



CHIEF CHARLES AUDY
MEMORIAL SCHOOL

WUSKWI SIPIHK FIRST NATION | Manitoba
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In the 80's and 90's, Chief Charles Audy had a vision for the children of Wuskwi Sipiik First Nation [WSFN]. They needed to be educated within their community, by their community. His goal was not about implementing the latest 21st century pedagogies and technology-driven teaching styles. This project was envisioned to meet primal needs as beings - connection, safety, and hope. This project is about overcoming fundamental obstacles that are often take for granted - including access to clean drinking water, education and teachers.

Chief Charles Audy Memorial School expresses modesty, relevance, and fortitude. It is a testament that scale and sophistication are not prerequisites for an impactful project for students, staff, and the community. For an existing student population of 17 students, this project needed to be approached with humility, openness to learn, and an eagerness to execute.

Through Chief Charles Audy's leadership, Wuskwi Sipiik First Nation was able to secure a temporary school building, a pre-engineered structure that represented hope that students would be able to be learn and thrive in the safety of their community. Unfortunately, this interim solution became a 25-year solution. The building was not intended for such long use and quickly deteriorated and became inadequate and unsafe. In 2018, funding was approved for a new 1,160 SM [12,490 SF] school to be constructed for a 2026 anticipated student population of 66 students.

Meeting the challenge with alacrity, we listened closely to Wuskwi Sipiik First Nation, and came back with a solution that is intended to inspire and facilitate an environment of learning, a gathering place for the community. Coming full circle, decades later, Chief Charles Audy's dream of educating children within their community by their community was fulfilled in the addition of a facility where children can learn and thrive.

Due to Chief Charles Audy's legacy, and the community's ongoing perseverance, their children have the education they deserve.

EXECUTIVE SUMMARY



The late Chief Charles Thomas Audy was Chief of Wuskwi Sipiik First Nation for approximately 10 years during the late 80's and early 90's. During his time he carried out the vision for getting a school on reserve so the students of the community did not have to travel to an off reserve provincial school where many of them were experiencing raciSM. Elder Albina Brass commented, "Charley was all for kids, anyone's kids. He loved helping out the children of his community."

The old school was built as a temporary school in 1994, and the next year Chief Charles Audy passed away. The school was not yet named so after his passing they dedicated the building in memory of him. We believe it is important to carry his name throughout our school's legacy because it is a history of our people and shows where we have come from.

VANESSA ZASTRE | FORMER PRINCIPAL,
CURRENTLY DIRECTOR OF EDUCATION





CAFETERIA - CHIEF CHARLES AUDY MEMORIAL SCHOOL | Wuskwi Sipihk First Nation, MB

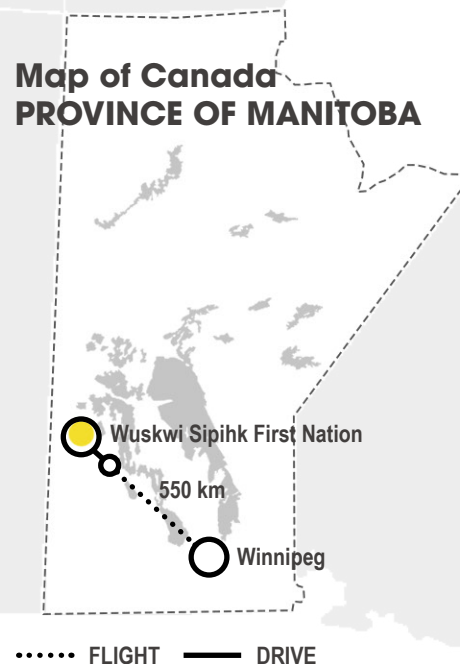
SCOPE OF WORK AND BUDGET

The scope of work for the planning, design and construction of Wuskwi Sipiik First Nation School includes the following:

- New 1,160 SM [12,490 SF] school
- New 530 SM allotted floor area for teacherages
- Site works and site development
- Fit-up of the completed facilities;
- Address immediate health and safety concerns at the existing school, and
- Provide approximately 500 linear feet of road access to the school site

Budget: \$12,500,000 CAD

Map of Canada PROVINCE OF MANITOBA



COMMUNITY CONTEXT

Wuskwi Sipiik First Nation is located 385 km northwest of Winnipeg and about 18 km west of Swan River (58 km by road) in the Parkland region of Manitoba. The community is situated within two reserve parcels IR65C and IR2 on Treaty 2 Land. IR65C is a 923.7-hectare parcel of land adjacent to the western shore of Swan Lake. The “Satellite” Reserve, IR2 is a 91.5-hectare parcel adjacent to PTH 10, about 15 km west of IR65C. The project is located on IR2.

The band office, Chief Charles Audy Memorial School, day care, fire truck garage, water and sewage treatment plants, Small gas bar and four houses are located on IR65C. The former water treatment plant, which was built in 1992, supplied “grey” water to their existing school, band employees and residents of IR65C. The band purchased bottled water for drinking purposes at IR65C. The water supply for the IR65C community is drawn from the Woody River and treated sewage effluent is discharged into the Birch River. Both rivers flow north into Swan Lake. On July 30, 2020, Wuskwi Sipiik First Nation lifted a long-term drinking water advisory that had been in effect since April 2014. This new water treatment plant provides clean drinking water to over 40 homes and 7 community buildings.

According to the regional population statistics of May 2023, current registered First Nation membership is 731 of which 222 live on reserve. WSNF's geographic zone classification is currently Zone 2. The First Nation is located between 50 and 350 km from the nearest service center to which it has year-round road access and is linked to the provincial electrical power system.. The community exhibits an environmental index of C (between 50 and 55 degrees latitude).

A Feasibility Study was completed previously, in 2017, to provide conceptual planning options towards the replacement of the existing K4-Grade 8 School facility. The study recommended constructing a new 1,160.4 m² K4-Gr.8 School on the IR2 reserve. Four new teacherages with a total gross area of 530 m² were also recommended. The teacherages were to be configured and located in the community during the design stage.

Based on the Wuskwi Sipiik School Feasibility Study, the enrolment in December 2016 for K4 – Grade 8 was 17 students. Based on the government approved enrolment projection model for the design year of 2026, the total number of students is anticipated to be 66 students (63 Full-time equivalent). In addition, there is also anticipated to be an additional 20 students attending Grade 9 – 12 outside the community. At the project start, high school students were bussed to Swan River, which is 58 kilometers away by road.

STAKEHOLDERS

First Nations own and operate education facilities within their communities and are responsible for managing projects to renovate or build new facilities. Chief Elwood Zastre is the Chief of Wuskwi Sipiik First Nation. Indigenous Services Canada aims to support First Nations by providing funding for the construction, renovation, operations, and maintenance of First Nations educational facilities. Colliers Project Leaders acted as Project Manager for the New Work.



EXISTING SCHOOL



EXISTING SCHOOL



SITE CONTEXT



COMMUNITY CENTRE

PROJECT CHALLENGES

Key Existing School Issues

Wuskwi Sipiik First Nation's (W SFN) former 493.8 m² school was undersized, lacked natural light and did not have a proper gym, cafeteria, or playground space. The existing school was deteriorating and required major repairs to meet today's standard health and safety requirements. The facility was designed as a temporary pre-engineered building in 1994 but remained in use until the new school funding was approved in 2018.

In addition to the poor condition of the building, life safety was compromised in the facility with the need of emergency lighting repairs, fire alarm panel replacement, replacing receptacles, replacing fire extinguishers, verifying control systems for outside air, and remedial work of the air handling unit to control heating.

Road accessibility has long been an issue of the existing school as it is located over 15 km from the new Wuskwi Sipiik IR2, which is where most community members live and has become the focus of new housing and commercial development.

Location

First Nation Communities must take into consideration transportation limitations; the infrastructure of the communities where they are situated; the need for more efficient construction technologies; ease of operations and maintenance; while creating a school environment that is inviting, culturally relevant, safe, enabling and nurturing.

When considering the optimal location of the school as well as siting the new school on the site, it was important to be cognizant of the site conditions that can have massive bearing on the financial feasibility of the project. Our project began with an Environmental Assessment to help identify any potentially contaminated soils as well as potential areas of peat or rock outcrops, where

remediation or blasting had the potential to add substantial cost to the project. Site optimization was an imperative piece to this school project.

Heritage and Culture

In a 2003 Manitoba Education and Youth publication called Integrating Aboriginal Perspectives into Curricula, it outlined two main goals of integrating Aboriginal perspectives for Aboriginal students in modern curriculum:

- 1.** To develop a positive self-identity through learning their own histories, cultures, traditional values, contemporary lifestyles, and traditional knowledge, and
- 2.** To participate in a learning environment that will equip them with the knowledge and skills needed to participate more fully in the unique civic and cultural realities of their communities.

In Integrating Aboriginal Perspectives into Curricula, a quote by a Salish Elder says, "If you don't tell your children who and what they are, they won't know. How can they be proud of what they don't know?"

It is important to remain humble throughout the collaborative process. The Design Team led through listening, absorbing, translating and incorporating what we heard into something that is relevant, sensitive, and meaningful to the community.

Socio Economic

The school project provided an opportunity for community employment, training and skills upgrade in the construction field. Our project team, in concert with the First Nation and Project Manager, needed to assist in developing strategies to maximize employment and training benefits to the community. At the onset of the project, it was essential to explore these economic opportunities in order to maximize local labour and resources. Similarly, economic opportunities

included equipment procurement and rental, as well as the economy that was required through food and accommodation services.

Construction With Limited Materials and Labour Resources

The construction schedule presented a significant challenge because the construction season in northern Manitoba is limited. Transportation and logistics tend to be very expensive due to the long distances involved. The roads to remote communities may get compromised during winter storms and this needs to get accounted for in order to meet construction timelines.

Planning for worst scenarios must be contemplated. The cost of transportation and housing trade specialists can be significant, and the variety of materials should be limited to minimize the number of specialized trades required on the project to keep project costs down.

Staff Shortages and Retention

Adjunct to this new school construction project was the construction of five new teacherages. Teacherages are a series of houses to teachers who are not originally from the community. For schools that don't have the full staff team to lead their students, housing facilitates the logistics around obtaining new staff members. Attracting and retaining staff are necessary to the long term success of the project.

AVAILABLE ASSETS

The strongest asset to the design and construction of the new school were the Leaders and community members of Wuskwi Sipihk First Nation. Despite the remote location of the community not providing equal economic

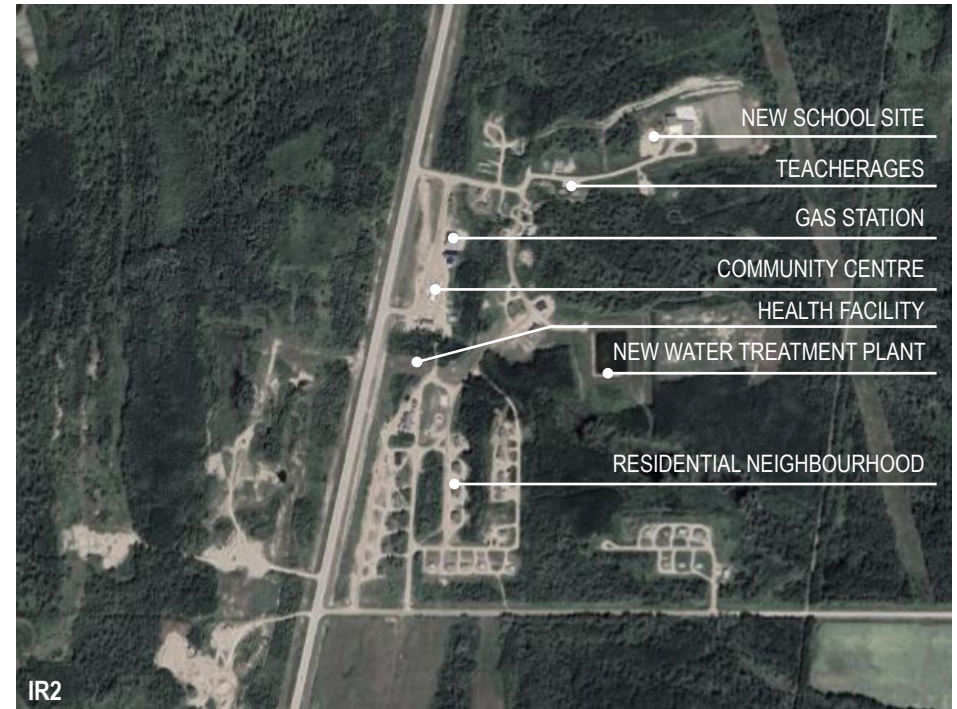
opportunities as other urban city schools, there was a plethora of indigenous knowledge and traditions that helped to shape the school design, for instance land based learning traditions and the inspiring nearby birch trees.

VALUE OF PROCESS AND PROJECT TO COMMUNITY AT LARGE

First Nation Schools have tremendous social impact on community youth.

- By allowing children to be raised by their own families, as a result, they help communities grow
- They shape future leaders, teachers, tradespeople and business owners who shape the future of the community
- They provide something to do
- They provide purpose
- They provide hope
- They encourage safety

Schools in small communities with limited access to amenities become community hubs. Wuskwi Sipihk School is a focus of community activity, a place to celebrate and honour the traditional First Nation culture whilst acknowledging and bridging contemporary society and technologies. The school anticipates and respects the ceremonies and ways of the First Nation teachings, traditions and culture which can be experienced and shared between all community members. The manner in which these values were interpreted and accommodated into the new school was determined through the collaborative design. Examples of how this was manifested are outlined as follows:

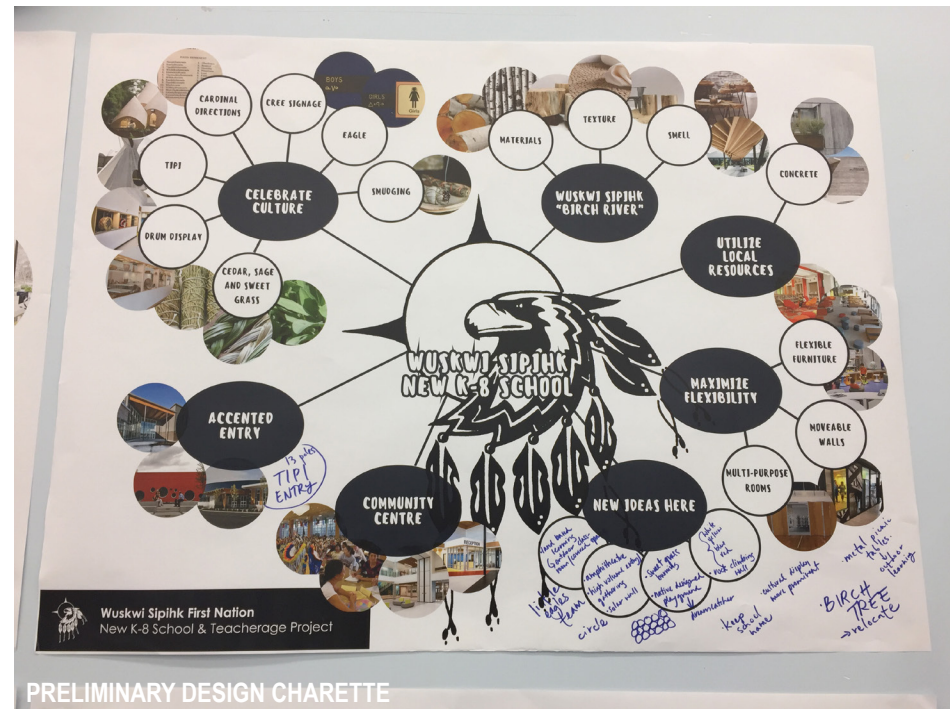
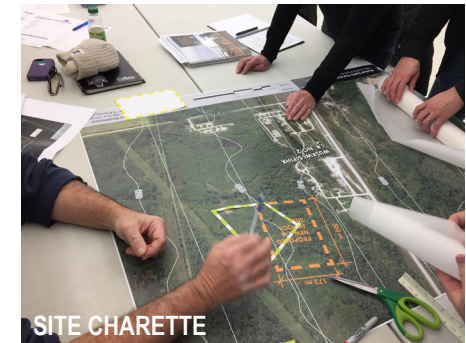
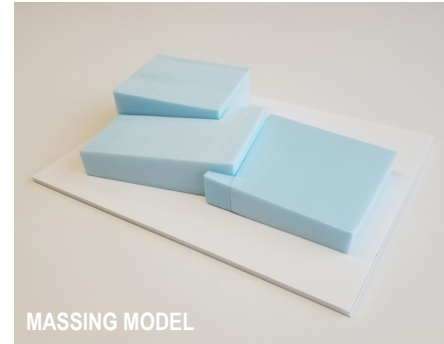


- Collaboration was fundamental to the success of this project. To generate a sense of pride, ownership and stewardship in the end product, students and staff needed to be an integral part of the process. Although our team has worked with numerous First Nation Communities, we know that no two communities are alike. Consequently, we approach every project with humility, an open mind, open ears and an eagerness to learn the unique story of Wuskwipi Sipiik.

FOSTERING JUSTICE, EQUITY, DIVERSITY, AND INCLUSION

The success of the school lies in the success of collaboration. When the end user takes pride and ownership of their buildings, these projects will be used beyond its designed potential, will be well taken care of, and will last for future generations.

It is fundamental that the community claims ownership of not only the school building, but also the inclusive and integrated design process that delivers the school project. To elevate engagement and to promote diverse perspectives from all users, collaboration is more casual in nature and involves small group discussions as opposed to formal boardroom meetings. These planned informal interactions were supported by:





- **PHYSICALLY WALKING AND EXPERIENCING THE SITE.** On the first project meeting, it was essential to walk the site with our client. A 2D site plan can be disorienting and confusing. Walking the site, through the birch forest, gave a sense of bearing, belonging, and site constraints and access can be articulated and confirmed.
- **MIND MAPS.** Prior to meeting, the team performed deep research into the community, the history of the First Nation, Cree teachings, and geographical context, so that we came to the table with ideas, concepts, and traditions that sparked conversation. Through these discussions, we were able to prioritize important design elements to implement.
- **DESIGN CHARRETTE.** In contrast to formal presentations and open large group questions and answers, conversations around pin up material was more fruitful and inclusive.
- **MATTERPORT WALK-THROUGHS.** Visualizing new spaces that potentially introduce new ways of working can often be met with resistance. When teachers have not had the opportunity to experience and see another way of working, it is difficult to introduce new ideas. Matterport is a scanning technology that we use as a collaborative and communication tool. The pivoting camera scans each room and pieces it together so that their existing facility can be converted into a 3D dollhouse. We therefore can compare what we are providing with what they understand and relate to in their existing facility and we can easily contrast and parallel what we propose with what they currently have.
- **3D VISUALS AND PRECEDENT IMAGERY.** Physical models, precedent photos, and materials that you can touch and see are more effective communication tools than two dimensional plans, sections, and elevations.



ENTRANCE / FOYER AND CAFETERIA - CHIEF CHARLES AUDY MEMORIAL SCHOOL | Wuskwi Sipiik First Nation, MB

2 EDUCATIONAL ENVIRONMENT DESIGN

The mission of the Chief Charles Audy Memorial School is to achieve the highest standards in education for their children. We will develop their special gifts and talents to prepare them for their journey towards life-long learning. This will be achieved in a safe and positive environment with the wisdom of the whole community.

EDUCATIONAL VISION AND GOALS OF SCHOOL

The Community Goals of Education Are

- To provide education facilities, which accommodate current and projected enrollments;
- To develop an inviting, culturally relevant environment in which community members are partners in the education process;
- To provide a safe, enabling and nurturing environment for all students regardless of their individual challenges;
- To provide a safe working environment for staff; and
- To provide access to a variety of educational opportunities for students and the community.

The programs currently offered by the Chief Charles Audy Memorial School includes K4-Gr. 8 programs, core subjects (English, Math, Science, Social Studies), Arts (multi-media, drama), Music, Cree language and culture, technology (computer education), health and physical education, and home economics (food/nutrition/sewing). In the future, the school is anticipating offering additional programs such as outdoor/land-based learning, special education/life skills, breakfast and lunch program, head start, and adult education.

These goals highlight a desire to provide a safe learning environment for all levels of learning. The foundation of learning is found in sacred and traditional teachings, that instill values, attitude, holistic thought, as well as a sense of pride and belonging. Wuskwi Sipihk First Nation desires to establish a perfect balance of incorporating traditional teachings into modern day curriculum to help nurture children into becoming future leaders, teachers, makers and builders, giving back to the community - communities where access to education is limited or where their existing facility is inadequate, new school projects serve a fundamental need.

Safety is paramount. Bullying, supervision, and security are challenges that many schools continue to face today. Safety in terms of air quality, comfort, and health seem like pedestrian criteria but it is critical and surprisingly not available in communities such as Wuskwi Sipihk. As previously mentioned, WSN's existing facility was a temporary pre-engineered building that became a permanent facility. Decades of use resulted in poor air quality and minimal access to natural light and no access to natural views. Schools also promote safety within the community.

They do not solely provide education, they provide respite, guidance, and purpose. It is imperative that the new W SFN school is designed to be healthy, ultra durable and to last several generations.

With safety serving as the groundwork for the school, land-based learning is the foundation. Land-based learning is a way to teach survival, language, stewardship, stories, and traditions. Land-based learning and cultural learning are interwoven and our aim was to weave nature and culture throughout their school as well. Connecting to nature not only promotes an optimal learning environment, but it also connects students to their heritage and culture.

ILLUSTRATING HOW DESIGN ENVIRONMENT SUPPORTS CURRICULUM

The words “Wuskwi Sipiik,” translates to Birch River. Birch trees are an important feature of the community’s landscape and a birch forest engulfs the school site. The birch tree therefore serves as a primary design element within the school. Masonry was chosen in the cladding for its robustness and longevity. Masonry can be a limited medium to communicate organic-inspired ideas, however, through experimentation and by testing each manipulated variable available to us in masonry construction, we were able to develop a birch-inspired motif through block size, block colour, bond pattern, mortar type, and block location. Additionally, the window placement and roof material supported the idea further.

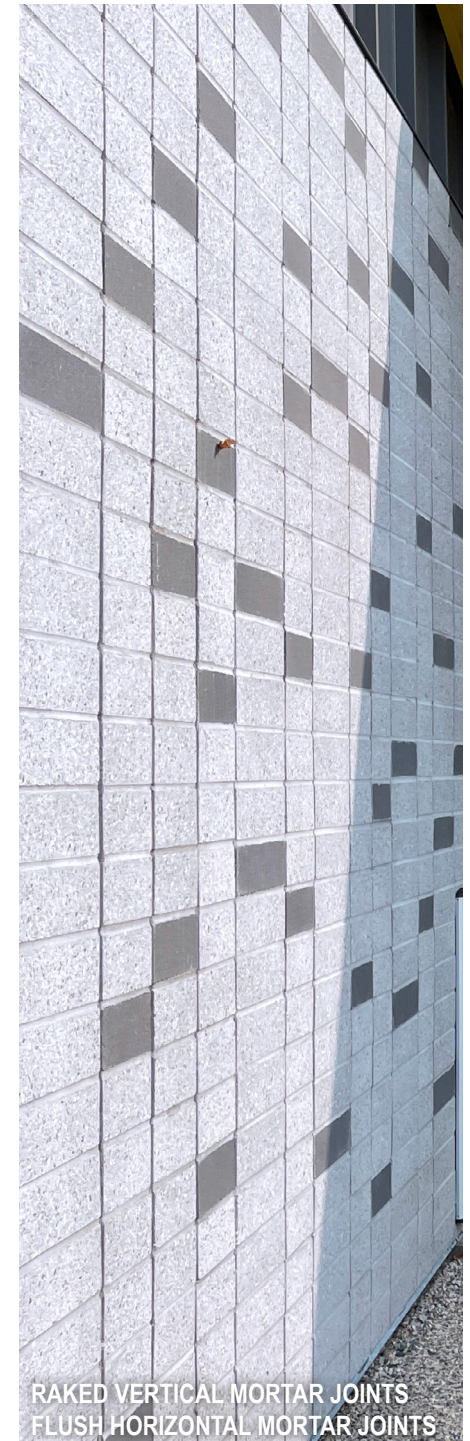
Two types of concrete block were chosen to create a repeating “randomized” pattern. The block colour is neutral black and white, to mimic the high contrast birch bark. The units were installed in a stack bond to accentuate the verticality of a birch forest and the mortar joints were raked in the vertical and made Smooth in the horizontal to catch a vertical shadow line between each vertical block placement. This birch motif wrapped around the exterior of the building to the interior gathering space and back out to the exterior.

Windows are long and linear, filtering light from the top of the masonry “tree line” to the bottom. The roofline acts like a tree canopy, visible from above, by plane, and it is a continuous element from exterior to interior.

Other supporting ideas expressed by the school staff that will complement the main architectural concept include: circles and the medicine wheel described in more detail on the following pages.



SCHOOL ENTRANCE WITH STUDENT-LED MEDICINAL GARDEN ON FRONT DISPLAY



RAKED VERTICAL MORTAR JOINTS
FLUSH HORIZONTAL MORTAR JOINTS



BIRCH BARK MOTIF
CARRIED THROUGHOUT



CANOPY VISIBLE BY AIR



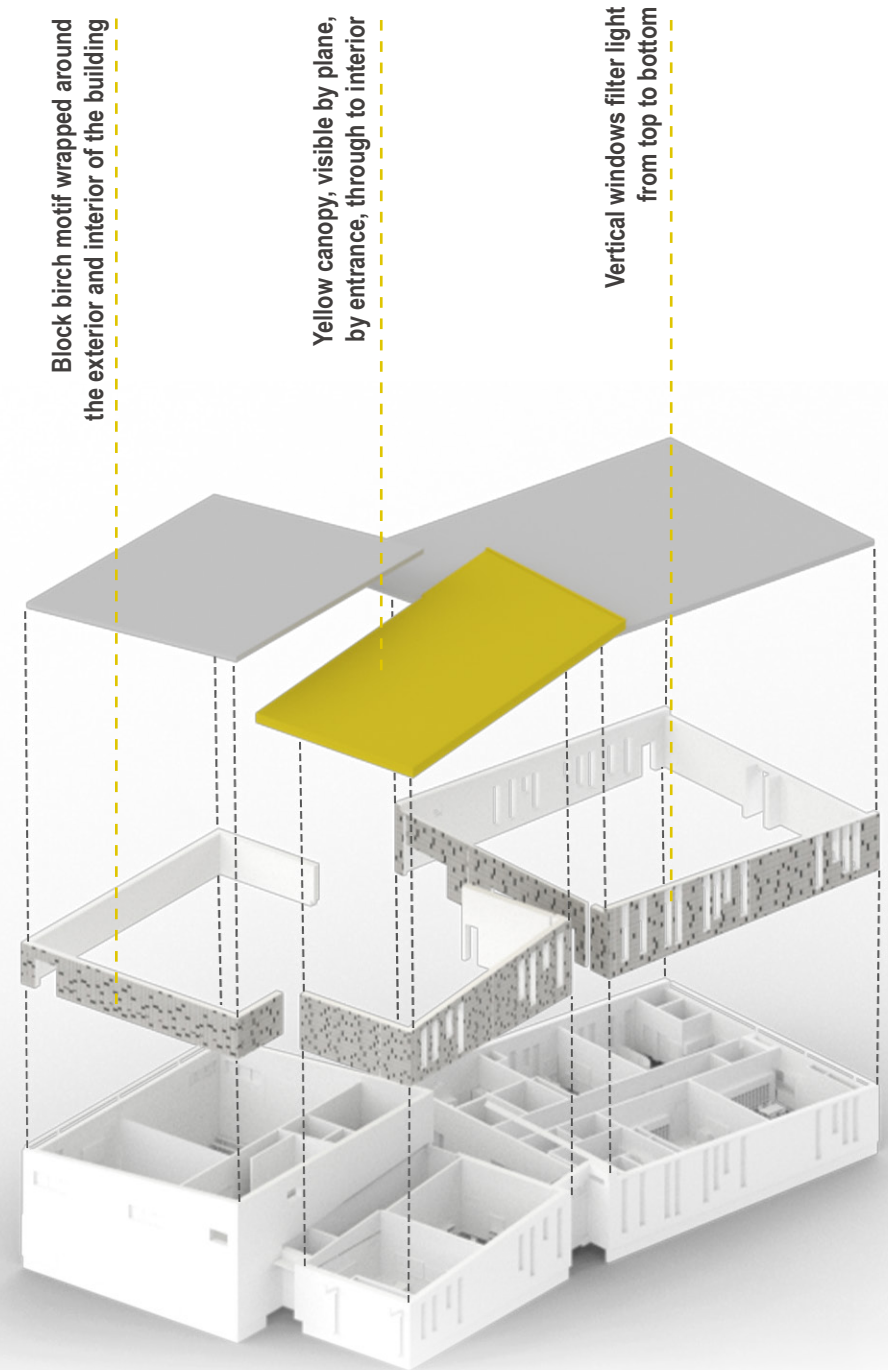
EXTERIOR CANOPY
TRANSITIONS TO INTERIOR



VERTICAL WINDOWS FILTER
LIGHT FROM TOP TO BOTTOM



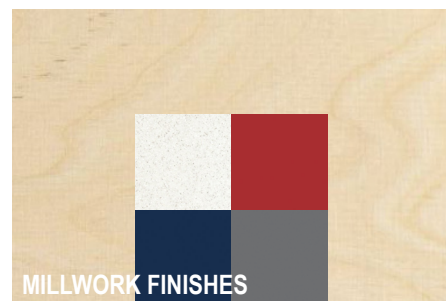
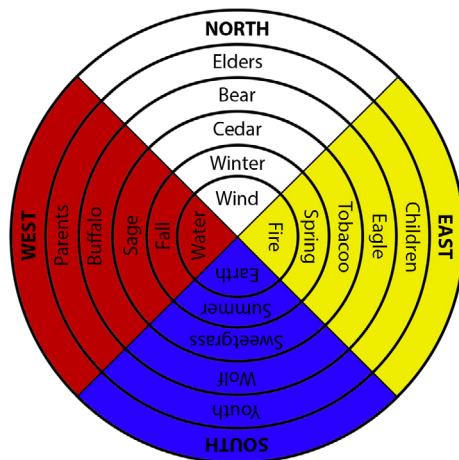
TWO BLOCK SIZES USED IN REPEATING RANDOMIZED PATTERN



Block birch motif wrapped around
the exterior and interior of the building

Yellow canopy, visible by plane,
by entrance, through to interior

Vertical windows filter light
from top to bottom



THE MEDICINE WHEEL

The medicine wheel is a reminder that everything flows in a circle. There is a connection to land and Mother Earth, affecting our spiritual well-being, and ultimately our physical, mental and emotional health. The medicine wheel has 4 connected parts, each dependent on the others to create the whole. Together they create balance and harmony. We placed a medicine wheel in the floor plan to connect the learning spaces in the East wing of the school. While separate physical spaces, the connecting floor pattern implies a physical connection and continuation of learning. Circles were incorporated in design elements such as the vision panels in doors, the display cases and floor pattern. The circle implies a continuous and never ending life with no beginning or end.

HOW ENVIRONMENT SUPPORTS LEARNING AND TEACHING STYLES

In designing the new school, we wanted to ensure that a variety of teaching and learning styles could be accommodated. At the onset of design, we advocated for operable partitions between 2 of the classrooms as well as between the library and middle years classroom to allow for maximum flexibility. After spending so many years in their 'temporary' school and making the best of ill-equipped spaces, we found that the teaching staff were reluctant to move away from what they knew. The operable partition was too far of a departure from what they knew, in the end a door adjoining the library and middle years classroom was as far as they were willing to go. To maximize storage and to provide an additional teaching wall, sliding white boards were included in the classrooms.

The layout of the school allows for a 'community centre' on the west side of the school with the library, adult education classroom, cafeteria/ commercial kitchen and gymnasium being open for after hour use. The classroom and library can be easily accessed from each other through the connecting door. The classroom wing of the school can be locked off to allow these spaces to remain secure.

ILLUSTRATING HOW ENVIRONMENT IS ADAPTABLE AND FLEXIBLE

A facility of this nature will have broad community use, as well as function as an educational facility. In light of this, as we designed this school to satisfy the predetermined program calculated by population metrics, we thought of ways that these spaces could be used in a multi-purpose way in order to generate opportunities for gathering, sharing, learning and participating for students and communities and have a 24-hour life. We have intentionally designed a duality into each of our programmed spaces to support the students as well as the community at large.

Knowing that the school population would grow, the design allows for easy expansion to the East. Even with expansion, the roof slope is such that it would terminate at a comfortable height.

For example, the **STUDENT LIBRARY IS THE COMMUNITY RESOURCE CENTRE + VISITOR DESTINATION**, and **INTERPRETIVE CENTRE**. It is a **PLACE TO LEARN AND RESEARCH HISTORY, THE LAND, THE PEOPLE, TRADITIONAL CRAFTS, NAVIGATION**.

DOOR BETWEEN LIBRARY AND MIDDLE YEARS CLASSROOM – ease of access to technology (computers) to integrate in lesson plans. Younger students can have a connection to older students for mentorship. Ease of use for both spaces for adult education.

LIBRARY/ADULT EDUCATION CLASSROOM / GYMNASIUM /CAFETERIA / OUTDOOR SPACE

– proximity of these areas allows for school and community gatherings after hours.

COMMERCIAL KITCHEN – Provides opportunity for large community feasts that were difficult to accommodate before the new school.

The gymnasium is utilized every single day and for multiple purposes. We have regular physical education classes, art shows, Indigenous Dance, community functions and much more. It has become a gathering area for the community and an area where we can showcase our student's talents.

The kitchen/cafeteria is a critical area of our school. Students receive Free Hot Breakfast, lunches and multiple snacks throughout the day.

Wuskwi Sipiik Education Authority believes that no child should ever be hungry and to create equality we provide free meals for every single one of our students. Without the commercial kitchen this would not be possible to the scale in which we do.

We have a large field and playground, a garden, cultural area, an outdoor education area, a sensory room. Every area has become our favorite. We are so grateful for this building and will cherish it for many years to come.

VANESSA ZASTRE
DIRECTOR OF EDUCATION





CHIEF CHARLES AUDY MEMORIAL SCHOOL - CLASSROOM



ACHIEVING EDUCATIONAL AND SCHOOL DISTRICT GOALS AND OBJECTIVES

Our old school was a sealed tin box with no windows, no gym, lack of heating, and undrinkable water. The new school was always a vision that Wuskwi Sipihk leadership

strove for. Working with the designers, and the actual education staff, we were able to create our dream school that fits the culture of our students and families and the pedagogy that is implemented by our instructors. Walking into the school for the first time brought an intense wave of emotion over me, it was so hard and sad to teach in the old school. The feeling of being able to provide our children equality

in education comparable to other schools in Canada was overwhelming. Our children always deserved a beautiful school to attend. We have had so many generations of students who did not have this opportunity and now we can put that in the past and walk forward in a good way.

**VANESSA ZASTRE
DIRECTOR OF EDUCATION**



HYDROPONICS



SCHOOL PHOTO



TRADITIONAL DRUMMING



BUILDING A TIPI



THE TEACHERS



ART



EXPLORING NATURE



ART



GATHERING

ACHIEVING COMMUNITY GOALS

Bringing culture and tradition back into the school was an crucial part of achieving community goals, the school needing to function as a gathering place in a small community for a life that extends beyond education. The cafeteria and commercial kitchen enable these important gatherings to take place, as food naturally brings people together. The various Outdoor Learning Environments also play a role in education - from cooking over fires, to growing traditional medicinal herbs that are harvested and dried. All of the initiatives of the Indigenous Learning Classroom celebrate culture, bringing it to the forefront, and teaching the importance of community and cultural pride.

The school is a place of community. It is a safe and inclusive area for our children to thrive, flourish and grow. It is a gathering area for our families and friends. The school is a starting location for many other services and programs within our community. The school provides academic education as we integrate Indigenous cultural aspects into the Manitoba Curriculum. We strive to enrich our students and families' spiritual, mental, physical and emotional well beings. This facility allows us to practice our culture and prepare our students to enter higher education institutions effectively.

VANESSA ZASTRE
DIRECTOR OF EDUCATION

UNINTENDED RESULTS AND ACHIEVEMENTS OF PROCESS AND PROJECT

Having a classroom solely dedicated to Indigenous Learning has brought tremendous value to the school. Children learn about sacred medicinal plants, ones they grow, harvest, and dry - learning traditional ways and therefore, continuing the legacy of their people. This knowledge sharing has extended to regalia and costumes, Vanessa explained, made by each child when they start school, and taken with them once they graduate. These traditional costumes are unique, carefully crafted by each child, and then used as part of the curriculum through dance and bringing the children to ceremonies where they have the chance to perform, embrace heritage, and express their identity with pride.



MEDICINAL HERBS GROWN, HARVESTED AND DRIED BY STUDENTS



DRYING MEDICINAL HERBS



MUSIC AND DANCING



BAKING



COMMERCIAL KITCHEN



SCHOOL CAFETERIA / FOYER



OUTDOOR FIREPIT



BIRCH TREE ART



OUTDOOR CLASSROOM



FRONT ENTRANCE AND GARDEN - CHIEF CHARLES AUDY MEMORIAL SCHOOL | Wuskwik Sipiik First Nation, MB

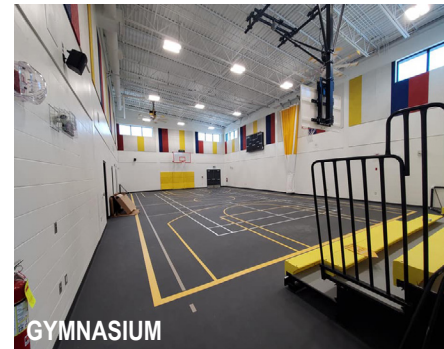
4 PHYSICAL ENVIRONMENT DESIGN



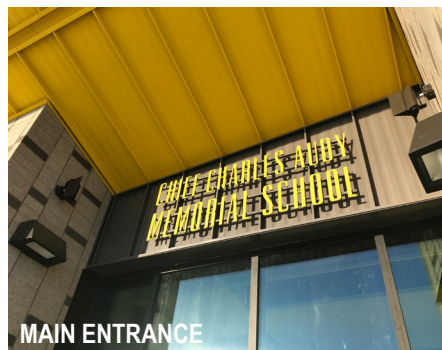
NORTH VIEW TOWARD THE BASKETBALL AND HARD SURFACE PLACE



LIBRARY / RESOURCE CENTRE



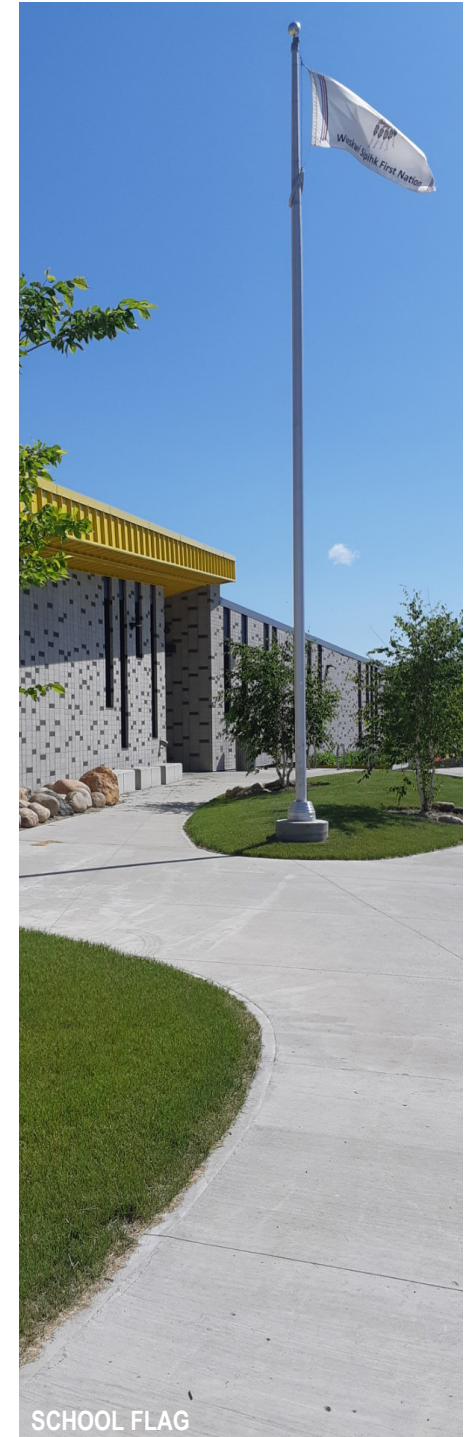
GYMNASIUM



MAIN ENTRANCE



KINDERGARTEN

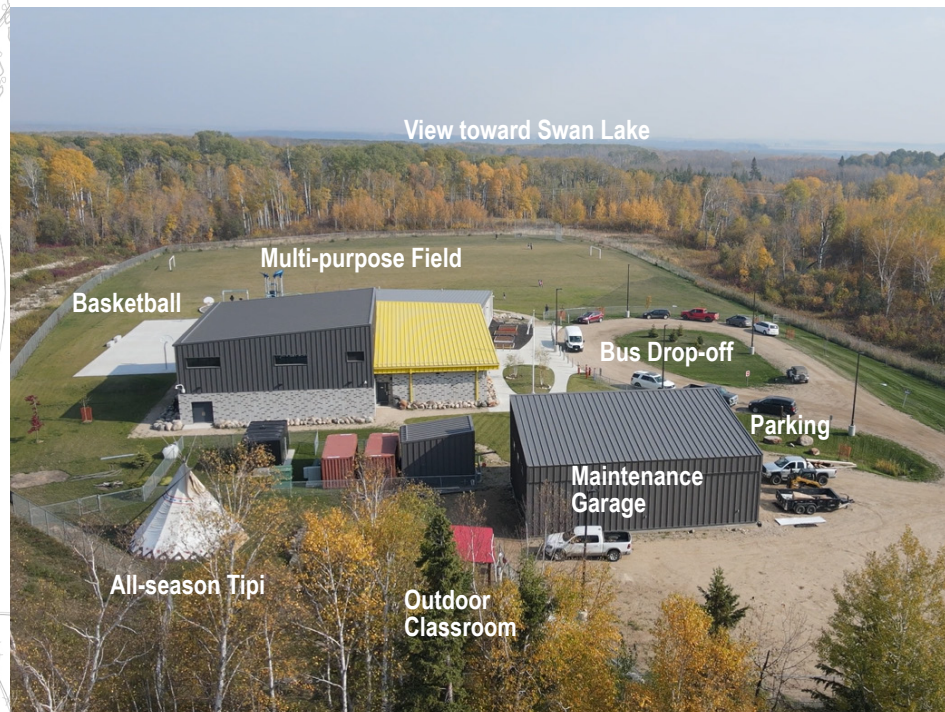
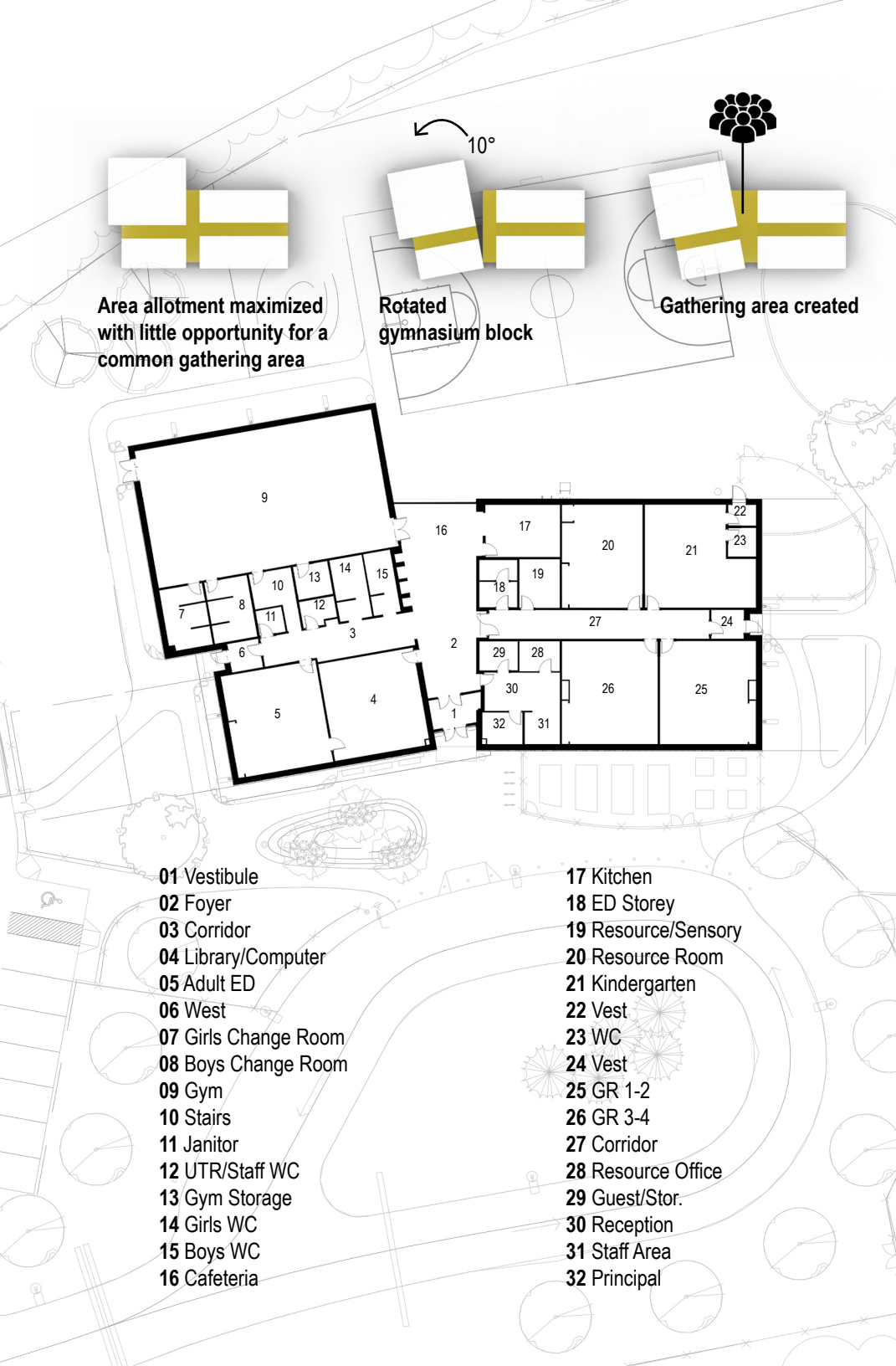


SCHOOL FLAG

SITE PLAN



- 1 New School Building
- 2 Basketball Play-field
- 3 Multi-Purpose Field (Soccer/Football Field)
- 4 Bus Drop Off
- 5 Parking (15 Stalls)
- 6 Outdoor Classroom
- 7 All Season Tipi
- 8 Maintenance Garage





CHIEF CHARLES AUDY
MEMORIAL SCHOOL

SUSTAINABILITY
AND WELL-BEING



L-R: VANESSA ZASTRA - DIRECTOR OF EDUCATION (Former Principal) | JAMES BRITTAIN - PHOTOGRAPHER (James Brittain Photography) | KAT POLISCHUK - GRAPHIC DESIGNER

ILLUSTRATING PROJECT ENERGY-EFFICIENCY

Successful high performance buildings in the north are responsive to their environment and sympathetic to the health and well-being of the building occupants. Energy modeling informed the design process and evaluates the design at each phase in an integrated manner from pre-design to construction documents. At each phase, the proposed building orientation, geometry, mechanical, lighting and envelope designs were evaluated for peak energy efficiency performance. This project complies with the Manitoba Power Smart Program. Their mission? To reduce electricity and natural gas consumption. The school utilizes a Radiant Floor heating/cooling system with fan circulation system. Radiant floors are an excellent way to efficiently heat and cool a space with less energy consumption. This is highly economical from a cost management perspective where electricity costs in Wuskwi Sipihk First Nation can be 10 times the amount of an urban city centre. Furthermore a highly robust insulative envelope, featuring R30 walls and R40 roof system, coupled with Energy Efficient Windows were utilized.

DURABLE GREEN MATERIALS RELATING TO MAINTENANCE

Local resources were used to the fullest extent: Local gravel, soil, granular, rocks, sand, and transplantable trees we utilized to express a natural aesthetic, meanwhile helping to be cost-effective. A durable mosaic CMU block pattern became a prominent cultural homage to the nearby birch trees. A 70 year life cycle sloped metal roof was also implemented with longevity in mind. As we typically spend 80% of our time indoors, it is important that we design healthy, comfortable and durable buildings, selection of durable materials that demonstrate low maintenance and long

life-cycle along with elimination or substantive reduction of products and finishes that emit volatile organic compounds (VOCs) were prioritized.

CULTURAL STEWARDSHIP

The Wuskwi Sipihk First Nation School Project had a particular focus on the school being a cultural steward of the land. As a cultural steward, you are the “boots-on-the-ground” lands guardian and act as the “eyes and ears” of the territory. Your focus is to maintain traditional values and establish a presence. Therefore, through an integrated design process that involved the designers, stakeholders, users and maintenance leaders, we were able to make informed decisions that lead to a school building that is culturally relevant and integrated onto its locale. The school facade is designed to camouflage in with the sites birch trees. Community members also participated in site truthing exercises, thoughtful tree clearing as to not create unnecessary waste, and several environmental studies were undertaken during key milestones of the project to ensure native plants and fauna were minimally disturbed.

HEALTHY ENVIRONMENTAL ASPECTS

The previous existing school had next to no windows. This new school prioritized that each learning and public space has ample natural light to mitigate the affects of seasonal affective disorder. Color theory is also utilized to inspire notions of sunshine being brought into the school, this is what inspired the community's desire to have the bright bold pop of yellow cascading through the school. Furthermore, each learning space has operable windows, which was important to facilitate drawing in fresh air, particularly during the COVID-19 pandemic. The school will also serve as one of the community's largest gathering spaces after school hours.

