

Operational Parameters  
for the  
Review and Evaluation of  
Construction Management Projects

# **Operational Parameters for the Review and Evaluation of Construction Management Projects**

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# Operational Parameters for the Review and Evaluation of Construction Management Projects

- **Introduction**

The following document has been prepared under the direction of the Assistant Deputy Minister, Socio-Economic Policy & Programs Sector of the Department of Indian Affairs and Northern Development (DIAND). It is intended that these operational parameters will be utilized by regions to assist in carrying out reviews and evaluations of construction management project proposals received from First Nations. Extensive consultation and collaboration with First Nations, private industry and federal stakeholders have resulted in the development of the ideas and premises contained within this document. A glossary of terms is enclosed under Appendix A. It should be noted that some of the material is provided as examples and suggestions, and not as a requirement.

- **Objective**

Through its capital program, DIAND supports the development of strong and healthy First Nations communities via contributions provided for infrastructure, community facilities and housing. A national framework for the development of First Nations' tendering policies has been developed to support the accountability for the use of public funds provided to First Nations.

These operational parameters support the goal of First Nations to maximize socio-economic benefits and capacity development opportunities for their communities, while ensuring that the principles of best value and sound construction management are utilized when developing capital projects with the support of federal funding. Integrating an equitable and consistently applied methodology into the existing departmental tendering framework, will provide regions with the necessary parameters to effectively review and evaluate project proposals seeking to utilize construction management for project delivery.

- **Background**

Construction management has been successfully utilized for many years as a project implementation methodology by government institutions and private industry and more recently by First Nations. Since the draft, "Framework to Guide the Development of a Tendering Policy by First Nations in Relation to Federally Funded Capital Projects (Excluding Housing)" was issued in February 1998, work has been underway to develop a process that would ensure a consistent and accountable approach to the approval of construction management projects, undertaken by First Nations and funded in whole or part by federal government.

In September of 1998, a working group representing First Nations, private industry, Public Works & Government Services Canada and DIAND regional offices and headquarters met to discuss and develop these parameters. The task was to establish guidelines that would facilitate the use of construction management, thereby meeting the needs of First Nations while ensuring accountability for the use of public funds.

These operational parameters will contribute to the development of strong, effective, and accountable Aboriginal governments and institutions, particularly in the area of managing the expenditure of public funds. The establishment of sound local policies and practices in tendering and contract management is a key function within the public works activities of an effective First Nation government.

- **Application of Parameters**

The operational parameters outlined in this document apply to all regions and to those proponent First Nation seeking approval of capital projects or funding contributions for carrying-out capital projects, for which construction management has been selected as the means of project implementation.

- **Basic Principles**

The following is a list of principles that must be followed by First Nations in their tendering:

- a commitment to deal with all potential bidders on an equitable basis;
- a commitment to establish specific criteria within which an open tendering process will be followed based on good contracting principles which take into consideration the dollar value, the complexity of the work to be undertaken and the number of firms within the area of competition who are able to meet the level of expertise and qualifications necessary;
- all tender documents will be treated confidentially;
- all tenders will be opened in public with appropriate safeguards; and
- all tenders will be assessed on the basis of a clear, consistent, predefined evaluation criteria.

In addition, First Nations may also want to consider outlining the following within their tendering policies:

- a commitment to maximize the use and development of available First Nation resources or skills;
- a commitment to develop and review annually a source list of qualified local and Aboriginal suppliers from which to invite bids for projects under \$100,000; and
- a discussion of the different approaches to deliver projects (ie. Day Labour, Construction Management and General Contractor).

- **Approval Process**

When Construction Management is proposed as a project implementation methodology, additional information in the form of a business plan and a review by a Construction Management Evaluation Team (CMet) must be integrated into the existing submission requirements and necessary approval processes. All aspects of a region's capital project approval process remain intact and are to be carefully adhered to. Construction works are not to be undertaken until the final resource level is established and agreed to.

- **Construction Management Evaluation Team (CMet)**

An evaluation team will be established for each project contemplating construction management as the implementation process. Each team should consist of equal representation from both the proponent First Nation and DIAND. The CMet will assume responsibility for carrying out a review of the business plan submitted by the proponent First Nation and make a determination on how the plan meets or does not meet the evaluation criteria set out later in this document. Although additional technical or financial advice may be sought by either of the parties, it is intended that they work together as a team to establish consensus on the evaluation.

Evaluations will normally be required at three stages of the project: one for preliminary (design) approval; one for effective (acquisition/construction) approval; and a third for post-project evaluation. The team will be responsible for making recommendations to strengthen or amend the plan as appropriate to help ensure the effective delivery of the project. A sign-off by all members of the CMet will be included with the business plan prior to it being included as part of the project submission.

- **Preparation of Construction Management Business Plan for Preliminary Project Approval**

The proponent First Nation is responsible for preparing and providing an acceptable Construction Management (CM) Business Plan, outlining the implementation, resourcing and management of the project, as part of the formal submission for preliminary project approval. An initial CM Business Plan, which may be developed as a part of the feasibility study, is required for review by the Construction Management Evaluation Team (CMet). As this information will form the basis of the evaluation, it should be both complete and accurate. The initial CM Business Plan should include, as a minimum, discussion of the areas outlined in the attached Appendix "B". The preparation of a Construction Management Business Plan is considered to be a legitimate project expenditure, however, given that virtually all the information required should be available as part of the normal construction management process, the cost of preparing the business plan should be minimal.

- **Evaluation of Construction Management Business Plan at Preliminary Project Approval**

The evaluation of the initial CM Business Plan by the CMet is to examine compliance with the factors included in Appendix “C” to assess the likelihood of the success of the plan.

- **Revision/Finalization of Construction Management Business Plan for Effective Project Approval**

The proponent First Nation is responsible for revising and providing an acceptable Construction Management Business Plan, detailing the implementation and management of the project. It is expected that this would normally be done as a stage in or as part of the formal submission for effective project approval. The final version of the CM Business Plan should be a fine-tuned version of the initial Business Plan, with the elements of all sections fully elaborated. The final Construction Management Business Plan should include, but not be limited to the information requirements outlined in Appendix “D”.

- **Evaluation of Construction Management Business Plan at Effective Project Approval**

The evaluation of the CM Business Plan by the CMet should examine the compliance with the factors outlined in Appendix “E” in order to assess the likelihood of the success of the plan.

- **Establishing Resourcing Levels**

The resourcing package for projects funded by DIAND will be broken down into two components:

- **Component 1 - Competitively Awarded Procurement (CAP)**

The maximum eligible funding for the Competitively Awarded Procurement (CAP) portion of a construction management project will be the sum total of all competitively awarded works, plus limited agreed-to contingencies. Appropriate justification will be required before contingencies are disbursed. For all projects, the tender results for a minimum of 90% of the work (dollar value) to be competitively awarded must be known and agreed to before the resourcing level is finalized and construction work begins. For multi-year projects, the tender results for at least 90% of the competitively awarded works (dollar value) to be completed in the current fiscal year must be known and agreed to before the resourcing level is finalized and construction work begins.

The results of the competitive award process must be reviewed by DIAND against the “Class B” estimates that were submitted at the time of effective approval. Final approval will be subject to the satisfactory review of this information.

The contract limits for the Competitively Awarded Procurement portion of the construction management projects as set out in the department’s tendering policy are:

- S for contracts over \$100,000, open public tender
- S for contracts between \$25,000 and \$100,000, invited or public tender
- S for contracts under \$25,000, in a manner that ensures value for money.

## **‘ Component 2 - Own-Forces Procurement (OFP)**

This component allows for the procurement of goods and services directly from the First Nation’s own-forces (local labour (band employees), equipment and materials manufactured or produced locally) but excludes private and band-owned business enterprises. To be eligible to use own-forces procurement, the proponent First Nation must demonstrate its capacity to provide the skilled labour, equipment and/or materials required to fully complete all aspects of the sub-trade work in accordance with the standards and specifications contained in the approved project submission.

In the absence of a competitive process for the work being undertaken by the First Nation’s own forces, an independent evaluation will be used to verify that fair value for the work is achieved. No allowance for profit is to be included given that own forces procurement is not to result in profit to the First Nation.

Where the estimated value of all the sub-trade elements is under \$100,000, which is the threshold established for public tendering in the Competitively Awarded Procurement, the project architect/engineer, DIAND (using the expertise of Public Works and Government Services Canada), and the First Nation must establish and agree to the value of work identified for that sub-trade, based on industry standards and market value. This will normally be carried out by developing a detail estimate based on a breakdown of the individual components of work to be carried out and associated costs.

Where the estimated value of all the sub-trade elements is over \$100,000, the services of an independent Professional Quantity Surveyor are to be retained to estimate a fair market value for the goods and services provided through Own-Forces Procurement, exclusive of any profit. A Professional Quantity Surveyor is a person who, by training and experience, is qualified to give advice on construction cost planning, preparing cost estimates and value analyses, setting up cost control systems and acting as an expert witness. Both the proponent First Nation and DIAND must agree in advance on the independent Professional Quantity Surveyor credentials and services to be provided and on his/her selection. The cost of retaining an independent Professional Quantity Surveyor for the purposes of analysing the use of Own-Forces Procurement is considered to be a legitimate project expenditure.

The independent Professional Quantity Surveyor will prepare and submit a report covering each of the sub-trade work over \$100,000 to be undertaken by Own-Forces Procurement. Once the report has been reviewed and approved by DIAND and the proponent First Nation, the second level of the resource package (ie. the Own-Forces Procurement component) will be established.

The Own-Forces Procurement component of the resource package will be the sum of the estimate(s) by the independent Professional Quantity Surveyor plus limited agreed-to contingencies similar to the contingencies allowed under Competitively Awarded Procurement. The responsibility for managing the Own-Forces Procurement component of the work within this resource level rests with the proponent First Nation. The proponent First Nation must confirm to DIAND their agreement to carry out the Own-Forces Procurement work within the resource base.

Any cost savings achieved under Own-Forces Procurement must go back to the project (expanded scope such as personal computers in the case of a school construction) or be returned to the department.

#### **‘ Application of Cost-Sharing**

In cases where there is to be cost-sharing of the project costs, DIAND's portion will normally be applied first to the Competitively Awarded Procurement portion of the project. Only if DIAND's share of the funding exceeds the total Competitively Awarded Procurement value will it be applied to the Own-Forces Procurement portion. This principle will also apply in cases where DIAND's project funding is used to enhance core funding already contained in a block funding agreement.

#### **‘ Post Project Evaluation of Construction Management Projects**

During the implementation of these parameters, the CMet will be required to carry-out a post project evaluation in order that both First Nations and DIAND may improve the process and learn from the experiences that resulted in the delivery of capital projects using construction management. Regions will be responsible for recording the results of these evaluations and will be asked to report on those results from time to time to DIAND headquarters. Based on the results of these evaluations, adjustments may be made to these parameters. The minimum level of evaluation and reporting is outlined in “Appendix F” of this document.

#### **‘ Compliance to Parameters**

The application of these parameters is to be considered a prerequisite to the DIAND Regional Office authority to approve capital projects using construction management as the procurement method. Failure to follow these guidelines may result in the withdrawal of that authority.



## Appendix “A”

### Definition of Terms

Definitions are provided here for only those terms which are not already defined under the tendering framework document.

- **Class of Cost Estimates**

- ‘ Class “A” Cost Estimate

Detailed project cost estimate based on quantity take-offs from final drawings and specifications. It is used to evaluate tenders or as a basis of cost control during construction.

- ‘ Class “B” Cost Estimate

Project cost estimate prepared after site investigations and studies have been completed and the concept designs developed to illustrate and define all major systems, including outline specifications of each. It is based on a project brief and preliminary design.

- ‘ Class “C” Cost Estimate

This project cost estimate, which is prepared with limited site information, is based on probable conditions affecting the project. It represents the summation of all identifiable project component costs. It is used for program planning, establishing a more specific definition of client needs, and to obtain approval in principle.

- ‘ Class “D” Cost Estimate

This is a preliminary project cost estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client’s broad requirements. This overall cost estimate may be derived from lump sum or unit costs as identified in the construction cost manual for a similar project. It may be used to obtain approval in principle and for discussion purposes.

- **Construction Management** is a project implementation methodology carried out under the management of a professional construction manager or construction management firm. Contracting by this method is carried out largely on a trade-by-trade basis, such as the electrical, mechanical and structural, and is planned and coordinated by the construction manager.

- **Construction Manager**

The construction manager is responsible for:

- C assisting in the preliminary planning and design of the project which reflects the needs of the community, identifying and incorporating socio-economic opportunities
- C advising on schedules, budget cost control and economics of various methods and material selection
- providing site management and technical services
- C coordination of the trades, labour & supplies
- C project planning and scheduling activities of the trades
- overall project risk assessment and management
- C supervising the activities of the trades

A professional construction manager is selected by the owner through a proposal selection process, retained by the client on a fixed fee/ reimbursable expense basis, and is responsible for the completion of the project. As part of the Project Team, the construction manager is responsible to efficiently package the project work for tendering in order to ensure the effective delivery of the project, while making the best use of local resources (labour, equipment, and materials). Contractual relationships are usually carried out directly with the client who retains responsibility for paying accounts and billings. The construction manager is the owner's agent and should not be one of the sub-contractors or suppliers involved in the project.

A professional construction manager may be retained until the completion of a project or until the construction starts, with provision for his/her services to the end of construction, should the proponent First Nation wish to have the option to pursue the project either under general contracting or under construction management.

- **Competitively Awarded Procurement**

Procurement of goods and services obtained by open/public tender or other competitive process as required by and in accordance with the departmental tendering policy. For the purposes of this document, it will also be used to refer to the total component of goods and services within the project that will be procured in this manner.

- **Own-Forces Procurement**

Procurement of goods and services directly utilizing band equipment, materials manufactured or produced locally or labour provided by permanent or casual employees of the Band Council. This does not include private and band-owned business enterprises. For the purposes of this document, it will also be used to refer to the total goods and services within the project that will be procured in this manner.

To be eligible to use their own forces, the proponent First Nation must demonstrate its capacity to fully complete all aspects of the sub-trade work in accordance with the standards and specifications contained within the approved project submission.

- **Professional Quantity Surveyor**

A Professional Quantity Surveyor is a person who, by training and experience, is qualified and registered or eligible to be registered with the professional quantity surveyors' body in the province of practice or is accredited by the Canadian Institute of Quantity Surveyors. The Professional Quantity Surveyor is capable of giving advice on construction cost planning, preparing tender documents, bill of quantities, specifications, etc., checking and analyzing tenders, preparing schedules, setting up cost control systems, evaluating change orders, and acting as an expert witness. In context of this paper, the areas of expertise for the independent Professional Quantity Surveyor would be in the area of preparing cost estimates, in the building and/or civil engineering fields and value analyses required to establish a fair value for the Own-Forces Procurement components of the project.

Basic Terms of Reference to be used when hiring an independent Professional Quantity Surveyor:

- is qualified and registered or eligible to be registered with the professional quantity surveyors' body in the province of practice or is accredited by the Canadian Institute of Quantity Surveyors
- will independently develop and validate the project cost estimate by establishing "value for money" for variable quantity items and for items with a clearly defined scope of work, exclusive of any profit
- will confirm the quantities of materials, labour and equipment
- will prepare a value analysis of the project as proposed and compare the costs to other methods of implementation, providing cost data and comparable market rates for labour, materials and equipment
- will report directly to the Construction Management Evaluation Team
- the independent Professional Quantity Surveyor proposal and Terms of Reference shall form part of the final contract package.

- **Project Manager**

Projects over \$1.5 million may require the involvement of a professional project manager. Many of the functions of the project manager are, under construction management, carried out by the professional construction manager, thus eliminating the need for a project manager. If, however, a project manager (like a foreman) is hired, the project manager's responsibilities must not overlap those of the construction manager (like a superintendent). The reduction in roles and responsibilities should be reflected in the fees allotted to the project manager and construction manager.

The project manager is normally responsible for:

- defining owner's requirements
- selection of designers and consultants
- budgeting, cost controls, project accounting
- risk assessment & management
- scheduling
- reporting and maintenance of project records and files
- monitoring progress against schedule
- issuing change orders
- resolving claims and disputes
- obtaining final reports and completion certificates
- operational procedures
- quality control
- commissioning
- public relations
- supporting the socio-economic objectives of the owner

## **Appendix “B”**

### **Business Plan Outline at Preliminary Project Approval Stage**

- **Overview**

This section should include a brief narrative outlining the overall goal for the project, the manner in which it will be implemented and the benefits that are anticipated to accrue to the community.

- **Project Team**

Through the use of a narrative and appropriate, supporting documentation, a description of the entire project team, the roles and responsibilities of each member, sufficiently detailed as to allow the CMet the opportunity to effectively review and determine whether the proposed team meets the required standards or requires additional enhancement. The project team is responsible for the implementation of the project.

- **Proponent First Nation’s Profile**

The proponent First Nation’s profile should include a narrative overview of the First Nation providing a particular focus on the financial capacity and well-being of the community. An outline of the First Nation’s management structure and the capacity of its administrators should also be provided, along with information relating to previous experience with similar type or other major capital projects.

- **Project Team Profile**

This profile should include identification of all project team members, their primary roles and responsibilities as well as their respective qualifications, including professional, technical, administrative or financial. If departmental or other federal representatives are included as team members, their roles and the anticipated level of support sought should be included in the outline. Although each project is unique in its own requirements, the following will provide a typical guide for the selection of project team members:

**A recommended project team profile for projects less than \$1.5 million:**

- " First Nation’s Capital Program Officer/Project Manager
- " Construction Manager
- " Design Architect/Design Engineer

**A recommended project team profile for projects greater than \$1.5 million:**

- " First Nations Capital Program Officer
- " Project Manager
- " Construction Manager
- " First Nations Assistant Construction Manager
- " Design Architect/Design Engineer
- " Funding Services Officer/Capital Program Officer
- " Real Property Services Technical Representative

**Project Team Organization**

The following organizational items should be described:

- " project team organizational plan and reporting relationships
- " responsibility for monitoring project budget
- " responsibility for monitoring project schedule
- " responsibility for addressing budget and schedule variances and making adjustments
- " responsibility for regular reporting on project status
- " responsibility for analyzing and assessing preliminary project risks
- " responsibility for delivering the project within established scope of work, on time and within budget

**Construction Manager/Construction Management Firm**

The business plan will generally include a complete section outlining qualifications of the proposed project construction manager/construction management firm. Selection of a construction manager/construction management firm before proceeding into the pre-design/design phase is generally recommended as it supports the design process and helps to maintain project continuity.

If the construction manager/construction management firm is to be engaged after preliminary project approval, one of the conditions of the preliminary project approval will be the subsequent submission of an acceptable proposal from the construction manager/construction management firm prior to effective project approval. The proposal will then be evaluated by the CMet.

Any company engaged to provide construction management services to the project will not be permitted to submit bids on any project construction contracts and shall be at arms-length from all prospective bidders.

A copy of the proposal received from the proposed construction manager or construction management firm should provide the following information:

- " Qualifications and experience of proposed construction manager and associated on-site and off-site support personnel for the project [detailed resumes required];
- " Organizational structure supporting the construction manager including replacements for key personnel and availability of multi-disciplinary staff;
- " Roles and responsibilities of the construction manager;
- " Established systems and procedures for planning, cost analysis, scheduling, estimating, cost control, tendering, purchasing and construction administration;
- " Demonstrated knowledge of the current market for material costs and availability, labor conditions and union agreements, construction equipment costs and availability of qualified trade contractors;
- " Involvement in previous First Nations projects;
- " Involvement in projects of similar discipline, magnitude and within similar geographical area;
- " Present workloads of construction manager and immediate past history of project performance.

‘ **First Nations Assistant Construction Manager**

As one of the primary benefits of construction management is expected to be in the area of capacity development, the business plan for projects more than \$1.5 million should include a section outlining the qualifications and experience of the proposed First Nations assistant construction manager and the roles and responsibilities associated with this position. Information requested includes the amount of time to be spent on the project, tasks to be completed, reporting relationships and involvement with the principal construction manager.

• **Own-Forces Procurement Resource Pool**

In general terms, outlines expected sub-trade(s) and the human resources, equipment and materials that are expected to be utilized under the Own-Forces Procurement portion of the project.

- **Implementation Plan**

It is anticipated that construction management projects will be implemented consisting of two distinct components. Those components are the Competitively Awarded Procurement portion and the Own-Forces Procurement portion.

A general description of the projected works to be competitively awarded and those to be carried out under own-forces procurement is to be developed within the implementation plan. Approximate value and percentage of total works for various components should be indicated. An anticipated schedule for project activities is to be provided.

- **Competitively Awarded Procurement**

Those specific portions of the project's work that will be awarded through a competitive process as required by and in accordance with departmental tendering policy.

- **Own-Forces Procurement**

To be eligible to use their own forces, the proponent First Nation must demonstrate its capacity to fully complete all aspects of the sub-trade work in accordance with the standards and specifications contained within the approved project submission, in providing skilled labour, appropriate equipment or the required material manufactured or produced locally.

- **Resourcing Plan**

The resourcing plan for the entire project is to be developed utilizing "Class C" estimates. Costs for architectural and engineering design and implementation services and costs for construction management services should be identified and itemized in discrete work packages.

Similar to preliminary advances that may be allowed for eligible soft costs such as architectural/engineering fees and the cost for the development of a business plan, an allowance for the cost of the independent Professional Quantity Surveyor should be identified for inclusion within any applicable funding submission. As it will be necessary for the CMet to review the credentials of the third party independent Professional Quantity Surveyor, a resume or other appropriate documentation should be provided. The selection of the independent Professional Quantity Surveyor, the delivery and the acceptance of his/her report is to be carried out on a joint basis between the proponent First Nation and DIAND.

Contingencies are to be calculated according to the appropriate regional practices and the complexity of the project.



- **Capacity Development**

In general terms, outlines the proposed working relationship, including First Nation representatives, as part of the construction management process. It should provide an estimated value of labour services to be provided by the First Nation community.

## **Appendix “C”**

### **Evaluation of Business Plan at Preliminary Project Approval Stage**

When the CMet reviews the business plan at the preliminary project approval stage, it must ensure that the following information is provided and is satisfactory.

- **Project Organization**

- S First Nation management structure, administrative capacity, financial capacity and experience with similar projects
- S proposed team is meeting the requirements of the project
- S presentation of an organizational chart/staffing plan and reporting relationships
- S roles and responsibilities of each project team member defined, including responsibility for budgets, schedules, project reporting and project risks
- S proposal from proposed construction manager/construction management firm indicating qualifications, experience, knowledge, available resources, procedures for planning, cost analysis, scheduling, estimating, cost control, tendering, etc. [note: construction manager/construction management firm may be submitted after Preliminary Project Approval, but must be submitted before Effective Project Approval]

- **Own-Forces Procurement Resource Pool**

- S an outline of First Nation human resources to be utilized
- S an outline of local equipment and materials to be used

- **Implementation Plan**

- S general description of proposed implementation strategy identifying competitively-awarded procurement and own-forces procurement with approximate value and percentage of total works for procurement method
- S specifics on the portions and value of the project to be awarded through competitively-awarded procurement

- **Resourcing Plan**

- S class “C” construction cost estimates including contingencies and cashflow projections
- S engineering/architectural design fees and estimated fees during construction
- S construction management and project management design fees and estimated fees during construction
- S cost of independent Professional Quantity Surveyor or estimate agreed to by the CMet when under \$100,000
- S costs for each contract or value of services to be obtained locally
- S value of materials to be purchased both locally and outside the community
- S anticipated schedule of resourcing requirements

- **Capacity Development**

- S description of proposed working relationship including First Nation representatives as part of construction management process
- S approximate value of labor services to be provided by First Nations community

- **Socio-economic benefits**

- S community skilled trades trainees utilized
- S community direct employment of labour force utilized
- S community equipment utilized
- S value of materials purchased locally

## **Appendix “D”**

### **Business Plan Outline at Effective Project Approval Stage**

- **Overview**

A revision of the original business plan submitted at preliminary project approval highlighting any significant changes to the project supplemented by additional or more detailed information relating to project implementation and benefits to the community. (Refer to Appendix “B” for details on the contents of each section).

- **Project Team**

The project team proposed at the Preliminary Project Approval stage along with their respective roles and responsibilities are to be confirmed for the construction stage of the project. Responsibilities for construction quality control, project inspection, project completion certification and project completion reporting are to be included at this project stage.

Project team organizational items are to be confirmed, including roles and responsibilities, as well as reporting relationships. Where changes in the project team are being proposed, detailed resumes of the new members are required.

Resources and services provided by the Construction Manager/Construction Management firm relating to the implementation of the project are to be identified.

Any changes from the preliminary project approval stage business plan need to be explained within the context of this project, including the impact on the project.

- **Own-Forces Procurement Resource Pool**

Provide details on the human resources, equipment and materials that will be utilized under the Own-Forces Procurement portion of the project.

- **Implementation Plan**

A detailed description of the works to be competitively awarded and those to be carried out under own-forces procurement are to be provided within the implementation plan. Provide a schedule for proposed project activities, including key milestones such as procurement and approvals. This section should outline how the project is to be implemented and any specific arrangements that are planned to ensure the project is successfully completed.

- **Resourcing Plan**

- **Resources Plan Estimates**

The resourcing plan must be precise in its outline of the works to be carried out under both procurement methods. Cost estimates are to be established at a “Class B” level.

Estimates for the Own-Forces Procurement works over \$100,000 are to be established in accordance with an independent third party quantity takeoff (e.g. square metres of carpeting) and valuation of the proposed works, as developed by a qualified independent Professional Quantity Surveyor, whose credentials and services to be provided were agreed to in advance by both the proponent First Nation and DIAND.

A final cost for the Own-Forces Procurement works should not be established without the full set of drawings and specifications which are normally required for a Class A estimate where an accurate value of the project is confirmed. Therefore, it may be necessary to utilize the services of a Professional Quantity Surveyor both at Class B and Class A cost estimate stages.

### **Contingencies**

Resourcing plans are to include provision for contingencies refined according to the level of estimating at this stage. Contingencies at this time would generally not exceed 2% for building components or 10% for civil components.

### **Bonding and Warranties**

Bonding of contracts valued over \$100,000 should be required as part of the tender package. This would usually represent bonding on 60 to 80 percent of the project. The remaining work would normally include own-forces work, small contracts, fees, and general requirement items, which do not need to be bonded. However, a First Nation may require bonding for contracts under \$100,000, if they feel the project risks justify bonding.

Alternative types of performance security could be permitted. An irrevocable letter of credit or cash security are options commonly used in the construction industry.

For warrantied works, trade contractors should be responsible for their work for a minimum period of one year, during which time the construction manager should remain responsible to the owner to ensure trade contractors carry out their warranty work. A warranty period, to be provided by the First Nation, should also be arranged in the budget and administered by the construction manager to cover the work undertaken using own-forces.

### **Risk Assessment and Mitigation Plan**

### **Competitively Awarded Procurement**

Proponent First Nations are to provide an analysis of the potential risks related to the works and responsibilities being undertaken under the Competitively Awarded Procurement portion of the project. A mitigation plan is to be provided which outlines how these risks will be managed and how necessary resources will be provided if required.

- **Own-Forces Procurement**

For the works and responsibilities being undertaken under Own-Forces Procurement by the project's First Nation proponent, an analysis of potential risks, including a mitigation plan outlining how risks will be managed and resourced is to be provided. To be eligible to use their own forces, the proponent First Nation must demonstrate its capacity to fully complete all aspects of the sub-trade work in accordance with the standards and specifications contained within the approved project submission, in providing skilled labour, appropriate equipment or the required material manufactured or produced locally.

- **Capacity Development**

Provide a quantifiable description of the direct social and economic benefits accruing to the community through the Own-Forces Procurement portion of works. Compare community benefits and identified potential risks to support the assessment of a decision to proceed.

## **Appendix “E”**

### **Evaluation of Business Plan at Effective Project Approval Stage**

When the CMet reviews the business plan at the effective project approval stage, it must ensure that the following information is provided and is satisfactory.

- **Project Team**

- S confirmation of the project team
- S confirmation or revisions to previous organizational chart/staffing plan and reporting relationships
- S roles and responsibilities of the project team confirmed
- S revisions to construction management arrangement
- S changes from preliminary project approval to be documented

- **Own-Forces Procurement Resource Pool**

- S details on proposed First Nation human resources to be utilized
- S details on proposed local equipment and materials to be used

- **Implementation Plan**

- S description of project implementation strategies for defined packages of work identifying competitively-awarded procurement and own-forces procurement with value and percentage of total works for each procurement method
- S specifics on the portions and value of the project to be awarded through competitively-awarded procurement
- S costs for each contract or value of services to be obtained using local resources
- S value of materials to be purchased both locally and outside the community
- S schedule of all project activities, including the tenders and procurement of resources
- S description on how the project schedule will be maintained

- **Resourcing Plan**

- S Class “B” construction cost estimates including contingencies and cashflow projections provided for tender packages
- S “Class B” construction cost estimates including contingencies and cash-flow projections provided for work to be completed by Own-Forces Procurement [information to be supplied by an independent Professional Quantity Surveyor or estimate agreed to by the CMet when under \$100,000]
- S Engineering/Architectural fees during construction
- S Construction Management costs during construction
- S Bonding and warranty details
- S Other project costs such as project management fees

- **Risk Assessment and Mitigation Plan**

- S description of potential risks and mitigation plan to manage risks for work being undertaken under the Competitively Awarded Procurement
- S description of potential risks and mitigation plan to manage risks for work being undertaken under the Own-Forces Procurement

- **Capacity Development**

- S description of proposed working relationship with First Nation representative as part of construction management process
- S value of labor services to be provided by First Nations community
- S summary of quantifiable direct social and economic community benefits
- S benefit/risk analysis comparing direct social and economic benefits against potential risks

- **Socio-economic benefits**

- S community skilled trades trainees utilized
- S community direct employment of labour force utilized
- S community equipment utilized
- S value of materials purchased locally



## Appendix "F"

### Construction Management - Post Project Evaluation Indicators

The department will be using the post-project evaluations to improve the process of construction management. An analysis of the benefits achieved at the First Nation's community level compared to the project costs will determine the profits of using such an approach.

- **Project Completion**

S      Was the project completed meeting original objectives?      Yes/No

S      Were changes in project scope required?      Yes/No  
         If yes, reasons: \_\_\_\_\_

S      What was the dollar value of any changes in project scope?      \$\_\_\_\_\_

- **Project Budget**

'      Comparison of value of construction work completed using Own-Forces Procurement versus the value of work completed using Competitively Awarded Procurement.

Suggested rating:    above 75%   - rating of 10  
                             50% to 75%   - rating of 8  
                             25% to 50%   - rating of 5  
                             10% to 25%   - rating of 3  
                             5% to 10%    - rating of 1

'      Comparison of project budget to final project dollars

S      Was the project fully completed within budget dollars allotted?      Yes/No  
         If no, reasons: \_\_\_\_\_

S      Suggested rating - calculate percentage of dollar savings/(cost overruns) and use as point systems, i.e., save \$100,000 on a \$1.0M project ergo 10%, + 10 points; over expend \$100,000, - 10 points

- **Project Schedule**

S      Was the project completed in accordance with original schedule?      Yes/No  
         If no, reasons: \_\_\_\_\_

S      Suggested rating - calculate percentage of actual construction time frame to substantial completion versus proposed construction schedule and use as point system, i.e., save 10 days on 100 days, therefore 10% or +10 points or a 10-day delay - 10 points.

- **Community Labour Force Utilized - Skilled Trades Trainees**
  - S Determine number of hours of work for skilled trades trainees
  - S Evaluate number of hours of work as dollar value compared to project value
  - S Suggested rating - calculate percentage of dollars for skilled trades trainees compared to project value and use as point system, i.e., if 10%, then get 10 points
  
- **Community Labour Force Utilized - Direct Employment Hours**
  - S Determine number of hours of direct employment
  - S Evaluate number of hours of work as dollar value compared to project value [note this evaluation does not consider impact of small available work force and large project dollars]
  - S Suggested rating - calculate percentage of dollars for direct employment hours compared to project value and use as point system i.e. if 10%, then get 10 points
  
- **Community Equipment Utilized**
  - S Determine number of hours of usage from community equipment
  - S Evaluate number of hours of dollar value compared to project value
  - S Suggested rating - calculate percentage of dollars for direct employment hours compared to project value and use as point system, i.e., if 10%, then get 10 points
  
- **Community Capacity Building in Construction Management Process**
  - S Determine number of hours of capacity building incorporated into project compared to value of construction management dollars
  - S Suggested rating - calculate percentage of dollars for capacity building compared to value of construction management dollars and use as point system, i.e., if 10%, then get 10 points

- **Value of Materials Purchased Locally**

S Determine value of materials purchased locally versus total dollars spent on purchase of materials

S Suggested rating - calculate percentage of dollars for purchase of local materials compared to total dollars spent on materials purchase and use as point system, i.e., if 10%, then get 10 points

- **Quality of Work**

S Was professional certification of work completed obtained? Yes/No  
If no, reasons: \_\_\_\_\_

S Was environmental compliance with environmental assessment report requirements implemented Yes/No  
If no, reasons: \_\_\_\_\_

- **Reporting Requirements**

S Were progress reports generated as required? Yes/No  
If no, reasons: \_\_\_\_\_

S Was completion report generated? Yes/No  
If no, reasons: \_\_\_\_\_

- **Overall assessment**

S What successes were achieved?

S What lessons were learned?

S If a similar project was to be undertaken, would the construction management approach be used again? If yes, would some changes be necessary to improve the implementation of the project?

If no, what would be the reasons for going general contracting ?

**Note:** Weighting of rating factors to be determined by each Regional Office.