

2016 Exhibition of School Planning and Architecture

Wagmatcookewey Comprehensive School

Category: New Construction

Wagmatcook First Nation
Cape Breton, Nova Scotia

Wagmatcookewey Comprehensive School



Wagmatcookewey Comprehensive School



A meeting over tea

Community Environment:

The Wagmatcookewey First Nation was the first reserve in Atlantic Canada to take control of its school system. Visioning workshops involving the entire Wagmatcook community from chief and council, to teachers, staff, students, parents and elders, led to a design vision which captured the spirit of the new school.

We met over tea with the elders to give us broad guidance for the new school. Elders said much of traditional culture had been lost and asked for a design that felt Mi'kmaq and rooted in the community, yet looked to the future. It was also important that the school be open and inviting to any member of the community. The school includes an elder's centre for elders to be present throughout the school day, drink tea and serve as a living link to parents and community.



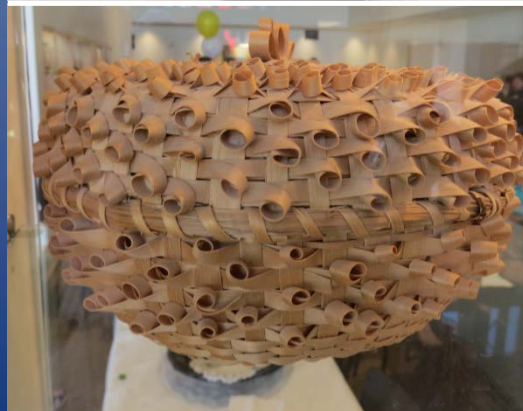
Creating connections

Community Environment:

The double height central space is conceived as a community space and includes a reception and lobby as well as the cafeteria and elder's centre. The entry space and the cafeteria are separated by double-sided display cases showing aboriginal art and artifacts.

The site is elevated overlooking the reserve with views to the Bras D'Or Lakes. The Bras D'Or Lakes, connected to the sea by narrow natural channels, is the spiritual centre of Mi'kmaq culture, and the lobby/community space has double height glazing to make the visual connection between land, water and sky. An outside play area and low seating wall extends out in the direction of the views and is available for use by the community anytime.

The school community asked for a design where students would have a sense of grade identity and progression to higher grades, and felt there should be some separation of primary and secondary students.



Flexible spaces for future needs

Learning Environment:

The Wagmatcookewey School accommodated grades P-12 and an alternate learners class. The teaching model presently follows the provincial (non-aboriginal) curriculum with students separated by grade and classes separated by subject. The principal and elders envision changes in the future, so classrooms were designed to provide flexibility.

A core challenge in the design of the school was the provision of classroom space for cohorts with large variation in number. Some grades have as few as 5 students, others as many as 19. Some grades are combined, but this changes from year to year depending on the cohort sizes.

Instead of a library, the school features a Mi'kmaq Language room directly off the Central Hall/Lobby. The school is connected wirelessly with laptop storage in each wing and smartboard technology in each classroom. A multi-purpose lab is available for all grades.



A response to evolving learning needs

Learning Environment:

The learning spaces are organized in 2 wings, each with 2 classroom clusters. Each cluster contains one small classroom, 2 medium size classrooms and one large classroom. The classroom variety is further augmented by configurable classroom furniture. Every classroom contains connected projection boards.

The tall north-facing classroom windows are operable, with translucent panels to improve natural light distribution. The south-facing classrooms have both upper clerestory lights, and large windows that view the outside through the hallways which acts as a sun visor, cutting glare. In addition to views and daylight, the large interior windows to the south classrooms promote transparency. This combination of classroom sizes and access provides a high degree of flexibility now and for future learning program changes.



There's an opportunity to learn around every corner

Physical Environment:

At the centre of each classroom cluster is a common space which is open to the single-loaded hallway. Each large classroom has doors to each cluster. The cluster common spaces feature an undulating wood ceiling inspired by the distinct shape of Mi'kmaq canoes. Each cluster includes a window seat, with a low window you can only see out of when sitting. Each cluster has a distinct species of tree to provide summer shading: red maple, white birch, mountain ash and Service Berry. The trees relate to other plants and the animals that rely on them and are intended to evoke stories, foods, medicines, economies and art, providing a learning opportunity and identity to each cluster. Every pod hall opens up to the rear to take advantage of the natural classrooms formed by the south facing slopes and which connect to the forest and trails beyond.

Every walk to class should offer opportunities for delight and distraction.



Healthy school, healthy minds

Physical Environment:

The hallways are single loaded, free of lockers, and are overlooked by the interior windows of south facing classrooms. The students love the window seats for reading, socializing or just gazing. The grade outside the hallways is raised above floor level to create a closer connection to the earth outside.

The robust materials were selected for their durability and ease of maintenance, and for a warm and natural feel. They include floors of polished concrete in traffic areas and linoleum in classrooms, and partitions of abuse resistant gwb. North, east and west walls consist of ICF wall construction and the roofs have high insulation values. Passive strategies include passive solar heating as well as natural ventilation and shading; combined with a ventilation system using high efficiency heat recovery units, energy costs are projected to be 40% below the average for comparable buildings.



A community effort

Planning Process:

While we had a conventional schedule of meetings and community engagement to progress the design, we remained open and flexible. For full community buy-in we had to be nimble and able to respond to the needs and schedule of the community groups and band leadership, and incorporate input throughout all stages of the design process.

The design process included regular band council meetings, 2 townhall style meetings including parents, as well as separate meetings with the principal and teachers, and with the students. Most importantly we also met over tea with the elders to give us broad guidance for the new school.

A common goal was that the children feel at home in the school, safe and comfortable, and have access to 21st century technology and teaching tools. The school should also be open and inviting to any member of the community.



Capturing the spirit of Wagmetcookewey School

Planning Process:

Together we created a school that:

- 'Feels' Mi'kmaq but which looks to the future, and which is unique to Wagmatcook
- Welcomes the community, and includes an Elders Centre, Mi'kmaq language room and an open lobby with art and cultural displays
- Embodies a real connection to nature and the land, and with lots of daylight
- Accommodates a growing population with cohorts of greatly varying size
- Accesses modern technology and provides for differentiated learning
- Brings troubled learners back into the school with the rest of the student body
- Creates a sense of student identity and ownership, and a sense of passage through the grade levels
- Provides transparency and connection between grades and to the adults, and has clear and intuitive circulation
- Accommodates formal and informal interaction and learning
- Has low maintenance and operational costs, robust building fabric and systems, but uses warm and tactile materials
- Targets 50 percent local labour, skilled trade and apprenticeship opportunities



Ground Floor Plan

- 1. Central hall/Lobby
- 2. Junior-senior high school wing
- 3. Primary-elementary school wing
- 4. Small classroom
- 5. Medium classroom
- 6. Large classroom
- 7. Resource room
- 8. Reception
- 9. Cafeteria
- 10. Administration
- 11. Mi'kmaq language room
- 12. Elder's room
- 13. Dental clinic
- 14. Mechanical room
- 15. Laboratory
- 16. Gymnasium



Exhibition of School Planning and Architecture

Project Data

Submitting Firm :	Stantec Architecture Ltd. (formerly JDA Mackenzie Architects)
Project Role	Architecture and Prime Consultant
Project Contact	Leif Fuchs
Title	Project Architect
Address	102-40 Highfield Park Drive
City, State or Province, Country	Dartmouth, Nova Scotia Canada
Phone	(902) 468-7777 ext 7217
Joint Partner Firm:	n/a
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	
Other Firm:	CBCL Consulting Ltd.
Project Role	Civil, Mechanical, Electrical, Structural, Landscape Design
Project Contact	Kerry Fraser P.Eng
Title	Mechanical Lead
Address	1489 Hollis St, Halifax, NS B3J 3M5
City, State or Province, Country	Halifax, Nova Scotia, Canada
Phone	(902) 421-7241
Construction Firm:	Brilun Construction Ltd.
Project Role	General Contractor
Project Contact	Brian Lund
Title	President
Address	Keltic Dr, Sydney, NS B1L 1B6
City, State or Province, Country	Sydney, Nova Scotia, Canada
Phone	(902) 567-0473

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Project Details

Project Name	Wagmatcook Comprehensive School
City	Wagmatcook, Cape Breton
State	Nova Scotia, Canada
District Name	Wagmatcook First Nation
Supt/President	Brian Arbuthnot
Occupancy Date	July 2013
Grades Housed	P-12
Capacity(Students)	174
Site Size (acres)	5
Gross Area (sq. ft.)	27,000
Per Occupant(pupil)	155
gross/net please indicate	40%
Design and Build?	yes
If yes, Total Cost:	\$7.4M
Includes:	site work and building, fixed equipment
If no,	
Site Development:	
Building Construction:	
Fixed Equipment:	
Other:	
Total:	\$7.4M

Skilled local workforce

An important community goal was to ensure a high local labour content to build the school. It was important that the labour was meaningful, because the experience from other First Nations projects in the region was that contractors employed only manual labour locally. We set an ambitious target of 50% local labour with a significant amount of skilled trades. We managed to exceed that and reached 55%. This included first Nations excavation sub-contractor, skilled trades and apprentices. Community buy-in to the project was a great success. According to the General Contractor this was the first construction project in his 25 years of experience in the region that suffered no vandalism.





“The design team established an open dialogue with the Wagmatcookewey School planning committee which comprised of teachers, parents, elders, school administrators and the Chief”.

Brian Arbuthnot,
Director of Operations, Wagmatcook First Nation





"Great school, man!"

Elijah, grade 11 student