



Lord Nelson Elementary School

1355 Garden Drive
Vancouver, BC
Canada

New Construction
2019

McFarland Marceau
Architects

Submission for the 2021
James D. MacConnell Award

Executive Summary



Have open space to run and
do like exciting things in the open space

Student sketch from workshop



Front entrance of the school with covered play area and community terrace - a place to socialize

Lord Nelson Elementary is a three-storey school located in Vancouver, Canada. The program combines an elementary school for 460 students with a rooftop child-care facility with space for 69 children. After six years of consultation, design and construction, occupancy began in September 2019, while the extensive landscape design is still under construction.

Informally dubbed the “Nelson Model” at the Vancouver School Board, the school provides extensive facilities for 21st century learning and outdoor education. The project also achieves LEED Gold equivalency, though it has not pursued certification.

The project embraces the 21st century learning approach, providing variable and flexible spaces that celebrate the numerous modalities of learning. Clusters of four classrooms open onto shared classroom commons, which in turn provide access to smaller breakout rooms, teacher offices, art sinks and storage. Each classroom commons area on the ground floor allows direct access to the school grounds, while classrooms on the upper floor can access the grounds via stairs and a slide. A large after-school care room, gym and the track field are available to neighbourhood groups after hours. These well-managed spaces are

designed to act as a “Neighbourhood Learning Centre”, a new facility type that supports the Vancouver School Board’s goal of providing gathering spaces for communities in their local schools. Additionally, school grounds are open at all hours, allowing children to play and be active after school and on the weekends.

Embracing emerging pedagogy for elementary education, the design responds with new spatial typologies and a flow of interior and exterior shared spaces. Together, these responses characterize a flexible, varied and inviting learning environment, suited to its site and context.



The central commons offers seating and gathering opportunities just outside the doors to the gymnasium

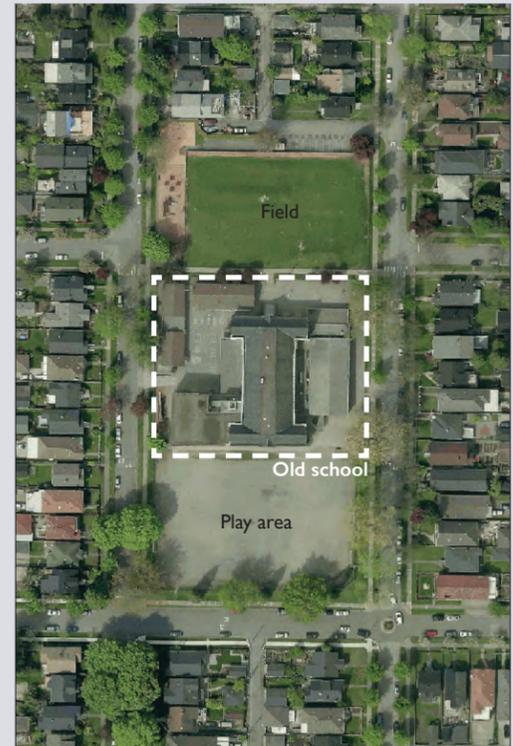
Area School : 42,650 ft²
 Area Childcare : 10,600 ft²
 Budget : 15.25M USD
 Building completion : 2019

Scope of Work and Budget

The project consists of the replacement of a 1911 school building and its additions, assessed as high risk of collapse during a seismic event. Given the extensive and tortuous structural upgrades that would have been required to bring the old building to a safe state, the replacement option was judged as the most cost-effective.

The replacement project was defined as a 42,650 ft² school building with associated site servicing and playground development. To this scope was added a City of Vancouver childcare facility, to be located on roof of the new school, adding 10,600 ft² to the project, for a total of 53,250 ft².

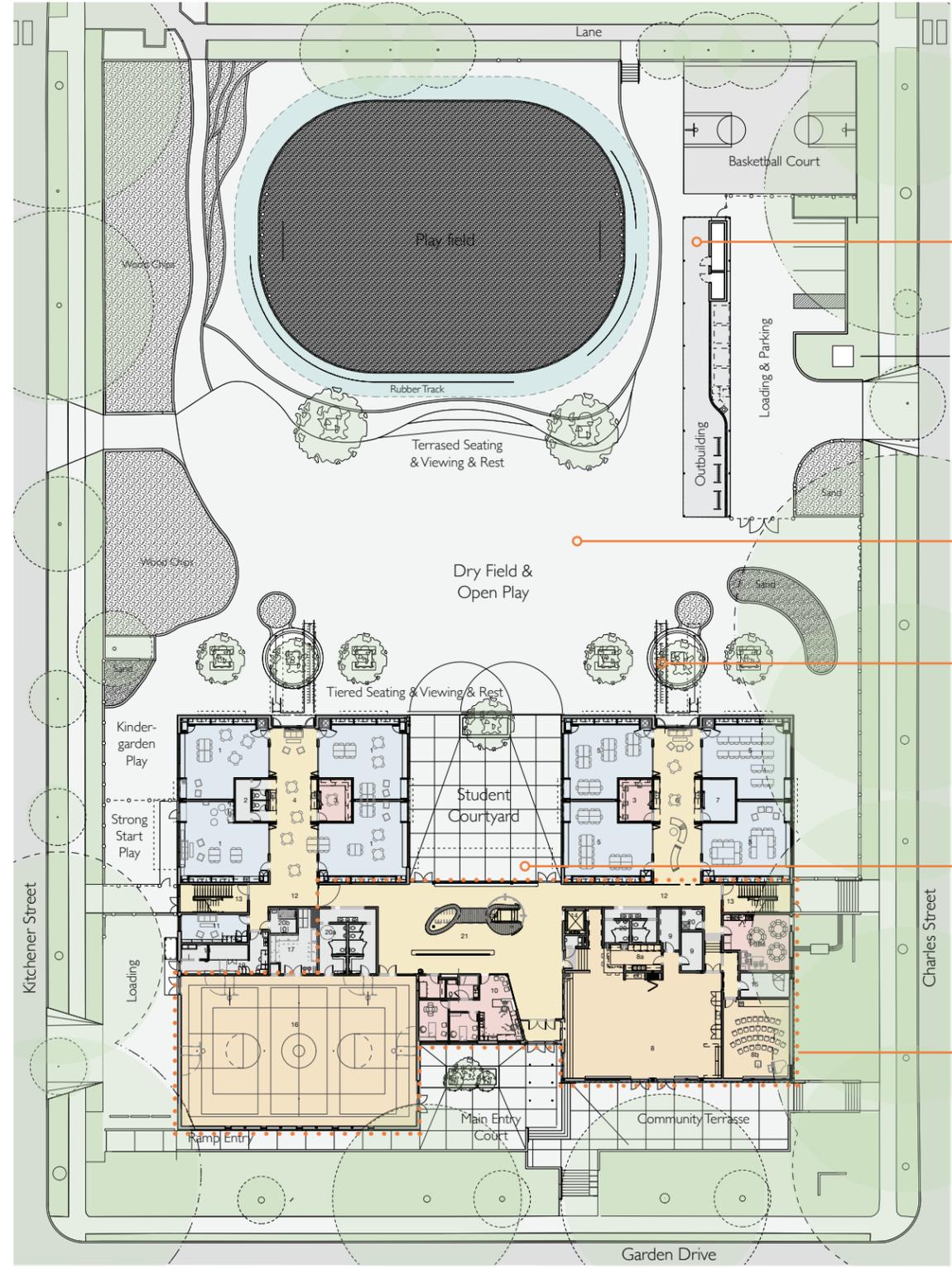
Design began in June 2014, with the mandate of achieving meaningful consultation with the VSB, the school community, the surrounding community and the City of Vancouver.



Project site before construction: The existing facility consisted of an agglomeration of buildings judged seismically deficient



Aerial view of the new school in construction beside the old school



Ground Floor with the site

Outbuilding

Storage, Waste and Recycling are hidden and secure in an exterior structure composed of century-old salvaged wood slats.

Open Play

School grounds are open and accessible at all hours.

Slides!

Slides incorporated into the stairs create a fun transition between the second storey and the playground.

Courtyard

A central courtyard provides views to the central classroom and a socialisation space.

Community Acces

Gymnasium, Multipurpose room and Field rental on the ground floor are accessible to the community after school hours.

- | | | |
|-----------------------|-------------------------|-------------------------|
| 1 K pod classrooms | 9 multi-purpose storage | 17 gym storage |
| 2 K pod WCs / storage | 10 administration | 18 mechanical |
| 3 professional areas | 10a staff room | 19 custodial / storage |
| 4 K pod commons | 11 resource (spec ed) | 20 washrooms |
| 5 pod classrooms | 12 general circulation | 20a gym washrm / change |
| 6 classroom commons | 13 stairs | 20b personal care room |
| 7 small group room | 13a stairs - commons | 21 school commons |
| 8 multi-purpose room | 14 childcare elevator | |
| 8a kitchen | 15 storage general | |
| 8b music room | 16 gymnasium | |

Legend

- staff support / administration
- gathering spaces
- circulation / commons
- vegetation
- classrooms
- services / storage

Legend

- staff support / administration
- gathering spaces
- circulation / commons
- vegetation
- classrooms
- services / storage

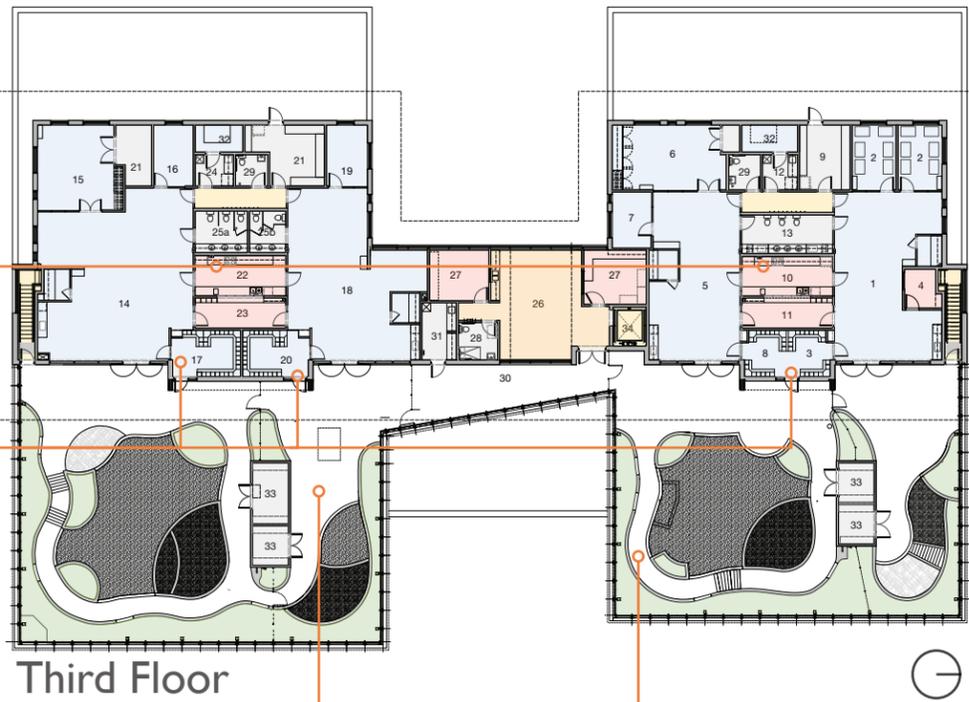
- 1 infant activity room
- 2 infant gross motor/nap
- 3 infant cubby
- 4 consultation room
- 5 toddler activity room
- 6 toddler gross motor/nap
- 7 toddler quiet room
- 8 toddler cubby
- 9 shared storage
- 10 shared kitchen
- 11 shared staff + parent
- 12 shared laundry + mop sink
- 13 shared wc + diapering
- 14 3-5 daycare activity
- 15 gross motor/nap
- 16 3-5 daycare quiet room
- 17 3-5 daycare cubby
- 18 pre-school activity
- 19 pre-school quiet room
- 20 pre-school cubby
- 21 shared storage
- 22 shared kitchen
- 23 shared staff + parent
- 24 shared laundry + mop sink
- 25a 3-5 daycare child WC
- 25b pre-school child WC
- 26 commons
- 27 flex office / staff office
- 28 parent/accessible WC
- 29 staff/accessible WC
- 30 covered ext. stroller storage
- 31 central janitor storage
- 32 mechanical
- 33 exterior play yard storage
- 34 elevator
- 35 2 exits stairs
- 36 managers office

Support Spaces

The support spaces both connect and separate the childcare rooms on each sides.

Cubbies

The cubbies act as threshold between the rooftop play area and childcare rooms.



Third Floor

Rooftop play area

The landscape at the third floor childcare is a softscape with edible native plants.



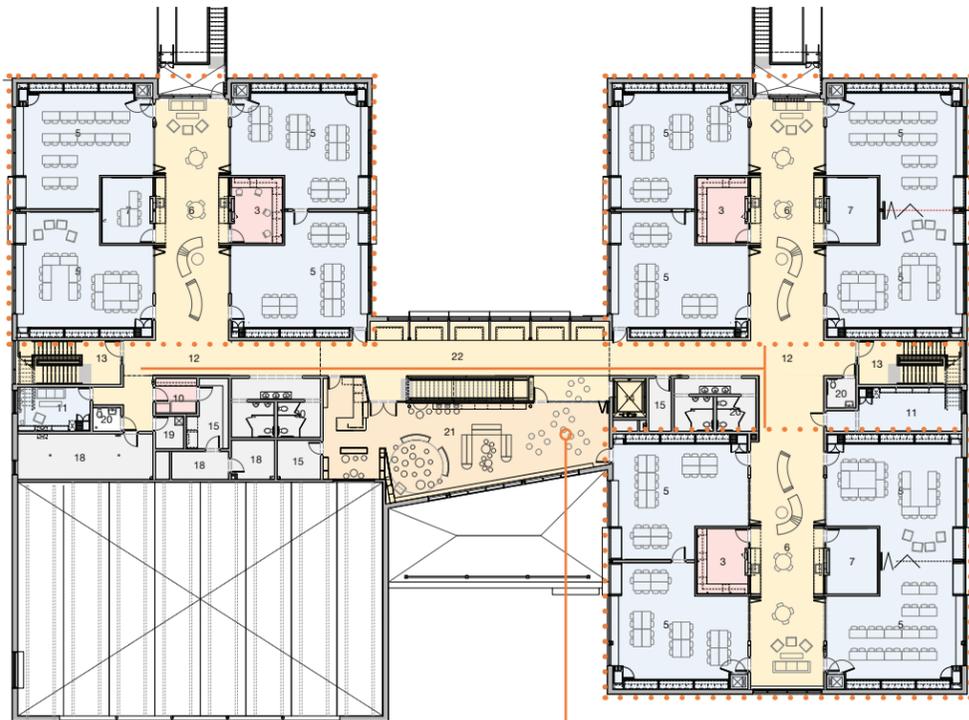
Third floor daycare cubbies



The rooftop childcare facility provides a large and protected exterior play area

Classrooms pods

The 20 classrooms are regrouped in 5 identical pods of 4 classrooms. Classrooms are articulated to create alcoves, porches and break-out spaces that support a variety of small groups. They are connected to the circulation by moveable partitions.



Second Floor

Library

The configuration of the space allows the library to function in several modes and borrow additional spaces from circulation and commons.

- 1 K pod classrooms
- 2 K pod WCs / storage
- 3 professional areas
- 4 K pod commons
- 5 pod classrooms
- 6 classroom commons
- 7 small group room
- 8 multi-purpose room
- 8a kitchen
- 9 multi-purpose storage
- 10 administration
- 11 resource (spec ed)
- 12 general circulation
- 13 stairs (shared)
- 14 childcare elevator
- 15 storage general
- 16 gymnasium
- 17 gym storage
- 18 mechanical / electrical
- 19 custodial
- 20 washrooms
- 21 learning commons (e)
- 22 learning commons (w)



The second floor library is composed of a secure area (to the left) and open commons with banquettes available to all students.

School & Community Engagement

Stakeholders

- 1 Ministry of Education:** Provided a project budget (162 USD/sqft) and a space entitlement (42 650 sqft).
- 2 Vancouver School Board:** Provided design guidelines (see Educational Specifications and Visioning Documents) and a project manager.
- 3 Parent Advisory Committee:** Participated throughout the design process, providing valuable feedback and voicing their requests directly to the Ministry of Education.
- 4 Strong Start:** Several design considerations were included to accommodate Strong Start needs, including a separate entrance and play area, with classrooms on the ground floor.
- 5 Before and After School Care:** Included in the consultation process, particularly in discussions regarding storage and accessibility.
- 6 Gymnasium, Multipurpose room and Field rental for community sports and activities:** The architect designed a ground floor configuration that locates the gymnasium and after-school care rooms near the main entrance and WCs, allowing the area to be closed off with gates after hours.
- 7 City of Vancouver:** The project had to comply with extensive city by-laws and permitting processes, including zoning, height restrictions, set backs, childcare requirements and energy performance.

Challenges

- 1 Site:** To enable the continued operation of the existing school during construction, the available site area for the new facility was restricted to the eastern third of the site. This constraint was turned into an opportunity to design a compact and efficient facility.
- 2 Site Access:** Since the new building occupies the majority of the available site area, access to the site for construction operations was quite challenging, requiring special measures to maintain student safety and to avoid impact to the several mature trees surrounding the site.
- 3 Area Standards:** Elementary schools in British Columbia are subjected to strict area standards which do not reflect 21st Century pedagogies and the need for a variety of learning spaces. In order to provide these spaces, synergies between school and community spaces needed to be found.
- 4 Budget:** Budgets for schools are modest and require restraint in addition to careful and constant vigilance with solutions. The Nelson School proved that the principles of repetition and stacking, associated to a structural system that acts as finish (concrete blocks), were effective strategies to meet a challenging budget.
- 5 Rooftop Childcare:** In a first for the City and the VSB, the project incorporates a rooftop childcare facility for 69 children. The challenge of incorporating such facility was felt in many aspects of the project, including access and circulation (the childcare is accessed from the school), structural design for a living roof, envelope complexities to allow for planted roof top, and contract management to properly assign costs to the two Owners.

Available Assets

- 1 Site:** The site became both a challenge and an asset: by limiting building construction on a small portion of the site, the area available for play is large and uninterrupted offering substantial playgrounds for both the school and community.
- 2 Large mature trees:** Large and beautiful mature trees surround the site. These trees are valued by community members who supported the extensive measures used to keep them. The trees now provide essential shading to the building, reducing the need for sun shading devices.
- 3 Existing buildings:** While structurally deficient, the existing buildings became nonetheless an asset by providing materials for the new project, offering a historical reference to the 1911 building. The project was able to incorporate granite stairs and century-old wood joists from the old school, as well as large boulders uncovered during excavation.



Aerial view of the school and context

Community

The school is located in East Vancouver, a thriving, multicultural urban neighbourhood. 72% of students live in the catchment area, and 65% walk or bike to school. The catchment is nearly 100 city blocks. The school grounds also act as an important neighbourhood park in a densely populated neighbourhood, with a soccer field, climbing structures and community gardens. It is anticipated that the catchment population will increase gradually over the next 20-30 years.



Principal facade of the school in winter

Value of process and project to community



Consultation with community stakeholders



Drawing workshop with students

The design was initiated after consultation with the Lord Nelson School community, which included workshops with the school staff, regular meetings with the project steering committee, and open houses to the whole community.



Gaming session with parents from the school



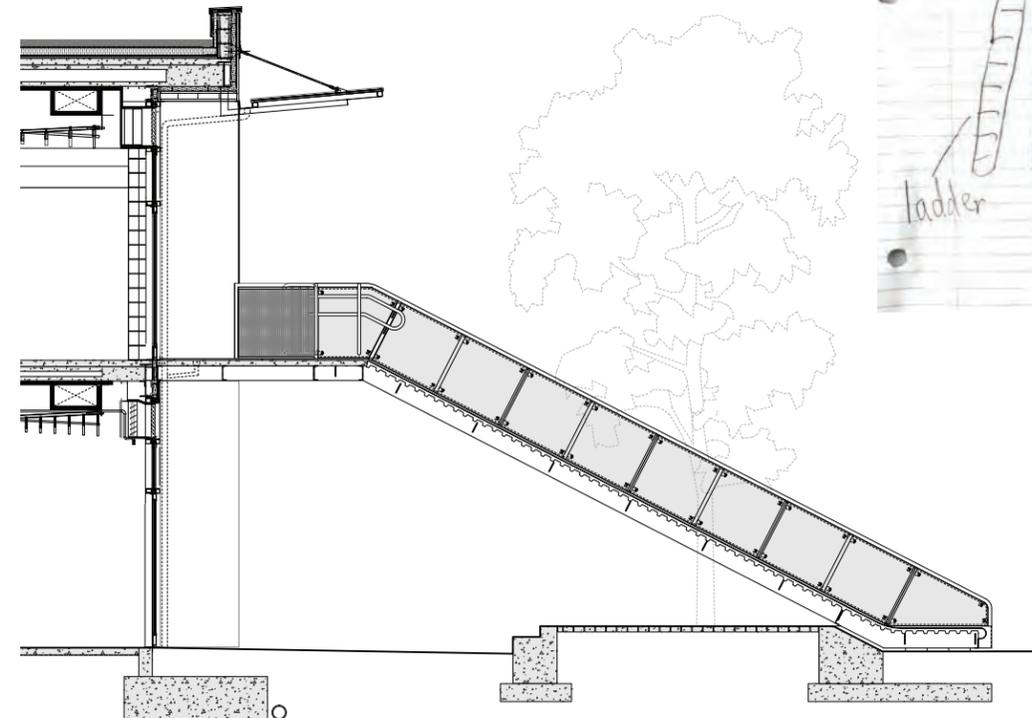
During the design development phase, the architect invited students of all ages to draw what they would like to see in their new school. Many of these ideas made their way into the project, see the "Physical Environment" section.

The students were involved through a dynamic drawing workshop artfully directed by the Vancouver School Board District Principal, Chris Atkinson.

Dozens of parents and teachers participated in 'gaming' activities, triggering participants to express their thoughts about the building. The results of these activities were summarized in a 'Talking Wall' and presented to the School Advisory Group in order to discuss results and establish a greater consensus.



Student workshop drawing



A slide is integrated into the stairs, offering a direct access from the 2nd floor to the play area

Talking Wall

The 'Talking Wall' methodology is an important tool in the architect's design process: it is used to engage stakeholders in the intricacies of a project. The 'Talking Wall' was developed to graphically convey the myriad of parameters that influence a project, from municipal requirements to wind speed. Our talking walls provide a good overview of the project's vision, objectives and facts, and in doing so, they facilitate understanding of the forces that will shape a project which often leads to greater contribution on the part of Stakeholders.

The Talking Wall is displayed and modified at every meeting; this allows community members to consider every aspect of the project, and to review the rationales behind each decision. Still today, the architect continues to discuss the options for the outdoor play areas with the School Advisory Group, finding ways to incorporate salvaged materials.



Teachers workshop session around the talking wall

GOALS

OBJECTIVES
The "objective" objectives...

- Construct new school facilities to replace the current Nelson School.
- Remain within the project budget prescribed by the Ministry of Education i.e. \$2,200/m² (\$204/ft²).
- Remain within the space entitlement prescribed by the Ministry of Education i.e. 3,962 m²
- Design the project to meet a level of sustainability equivalent to LEED Gold.
- Foster an implementation strategy that minimizes disruption to the active existing school and the neighbourhood.
- Meet the intent of:
 - the VSB Mandate
 - the VSB School Design Principles
 - the Planning Principles developed at the PDR stage

VSB MANDATE
SCHOOL DESIGNS TO BE SUPPORTIVE OF THE 21ST CENTURY LEARNING PRINCIPLES

21st Century Learning Principles include:

- Student centred learning that focuses on the needs, strengths and interests of each learner, understanding and addressing the diversity of learners and learning styles.
- Collaboration and communication among teachers & learners.
- Development of basic knowledge embedded in such key competencies as critical thinking, problem solving, social emotional knowledge, creativity, communication & technological competency.
- Teaching and learning using inquiry and project based learning, teamwork, collaboration and experience.

PLANNING PRINCIPLES
Principles developed by the PDR project team

- Create an excellent teaching and learning environment
- Create a seismically safe and secure school for all users
- Strengthen and welcome community connections
- Maximize the value and quality of outdoor spaces
- Ensure good connectivity and circulation within the school and between the school and outdoor spaces
- Maximize sustainability and a healthy environment
- Honour the heritage character of Lord Nelson School

WORKSHOP RESULTS

Buildable Area
The buildable area is limited by:

- zoning setbacks
- an existing school that must remain active
- retention of the existing grass playing field
- the limiting distance (for fire spread) between existing and new buildings during construction

GOALS

FACTS

■ Vancouver, British Columbia

LOCATION

■ The school is located in Grandview-Woodland
■ The catchment also includes Sunrise-Hastings

COMMUNITY

■ The school is located in Grandview-Woodland
■ The catchment also includes Sunrise-Hastings

ZONE & SITE USE

- The site is divided + surrounded by two zoning types: RS-7 (school and landscape) and RT-4 (grass playfield & adjacent staff parking)
- Conditional Uses (CU required) include: cultural & recreational, school, child day care, parking, plus accessory buildings and accessory uses
- A small C-1 commercial zone is near the site on Nanaimo Street

TEMPERATURE

PRECIPITATION

SUNSHINE

CLOUD COVER

REL. HUMIDITY

VEGETATION / HABITAT

- Mature Maple, Birch, Oak and Plum trees line the perimeter streets of the site. There are plum trees along the east side of the grass field
- There are minimal coniferous trees
- Cedar hedge screens the private residence at the South West corner of the property
- Vegetable gardens exist at the South West side of grass play field. Perennial gardens are located at South central access points of the site.

EXISTING FACILITIES

- 1910: Original Building (classrooms, library, office, kitchen w/ basement)
- 1950s: Classrooms (1st floor)
- 1951: Addition (open stack and changing, 1st floor)
- 1963: Addition (openstack, lockers, covered play area, kitchen)
- 1994: Upgrade (concrete accessibility upgrade)

PEDESTRIAN ACCESS

- Pedestrian access is present on all sides of the site, including a pathway between the grass field and existing school and between the grass field and lane
- 59% of Students walk to school
- 8% Staff walk to school

TRAFFIC ROUTING

CONCRETE WALLS

CONCEPT

PLANNING DIRECTIONS DERIVING FROM ANALYSIS OF THE SITE

Allow construction to occur while existing school remains operational by establishing a **wide fire access** lane that will separate the existing school from the new construction.

Optimize the buildable area to ensure that when building can be built in one-phase only, which will minimize disruption and optimize cost efficiency.

PLANNING DIRECTIONS DERIVING FROM ANALYSIS OF THE SITE

Maximize usable building area and carve penetrations to bring natural light to all classrooms and commons.

PLANNING DIRECTIONS DERIVING FROM ANALYSIS OF THE SITE

Establish clear entry and clear distinction between student, servicing and community areas.

CONCEPT A - DESCRIPTION

Ensure that all spaces comply with the LEED criteria for daylight and views.

Selected slides from the talking wall



View from the courtyard into classrooms, showing how the rooms adapt to varying arrangements

Educational Environment

Vision and Goals of the School

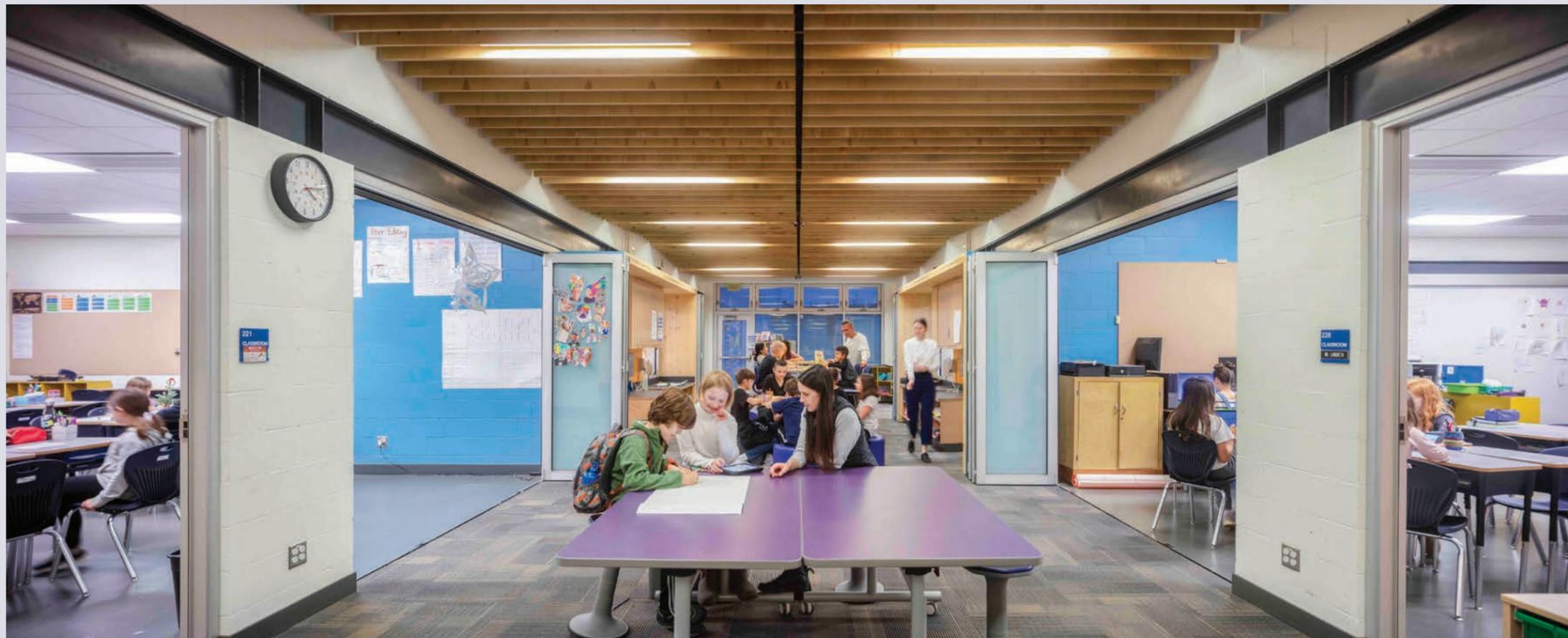
The project embraces the 21st century learning approach through the careful design of common spaces. Two centuries of institutionalized schooling, based upon the singular pedagogy of classroom lecture, is giving way to greater variety in how learning occurs. This translates into an appreciation for numerous modalities of learning – the understanding that different children learn in different ways. In practical terms, this means the spaces in the school must be varied and flexible to support small groups, team teaching, project-based learning, independent study, social gathering, creativity, and outdoor activities - in addition to standard lectures.



3-5 daycare room on the 3rd floor, with direct access to the secure rooftop child-care playground.

The Vancouver School Board has created strong School Design Goals:

- 1 **Maximum flexibility** for teaching and learning both today and in the future.
- 2 **Healthy Environment-design** allows for natural lighting, temperature control, easy access to outdoors, ventilation & acoustics .
- 3 **School connections** which promote a feeling of belonging & sense of community.
- 4 **Connection to the wider community.**
- 5 **Support for Educators-** design promotes collaboration and provides spaces, tools & resources to enable 21st Century teaching practices.

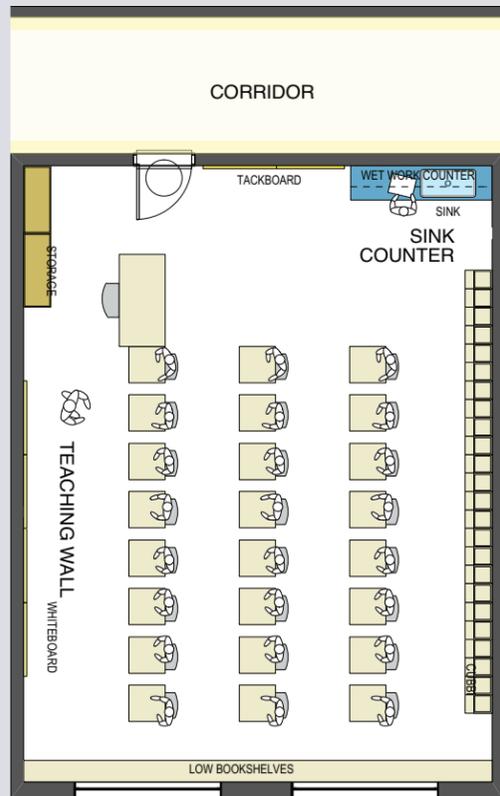


Classroom commons shared by four classrooms

The consultation process generated the following Planning Principles:

- 1 **Create an excellent teaching and learning environment**
- 2 **Create a seismically safe and secure school for all users**
- 3 **Strengthen and welcome community connections**
- 4 **Maximize the value and quality of outdoor spaces**
- 5 **Ensure good connectivity and circulation within the school and between the school and outdoor spaces**
- 6 **Maximize sustainability and a healthy environment**
- 7 **Honour the heritage character of Lord Nelson School**

The design responds to the new learning methodology with new spatial typologies for classrooms and corridors. Classrooms are articulated to create alcoves, porches and break-out spaces that support a variety of small groups. Classrooms are connected to the circulation by moveable partitions, and there is transparency throughout. The corridor is similarly elaborated into a classroom commons, which combines independent work and social space.



Traditional classroom schematic



Photos archives

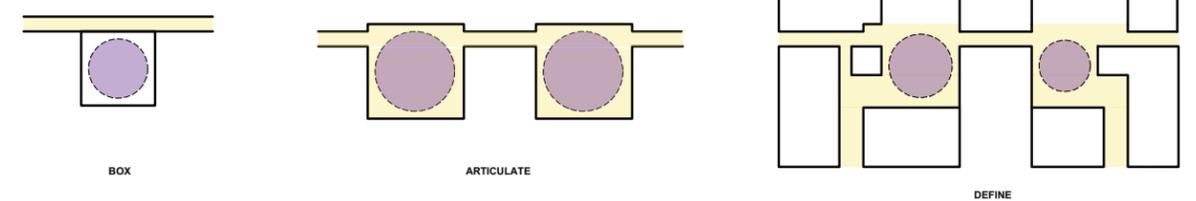
Classroom



Corridor

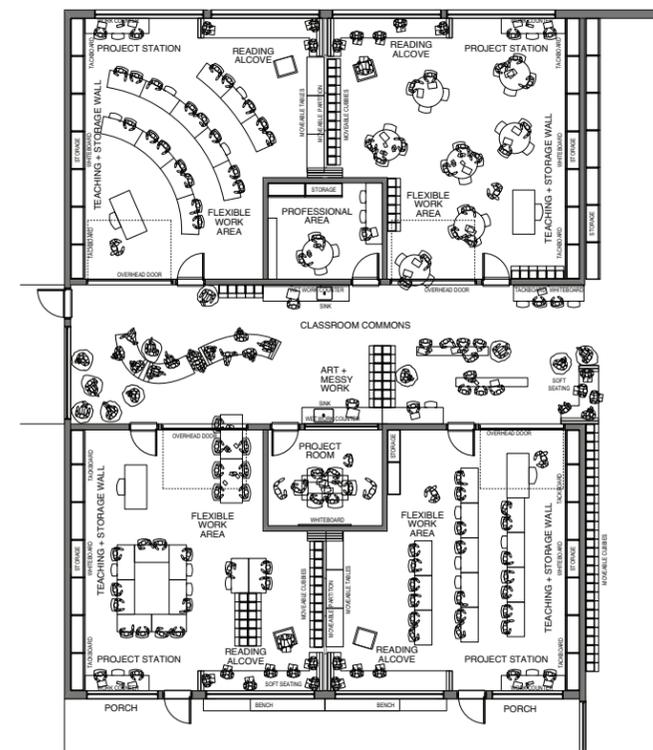


Common spaces

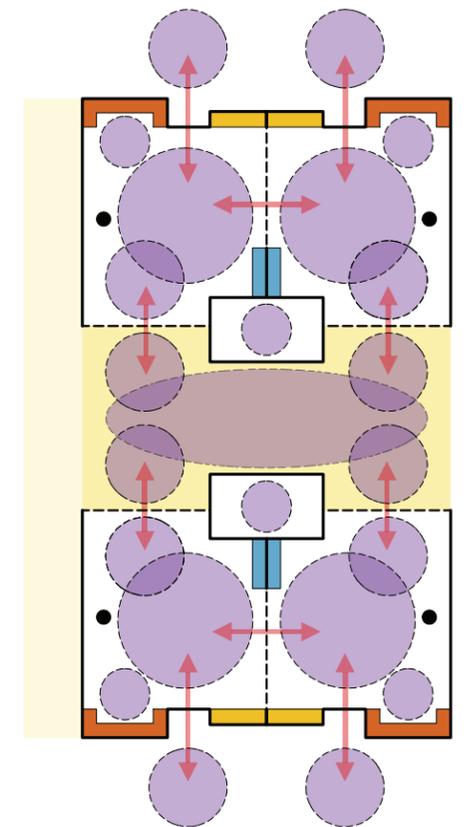


Schematic design - functional concepts

New Spaces for Learning



Detailed plan of the classroom pod



Schematic plan of the classroom pod

Physical Environment

How the facility fits in the larger context

Pedestrian access is prioritized on all sides of the site and is exemplified by the inclusion of pathways linking the grass field and existing school, as well as the grass field and lane. Cycling is also strongly encouraged and secure bike storage has been provided.

Extensive consultations with the community showed that the school grounds have long provided an important neighbourhood park. In recognition of this important role, additional play facilities were added to allow more space for more children to interact with and enjoy the site. In Vancouver, school grounds are not locked after hours, allowing the school site to integrate the community seamlessly. For example, the public plaza fronting the building is rarely empty: it is used by the community after hours for casual gathering, reading and other outdoor activities, particularly essential during the recent pandemic.



North facade of the school

Physical attributes

Replacing an existing structure from 1910, the new school's "H" layout echoes Edwardian Vancouver school designs on a compact footprint. The decision to fit the new building right beside the old one meant that the architect had to develop a rectangular site. We thought the H-shape was dignified, nicely proportioned, and we designed the wings narrow enough to allow plenty of natural light into the building's core.

The school provides 20 classrooms, a childcare centre on the roof, and extensive recreation and multipurpose spaces that can be used by the community after hours. To meet a challenging budget, the design team prioritized a simplicity of form, with rigorous and creative repetition of spatial elements. The structure is concrete block and hollowcore concrete deck, chosen for their thermal properties and affordability. Inside, wood accents are used throughout to relate different spaces to each other and add a sense of warmth. CLT was used for the classroom reading nooks, main stairs, and library seating areas. The corridor ceilings are undulating plywood slats, which create a soft rhythm in the circulation spaces and are easily removable for maintenance purposes.

How the project inspires and motivates

From the outset of the project, the architects sought opportunities for kid-oriented spaces and features throughout the school building and grounds. Design workshops with administrators, teachers, parents and students resulted in new ideas about learning, playing and collaborating at school.

Many of these ideas made their way into the project: slides incorporated into the stairs create a fun transition between the second storey and the playground; reading nooks provide cozy spaces in every classroom; a perforated CLT panel above the main staircase represents the constellation Hercules, visible at the time of Lord Nelson's birth; seating at the base of the staircase provides a central gathering space for students and parents, its shape inspired by the ship of a deck; covered areas allow for outdoor play on Vancouver's many rainy days; circular holes in the CLT at the lobby allow kids to climb through the walls; and small vertical windows create kid-sized openings that peek into the gym.



Central staircase in the school lobby

Sustainability

Building orientation and classroom layouts were selected to minimize solar gain from the west afternoon sun. Each classroom has large operable windows to provide natural daylighting and ventilation. Though no mechanical cooling was included, the mechanical engineers designed an air intake system that can take air from the north side of the school in the summer, then switch to a southern air intake in the winter. Finally, the embodied mass of the concrete block structure has been very successful: staff report that the building is comfortable at all seasons. The green roof on the third-floor retains rainwater and providing habitat for local insects and birds. Other sustainable strategies at the school include the use of low-emitting materials, low-irrigation landscaping (utilizing local plant species), storm water infiltration, and greater than 90% recycling of construction waste materials.



View of playground, with ship's mast climber



Rooftop play area



Render of the landscape design, currently under construction

Landscape

The new landscape design began with the existing vegetation. Mature trees and shrubbery were conserved, continuing their decades-long legacy in their neighbourhood. These trees offered several opportunities: classrooms and childcare now look into the canopy, creating a 'treehouse-like' environment for creative minds. The trees also provide shade against solar gain at all levels, and shelter outdoor play.

The landscape was also designed for community investment and ownership, encouraging both everyday use and informal supervision. Significant outdoor hard surfaces were provided for community and school activities, as well as community garden planters, tiered seating for viewing and rest, a sculpted landscape for climbing and adventure play, and outdoor covered areas for quieter games and shelter. Large engagement boards on the façade encourage creative expression and facilitate outdoor classroom time.

The landscape at the third floor childcare is a soft scape reserved exclusively for their use. All plants are edible native species, providing valuable habitat for birds, bees and butterflies. A frit on the glass guards at the rooftop helps birds avoid collisions, a key component of the city's bird-friendly building strategy.

Results of the Process and Project

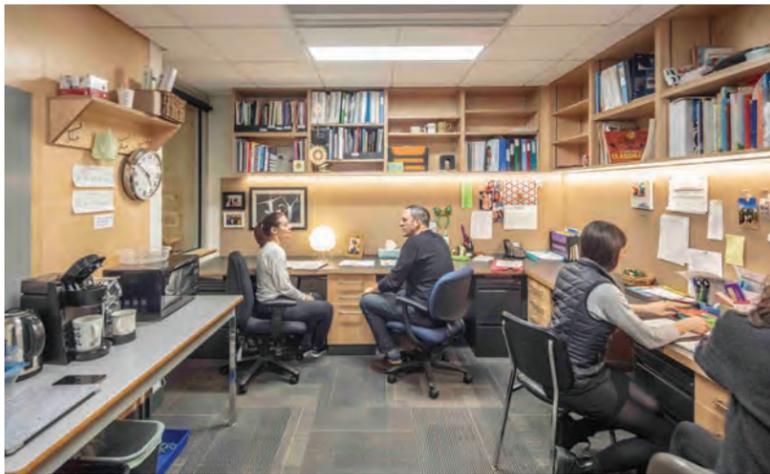
Achieving Educational goals

To date, feedback from the teachers, students, and administration has been overwhelmingly positive. Teachers have been using the classroom commons and group rooms extensively, with a natural flow occurring between classroom and shared spaces. The classroom reading nooks are also fantastic gathering spaces, comfortable for a small group of students to gather or for a teacher to sit while reading out loud. It has been exciting and validating to observe how many different approaches to classroom furniture layouts have been possible in the classroom pods, with furniture spilling out into the classroom commons.



Classroom commons

Unintended results and achievements



Teacher collaboration room

Teachers commented that the Teacher Collaboration Rooms, a space that they politely accepted without experience, were instrumental in triggering collaboration between teachers and also in providing additional teaching storage as well as a comfortable space for their work.

Also surprising to the teachers was the functionality of the classrooms commons and the ability to open each classroom into that space, through an operable wall. These facilities enable flexibility and collaboration, in addition to allowing teachers to adapt the spaces to their needs.

Achieving School District goals



Typical classroom, with reading nook in the back

The project has excelled at creating flexible, healthy learning spaces that support students and educators. There is extensive customization possible in each classroom: unit ventilators allow for local temperature control, windows are operable, and teachers can easily bring classroom projects outside. Finally, the project was on budget, proving that exceptional educational spaces can be created with the proper support and funding.

It's known as the "Nelson class" of school design in the Vancouver school district. The skill of the architectural firm and the limited budget resulted in a leaner project that introduces a new level of flexibility which you can't find in any other school. It is also remarkably equitable: every teacher gets equal classroom room. The building is key, allowing teachers to evolve in the space.

Steve Snyder, Vancouver School Board, Project Manager

Achieving Community goals

The local community was included at every step of the process. Community spaces were generously integrated in the building, allowing several groups to use school facilities without compromising the space reserved for students. Outside, garden plots, performances spaces, and outdoor play all occur regularly at the site.



Classroom commons on the ground floor

Educational Specifications and Visioning Documents

21st Century Learning & School Design

VSB CORE PURPOSE

It is our collective responsibility as a school district to ensure the highest quality of learning for all students, with a focus on student engagement, learning and development in a safe, inclusive environment.

School Design Principles:

1. Learner centered:

- learners' needs are placed first
- there are spaces designed for individualized support, collaborative groups, small learning communities, personal learning and reflection, social learning, etc
- a variety of learning and teaching styles are supported

2. Healthy environment:

- a healthy and safe environment is provided for all users
- natural lighting, temperature control, ventilation, and acoustics are optimized
- there are provisions for outdoor learning and physical activities



3. Community connections:

- the design of the building invites community participation
- there are spaces to support community enhancements to the educational programs
- it is a pleasure to learn, teach, work, play, eat, and socialize in these spaces

4. Aesthetically significant:

- the students and community are proud of the school building
- the design establishes an appropriate civic presence for the school in its neighbourhood
- materials, massing, siting, and elevations contribute to an inspiring and coherent design (externally and internally)

5. Sustainability:

- the building incorporates and visibly demonstrates sustainable design concepts
- long life / loose fit: the school serves its purpose well today and can adapt and evolve for the future

21st Century - Social Spaces

These boards are intended to illustrate newer, less traditional ways of conceptualizing learning spaces.



Covered/Uncovered Play



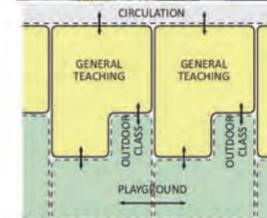
Outdoor Learning/Rainy Day Play

- Exterior classroom connections & gardens for active learning
- Classrooms visually/physically connected to the outdoors
- Covered play areas for a rainy climate
- Before and after school program access & use



Covered/Uncovered Play Accessible Roofs

Outdoor Learning/Gardening



Interior Activity & Gathering Spaces



Informal Gathering Spaces in Atrium or Main Entry

Welcoming Entry & Gathering Space

- Administration, security, school access, easy to navigate, easy to oversee
- Event spaces
- Informal social space
- Gathering area for field trips; can be combined with the multipurpose area
- Can be available for before & after school programs
- Place for parents & community to gather inside and outside



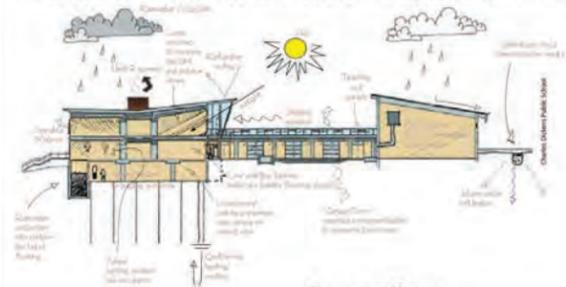
Outdoor Entries



Educational Specifications and Visioning Documents

21st Century - Sustainability

These boards are intended to illustrate newer, less traditional ways of conceptualizing learning spaces.



Solar Control



Low VOC (Emissions) Products

Design

- Reuse/refurbish existing materials
- Building orientation & shading devices can minimize heating, cooling, lighting and air circulation requirements
- Energy efficient lighting & HVAC
- Low emissions materials to improve air quality
- Water capture & reuse
- Natural ventilation systems



Natural Ventilation

Community

- Community gardens
- Integrate community partnerships
- Encourage Alternative Transportation

Operations

- Environmentally friendly cleaning products
- Proper equipment commissioning
- Reduced wastewater production

Education

- School recycling and materials sorting programs
- Using the building & grounds to teach sustainability

Sustainable Design



Geothermal HVAC



Outdoor Classrooms



Encourage Alternative Transportation



Natural Materials /Daylighting

Neighbourhood Centres of Learning & Development (NCLD) Project Public Open House

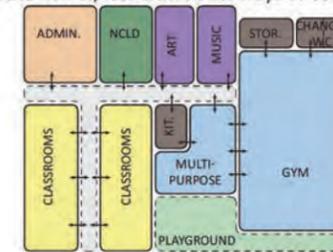


21st Century - Activity Spaces

These boards are intended to illustrate newer, less traditional ways of conceptualizing learning spaces.



Integrated Performance Space



Gym:

- Historically the central gathering space within the school
- Space can host a variety of sports & activities: intramural activities, interschool competition, performances
- Gym can be rented out to community after school hours
- Possible to integrate flexible stage/performance areas



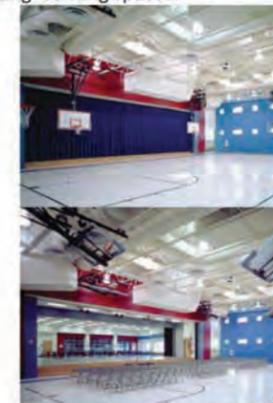
Gym Community Use



Gym Climbing Wall



Informal Gathering & Play Space



Convertible Multipurpose Rm for Performance



Multipurpose Kitchen

Multipurpose Room

- Large activity area that could be used for: messy classrooms, lunch programs, rainy day play area
- Before & after school programming
- Adequate storage allows for multiple uses
- Separate from circulation spaces
- Warm & inviting place for the community, a clear destination from the main school entry
- Potential performance space



Community Use



Multipurpose & Cafeteria

Neighbourhood Centres of Learning & Development (NCLD) Project Public Open House





1355 Garden Drive
Vancouver, BC
Canada

New Construction
2019

McFarland Marceau
Architects