



TOOLKIT

FOR

BUILDING, RENOVATING
AND EXPANDING

BC FIRST NATIONS SCHOOLS

UPDATED APRIL 2019



PREPARED BY

The BC First Nations Education Steering Committee (FNESC) and
BC First Nations Schools Association (FNSA)

DISCLAIMER

The information contained in this document is not meant to represent a comprehensive overview of the policy, legal, and administrative aspects of building new schools or renovating / expanding schools on-reserve. The information should not be relied upon as the sole basis for decision-making regarding school projects. The objective of the document is to facilitate a general understanding of the school-development process. *Readers are advised to seek professional advice throughout all stages of school construction and upgrades.*

Recognizing that federal policies and best practices respecting new school projects change over time, and because capital project policies are handled by both ISC BC Region and Headquarters, *it is very important that First Nations always check the latest federal policies and procedures, not relying solely on this document.* It is also intended that this Toolkit will be updated as required. This document in fact represents the second version of the “New Schools Toolkit,” which was originally published in 2012.



Toolkit for Building, Renovating and Expanding BC First Nations Schools

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This document has been updated and revised since its original publication, but most of the original content remains.

ACRONYMS AND ABBREVIATIONS

ACRS	Asset Condition Reporting System
ARFA	Aboriginal Resource Funding Agreements
BCTEA	BC Tripartite Education Agreement: Supporting First Nations Student Success
CCDC	Canadian Construction Documents Committee
CP	Certificate of Possession
FNIIP	First Nations Infrastructure Investment Plan
GFA	Gross Floor Area
HVAC	Heating Ventilation and Air Conditioning
ISC	Indigenous Services Canada
LEED	Leadership in Energy and Environmental Design
O&M	Operations and Maintenance
PIFI	Protocol for ISC-Funded Infrastructure
RFP	Request for Proposal
SPRF	School Priority Ranking Framework
SSAS	School Space Accommodation Standard

DEFINITIONS

Allowances, Rates and Costing Factors Supplement: Used in conjunction with BC’s annually updated [Capital Plan Instructions](#), this document outlines the various allowances, rates and costing factors for calculating budgets for capital projects included in capital plan submissions from public School Boards to the Ministry of Education.

Asset Condition Reporting System (ACRS): ACRS is a system module of the ISC Capital Asset Management System (CAMS). “The information contained in the ACRS includes an assessment of the general condition of on-reserve funded assets. The ACRS also provides information and cost estimates for repair and reconstruction needs and an estimate of the remaining life of the asset.”¹

BC Tripartite Education Agreement (BCTEA): A formal agreement between Canada, the province of British Columbia, and the First Nations Education Steering Committee (FNESC), BCTEA outlines roles and responsibilities for the delivery of First Nation education in BC and sets out the approach for funding schools on-reserve.

Canadian Construction Document Committee (CCDC): This national joint committee is “responsible for the development, production and review of standard Canadian construction contracts, forms and guides.”²

Capital Facilities and Maintenance Program (CFMP): This ISC program provides funding and advisory support to First Nation communities for the construction, acquisition, operations and maintenance of community infrastructure assets on reserves.

Capital Project: In an on-reserve context, a Capital Project is a construction, expansion, renovation or replacement project for an existing facility or community infrastructure asset.

Certificate of Possession (CP): Issued by the Indian Lands Registry on behalf of the minister of ISC, this document constitutes evidence that one or more Status Indian(s) has been granted lawful possession of a land under the *Indian Act* s. 20.

1 ISC. 2007. A Practical Guide to Operations & Maintenance. p.v.

2 CCDC. 2012. About CCDC. Retrieved from <http://www.ccdc.org/about/index.html>

DEFINITIONS (CONTINUED)

First Nations Infrastructure Investment Plan (FNIIP): The FNIIP is a national ISC tool designed to apply a consistent approach to short and medium term planning and budget forecasting. The FNIIP is intended to support First Nations' infrastructure and housing planning process, and allows ISC to better forecast infrastructure budget pressures using information submitted by First Nations.

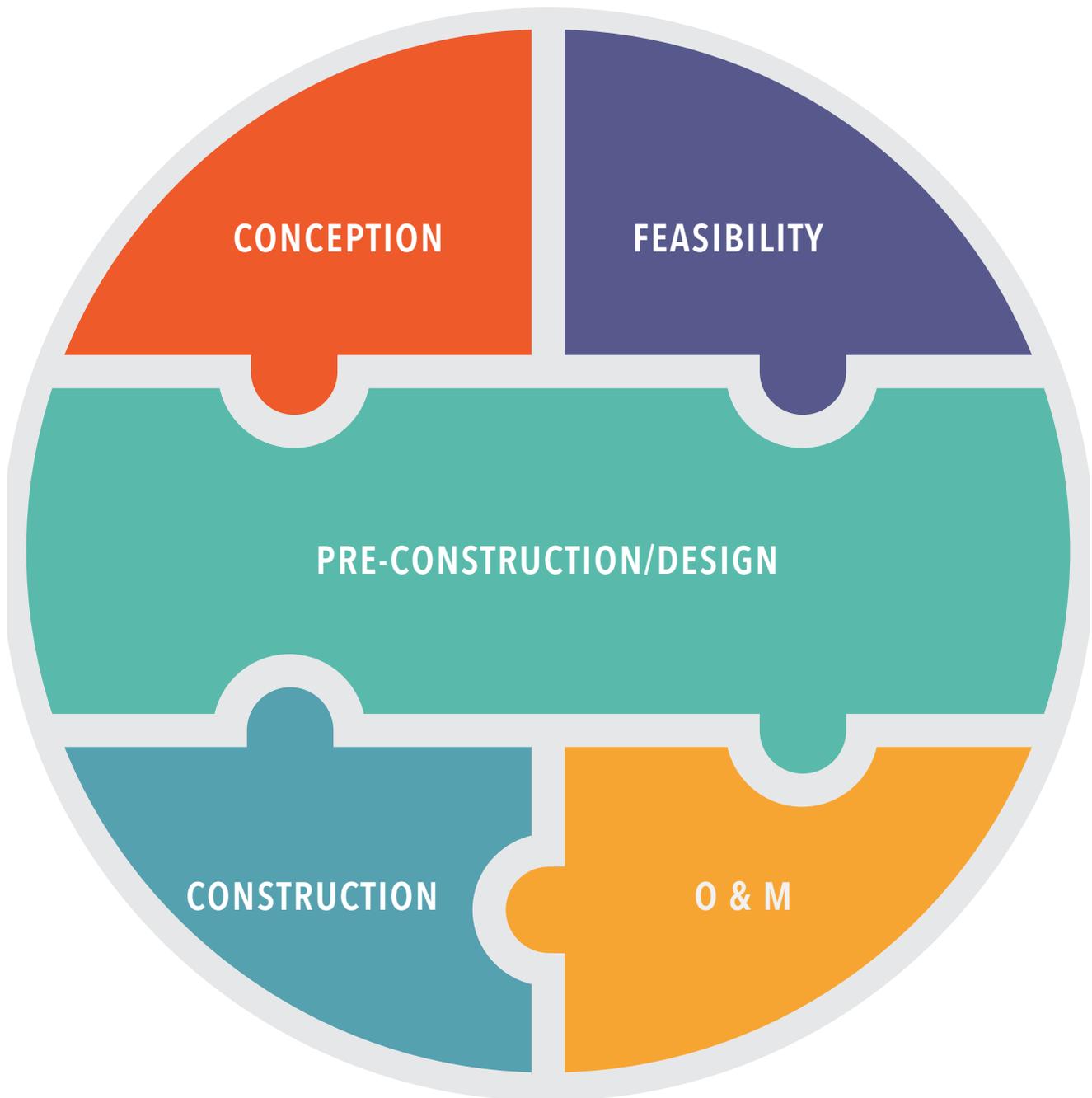
- **Community Level FNIIPs:** First Nations use the FNIIP to develop community-specific plans for their annual and medium-term capital investments in community infrastructure projects, leading to a clearer expectation of when ISC funding may be available to support the projects in their Capital Projects program. Using the FNIIP annually provides an opportunity for Chief and Council to review their capital program each year, and add, change or remove planned capital projects to address the changing needs of their community. Developing a community FNIIP is a mechanism for First Nations' to identify their changing priorities and work with their Capital Management Officers at ISC to develop action plans to address community objectives.
- **Regional Level FNIIPs:** ISC BC Region uses community-level FNIIPs to set regional priorities and to focus attention on moving priority projects forward. BC Region provides a prioritized Regional FNIIP to National Headquarters (NHQ) for consideration, recognizing national budget pressures and priorities.
- **National Level FNIIPs:** NHQ creates a National FNIIP based on infrastructure investment plans from the community and regional levels, and conducts quarterly reviews of Regional FNIIPs and the National FNIIP to monitor capital program progress.

Leadership in Energy and Environmental Design (LEED): An internationally recognized framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions, LEED certification provides independent verification that a building was designed and built to achieve high performance in the key areas of human and environmental health, including sustainable site development, energy efficiency, materials selection, and indoor environmental quality.³

School Priority Ranking Framework (SPRF): The ranking system ISC employs to prioritize school projects and spending, and to develop national and regional capital plans.

School Space Accommodation Standards (SSAS): The mechanism that outlines ISC's level of service standards for which funding may be provided for the construction and major renovation of First Nation schools.

³ Canada Green Building Council. 2012. www.cagbc.org/Content/NavigationMenu/Programs/LEED/default.htm. <https://www.sac-isc.gc.ca/eng/1456150810793/1533641989260>



INTRODUCTION AND PURPOSE

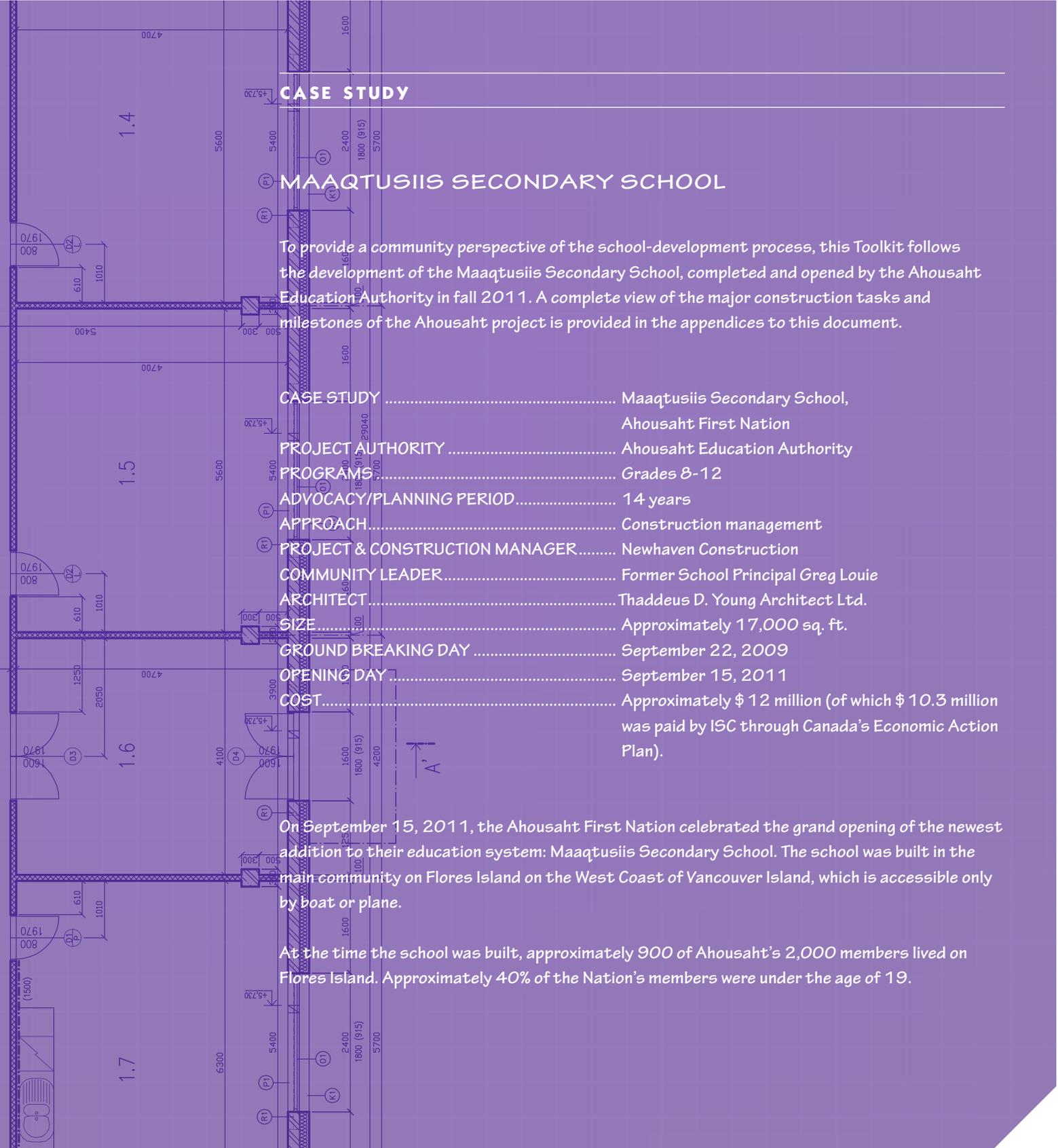
Welcome to the First Nations school-development process! Bringing a school or expansion project from a concept to a fully operational reality is a complicated task, requiring the dedicated work and expertise of many individuals. The purpose of this Toolkit is to provide First Nation communities with a roadmap for getting a project underway and interacting with the various professionals and community members who are essential for building and maintaining a school facility.

First Nations in British Columbia have worked for more than two decades to build the BC First Nations Education System, which is premised fundamentally on quality education for First Nation students and First Nations control of First Nations education. First Nations schools are a key aspect of the BC First Nations Education System, and they are integral to the life and goals of First Nation communities. As such, some First Nations that do not yet operate a school may be interested in creating their own facility, and some that already operate a school may want to renovate or expand their building.

In order to begin such a project, First Nations must have access to resources that will guide them through complex development and operations and maintenance (O&M) processes. Communities will also require the assistance of skilled professionals to ensure that projects meet their unique needs. This Toolkit represents a first step in identifying key resources, with first-hand experiences included to create a practical and user-friendly guide.

It is important to note that no two school projects will be the same. The varied geographies, program needs, and human and financial resources that exist across BC mean that different levels of support will be required in each circumstance. This Toolkit attempts to explain the key phases of capital projects and highlight lessons learned and best practices identified through projects that have been implemented previously. The specifics of each building experience, however, will depend upon each Nation's approach, circumstances, and needs.

The guide is organized according to the five main phases of school development and operations, including: 1. Conception, 2. Feasibility, 3. Pre-Construction/Design, 4. Construction, and 5. Operations and Maintenance.



CASE STUDY

MAAQTUSIIS SECONDARY SCHOOL

To provide a community perspective of the school-development process, this Toolkit follows the development of the Maaqtusiis Secondary School, completed and opened by the Ahousaht Education Authority in fall 2011. A complete view of the major construction tasks and milestones of the Ahousaht project is provided in the appendices to this document.

CASE STUDY	Maaqtusiis Secondary School, Ahousaht First Nation
PROJECT AUTHORITY	Ahousaht Education Authority
PROGRAMS	Grades 8-12
ADVOCACY/PLANNING PERIOD	14 years
APPROACH	Construction management
PROJECT & CONSTRUCTION MANAGER	Newhaven Construction
COMMUNITY LEADER	Former School Principal Greg Louie
ARCHITECT	Thaddeus D. Young Architect Ltd.
SIZE	Approximately 17,000 sq. ft.
GROUND BREAKING DAY	September 22, 2009
OPENING DAY	September 15, 2011
COST	Approximately \$ 12 million (of which \$ 10.3 million was paid by ISC through Canada's Economic Action Plan).

On September 15, 2011, the Ahousaht First Nation celebrated the grand opening of the newest addition to their education system: Maaqtusiis Secondary School. The school was built in the main community on Flores Island on the West Coast of Vancouver Island, which is accessible only by boat or plane.

At the time the school was built, approximately 900 of Ahousaht's 2,000 members lived on Flores Island. Approximately 40% of the Nation's members were under the age of 19.

THE PROJECT PICTURE

CONCEPTION	DETERMINE THE GOVERNANCE STRUCTURE	Project Authority, Project Manager, community leaders, and consultants
	COMPLETE CONSULTATIONS	Establish the community's vision Clarify enrolment
	IDENTIFY AVAILABLE FUNDING	Identify and apply for ISC funding Own Source Revenue
FEASIBILITY	COMPLETE THE NECESSARY STUDIES	Feasibility, engineering, environmental, archaeological studies, and land encumbrance check
	ONGOING CONSULTATIONS	Confirm the community's vision and enrolments
PRE-CONSTRUCTION/DESIGN	DESIGN	Consultations Consider: culture, function, affordability, social context, climate, geography, sustainability, technology, bus transportation, special education
	TENDERING	General contracting vs. construction management
	SITE SUPERINTENDENT	Identify necessary personnel
CONSTRUCTION	CHANGES	Planning and funding
	POST-CONSTRUCTION "SHAKE-OUT"	Ensure quality; plan for O & M
O & M	FUNDING	ISC funding
	CONDITION MONITORING	Minor versus major repairs and upgrades
	ONGOING CONSULTATIONS	Maintain community vision and enrolments

Within each phase, key activities and considerations are described. Each section also includes highlights from experiences of First Nations and a checklist of the key activities required to get started on a new school project. In reviewing the checklists it is important to note that the work of each phase will often overlap and Project Teams will likely need to revisit tasks from previous phases or work within the edges of two phases at once. Where possible, the section related to each phase in this Toolkit also references key resources.

PHASE 1

Conception

Determine the Governance Structure

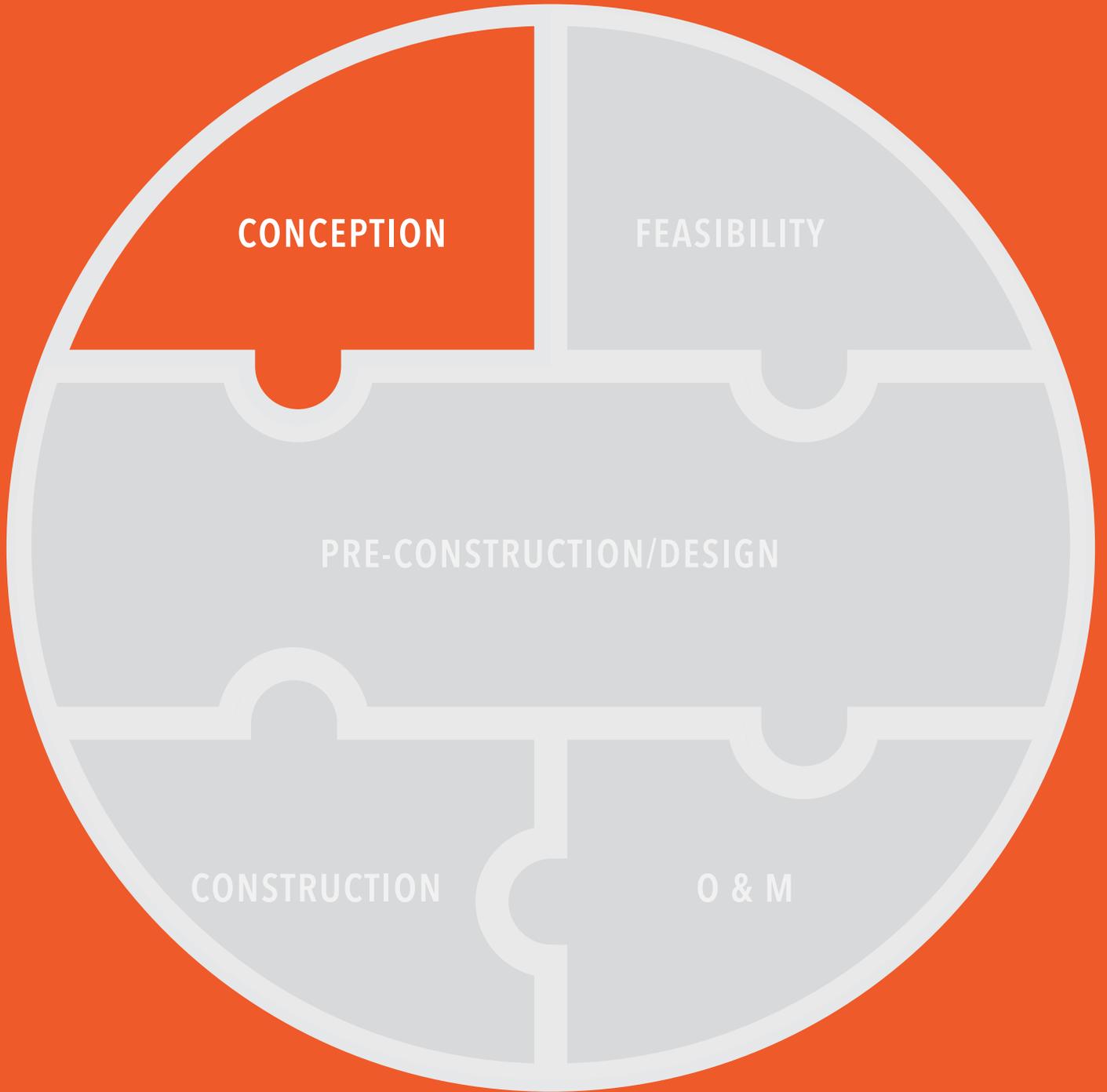
Project Authority, Project Manager, Community
Leaders, and consultants

Complete Consultations

Establish the Community's Vision
Confirm Enrolment

Identify Available Funding

Identify and Apply for ISC Funding
Own Source Revenue



PHASE 1

CONCEPTION

Conception is the foundational phase of building a new school or adding to an existing facility. It refers to all the steps a First Nation will take to transform the idea of a new school or large building addition into a plan for getting the job done. The conception phase focuses on how the new school building or addition will be funded and how the process will be governed, from the feasibility phase through to the operations and maintenance of the facility.

* It is critical to note that First Nations must apply to ISC before adding a grade to an existing school's education program. Without prior approval, students for additional grades cannot be included on the nominal roll. If a building expansion will be associated with offering additional grades, the ISC application for adding grades is a critical aspect of the planning process. Detailed information about this step is provided in Appendix A.

As cited in Appendix A, the main criteria that must be met before an application to add grade(s) or program(s) to a First Nations school can be approved by ISC includes, among others:

The building where the grade or program will operate must be confirmed to be safe and suitable for use and occupancy as a school. Please note that schools are one of the most stringently regulated building occupancy classes, with very specific Fire and Building Code requirements. Inspection by a certified professional is required. ISC cannot provide any funding support to a school facility that does not comply with all pertinent Fire and Building Code legislation. You are strongly advised to consult with your Capital Management Officer at ISC before you make any arrangements to build, acquire or renovate a building for use as a school facility; ...

As Appendix A further states:

Applications to add grade(s) or program(s) must be submitted by January 31st, in order to receive approval for implementation the next school year. If you require capital funding from ISC to build, acquire or renovate in order to expand grade(s) or program(s) at your school, your project must be entered in your First Nation Infrastructure Investment Fund (FNIIF) application for the fiscal year in question. As the FNIIF process must accommodate all projects at hand on

a National basis, it may take several years before Capital Budget funds can be made available for your specific project – please be guided accordingly.

The FNIP process is described more in the Funding section further in this document. See also Appendix A for additional details about adding a grade.

GOVERNANCE

“The most cost-effective form of construction begins with careful planning.”

TOOLKIT STEERING COMMITTEE PARTICIPANT

In this Toolkit, the term “governance” refers to the roles and responsibilities associated with managing the school project. As a general rule, it is best to establish the project governance structure as early as possible in the new school or building expansion process.

While ISC may be the major funder of the school, it typically does not play a major role in the governance of a project. Instead, project management is led by a key group of professionals and community members who will plan all aspects of the facility’s development – in this document called the Project Team.

The Project Authority

For the purposes of this Toolkit, the “Project Authority” refers to the Tribal Council, Chief and Council, or First Nation education authority that will ultimately be accountable to both the community and funding agency(ies). For some projects, it has been beneficial to include a member of the Project Authority as either a consistent or ad hoc member of the Project Team. These individuals are important for demonstrating ongoing political commitment to the project, and for providing updates and advice for decision-making related to the school.

The Project Manager

The “Project Manager” is a key member of the Project Team -- the lead coordinator of the facility development process and the on-site representative of the Project Authority. His or her role is to oversee budgeting, scheduling and the preparation of documents that will be submitted to ISC on behalf of the Project Authority. The Project Manager will also ensure that the project meets the vision and needs of the community. Above all, the Project Manager is

an advocate for the community when dealing with consultants and contractors, and he or she will also participate in or lead negotiations with ISC. Ideally, the Project Manager will have design and construction experience and will be capable of anticipating challenges as the project unfolds.

The relationship between the Project Authority and the Project Manager is the most important in the school-development process. It is therefore advised that the community choose a Project Manager who has experience working with First Nations.

There are multiple resources available to assist First Nations in hiring a Project Manager:

- ISC BC Region’s Practical Guide to School Projects provides Terms of Reference for inviting Project Managers to submit a proposal.
- Referrals from other First Nations are useful for identifying a pool of qualified candidates.
- The Government of BC maintains a list of qualified Project Managers for building new schools. For information about gaining access to that list, visit the BC Ministry of Labour Project Management Services.

Identified individuals and firms can be invited for introductory meetings before the formal hiring process begins.

Funding for a Project Manager can be accessed from ISC as part of the overall budget for the school development project.

The Community Leader

As a best practice, the Project Authority should appoint an individual from the community to function as an on-the-ground communications link between the community and the Project Team. Often, the school principal fills this important role, as he or she will have a direct line to community members, students and teachers.

The key duties of the “Community Leader” include working with the Project Manager to identify local materials and resources, coordinating community consultations, and ensuring the project remains in line with the vision of the community. Given the wide scope of duties associated with this role, it is important that the Community Leader have some knowledge of both education and construction. For Community Leaders and other team members who are new to working on large-scale construction projects, ISC offers a course called Construction Contracting for First Nations.

Ideally, the Community Leader will be a full-time paid position. However, ISC does not provide capital funding for this role and the Community Leader’s salary must therefore be built into the overall project budget.

Consultants

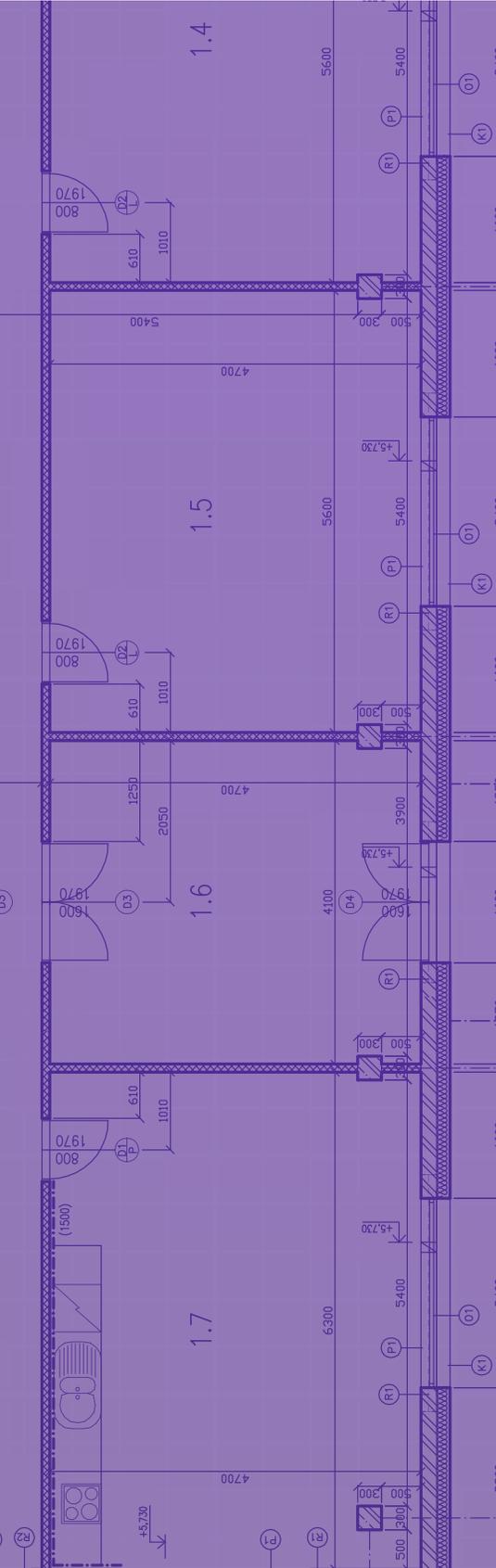
Other professionals will enter the school-development process and play a role on the Project Team at different times depending on the project. For projects where the architect or engineer (often referred to as the “lead consultant”) is also acting as the Project Manager, those individuals will be involved from the outset of the conception phase. Some First Nations may hire a consultant to oversee the feasibility stage exclusively. If the architect leads the feasibility phase, this will provide an opportunity to develop a working relationship in advance of the contract for design.

It is important to select the lead consultant carefully because he or she will be responsible for translating the community’s vision into the physical structure. Referrals from other First Nations and informal interviews can be effective to better understand if an engineer or architect is suited for the project.

- For tips about how to select an architect visit the Architecture Canada website. This organization also provides a Standard Contract for Architectural Services.

CONSIDERATIONS

1. In some cases, a member of the consulting team, such as the architect, engineer or construction manager, may take on the role of Project Manager. In other cases, First Nations will use the professional project management services of an independent consultant. As a general rule, the Project Authority should ensure there is reasonable independence between the Project Manager and other members of the consulting team in order to ensure that decisions are made in the best interests of the community.
2. Though many professionals and community people will participate in meetings at various times during the school’s development project, the core Project Team should be moderately sized with well-defined roles and responsibilities.
3. Although ISC representatives are not usually core members of the Project Team, there should be meetings with ISC officials early and often. Regular connections with ISC will reduce the amount of time spent negotiating school space and level of service. It will also help to get funding flowing for feasibility as quickly as possible.



CASE STUDY: GOVERNANCE

MAAQTUSIIS SECONDARY SCHOOL

Maaqtusiis School has historically delivered both primary and secondary programs from the kindergarten to grade 12 levels, as well as preschool, daycare and Aboriginal Head Start. Prior to the building of a new facility, 243 students were enrolled and the school suffered from major overcrowding and a lack of suitable space to deliver the secondary curriculum. In order to accommodate its young and growing population, the Ahousaht Education Authority embarked on the journey of planning and building a new high school.

Getting the Ahousaht school project through the pre-construction phase was a lengthy process that took over 12 years. A critical part of the success of the school project, once funding was approved, was a strong governance structure. The project initially stumbled out of the gate. It was not until the core Project Team, including the Project Manager, Community Leader and design team (consultants), was brought together that the project began to gain momentum. Throughout various stages of the project, the team expanded to include members of Chief and Council, youth and elders, and representatives of ISC. The strong governance established by this Project Team enabled it to overcome many challenges that could have crippled the project, and ultimately resulted in a school that the Ahousaht people can be proud of.

A key component of success for the core Project Team was a disciplined approach to meetings and project management, with meetings booked nearly a year in advance. Frequent meetings allowed for transparency about budgets and schedules, and assisted with the identification and coordination of the best and most cost-effective sub-contractors and supplies, accessed both locally and from abroad.

A community champion is critical to success in building a school. Early in the process, the Ahousaht First Nation identified a leader from the community to fill this role. With a background in education, an understanding of construction processes, and knowledge of the community's people and resources, the Community Leader worked closely with students, teachers and administrators to create a practical vision for the project and school. Working closely with the community, the Community Leader identified two key priorities for the new school: 1. more space and 2. up-to-date curriculum.

CONSULTATIONS

Appropriate consultations are one of the most important activities the Project Team will undertake during the school-development process. A consultation process that engages parents, students, teachers, Elders, and community members is critical to the ultimate success of the school. It is in this stage when the community's vision of the school will begin to develop, and the level of community interest in a new school or expansion will become known.

It is important to remember that, ultimately, the community is working to create an environment where students will thrive. Achieving this goal requires more than a physical building, no matter how beautiful it may be; there also must be a corresponding curriculum that will challenge and educate learners.

ISC is reluctant to fund a “build it and they will come” school project. To be accountable for spending decisions, ISC is interested in demonstrating relevance (need), cost-effectiveness, and support from the community for every new school or large expansion project.

Additionally, lack of community buy-in and a half-filled school may have long-term, problematic consequences. According to BCTEA, funding for O&M is determined by student enrolment numbers (i.e. it is calculated by annual nominal roll FTEs) and is provided by ISC to the First Nation as part of the allocation for Instructional Services. In order to ensure the school facility is adequately funded, it is important to ensure the school will grow or maintain enrolment in line with projections; if there is not enough funding to adequately operate and maintain the school in the future, it can dramatically shorten the life expectancy of the facility and the willingness of the community to support the school in the long-term.

Overall, then, consultations to create a community vision for the school are critical to ensure its continued use. Parents, teachers, students, and the community must be fully involved in the process in order to develop a community vision that can reasonably be implemented within the project budget.

A Story from ...

ADAMS LAKE FIRST NATION

SCHOOL NAME: Chief Atahm Day School

PROGRAMS: K-7

OPENING: Fall 2003

TOTAL COST: \$2-3 million (Total)

When it originally opened in 1991, the Chief Atahm Day School had two classrooms. After years of successfully integrating the Secwepemc immersion curriculum in the school, the two classrooms were inadequate to deliver the kind of education envisioned for the 60 students enrolled. As the community worked with ISC to enhance curriculum, it was obvious to both parties that more space was needed.

To get their project underway, a committee comprised of parents, Chief Atahm staff, the principal, and members of Chief and Council was formed. Due to funding and time constraints, the committee was not able to hire an expert Project Manager and had to choose an off-the-shelf design that had been used by another First Nation. As a result, there was no opportunity to ensure the design was fully functional for Chief Atahm and the new school is circular with little space for closets. Other challenges have also arisen, including problems remediating deficiencies and high operating and maintenance costs.

Despite these challenges, students who graduate from Chief Atahm and go into the public school system have been shown to be fully prepared for success.

FUNDING

"It all depends on whether the band behind the school is squeaking the wheel."

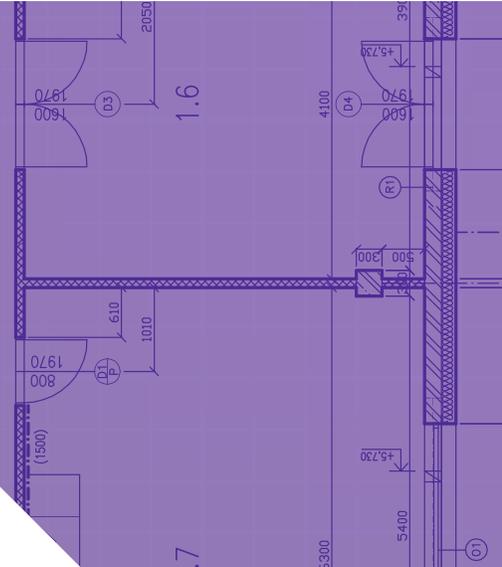
TOOLKIT STEERING COMMITTEE PARTICIPANT

How building projects are funded varies amongst First Nations.

- A variety of funding partners may be available to BC First Nations from both the public and private sectors.
- For many communities, a significant portion of the necessary funding is provided by ISC's Capital Facilities and Maintenance Program (CFMP) (described in more detail below).
- In addition, most First Nations contribute some own sources of revenue for specific aspects of the school building process. Community contributions may come from revenue from economic development projects, funds from the settlement of specific claims, and bank loans, among other sources.

Funding from Canada

ISC funding for building and maintaining schools is governed under the department's School Site Development Policy. For First Nations intending to seek funding from ISC, planning must begin long – often years – before site selection and construction.



CASE STUDY: FUNDING
MAAQTUSIIS SECONDARY SCHOOL

A challenge for the Ahousaht Project Team was aligning the community's vision for the creation of a spacious school that has state of the art technology, with ISC's funding policies and formulas. As the project moved into site selection and design, the Team learned that frequent communication with ISC was essential to ensure the school was fundable and to address any issues that might have negatively impacted on the project timeline. As a result of the Team's frequent communications and persistent negotiations with ISC, today the school is fully equipped with a stand-alone computer lab and a separate science room and science lab.

COMMUNITY LEVEL FNIIPS

Developed by First Nations | Detailed report of infrastructure funding needs



SUBMITTED BY FIRST NATIONS TO ISC BC REGION
ISC BC REGION IDENTIFIES PRIORITIES; SENDS ALL TO ISC HQ



HQ APPLIES SCHOOL PRIORITY RANKING FRAMEWORK (SPRF)

Based on condition of existing facility, overcrowding, accessibility to off-reserve schools, design, and cost-efficiency opportunities

The review results in National FNIIP



PROJECTS IN NATIONAL FNIIP ASSESSED AGAINST NATIONAL PRIORITY RANKING FRAMEWORK (NPRF)

Using four priorities – protection of health and safety and assets; health and safety improvements; recapitalization / major maintenance; population growth



ISC BC REGION PRIORITIZES FUNDING FOR NPRF RANKED PROJECTS

Based on health and safety, overcrowding, and curriculum development

To be eligible for funding, a First Nation must first create its own First Nations Infrastructure Investment Plan (FNIIP) for submission to the ISC BC regional office. Also known as Five-Year Community Plans, these documents provide a detailed report of the infrastructure funding needs of the community. Details about what is eligible to be included in the plans, relevant forms, and information on how to obtain assistance from ISC to develop plans are provided in ISC's yearly Program and Reporting guides.

Once ISC BC region receives all community's FNIIPs, projects and cash flows are prioritized according to the number of projects proposed and the anticipated availability of funds. A similar exercise is then undertaken at ISC headquarters, which ranks the proposed projects using the School Priority Ranking Framework (SPRF). (See the Government of Canada's web site, sac-isc.gc.ca)

The SPRF incorporates the following considerations into the decision-making process.

- Condition of Existing Facility (with a focus on health and safety)
- Overcrowding
- Accessibility to Off-Reserve School(s)
- Design (grade distribution and amenities offered)
- Cost Efficiency Opportunities (external funding sources and aggregation)

The SPRF is a points-based system that takes into consideration multiple criteria. Weighted factors are automatically applied to each criterion to ensure that factors of highest priority (such as health and safety) maximally influence the overall ranking score.

Based on the results of the national prioritization exercise, a National FNIIP is developed based on infrastructure investment plans from the community and regional levels. The amount of money planned under the FNIIP varies from year-to-year.

Proposed projects on the National FNIIP are then assessed against the National Priority Ranking Framework (NPRF), which incorporates the following four priorities:

1. Protection of health and safety and assets: maintenance projects required to protect assets and to mitigate identified high-risk health and safety issues;
2. Health and safety improvements: upgrades of existing assets and new construction / acquisition projects to mitigate and identify significant risks to health and safety;
3. Recapitalization / major maintenance: projects to extend the useful operating life of facilities or assets, or to maintain the original service level of the asset; and
4. Population growth: anticipated community growth that requires new construction, expansion and procurement of assets to maintain the service level standard

The NPRF is intended to help direct funding to the highest priorities using a consistent and transparent process; higher ranked projects are placed in earlier years of the FNIIP, while lower-ranked projects are placed in later years.

In addition, regional offices further prioritize spending based on:

- health and safety;
- overcrowding; and
- curriculum requirements.

Note: While both processes attempt to create a hierarchy of projects in descending order of priority, the national and regional ratings may not always align. In addition, specific project funding is subject to the priority of all proposed projects and the availability of funds within ISC's annual capital budget.

Other federal funding sources may also be important. For example, for many small First Nations, their schools will function as a central meeting place for all community members. In the absence of a community centre, the school may include a large gathering space for community meetings, feasts and emergencies. It may also function as a health centre and band administration office. For many First Nations, this is what it means to have a community school. For these types of facilities, funding will come from various agencies, including the First Nations Health Authority, or possibly from one-time contributions from ISC for band administration and community facilities.

CONSIDERATIONS

1. ISC categorizes major capital projects as those valued at more than \$1.5 million. Generally, new schools fall within this category and are therefore subject to the National Priority Ranking Framework (NPRF). Other school projects, such as expansions and major upgrades, fall within the minor capital projects category when they are valued below \$1.5 million. Minor capital projects are not subject to the NPRF, but must still be included in a community's FNIIP in order to be eligible for funding.
2. A First Nation that does not appear in ISC's plan should request a meeting with Capital Management Officers to obtain assistance with developing an FNIIP and to explore alternative funding sources.
3. Even if a school is prioritized in ISC's plan, ISC's capital priorities shift annually as new projects and needs are identified throughout the year. Communicating the need for a school to ISC effectively and repeatedly is crucial for bringing the project to fruition.

School Space Accommodation Standards

To support First Nations education, ISC is committed to funding education facilities that create quality learning environments for First Nation students on reserve. School projects that qualify to receive capital funding undergo a feasibility study, for which the Department uses the School Space Accommodation Standards (SSAS) to determine the eligible school size. The most important input needed to determine school size is student enrolment data (nominal roll), which currently includes the on-reserve student population age 4 to 21 registered to a given school as submitted to the Department each year. This reflects Canada's position that ISC provides funding support for eligible students ordinarily living on reserve, and enrolled in and attending an eligible elementary or secondary program. Students residing off reserve are funded by the Province of BC.

Note: Discussions are now ongoing regarding whether students who are funded through the Reciprocal Tuition agreement with the BC Ministry of Education can be counted for the purposes of calculating the SSAS. While this issue has not yet been resolved, it is recommended that First Nations submit to ISC officials enrolment information for students who are attending band-operated schools but resident off-reserve, to be considered in the Department's determination of eligible school size in the future. The answer to this question is still evolving and First Nations should ensure they have spoken to ISC staff to get the latest information available.

The SSAS enrolment projections use nominal roll and community demographic trends over 5 years to estimate the student population in future years. The school size is determined on the basis of projected enrolment during the 5th year of operation. Factors that are considered include on and off reserve student migrations (see note below) and repatriation rates based on past and current demographic trends. This projection is intended to represent a fair expectation of anticipated needs. *Any unjustified enrolment numbers, resulting floor space, and related extra project costs and ongoing O&M -- exceeding the level prescribed by the SSAS -- are expected to be covered by the recipient First Nation's own or other external funding sources.*

Note: For calculating projected enrolment figures, most First Nations indicate how many members and neighbouring First Nation members will attend the proposed school. For the purpose of these calculations, expected "In-Migration" is calculated as follows:

$$\text{In-Migration (the First Nation)} = \text{In-Migration (other schools)} + \text{In-Migration (unregistered)} + \text{In-Migration (other First Nations)}$$

1. **In-Migration (other schools):** On-reserve students who are registered to the First Nation and living on the First Nation's land (reserve), who currently attend another neighbouring Band Operated School but will attend the proposed expansion school on the First Nation's reserve.

Note: For these children to be counted, the First Nation is required to provide the following information: name of student, current school they are attending, and documentation that confirms the student will attend the proposed expansion school on the First Nation's land.

2. **In-Migration (unregistered):** On-reserve students, not registered to the First Nation but living on the First Nation's land (reserve), who do not attend an existing band school or another neighbouring Band Operated School, but will attend the proposed expansion school on the First Nation's reserve.

Note: For unregistered students to be counted, the First Nation is required to provide the names of the students and documentation that their parents were polled individually to confirm that they intend to send their children to the proposed expansion school on the First Nation's land.

3. **In-Migration (other First Nations):** On-reserve students from any other First Nation whose parents have indicated that the students will attend the proposed expansion school on the First Nation's reserve.

Note: For these children to be counted, the First Nation is required to provide the names of the students, current school they are attending, and documentation that confirms the student will attend the proposed expansion school on the First Nation's land.

Gross Floor Area (GFA)

Should a school project qualify to receive capital funding, the department will establish the project's funding based on eligible school size as calculated using the SSAS and expressed as the total Gross Floor Area allowance (Total GFA). The Total GFA encompasses the full footprint of all of a school's enclosed floor areas (i.e. measured on plan to the exterior faces of perimeter walls). The SSAS calculates the eligible Total GFA for a school, taking into account the level of service required by the education curriculum.

The Total GFA allowance (i.e. the total eligible school size) includes three components:

- Instructional space allowance – This is the basic gross floor area allowance (Basic GFA) that is required for classrooms for the grade levels that will be taught in the proposed school (including kindergarten 4 and kindergarten 5 students);
- Gymnasium space allowance (Gym GFA); and
- Cafeteria space allowance (Cafeteria GFA).

The Total GFA sets a maximum floor space allowance for the entire school building. This means that the Basic GFA not only includes classroom space but also encompasses circulation areas and various special purpose rooms, such as administration areas, library, auditorium, and computer labs.

Special purpose rooms: The number, type, and size of special-purpose rooms provided for will vary depending on the type of school, the grade levels offered, and the projected student enrolment. Special-purpose rooms include:

- **Administration areas:** School space required for administration offices and staff rooms. Floor space allowance for administration areas varies considerably depending on enrolment projections.
- **Storage rooms:** Storage space for educational supplies. Storage rooms should be sized to meet the specific needs of the school. In remote areas, such as Zone 3 (more than 350 km away from the nearest service center by road access) or Zone 4 (no road access to any service center), where schools get their supplies only once a year, it is particularly important that sufficient storage space is available. On a case by case basis, extra storage can be provided in addition to the space specified in the GFA tables, but such increases must be justified in the proponents' submission for funding.
- **Gym office:** A gym office is recommended when a school includes 16 or more classrooms, or when the education curriculum justifies hiring a full-time physical education instructor. When a school needs more than one full-time physical education instructor, a separate office for each full-time instructor is advisable.
- **Multi-purpose room:** An elementary/secondary school with a planned student enrolment of 35 to 60 (or higher) normally includes a multi-purpose room.
- **First aid room:** A first aid or health space should be available in all schools. A first aid room should include enough space to accommodate a sink and a lockable cupboard for supplies. In schools with fewer than six classrooms, this type of space may be incorporated in the multi-purpose room or the administration area. For larger schools, a dedicated first aid room is recommended.
- **Cafeteria:** The floor space for a school cafeteria is accounted for as a separate portion of the Total GFA as set out in ISC's 2016 SSAS Appendix E tables.
- **Gymnasium:** The floor space for a school gym is accounted for as a separate portion of the Total GFA allowance as set out in ISC's 2016 SSAS Appendix E tables. Additional gym space can be provided when communal space is not already available in an existing school or other community building.
- **Library/resource center:** A library is recommended in elementary/secondary schools with a planned student enrolment of 61 or more students.
- **Mechanical room:** Since the floor space for the school's mechanical room is not accounted for in the GFA tables, the necessary area must be manually added to the GFA and justified in the proponents' submission for funding.

- **Other special-purpose rooms:**

- Auditoriums
- Science rooms
- Computer rooms
- Home economics rooms
- Industrial art rooms
- Any other rooms required to support the First Nation education curriculum.

Additional space allowance for multi-purpose gymnasium: As discussed above, the determination of the overall school GFA (Total GFA) includes an individual portion to account for gymnasium floor space (Gym GFA). Remote First Nation communities that are located in Zone 3 or Zone 4 are allowed extra gymnasium space in order to use the proposed school as a community center or emergency response centre. Alternatively, First Nations without an existing community center, emergency response center, or gymnasium are also eligible to get a multipurpose gym as part of their school project. However, a school project is not eligible for extra gym space when communal space is already available in an existing school or other community building.

Additional floor space allowance for students with special needs: ISC provides additional space allowance for each student with special needs in the determination of the GFA allowance for a school. This extra floor space can either be allocated towards larger regular classrooms, or to special classrooms as required.

To determine the number of students with special needs in First Nation communities, teachers and specialists are involved in the assessment of students to determine their eligibility for special education services. ISC annually tracks the number of students with special needs together with other nominal roll information.

When applying the SSAS, the additional floor space allowance for students with special needs is determined as follows:

- Regular floor space for students with special needs – In the SSAS, students with special needs should be considered as part of projected enrolments for the 5th year, together with other students. Projected enrolments – including students with special needs – is then used to determine the regular GFA.
- Additional floor space allowance for students with special needs – The SSAS allocates an additional 3.75 m² of school floor space for each student with special needs.

GFA and Funding Calculations: The GFA approach to determining eligible school space provides the designer flexibility to establish a school layout that suits site-specific and community-specific requirements. Concurrently, it is the responsibility of the school designer to achieve efficiencies and to lay out the school so that it meets identified needs and accommodates all educational and special-purpose rooms within the eligible gross floor space.

Once the size of the school is determined, ISC will use a Budget Calculator (for either a new school, school renovation, or expansion) for determining the budget for the school project. The Budget Calculator formulas are based on the Government of BC's annual Allowances, Rates and Costing Factors Supplement within its Annual Capital Plan. The allowances and rates are fixed and adjusted for location. The "Location Factor" is based on geography (and climate), as well as market rates.

Finally, to guide a First Nation through the funding application process (beginning with funding for feasibility), ISC BC Region has developed its own Practical Guide to School Projects, which provides detailed instructions for what is required to access funding at each stage of the school-development process.

*** AS DESCRIBED IN APPENDIX A – ADDING A GRADE:**

How can I determine if a proposed increase in students can be accommodated within our existing band operated school space?

You can self-assess if the total area available in the current Band Operated School facility is less than or greater than the maximum area established using the current ISC School Space Accommodation Standards. However, it is recommended that you contact your Capital Management Officer for assistance. Some useful rules of thumb are: Minimum classroom sizes of 66.9 m² for Kindergarten students (Max. = 26 students per classroom) and 66.9 m² for Grades 1 through 12 (Max. = 26 students per classroom) are recommended; core (support) functions (heat, storage, janitorial, etc.) typically comprise an additional 45% in area; kindergarten facilities should be physically separated from Grade school and adult facilities; and, adequate washroom and play facilities should be provided for all students.

CONSIDERATIONS

1. School space and projected enrolment are often among the more contentious issues to arise during school development projects. First Nations should be prepared for negotiations with ISC on these topics. At a minimum, the Project Team should compile demographic data to support claims of increases in school population and the number of students with special needs over time.
2. If a First Nation desires school space that falls outside of SSAS, or is looking to fast-track its project, it should be prepared to fund some aspects of the project. This can include small projects paid for by fundraising efforts, or funding major portions of the school building through other forms of own source revenue.
3. To negotiate more school space, some First Nations have provided studies with evidence to demonstrate their need for a school that falls outside the SSAS. For example, one First Nation submitted a literacy study on the level of education of member students attending school outside of the community. The study helped the First Nation to justify its need for a local school that delivers language and culture-based programs to enhance the BC curriculum. Other First Nations have highlighted the costs and risks associated with sending students to schools outside of the community as the basis for their argument for a new school. In another case, inviting ISC officials into the community for a tour of existing facilities was an effective way to make the case for a new school.
4. Depending on the intended functions of the school, facilities may need to include large kitchens, community gathering spaces, and/or other amenities that serve both curricular as well as community needs. It is also useful to think about on-the-land learning, and language and culture activities when exploring space needs. The importance of such facilities must be weighed against the additional cost to build and maintain them, especially when they fall outside of the SSAS allowances.
5. Depending on their location, some First Nations have found that the BC “location factor” does not result in adequate funding for labour and materials. Although these factors are set and seldom vary, changes to cost allowances have been negotiated when supported by a strong business case.



CHECKLIST - PHASE 1: CONCEPTION

- Identify source(s) of funds for the project.
- Identify the project as part of the community's First Nations Infrastructure Investment Plan and submit to the ISC BC regional office.
- Consult ISC's Practical Guide to School Projects for instructions about what is required to access funding at each stage of the school-development process, such as the documents required to apply for feasibility funding.
- Assemble the Project Team.
 - Hire a Project Manager (refer to ISC's Practical Guide to School Projects and the Government of BC's list of qualified Project Managers).
 - Appoint a leader from the community to work as the on-the-ground communication link between the community and the Project Team.
- Consult ISC's School Space Accommodation Standards to create a plan for school space.
- Begin formulating enrolment projections. This should include demographic and other data to demonstrate the need for space.
- Develop a plan for consultations and begin consulting with the community about their vision for the school.
- Begin negotiations with ISC Capital Facilities and Maintenance Program officials.
- Support the Project Manager to prepare documents that need to be submitted to ISC for review, approval, and for the allocation of funding for feasibility.

PHASE 2

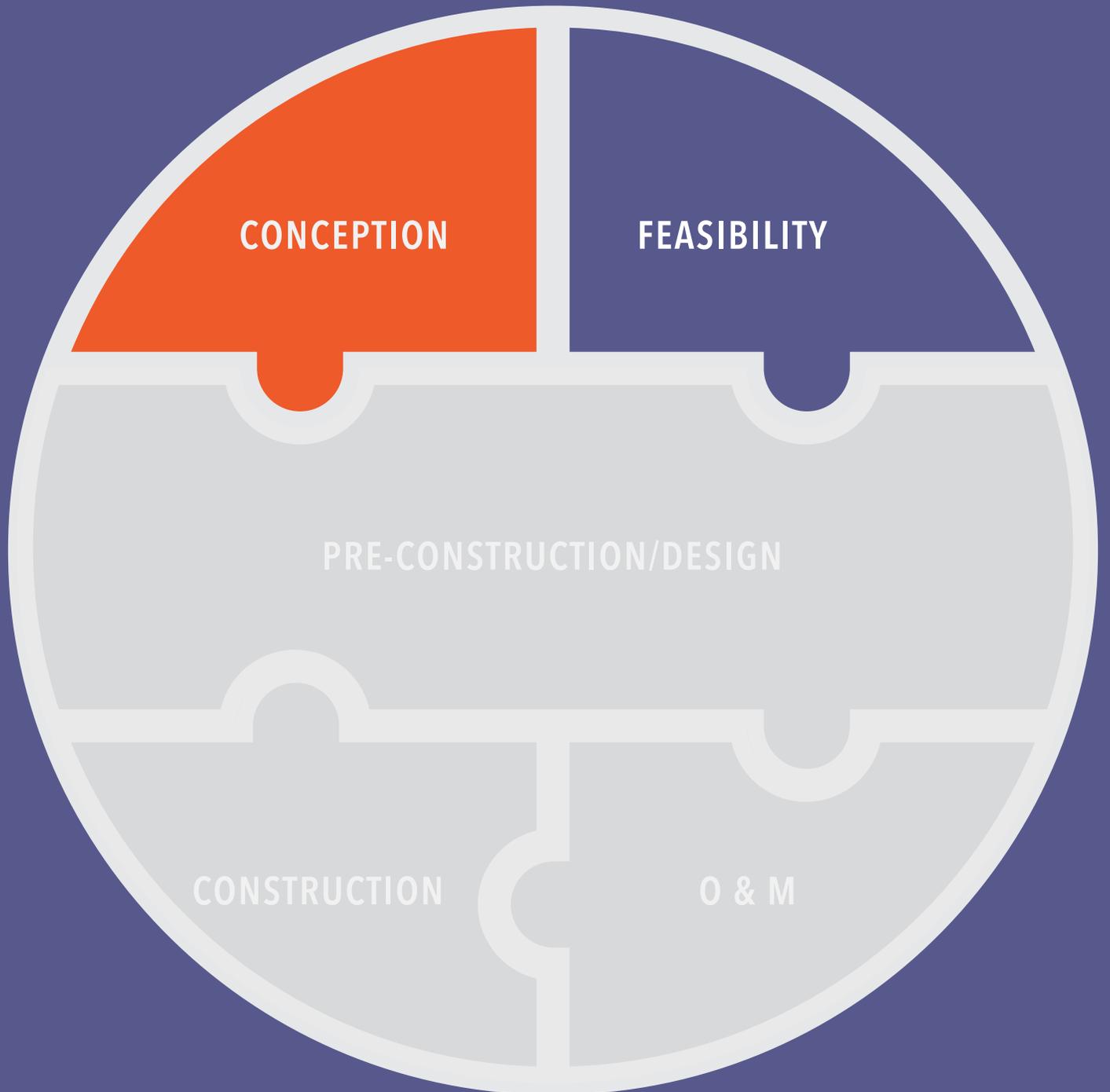
Feasibility

Complete the Necessary Studies

Feasibility, engineering, environmental,
archaeological studies and land encumbrance
check

Ongoing Consultations

Establish the Community's Vision
Confirm Enrolment



PHASE 2

FEASIBILITY

Feasibility refers to the work of identifying and confirming site location options that are free and clear of all impediments to construction. At the end of Phase 2, a First Nation will have established all of the conceptual and physical parameters of the facility.

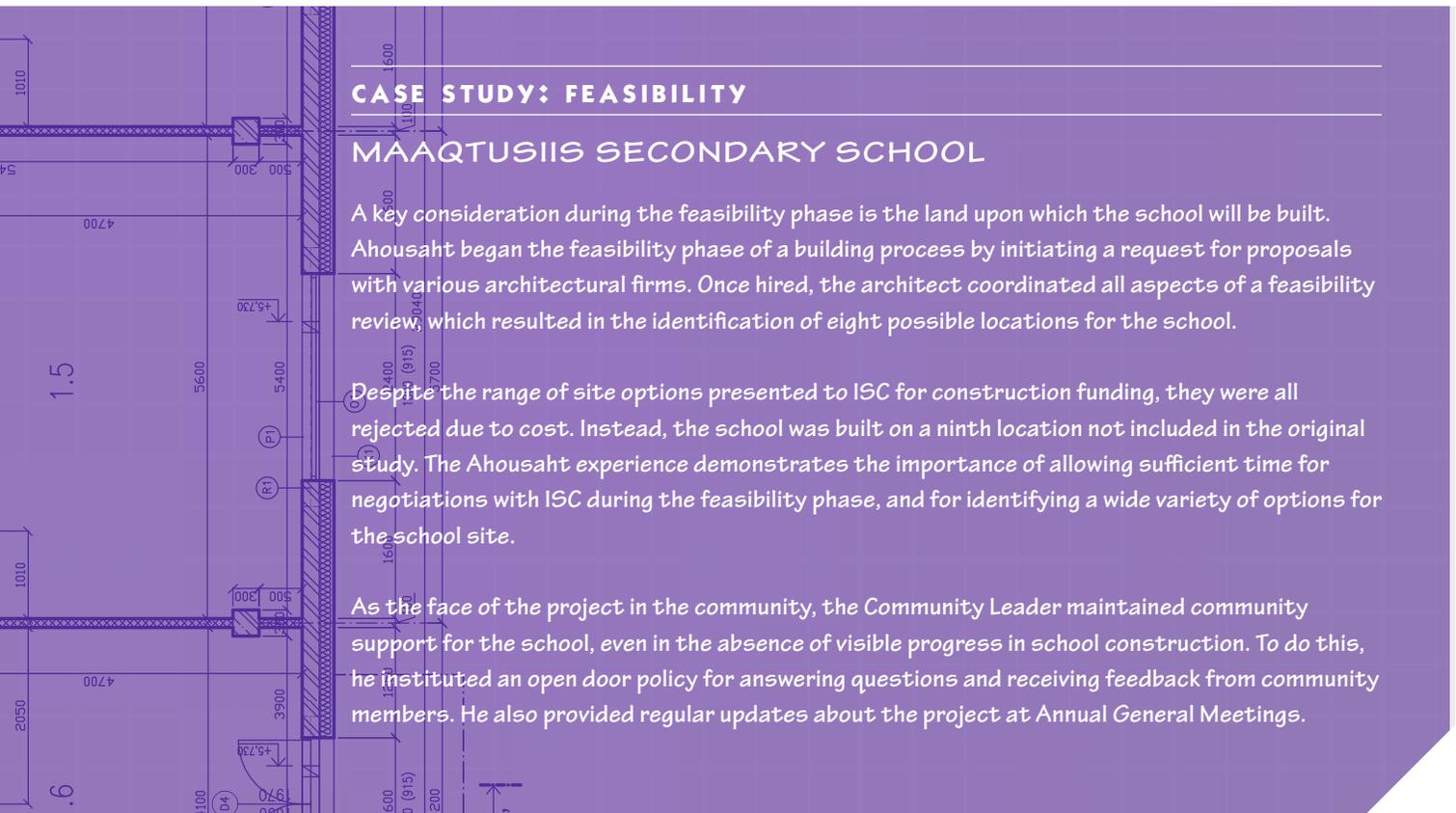
CASE STUDY: FEASIBILITY

MAAQTUSIIS SECONDARY SCHOOL

A key consideration during the feasibility phase is the land upon which the school will be built. Ahousaht began the feasibility phase of a building process by initiating a request for proposals with various architectural firms. Once hired, the architect coordinated all aspects of a feasibility review, which resulted in the identification of eight possible locations for the school.

Despite the range of site options presented to ISC for construction funding, they were all rejected due to cost. Instead, the school was built on a ninth location not included in the original study. The Ahousaht experience demonstrates the importance of allowing sufficient time for negotiations with ISC during the feasibility phase, and for identifying a wide variety of options for the school site.

As the face of the project in the community, the Community Leader maintained community support for the school, even in the absence of visible progress in school construction. To do this, he instituted an open door policy for answering questions and receiving feedback from community members. He also provided regular updates about the project at Annual General Meetings.



STUDIES

"Feasibility answers the question of 'yes or no' by focusing on the core issue of when, where, what and how much."

TOOLKIT STEERING COMMITTEE PARTICIPANT

In this stage there are five major types of studies / assessments to be completed. Generally, these are coordinated by the Project Manager and led by architects, civil engineers, or other professionals from the consulting team. The five core studies / assessments to be undertaken include:

1. feasibility;
2. engineering;
3. environmental;
4. archaeological; and
5. land encumbrance.

Feasibility Study

Feasibility studies are undertaken to determine the technical (architectural and engineering) and economic feasibility of one or more optional sites for building the school. Working in conjunction with the Project Team, feasibility studies are usually undertaken by registered professionals (architects and engineers).

In general, feasibility studies include:

- Exploring site characteristics and area requirements;
- Determining factors affecting site development;
- Identifying options that can be implemented within the project scope, budget and timeline; and
- Ranking site options and making recommendations.

Engineering Study

Working under the direction of the Project Team, an engineer will lead a study that typically includes a review of:

1. natural hazards;
2. accessibility (pedestrian and vehicular);
3. water supply and wastewater disposal;
4. preliminary geotechnical assessments (excluding drilling and excavation);

5. potential development considerations;
6. drainage; and
7. others items as required.

Environmental Assessment

The environmental assessment process for a school includes two stages:

1. **Project Environmental Outline:** which describes the basic environmental issues and planned investigation, possible mitigation strategies, and an assessment of previous site investigations.
2. **Environmental Assessment:** which identifies project activities, the impact of those activities, and mitigation strategies.⁴

Environmental assessments are governed under the *Canadian Environmental Assessment Act* and other relevant federal and provincial statutes such as the *Fisheries Act*, the *Species at Risk Act*, and the *Canadian Environmental Protection Act*.

Archaeological Assessment

This assessment determines whether the desired school site is situated on or near an archaeological or burial site that has known significance to the First Nation. This information may be available in the community or there may be relevant information archived at Parks Canada (historical research) or at national and regional anthropology museums. If it is determined that the proposed school location may disturb an archaeological site, an archaeological report will outline an assessment of the impacts and will identify mitigation strategies.

In order to protect sites with historical and cultural significance, it may be beneficial to establish an archaeological committee to work with the Project Team as they conduct archaeological assessments and surveys of particular sites. This committee can consist of the Community Leader, Elders, historians, archaeologists, anthropologists, or members of Chief and Council who will guide the work of the Team and provide recommendations for site selection.

⁴ ISC. 2003. A Practical Guide to New Schools: Appendix 9/General Terms of Reference for Completing Environmental Assessments.

Land Encumbrance Check

A land encumbrance is a restriction on land that can create roadblocks for funding and construction. Generally, an encumbrance restricts free use of the property until the issue is resolved. For example, a land encumbrance can include lands held by a Certificate of Possession (CP). In these cases, it will be necessary to come to an agreement with the CP holder(s) to gain access to the land. For a site to be considered an option, there can be no land encumbrances. An encumbrance check can be initiated with an encumbrance researcher at ISC, who can carry out the necessary check of both on- and off-reserve lands.

CONSIDERATIONS

1. The cost of feasibility will vary depending on the anticipated size of the school.
2. Some First Nations will opt to pay for feasibility in advance of ISC approval. For First Nations relying solely on ISC funding for feasibility, a request for funding or for a meeting to explore funding alternatives should be submitted early.
3. ISC will likely make requests for modifications to the studies and there may be a gap in time before beginning pre-construction work in Phase 3.
4. Prices for materials and labour change over time. It is important to be aware of the overall cost-ing model while keeping momentum through consistent communications with ISC.

CONSULTATION

Enrolment projections will continue to drive consultations during this phase, as negotiations with ISC about school space become constrained by site selection. Community consultations are critical for confirming continued support for the school. The hard work invested in creating a strong community vision during conception can easily be lost if clear and consistent communications with community members is not maintained throughout the process.

At this juncture, consultations should focus on defining the number of students expected to attend the school. However, this should be more than an exercise of counting the number of students who expect to enroll. Rather, more direct commitment from parents should be sought, such as through confirmation emails, signatures or a community survey. This will be beneficial for negotiations with ISC and will help ensure that expectations match actual enrolment when the school opens.

A Story from ...

STZ'UMINUS FIRST NATION

SCHOOL NAME: Stu'ate Lelum Secondary School

PROGRAMS: 8-12

OPENING: Fall 2012

TOTAL COST: \$12 million (Total)

For Stz'uminus, the real negotiations about school size and enrolment began at the feasibility stage. The community wanted to improve the facility by building a big library and lecture hall. Negotiation of these issues was challenging. After months of back and forth with ISC about the community's feasibility submission, the band ended up contributing upwards of \$1 million of own source revenue for upgrades that would turn the school facility into their vision of a resource and meeting space for all community members.



CHECKLIST - PHASE 2: FEASIBILITY

- Hire professional consultants to conduct a feasibility study and determine the technical (architectural and engineering) and economic feasibility of multiple optional sites for building the school.
- Support the Project Team to create an environmental outline and assessment for the proposed school project.
- Hire a professional consultant and/or assemble a committee to conduct an archaeological assessment of the proposed sites.
- Initiate a land encumbrance check with an encumbrance researcher at ISC.
- Consult with the community to confirm enrolment projections.
- Support the Project Manager to prepare documents required for submission to ISC for review, approval, and for allocation of funding for design.
- If you are using Own Source Revenue, make sure it is confirmed.

PHASE 3

Pre-Construction

Design

Consultations

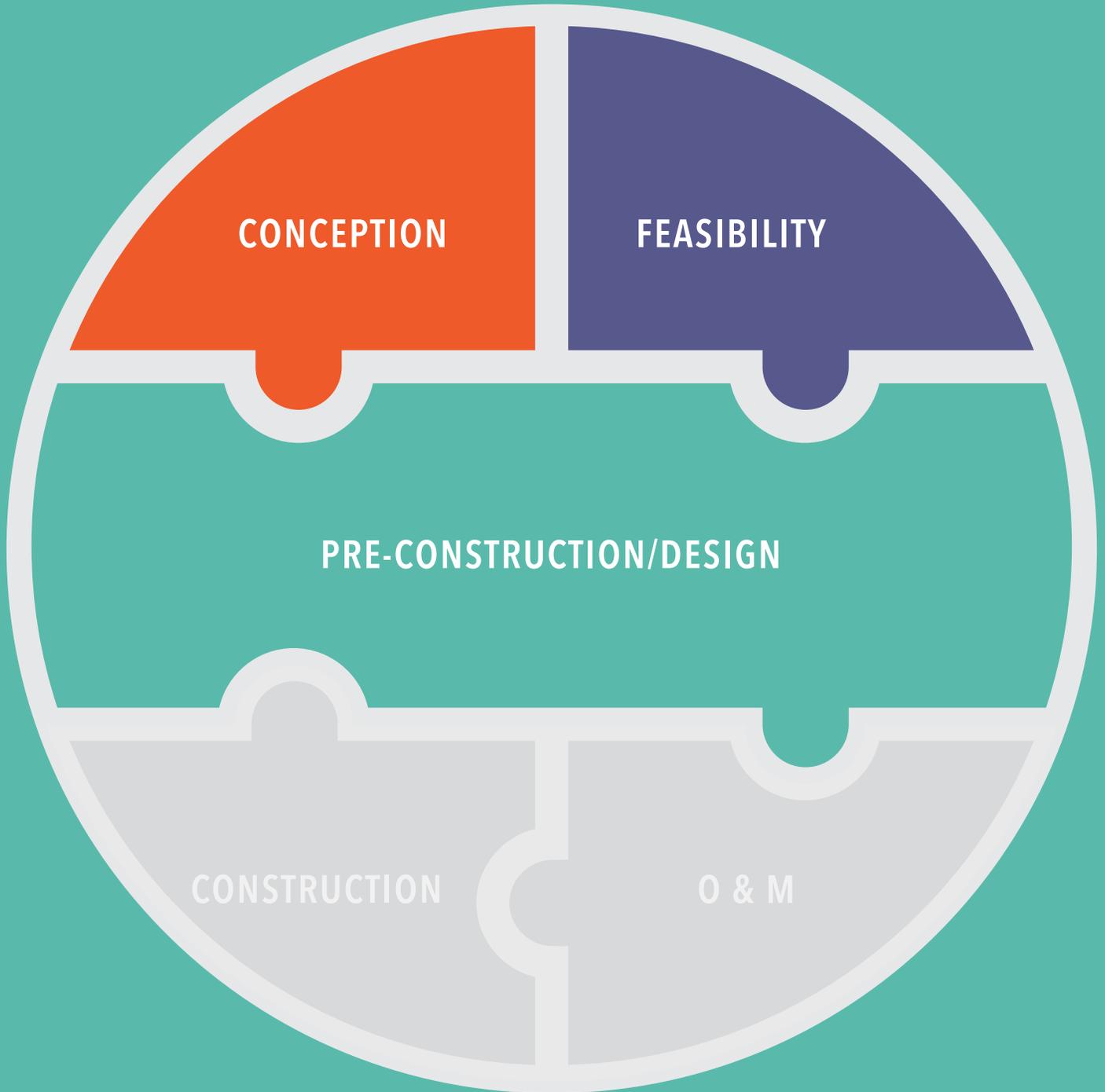
Consider: culture, function, affordability, social context, climate, geography, sustainability, technology, bus transportation, special education

Tendering

General contracting vs. construction management

Site Superintendent

Identify necessary personnel



PHASE 3

PRE-CONSTRUCTION/DESIGN

The pre-construction and design phase encompasses all the planning work that will be required to prepare for construction. In Phase 3, two major activities will be completed:

1. the design of the school; and
2. the hiring of the general contractor or construction manager (tendering).

CASE STUDY: PRE-CONSTRUCTION

MAAQTUSIIS SECONDARY SCHOOL

Ahousaht chose the construction management approach to manage the tendering and construction of the school. The biggest benefit of this approach was the control it provided the First Nation over the selection of the contractors and suppliers. By assembling different work packages to be tendered, the Team was able to put together local construction crews and use local materials, such as the cedar siding of the school, which was sourced and cut locally by First Nations. Altogether, 80% of the construction crew were First Nations people.

For the school design, the team took a cost-effective approach to incorporating Ahousaht culture into the Maaqtusiis Secondary School design. Students participated in bringing culture to the school by applying carved designs from old plywood into the concrete. Beyond its practicality, this approach also helped foster a sense of student pride and ownership of the school.

DESIGN

"Design control is cost control."

TOOLKIT STEERING COMMITTEE PARTICIPANT

The design of the school project will be largely driven by the lead consultant, who works with the Project Team to design the school facility in line with the community vision, funding parameters, and timelines.

The following considerations should be included in the design phase.

Consultations

The importance of community consultations at this stage cannot be overstated. The benefits of creating a school in which community members see themselves include pride of ownership, reduced vandalism, as well as greater volunteerism and community spirit.

At this point in the development process, the community should be invited to provide direct input into design. Although it is a natural impulse to leap head first into design, a well-planned and staged approach to consultations will help ensure that a comprehensive vision is achieved. The Project Team should focus on talking with teachers about how they intend to use the space and find ways to incorporate their needs into a practical design. As social anchors in the community, Elders should also be involved in focused discussions about school design, and students and parents will provide voices to the phase, as well.

Once complete, the consultation results can then be aggregated in a preliminary conceptual drawing, to be returned to the community for further input and validation.

Culture, Function, Affordability, & Accessibility for All Students

Balancing culture, function, affordability and accessibility, including for students with exceptionalities is an important aspect of design. The key to design is arriving at a concept of a school that meets the priorities of the community in each of these areas.

Historically, communities have tended to prioritize cultural design. While the resulting buildings are often beautiful physical representations of the community's commitment to preserving language and culture, they can be difficult to maintain due to limited O&M funding and human resources within the community.

Given such concerns, more First Nations schools are now being designed specifically to require a reasonable level of maintenance throughout the lifetime of the school. They also operate from a design philosophy of saving money on the outside in order to enhance what goes

inside, such as new computers and machines for industrial arts. To fill the gap, communities are finding interesting and cost-effective ways to incorporate culture into the school, such as through community art projects.

Social Context

It is important for the architect, in conjunction with the Project Team, to anticipate how the community will interact with the building and to incorporate design elements to maximize its life within its social environment. For example, where there is a risk of vandalism, First Nations have installed specialty glass windows that are difficult to break. Through these and other measures, the school is maintained as close to its original form as possible and can continue to be a source of community pride.

In addition to community consultations to develop the design of the school, the Canadian Standard Form for Architectural Services sets out other work of the architect in design development:

- Review alternatives;
- Review statutes, codes, guidelines and standards;
- Produce preliminary, pre-design and final drawings (site plan, building plan, elevations, sections);
- Prepare cost estimates and cost plans based on preliminary drawings; and
- Create a work plan (work breakdown) with definitions of major systems and specifications.

Climate and Geography

Considering climate and geography as part of design is imperative for ensuring the school will live out its expected life and, most importantly, continue to be a safe and healthy environment for the school population.

When schools are built in northern communities these two elements must be considered together. As an example, roofs with steep pitches are necessary to allow the snow to move away from the building. However, care must be taken to ensure snow does not fall near walkways. Addressing this aspect in the design is relatively easy to do prior to construction, whereas changing a building later can be expensive, lengthy, and time consuming.

Sustainability

In the absence of a business case to demonstrate long-term cost-effectiveness, ISC typically does not include Leadership in Energy and Environmental Design (LEED) standards or other sustainability standards as a fundable aspect of the school. Additionally, maintaining sustainability standards once the school is built may require specialty services and technical

skills that may not be readily available in the community. However, some sustainable alternatives may be associated with potential benefits. It is therefore important to think comprehensively about how sustainability features will impact O&M funding.

For example, many communities are moving towards the use of geo-thermal heating and cooling systems as a sustainable alternative to traditional Heating Ventilation and Air Conditioning (HVAC) systems. These systems are expensive up-front but can create significant cost-savings over time if the First Nation has the required capacity to have them properly installed and maintained.

As a best practice, education facilities should be designed with due consideration for the capacity of the First Nation to support long-term O&M.

Technology Needs

School design must accommodate technology needs, possibly including computer rooms for teaching, as well as necessary storage and access to the associated equipment.

Additionally, it is important to consider how the school will be connected to the Internet. In rural areas, a dedicated conduit (capable of receiving fibre cabling) must be installed. In most urban areas, fibre connections are usually done via aerial connections, so no dedicated conduit is necessary. Verification from the fibre service provider should be obtained to ensure a proper connection can be made.

At the building entrance site, a hole needs to be punched through the building and a conduit must be in place to receive the fibre coming into the school.

Once the cable is inside the school, the fibre must terminate in a dedicated clean, secure, ventilated wiring closet. In larger schools, the wiring closet must be able to house one or two servers, as well. A janitor's closet is NOT acceptable for this purpose.

The wiring closet must also have a dedicated uninterruptible power supply (UPS) with surge suppression, capable of working for at least 4 hours without power. There must be ample power outlets in this wiring closet for the UPS, firewall, server(s), and networking switches.

In most cases, the cabling running to all wired computers, wired phone systems, and wireless access ports should be CAT 6 grade ethernet cabling. If there are cabling runs longer than 100 feet, those need to be fibre cables. Once it is determined how many wired computers, wired phones and wireless access ports are required, layer 3 POE network switches with a sufficient number of ports need to be ordered and installed in the wiring closet. These port(s) need to be connected to a firewall capable of content filtering, anti spyware, anti malware, and anti virus protection for all devices in the school.

Additionally, commercial grade wireless access ports need to be purchased, configured and installed to provide adequate coverage throughout the school for wireless devices.

Bus Transportation & Accessibility for All Students

First Nation schools may require facilities for accommodating school buses, including safe school bus access and egress to the site, as well as facilities for dropping-off and picking-up students at school – including students with exceptionalities, who might require special access to buses.

Where school buses drop off and pick up students on a school site, school buses are often accommodated in one of three ways.

1. On-street pull-out, where there is not sufficient space on the school site to accommodate a bus loop
2. On-site loops for school buses only
3. Shared on-site school bus loops, used for the school bus as well as parent drop-offs and pick-ups

The approach selected in each case is often based on the size of the school site and the amount of space available. On site exclusive bus loops allow for the most efficient school bus operations and reduce traffic impacts on the streets near the school, and also minimize pedestrian and vehicular conflicts on the school site.

Capacity: The on-site loop (or on street pull-out space) should be sized to accommodate the expected number of buses. The number of buses a school requires will depend on a number of factors:

- Student eligibility and the catchment area: the number of children requiring bus service depends on the First Nation's policy with respect to school bus eligibility and the size of the school's catchment area.
- School bus routing: routes followed by school buses should be optimized to maximize the number of students per bus and minimize the number of buses.
- Scheduling: bus arrival times may be staggered to reduce the number of buses simultaneously stopping in the bus loop (or the on-street pull-out).

Bus Loop: A large school site may have sufficient space to accommodate a dedicated school bus loop. The configuration for on-site bus loops is generally single-file, right wheel to the curb, with operation one-way in a counter-clockwise direction to ensure that loading/unloading of students occurs on the right-hand side of the vehicle, adjacent to the school building.

The configuration of the bus loop should not require backward movement by buses or for children to walk between buses when loading or unloading.

Shared Loops: Shared bus loops that also allow parent drop-offs and pick-ups in the bus loop may require scheduled times that separate parent drop-offs and pick-ups from bus arrival and departure times. Usually, parent drop-offs in the morning are allowed only before school buses begin to arrive. For after school dismissal, parent pick-ups in the loop may be allowed after school buses have departed.

Shared bus loops may require signage customized to reflect the hours when passenger cars are not permitted in the loop, as well as designated space within the loop that is restricted solely for school bus loading and unloading.

Space for Special Education

A practical and student-centred approach to providing accessibility for students with special needs is to address this issue when new construction or renovations are planned and approved, as it is far less costly to design accessibility features at the outset than it is to retrofit a building at a later date. This is a long-term planning process that should, wherever possible, anticipate student arrivals and any exceptional facility needs. (Although of course it may be necessary to implement changes to existing buildings later, if they are possible and reasonable as students' needs are identified).

The ability of students with special educational needs to access school facilities affects the inclusion of these students in the overall school environment. Related planning should ensure that all students have access to the school's facilities and all aspects of the school program. This access should be as seamless as possible; that is, there should not be an obvious distinction that some feature is only for students who have exceptionalities.

TENDERING

"If it's done right, the project can create little economic booms."

TOOLKIT STEERING COMMITTEE PARTICIPANT

Tendering refers to the process of hiring either a general contractor or a construction manager and trade contractors. Once the design is complete, a tender will be put out to hire the general contractor or construction manager to provide advisory services during design and to coordinate the construction of the new school or addition.

When federal funds are used for school construction, the tendering process is governed by the federal Tendering Policy on Federally Funded Capital Projects for First Nations On-Reserve.

There are two main types of tenders involved with the construction.

1. The first is the traditional approach of hiring a general contractor (also referred to as “stipulated sum tender”).
2. The second is to manage the project internally by hiring a construction manager.

Type 1: General Contracting

General contractors are companies that are responsible for managing a construction project. A firm is typically hired using a public tender process, where the winning bid offers the lowest fee for services.

With the general contractor approach, the First Nation will hold one contract with the general contractor, and the general contractor will hold various contracts with suppliers and/or labourers. This contract is called the Canadian Construction Documents Committee 2 (CCDC 2), which is the standard contract for work between the Project Authority and the general contractor to perform the work required for a single, pre-determined fixed price. His or her role is to source materials, hire trade contractors, lease vehicles and machines, and maintain all accounting and personnel matters.

Under a CCD 2 contract, the general contractor must supply a site superintendent. General contractors also often have their own “in-house” crew of carpenters, cement masons, excavators, and other trade contractors.

The tendering process for a general contractor begins with preparation of tender documents by the architect. These documents, collectively referred to as the bid package, are advertised in a public tender process. The bid package is then used by prospective general contractors to prepare and submit their stipulated price to the Project Authority.

Type 2: Construction Management

As with the general contracting approach, “construction managers” are responsible for managing a construction project. The major difference between the approaches is in the contractual relationship between the First Nation and the construction management firm and the trade contractors.

Within the construction management approach, there are two types of contractual arrangements:

1. The CCDC 5A “Construction Management Contract” is the standard contract between the Project Authority and construction manager for which the work is to be performed by trade contractors. The construction manager acts as an agent of the owner, providing advisory services and administering and overseeing the contracts between the Project Authority and trade contractors. In other words, the construction manager becomes an employee of the Project Authority.

Under this contractual arrangement the construction manager, with the assistance of the Project Team, will create packages for tendering to different trade contractors. Construction managers will use CCDC 17 contracts to hire trade contractors.

2. The CCDC 5B is a contract between the First Nation and the construction manager to provide advisory services during pre-construction and to oversee the contracts between the Project Authority and trade contractors. Under the contract, the work is performed on an actual-cost basis, plus a percentage or fixed fee, which is applied to actual costs. Although the construction manager plays the same role as if he or she were the agent of the Project Authority, he or she does not usually have signing authority over billing and payables.

CCDC documents are available for sale at various CCDC document outlets.

Similar to the general contracting approach, construction managers will also bid for the new school project in a public process. Typically, the Project Authority (with assistance from the lead consultant) will solicit proposals from construction management companies in a Request for Proposal (RFP). The RFP provides a description of the project, budget, schedule and other requirements of the Project Authority. A sample of the Ahousaht school project RFP for construction management services is provided in the Appendices.

While both approaches are used by First Nations throughout BC, Table 1.0 outlines the strengths and challenges of each approach.

Regardless of the approach taken, the Project Authority should include a lien holdback as a supplementary condition of the contract. In the context of building on reserve, a lien holdback is typically the last portion (usually 10%) of an invoice or progress claim the Project Authority withholds from the contractor until the building is complete and approved.

Though there is no law requiring or enforcing lien holdbacks for construction projects on reserve, due diligence (i.e. good project management) requires that both adequate lien and deficiency holdbacks be retained. The lien holdback serves two purposes:

1. To ensure the general contractor and/or trade contractors are comfortable providing a competitive bid in the absence of a right to impose a lien on reserve land.
2. To allow for the protection of trade contractors in the event that they are not paid by the general contractor.

TABLE 1.0		GENERAL CONTRACTING	CONSTRUCTION
STRENGTHS	<ul style="list-style-type: none"> <input type="checkbox"/> A stipulated price for services increases cost-certainty <input type="checkbox"/> Is generally preferred by ISC, which takes a funding perspective of least-cost opportunity and best value 	<ul style="list-style-type: none"> <input type="checkbox"/> The First Nation plays a strong role in project governance <input type="checkbox"/> Increased accountability of funds by the contraction manager to the Project Authority <input type="checkbox"/> Construction managers have the flexibility to prioritize hiring local trade contractors and buying local materials, keeping much of the economic benefit of the project in the community <input type="checkbox"/> The form of contract allows for flexible budgeting and greater control of trades scheduling 	
CHALLENGES	<ul style="list-style-type: none"> <input type="checkbox"/> Where there is no prior relationship it may be difficult to find solutions when things go wrong <input type="checkbox"/> There may be weak financial transparency and accountability to the Project Authority <input type="checkbox"/> There is no guarantee the general contractor will hire local people and buy local materials 	<ul style="list-style-type: none"> <input type="checkbox"/> Higher risk to the First Nation responsible for delivering the project within a fixed budget <input type="checkbox"/> No guarantee that funding for cost overruns can be covered by either the First Nation or ISC 	

Contracts also include a deficiencies holdback. This holdback refers to amounts withheld from the contractor to deal with incomplete items of work specified in the contract documents. These funds are released once the deficiencies have been addressed. The purpose of the deficiencies holdback is to provide a degree of protection to the First Nation if the general contractor or trade contractors are unable to address deficiencies identified in a post-construction “shake-out” (end of Phase 4).

THE SITE SUPERINTENDENT

An important person who will become a key part of the core Project Team during construction is the site superintendent. The site superintendent is responsible for coordinating and overseeing daily on-site construction activities. As the primary point of contact for all trade contractors and installers, the site superintendent works to ensure productive and efficient use of machines, labour and materials.

It is important to distinguish between the roles of the Project Manager and the site superintendent. Unlike the site superintendent, the Project Manager may not be on site every day, but will rely on the site superintendent to communicate construction issues if and as they arise. Working in conjunction with the Community Leader, the job of the Project Manager is to respond to issues that relate to long-term scheduling, funding and community approval processes.

CONSIDERATIONS

1. The design should be fully complete before the project goes to tender. This will ensure that the bidders have enough information about the project scope and budget to provide a realistic price for the job.
2. There may be a gap of several months between completion of the pre-construction phase and the submission to access funds for construction. The Project Manager should ensure that submissions to ISC are up-to-date.
3. Concurrently, the Project Team should continue to communicate with the community and generate excitement about the project.
4. Although it is ideal to draw from local people and resources as a way of creating “economic booms,” ISC capital funding is not provided for training trade contractors.
5. For projects in the north, climate and location will necessarily dictate when construction can reasonably take place. In general, the Project Team should aim to begin construction in spring, in order to get an enclosed building in place before the winter, at which point work on the interior can begin.

A Story from ...

THE HAISLA NATION

School Name: Haisla Community School
Programs: N/A
Opening: Fall 1992
Total Cost: \$2.9 million (Construction)

For the Haisla Community School, the first task of the design team was to work with the community to identify an overall theme. The chosen theme was “living on water’s edge,” which captured the community’s intent to embrace both modern and traditional ways of learning. The theme also reflects the community’s need for an open space to accommodate an oral teaching methodology and the dual function of school and community lodge.

During pre-construction, the Project Manager focused on building community capacity by hiring both trained and untrained people in the community. The Team instituted an apprenticeship program through which unskilled workers worked alongside seasoned contractors to build the school. Band members worked on mechanical, electrical, concrete forming, carpentry, excavation, drywall and painting.



CHECKLIST - PHASE 3: PRE-CONSTRUCTION

- Assist in the preparation of tender documents to hire a general contractor or an RFP to hire a construction manager.
- Consult community members to gain their input on school design to determine the best configuration and use of space.
- Support the architect to prepare a preliminary conceptual drawing.
- Support the lead consultant and Project Team to review statutes, codes, guidelines and standards.
- Support the lead consultant and Project Team to prepare cost estimates and cost plans based on preliminary drawings.
- Support the Project Team to create a project work plan.
- Support the Project Manager to prepare documents to submit to ISC for review, approval and for the allocation of funding for school construction.

PHASE 4

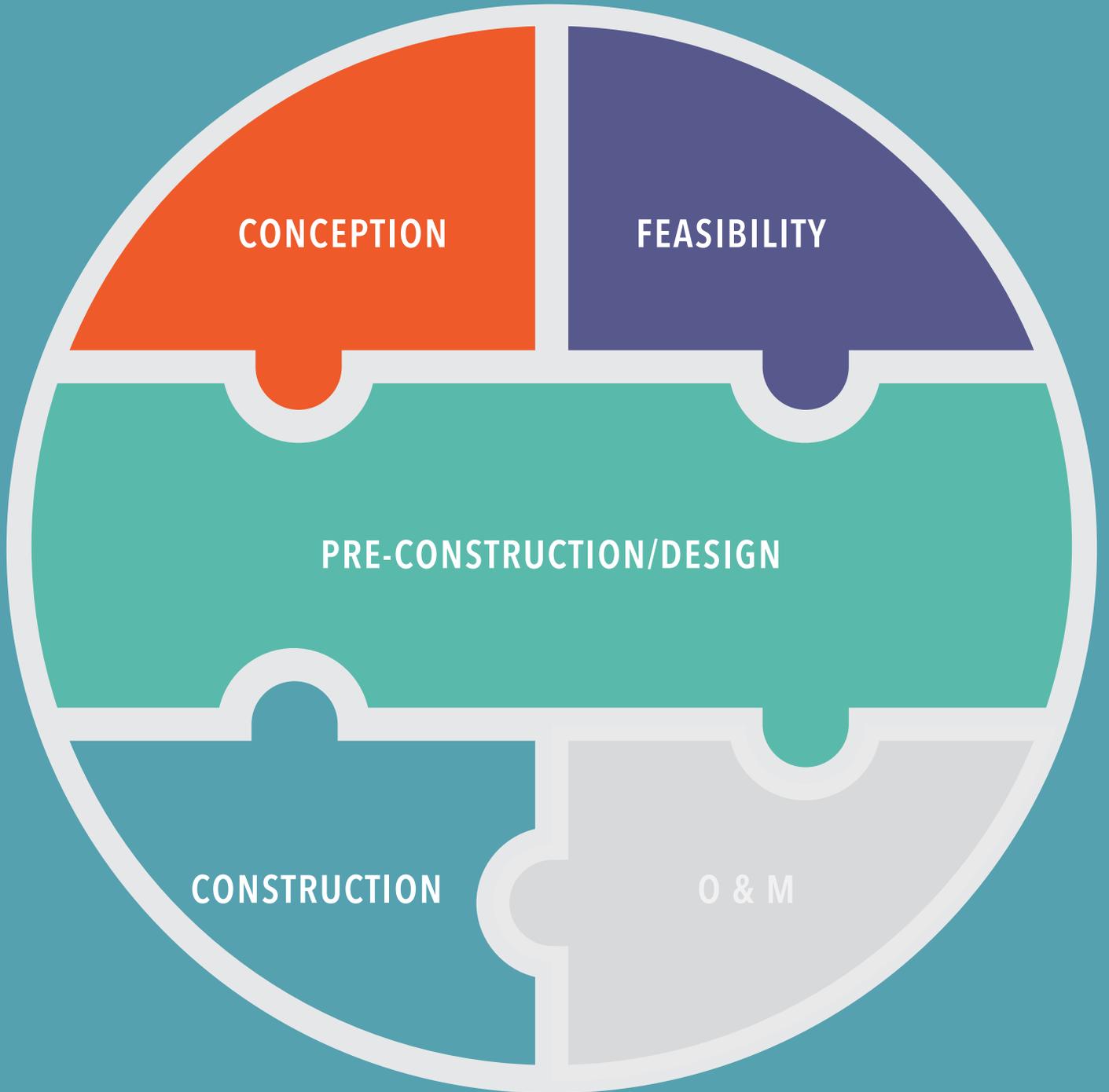
Construction

Changes

Planning and funding

Post-Construction “Shake-Out”

Ensure Quality; plan for O & M



PHASE 4

CONSTRUCTION

Construction refers to the physical process of building the school from the ground up.

CASE STUDY: CONSTRUCTION

MAAQTUSIIS SECONDARY SCHOOL

Among the most important lessons from the Ahousaht experience is the need for flexibility throughout construction management. This lesson came early in the construction phase, as the site was being excavated and the crew discovered a deposit of blue clay beneath the surface of the school site. The presence of blue clay meant that even a small, shallow excavation could slump and collapse. As a result, the Project Team decided to relocate the building to avoid the blue clay. To implement the decision, the Team had to act quickly to submit a contemplated change order to ISC and begin negotiating an increase to the project budget.

Other issues during construction included the delivery of a mislabeled heating, ventilation and air conditioning system, as well as damaged millwork. Despite these setbacks, careful construction management resulted in the completion of an enclosed building before winter arrived at Flores Island.

Although not applicable to all communities, one creative way the Ahousaht Project Team was able to maximize its construction dollars was to coordinate activities and resources with the building of an RCMP building and a multiplex housing project. The three projects shared housing for construction workers (trailers located in the school yard), shipping expenses, and the use of equipment. In addition, crew accommodations were staffed and run by community members.

CONSTRUCTION

Construction is the most exciting phase of building a new school or addition. While Phases 1 to 3 focus heavily on the work of the Project Team to plan for construction, Phase 4 depends largely on the ability of the general contractor and trade contractors to implement the plans.

No matter how well Phases 1 to 3 have been completed, most school projects will experience setbacks and require the use of change orders. Change orders are written orders to the contractor signed by the Project Authority authorizing a change to the work (minor change order) or an adjustment to the contract (major change order).

Minor change orders typically involve a change to the work resulting from delays getting materials to the site or minor changes in design, among other things. Typically, a contingency fund will have been included in the contract with the general contractor or construction manager to cover minor change orders. The Project Manager will track these change orders in order to keep the project on budget. ISC Regional offices can also assist with creating a risk assessment or a risk management strategy, which can be very useful for thorough preparations and addressing contingencies.

Major change orders in construction, such as the example from Ahousaht, are unanticipated and can result in increased costs and extended timelines. When they occur, the Project Team will likely be required to complete the following steps.

1. Submit a Treasury Board Submission for “cost overruns,” which may delay a project. “Cost overruns” refers to the amount by which the cost to address a setback exceeds the original estimated and/or budgeted cost. The federal government may provide funding for cost overruns that a “qualified professional could not have reasonably foreseen.”⁵ For more information and instructions on completing a Treasury Board Submission for cost overruns, see Appendix 18 of ISC’s *A Practical Guide to School Projects*.
2. Negotiate the change order. Change orders are used by both the Project Authority and contractors (general or trade contractors depending on the approach) to alter the scope of work set out in the original contract. Standard change orders typically include:
 - details about the project, contractors etc.;
 - specifications of the change;
 - information about the cost of the change;
 - notice from the contractor to the Project Authority (or construction manager as the case may be); and
 - approval from the Project Authority (or construction manager) to implement the change.

5 ISC. 2003. *A Practical Guide to Schools Projects*. pg 17.

POST-CONSTRUCTION “SHAKE OUT”

“Challenge your design and contracting team to educate you about what you will be taking over.”

TOOLKIT STEERING COMMITTEE PARTICIPANT

At this point in the process, the school or addition will be nearly built and everyone in the community will be anticipating the grand opening. However, amidst the excitement there are a number of proactive measures the Project Authority will need to take in order to be ready to take over the building once the Project Team is dismantled.

It is important to identify the individual (often the school principal, an educator, or a Community Leader) who will engage with the Project Team as well as trade contractors throughout construction to understand what systems and features will be the focus of ongoing maintenance and repair. In addition, the job of the point person includes the following.

1. Explore options for insuring the school. ISC does not provide insurance for individual school projects because they are “self-insured”. This means that, for the most part, the government underwrites its own risks and does not purchase insurance in the commercial insurance market. However, major renovations and repairs (valued at over \$1.5 million) are generally categorized as new capital projects and will become part of the larger ISC capital planning process. It is therefore advised that a First Nation arrange for private insurance.
2. Hold contractors and subcontractors accountable for deficiencies. As the rightful owner and operator of the new facility, the Project Authority must be satisfied with the work of the general contractor and trade contractors. To ensure satisfaction, the work of the point person will be to keep a “punch list” of deficiencies and ensure the relevant party remedies deficiencies within the warranty period.
3. Begin to develop the Operations & Maintenance (O&M) Plan. The development and ongoing use of an O&M Plan is essential for ensuring the building operates efficiently and at maximum capacity. Details of what must be included in the plan are outlined in ISC’s *A Practical Guide to Operations and Maintenance*. ISC can fund the development of a plan as part of its formula funding for capital projects. This activity should therefore be included as part of a contract with the Project Manager or member of the consulting team in order to ensure a plan is in place when the school becomes operational. A sample O&M Plan is provided in the Appendices.

CONSIDERATIONS

1. First Nations can employ various methods to build capacity and prepare for O&M, such as working with installers to develop training videos and ensuring they have an up-to-date book that lists all suppliers and contractors, should the need for instructions and supplies arise in the future.
2. To address O&M capacity gaps, ISC's Community Infrastructure Directorate has developed a number of training programs, workshops and resources to help communities build capacity in O&M.

Consultations

Consultation during construction is important to maintain momentum and community support. Parents, teachers and students must all be excited at the prospect of the new facility and remain committed to enrolment after it opens. To sustain excitement, Project Teams can organize tours through the site at various key points (excavation, concrete, framing etc.). Other opportunities to consult with community members during this phase include open houses and door-to-door visits to talk informally about the school and its future in the community.

CASE STUDY: CONSTRUCTION

MAAQTUSIIS SECONDARY SCHOOL

The operations and maintenance policy established under BCTEA bases funding on the number of students attending the school. This may pose a challenge for Ahousaht if there is not enough funding to properly maintain the school. However, the consistent efforts of the Project Team to consult community members, parents, teachers and students and include them in developing the vision for the school throughout the school-building process has resulted in student enrolment closely aligning with the original enrolment projections. The beautiful school and the nurturing learning environment mean that enrolment is expected to be maintained in the coming years as the community continues to thrive and grow.

A Story from ...

COWICHAN TRIBES

SCHOOL NAME: Quw'utsun Smuneem Elementary School

PROGRAMS: K-3

OPENING: Spring 2004

TOTAL COST: \$2 - 3 million (total)

The story of the Quw'utsun Smuneem Elementary School highlights the importance of building a school considering seasonal variations for different locations. Site excavation and clearing began in the spring when the ground was very wet. As a result, the machines became trapped and it took some time for mechanics to arrive on the site to get them back up and running. This roadblock in construction caused major delays that impacted both the cost and timing of the final delivery of the school.



CHECKLIST - PHASE 4: CONSTRUCTION

- If major setbacks occur:
 - Submit a Treasury Board Submission for cost overruns; and
 - Negotiate a change order with the general contractor (and/or trade contractors depending on the approach).

- Identify the individual (often the school principal, an educator or a Community Leader) to:
 - Develop a contractor and suppliers list;
 - Develop and monitor a punch list of deficiencies and a schedule for addressing deficiencies within product and systems warranty periods;
 - Develop the Operations & Maintenance Plan; and
 - Arrange for private insurance.

- Consult with the community to continue to build excitement about the school's grand opening.

- Support the Project Manager to submit a post-completion report to ISC and ensure O&M funding is included in the Funding Agreement (refer to ISC's Practical Guide to School Projects for instructions).

PHASE 5

O & M / OM

Funding

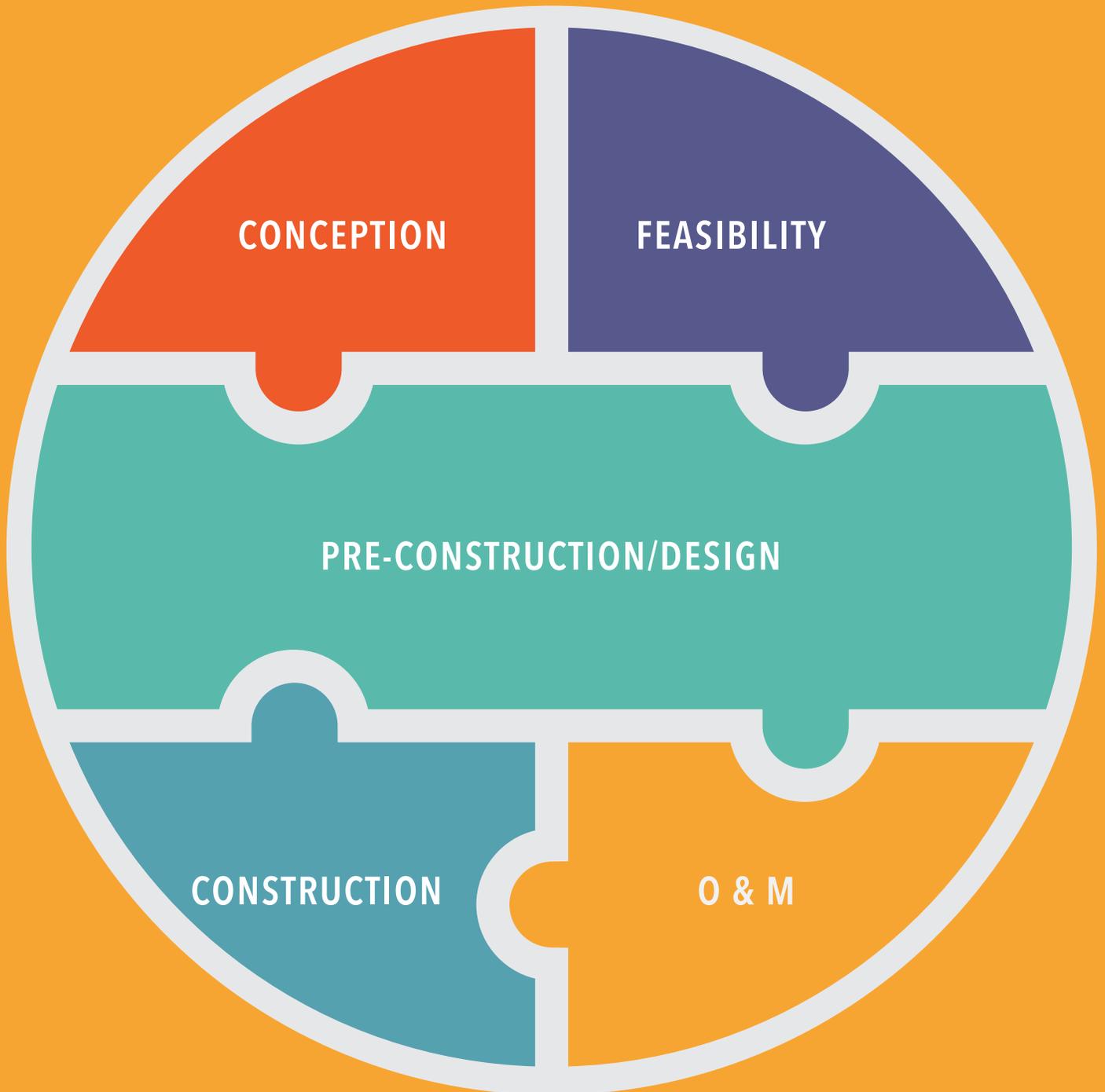
ISC Funding

Condition Monitoring

Minor versus major repair and upgrades

Ongoing Consultations

Maintain community vision and enrolments



PHASE 5

OPERATIONS & MAINTENANCE ONGOING MONITORING

Operations and Maintenance (O&M) refers to activities, resources and the provision of services necessary to operate a school facility and preserve it near to its original condition and to realize its normal life expectancy.⁶

FUNDING

"The lifespan of a school really depends on its O & M budget."

TOOLKIT STEERING COMMITTEE PARTICIPANT

As with funding for feasibility, design and construction, most First Nations require ISC funding for O&M. Base O&M funding is provided pursuant to the terms and conditions set out in Funding Agreements between ISC and the First Nation.

Funding Agreements used with First Nations, including Block Funded Recipients, are agreements in which funds are provided annually through contributions, transfer payments and grants.

As noted in Phase 1, the BCTEA funding model transfers funds on a per-student basis for core operational costs, which includes management and O&M, provided by ISC as part of the allocation for Band Operated Schools Instructional Services. In this enrolment driven plus supplemental grants model, schools have flexibility for using their funding – including the component identified for O&M. For more information, see the BCTEA First Nations Education Funding Handbook at www.fnesc.ca.

CONSIDERATIONS

1. It is not unusual for First Nations to supplement their O&M funding (for example, by establishing user fees for garbage disposal, sewer and water and for the use of the facilities by individuals and organizations outside of school hours).
2. Whereas the ISC funding model for O&M prior to 2012 was based largely on square footage and location, the BCTEA funding approach does not set aside a separate budget for O&M. While a First Nation may be inclined to allocate O&M dollars towards other school budget needs, it is important to ensure that an appropriate amount of funding is reserved for O&M in order to preserve the life of the school. It is strongly advised that each First Nation establish a realistic O&M budget and stick with it.
3. For more information about how the funding model will impact program and O&M funding, contact an ISC BC Region Funding Services Officer.

CONDITION MONITORING, REPAIRS AND UPGRADES

ISC tracks information about the conditions of schools on reserve in the Asset Condition Reporting System (ACRS).

Note: A school is only included in the ACRS if ISC funded the construction of the building OR if it was constructed using other revenue but has been confirmed by ISC that the building meets code and safety requirements. For example, if a First Nation has a building it wants to use as a school that was constructed using revenue other than from ISC (such as own source revenue) it will not be included in ACRS unless requested by the First Nation and with appropriate supporting documentation to prove it meets school code and safety requirements and with engineer/architect signed drawings.

To collect information about the nature of repairs needed in schools, ISC hires independent contractors to inspect schools every three years. The inspectors are typically qualified architects, civil engineers, structural engineers, and other professionals who are trained to identify potential and apparent issues with the building. Once on site, inspectors complete ACRS reports that identify requirements to bring schools up-to-date. Within the reports, deficiencies and repair needs are grouped into three project categories:

1. ACRS Group 1 Projects: Routine O&M activities and repairs. Funding for these projects is provided within a First Nation's annual budget as provided under BCTEA.
2. ACRS Group 2 Projects: Major repairs/component replacements. Funding for these projects is provided under Funding Agreement through a First Nation's submission for capital funding (for minor capital projects). Typically, Group 2 projects are valued less than \$50,000 per deficiency.

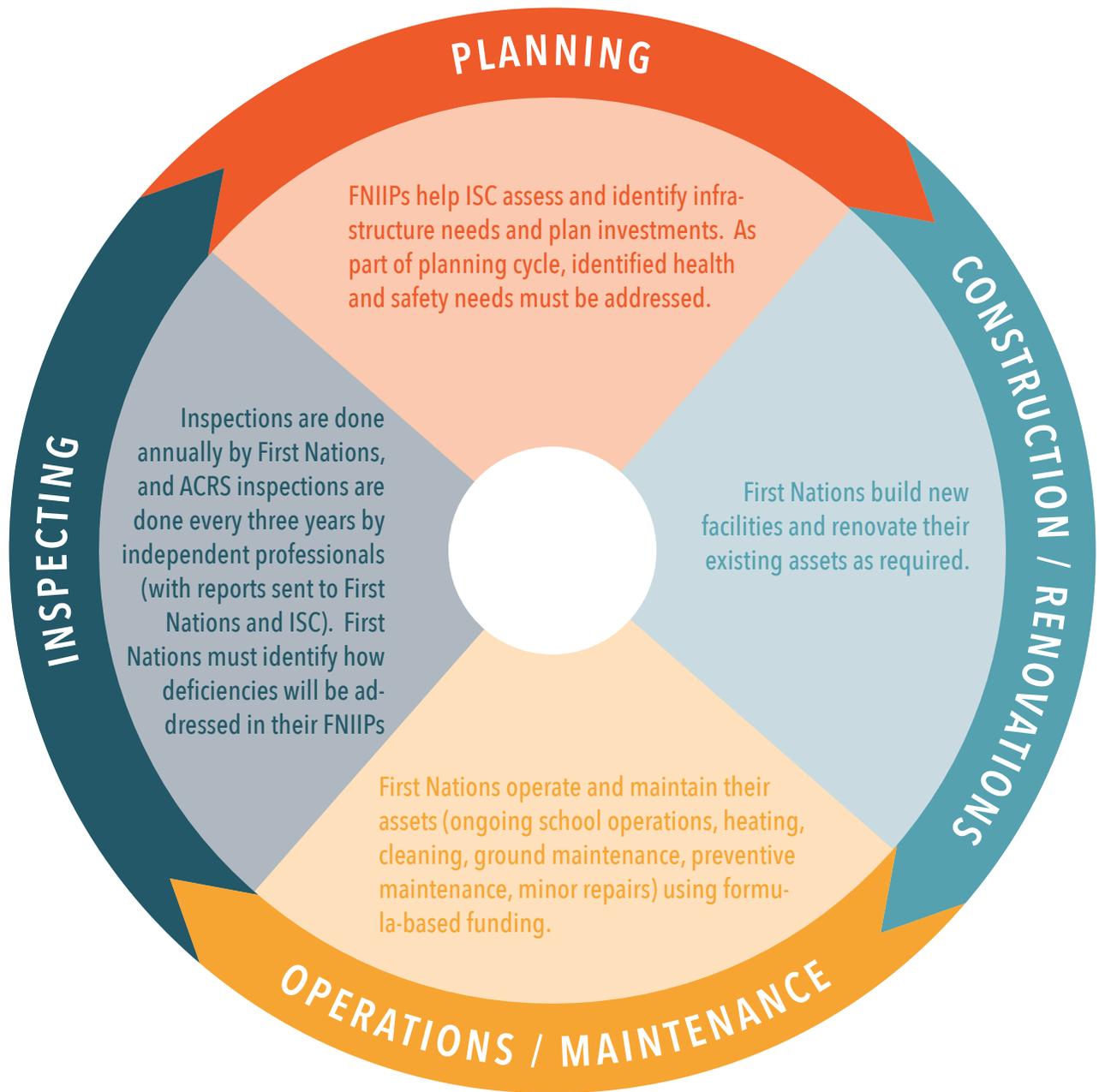
Funding for Group 2 requires separate applications that are forwarded to First Nations in April following the ACRS inspection. In order to receive funding, the applications must be returned to ISC within six weeks. Once funds are received (usually in July), First Nations operating under Funding Agreements must complete the project and submit completion reports to ISC within 90 days. For Block funded First Nations operating under a Funding Agreement, funding for Group 2 projects must be taken from the annual budget.

3. ACRS Group 3 Projects: All other projects identified in the ACRS reports, which fall into the category of study/asset replacement or reconstruction/upgrading. Group 3 projects are typically characterized as major capital projects and require engineering or feasibility studies to determine costs.

To access funds for Group 3 projects, First Nations must initiate a capital project submission.⁷ As with all capital projects, completion reports are due within 60 days of the completion of the project.

⁷ ISC. 2007. A Practical Guide to Operations & Maintenance.

ISC INFRASTRUCTURE CYCLE



A Story from ...

TSAL'ÁLH (SETON LAKE) FIRST NATION

SCHOOL NAME: Seton Lake School

PROGRAMS: K-12

OPENING: 2000

TOTAL COST: Unknown

For Seton Lake, O&M is an ongoing challenge. Like many First Nations, the school has limited access to technicians and supplies. The difficulties of maintaining the school are compounded by an impractical lighting system that continuously fails due to the proximity of the school to a hydro plant. The story highlights the importance of installing equipment and fixtures in the school that are appropriate for its location.

Fortunately, the school administration maintains close ties with the public school district, which often contracts O&M services to the First Nation. Though the cost of maintenance and repair remains high for Seton Lake, the arrangement with the school district may ultimately translate into a longer life for the school.

CONSIDERATIONS

1. In the event of an emergency or a major incident (such as an earthquake) that occurs between inspections, First Nations should notify ISC Capital and Facilities Maintenance Program officials, who will work on a building-by-building basis to remedy issues that trigger structural and other safety concerns within ISC's emergency O&M process.
2. To better manage the day-to-day operations of all capital facilities on reserve, and to ensure maintenance and repairs are up-to-date in line with O&M funding requirements, First Nations can invest in work order software and systems that record and track work orders and capture labour, parts and materials by cost. Having a good work order system that tracks inventory is especially helpful for remote and isolated First Nations, as it can decrease costs by buying and shipping materials in bulk for multiple facilities.

ONGOING CONSULTATION

Under the enrolment based BCTEA funding formula, student enrolment is critical for maintaining adequate levels of O&M funding. O&M funding is no longer allocated on a square footage basis. Funding to support school O&M is provided as part of the allocation for Band Operated Schools' Instructional Services under BCTEA funding on a per-FTE (full time equivalent) basis; a separate allocation for this purpose is not provided. Spending under the BCTEA model is also flexible. It is therefore important for First Nations to continue to seek feedback and promote the school within the community. Continued and ongoing consultations will help keep enrolment numbers stable and ensure that there is enough funding to maintain the school facility.



CHECKLIST - PHASE 5: O & M

- Ensure all deficiencies are remedied within their respective warranty periods.
- Keep up-to-date with tasks outlined in the O&M Plan.
- If operating from a Funding Agreement, apply for ACRS Group 2 funding within six weeks of receipt of an application from ISC.
- Continue to consult with community members to ensure the school and education programs continue to meet their needs.

Clelen generously shared the following thoughts to be considered when undertaking a school construction project.

- ‘Na Aksa Gyilak’yoo School, like other First Nation schools in BC, has a strong academic focus, striving to meet the needs of all of its students, including needs that are not always fully met by neighboring public schools, such as relevant and comprehensive special education services, outdoor education activities, and adequate staffing with enough Educational Assistants in classrooms. The range of services can require more and unique spaces.
- ‘Na Aksa Gyilak’yoo School and the Kitsumkalum community are especially committed to the school’s Language and Culture programming, which was also a key consideration in determining school space and building needs.
- The process for adding grades, involving the utilization of renovation of existing spaces, requires careful attention and knowledge of construction and protocols – meaning that sufficient expertise should be accessed to ensure success.
- Beginning conversations about a new school building requires a strong and positive relationship with families, Chief & Council, and the broader community.
- Hosting meetings with consultants and community members related to the possible building location and site requirements requires considerable organization, and it is important to ensure that people with the appropriate expertise are available at critical points in the consultations.
- In completing a feasibility study, the issue of space allocation is particularly critical. For schools that enroll large numbers of students who live off-reserve, the inclusion of students who are funded through the Reciprocal Tuition Agreement (i.e. families living off reserve) in the calculation of ISC’s space allocation will need special attention in discussions with ISC.
- It is important to ensure that the school principal is included on the team that will coordinate the design application, and principals must have sufficient time available to complete the associated work on top of their existing responsibilities.
- Involving the Chief and Council in negotiating and advocating with ISC is very valuable, especially regarding the determination of adequate space for Language and Culture programs and for the enrolment of students who live off-reserve.
- The question of school growth should be approached according to community needs, not based solely on ISC’s determination and factors.

What's gone well for Kitsumkalum?

- Hiring a consultant who has had experience building schools in First Nations communities, and having regular face-to-face conversations with ISC about additional grades, renovations and capital infrastructure processes.

What was challenging?

- Working with the community to build an understanding of the necessary processes and coming to a consensus about decisions that have to be made requires adequate time and careful attention.
- It can be tempting to choose quick building options, and it can be challenging to maintain a commitment to more permanent structures and ecological-friendly options.
- Fitting the community's vision of the school into the constraints of the funding agency – in this case ISC – is not always easy and takes cooperation from everyone involved.

Colleen shares the following recommendations based on her sometimes difficult but very rewarding experience with school construction projects.

- Be patient – don't rush the process.
- Consult with as many people as possible – both within the community and within ISC.
- Build according to long-term school programming needs and projected growth, undertaking phases for expansion as funding becomes available and always focusing on a building that will ultimately serve the students and community well for many years to come.

CONCLUSIONS

This Toolkit provides a starting point from which First Nations can understand the school-development process and implement a roadmap for getting a project underway. The school development process is complex and a community will rely heavily on the expertise of various professionals for guidance. To do their jobs right, these professionals will, in turn, require guidance from people with direct links to the community. It is only through their participation that the community's vision of the school can be truly implemented.

FNESC and the FNSA recognize the critical importance of supporting First Nations that choose to operate their own schools. Overall, First Nation schools provide educational environments that are consistent with community values and priorities, including promoting the preservation of their languages and cultures. First Nation schools are also consistent with First Nations' rights to establish and control their own educational systems and institutions, as affirmed in the United Nations Declaration on the Rights of Indigenous Peoples, and as a fundamental aspect of their inherent right of self-government recognized by Canada and British Columbia pursuant to section 35 of the Constitution Act, 1982.

As First Nations education policies evolve and First Nations continue to pursue increased control and self-governance over education, so too will the context for building a new school or expanding an existing facility. Reflecting this reality, this Toolkit will be updated regularly to include new information and changing opportunities for First Nations schools' developments.

APPENDIX A

ADDING A GRADE - ISC Requirements

ADDING A GRADE

There are four main criteria that must be met before an application to add grade(s) or program(s) to a First Nations School can be approved by ISC.

1. The building where the grade or program will operate must be confirmed to be safe and suitable for use and occupancy as a school. Please note that schools are one of the most stringently regulated building occupancy classes, with very specific Fire and Building Code requirements. Inspection by a certified professional is required. ISC cannot provide any funding support to a school facility that does not comply with all pertinent Fire and Building Code legislation. You are strongly advised to consult with your Capital Management Officer at ISC before you make any arrangements to build, acquire or renovate a building for use as a school facility;
2. There must be sufficient classroom, core and recreational space available within the proposed school facility to accommodate the grade distribution and anticipated peak Nominal Roll (i.e. the maximum total student enrolment) over the next 5 years. Your Capital Management Officer at ISC can help you determine your space requirements for this purpose;
3. The education program(s) offered must meet standards that will allow students to transfer without academic penalty, at similar levels of achievement, between First Nations Schools and Provincial Public Schools; and
4. All teacher(s) in the school must be certified members in good standing with the British Columbia Ministry of Education's Teacher Regulation Branch.

The above list sets out the four main criteria only; other requirements are set out in the application form.

Applications to add grade(s) or program(s) must be submitted by January 31st, in order to receive approval for implementation the next school year. If you require capital funding from ISC to build, acquire or renovate in order to expand grade(s) or program(s) at your school, your project must be entered in your First Nation Infrastructure Investment Fund (FNIIIF) application for the fiscal year in question. As the FNIIIF process must accommodate all projects at hand on a National basis, it may take several years before Capital Budget funds can be made available for your specific project – please be guided accordingly.

ISC PAPER: FIRST NATIONS SCHOOLS – ADDING NEW GRADES/PROGRAMS FREQUENTLY ASKED QUESTIONS

1. What if the application is late?

Applications to add grades or programs for the following school year should be submitted by January 31st. For example, an application should be submitted by January 31, 2019, to be considered for a grade opening in September, 2019. This application deadline provides time for ISC's Capital & Infrastructure group to determine whether or not an existing facility will be able to accommodate additional students, before new students are accepted into the school. If renovation or expansion of an existing school facility is required to house the additional grade(s)/program, or if a new school facility is needed, it may take longer before the addition of new grade(s)/programs can be approved by ISC. However, applications are accepted year-round, and – in cases where the existing facility is already suitable to house the additional students/grades (and the Capital & Infrastructure group can confirm that via building documentation from the band) – are approved on a 'rolling' basis.

2. When can I expect to be notified if the application to add a grade or program has been approved?

If a complete application is submitted (all required documents are included in the application) and the application does not involve capital funding or approval for converting an existing facility to a school building, applicants who apply by January 31st will be informed of ISC's decision on their request for approval of an additional grade or program, in writing, by the end of March. If any documents are missing from the application, there may be a delay in the approval process. It should be noted that if Capital funding is required or an existing building is being converted to a school building, the approval process takes significantly longer; applicants are encouraged to contact their Capital Management Officer as early as possible.

3. What if capital funding is required?

Should the project require ISC capital funding support to take it to completion, the project must be included in the First Nation's Infrastructure Investment Plan (FNIIP). The submission of these plans is required each Fall. Project priority determines when funding will be available.

Projects may need to be deferred due to competing regional or national capital funding priorities. In the case of urgent space pressures, contact your Capital Management Officer to discuss options, including utilizing a band's own source funding.

4. What should be considered when creating or adding a new program/grade?

The premises should be deemed safe and suitable for use and occupancy as a school. It must be emphasized that schools are one of the most stringently legislated occupancy classes, with specific Fire and Building Code Requirements. Inspection by a certified professional is recommended.

5. What if the premises do not pass Fire Code inspection?

As stated in the Protocol for ISC Funded Infrastructure (PIFI), ISC cannot provide any funding support to a school facility that does not comply with all pertinent fire and building code legislation.

6. Are there any additional reporting requirements?

There are no additional reporting requirements. Once a school receives a letter of approval from ISC, all additional students from the newly-approved grade/program should be included on the annual Nominal Roll Student and Education Staff Census Report (DCI# 462572). Only students enrolled in approved grades and meeting all eligibility criteria for the nominal roll will be accepted on the Nominal Roll Report; this is true for both K-12 and adult students.

7. How does the BCTEA affect funding?

BCTEA funding includes funding formerly provided as targeted program funding and funding formerly provided in separate allocations. First Nations now have more flexibility to direct funding to their own priorities, whether to language and culture, school maintenance, student transportation, parental engagement or other activities. BCTEA funding is based on the provincial funding model, with adaptations to reflect the unique circumstances of First Nations/Band Operated schools.

If the applicant has not previously submitted a Nominal Roll, once approved for funding, the applicant will receive a BCTEA budget estimate package to review the formula and school and student support funding. This will be provided to the school based on its projected current-year Nominal Roll. For more information, please refer to the BC Region Program Guide.

8. How are Operations and Maintenance (O&M) affected? Is there any additional information required?

O&M funding is no longer allocated on a square footage basis. Funding to support school operation and maintenance is provided as part of the allocation for Band Operated Schools' Instructional Services under BCTEA funding on a per-FTE (full time equivalent) basis; a separate allocation for this purpose is not provided. This should be considered when applying for capital funding to build school facilities.

First Nations considering using existing funded community space (such as a Community building) for school space will need to advise ISC Community Infrastructure to adjust their O&M Capital Asset Inventory System (CAIS) from community building space to school space. This may affect the annual O&M budget.

It is also important that applicants ensure that costs for operation and maintenance of school facilities are included within their school budgets to ensure operations and sustainability is considered. ACRS inspections of fundable school building assets listed in CAIS will continue.

9. What are the School Space Accommodation Standards (SSAS)?

ISC allocates space for school facilities in square meters (m²) using School Space Accommodation Standards (SSAS) published in 2016. Basic maximum classroom area including service core support area can be assessed using SSAS guidelines by converting the projected Nominal Roll (NR) five years past the proposed opening day of the school, by grade, into square meters per student, as follows:

K4 & K5 = $(100\text{m}^2 / 17) \times 1.45 = \text{allow } 8.53 \text{ m}^2 \text{ per student.}$

Grade 1 to Grade 3 = $(90 \text{ m}^2 / 26) \times 1.45 = \text{allow } 7.67 \text{ m}^2 \text{ per student.}$

Grade 4 to Grade 6 = $(90 \text{ m}^2 / 26) \times 1.45 = \text{allow } 5.67 \text{ m}^2 \text{ per student.}$

Grade 7 to Grade 9 = $(90 \text{ m}^2 / 26) \times 1.45 = \text{allow } 5.22 \text{ m}^2 \text{ per student.}$

Grade 10 to Grade 12 = $(90 \text{ m}^2 / 26) \times 1.45 = 5.02 \text{ m}^2 \text{ per student.}$

NOTE: each Special Needs student = +3.75 m² (additional).

10. How can I determine if the proposed increase in students can be accommodated within our existing band operated school space?

You can self-assess if the total area available in the current Band Operated School facility is less than or greater than the maximum area established using the current ISC School Space Accommodation Standards. However, it is recommended that you contact your Capital Management Officer for assistance. Some useful rules of thumb are: Minimum classroom sizes of 66.9 m² for Kindergarten students (Max. = 26 students per classroom) and 66.9 m² for Grades 1 through 12 (Max. = 26 students per classroom) are recommended; core (support) functions (heat, storage, janitorial, etc.) typically comprise an additional 45% in area; kindergarten facilities should be physically separated from Grade school and adult facilities; and, adequate washroom and play facilities should be provided for all students.

11. When should the conversion of an existing building to a school be considered?

The conversion of an existing building to a school should only be considered if:

- a. The total area available in the current Band Operated School facility is not more than the maximum area established using the current ISC SSAS; and
- b. A certified inspector confirms that the proposed premises meets or exceeds all code requirements pertaining to the use &/or occupancy as a school.

Minimum classroom sizes of 66.9 m² for Kindergarten students (Max. = 26 students per classroom with 100.8 m²) and 66.90 m² for Grades 1 through 12 (Max. = 26 students per classroom with 69.1 m²) are recommended.

Core (support) functions (heat, storage, janitorial, etc.) comprise an additional 45% in area. Kindergarten facilities should be physically separated from Grade school and adult facilities. Adequate washroom and play facilities should be provided for all students.

If the proposed space for conversion is already registered in CAIS, then a Change of Use form with supporting documentation is required to facilitate the appropriate adjustments to the particulars noted within the ISC CAIS registry. For more information, contact your Capital Management Officer at ISC.

A Capital requirement for a renovation, an addition or construction of new premises would indicate the submission of a major Capital project request within the First Nation's Infrastructure Investment Plan (FNIIP) request for the next Fiscal Year. PLEASE CONTACT YOUR CAPITAL MANAGEMENT OFFICER FOR ADVICE WHEN COMPLETING A FNIIP.

12. What are the ISC goals and objectives as detailed in the Capital, Facilities & Maintenance Program?

The goal of the Capital Facilities and Maintenance Program (CFMP) is to assist First Nations with the establishment of healthy, safe and sustainable First Nation communities. The objective of the CFMP is to assist First Nations to:

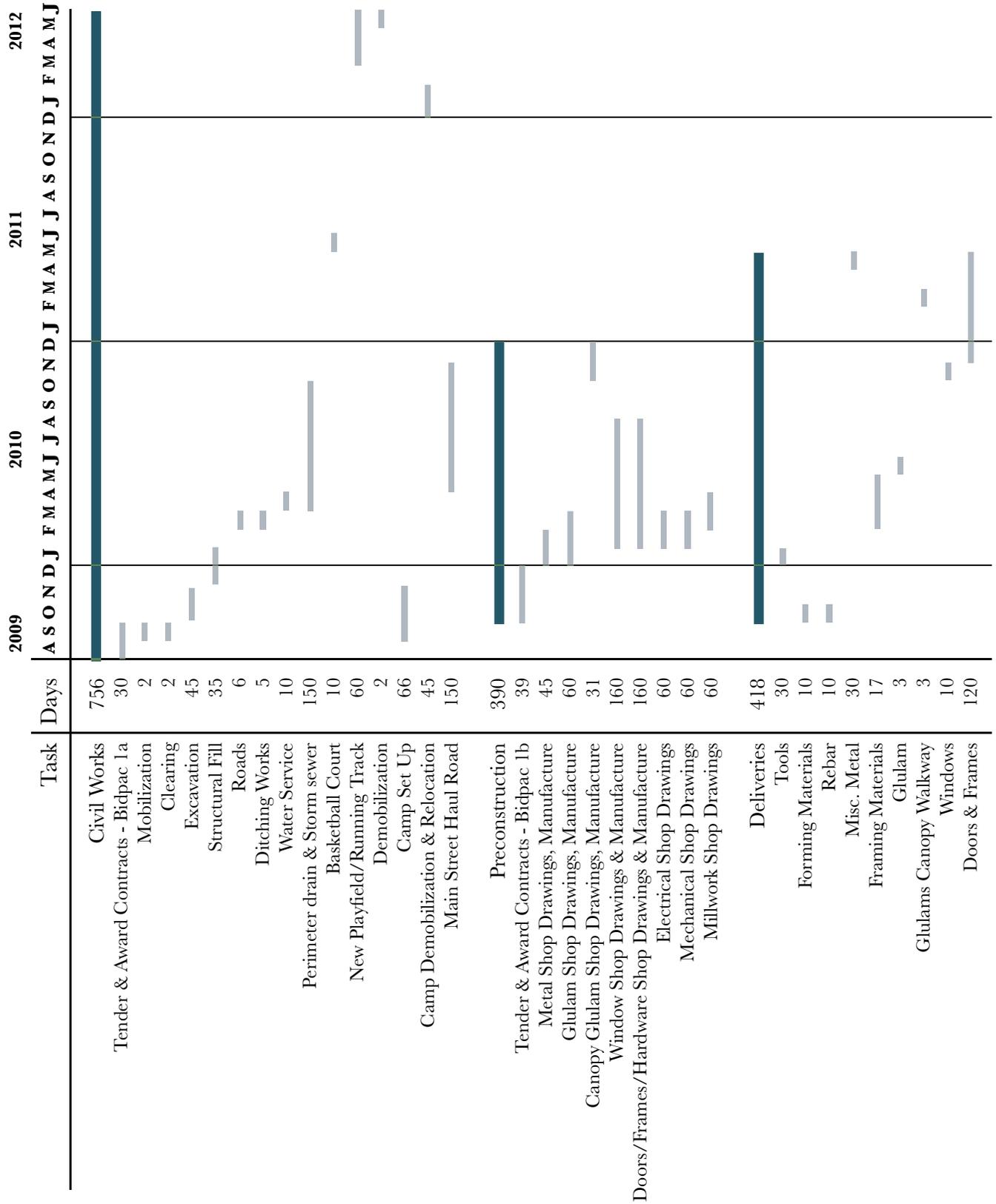
- invest in physical assets (or services) that mitigate health and safety risks to recipients;
- ensure that assets meet established codes and standards; and
- ensure that assets are managed in a cost-effective and efficient manner that protects, maintains and maximizes asset life-cycle.

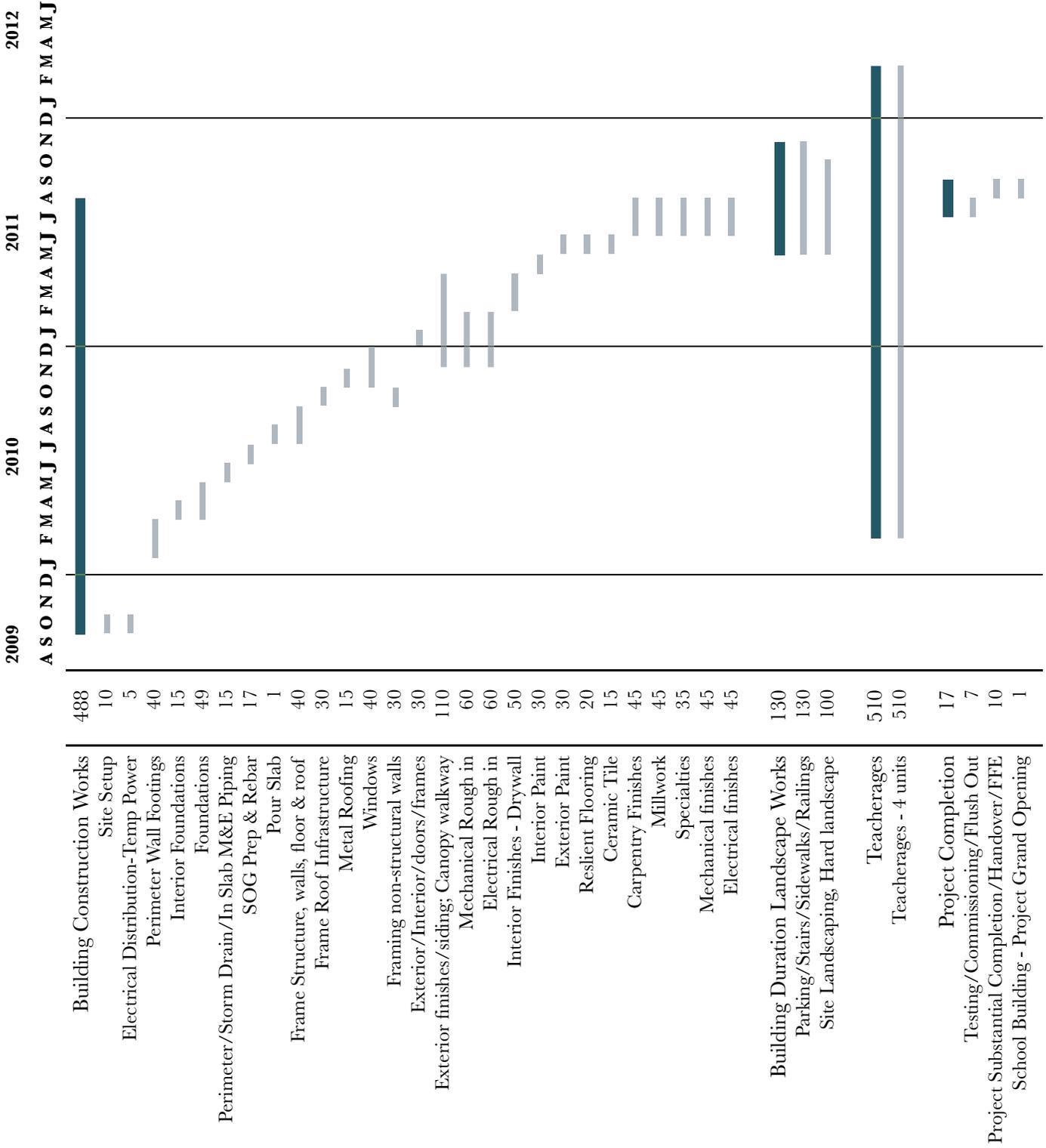
This funding helps eligible recipients to maintain basic community facilities including: water and sewer, schools, fire protection, electrification, roads and bridges, solid waste disposal and community buildings.

APPENDIX B

AHOUSTAHT CONSTRUCTION SCHEDULE

MAAQTUSIIS SECONDARY SCHOOL
Construction Schedule (August 2009 - June 2012)





APPENDIX C

AHOUSAHT REQUEST FOR PROPOSAL FOR CONSTRUCTION MANAGEMENT SERVICES

October 27, 2003

Dear Sirs:

Re: CONSTRUCTION MANAGEMENT SERVICES
AHOUSAHT EDUCATION AUTHORITY

On behalf of the Ahousaht Education Authority, the ARCHITECT. is requesting proposal for the supply of construction management services for a School Project in Ahousaht, Flores Island, British Columbia. Your firm is invited to submit a proposal of construction management services for the above project in accordance with the following terms and references:

1. PROJECT DESCRIPTION:

The Ahousaht school project consists of the following three basic components:

The New School

The 616 m² new secondary school will be located on a hillside site south of the existing school. Secondary classrooms (G8-12) and basic admin/support spaces are located in the new structure while the elementary classrooms (K4-G7) and the common facilities remain in the existing school. Renovation of the existing school only includes the repair/upgrade items as mentioned below. The construction budget for the new school is [REDACTED]. Construction Manager will work with the Project Team to monitor and control costs, and to determine cost savings during the Design Development (50%), Design(99%) and Construction stages.

Repair/Upgrade Work

The repair/upgrade of the existing School, Gym and Teacherages are based on a 1997 condition assessment study conducted by the and a 1998 report by the Department of Indian Affairs and Northern Development (DIAND). The current DIAND budget for the education facility repair/upgrade portion is [REDACTED] (see attached list). Construction Manager will work with the Project Team on site to review each item as listed and to determine exact scope of work and costs during the Design Development stage.

New Teacherages

Based on the need analysis in the feasibility study, 4 new teacherage units will be constructed. These will be 3 bedroom semi-detached (non-basement) units. The cost of the new teacherages is based on the CMHC Maximum Units Price (MUP). The 2002 MUP for a 3 BR Semi-detached (non-basement) unit in the Vancouver Island region (Special Access) is \$138,000. The total budget for the 4 new teacherages is \$552,000. Construction Manager will work with the Project Team to monitor and control costs, and to determine cost savings during the Design Development, Design and construction stages.

2. PROJECT BUDGET:

The approved budget for construction is [REDACTED] with the following breakdown:

- | | |
|--|------------|
| 1) New School | [REDACTED] |
| 2) Repair/Upgrade of existing facilities | [REDACTED] |
| 3) 4 new teacherages | [REDACTED] |
| 4) Miscellaneous | [REDACTED] |
| - Demolition of portable classroom | [REDACTED] |
| - Relocate teacherage trailer | [REDACTED] |

The above budget includes the Construction Management fee and cannot be exceeded. The funding is currently being finalized by DIAND.

3. SCHEDULE:

The estimated milestone dates for the project schedule are as follows:

- | | |
|--|---------|
| 1) Finalize Construction Management Contract | Nov03 |
| 2) <u>Design Development Phase:</u> | |
| • @ 50% completion | Nov03 |
| • Review and approval | Dec03 |
| 3) <u>Design Phase:</u> | |
| • @ 99% completion | Feb04 |
| • Effective Project Approval | Mar04 |
| 4) <u>Construction Phase:</u> | |
| • Tenders | Mar04 |
| • mobilize Band labour | Mar04 |
| • Construction Start | May04 |
| • Construction Completion | May05 |
| • take over by Band | June 05 |
| 5) <u>Post Construction Phase:</u> | |
| • O&M Plan, as built dwgs etc, | July 05 |

4. CONTRACTUAL ARRANGEMENTS:

The role of the Construction Manager for the purposes of this project is one of agent to the Owner. It is the intention to use the "Canadian Standard Construction Management Contract Form between Owner and Construction Manager" (CCA Document No.5, 1988 edition) as the contract for the provision of these services. Also, the following addenda will form an integral part of the Contract.

- Addendum "A" Amendments to the Standard Contract Form
- Addendum "B" Terms of Reference for the {reparation of an Operation & Maintenance Plan, Manual & Training Program
- Addendum "C" Criteria for the Preparation of a Construction Management Business Plan.

5. OWNER PARTICIPATIONS:

For the duration of the Project, the Owner, the Ahousaht Education Authority will be represented by Greg Louie, the Project Manager who will provide overall project management assistance to the Band Administrator and to the Project Team. He also will be responsible for the coordination of local input into the Project, for day-to-day liaison with the Owner, and for providing assistance to the Owner with the daily handling of invoices, computer data entry, document production, etc. The bidder is requested to outline in the submission the anticipated contribution the Project Manager might make, taking into account that a certain amount of training might be required to ensure familiarity with the Construction Manager's system.

6. LOG PROCESSING:

As part of the project funding, the Band secured from a private forest company the donation of raw timber materials towards the construction of the school. One of the tasks of the Construction Manager is to assist the Band to arrange the processing of the raw timber into finished log and lumber materials as required for the school construction.

7. BAND LABOUR:

It is the intention of the Ahousaht Education Authority that the Ahousaht Band members be given priority for employment consideration in the construction of the project. There is a wide range of skills available in the community, but the Construction Manager should assume that a certain amount of training may be required. The Construction Manager will be responsible for establishing procedures as well as organizing employment and training of Band members, in a way to maximize the Band's participation in this construction project. This requirement will be monitored throughout the length of the project.

It is the intent of the Ahousaht Education Authority to take advantage of this major project to establish an Apprenticeship Program in the community. The Construction Manager will be responsible for identifying the requirements and procedures and cooperate fully with the Ahousaht administration.

8. PROJECT CONTROL:

Cost and schedule monitoring will be an on-going activity during the construction period. The Project Team intends to meet regularly with the Construction Manager to closely monitor expenditures and make re-allocations if necessary. To enable this monitoring and to satisfy reporting requirements to DIAND, the Construction Manager will be required to prepare comprehensive reports which will convey the status of the project on a monthly basis.

9. FEES & EXPENSES:

Bidders are required to submit fees for services as described in Article A5: Contract, and Addendum A B & C. Bidders are also requested to provide a budget estimate for reimbursable expenses as detailed in APPENDIX A: Reimbursable Expenses. All items requested must be provided, otherwise the bid could be rejected as incomplete. Should alternate prices be submitted it should be clearly indicated how they differ from the requested base prices, and what the benefits would be.

10. BIDDER QUALIFICATIONS:

The bidders are requested to submit for review a full description of their firm's qualifications, including:

- 1) previous experience in building construction and in construction management;
- 2) previous experience in working with First Nations projects of similar nature.
- 3) description of your approach in working with the Band on log processing & your previous experience in log milling and mill setup.
- 4) expertise of overall firm, including ability to meet administrative, cost and scheduling requirements;
- 5) names and resumes of key individuals who will be involved with the construction;
- 6) description of the procedures that will be used to maximize participation and training of members of the Ahousaht Band;
- 7) description of the procedures that will be used to maximize the use of local equipment and resources;
- 8) ability of head office to provide remote monitoring of the project, including staff, document production/communication facilities;
- 9) suitability and ability of firm to undertake a project of this size and scope;
- 10) ability of the firm to meet the proposed schedule including present workloads and history of performance;
- 11) names and resumes of individuals who will be involved in the construction indicating their proposed role along with their expertise and experience;
- 12) description of proposed systems and procedures for planning, cost analysis, scheduling, estimating, cost control, tendering, purchasing and administration;
- 13) description and example of proposed project reporting system;
- 14) particular experience with projects with multiple relationships
- 15) client references with minimum three names, phone numbers and email addresses; and
- 16) any other information which would be helpful in assessing the firm's suitability.

11. PROPOSALS:

Bidders are requested to prepare 3 identical hard copies of their proposals. One electronic copy is to be sent to the office of the Architect and must be received before 5:00pm, November 06, 2003 at the following address:

Three hard copies of the proposal are to be sent to the office of the Ahousaht Education Authority and should be received by the school office before 5:00pm November 06, 2003 at the following address:

Should you require any further information or clarification of any aspects of this request, please contact the undersigned by phone at or by email at. Thank you for your interest in responding to this request.

Yours truly

ADDENDUM "A" to the Construction Management Contract for the Ahousaht School Project

AMENDMENTS TO
"CANADIAN STANDARD CONSTRUCTION MANAGEMENT CONTRACT FORM
BETWEEN OWNER AND CONSTRUCTION MANAGER"
FOR THE CONSTRUCTION OF THE AHOUSAHT SCHOOL
FLORES ISLAND, BRITISH COLUMBIA

ARTICLE A-2 THE CONSTRUCTION MANAGEMENT TEAM

For the purpose of this Contract, the Construction Management Team will be composed of:

- 1) The Owner, the Ahousaht Education Authority, which, for the purposes of the Construction Management Team, will normally (but not exclusively) be represented by the Project Co-ordinator, Greg Louie and by the Consultant.
- 2) The Construction Manager
- 3) Sub-Consultants as deemed necessary by the Consultant

ARTICLE A-5 CONTRACT FEE

- (a) For the purpose of the Contract, phase 1 Pre-Construction shall begin at the Design Development stage.
- (b) In addition to the proposed fees for the three phases of the work (1), (2) and (3), prices shall be provided for the following items:
 - (4) Preparation of a Construction Management Business Plan, in accordance with INAC requirements, as detailed in Addendum 'C'.
 - (5) Operation & Maintenance Plan, Manual and Training Program, as identified in Amendment 2.5.6 under ADDITIONAL SERVICES to GC2 CONSTRUCTION MANAGER'S SERVICES, and described in Addendum 'B'; and
 - (6) Salary, benefits and living expenses of proposed Site Superintendent, on a monthly basis.

Note: All goods and services purchased by Indian bands are zero-rated for the purposes of the Goods and Services tax.

- (c) Outline how the fees may be amended should the construction budget be increased.

ARTICLE A-6 REIMBURSABLE EXPENSES

The only items reimbursable to the Construction Manager are the following:

- (1) The items (1) through (3) described under ARTICLE A-5 CONTRACT FEE along with items (4) and (5) also described in the same above section;
- (2) The direct expenses itemised in APPENDIX 'A' REIMBURSABLE EXPENSES as (d) travel expenses, (q) telephone, fax, courier services, etc., and adding: (y) printing and advertising costs.

All other expenses identified in APPENDIX 'A' REIMBURSABLE EXPENSES are to be paid directly by the Owner, upon processing and approval of invoices by the Construction Manager, who is responsible for the coordination and cost control of the entire project.

ARTICLE A-7 OWN FORCES WORK

To avoid any conflict of interest, the Construction Manager is not permitted to use own forces for any aspect of the construction work. This does not, however, preclude the appointment of members of the Construction Manager's staff as Site Superintendent, Site Foreman or Crew Supervisors; nor does it preclude the

employment of the Construction Manager's staff to perform the normal duties within the scope of the construction management services.

ARTICLE A-8 PAYMENT

(b) "Contractor" should read "Construction Manager".

ARTICLE A-15 DISCOUNTS, REBATES AND REFUNDS

Delete:

All cash discounts....shall accrue to the Owner.

GC2 CONSTRUCTION MANAGER'S SERVICES

2.2.4.2 Add:

Make recommendations to the Owner and the Consultant regarding the efficient recording of changes required during the construction phase in view of preparing a complete set of record drawings.

2.3.1.7 Add:

The Construction manager is responsible to supply the Consultant with a complete and accurate set of record drawings, no later than two weeks following substantial completion of the project. The Construction manager shall maintain, on site, at all times, a complete set of drawings solely dedicated for this purpose, and shall ensure that it is annotated on a regular basis to record all changes and amendments made to all aspects of the works including architectural, landscape, structural, mechanical (plumbing, HVAC and fire protection systems), electrical, and civil. The record drawings will be certified as correct and signed by the Construction Manager and by any subcontractor involved in the work described by the particular drawing, prior to submission to the Consultant. The record drawings shall provide complete and accurate information to permit the Consultant to prepare the official set of as-built drawings for the project.

2.3.2.1 "ARTICLE A-4" should read "ARTICLE A-7".

2.3.10.2 Add:

Maintain a photo history of the project carefully and completely documenting all stages in the progress of the work.

2.3.11.2 Add:

The Builder's Lien Act does not apply to reserve lands. Ensure that all trade contracts are consistent with the Builder's Lien Act in this respect.

2.5 ADDITIONAL SERVICES

Add:

2.5.6 Construction Management Business Plan

Within 4 weeks of being appointed as Construction Manager, provide Construction Management Business Plan, in accordance Addendum C.

2.5.7 Operations & Maintenance Plan, Manual, and Training Program.

Provide the additional services as described in the Terms of Reference. (Cost of this item to be provided separately as item (4) under ARTICLE A-5 CONTRACT FEE).

Costs are to be provided separately for each of the three activities: plan, manual and training. The following should also be noted:

- (a) Prior to preparing the Maintenance Plan, the Construction Manager shall ensure that the completed plan meets the needs of the Tribe in terms of planning, control, use and ability to update. The system may be required to complement the Tribe's current maintenance plan for the village. An outline of the proposed plan shall be submitted to the project team prior to proceeding.
- (b) Under the amount allocated for training, show separate amounts for:
 - i) training by the Construction Manager
 - ii) training by others

Indicate what training is to be provided and at which point during the project.

GC10 APPLICATIONS FOR PAYMENT

Add:

A sample of the form intended to be used as application for payment by the Construction Manager must be supplied with the proposal.

CG14WAIVER

Delete:

14.1, 14.2

CG17 INSURANCE

Add:

The Construction Manager shall outline in the proposal, insurance coverage he deems necessary during the construction of the project, and specific insurance agents he intends to use. The decision with respect to insurance coverage will form part of this contract as mutually agreed by both the Owner and the Construction Manager.

ADDENDUM "B" to the Construction Management Contract for the Ahousaht School Project

TERMS OF REFERENCE FOR
THE PREPARATION OF
AN OPERATION & MAINTENANCE PLAN, MANUAL AND TRAINING PROGRAM
FOR THE AHOUSAHT SCHOOL PROJECT
AT
FLORES ISLAND, BRITISH COLUMBIA

1.0 PURPOSE

These Terms of Reference pertain to the development of an Operation & Maintenance Plan and Manual for the Hesquiaht School Project, and to the provision of a Training Program for maintenance personnel.

2.0 OBJECTNE

The objective is to provide the Ahousaht School with a planned program of maintenance to ensure that emergencies are minimised, safety and environmental needs are met, and that the design life expectancy of existing and proposed facilities can be realised.

The Maintenance Plan and Manual are needed to:

- a) ensure that pertinent technical Operations & Maintenance (O&M) instructions are documented for use by the school maintenance personnel;
- b) provide a means by which new maintenance personnel may familiarise themselves with both the operational features of the system and the inspection and preventive maintenance requirements;
- c) assist the Ahousaht Education Authority in successfully maintaining the school's systems in a satisfactory operating condition; and
- d) aid the Ahousaht Education Authority in planning the school's O&M budget.

3.0 SCOPE OF WORK

The scope of work is divided into three parts:

1. Preparation of the Operation & Maintenance Manual;
2. Preparation of the Maintenance plan; and
3. Provision of O&M Training.

In order to ensure that the maintenance system is in place on or before the completion or occupancy date of the project, the following time frame should be adhered to: (Submission are to be made to the Owner)

1. Submit, for approval, the Preliminary data collection book and the first draft O&M manual.
2. Submit the final maintenance Manual and Plan at the project substantial completion or at least two months prior to construction completion/occupancy.
3. Completion of training and Plan implementation prior to construction completion/occupancy.

4.0 MAINTENANCE MANUAL

The Operation and Maintenance Manual shall contain a detailed report on all electrical, mechanical, civil and architectural operations and maintenance activities and objectives required for the direct operation and maintenance of the system components.

4.1 The manual's general format should follow a typical outline that includes:

- a) Letter of Transmittal
- b) Index
- c) Introduction
- d) Contents
- e) Appendices

Upon completion of the Manual, the Construction Manager shall submit five (5) copies for distribution to the Department of Indian Affairs Canada (INAC) (2) and the Ahousaht Education Authority (3).

4.2 The contents of the Manual shall include the items listed below if applicable:

- a) The rationale for implementing the facilities;
- b) A description of the facilities including the aim and methodology;
- c) A description of the general operation of the equipment or system as a whole during normal flow conditions and monitoring requirements;
- d) A simplified schematic plan or flow chart clearly identifying all components of the system;
- e) Procedures for inspecting, maintaining and servicing all elements of the system;
- f) Detailed operating procedures such as start-up and shut-down, seasonal operations, control functions;
- g) A description of the monitoring, inspection and reporting requirements, noting features and equipment included to accomplish these tasks;
- h) Emergency procedures and trouble shooting instructions in the event of facilities failure or breakdowns;
- i) Schematic drawings for any electrical controls including fighting, alarm systems, pump or motor circuits, heaters, etc.;
- j) Necessary safety practices and measures including cleanliness and suggested wearing apparel;
- k) Provision of maintenance checklists to facilitate recording of maintenance completed, expenses incurred and materials used for each component of the system;
- f) A list of spare equipment and parts which should be on hand for routine or emergency maintenance repairs and suggested locations for storage of parts and tools;
- m) An estimate of annual operation and maintenance costs including labour, equipment, materials and service contracts. Operation costs shall include an estimate for heat (fuel) and electricity;
- n) Provincial and/or Federal Permits;
- o) Inclusion of site construction photographs or sketches which supplement or simplify the explanation of various operation and maintenance procedures;
- p) *An assembly of manufacturer's literature:
 - i) Material and equipment information (names, model numbers, types, sizes, warranties, etc.);
 - ii) Instructions and schedules for recommended O&M practices;
 - iii) Exploded views and parts lists;
 - iv) Suppliers' names, addresses and phone numbers.
- q) *As-built drawings of the system (trimmed and folded to fit the manual's format).

- *These items to be added after construction.*

5.0 MAINTENANCE PLAN

- 5.1 The contents of the Plan will include a Performance Budget, Annual Work Plan, Task Statements and Weekly Work Summary.

A sample format of these will be provided along with a Data Collection Book, Capital Asset Inventory System (CAIS) forms and Activity Standards with guideline task descriptions for use in preparation of the Plan. This supporting information and explanation is available from the Maintenance Management Co-ordinator, PWCGS – Real Property Services for INAC, BC Region, in Vancouver. That person can be reached at 604-666-5167.

Where an existing Village Maintenance Plan is available, obtain a copy from the Maintenance Management Co-ordinator to update the resource requirements and indicate maintenance activities that may be abandoned or will become obsolete as a result of the new facilities and which new maintenance activities can be combined with existing jobs.

5.2 Stage 1 - Data Collection

- In conjunction with the other members of the Construction Management Team, identify the asset components to be maintained.
- Determine areas, lengths, sizes and quantities of all components. Mount quality colour photographs on the Component Detail sheets and submit data on the blank Capital Asset Inventory System (CAIS) forms provided.
- Using the Activity Standards Reference Books as a guide, complete a Data Collection form for each component identified, providing minimum acceptable level of service. Include costs for municipal service contracts, small tools, materials and operational costs.
- Complete forms TDM 103, 104 and 105 regarding school equipment, hourly labour cost data and summary of hourly equipment and labour rates.
- Completed forms are to be collated into a manual, submitted to INAC for approval and TWO (2) final copies submitted to the Project Manager for distribution.

5.2 Stage 2 - Maintenance Plan

- Using the data collected, prepare a Maintenance plan that contains at least the following:
 - A performance Budget detailing labour, material, equipment, contract, and operational costs by activity.
 - An Annual Work Plan scheduling the labour requirement for the tasks involved.
 - A work order for each job to be completed listing the labour requirements, the tasks frequency, and the estimated hours.
 - Tasks descriptions and statements detailing the work required.
 - Weekly work records providing the maintenance staff with a form for recording labour, material, and equipment time and costs.
- Combine activities to reduce paperwork and simplify the plan. Assist the Ahousaht Education Authority in establishing priority tasks, and revise the Plan to meet those priorities for O&M within the funds available.

- m) Assist the Ahousaht Education Authority in obtaining any available job development program funds for trainee wages from the Native Program Officer of the Employment Development Branch (CEIC).

6.0 **GENERAL REQUIREMENTS**

- 6.1 The Construction Manager will maintain a liaison with the Ahousaht Band Manager and take into account their considerations during the work duration, and meet with the designated staff to keep them informed of work progress and implementation.
- 6.2 The Construction Manager is responsible for ensuring that all members of team visiting the Reserve are properly identified to the Band Manager, that they are briefed on wishes with regard to access to the Reserve and the various assets, and that they respect By-laws or customs which may affect their general behaviour or conduct on the Reserve.
- 6.3 The format of all printed material is to be 8" x 11" on white bond paper suitable for reproduction by photocopying equipment, bound in a hard covered, 3 ring, loose leaf binder, and separated into sections by heavy stock paper dividing sheets complete with label tabs.

ADDENDUM "C" to the Construction Management Contract for the Ahousaht School Project

Terms of Reference for the Preparation of a Construction Management Business Plan

BACKGROUND

The preparation of a Construction Management Business Plan is a requirement of the funding agency, INAC, for major projects whose construction is implemented under a construction management framework. The Business Plan needs to be reviewed and approved by INAC before construction can begin.

ITEMS TO BE INCLUDED IN BUSINESS PLAN

1. Overview of the project
 - Brief overview of the project, the manner in which it will be implemented and the benefits anticipated for the community.
2. Construction Management Team
 - Description of construction management team, individual roles & responsibilities, and reporting relationships.
3. Implementation Plan
 - Description, value, and percentage of works (each contract to be detailed) to be awarded through competitive tenders and those to be undertaken by the Owner's forces.
 - Specifics on the portion and value of the project to be awarded through competitive tenders
 - Outline and value of local human resources, equipment and materials to be used.
 - Detailed schedule for all project activities including key milestones such as procurement and approvals.
4. Management Plan
 - Description of procurement procedures for works to be awarded through competitive tenders, including bonding and insurance requirements.
 - Description of procurement procedures for works to be undertaken by Owner's forces including employment and payroll procedures, training procedures, labour rates, and equipment rates.
 - Description of procurement procedures for material purchases
 - Description of approval levels and cheque signing authorities
 - Description of proposed working relationships as part of the construction management process
 - Description of cost monitoring procedures to be used throughout the project
 - Description of remedial measures to be undertaken should any aspect of the works exceed budgetary estimates
 - Description of procedures to maintain project schedule.
5. Risk Assessment and Mitigation Plan
 - Description of potential risks and mitigation plan to manage risks for work to be awarded through competitive tenders
 - Description of potential risks and mitigation plan to manage risks for works undertaken by Owner's forces.
6. Capacity development
 - Description of proposed working relationship with local Project coordinator
 - Value of labour to be provided by Owner's forces
 - Summary of quantifiable direct social and economic benefits
 - Benefits/risks analysis comparing direct social and economic benefits against potential risks

APPENDIX D

SAMPLE O&M PLAN

Work Order No.	Activity	APRIL				MAY				JUNE				JULY			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MANAGEMENT																	
A1	Weekly Meeting & Supervision																
A2	Semi-Annual Budget & Review																
Management hours by week:																	
MAINTENANCE																	
<u>Administration</u>																	
A3	Weekly Meeting with Management																
A4	Purchase Orders, Materials Procurement																
A5	Work Plan & Budget																
A6	Semi-Annual Major Materials Order																
<u>Building</u>																	
B1	Daily Building Inspection																
B2	General Building Maintenance																
B3	Building Security Checks																
B4	Finish Hardware Maintenance																
B5	Lighting Inspection & Maintenance																
B6	Milwork Maintenance																
B7	Washroom Hardware Maintenance																
B8	Plumbing System Inspection & Maintenance																
B9	Interior Wall Repair Painting & Touch-Up																
B10	Floor Maintenance																
B11	Fire Extinguisher Inspection																
B12	Emergency Lighting Inspection & Maintenance																
B13	Roof Inspection & Maintenance																
B14	Mechanical System Inspection & Maintenance																
B15	Fire Drill																
B16	Equipment Repairs																
B17	Building Inspection Accompanying Mech / Elec																
<u>Grounds</u>																	
G1	Ground Inspection & Maintenance																
G2	Sping Driveway & Parking																
G3	Drainage Maintenance																
G4	Seeded Lawn & Planting Maintenance																
G5	Mowing & Weeding Supervision																
G6	Hard Surface Maintenance - Concrete, Stone																
G7	Painting - Exterior Building & Site																
G8	Surface Refinish - Exterior (3 year cycle)																
G9	Snow Removal from Walks & Roofs - Supervision																
G10	Septic System - Inspection																
G11	Septic Tank Pump-out																
G12	Hydrant Flushing & Testing																
Maintenance hours by week																	
CASUAL LABOUR																	
G10	Mowing & Weeding																
G11	Snow Removal from Walks & Roofs																
Casual labour hours by week																	
JANITORIAL																	
J1	Cleaning/Custodial Services (crew of 2)																
CONTRACTED MAINTENANCE																	
<u>Building / Site</u>																	
B1BC	Painting - Exterior - Complete Restrain (4 year cycle)																
G12C	Snow plowing & Removal																
Site Maintenance Contract by week																	
<u>Mechanical</u>																	
B2OC	Quarterly Mechanical Inspection / Maintenance																
<u>Electrical</u>																	
B21C	Annual Electrical Inspection																

* Note: This plan is an example only and is not meant to be used as a template for all new or existing First Nations Schools



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