



Walking in Two Worlds

Elizabeth Quintal School

Peerless Trout First Nation, Alberta



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EXECUTIVE SUMMARY

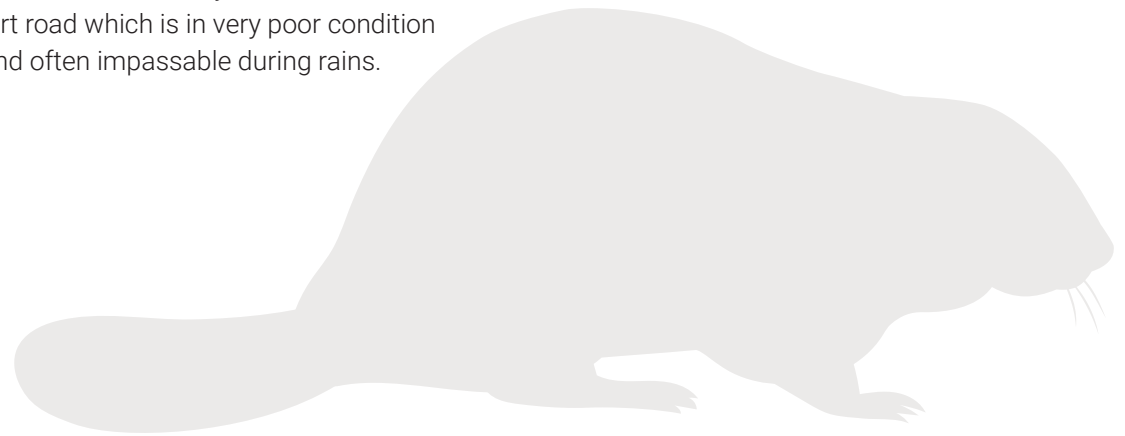
Goals and Outcomes

Education for First Nations in Canada over the past 150 years has been complex, and schools have not been viewed positively as they have caused lasting harm to numerous communities across the country.

Peerless Lake and Trout Lake are remote communities of the Peerless Trout First Nation located in Northern Alberta. Their first building with running water, the old school, was built in the 1980s, and while a source of pride at the time, became run down and had low attendance rates. To reach the community, there is one 80 km dirt road which is in very poor condition and often impassable during rains.

In recent years, Peerless Trout First Nation has obtained official First Nation status and one of their first decisions was to build a school that offers a future for their children and a community gathering space for its citizens.

Much more than another space for education, the Elizabeth Quintal School stands as a lasting symbol that celebrates traditional Cree values while looking forward to a bright and promising future – allowing their students to walk in both worlds.



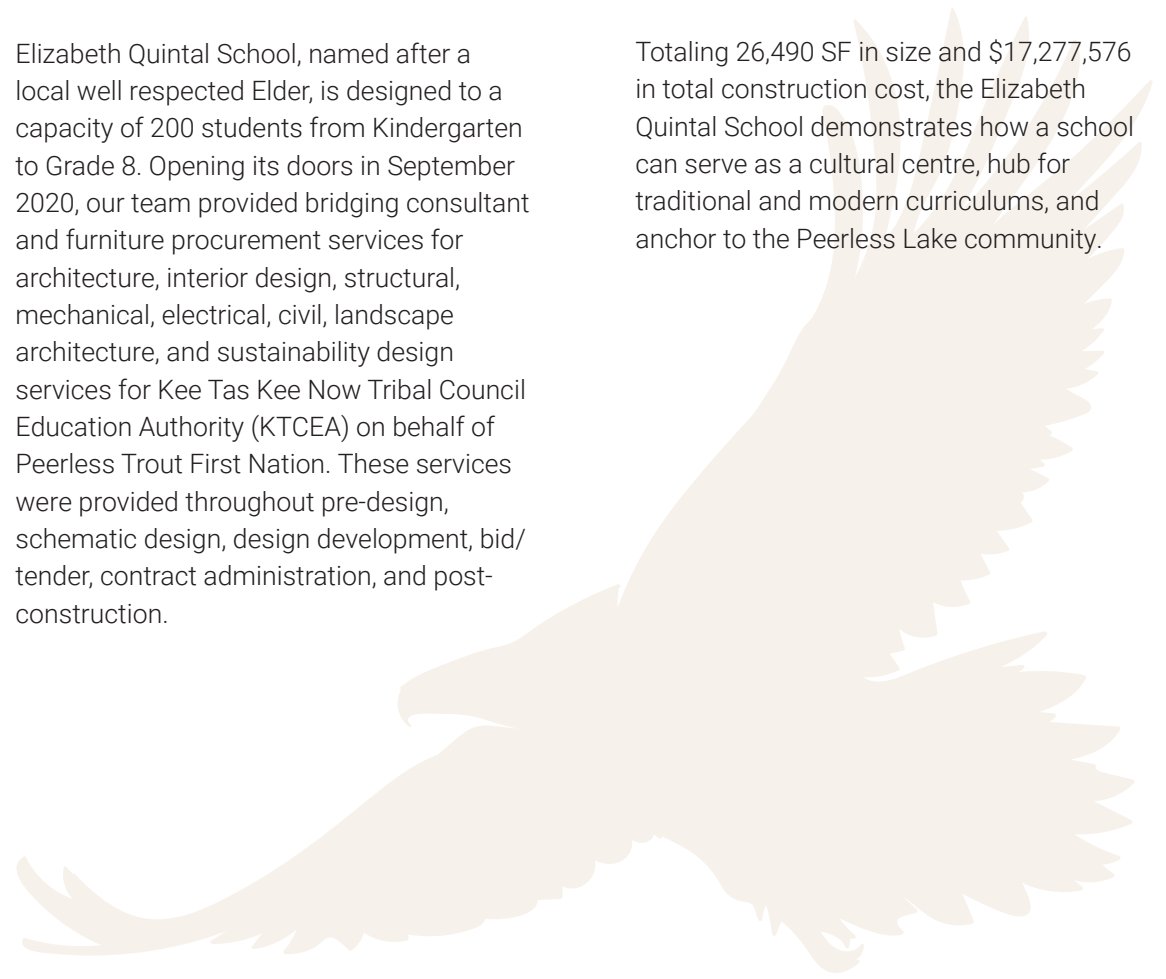




SCOPE OF WORK AND BUDGET

Elizabeth Quintal School, named after a local well respected Elder, is designed to a capacity of 200 students from Kindergarten to Grade 8. Opening its doors in September 2020, our team provided bridging consultant and furniture procurement services for architecture, interior design, structural, mechanical, electrical, civil, landscape architecture, and sustainability design services for Kee Tas Kee Now Tribal Council Education Authority (KTCEA) on behalf of Peerless Trout First Nation. These services were provided throughout pre-design, schematic design, design development, bid/tender, contract administration, and post-construction.

Totalling 26,490 SF in size and \$17,277,576 in total construction cost, the Elizabeth Quintal School demonstrates how a school can serve as a cultural centre, hub for traditional and modern curriculums, and anchor to the Peerless Lake community.





Budget and Schedule Specifics

Target Budget: \$17,184,000

Actual Budget: \$17,277,576

Project Schedule: June 2016 – September 2020

At the time of opening, the old school was the only building in the community with running water. Community members used the school for showers.

2016

August

Client Introduction Meeting / Listening Session

September

Visioning Meeting

October

Conceptual Design

November

Schematic Design

2017

January

Community Update (VR included)

February

Design Development

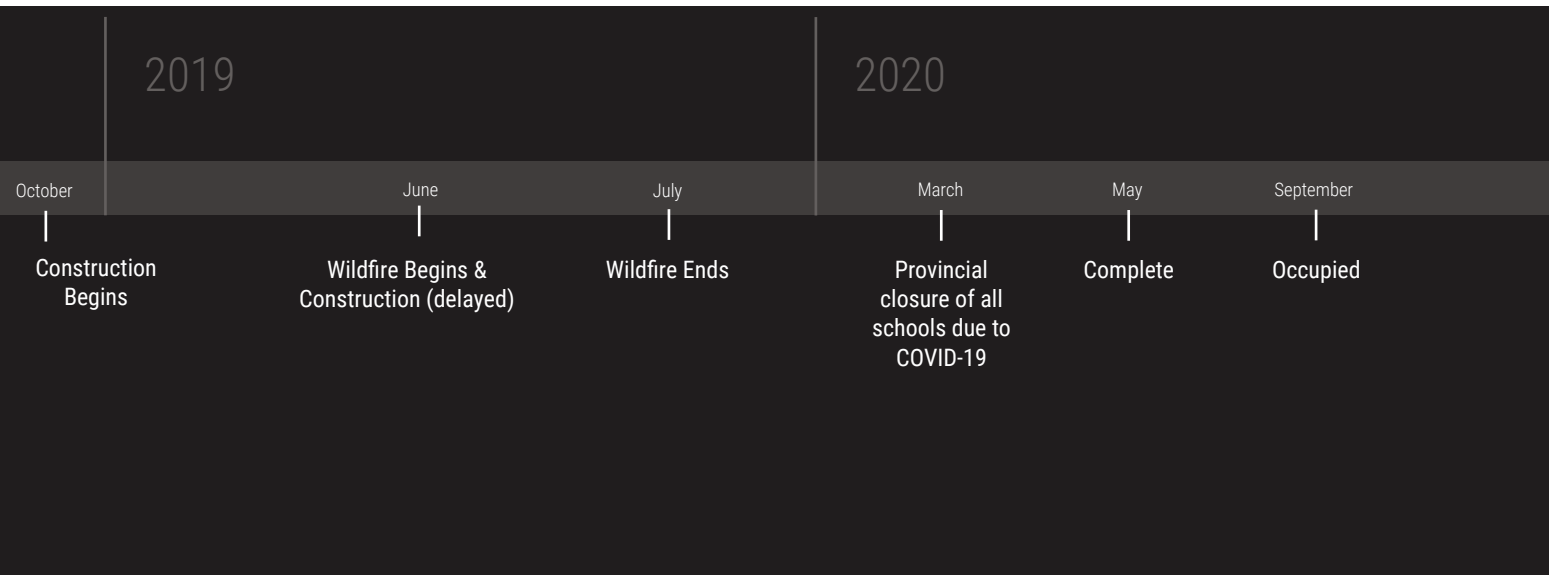
November

Community Engagement

2018


August

Treaty Days Community Engagement





CV



SCHOOL AND COMMUNITY ENGAGEMENT

The Community

Peerless Trout Lake First Nation is located on traditional lands in northern Alberta, a setting that is rich in natural beauty. The area includes not only Peerless and Trout Lakes, but many other smaller lakes, muskegs, and prairies, which support the fish and wildlife needed to make a living. Due to this mixture of environments the land also provides a wide variety of plants, useful in many ways.

Once referred to as Kapaskwatinak (Bald Hill), the name of this site was later changed to Peerless Lake by a trapper and trader originally from Nova Scotia. The settlement on the northeast shore, Peerless Lake, is located approximately 70 km northeast of Red Earth.

The Sakhaw Nehiyawak (Woods Cree) people who make up this community speak Nehiyawewin, the Cree language. It is the first language for most community members and is used for the most part, in all but school settings.

Until recently, the people of the Peerless/ Trout Lake area were registered as members of the Bigstone Cree Nation, over 150 km to the southeast. However, they have always held to their own status as a distinct people with their own lands, history, Elders and stories. They have now accomplished their long-desired objective to have their own government and their reserve lands are currently being surveyed. Now the achievement of other goals for their community is expected. They include education, training, and employment for children, youth and adults, respectively, while sustaining a “good way of life” for the people, animals and their lands.

As of 2021 there are currently 1040 members registered within the First Nation with most members residing within the two communities of Peerless and Trout Lake.

Stakeholders

Elizabeth Quintal School involved a complex collection of stakeholders that each required various types of engagement for the project.

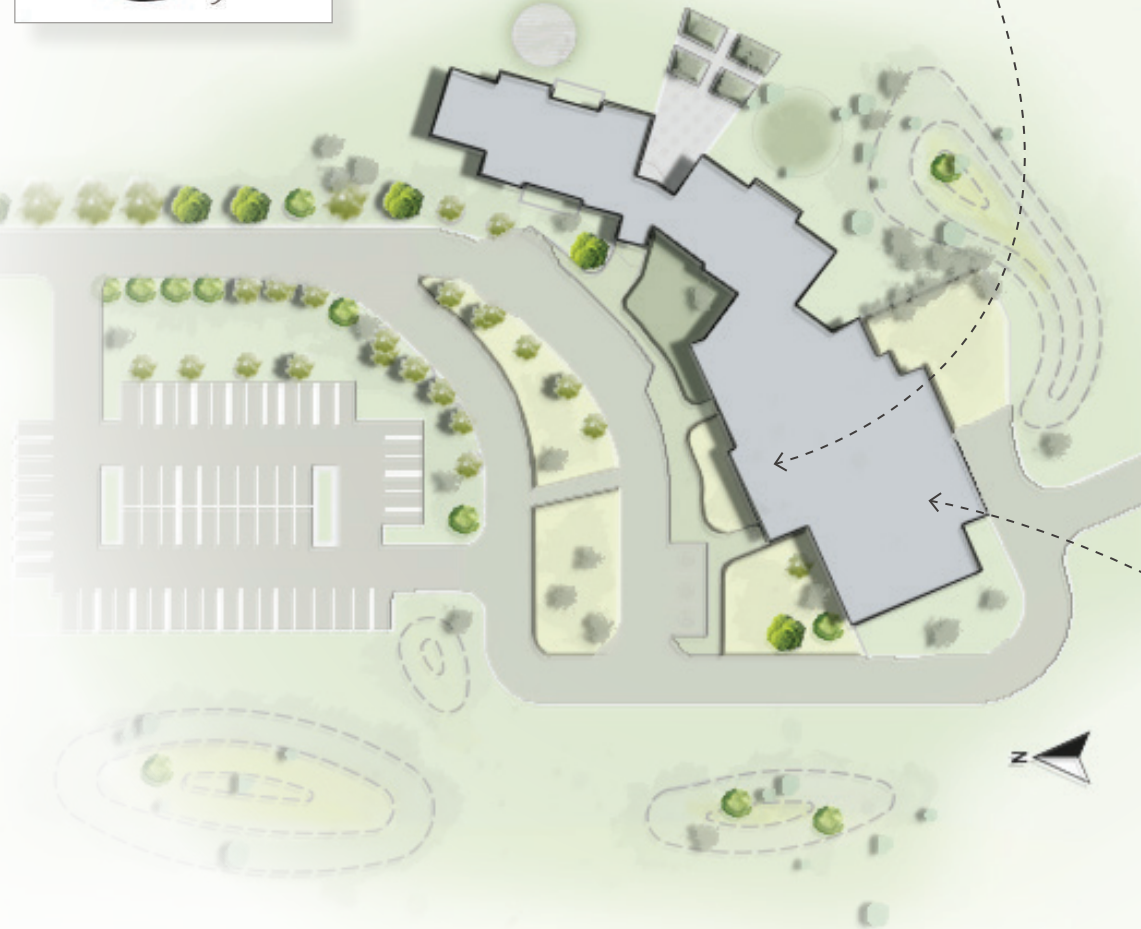
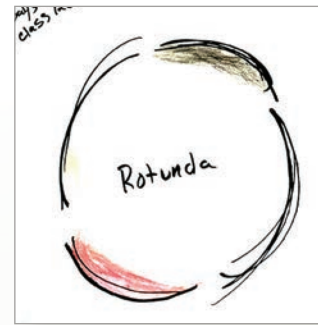
Peerless Trout First Nation – Chief and Council:

Chief and Council are the key decision makers on behalf of the Peerless Trout First Nation. They were part of each design meeting and milestone update throughout the project. Chief and Council also guided the vision of how this school would best align with their community plans as well as specifics on cultural details added to the design.

Peerless Trout First Nation – Parents and Students:

Students and parents were essential stakeholders to the project. One of the challenges of the existing school in the community was its low attendance rate of students. Critical to the success of the project was creating a school that both students and parents would be excited to attend.

Peerless Trout First Nation – General Community: Outside of the parent and student population, the school was also required to serve as a community centre. As one of the few community buildings, it needed to be multi-functional, playing host to weddings, cultural ceremonies, funerals, sporting events, and more. The general community was engaged to understand how this school could fulfill the needs of these events.



Alberta Infrastructure and Alberta Education:

Alberta Infrastructure and Alberta Education worked alongside the Peerless Trout First Nation as a key decision maker for the project. They were responsible for managing the project budget, scope, and schedule while aligning the needs of the provincial curriculum to these spaces.

Kee Tas Kee Now Tribal Council Education Authority (KTCEA):

KTCEA was established to ensure that Loon River First Nation, Woodland Cree First Nation, Lubicon Lake Band, Whitefish Lake First Nation #459 and Peerless Trout First Nation students received an education within their communities that is responsive to their unique needs. They were involved in strengthening the presence of nêhiyawêwin (Cree) culture in the school and provided insight on spaces that needed to accommodate activities such as hunting, fishing, and cultural ceremonies. Their focus was on student retention, attendance, literacy, numeracy and teacher retention as well as student well-being.

Indigenous Services Canada (ISC):

Once the school has gone through the one-year warranty period, the funding responsibility shifts from the Province to the Federal government. ISC will be responsible along with PTFN for maintenance and operations.





The teepee has five poles symbolizing the five Nations that make up Kee Tas Kee Tribal Council.

to requirements for educational spaces. The front door was designed as a teepee as requested by the Peerless Trout First Nation, allowing students to acknowledge the past while stepping forward into the future. Much of the community grows their own food, as such we incorporated a community garden. A learning circle, located just behind the school, was incorporated to host evening activities and events for the community.

Learning to Listen First: It is easy to get caught up in the rhythm of design and rely too heavily on experience and assumptions for what the community would like. What our team found and had to grasp was that the Peerless Trout First Nation is fundamentally different to every other client we had designed a school for. To be clear, we are not talking about preferences of learning or selection of finishes. Walking through the community of Peerless Lake, allowed us to truly grasp how different our communities are. There is little commercial development, the forest is your backyard, and indoor spaces for general community use are very limited. The community grows, fishes and hunts much of their food. Children in this community spend the majority of their time outdoors in all seasons.

We assumed that the community wanted a school that would connect students to nature. They did not. Instead, Chief and Council desired a new 'main street' to run through the centre of the community. The school would serve as a focal point and would start a new streetscape similar to a small Alberta town. Through this moment of humble realization, we found that the best way to work with this community was to remove all assumptions from our process and instead focus on listening intently to each stakeholder to find out the true meaning behind their vision.

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Challenges

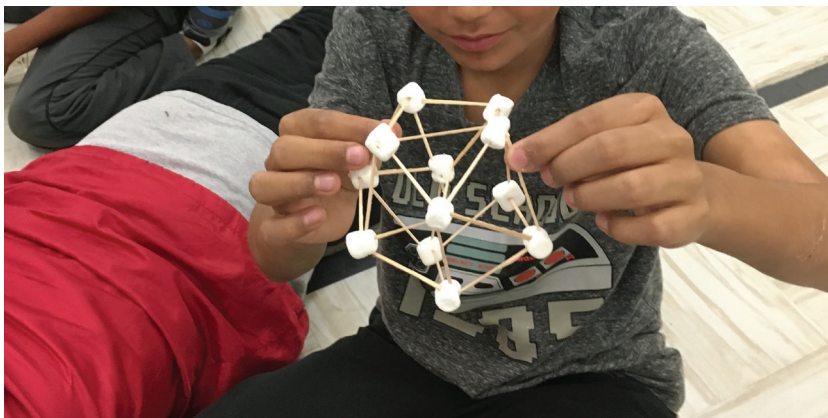
Balancing Provincial Requirements and Local Needs: Schools across the Province of Alberta must adhere to the requirements of the provincial curriculum set by Alberta Education. Unlike other school districts in North America, the school district can't unilaterally create its own curriculum. This also applies to the number, size, and configuration of learning spaces throughout the school.

When resources are limited and restrictions are many, that is where we find the most opportunity for innovation. We used civil design to create new land features to complement the school as well as provide new areas of play for students. In the building, we worked with the Province to create culturally relevant spaces while adhering

Bridging the Gap Between Design and Stakeholders: Many citizens of Peerless Trout First Nation were not familiar with how to engage with the consultant on the design process. While a community engagement session may seem straightforward to urban schools, it was quite out of the ordinary for the citizens of Peerless Lake. Our challenge was to create a forum for meaningful feedback by ensuring that each stakeholder fully grasped our design concepts.

To gain feedback, we traveled to Peerless Lake and stayed in the community. We didn't go up to present design ideas or sketches, but rather to simply get to know the community and for them to get to know us. We arrived with an open mind and ready to listen.

One of the highlights of this process was hearing from some of the students by hosting engagement activities where they learned about building structures by creating shapes with toothpicks connected to marshmallows. While the students created different structures, we got them thinking about what they wanted to see in their brand-new school. Multiple requests included "one window" as the current school had only a few small windows, all of which were covered over. Expectations from students were so low that they often asked for very little, and the request for one window over many was often heard. One student wanted a second storey as all the community buildings were all one level and they wanted to experience stairs.



Worries About Engagement: Going into the stakeholder engagement process, expectations were understandably low from Chief and Council. Recent years only saw 30% of students regularly attending school and they did not expect that the community would be interested in town hall meetings to review the design concept and provide feedback. For many parents and elders, the idea of school was filled with painful memories of residential schools. For some of the students, it was their first day at school and they had never heard English before, outside of the media. Our task was to create an open environment that attracted engagement and help the community rally behind this new school that represented their future.

To attract residents to the community meeting, we had the principals remind students to bring parents back that night. We also sent postcards home with the students to share with their parents. Peerless Trout First Nation also offered dinner as part of the engagement.

High Tensions: There were significant challenges during construction including high tensions between the Peerless Trout First Nation and the contractor. There is a history in Canada of settlers reneging on promises with First Nations and this was experienced on site. We worked with Alberta Infrastructure to facilitate timely responses, and our team made additional site reviews to record and observe compliance to the contract documents. In cases such as the gymnasium flooring, where items were non-compliant, additional testing was done. These reports gave the team the ability to have the contractor either redo or fix work on site. For the Elizabeth Quintal School, the water pressure at the school site was not sufficient to run the school for daily operations as well as in the event of a fire for the sprinkler system. The Municipal District was to have completed a new lift station prior to the opening of the school to address this need. Early in design the team addressed the risk of the lift station not being online prior to opening day by designing a redundant system for the fire protection.

An Unexpected Wildfire: In June 2019, construction was halted as the community was evacuated from nearby wildfires. This disrupted many aspects of Peerless Lake and added new challenges to the project. After the fires were dealt with, the entire construction site was covered in ash and required hazardous material removal on the site. While unexpected, the community is also not unfamiliar with unexpected challenges and demonstrated their resilience in how they bounced back to their way of life.

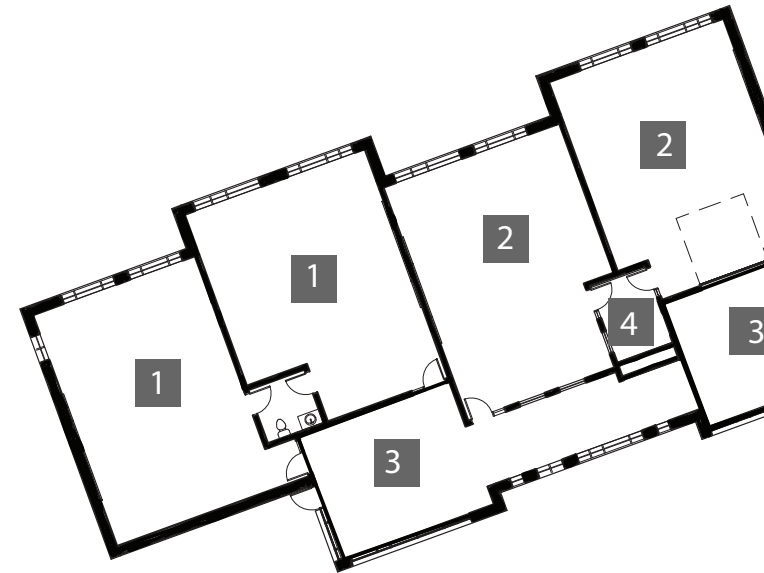
Available Assets

With the remote location of the Peerless Lake community and lack of economic opportunities within the area, there were limited assets to assist with the design and construction of the new school. It is critical that the new school helps change this reality the location creates. The condition of the road does not allow for easy travel, and most days cars cannot drive the road. Vehicles must have a high clearance, and a low weight. This limits transportation and access to assets since elsewhere in the Province. The school was designed to allow for two shipments of supplies per year. When the closest place to buy printer paper is a round trip of four hours, staff rethink what to print.

Value of Process/Project to Community

Elizabeth Quintal School is the community's first major project after becoming its own First Nation. The stakeholders saw this school as an opportunity to encourage the youth to learn and embrace their Cree heritage while setting them up for success in the modern world. It wasn't just a building, but a means to realize a prosperous future for their descendants.

We realized the value of the process was getting meaningful feedback on the planning and design process from students, parents, and citizens. We knew that many of these stakeholders would be unable to give this feedback on traditional floor plans, so we tried a different approach. Our team provided extensive community engagement in the form of community meetings at the former school gymnasium. We brought an abundance of graphic 2D renderings to visualize key spaces and provide initial concepts for discussion. At a follow-up meeting our team took the community's feedback and created an engaging virtual reality (VR) experience of their main gathering space, showing how the design reflects Peerless Lake as well as their Seven Sacred Teachings. They loved the VR and it helped them feel more confident in providing feedback. The stakeholders could truly see and understand the design, as if they were looking at the final built school.



We loved how quickly the students took to the VR which created a sense of engagement and excitement from the community.

- 1 - Kindergarten classroom
- 2 - Core classroom
- 3 - Breakout space
- 4 - Breakout room
- 5 - Wrap Around
- 6 - Library
- 7 - Reception
- 8 - Meeting Room
- 9 - Principals Office
- 10 - Staff Room
- 11 - Stage
- 12 - Kitchen
- 13 - Gym Storage
- 14 - Gym





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EDUCATIONAL ENVIRONMENT DESIGN

Educational vision and goals

Peerless Trout First Nation's educational vision is to create a learning environment that allows their students to walk between two worlds. They value and respect their cultural heritage but also want to provide their youth with the skills required to thrive in today's world.

Elizabeth Quintal School would support this vision by achieving the following goals:

1. Increase attendance – current attendance rates were hovering around 30%
 2. Increase rates of graduation – on average for every 25 students in kindergarten, only one would reach grade 12.
 3. Implement Cree curriculum that is complimentary to the western curriculum.
- Emphasize Language (both Cree and English) both oral and written

- Providing a provincially approved education that would lead students to post-secondary education.
- Pass down traditional learning from the land as well as the cultural significance and traditions of gathering plants, fishing, and hunting

Supporting Cree Curriculum

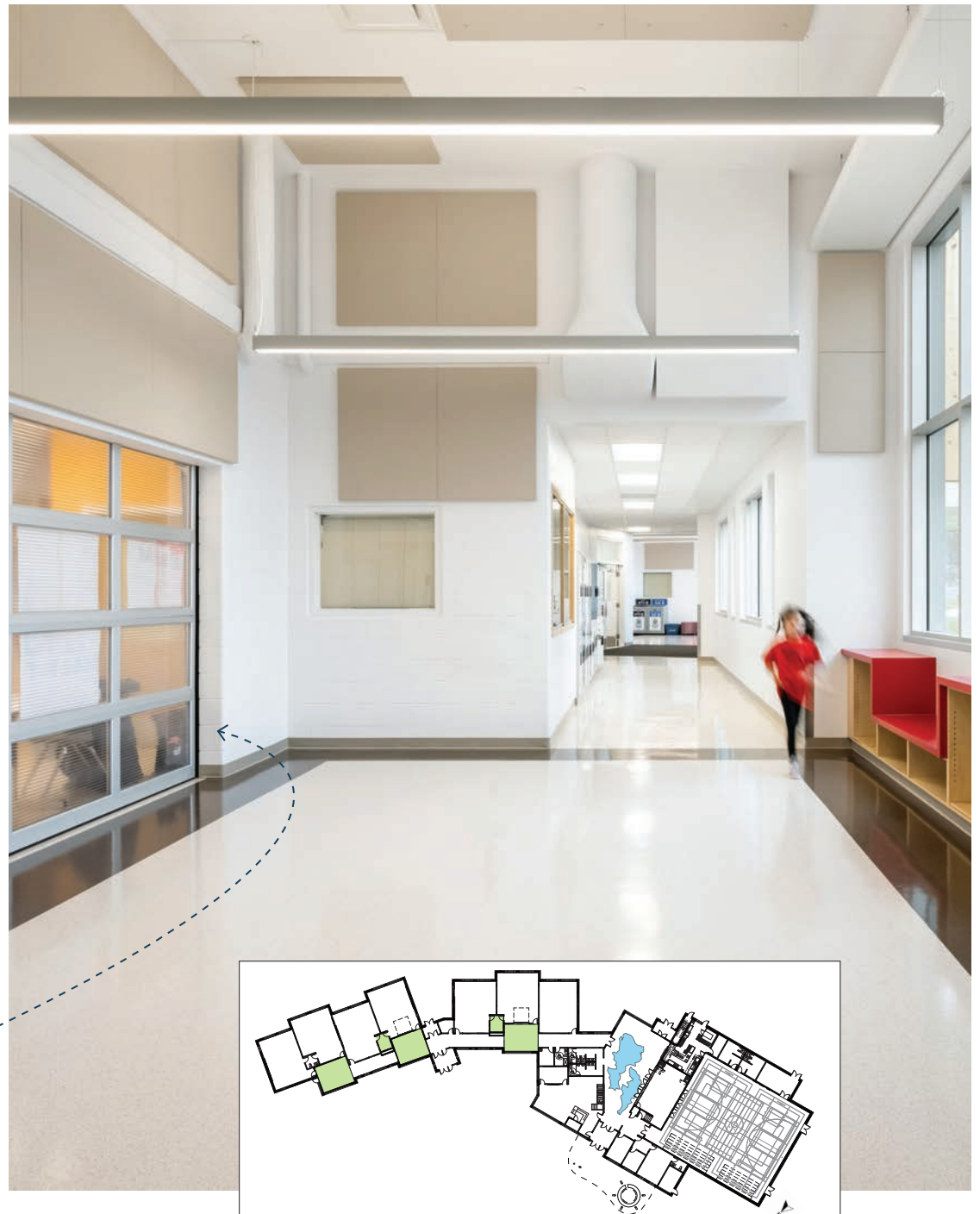
With attendance rates being so low at the previous community school, our team needed to make a special place that the students would love coming to. To understand how we could make the school as welcoming as possible, we met with an Elder to learn more about his experiences in the residential school system. What was striking to us was his retelling of his memories of dark, narrow, dual-loaded corridors that stretched across the schools. Having natural light taken away in school was especially troubling to our team and we sought to take an entirely different approach to ensure the new school would exhibit the exact opposite qualities that this old school embodied.

We designed Peerless Lake with a single corridor that is neither straight, nor narrow. Subsequently, when government officials toured the schools, they could not believe how much light and volume there was in the corridor (while meeting the area requirements) and they asked "why don't we do this in all of the schools?"

We often take for granted our abundant access to local teachers in our communities. In Peerless Lake, there are very few accredited teachers that live in the community. As such, the building must account for teachers that come in from out of town and unfortunately do not stay long to teach in the community, with an average stay of less than three months.

As a result of this flux of teachers, our team needed to position complementary spaces near each other to allow a single staff member to supervise and manage multiple spaces. In the existing school, the library was often closed as it was an isolated room that required a dedicated staff member. To address this, we placed the administration welcome desk in the library. This allows for one staff member to oversee the library and the front desk simultaneously, which the community loved.

Garage doors open up into a single-loaded corridor, allowing for large areas of play and activity.





A 2nd floor mezzanine in the library overlooks the atrium. In this loft, students can quietly read and overlook the stage and gathering space. This is the first building in Peerless Lake to have two storeys.

Supporting Learning/Teaching Styles

Students in Peerless Lake are used to growing up in the outdoors. They spend most of their days running through the forests and along the shoreline. How do you think these kids react to sitting in a small box of a classroom? The answer is, not well. Students here learn through movement, which is why we equipped each classroom with garage doors that open up into a single-loaded corridor, allowing for large areas of play and activity. Of course, when it is time to sit and learn, the garage doors (even closed) bring an abundance of natural light, creating a space that is open and welcoming.

This school also serves as the only indoor area for play and recreation in the harsh winters, a perfect place to warm up and play games in corridors and the gymnasium.

Adaptability and Flexibility

Flexibility was key as the building needed to be able to adapt to a variety of teaching styles and changing pedagogy. The school is designed to accommodate both 21st Century Learning or more traditional teachings. The program included a stage, library, administration spaces, gymnasium, and a commercial kitchen. The school's design deeply reflects the wishes of the community, staff, students, parents, and general community members. For example, a teepee above the entrance to the school was strongly desired to acknowledge the history of the Peerless Trout First Nation. The teepee has five poles symbolizing the five Nations that make up Kee Tas Kee Tribal Council.

The location of administration and learning commons at the school entry reduces the number of staff needed for operations. As you walk past the entry, the building opens into a large gathering space to be used for education and community events where imagery of the Seven Sacred Animals are placed in a manner compatible with the PTFN Cree teachings.







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PHYSICAL ENVIRONMENT DESIGN

Physical Attributes

The community of Peerless Lake is in the boreal natural region in remote Northern Alberta. The lake serves as an abundant source of food and means of transportation for the community. Prominent fauna include the woodland caribou, white-tailed deer, mule deer, moose, Canada lynx, cougar, and black bear. The design team had to make sure that all outdoor areas including the garbage bins were bear proof, having often seen bears on site. The region is subject to a humid continental climate with warm summers and cold winters. Extreme shifts in temperature are not uncommon and can cause severe droughts as well as snowstorms. In recent years, wildfires have become a growing concern driven largely by climate change.

Homes are built along the shore of Peerless Lake which creates a relatively spread out population. The community lives among the dense boreal forest and there is no significant division between the community boundaries and the surrounding nature.

Fitting in the Larger Context

Elizabeth Quintal School is located along the secondary highway that goes through the community and acts as the central street. The building includes a variety of community spaces. With limited indoor spaces for informal and formal gatherings, the new school was designed to accommodate a variety of community spaces for students, parents, and all other residents. The gymnasium is used as a large gathering space and is equipped with a dual sided stage for performing round dances, drumming, plays, and Christmas concerts. Smaller gathering spaces along the corridor include millwork that can be sat on. The commercial kitchen is for use on weekends and after hours. Food is often central in cultural ceremonies and the kitchen can be used to prepare caught fish or game.

Outside the school, a community garden was included for residents to grow fruits and vegetables. Adjacent to the garden is a learning circle that is used by students as well as for outdoor events and ceremonies. A shared parking lot was designed to accommodate both staff for the school as well as the nearby Administrative building.



Peerless Trout First Nation is located 477km north of Edmonton, the closest large city. The Nation is only accessible by dirt road.



Inspiring and Motivating

The teepee has five poles symbolizing the five Nations that make up Kee Tas Kee Tribal Council. The location of administration and learning commons at the school entry reduces the number of staff needed for operations. As you walk past the entry, the building opens into a large gathering space to be used for education and community events where the Seven Sacred Animals are placed in a manner compatible with the PTFN Cree teachings.

1. Attendance has increased to 90% since the new school opened (from 30%)
2. The amount of windows allow for connection to the outside, which is important for students to not feel boxed in.
3. The colours chosen for the school represent the community, and are typically seen in the medicine wheel.
4. The school hasn't lived up to its full potential due to COVID-19, however, the community has started using it as a community space and they activity list the school on their Facebook page for meetings.





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RESULTS OF THE PROCESS AND PROJECT

Achieving Goals and Objectives

Prior to the schools opening, the community saw only a 30% rate of students attending classes. After the Peerless Lake School opened in September 2020, the school saw a 90% attendance rate at the end of the school year, despite the impact of COVID-19. There are many factors contributing to this drastic change in attendance, and our team hopes the school design had a part in it.

True to their desire to walk in two worlds, the school displays both traditional Peerless Trout First Nation items including beading, drums, and birch canoes as well as student art, basketball trophies, and other sporting awards.

What is beautiful to see is how the Elders use the outside spaces to come to the school and teach the Cree curriculum to both the students and teachers, carrying their culture forward another generation.

To summarize, the community feels the Elizabeth Quintal School represents their culture and values. It belongs to and was conceived by them as a way to preserve their values while propelling their youth forward.

Achieving School District Goals

Kee Tas Kee Now Tribal Council Education Authority (KTCEA) was established to ensure that Loon River First Nation, Woodland Cree First Nation, Lubicon Lake Band, Whitefish Lake First Nation #459 and Peerless Trout First Nation students receive an education within their communities that is responsive to their unique needs.

The Elizabeth Quintal School strengthened nēhiyawêwin (Cree) culture in the schools by incorporating key symbols in the architecture of the school.

Attendance numbers are up significantly and student well-being is achieved through a variety of spaces to learn and play in. This school also brings back the library which students can now freely access within and outside school hours.

Achieving Community Goals

The well-being of the community was addressed through the incorporation of an abundance of shared spaces for both students and surrounding residents. The library is a core utility that previously had been difficult to access in the previous school. Both indoor and outdoor community spaces, both large and small, were designed to accommodate events such as funerals, wakes, weddings, meetings, and other gatherings.

Elizabeth Quintal School is designed to inspire hope and a lasting future for the residents of the community. They have been faced with numerous challenges and hardships as a community, now this school is a stepping stone to a future that will help their culture and people endure.

Unintended Results and Achievements

We were pleasantly surprised at the level of excitement provided by students throughout the planning and design process. We were offered several unexpected ideas but one really stuck out to us. One little girl told us that she had never gone up or down stairs before, and that it would be amazing to have a second storey at the school so she could experience being up high. In response, our team designed a 2nd floor mezzanine in the library that also overlooks the atrium. In this loft, students can quietly read and overlook the stage and gathering space. This is the first building in Peerless Lake to have two storeys.

We also offered the students an opportunity to look at the lakes from above. The main gathering space in the atrium incorporates an outline of Peerless Lake and Trout Lake as vinyl flooring. The community loves to point out areas of interest and show each other where they live along the shoreline. In a sense, these connections made between the community is strengthening their bonds and bringing new life and excitement to their part of the world.



Display cabinets throughout the school provide an opportunity to celebrate milestone events, and traditional Cree items.



SUSTAINABILITY AND WELLNESS

Energy Efficient Solutions

Due to the harsh winter climate of northern Alberta, the Peerless Trout First Nation were unclear to how climate change would impact their community. To help shed light on the importance of reducing greenhouse gas emissions, our sustainability specialists customized their approach to LEED by connecting it with their local challenges. In Alberta, while we are not directly impacted by rising sea levels, our environment is susceptible to devastating wildfires sparked by lightning or humans. We explained that, as our region becomes hotter and drier due to climate change, the likelihood and intensity of wildfires increases significantly. Surrounding communities such as Slave Lake and Fort McMurray were already impacted by wildfires – this realization hit home for our client and the conversation quickly changed to how they could make a positive impact through the new school. This project is LEED Gold Certified and is equipped with PV panels along the roof of the gymnasium. To reduce water usage, the school incorporated minimal landscaping to the site and instead focused on the creation of outdoor gathering spaces, such as the learning circle and community garden.

Durable and Green Materials

Durability and material availability to site was an important consideration for this project given the remote location. Materials not only had to be sustainable and meet energy requirements, we also had to design systems that could be easily maintained. Drawing upon skilled tradespersons and/or equipment specialists to site from the closest major centre, Grande Prairie, was considered so that the school could maintain operation with maintenance products and any operational issues in a timely manner.

This project also achieved the recycled content credit in LEED achieving over 10% in recycled content in the materials used.

Healthy Environmental Aspects

The single-loaded corridor of the school draws in an abundance of natural light as well as wide and open corridors for student freedom and activity. The school will serve as an indoor gathering space for the community as well as a place for children to stay warm and play during the winter season. As the school only receives deliveries of materials (such as printer paper) twice a year, the staff carefully utilize each resource to ensure lasts for the school year. We designed for ample storage of these supplies throughout the school as to minimize the need for additional travel for the community.

EDUCATIONAL SPECIFICATIONS

The Elizabeth Quintal School was required to meet the educational design standards by Alberta Education (Space areas, curriculum) and the technical design standards by Alberta Infrastructure (Building envelope, acoustics, mechanical, electrical systems) and meet LEED Silver. During design, the Elizabeth Quintal School was using the Alberta Education curriculum as well as the learning wheel. One of the first meetings we had with Peerless Trout First Nation was to determine the type of spaces required for the school. Using provincial guidelines, the number of core classrooms, and the size of the gymnasium, commercial kitchen and administration were determined.



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