
	Kitchen hood, fan and welded ductwork	1	no	25,000.00	25,000

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

3	Air distribution ductwork	5973	sm	175.42	1,047,800	
	Galvanized ductwork	24000	kg	26.00	624,000	
	Thermal insulation	5600	sm	45.00	252,000	
	Supply air diffuser	320	no	235.00	75,200	
	VAV box	72	no	1,000.00	72,000	
	Return grill	120	no	155.00	18,600	
	Exhaust grill	48	no	125.00	6,000	
4	Miscellaneous	5973	sm	17.24	103,000	
	Vibration isolation	1	ls	4,500.00	4,500	
	Tag and label	1	ls	2,500.00	2,500	
	Sleeving	1	ls	9,500.00	9,500	
	Fire stopping	1	ls	9,500.00	9,500	
	Demolition HVAC	1	ls	68,000.00	68,000	
	Cutting & patching	1	ls	9,000.00	9,000	
5	Balancing & commissioning	5973	sm	10.55	63,000	
	Air balancing	1	ls	24,000.00	24,000	
	Water balancing	1	ls	24,000.00	24,000	
	Commissioning	1	ls	15,000.00	15,000	
	C13 HVAC	Total : \$	5973	sm	377.58	2,255,300

Postma Consulting
 Windsor Park Collegiate
 Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C14 Controls

1	Controls	5973	sm	47.30	282,500
	Demolish existing	1	ls	10,000.00	10,000
	Radiation CV	14	no	1,000.00	14,000
	Fan coil	48	no	1,500.00	72,000
	Unit ventilator	5	no	1,500.00	7,500
	Force flow	19	no	1,000.00	19,000
	AHU / ERV	7	no	10,000.00	70,000
	BAS / head end, programing	1	ls	90,000.00	90,000
	C14 Controls	Total : \$ 5973	sm	47.30	282,500
	Mechanical	Total : \$ 5973	sm	556.63	3,324,740

Postma Consulting
Windsor Park Collegiate
Class D estimate

Sprinklers shops area 990 sm

C1 Mechanical

C12 Fire Protection

1	Sprinklers	990	sm	45.96	45,500
	Connect to addition	1	ls	17,500.00	17,500
	Alarm zone	1	no	1,500.00	1,500
	Sprinkler head	106	no	250.00	26,500
	C12 Fire Protection	Total : \$	990 sm	45.96	45,500
	Mechanical	Total : \$	990 sm	45.96	45,500

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov	3107	sm
Total	5973	sm

Building Area - New Construction

C2 Electrical

C21 Service and Distribution	5973	sm	11.81	70,535	
1 New service - utility charge	1	no	40,000.00	NIC	
2 Upgrade service / connect to existing	1	no	75,000.00	NIC	
3 New MSB 600A	1	no	35,000.00	35,000	
4 Panel	9	no	3,500.00	31,500	
5 Panel feeders	23	m	45.00	1,035	
6 Testing	1	sum	1,500.00	1,500	
7 Grounding	1	sum	1,500.00	1,500	
C21 Service and Distribution	Total	5973	sm	11.81	70,535

C22 Lighting, devices and heating

1 Light fixtures	5973	sm	119.87	716,000
Light fixtures	920	no	420.00	386,400
Demolition fixtures	1	sum	44,000.00	44,000
Wall mount exterior light fixture	12	no	500.00	6,000
Pole light	8	no	5,500.00	44,000
Buried feeders	250	m	20.00	5,000
Emergency battery	26	no	550.00	14,300
Emergency head	25	no	225.00	5,625
Exit sign	10	no	450.00	4,500
Wall switch / OC	80	no	175.00	14,000
Switch	20	no	140.00	2,800
Occupancy sensor	125	ea.	195.00	24,375
Branch wiring	1	sum	115,000.00	115,000
Lighting control system / low voltage wiring	1	sum	50,000.00	50,000

Postma Consulting						
Windsor Park Collegiate						
Class D estimate						
	New	2866	sm			
	Renov	3107	sm			
	Total	5973	sm			
Building Area - New Construction						
2	Power outlets, devices and connections	5973	sm	35.59	212,595	
	15A wall receptacle	550	no	135.00	74,250	
	20A wall receptacle Tee	10	no	140.00	1,400	
	GFI receptacle	95	no	145.00	13,775	
	Parking receptacle	20	no	750.00	15,000	
	Drinking fountain	2	no	185.00	370	
	Hand dryer	6	no	750.00	4,500	
	ADO door	6	no	550.00	3,300	
	Branch wiring	1	sum	100,000.00	100,000	
3	Mechanical power	5973	sm	33.48	200,000	
	Allowance	1	no	125,000.00	125,000	
	Branch wiring	1	sum	75,000.00	75,000	
	C22 Lighting, devices & heating	Total	5973	sm	188.95	1,128,595

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov	3107	sm
Total	5973	sm

Building Area - New Construction

C23 Systems & Ancillaries

1	Fire Alarm	5973	sm	14.27	85,215
	New fire alarm panel	1	sum	20,000.00	20,000
	Pull station	8	no	225.00	1,800
	Relocate existing	30	no	225.00	6,750
	Smoke detector	25	no	395.00	9,875
	Horn/strobe	22	no	515.00	11,330
	Horn	2	no	455.00	910
	Strobe	2	no	275.00	550
	Verification	1	sum	9,000.00	9,000
	Wiring	1	sum	25,000.00	25,000
2	Voice and data	5973	sm	18.45	110,200
	Data outlet	130	no	100.00	13,000
	Cable outlet	2	no	100.00	200
	WAP	60	no	750.00	45,000
	Data rack	4	no	3,000.00	12,000
	Wiring / cable tray	1	sum	40,000.00	40,000
3	Public address	5973	sm	8.90	53,150
	PA speaker	62	no	325.00	20,150
	Call station	20	no	350.00	7,000
	Relocations incl wire	80	no	200.00	16,000
	Conduit and wire	1	sum	10,000.00	10,000
4	Security / intrusion	5973	sm	21.72	129,725
	Motion detector	30	no	395.00	11,850
	Barrier free washroom alarm	1	no	1,500.00	1,500
	Relocations incl wire	40	no	250.00	10,000
	Door contact	15	no	225.00	3,375
	Cameras incl rough in	24	no	3,500.00	84,000
	Card reader/door control	5	no	2,000.00	10,000
	Conduit and wire	1	sum	9,000.00	9,000
5	Clock	5973	sm	1.51	9,000
	Relocations incl wire	10	no	250.00	2,500
	Clock	10	no	650.00	6,500
6	Theatre Lighting & Sound	1	sm	110,000.00	110,000
	Lighting & related rigging	1	sum	75,000.00	75,000
	Sound	1	sum	35,000.00	35,000
	C23 Systems & Ancillaries	5973	sm	83.26	497,290
	Electrical	5973	sm	284.01	1,696,420

From: Wes Postma wes@postmaqs.ca 
Subject: Windsor Park Collegiate & College Beliveau Class D estimate final
Date: April 22, 2023 at 7:58 AM
To: Lindsay Oster lindsay@prairiearchitects.ca
Cc: Ben Postma ben@postmaqs.ca



Hello Lindsay

Attached is revised estimate for Windsor Park Collegiate to add stage lighting and sound as requested. I have also included the correct mechanical estimate – no change in budget.

To delete 3 science rooms in the renovated area at Speers site (Windsor Park) I have the following:

- Architectural \$291,000
- Mechanical incl fume hoods \$248,000
- Electrical \$76,000
- GC costs \$61,000
- Subtotal \$676,000
- Escalation 8% \$54,000
- Design contingency 15% \$110,000
- Total \$840,000



Wes Postma, CET, PQS, GSC
Senior Advisor
O: 204-415-3700 C: 204-509-5339
Postma Consulting Ltd.
400 - 93 Lombard Ave, Winnipeg MB, R3B 3B1
www.postmaconsulting.ca



Windsor Park
Collegi...23.pdf

Windsor Park Collegiate & Beliveau Schools

Site Redevelopment Class D Budget

HTFC April 4, 2023

A. Cottonwood Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	6,100	\$ 1,525,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	8,500	\$ 2,975,000.00
Total					\$ 4,500,000.00

B. Speers Site

Item	Description	Units	Unit Price	Qty.	Ext.
1	Drive isles, drop-offs and parking lots (vehicular) <i>Complete w/ land drainage system, pavement, curbs, fences, site lighting, utility enclosures, line painting & site signage</i>	m2	\$ 250.00	4,100	\$ 1,025,000.00
2	Student & community outdoor spaces (pedestrian) <i>Complete w/ walkways, courtyard pavement, sports courts, arbours, trees, shrubs, groundcovers, community gardens, sod, sports equipment, site furniture & pedestrian scale lighting</i>	m2	\$ 350.00	5,700	\$ 1,995,000.00
Total					\$ 3,020,000.00



400 – 93 Lombard Ave.
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December 3, 2024

Prairie Architects Inc.
101 – 139 Market St
Winnipeg, Man.
R3B 0P5

Attention: Lindsay Oster, Principal Architect
MAA, OAA, SAA, CPHD, LEED AP, FRAIC

Re: **College Beliveau Transition to Cottonwood Road
Winnipeg, Manitoba
Class D Estimate 2024**

We are pleased to attach our class D estimate for the above noted project and do hereby certify the values as noted below which include a 15% design & pricing contingency, and 3% for escalation.

• New school & renovation	\$12,882,211
• Sitework as per HTFC budget	\$4,500,000
• Total	\$17,382,211

Note: Postma estimate for site work and attached for reference is \$3,813,990 but may not include all the items assumed under the HTFC budget.

Separate Prices

• Separate Price #1 – replace main building air handling unit	ADD \$179,854
• Separate Price #2 – replace gym air handling unit	ADD \$111,402

Itemized pricing

• No. 1 Phase 1	\$432,000
• No. 2 Phase 2	\$135,000
• No. 3 Phase 3	\$8,657,000
• No. 4 Phase 4	\$685,000
• No. 5 Phase 5	\$2,011,000
• No. 6 Phase 6	\$425,000
• No. 7 Phase 7	\$537,211
• Total	\$12,882,211

The estimate is based on the work being tendered as one package and construction commencing in 2025. If the work is tendered in stages, an extra escalation and time costs will need to be added to the estimates. For Class D purposes we would suggest adding 5% for tendering and building the work in phases plus 3% per year for escalation.

Exclusions:

- GST

- Cash allowances (unless noted)
- Supply chain constraints
- Hazardous material abatement
- Consulting fees
- Soft costs
- FF&E
- Construction contingency

The pricing reflects probable construction costs obtainable in the location of the project as of the date of this estimate and is a determination of fair market value for the construction of this project and should not be taken as a prediction of low bid.

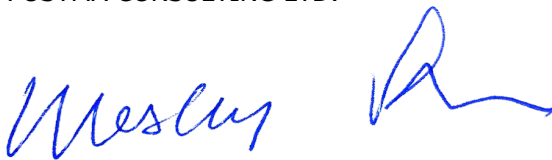
This pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor and assumes a minimum of four (4) general bidders. If fewer bids are received, the bid results can be expected to be higher.

It is recognized, however, that Postma Consulting does not have control over the cost of labour, material or equipment, over a contractor's methods of determining bid prices, or over competitive bidding, market or negotiation conditions.

Accordingly, Postma Consulting cannot and does not warrant or represent that bids or negotiated prices will not vary from this or any subsequent estimate of construction cost or evaluation prepared or agreed to by Postma Consulting. It is generally acknowledged that a Class D estimate is within the range of plus or minus twenty to thirty percent.

We hope this meets to your satisfaction. If you have any questions, please do not hesitate to call.

POSTMA CONSULTING LTD.



Wes Postma, CET, GSC, PQS
Senior Advisor

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
General & Special Conditions				
Site supervision & Administration 3 phases	months	15	\$36,500.00	\$547,500
Indirect Site Costs	months	15	\$21,000.00	\$315,000
Overhead & Fee	%	4.0	\$10,458,000	\$418,320
Temporary heating and hoarding	months	10	\$8,000.00	\$80,000
Access roads & temporary laydown	m2	500	\$42.00	\$21,000
Bonds, Insurance	thous.	10,876	\$25.00	\$271,900
Permits renovations	thous.	4,800	\$12.00	\$57,600
Permits addition	m2	1,324	\$21.00	\$27,804
Cash Allowances				
Foundation inspections	item	1	\$20,000.00	\$20,000
Soil compaction, conc and mortar testing	item	1	\$10,000.00	\$10,000
Manitoba Hydro service	item	1	\$30,000.00	\$30,000
MTS Service	item	1	\$10,000.00	\$10,000
Testing and air balancing	item	1	\$40,000.00	\$40,000
LEED air quality testing	item	1	\$12,000.00	\$12,000
Exterior and interior signage	item	1	\$15,000.00	\$15,000
			Subtotal	\$1,876,124
Demolition				
Demolition portion of existing school	m3	2,144	\$42.00	\$90,048
Gut existing school	m2	2,184	\$67.00	\$146,328
Door openings exist block walls for doors	no	4	\$900.00	\$3,600
Door openings double exist block walls	no	5	\$1,600.00	\$8,000
			Subtotal	\$247,976
Excavation & Backfill				
Excavation/backfill, crawlspace, grade beams	m2	1,211	\$67.00	\$81,137
Foundation drainage, exterior	m	110	\$54.00	\$5,940
Foundation drainage, interior	m	53	\$81.00	\$4,293
Sump pit	no	1	\$2,600.00	\$2,600
Sand 50, vb to crawlspace	m2	1,211	\$23.00	\$27,853
			Subtotal	\$121,823

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Structural Elements				
P1 pile 400 dia x 12 metres	no	131	\$2,200.00	\$288,200
P2 pile 400 dia x 7.6 metres	no	4	\$1,400.00	\$5,600
P1 underpin piles	no	6	\$4,650.00	\$27,900
Pile caps 760 x 600 x 900	no	29	\$775.00	\$22,475
Grade beams 250 x 1200	m3	33	\$1,800.00	\$59,400
Grade beams 250 x 1200 susp	m3	14	\$2,200.00	\$30,800
Grade beams 250 x 1200 at exist wall	m3	9	\$1,800.00	\$16,200
Grade beams 250 x 800 susp	m3	20	\$2,400.00	\$48,000
Grade beams 250 x 800 sups at exist wall	m3	6	\$2,275.00	\$13,650
Rebar to grade beams, caps	kg	9,300	\$4.10	\$38,130
200 precast hollowcre	m2	1,066	\$155.00	\$165,230
250 precast hollowcore	m2	145	\$160.00	\$23,200
Topping 75 to hollowcore	m2	1,211	\$57.00	\$69,027
Entrance pads	m2	32	\$350.00	\$11,200
Allowance strengthen gym floor for mech openings new	item	1	\$10,500.00	\$10,500
Music room struc stud frame, 38 mm deck, topping	m2	104	\$455.00	\$47,320
Steel roof decking - acoustic	m2	1,364	\$68.00	\$92,752
Structural steel & OWSJ at addition	kg	16,500	\$12.25	\$202,125
Shelf support angle	m	110	\$440.00	\$48,400
Upgrade exist roof for added snow load	m	30	\$2,650.00	\$79,500
Fall away anchors at firewall	no	24	\$260.00	\$6,240
			Subtotal	\$1,305,849
Masonry				
Ext wall - CMU 190	m2	625	\$300.00	\$187,500
Addition interior 190 CMU walls	m2	946	\$300.00	\$283,800
Renovation 240 CMU walls	m2	33	\$350.00	\$11,550
Masonry veneer 90, rigid 125, avb	m2	625	\$560.00	\$350,000
Anti-graffiti coating	m2	625	\$36.00	\$22,500
			Subtotal	\$855,350

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Vertical Elements & Miscellaneous Metal				
Lift, 2 stops - 2 doors 1400 kg	item	1	\$78,000.00	\$78,000
Metal stair, concrete filled, 100 wide	no	20	\$600.00	\$12,000
Metal handrail	m	15	\$400.00	\$6,000
Crawlspace hatch	no	1	\$2,600.00	\$2,600
Roof hatch	no	1	\$2,600.00	\$2,600
Roof access ladder	m	4	\$930.00	\$3,720
			Subtotal	\$104,920
Rough Carpentry, Architectural Woodwork				
Misc. rough carpentry	item	1	\$77,000.00	\$77,000
Lower cupboards with counter	m	132	\$1,375.00	\$181,500
Upper cabinets	m	89	\$690.00	\$61,410
Cubbie & bench at change room	m	34	\$710.00	\$24,140
Servery counter	m	4	\$760.00	\$3,040
Reception desk	m	16	\$2,250.00	\$36,000
Storage units	m	6	\$1,120.00	\$6,720
Science island	m	7	\$1,630.00	\$11,410
Home Ec island 1.2 wide	m	4	\$1,630.00	\$6,520
1x4 maple ceiling suspended	m2	496	\$480.00	\$238,080
Window sills	m	30	\$120.00	\$3,600
			Subtotal	\$649,420
Roofing, Siding, AVB, Insulation				
Two ply mod bit roofing R40	m2	1,324	\$325.00	\$430,300
Roofing canopy	m2	36	\$210.00	\$7,560
Cladding canopy	m2	24	\$930.00	\$22,320
Soffit canopy	m2	36	\$430.00	\$15,480
Parapet cap flashing	m	110	\$52.00	\$5,720
CFI 100, waterproofing at grade beam	m2	132	\$170.00	\$22,440
			Subtotal	\$503,820

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

	Description of Work	Unit	Quantity	Unit Price	Total
91	Windows, Doors				
92	Aluminum curtainwall, triple glazed	m2	66	\$1,650.00	\$108,900
93	Fiberglass windows, triple glazed	m2	117	\$940.00	\$109,980
94	Gym doors double interior	no	3	\$7,350.00	\$22,050
95	Vestibule exterior doors with cont. hinge, panics	no	6	\$6,200.00	\$37,200
96	Vestibule interior doors	no	6	\$4,250.00	\$25,500
97	Double exit ext	no	2	\$10,000.00	\$20,000
98	Change and washroom doors	no	6	\$3,100.00	\$18,600
99	Storage & elect doors	no	11	\$3,400.00	\$37,400
100	Sound rated doors	no	3	\$2,600.00	\$7,800
101	Ext exit single	no	1	\$5,600.00	\$5,600
102	Office/kitchen doors, classroom	no	14	\$1,800.00	\$25,200
103	Rolling shutter kitchen 2 metres wide	no	2	\$5,200.00	\$10,400
104	Auto door operators	no	6	\$2,850.00	\$17,100
105				Subtotal	\$445,730
106	Drywall, Acoustics, Flooring & Painting				
107	Parapet - Ext dw b/s, steel studs, batt	m2	75	\$163.00	\$12,225
108	P3 partition	m2	382	\$139.00	\$53,098
109	P4 partition	m2	55	\$151.00	\$8,305
110	Patching wall allowance	item	1	\$29,000.00	\$29,000
111	Acoustic panels to band & guitar room	m2	88	\$510.00	\$44,880
112	Drywall suspended ceilings	m2	213	\$98.00	\$20,874
113	Acoustic tile ceilings with reveal edge 2x2 look 16mm tile	m2	2,387	\$84.00	\$200,508
114	R12 batt at ceiling	m2	287	\$28.00	\$8,036
115	Ceramic tile backsplash	m2	71	\$281.00	\$19,951
116	Ceramic tile washrooms	m2	101	\$143.00	\$14,443
117	Safety vinyl flooring c/w cove base	m2	203	\$120.00	\$24,360
118	Modular carpet with base	m2	413	\$65.00	\$26,845
119	Sheet vinyl flooring with base	m2	2,750	\$81.00	\$222,750
120	Patch existing floors	m2	2,184	\$29.00	\$63,336
121	Painting renovations	m2	2,184	\$55.50	\$121,212
122	Painting addition	m2	1,324	\$55.50	\$73,482
123	Firestopping	item	1	\$98,000.00	\$98,000
124				Subtotal	\$1,041,305

College Beliveau Transition to Cottonwood Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Specialties & Furnishings				
Whiteboards and tackboards	classroom	7	\$2,100.00	\$14,700
Flagpole with base	no	1	\$5,200.00	\$5,200
Steel support for data projectors	no	7	\$800.00	\$5,600
Toilet partitions, changerooms & washrooms	stalls	8	\$1,850.00	\$14,800
Washroom accessories	item	1	\$21,000.00	\$21,000
Shower stalls	no	4	\$2,600.00	\$10,400
Roller blinds	m2	175	\$125.00	\$21,875
Appliances	item	1	\$0.00	NIC
FF&E	item	1	\$0.00	NIC
			Subtotal	\$93,575
Mechanical				
Mechanical as per attached worksheets	item	1	\$2,325,815.00	\$2,325,815
RST	%	7	\$2,325,815.00	\$162,807
			Subtotal	\$2,488,622
Electrical				
Electrical as per attached worksheets	item	1	\$1,066,485.00	\$1,066,485
RST	%	7	\$1,066,485.00	\$74,654
			Subtotal	\$1,141,139
Subtotal				\$10,875,653
Escalation			3.00%	\$326,270
SUBTOTAL				\$11,201,923
Design & Pricing Contingency			15.00%	\$1,680,288
TOTAL				\$12,882,211

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
General & Special Conditions				
Site supervision & Administration	months	3	\$36,500.00	\$109,500
Indirect Site Costs	months	3	\$21,000.00	\$63,000
Overhead & Fee	%	4.0	\$2,953,000	\$118,120
Bonds, Insurance	thous.	3,070	\$26.00	\$79,820
Permits	thous.	3,070	\$11.25	\$34,538
Cash Allowances				\$0
None identified	item			\$0
			Subtotal	\$404,978
Site Demolition				
Demo bus loop paving	m2	624	\$12.00	\$7,488
Demo concrete sidewalk	m2	250	\$20.00	\$5,000
Demo concrete curb	m	105	\$20.00	\$2,100
Demo existing gravel parking lot	m2	1,590	\$5.00	\$7,950
Demo existing school c/w foundation	m2	3,322	\$70.00	\$232,540
Asbestos abatement at existing school	allow	1	\$150,000.00	\$150,000
Demo granular path	m2	468	\$5.00	\$2,340
Demo hard playing surface	m2	2,297	\$11.00	\$25,267
Demo planters	m2	174	\$10.00	\$1,740
Demo soft play surface	m2	574	\$5.00	\$2,870
Demo teaching circle	m2	63	\$11.00	\$693
Demo volleyball court & equipment	item	1	\$500.00	\$500
Remove & relocate primary play structure	item	1	\$25,000.00	\$25,000
Remove & relocate slide	item	1	\$5,000.00	\$5,000
Remove & relocate swing sets	item	1	\$5,000.00	\$5,000
Remove & relocate tire swings	item	1	\$5,000.00	\$5,000
			Subtotal	\$478,488
Excavation, Backfill				
Site cut/fill allowance	m2	9,055	\$20.50	\$185,628
Remove organics, 200	m3	1,811	\$12.50	\$22,638
			Subtotal	\$208,265

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
32 Landscaping - hard				
33 Asphalt parking lot/bus loop	m2	2,914	\$104.00	\$303,056
34 Concrete sidewalk	m2	1,767	\$124.00	\$219,108
35 Concrete curb	m	553	\$124.00	\$68,572
36 Concrete curb, curved at play surface	m	139	\$145.00	\$20,155
37 Concrete garbage pad	m2	74	\$260.00	\$19,240
38 Hard top play area, concrete	m2	705	\$124.00	\$87,420
			Subtotal	\$717,551
40 Landscaping - soft				
41 Engineered wood fiber play surface	m2	404	\$83.00	\$33,532
42 Mulch bed c/w shrubs, topsoil	m2	392	\$115.00	\$45,080
43 Sod, topsoil	m2	6,942	\$21.00	\$145,782
44 Tree	no	165	\$780.00	\$128,700
			Subtotal	\$353,094
46 Landscaping - misc.				
47 Bench, cip concrete	m	59	\$1,050.00	\$61,950
48 Bench, curved	m	16	\$1,800.00	\$28,800
49 Bikeracks, 10 bikes	no	6	\$2,100.00	\$12,600
50 Chainlink fence 1800	m	572	\$170.00	\$97,240
51 Garbage enclosure fence c/w gates	m	21	\$625.00	\$13,125
52 Surface markings, parking space	no	57	\$31.00	\$1,767
53 Surface markings, crosswalks	m2	139	\$42.00	\$5,838
54 Basketball post and hoop w/ concrete pile	no	2	\$5,200.00	\$10,400
55 Light bollard	no	70	\$780.00	\$54,600
			Subtotal	\$286,320
57 Mechanical				
58 Mechanical/Civil site allowance	item	1	\$360,000.00	\$360,000
59 RST exempt	%	0	\$360,000.00	\$0
			Subtotal	\$360,000
61 Electrical				
62 Electrical site allowance	item	1	\$245,000.00	\$245,000
63 RST	%	7	\$245,000.00	\$17,150
			Subtotal	\$262,150

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
65 Subtotal				\$3,070,846
66 Escalation			8.00%	\$245,668
67 SUBTOTAL				\$3,316,513
68 Design & Pricing Contingency			15.00%	\$497,477
69 TOTAL				\$3,813,990

College Beliveau Transition to Cottonwood Road

Class D Estimate - Separate Pricing

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Separate Price No. 1 replace main building AHU				
Mechanical & electrical as per attached worksheets	item	1	\$146,000.00	\$146,000
Overhead & fee	%	4		\$5,840
Escalation	%	3.00		\$4,555
Design & Pricing Contingency	%	15		\$23,459
			Subtotal	\$179,854
Separate Price No. 2 replace gym AHU				
Mechanical & electrical as per attached worksheets	item	1	\$90,000.00	\$90,000
Overhead & fee	%	5		\$4,050
Escalation	%	3.00		\$2,822
Design & Pricing Contingency	%	15		\$14,531
			Subtotal	\$111,402

Postma Consulting
 College Beliveau
 Class D estimate updated

New	1324	sm
Renov.	2184	sm
Total	3508	sm

Building Areas

C1 Mechanical

C11 Plumbing & Drainage

1	Fixtures	3508	sm	17.77	62,340
	Water closet	14	ea.	890.00	12,460
	Lavatory counter	14	ea.	780.00	10,920
	Lavatory wall hung	2	ea.	910.00	1,820
	Sink	32	ea.	730.00	23,360
	Mop sink	2	ea.	1,040.00	2,080
	Shower	4	ea.	780.00	3,120
	Emergency eye wash	2	ea.	990.00	1,980
	Drinking fountain	2	ea.	3,300.00	6,600
2	Domestic Water	3508	sm	28.06	98,435
	Connect to existing	3	no	525.00	1,575
	Domestic water pipe	1	sum	56,000.00	56,000
	Thermal pipe insulation	1	sum	20,000.00	20,000
	Fixture connection	71	ea.	260.00	18,460
	NFHB	2	ea.	360.00	720
	Trap seal primer	8	ea.	210.00	1,680
3	Sanitary Waste and Vents	3508	sm	34.14	119,760
	Sanitary drain & vents	1	sum	83,000.00	83,000
	Condensate drain	1	sum	5,200.00	5,200
	Fixture connection	70	ea.	230.00	16,100
	Floor drain	8	ea.	190.00	1,520
	Excavation and backfill	1	sum	12,500.00	12,500
	Vent flashing through roof	8	no	180.00	1,440

Postma Consulting					
College Beliveau					
Class D estimate updated		New	1324	sm	
		Renov.	2184	sm	
Building Areas		Total	3508	sm	
4	Storm Drains		3508	sm	8.61
					30,200
	Storm drain	1	sum	15,500.00	15,500
	Thermal pipe insulation	1	sum	2,100.00	2,100
	Sump pit	1	sum	7,800.00	7,800
	Excavation and backfill	1	sum	3,100.00	3,100
	Roof drain fitting	5	no	340.00	1,700
5	Natural gas		3508	sm	5.92
					20,760
	Natural gas pipe	1	sum	15,000.00	15,000
	Connections/valves	16	ea.	360.00	5,760
6	Miscellaneous		3508	sm	6.40
					22,440
	Remove fixtures	10	no	130.00	1,300
	Remove floor drains	8	no	115.00	920
	Remove plumbing	1	sum	9,000.00	9,000
	Scan & firestop	34	no	330.00	11,220
	C11 Plumbing & Drainage	Total : \$	3508	sm	100.89
					353,935
C12 Fire Protection					
1	Fire extinguishers		3508	sm	1.23
					4,320
	Cabinet mounted fire extinguisher FEX	12	no	360.00	4,320
2	Sprinklers		3508	sm	73.49
					257,804
	New service BFP, 6" water service	1	ls	71,000.00	71,000
	Sprinkler header / Siamese	1	ls	7,500.00	7,500
	Alarm zone	1	ls	1,500.00	1,500
	Sprinkler head crawlspace	10	no	225.00	2,250
	Adjust sprinkler head renovated areas	2184	m2	56.00	122,304
	Sprinkler head new addition	150	no	355.00	53,250
	C12 Fire Protection	Total : \$	3508	sm	74.72
					262,124

Postma Consulting			
College Beliveau			
Class D estimate updated	New	1324	sm
	Renov.	2184	sm
Building Areas	Total	3508	sm

C13 HVAC

1	Liquid transfer - heating and cooling	3508	sm	58.47	205,120
	Heating piping, rads	1	sum	101,000.00	101,000
	Thermal pipe insulation	1	sum	32,000.00	32,000
	Radiation	1	sum	30,000.00	30,000
	Radiation connection	4	no	1,040.00	4,160
	Unit ventilator connection	1	no	1,040.00	1,040
	Fan coil unit connection	4	no	2,080.00	8,320
	Force flow / connection	11	no	2,600.00	28,600
2	Air distribution Equipment	3508	sm	149.71	525,200
	Unit ventilator	1	no	15,200.00	15,200
	Fan coil	20	no	3,500.00	70,000
	AHU 1 MBH 750, 40 ton cooling, 16,000 cfm	1	no	278,000.00	278,000
	AHU small and CU2 for performance	1	no	25,000.00	25,000
	AHU small with AC	1	no	22,000.00	22,000
	Fume hood and exhaust	1	no	20,000.00	20,000
	ERV-1	1	no	56,000.00	56,000
	MUA unit	1	no	10,000.00	10,000
	Exhaust fan	2	no	2,000.00	4,000
	Kitchen hood fan and welded ductwork	1	no	25,000.00	25,000

Postma Consulting
 College Beliveau
 Class D estimate updated
 Building Areas

New	1324	sm
Renov.	2184	sm
Total	3508	sm

3	Air distribution ductwork	3508	sm	194.97	683,945	
	Galvanized ductwork	15500	kg	26.50	410,750	
	Thermal insulation	3550	sm	45.50	161,525	
	Supply air diffuser	204	no	240.00	48,960	
	VAV box	47	no	1,000.00	47,000	
	Return grill	73	no	160.00	11,680	
	Exhaust grill	31	no	130.00	4,030	
4	Miscellaneous	3508	sm	29.25	102,600	
	Vibration isolation	1	ls	3,000.00	3,000	
	Tag and label	1	ls	2,000.00	2,000	
	Sleeving	1	ls	5,800.00	5,800	
	Fire stopping	1	ls	5,800.00	5,800	
	Demolition HVAC	1	ls	75,000.00	75,000	
	Cutting & patching	1	ls	11,000.00	11,000	
5	Balancing & commissioning	3508	sm	11.69	41,000	
	Air balancing	1	ls	15,500.00	15,500	
	Water balancing	1	ls	15,500.00	15,500	
	Commissioning	1	ls	10,000.00	10,000	
	C13 HVAC	Total : \$	3508	sm	444.09	1,557,865

Postma Consulting			
College Beliveau			
Class D estimate updated	New	1324	sm
	Renov.	2184	sm
Building Areas	Total	3508	sm

C14 Controls

1	Controls	3508	sm	54.59	191,500
	Demolish existing	1	ls	11,500.00	11,500
	Radiation CV	9	no	1,000.00	9,000
	Fan coil	31	no	1,500.00	46,500
	Unit ventilator	3	no	1,500.00	4,500
	Force flow	12	no	1,000.00	12,000
	AHU /ERV	5	no	10,000.00	50,000
	BAS / head end, programming	1	ls	58,000.00	58,000
	C14 Controls	Total : \$ 3508	sm	54.59	191,500
	Mechanical	Total : \$ 3508	sm	674.29	2,365,424

Postma Consulting			
College Beliveau			
Class D estimate	New	1324	sm
	Renov	2184	sm
Building Area - New Construction	Total	3508	sm

C2 Electrical

C21 Service and Distribution		3508	sm	28.02	98,300
1	New service - utility charge	1	no	40,000.00	NIC
2	Upgrade service / connect to existing	1	no	75,000.00	NIC
3	New MSB 1,000A	1	no	49,000.00	49,000
4	Panel	8	no	3,400.00	27,200
5	Panel feeders	25	m	44.00	1,100
6	Refeed existing panels	9	no	2,000.00	18,000
7	Testing	1	sum	1,500.00	1,500
8	Grounding	1	sum	1,500.00	1,500

C21 Service and Distribution	Total	3508	sm	28.02	98,300
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C22 Lighting, devices and heating

1	Light fixtures	3508	sm	132.36	464,310
	Light fixture	533	no	410.00	218,530
	Demolition fixtures	1	sum	30,000.00	44,000
	Wall mount exterior light fixture	6	no	490.00	2,940
	Pole light	8	no	5,400.00	43,200
	Buried feeders	250	m	20.00	5,000
	Emergency battery	15	no	540.00	8,100
	Emergency head	15	no	220.00	3,300
	Exit sign	6	no	440.00	2,640
	Wall switch / OC	46	no	175.00	8,050
	Switch	12	no	140.00	1,680
	Occupancy sensor	73	ea.	190.00	13,870
	Branch wiring	1	sum	67,000.00	67,000
	Lighting control system / low voltage wiring	1	sum	46,000.00	46,000

	Postma Consulting				
	College Beliveau				
	Class D estimate	New	1324	sm	
		Renov	2184	sm	
	Building Area - New Construction	Total	3508	sm	
2	Power outlets, devices and connections		3508	sm	39.43
					138,305
	15A wall receptacle		322	no	135.00
	20A wall receptacle Tee		6	no	140.00
	GFI receptacle		55	no	145.00
	Parking receptacle		20	no	750.00
	Drinking fountain		2	no	185.00
	Hand dryer		6	no	735.00
	ADO door		6	no	540.00
	Branch wiring		1	sum	63,000.00
					63,000
3	Mechanical power		3508	sm	35.35
					124,000
	Allowance		1	no	76,000.00
					76,000
	Branch wiring		1	sum	48,000.00
					48,000
	C22 Lighting, devices & heating	Total	3508	sm	207.13
					726,615

Postma Consulting			
College Beliveau			
Class D estimate	New	1324	sm
	Renov	2184	sm
Building Area - New Construction	Total	3508	sm

C23 Systems & Ancillaries

1	Fire Alarm	3508	sm	15.48	54,300
	New fire alarm panel	1	sum	20,000.00	20,000
	Pull station	5	no	225.00	1,125
	Relocate existing	22	no	225.00	4,950
	Smoke detector	11	no	395.00	4,345
	Horn/strobe	10	no	515.00	5,150
	Horn	1	no	455.00	455
	Strobe	1	no	275.00	275
	Verification	1	sum	6,000.00	6,000
	Wiring	1	sum	12,000.00	12,000
2	Voice and data	3508	sm	19.23	67,450
	Data outlet	78	no	100.00	7,800
	Cable outlet	2	no	100.00	200
	WAP	37	no	750.00	27,750
	Data rack	3	no	2,900.00	8,700
	Wiring / cable tray	1	sum	23,000.00	23,000
3	Public address	3508	sm	8.63	30,275
	PA speaker	37	no	325.00	12,025
	Call station	11	no	350.00	3,850
	Relocations incl wire	50	no	200.00	10,000
	Conduit and wire	1	sum	4,400.00	4,400
4	Security / intrusion	3508	sm	19.48	68,330
	Motion detector	14	no	395.00	5,530
	Barrier free washroom alarm	1	no	1,500.00	1,500
	Relocations incl wire	26	no	250.00	6,500
	Door contact	8	no	225.00	1,800
	Cameras incl rough in	11	no	3,500.00	38,500
	Card reader/door control	5	no	2,000.00	10,000
	Conduit and wire	1	sum	4,500.00	4,500
5	Clock	3508	sm	1.43	5,000
	Relocations incl wire	7	no	250.00	1,750
	Clock	5	no	650.00	3,250
	C23 Systems & Ancillaries	3508	sm	64.24	225,355
	Electrical	3508	sm	299.39	1,050,270



400 – 93 Lombard Ave.
Winnipeg, MB R3B 3B1
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Email: info@postmaqs.ca
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December 3, 2024

Prairie Architects Inc.
101 – 139 Market St
Winnipeg, Man.
R3B 0P5

Attention: Lindsay Oster, Principal Architect
MAA, OAA, SAA, CPHD, LEED AP, FRAIC

Re: **Windsor Park Collegiate Transition to Speers Road
Winnipeg, Manitoba
Class D Estimate 2024**

We are pleased to attach our class D estimate for the above noted project and do hereby certify the values as noted below which includes a 15% design & pricing contingency, and 8% for escalation.

• New school & renovations	\$21,308,764
• School sitework as per HTFC	\$3,020,000
• Total	\$24,328,764

The sitework estimate by Postma is attached is \$3,637,416 for reference.

Separate Prices

- Separate Price #1 – sprinkler system to metal and wood shops area ADD \$57,497
- Separate Price #2 – add firewall between gym and metal/wood shops ADD \$69,151

Itemized Prices

• No. 1 Phase 1 New Exterior	\$868,000
• No. 2 Phase 2	\$1,423,000
• No. 3 Phase 3	\$235,000
• No. 4 Phase 4	\$16,868,000
• No. 5 Phase 5	\$1,718,000
• No. 6 Phase 6	\$196,754
• Total	\$21,308,754

The estimate is based on the work being tendered as one package and construction commencing in 2025. If the work is tendered in stages, an extra escalation and time costs will need to be added to the estimates. For Class D purposes we would suggest adding 5% for tendering and building the work in phases plus 3% per year for escalation.

Exclusions:

- GST
- Cash allowances (unless noted)
- Supply chain constraints

- Hazardous material abatement
- Consulting fees
- Soft costs
- FF&E
- Construction contingency

The pricing reflects probable construction costs obtainable in the location of the project as of the date of this estimate and is a determination of fair market value for the construction of this project and should not be taken as a prediction of low bid.

This pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor and assumes a minimum of four (4) general bidders. If fewer bids are received, the bid results can be expected to be higher.

It is recognized, however, that Postma Consulting does not have control over the cost of labour, material or equipment, over a contractor's methods of determining bid prices, or over competitive bidding, market or negotiation conditions.

Accordingly, Postma Consulting cannot and does not warrant or represent that bids or negotiated prices will not vary from this or any subsequent estimate of construction cost or evaluation prepared or agreed to by Postma Consulting. It is generally acknowledged that a Class D estimate is within the range of plus or minus twenty to thirty percent.

We hope this meets to your satisfaction. If you have any questions, please do not hesitate to call.

POSTMA CONSULTING LTD.



Wes Postma, CET, GSC, PQS
Senior Advisor

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 General & Special Conditions				
2 Site supervision & Administration 3 phases	months	15	\$36,500.00	\$547,500
3 Indirect Site Costs	months	15	\$21,000.00	\$315,000
4 Overhead & Fee	%	4.0	\$17,300,000	\$692,000
5 Temporary heating and hoarding	months	10	\$8,000.00	\$80,000
6 Access roads & temporary laydown	m2	500	\$42.00	\$21,000
7 Bonds, Insurance	thous.	18,000	\$26.00	\$468,000
8 Permits renovations	thous.	4,300	\$12.00	\$51,600
9 Permits addition	m2	2,866	\$21.00	\$60,186
10 Cash Allowances				
11 Foundation inspections	item	1	\$20,000.00	\$20,000
12 Soil compaction, conc and mortar testing	item	1	\$10,000.00	\$10,000
13 Manitoba Hydro service	item	1	\$30,000.00	\$30,000
14 MTS Service	item	1	\$10,000.00	\$10,000
15 Testing and air balancing	item	1	\$40,000.00	\$40,000
16 LEED air quality testing	item	1	\$12,000.00	\$12,000
17 Exterior and interior signage	item	1	\$15,000.00	\$15,000
18			Subtotal	\$2,372,286
19 Demolition				
20 Demolition portion of existing school	m3	9,031	\$18.00	\$162,558
21 Gut existing school	m2	3,107	\$67.00	\$208,169
22 Remove windows, enlarge openings	m2	262	\$150.00	\$39,300
23 Door openings exist block walls for doors	no	7	\$900.00	\$6,300
24 Door openings double exist block walls	no	1	\$1,600.00	\$1,600
25			Subtotal	\$417,927
26 Excavation & Backfill				
27 Excavation/backfill, slab on grade, grade beams	m2	2,401	\$51.00	\$122,451
28 Foundation drainage, exterior	m	192	\$54.00	\$10,368
29 Foundation drainage, interior	m	106	\$81.00	\$8,586
30 Sump pit	no	2	\$2,600.00	\$5,200
31			Subtotal	\$146,605

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
32 Structural Elements				
33 P1 pile 400 dia x 12 metres	no	238	\$2,200.00	\$523,600
34 P2 pile 400 dia x 7.6 metres	no	3	\$1,400.00	\$4,200
35 P1 500 dia x 12 metres	no	142	\$2,600.00	\$369,200
36 Pile caps 760 x 600 x 900	no	30	\$775.00	\$23,250
37 Grade beams 250 x 750	m3	29	\$1,900.00	\$55,100
38 Grade beams 250 x 1650	m3	38	\$1,700.00	\$64,600
39 Grade beams 250 x 600	m3	9	\$2,000.00	\$18,000
40 Grade beams 250 x 600 at exist wall	m3	13	\$1,900.00	\$24,700
41 CIP feature stair - 10 m2 landings, 65 m2 throat/tread - 15 m3	item	1	\$31,000.00	\$31,000
42 SL1 slab 176 mm with drops, void form	m2	1,963	\$185.00	\$363,155
43 Crawlspace slab 125 thick on gravel	m2	376	\$150.00	\$56,400
44 SL2 slab 200 thick	m2	62	\$200.00	\$12,400
45 SL3 slab exterior	m2	32	\$350.00	\$11,200
46 200 precast hollowcre	m2	376	\$155.00	\$58,280
47 300 precast hollowcore	m2	193	\$165.00	\$31,845
48 Topping 75 to hollowcore	m2	569	\$57.00	\$32,433
49 Rebar for concrete	kg	88,000	\$4.10	\$360,800
50 Allowance strengthen gym floor for shop equipment new	item	1	\$21,000.00	\$21,000
51 Mezzanine gym - strengthen floor for mech equipment	item	1	\$32,000.00	\$32,000
52 Steel roof decking - acoustic	m2	2,452	\$68.00	\$166,736
53 Structural steel & OWSJ at addition	kg	51,000	\$10.60	\$540,600
54 Shelf support angle	m	245	\$440.00	\$107,800
55 Steel beams and columns for new exist wall openings - allow	item	1	\$42,000.00	\$42,000
			Subtotal	\$2,950,299
57 Masonry				
58 Ext wall - CMU 190	m2	1,072	\$300.00	\$321,600
59 Addition interior 190 CMU walls	m2	1,685	\$300.00	\$505,500
60 Addition interior 240 CMU walls	m2	763	\$325.00	\$247,975
61 Renovation 190 CMU walls	m2	362	\$300.00	\$108,600
62 Masonry veneer 90, rigid 125, avb	m2	1,101	\$560.00	\$616,560
63 Anti-graffiti coating	m2	600	\$36.00	\$21,600
			Subtotal	\$1,821,835

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
65 Vertical Elements & Miscellaneous Metal				
66 Lift, 2 stops - 2 doors 1400 kg	item	1	\$78,000.00	\$78,000
67 Metal stair, concrete filled, 100 wide	no	18	\$600.00	\$10,800
68 Metal handrail	m	12	\$400.00	\$4,800
69 Wood tread/insert common stair 2 metres wide (conc base)	no	27	\$770.00	\$20,790
70 Common area guardrail	m	15	\$965.00	\$14,475
71 Crawlspace hatch	no	1	\$2,600.00	\$2,600
72 Roof hatch	no	1	\$2,600.00	\$2,600
73 Roof access ladder	m	4	\$930.00	\$3,720
74			Subtotal	\$137,785
75 Rough Carpentry, Architectural Woodwork				
76 Misc. rough carpentry	item	1	\$132,000.00	\$132,000
77 Lower cupboards with counter	m	152	\$1,375.00	\$209,000
78 Upper cabinets	m	99	\$690.00	\$68,310
79 Cubbie & bench at change room	m	52	\$710.00	\$36,920
80 Vanity	m	6	\$815.00	\$4,890
81 Reception desk	m	7	\$2,250.00	\$15,750
82 Counters	m	13	\$710.00	\$9,230
83 Storage units	m	7	\$1,120.00	\$7,840
84 Science island	m	8	\$1,630.00	\$13,040
85 Home Ec island 1.2 wide	m	3	\$1,630.00	\$4,890
86 1x4 maple ceiling suspended	m2	243	\$480.00	\$116,640
87 Window sills	m	149	\$120.00	\$17,880
88			Subtotal	\$636,390
89 Roofing, Siding, AVB, Insulation				
90 Two ply mod bit roofing R40	m2	2,413	\$325.00	\$784,225
91 Roofing canopy	m2	39	\$210.00	\$8,190
92 Cladding canopy	m2	10	\$930.00	\$9,300
93 Soffit canopy	m2	39	\$430.00	\$16,770
94 Parapet cap flashing	m	200	\$52.00	\$10,400
95 CFI 100, waterproofing at grade beam	m2	144	\$170.00	\$24,480
96			Subtotal	\$853,365

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
97 Windows, Doors				
98 Aluminum curtainwall, triple glazed	m2	277	\$1,650.00	\$457,050
99 Fiberglass windows, triple glazed	m2	63	\$940.00	\$59,220
100 Fiberglass windows, triple glazed renovations	m2	262	\$940.00	\$246,280
101 Interior glazing partitions	m2	39	\$725.00	\$28,275
102 Office/kitchen doors	no	30	\$1,800.00	\$54,000
103 Classroom doors	no	15	\$1,800.00	\$27,000
104 Storage doors	no	13	\$3,400.00	\$44,200
105 Washroom & change room doors	no	9	\$3,100.00	\$27,900
106 Vestibule interior	no	9	\$4,250.00	\$38,250
107 Exit exterior	no	3	\$5,600.00	\$16,800
108 Operable partition	m2	50	\$1,450.00	\$72,500
109 Acoustic doors	no	3	\$2,600.00	\$7,800
110 Corridor doors	no	10	\$4,100.00	\$41,000
111 Vestibule exterior - cont hinge	no	7	\$6,200.00	\$43,400
112 Gym interior	no	6	\$3,700.00	\$22,200
113 Gym exterior	no	2	\$5,600.00	\$11,200
114 Rolling shutter kitchen 2 metres wide	no	1	\$5,200.00	\$5,200
115 Auto door operators	no	6	\$2,850.00	\$17,100
116			Subtotal	\$1,219,375

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

	Description of Work	Unit	Quantity	Unit Price	Total
117	Drywall, Acoustics, Flooring & Painting				
118	Parapet - Ext dw b/s, steel studs, batt	m2	150	\$163.00	\$24,450
119	P3 partition	m2	335	\$139.00	\$46,565
120	P4 partition	m2	388	\$151.00	\$58,588
121	Patching wall allowance	item	1	\$41,000.00	\$41,000
122	Acoustic panels to band & guitar room	m2	44	\$510.00	\$22,440
123	Acoustic panels to gym	m2	240	\$310.00	\$74,400
124	Drywall suspended ceilings	m2	200	\$98.00	\$19,600
125	Acoustic tile ceilings with reveal edge 2x2 look, 16mm tile	m2	3,126	\$84.00	\$262,584
126	R12 batt at ceiling	m2	95	\$28.00	\$2,660
127	Ceramic tile backsplash	m2	54	\$281.00	\$15,174
128	Ceramic tile washrooms	m2	113	\$143.00	\$16,159
129	Safety vinyl flooring c/w cove base	m2	203	\$120.00	\$24,360
130	Modular carpet with base	m2	262	\$65.00	\$17,030
131	Gym hardwood flooring	m2	839	\$186.00	\$156,054
132	Sheet vinyl flooring with base	m2	3,617	\$81.00	\$292,977
133	Patch existing floors	m2	2,629	\$29.00	\$76,241
134	Painting renovations	m2	3,107	\$55.50	\$172,439
135	Painting addition	m2	2,866	\$55.50	\$159,063
136	Firestopping	item	1	\$134,000.00	\$134,000
137				Subtotal	\$1,615,784

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
Specialties & Furnishings				
138 Whiteboards and tackboards	classroom	15	\$2,100.00	\$31,500
139 Patient lift	no	2	\$8,000.00	\$16,000
140 Steel support for data projectors	no	15	\$800.00	\$12,000
141 Toilet partitions, changerooms	stalls	10	\$1,850.00	\$18,500
142 Washroom accessories	item	1	\$21,000.00	\$21,000
143 Shower stalls	no	4	\$2,600.00	\$10,400
144 Roller blinds	m2	602	\$125.00	\$75,250
145 Gym equipment - highschool	item	1	\$166,000.00	\$166,000
146 Gym divider curtain - motorized	m2	182	\$340.00	\$61,880
147 Appliances	item	1	\$0.00	NIC
148 FF&E	item	1	\$0.00	NIC
149			Subtotal	\$412,530
Mechanical				
151 Mechanical as per attached worksheet	item	1	\$3,381,542.00	\$3,381,542
152 RST	%	7	\$3,381,542.00	\$236,708
153			Subtotal	\$3,618,250
Electrical				
154 Electrical as per attached worksheets	item	1	\$1,670,317.00	\$1,670,317
155 RST	%	7	\$1,670,317.00	\$116,922
156			Subtotal	\$1,787,239
Subtotal				\$17,989,670
157 Escalation			3.00%	\$539,690
SUBTOTAL				\$18,529,360
158 Design & Pricing Contingency			15.00%	\$2,779,404
TOTAL				\$21,308,764

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
General & Special Conditions				
Site supervision & Administration	months	3	\$36,500.00	\$109,500
Indirect Site Costs	months	3	\$21,000.00	\$63,000
Overhead & Fee	%	4.0	\$2,953,000	\$118,120
Bonds, Insurance	thous.	3,070	\$26.00	\$79,820
Permits	thous.	3,070	\$11.25	\$34,538
Cash Allowances				\$0
None identified	item			\$0
			Subtotal	\$404,978
Site Demolition				
Demo bus loop paving	m2	624	\$12.00	\$7,488
Demo concrete sidewalk	m2	250	\$20.00	\$5,000
Demo concrete curb	m	105	\$20.00	\$2,100
Demo existing gravel parking lot	m2	1,590	\$5.00	\$7,950
Demo existing school c/w foundation	m2	3,322	\$70.00	\$232,540
Asbestos abatement at existing school	allow	1	\$150,000.00	\$150,000
Demo granular path	m2	468	\$5.00	\$2,340
Demo hard playing surface	m2	2,297	\$11.00	\$25,267
Demo planters	m2	174	\$10.00	\$1,740
Demo soft play surface	m2	574	\$5.00	\$2,870
Demo teaching circle	m2	63	\$11.00	\$693
Demo volleyball court & equipment	item	1	\$500.00	\$500
Remove & relocate primary play structure	item	1	\$25,000.00	\$25,000
Remove & relocate slide	item	1	\$5,000.00	\$5,000
Remove & relocate swing sets	item	1	\$5,000.00	\$5,000
Remove & relocate tire swings	item	1	\$5,000.00	\$5,000
			Subtotal	\$478,488
Excavation, Backfill				
Site cut/fill allowance	m2	9,055	\$20.50	\$185,628
Remove organics, 200	m3	1,811	\$12.50	\$22,638
			Subtotal	\$208,265

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
32 Landscaping - hard				
33 Asphalt parking lot/bus loop	m2	2,914	\$104.00	\$303,056
34 Concrete sidewalk	m2	1,767	\$124.00	\$219,108
35 Concrete curb	m	553	\$124.00	\$68,572
36 Concrete curb, curved at play surface	m	139	\$145.00	\$20,155
37 Concrete garbage pad	m2	74	\$260.00	\$19,240
38 Hard top play area, concrete	m2	705	\$124.00	\$87,420
			Subtotal	\$717,551
40 Landscaping - soft				
41 Engineered wood fiber play surface	m2	404	\$83.00	\$33,532
42 Mulch bed c/w shrubs, topsoil	m2	392	\$115.00	\$45,080
43 Sod, topsoil	m2	6,942	\$21.00	\$145,782
44 Tree	no	165	\$780.00	\$128,700
			Subtotal	\$353,094
46 Landscaping - misc.				
47 Bench, cip concrete	m	59	\$1,050.00	\$61,950
48 Bench, curved	m	16	\$1,800.00	\$28,800
49 Bikeracks, 10 bikes	no	6	\$2,100.00	\$12,600
50 Chainlink fence 1800	m	572	\$170.00	\$97,240
51 Garbage enclosure fence c/w gates	m	21	\$625.00	\$13,125
52 Surface markings, parking space	no	57	\$31.00	\$1,767
53 Surface markings, crosswalks	m2	139	\$42.00	\$5,838
54 Basketball post and hoop w/ concrete pile	no	2	\$5,200.00	\$10,400
55 Light bollard	no	70	\$780.00	\$54,600
			Subtotal	\$286,320
57 Mechanical				
58 Mechanical/Civil site allowance	item	1	\$360,000.00	\$360,000
59 RST exempt	%	0	\$360,000.00	\$0
			Subtotal	\$360,000
61 Electrical				
62 Electrical site allowance	item	1	\$245,000.00	\$245,000
63 RST	%	7	\$245,000.00	\$17,150
			Subtotal	\$262,150

Ecole Varennes

Class D Estimate - Sitework

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
65 Subtotal				\$3,070,846
66 Escalation			3.00%	\$92,125
67 SUBTOTAL				\$3,162,971
68 Design & Pricing Contingency			15.00%	\$474,446
69 TOTAL				\$3,637,416

Windsor Park Collegiate Transition to 296 Speers Road

Class D Estimate - Separate Pricing

Postma Consulting Ltd.

Description of Work	Unit	Quantity	Unit Price	Total
1 Separate Price No. 1 Sprinklers to shop area				
2 Mechanical as per attached worksheet	item	1	\$46,230.00	\$46,230
3 Overhead & fee	%	5		\$2,312
4 Escalation	%	3.00		\$1,456
5 Design & Pricing Contingency	%	15		\$7,500
			Subtotal	\$57,497
7 Separate Price NO. 2 firewall between gym and shop area				
8 Firewall - concrete block	m2	168	\$300.00	\$50,400
9 Extra foundation work	item	1	\$5,200.00	\$5,200
10 Overhead & fee	%	5		\$2,780
11 Escalation	%	3.00		\$1,751
12 Design & Pricing Contingency	%	15		\$9,020
			Subtotal	\$69,151
13				

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C1 Mechanical

C11 Plumbing & Drainage

1	Fixtures	5973	sm	10.30	61,510
	Water closet	13	ea.	890.00	11,570
	Lavatory counter	5	ea.	780.00	3,900
	Lavatory wall hung	11	ea.	910.00	10,010
	Sink	35	ea.	730.00	25,550
	Mop sink	2	ea.	1,040.00	2,080
	Shower	4	ea.	780.00	3,120
	Emergency eye wash	2	ea.	990.00	1,980
	Drinking fountain	1	ea.	3,300.00	3,300
2	Domestic Water	5973	sm	18.23	108,915
	Connect to existing	3	no	525.00	1,575
	Domestic water heater 60 gal c/w exp tank, pump	1	no	5,700.00	5,700
	Domestic water pipe	1	sum	58,000.00	58,000
	Thermal pipe insulation	1	sum	22,000.00	22,000
	Fixture connection	73	ea.	260.00	18,980
	Washer connection	1	ea.	260.00	260
	NFHB	2	ea.	360.00	720
	Trap seal primer	8	ea.	210.00	1,680
3	Sanitary Waste and Vents	5973	sm	19.64	117,330
	Sanitary drain & vents	1	sum	86,000.00	86,000
	Condensate drain	1	sum	5,200.00	5,200
	Fixture connection	73	ea.	230.00	16,790
	Floor drain	8	ea.	190.00	1,520
	Washer connection	1	ea.	130.00	130
	Excavation and backfill	1	sum	6,250.00	6,250
	Vent flashing through roof	8	no	180.00	1,440

Postma Consulting
Windsor Park Collegiate
Class D estimate

		New	2866	sm		
		Renov.	3107	sm		
	Building Areas	Total	5973	sm		
4	Storm Drains		5973	sm	8.53	50,960
	Storm drain	1	sum		25,000.00	25,000
	Thermal pipe insulation	1	sum		3,100.00	3,100
	Excavation and backfill	1	sum		4,200.00	4,200
	Sump pit	2	no		7,800.00	15,600
	Roof drain fitting	9	no		340.00	3,060
5	Natural gas		5973	sm	7.94	47,400
	Natural gas pipe	1	sum		33,000.00	33,000
	Connections/valves	40	ea.		360.00	14,400
6	Miscellaneous		1	sm	36,225.00	36,225
	Remove fixtures	33	no		125.00	4,125
	Remove floor drains	10	no		110.00	1,100
	Remove plumbing	1	sum		15,000.00	15,000
	Scan & firestop	50	no		320.00	16,000
	C11 Plumbing & Drainage	Total : \$	5973	sm	70.71	422,340
C12 Fire Protection						
1	Fire extinguishers		5973	sm	1.21	7,200
	Cabinet mounted fire extinguisher FEX	20	no		360.00	7,200
2	Sprinklers		5973	sm	63.21	377,542
	New service BFP, 6" water service	1	ls		71,000.00	71,000
	Sprinkler header / Siamese	1	ls		7,500.00	7,500
	Alarm zone	1	no		1,500.00	1,500
	Sprinkler head crawlspace	60	no		225.00	13,500
	Adjust sprinkler heads renovated areas	3107	m2		56.00	173,992
	Sprinkler head new addition	310	no		355.00	110,050
	C12 Fire Protection	Total : \$	5973	sm	64.41	384,742

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C13 HVAC

1	Liquid transfer - heating and cooling	5973	sm	55.00	328,520
	Heating piping, rads	1	sum	166,000.00	166,000
	Thermal pipe insulation	1	sum	50,000.00	50,000
	Radiation	1	sum	42,000.00	42,000
	Radiation connection	5	no	1,080.00	5,400
	Unit ventilator connection	3	no	1,080.00	3,240
	Fan coil unit connection	6	no	2,080.00	12,480
	Force flow / connection	19	no	2,600.00	49,400
2	Air distribution Equipment	5973	sm	122.57	732,100
	Unit ventilator	3	no	15,200.00	45,600
	Fan coil	32	no	3,500.00	112,000
	Gym AHU 400 MBH, 20 ton cooling, 8,000 cfm	1	no	127,000.00	127,000
	AHU small and CU2 for performance	1	no	25,000.00	25,000
	AHU small 3 to 5	3	no	15,000.00	45,000
	VRF system for admin area, entry commons	1	no	76,000.00	76,000
	Fume hood and exhaust	1	no	20,000.00	20,000
	ERV-1	1	no	57,000.00	57,000
	ERV-2	1	no	40,500.00	40,500
	Dust collector equipment system	1	no	152,000.00	150,000
	Tank compressor	1	no	5,000.00	5,000
	Exhaust fan	2	no	2,000.00	4,000
	Kitchen hood, fan and welded ductwork	1	no	25,000.00	25,000

Postma Consulting
Windsor Park Collegiate
Class D estimate

		New	2866	sm		
		Renov.	3107	sm		
	Building Areas	Total	5973	sm		
3	Air distribution ductwork		5973	sm	178.31	1,065,040
	Galvanized ductwork		24000	kg	26.50	636,000
	Thermal insulation		5600	sm	45.50	254,800
	Supply air diffuser		320	no	240.00	76,800
	VAV box		72	no	1,000.00	72,000
	Return grill		120	no	160.00	19,200
	Exhaust grill		48	no	130.00	6,240
4	Miscellaneous		5973	sm	17.29	103,300
	Vibration isolation		1	ls	4,600.00	4,600
	Tag and label		1	ls	2,500.00	2,500
	Sleeving		1	ls	9,600.00	9,600
	Fire stopping		1	ls	9,600.00	9,600
	Demolition HVAC		1	ls	68,000.00	68,000
	Cutting & patching		1	ls	9,000.00	9,000
5	Balancing & commissioning		5973	sm	10.55	63,000
	Air balancing		1	ls	24,000.00	24,000
	Water balancing		1	ls	24,000.00	24,000
	Commissioning		1	ls	15,000.00	15,000
	C13 HVAC	Total : \$	5973	sm	383.72	2,291,960

Postma Consulting
 Windsor Park Collegiate
 Class D estimate

New	2866	sm
Renov.	3107	sm
Total	5973	sm

Building Areas

C14 Controls

1	Controls	5973	sm	47.30	282,500
	Demolish existing	1	ls	10,000.00	10,000
	Radiation CV	14	no	1,000.00	14,000
	Fan coil	48	no	1,500.00	72,000
	Unit ventilator	5	no	1,500.00	7,500
	Force flow	19	no	1,000.00	19,000
	AHU / ERV	7	no	10,000.00	70,000
	BAS / head end, programing	1	ls	90,000.00	90,000
	C14 Controls	Total : \$ 5973	sm	47.30	282,500
	Mechanical	Total : \$ 5973	sm	566.14	3,381,542

Postma Consulting
Windsor Park Collegiate
Class D estimate

Sprinklers shops area 990 sm

C1 Mechanical

C12 Fire Protection

1	Sprinklers	990	sm	46.70	46,230
	Connect to addition	1	ls	17,700.00	17,700
	Alarm zone	1	no	1,500.00	1,500
	Sprinkler head	106	no	255.00	27,030
	C12 Fire Protection	Total : \$	990 sm	46.70	46,230
	Mechanical	Total : \$	990 sm	46.70	46,230

Postma Consulting					
Windsor Park Collegiate					
Class D estimate	New	2866	sm		
	Renov	3107	sm		
Building Area - New Construction	Total	5973	sm		

C2 Electrical

C21 Service and Distribution		5973	sm	11.49	68,612
1	New service - utility charge	1	no	40,000.00	NIC
2	Upgrade service / connect to existing	1	no	75,000.00	NIC
3	New MSB 600A	1	no	34,000.00	34,000
4	Panel	9	no	3,400.00	30,600
5	Panel feeders	23	m	44.00	1,012
6	Testing	1	sum	1,500.00	1,500
7	Grounding	1	sum	1,500.00	1,500
C21 Service and Distribution	Total	5973	sm	11.49	68,612

C22 Lighting, devices and heating

1	Light fixtures	5973	sm	117.49	701,770
	Light fixtures	920	no	410.00	377,200
	Demolition fixtures	1	sum	44,000.00	44,000
	Wall mount exterior light fixture	12	no	490.00	5,880
	Pole light	8	no	5,400.00	43,200
	Buried feeders	250	m	20.00	5,000
	Emergency battery	26	no	540.00	14,040
	Emergency head	25	no	220.00	5,500
	Exit sign	10	no	440.00	4,400
	Wall switch / OC	80	no	175.00	14,000
	Switch	20	no	140.00	2,800
	Occupancy sensor	125	ea.	190.00	23,750
	Branch wiring	1	sum	113,000.00	113,000
	Lighting control system / low voltage wiring	1	sum	49,000.00	49,000

	Postma Consulting					
	Windsor Park Collegiate					
	Class D estimate	New	2866	sm		
		Renov	3107	sm		
	Building Area - New Construction	Total	5973	sm		
2	Power outlets, devices and connections		5973	sm	35.23	210,445
	15A wall receptacle		550	no	135.00	74,250
	20A wall receptacle Tee		10	no	140.00	1,400
	GFI receptacle		95	no	145.00	13,775
	Parking receptacle		20	no	750.00	15,000
	Drinking fountain		2	no	185.00	370
	Hand dryer		6	no	735.00	4,410
	ADO door		6	no	540.00	3,240
	Branch wiring		1	sum	98,000.00	98,000
3	Mechanical power		5973	sm	32.65	195,000
	Allowance		1	no	122,000.00	122,000
	Branch wiring		1	sum	73,000.00	73,000
	C22 Lighting, devices & heating	Total	5973	sm	185.37	1,107,215

Postma Consulting
Windsor Park Collegiate
Class D estimate

New	2866	sm
Renov	3107	sm
Total	5973	sm

Building Area - New Construction

C23 Systems & Ancillaries

1	Fire Alarm	5973	sm	14.27	85,215
	New fire alarm panel	1	sum	20,000.00	20,000
	Pull station	8	no	225.00	1,800
	Relocate existing	30	no	225.00	6,750
	Smoke detector	25	no	395.00	9,875
	Horn/strobe	22	no	515.00	11,330
	Horn	2	no	455.00	910
	Strobe	2	no	275.00	550
	Verification	1	sum	9,000.00	9,000
	Wiring	1	sum	25,000.00	25,000
2	Voice and data	5973	sm	18.22	108,800
	Data outlet	130	no	100.00	13,000
	Cable outlet	2	no	100.00	200
	WAP	60	no	750.00	45,000
	Data rack	4	no	2,900.00	11,600
	Wiring / cable tray	1	sum	39,000.00	39,000
3	Public address	5973	sm	8.90	53,150
	PA speaker	62	no	325.00	20,150
	Call station	20	no	350.00	7,000
	Relocations incl wire	80	no	200.00	16,000
	Conduit and wire	1	sum	10,000.00	10,000
4	Security / intrusion	5973	sm	21.72	129,725
	Motion detector	30	no	395.00	11,850
	Barrier free washroom alarm	1	no	1,500.00	1,500
	Relocations incl wire	40	no	250.00	10,000
	Door contact	15	no	225.00	3,375
	Cameras incl rough in	24	no	3,500.00	84,000
	Card reader/door control	5	no	2,000.00	10,000
	Conduit and wire	1	sum	9,000.00	9,000
5	Clock	5973	sm	1.51	9,000
	Relocations incl wire	10	no	250.00	2,500
	Clock	10	no	650.00	6,500
6	Theatre Lighting & Sound	1	sm	109,000.00	109,000
	Lighting & related rigging	1	sum	74,000.00	74,000
	Sound	1	sum	35,000.00	35,000
	C23 Systems & Ancillaries	5973	sm	82.85	494,890
	Electrical	5973	sm	279.71	1,670,717