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Building *Nunavut* Together  
*Nunavut* iuqatigiingniq  
Bâtir le *Nunavut* ensemble



## **Government of Nunavut Request for Proposals**

**GN Server Room – Baffin Regional Hospital**

**Iqaluit, Nunavut**

**RFP # AE2016-06**

**ISSUE DATE – August 12, 2016**

**GN RFP Form # 6215-25-AE rev.8 17-Oct-2014**



## Request for Proposals (RFP)

The Department of Community and Government Services (CGS) implements and maintains a diverse regional infrastructure portfolio for The Government of Nunavut. In conjunction with the Department of Informatics Planning & Services (IPS), CGS has determined the necessity of a new server room to support current informatics objectives. To fulfill this objective, a room at the Baffin Regional Hospital (BRH) in Iqaluit has been selected for redevelopment and expansion. The expansion will meet the demands of IPS's mandate, and meet all applicable regulations, standards, and guidelines. CGS is seeking a qualified professional engineering firm to provide design and construction administration services for expansion of this room as further described in this RFP.

Proponents should ensure that they have received this document **directly from the Nunavut Tenders** web site, (<http://www.nunavuttenders.ca/>). Only proponents that download this document directly from the Nunavut Tenders web site will be registered to receive notice of Addenda as they are issued. If you have received this document from another source, you will not receive notice of addenda that may be issued. If you have not received this document directly from the Nunavut Tenders website, you should go to the site now and register and obtain this document from the source site. Registration only requires your organization or individuals name and an email address so that notifications of addenda and awards can be received.

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## Instructions to Proponents

1. Proposals must be received in hard copy or by fax or by Tender Bid Box Submission on or before **August 26, 2016 at 16:00hrs (4:00 PM) Local Time at Iqaluit, Nunavut** at:

<p><b>Department of Community and Government Services Government of Nunavut Attention: Peter Mask, Technical Procurement Officer Hand Delivered to 3<sup>rd</sup> Floor, W. G. Brown Building, Astro Hill Terrace Iqaluit, Nunavut</b></p> <p>Telephone: (867) 975 – 6447    Fax: (867) 975 – 5450</p>
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- a) Proposals received after the exact time and date noted above will be considered late and will be rejected.
- b) The original and five (5) copies are to be submitted, quoting “*GN Server Room – Baffin Regional Hospital*”, closing date and proponent’s name on the outside of the envelope.
- c) After the closing time, and subject to the Access to Information and GN reporting provisions contained herein, only the names and addresses of the proponents will be made public.

2. The GN will not accept or be responsible for any proposal that:
  - a) does not indicate the RFP title, reference number, closing date, proponents name and address on the proposal envelope or packaging; or
  - b) is delivered to any building address or fax number other than that provided above.
3. **NUNAVUT TENDERS BID BOX:** The GN is offering vendors the option of submitting bids electronically for some, but not all, tenders and requests for proposals, using the Nunavut Tenders website (<http://www.nunavuttenders.ca>). If this RFP is eligible for the Nunavut Tenders Bid Box, a “Submit” button will appear on the webpage. By using the Bid Box, proponents are agreeing to the Terms of Use, which are linked to the Nunavut Tenders webpage.
4. If proposals are sent by fax:
  - a) The proposal must be **received in its entirety before the closing date and time** at the fax machine number stated. For greater certainty, “received in its entirety” means that the fax transmission is complete and all pages of the proposal are fully printed by the receiving fax machine. To ensure the proposal is received in its entirety before the closing time, it is recommended that the proponent **commence the fax transmission well in advance of the closing time**, and confirm receipt by a telephone enquiry. The fax machine is used for other government business and may be busy prior to closing.
  - b) The GN does not guarantee that fax transmissions will be received and any proponent who submits a proposal by fax machine does so **at its own risk. The GN accepts no liability** for any claim or damages resulting from a fax transmission which is interrupted, not received in its entirety, received after the stated closing time and date, received by any other fax machine other than the one stated herein, or for any other reasons.
  - c) While the GN will undertake to handle fax submissions in a secure and confidential manner, it is impossible to guarantee the confidentiality of information contained therein; therefore, by faxing their proposal, the proponent waives any legal claim of confidentiality against the GN.

Failure to comply with or agree to any of the foregoing provisions will result in disqualification of the proposal.
5. As soon as practical after sending a proposal by fax, the proponent should provide confirmation that the proposal and required copies have been sent by the most expedient means to:

Government of Nunavut  
Department of Community and Government Services  
3rd Floor, W. G. Brown Building – Astro Hill Terrace  
P. O. Box 1000 – Station 1600 Iqaluit, NU X0A 0H0

  - a) In the event of any inconsistency, discrepancy or conflict between the proposal received by fax transmission and the proposal received after the closing date and time, the faxed proposal shall govern.
6. Due to limited bandwidth, file size restrictions and connectivity interruptions, submitting a proposal by e-mail is unreliable. **Proposals submitted by e-mail will not be accepted.** Notwithstanding the foregoing, the GN reserves the right to request an unaltered electronic version of the proposal after the closing date and time.
7. One of the priorities of the GN is to ensure Inuit, Nunavut and Local businesses supply materials, equipment, and services on any GN contract, and that Inuit, Nunavut and Local labour is used to the fullest extent practical; therefore, the Nunavummi Nangminiqatunik Ikajuuti (NNI Policy) applies to this Request for Proposals.
  - a) To maximize incentives available under the NNI Policy, proponents **must** identify cost components for Inuit, Nunavut and Local Content.
  - b) Failure to complete and submit the NNI Incentives form with the proposal **will** result in a denial of any adjustments the proponent may otherwise be entitled to under the NNI Policy. Failure to provide complete business names **will also** result in a denial of adjustments.

- c) Proponents can obtain information about the NNI Policy from the GN's NNI Secretariat at 1 – 888 – 975 – 5999. A copy of the NNI Policy may be downloaded from the website <http://nni.gov.nu.ca/policy>. A registry of approved Nunavut Businesses is available on the internet at the website <http://www.nni.gov.nu.ca/search>. Proponents may also obtain information about Inuit Firms from Nunavut Tunngavik Inc. (NTI) at 1 – 867 – 975 – 4900 or from their website <http://inuitfirm.tunngavik.com/>. The registry of approved Inuit Firms can be accessed on the internet at the website <http://www.inuitfirm.com/public/search.php>.
  - d) **The Contracting Authority cannot guarantee the accuracy of, nor is it liable for any information provided by the NNI Policy Secretariat on the NNI Business Search website, or Nunavut Tunngavik Inc. on the Inuit Firm Registry; however, proponents may rely on the websites on the date of writing the proposal, and the evaluation committee may rely on the accuracy of the websites on the closing date for the purposes of applying the NNI Policy in evaluating proposals. Accordingly, for the purposes of ensuring the correct bid adjustments are applied, proponents should indicate the NNI and, or, NTI Registration Numbers on the NNI Incentives Application Form.**
  - e) Unsuccessful proponents may challenge the NNI evaluation of their proposal pursuant to s.18.11 of the NNI Policy within five (5) days of receiving notice of a contract award.
8. For one year from the date their employment ceases, former GN senior officers may not own, operate, control or be employed by any business enterprise in which they may be in a position to unduly exploit knowledge they gained while employed by the GN. If, however, within one year after employment ceases, a senior officer is offered a contractual position by a department, the Deputy Minister (DM) of that department may make a request of the Senior Personnel Secretariat (SPS) to waive the last 6 months of the required waiting period. If six (6) months have passed since the end of a senior officer's employment, the SPS may, in its sole discretion, waive the remaining waiting period.
9. The GN reserves the right to deem a proponent "not responsible" on the basis of performance problems in any similar contract which performance problems occurred in the past 12 months. Performance problems include default, failure to perform, unsatisfactory quality of result, or unsatisfactory contract management practice. A proposal submitted by a proponent who is "not responsible" will be rejected.
10. All questions, enquiries or any other communications concerning this RFP should be in writing and faxed or e-mailed to:
- Peter Mask, Technical Procurement Officer P: 867-975-6447 E: [pmask@gov.nu.ca](mailto:pmask@gov.nu.ca)**
- a) Responses to any communication made by a GN employee other than the contact person identified herein should not be relied on and can not be guaranteed.
  - b) Verbal communications are discouraged, can not be relied upon, and are not binding on either party. Verbal responses to any inquiry or communication made by the contact person identified herein, or any other person, are not binding on either party and cannot be relied upon or construed to be an implied term of this RFP or any ensuing contract. The GN will accept no liability for any losses, damages or claims by an unsuccessful proponent who has relied on verbal information or communication from any other party, including our client.
  - c) A response to any enquiry received later than five (5) calendar days prior to the proposal closing deadline can not be guaranteed.
11. Any amendments made by the GN to this RFP will be issued in writing and available via automatic notification in an addendum format for download to those proponents who have registered and who have received the original documents from the GN Tender website. Proponents who do not register will not get the addenda.
12. Proponents may amend their proposal by fax at any time prior to the closing date and time. If submitting via the Nunavut Tenders Bid Box is permitted, proponents may upload a revised proposal, or upload proposal amendments. Amendments or amended proposals should be clearly identified as such. The latest version will be considered the proponent's official submission.

13. The GN reserves the right to request clarifications and negotiate modifications with any proponent who has submitted a proposal. Proponents are encouraged to submit enquiries and seek clarifications to the RFP document prior to the stated closing date and time. A Proponent seeking modifications to the Agreement terms should specifically request those changes in writing prior to the closing date and time, and the GN may respond by way of addendum.
14. The GN reserves the right to issue an addendum after the closing date.
15. An evaluation committee will review each proposal. The evaluation committee reserves the exclusive right in its sole discretion, to determine the scores of all proposals relative to the evaluation criteria, weights and rating legend provided in this RFP. **For greater clarity, the evaluation committee reserves the right to make adjustments to a proposal following the closing date in accordance with the NNI Policy by taking into account any information that will assist it in doing so, including by taking into account information obtained from the Nunavut Business Registry maintained by the NNI Secretariat and the Inuit Firm Registry maintained by NTI. For greater certainty, if the GN determines that a proposal should, or should not, receive a bid adjustment pursuant to the NNI Policy, it can adjust the evaluation and scoring of a proposal accordingly.**
16. Proponents may be short listed. Proponents who are short listed may be requested to make a formal presentation. Such presentations shall be made at the cost of the proponent.
17. It is a condition of every contract made by or on behalf of the government requiring an expenditure, that an expenditure pursuant to the contract will be incurred only if there is a sufficient uncommitted balance in the appropriated item for the fiscal year in which the expenditure is required under the contract.
18. The GN is not bound to accept the Proposal that provides for the lowest price or the highest score nor any proposal of those submitted. The GN has the right to cancel this RFP at any time, in whole or in part, and to reissue it for any reason whatsoever, without incurring any liability and no proponent will have any claim against the GN as a consequence. The GN further reserves the right to accept proposals in whole or in part.
19. If a contract is awarded as a result of this RFP, it will be offered first to the proponent who is responsive and responsible and whose proposal provides the best potential value to the GN as determined by the highest score. “Responsive” means compliant in all material respects. “Responsible” means the capability in all respects to perform fully the contract requirements and the integrity and reliability to assure performance of the contract obligations. See also paragraphs 9 above and 22 below.
20. If a contract is awarded as a result of this RFP, it will contain the relevant provisions of this RFP and the accepted proposal, the terms and conditions of the Agreement and any other terms as may be mutually agreed upon, whether arising from the accepted proposal or as a result of any clarifications or negotiations prior or subsequent thereto; and this ensuing agreement will be forwarded to the successful proponent for signature prior to the GN's authorized representative signing it.
21. The GN and the successful proponent shall not acquire any legal or equitable rights or privileges under any ensuing agreement until it is signed by both parties.
22. In the event the successful proponent elects to withdraw its proposal after acceptance and not enter into an ensuing agreement, then the GN may, at its sole discretion, disqualify the successful proponent from any further participation in the RFP process, revoke the offer of the ensuing agreement presented for signature, and accept the proposal of the next highest scoring proponent, or cancel the RFP. Furthermore, as a result of withdrawing its proposal, the withdrawing proponent may be required to submit bid security on future RFPs, or be deemed ‘not responsible’ for future projects, at the sole discretion of the GN.

23. If a contract is awarded as a result of this RFP, it will be governed by the laws of Nunavut; therefore, the successful proponent shall be required to comply, and shall require its subcontractors to comply, with all applicable laws, orders, rules and regulations; and, without limiting the generality of the foregoing, shall at its sole expense comply with all unemployment insurance, Worker's Safety and Compensation, Labour Standards including requirements of the Labour Standards Board, income tax, Nunavut Payroll Tax, Canada Pension Plan, occupational health and safety and environmental protection legislation.
- a) If you are a new business in Nunavut, you will be required to register your business with the Workers Safety and Compensation Commission (WSCC) prior to undertaking any work or services in Nunavut. For greater clarity, the Nunavut does not have any reciprocity agreements with other provincial and territorial workers safety and compensation commissions. The GN may check with the WSCC prior to awarding a contract to ensure that the successful proponent is in compliance with the Workers Compensation Act. For more information, please call Employer Services at (867) 979-8500 or toll free at 1 877 404 4407 or visit the Registering A Business page on the website: <http://www.wsc.ca/Pages/default.aspx>
  - b) If you are a new business in Nunavut, you will be required to comply with the Business Corporations Act and other applicable legislation governing the conducting of business in Nunavut. The GN will check with its Corporate Registries branch in the Department of Justice, prior to the awarding of a contract, to ensure that the successful proponent is in compliance with the legislation. It will be a condition of contract award, that the successful proponent register its business with the GN's Department of Justice's Legal Registries Division prior to undertaking an work or services in Nunavut. For more information, call (867) 975 – 6590; e-mail ; or visit the Corporate Registries website at: [http://nunavutlegalregistries.ca/cr\\_index\\_en.shtml](http://nunavutlegalregistries.ca/cr_index_en.shtml)
  - c) All engineers, geoscientists and firms practising in the Northwest Territories and Nunavut are required to be licensed by NAPEG in adherence to the Acts of Northwest Territories and Nunavut. NAPEG does not have a category of registration for a limited licence or temporary licence or provisional licence. Accordingly, if you are not already a registered Permit Holder with the NAPEG, upon entering into a contract with the GN, you will be required to register, or show proof of registration and good standing with this Association. More information is available at the website: <http://www.napeg.nt.ca/registration>
  - d) Nunavut imposes payroll taxes on gross remuneration of all employees who work in Nunavut. For more information on Nunavut's unique Payroll Tax, e-mail the Department of Finance Taxation Division at payrolltax@gov.nu.ca, or visit the website: [http://www.finance.gov.nu.ca/apps/authoring/dspPage.aspx?page=tax\\_payroll](http://www.finance.gov.nu.ca/apps/authoring/dspPage.aspx?page=tax_payroll)
24. In the event of any inconsistency between this RFP and any ensuing contract, the contract shall govern.
25. Proponents should familiarize themselves with the insurance requirements in the attached form of contract, and take the cost of those insurances into account in making their proposal. Please note the requirement that the Consultant ensure that all individuals (including the Contractor if an individual, and including all employees, officers and subcontractors) who are physically present in Nunavut during the term of this contract have extended medical benefits that cover the full cost of ambulance and medical evacuation. Beneficiaries under the *Nunavut Land Claim Agreement* are automatically covered by the NIHB (Non-Insured Health Benefits) program. Individuals may have extended medical benefits through a group program, including a group program to which their spouse belongs. Private coverage is available. Individuals present for a short time in Nunavut may buy the necessary coverage with their airfare. **In the event this coverage is not in place for an individual who must be medically evacuated while in Nunavut, the Consultant will indemnify the GN for the cost of the medical evacuation.**



## Terms of Reference

### Owner Supplied Services

Services under any contract resulting from this RFP will include but not necessarily be limited to the provision of the necessary designs and construction administration services for the GN Server Room project as required by the Terms of Reference.

Services will be provided in accordance with the Architectural/Engineering Full Services Agreement attached with this RFP.

The GN will provide the services described in Section D of the attached Architectural/Engineering Full Services Agreement to be modified as follows:

With regards to Section D 1.4, on calling tenders and awarding a contract during the Bidding and Negotiating Phase, the GN will:

- Provide tender advertising
- Advise the A/E on the documents required for tender;
- Issue and manage RFT process
- Receive all enquiries and coordinate the distribution of addenda; technical enquiries referred to the A/E shall be answered by the AE during the Bidding phase – AE shall identify a contact person for this purpose
- Analyse tenders and recommend award
- Obtain bonds and insurance
- Prepare the construction contract for execution and obtain Contractor and GN signatures
- Distribute signed construction contracts to the Contractor and the Owner's Representative

With regards to Section D 1.5, on managing the Construction Contract during the Construction Phase, the GN will:

- Appoint a Project Manager to act as the Owner's Representative for the purposes of managing all aspects of the project, including the construction contract
- Issue Substantial and Final Completion certificates in accordance with the Construction Contract Documents





**Community & Government Services**

## **TERMS OF REFERENCE**

**Project Number:**

15235-00285

**ISSUED FOR PROPOSAL**

*Project:*

**GN Server Room – Baffin Regional Hospital**

**Iqaluit, Nunavut**

## **1.0 Introduction**

The Department of Community and Government Services (CGS) implements and maintains a diverse regional infrastructure portfolio for The Government of Nunavut. In conjunction with the Department of Informatics Planning & Services (IPS), CGS has determined the necessity of a new server room to support current informatics objectives. To fulfill this objective, a room at the Baffin Regional Hospital (BRH) in Iqaluit has been selected for redevelopment and expansion. CGS is seeking a qualified professional engineering firm to provide design and construction administration services for expansion of this room. The expansion will meet the demands of IPS's mandate, and meet all applicable regulations, standards, and guidelines.

## **2.0 Project Identification**

### **2.1 Name**

GN Server Room - Baffin Regional Hospital

### **2.2 Project Number**

15235-00285

### **2.3 Location**

Iqaluit, Baffin Region, Nunavut.  
Baffin Regional Hospital, Room 3130 and exterior.

### **2.4 Sponsor Department**

Department of Informatics Planning & Services (IPS)

### **2.5 Users**

IPS Staff

### **2.5 Project Personnel**

2.5.1 Government of Nunavut – CGS Contact Information

Project Personnel names and contact details will be provided upon contract award. For the purposes of the RFP and selection of a successful AE design firm, all enquiries are to be directed to the Technical Procurement Officer as set out in the Instructions to Proponents.

### **2.6 Schedule**

The project consultants will provide a detailed project schedule showing at minimum the anticipated dates for design, reviews and logistical milestone phases. Assume ten to fifteen (10 – 15) business days after the closing date to allow for proposal evaluation, selection of successful proponent and contract award.

## **3.0 Background**

The GN and IPS have identified initiatives to strengthen informatics networks contained within Iqaluit, and maintained by IPS. The expansion of the BRH room 3130 will be integral for the long-term Disaster Recovery (DR) and Business Continuity Plan (BCP) for the Government of Nunavut Informatics networks, applications and associated services. The hospital has been identified as a critical location for the Iqaluit fibre optic network. The site will be used for fibre optic redundancy and building connectivity. The expansion will serve as a long term location to implement and support a new Meditech system, and other healthcare related systems vital to health objectives.

#### **4.0 Site**

Room 3130 is a partially decommissioned generator room which previously serviced the BRH.

- Access to the room is internal to the hospital through a stair set.
- Internal and central to the room is a large Kohler generating unit, placed upon an approximately 4 inch cement riser.
- Associated controls items are located along surrounding walls.
- Exchange pipes, exchange ventilation, and electrical conduit are observed throughout the room with wall insertions and routing custom to the Kohler unit.



*Figure 1: Aerial view of site location at Baffin Regional Hospital obtained from Google Maps.*



*Figure 2: External view of Room 3130 / wall to be expanded.*



*Figure 3: Generator, generator controls and riser.*

## **5.0 Expansion / Re-development Considerations**

The consultants will be required to develop a site plan that demonstrates development of the expansion in context to IPS needs, and means of closing and adjoining the connected BRH. “Green”, or energy efficient systems and solutions should be integrated to the overall server room design where possible. The total area of the server room will be approximately 70m<sup>2</sup> (36m<sup>2</sup> existing and 34m<sup>2</sup> new construction)

### **5.1 General**

- Identify functional generator room components; maintain or re-route.
- Decommission and remove non-functional room components.
- Remove Kohler Generator (unit too large for door / internal hospital egress) and associated vital controls, and store as directed by CGS Property and Asset Management.
- Remove generator riser.
- Fill in internal access stair door, remove stairs and store as directed by CGS Property and Asset Management.
- Make good all architectural, mechanical and electrical for room and expansion development.

### **5.2 Expansion of Existing Structure**

- Expand footprint of site location and design a foundation system to accommodate the expansion.
- Expand building envelope to the proposed sizing.
- Close building to accommodate server room specifications.
- Expand building in a manner which maintains external roads.
- Provide transition area buffering main server room from outside.
- Provide access to server room through transition area from outside hospital.
- Provide access to server room through transition area from inside hospital through elec. room.
- Grade outside area to allow expansion and access.



A rough schematic has been produced which demonstrates the vision for the room expansion and access requirements:

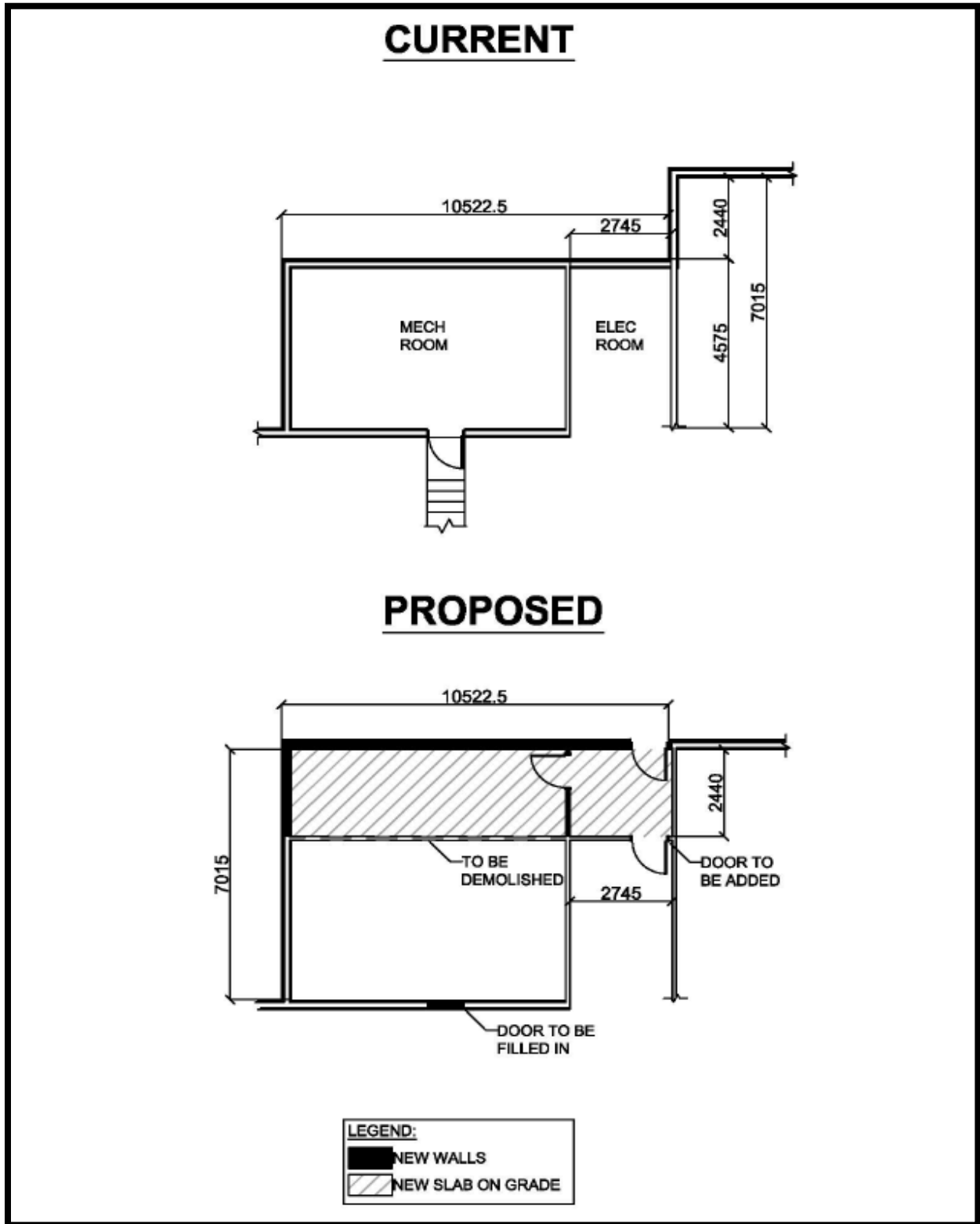


Figure 4: General proposed expansion (approximate dimensions, requiring verification).

### **5.3 IPS Development**

The consultant is to work with IPS to determine specific requirements necessary for development of the GN server room. To meet the requirements of the design and architecture of the new Server Room, IPS has preliminarily identified requirements of specific skills and experience in the following areas:

- Cooling, ventilation experience with server rooms design and construction. This skill-set should include cooling, ventilation and mechanical redundancy (N+1) and proper planning for scalable and future growth. This should also include a review of different cooling and ventilation options such as raised floors systems, hot and cool aisles etc.
- Power and electrical experience related to server room design and construction. This skill-set should include electrical design/power distribution units, flexible enterprise level UPS with expandable capacity for future growth, integration with new or existing generators.
- Experience in server room fire suppression, including airflow design, new technologies, potential pre-action or dry sprinkler systems (based on GN codes and standards), heat and smoke detection.
- Experience in server room lay-out and designs. This should include scalable cable management, power management and distribution, rack lay-out for optimal server/hardware performance and flexibility. This should also include optimal work, storage and staging areas.
- Experience in physical and logical security for server rooms. This should include physical security, local and central recording and monitoring.
- Experience in cabling termination standards and designs. This should include inside and outside cable plants and termination related to server room design.

## **6.0 Technical Requirements**

### **6.1 Intent**

The design should strive to produce an expansion with the minimum area and volume needed to satisfy the spatial and functional needs of the users, with the lowest capital cost.

### **6.2 Regulatory Compliance**

The consultant is solely responsible for adherence of the design to all Federal, Territorial and Municipal regulatory requirements and guidelines including but not limited to the latest editions of the following:

- National Building Code of Canada
- National Fire Code of Canada
- National Plumbing Code of Canada
- Canadian Electrical Code
- CGS – Good Building Practices Guideline
- Municipality of Iqaluit Land-Use By-Law

The consultant is advised that The Office of the Fire Marshall (OFM) is the 'authority having jurisdiction' (AHJ) under the Fire Prevention Act in the Territory of Nunavut.

## **7.0 Project Management Requirements**

### **7.1 Project Delivery Approach**

The project will be tendered via Open Public Tender. The CGS Project Manager is the single point of responsibility for the management of the project including administering contracts for design and construction. A collaborative approach is anticipated with communication among project representatives and consultants during the design phase, including formal reviews and approvals at the end of schematic design phase as well as during preparation of contract documentation. The design process is expected to

include collaboration with IPS representatives, particularly during the conceptual/schematic design phase for siting determination and to ensure adequate functionality within the Terms of Reference.

The project will be subject to CGS Design Review Stages and Document Submission Requirements, as well as CGS IPS GN Structured Cabling Guidelines. It is expected that the project will adhere to GN Good Building Practices, and all applicable National, Territorial, and Municipal regulations and codes.

Approvals for cash flow adjustments will be sought once consultant’s cost estimates are available, and consultants may be requested to provide a breakout of their construction cost estimates by fiscal year. The total budget amount is intended to cover soft costs such as site surveys, architectural/engineering services and project management expenses, as well as construction costs and specified equipment.

**7.2 Project Schedule**

The project consultants will provide a detailed project schedule showing at minimum the anticipated dates for design reviews (allow a minimum of 10 working days for each review) and logistical milestone phases.

**8.0 Deliverables**

<b>Phase</b>	<b>Deliverable</b>
Schematic Design	<ul style="list-style-type: none"> <li>• Schematic Design Report</li> <li>• Class C Estimate</li> </ul>
Design Development	<ul style="list-style-type: none"> <li>• 50% Construction Documents</li> <li>• Class B Estimate</li> </ul>
Construction Documentation	<ul style="list-style-type: none"> <li>• 99% Construction Documents</li> <li>• Class A Estimate</li> <li>• Tender Ready Package</li> </ul>
Bidding and Negotiation	<ul style="list-style-type: none"> <li>• Issued for Construction Drawings and Specifications</li> </ul>
Construction	<ul style="list-style-type: none"> <li>• Regular Inspections</li> <li>• Progress Reports</li> <li>• Substantial Completion and Final Completion Inspections and Reports</li> </ul>
Post Construction	<ul style="list-style-type: none"> <li>• As-Built Drawings</li> </ul>



## Proposal Evaluation

When an alternative is proposed regarding any specific requirement, it will be evaluated to ensure that the desired results will be achieved.

Proponents should be aware that certain mandatory requirements may have been set out in the Terms of Reference. Proposals that fail to provide these requirements shall be deemed not responsive and will not be evaluated.

### Evaluation Criteria

The evaluation team will utilize the following criteria to evaluate each proposal. Points awarded will be consistent with the Points Rating Legend on the Proposal Rating Schedule. Points awarded will be confidential and no details will be released to any of the other proponents.

Each proposal will be evaluated using the following criteria:

- 20% - Past Relevant Experience of Proposed Team Members
- 25% - Design Proposal
- 10% - Corporate Profile/Identity (Suitability for Project)
- 30% - Project Budget/Fees & Expenses (NNI adjusted for Nunavut, Inuit and Local Content prior to rating);
- 15% - Inuit Content (10% for Inuit Employment and 5% for use of Inuit Firms)

#### Nunavummi Nangminiqagtunik Ikajuuti (NNI Policy)

One of the priorities of the GN is to ensure that Inuit, Local, and Nunavut businesses supply materials, equipment and services, and that Inuit, Local and Nunavut labour are used to the fullest extent practical on any GN contract. Therefore the NNI Policy applies to this Request for Proposals.

To receive the benefits of this Policy, proponents must identify cost components for Inuit and Nunavut content including the names of any subcontractors, suppliers, and the residency of project team members or other labour proposed to carry out the work. Consideration will also be given for the proponent's Inuit Firm or Nunavut Business status.

Prior to rating, proposed pricing may be adjusted in accordance with the NNI Policy for the amount of work to be done by Inuit, Nunavut and Local businesses and residents. Cost components must be clear; therefore, proponents are encouraged to complete and submit the NNI Incentives Application Form attached to this RFP. Instructions are provided to guide proponents on what level of detail to include. Also refer to the Instructions to Proponents for more information. Failure to complete and submit this form with appropriate detail will result in a denial of NNI adjustments.

***For greater certainty, the evaluation committee reserves the right to make adjustments to a proposal following the closing date in accordance with the NNI Policy by taking into account any information obtained from the Nunavut Business Registry maintained by the NNI Secretariat and the Inuit Firm Registry maintained by NTI. If the GN determines that a proposal should or should not receive a bid adjustment pursuant to the NNI Policy, it can adjust the evaluation and scoring of a proposal accordingly.***

### Proposal Response Guidelines

The following are guidelines meant to assist proponents in responding to this RFP and will be utilized in evaluating each submission. They are not meant to limit or restrict proposals.

Proponents should take care to comply with any mandatory proposal requirements set out herein. Mandatory proposal requirements are preceded by terms such as “proponents must”, “proponents shall” or “proponents will”.

Note: Mandatory proposal requirements are not the same thing as **contractual obligations**. A contractual obligation is something that must be done under the contract that is expected to result from this RFP. Proposals will not be rejected for failing to demonstrate compliance with contractual obligations. Contractual obligations are identified by terms such as “consultant must”, “consultant is required to”, “consultant shall”, etc.

### **Proposal Format**

To allow for a thorough yet timely evaluation, proposals should be presented in a clear and concise manner. Failure to present information in the manner requested may be to the proponent's disadvantage. It is suggested that the following format and sequence be followed in order to provide consistency in proponent response and to ensure each proposal receives full consideration:

1. Proposal Cover Letter or Executive Summary
2. Corporate Profile & Legal Identity for the Purposes of Entering into a Contract
3. Project Team & Key Personnel – Roles & Responsibilities
4. Design Proposal
5. Additional Services
6. Project Schedule & Critical Milestones
7. Detailed Project Budget/Fees & Expenses
8. Past Related Experience on Similar Projects – Proponent Firm
9. Past Related Experience on Similar Projects – Project Team Members
10. Proposal Attachments
  - a. Proposal Submission Form (Legal Identity)
  - b. NNI Incentives Application Form & Inuit Content
  - c. Others as may be proposed

The cover letter or Executive Summary should provide a summary of your organization's interest and suitability for this project. It should be no more than 2 pages in a standard business format and should identify and be signed by the people who prepared the proposal, and include a contact person responsible to answer questions regarding the proposal contents.

### **Corporate Profile & Legal Identity**

The profile should include the organization's legal name, address, and telephone number; date established and structure; ownership details; firm leadership (such as corporate officers or partners); number of employees; number of employees engaged in tasks related to the scope of work for this RFP. The proponent's business number and principal place of business should also be provided, and the Proposal Submission Form attached with this RFP should also be filled out and submitted.

Incorporated proponents should also be required to provide a certificate of standing to prove their corporate status, as a mandatory proposal requirement; that is, failure to provide this information will result in the proposal being rejected.)

### **Related & Past Experience – Similar Projects (note – corporate past experience can be evaluated separately from the personal past & related experiences of the project team members).**

To demonstrate knowledge, skill and related experience of each member proposed to carry out work on the project, the proponent should provide a detailed list of similar projects completed in the past five (5) years, and identify who the projects were completed for. Also provide a brief description of the work that was done and the project outcomes.

The proposal content is expected to demonstrate appropriate and relevant knowledge, skills and experience within the team, however, personal resumes for each of the proposed team members should be provided to support the proposal. Personal resumes should be limited to not more than two (2) or three (3) pages per person.

Letters of Reference from past clients and other governments may also be provided to support the proposal. Proponents should also be aware that where it has done past similar work for the GN, the GN Department and Division that the work was done for will automatically become a reference for the purposes of verifying the proponent’s satisfactory performance for that particular work, and suitability for the work contemplated in this RFP.

If the proponent is not legally registered to do business in Nunavut, then the proponent will have to register their business in order to lawfully enter into any contract resulting of this RFP.

**Project Methodology – Approach & Work Plan to Successful Completion**

Your proposed solution will demonstrate your understanding of the project and potential for achieving the project objectives. Provide details of your solution and how it will be implemented. Explain how it will successfully achieve the department’s goals and objectives and benefit the end users.

Your methodology should also include your proposed means of working with the GN project manager, the levels of authority within the Project Team and all lines and means of communication.

You may also summarize your methodology in a work plan or other format which demonstrates a logical sequence of events, and identifies specific tasks and the person responsible for completing them.

**Project Schedule & Critical Milestones**

Provide a schedule for the sequence of events described in the methodology. Identify a project start and end date and any time frames allocated for each planned task. Identify key milestone dates for submittals, approvals, travel, meetings, etc., Your timeline will be evaluated in light of the time constraints discussed in the Terms of Reference and the timeframes you have set out for each task.

It is expected that the proponent will incorporate the following critical milestones in the proposed schedule:

<b>Phase</b>	<b>Deliverable</b>
Schematic Design	<ul style="list-style-type: none"> <li>• Schematic Design Report</li> <li>• Class C Estimate</li> </ul>
Design Development	<ul style="list-style-type: none"> <li>• 50% Construction Documents</li> <li>• Class B Estimate</li> </ul>
Construction Documentation	<ul style="list-style-type: none"> <li>• 99% Construction Documents</li> <li>• Class A Estimate</li> <li>• Tender Ready Package</li> </ul>
Bidding and Negotiation	<ul style="list-style-type: none"> <li>• Issued for Construction Drawings and Specifications</li> </ul>
Construction	<ul style="list-style-type: none"> <li>• Regular Inspections</li> <li>• Progress Reports</li> <li>• Substantial Completion and Final Completion Inspections and Reports</li> </ul>
Post Construction	<ul style="list-style-type: none"> <li>• As-Built Drawings</li> </ul>

**Consultant/Project Team – Qualifications, Knowledge, Skills, Past Related Experience**

Identify key personnel to be involved in the project, and ensure their roles and responsibilities are clearly defined. Identify a team leader and clearly establish lines of communication within the team, and with the GN Project Manager.

**Detailed Project Budget/Fees & Expenses (should be consistent with the way the contract will be paid for, e.g. Terms of Payment section B) AE Full Services Agreement (aka “Long Form”).**

**Proponents should be asked to provide pricing for Basic Services and Field Expenses separately; the Basic Services Fee should be broken down into the 6 phases of the project.**

**Field Expenses should be based on a minimum number of inspection trips (to be included in the base bid but broken down on a per trip basis), and additional pricing for any additional trips offered by the proponent should be priced individually. Disbursements should be defined - e.g., what field expenses are going to be reimbursed at what rate (this should be a general all-inclusive administration rate, however, refer to the AE Agreement Basic Services section to determine what is covered under disbursements.**

**If additional services are required, pricing should be price separately (as with the scope of work details for what is being offered if not requested in the TOR).**

Proponents must/should (depending on Terms of Reference & Scope of Work):

- a) Provide a detailed cost breakdown showing all work components and costs associated with delivering the project. Each component should be itemized and priced separately with a Grand Total or Lump Sum of all components and expenses. It is expected the detailed budget will include, but not necessarily be limited to least the following items:
  - nature of work and costs associated with the proponent’s direct involvement in the project;
  - nature of work and costs associated with each team member’s involvement in the project;
  - nature of goods and costs associated with each supplier involved in the project;
  - nature of services and costs associated with each sub-consultant involved in the project;
  - cost estimates and pertinent details associated with travel, including travel agency, airlines and hotels and number of travel days;
  - for persons travelling, identify the travelers, their points of departure and arrival, duration of trip, airfare, accommodations and estimated field expenses. Provide the name of the hotel, airline or travel agency for greater opportunity to maximize any permissible NNI Policy pricing adjustments.

Proponents should:

- a) Submit a billing cycle. It is preferred that invoices will only be issued as specific tasks are completed. The GN's Financial Administration Manual provides for payments terms of net thirty (30) days or net twenty (20) days for an NNI registered Nunavut Business.
- b) Provide a list of hourly rates for each team member in the event additional services may be required. For greater certainty, additional work must be specifically requested and approved by the GN Project Authority and itemized with associated additional costs within a written contract change order.
- c) Additional Services: The proponent should include hourly rates for project team members' time if required to provide additional services over and above those provided in the proposal. Note that additional services will only be authorized in writing by the CGS contract manager on request of a written quotation, and if acceptable, the contract will be amended accordingly in writing.

Clearly identified cost components will be adjusted in accordance with the NNI Policy for the amount of work to be done by Inuit and Nunavut businesses and for the amount of work to be done by Inuit and Nunavut Residents. In order to receive these adjustments, proponents must complete the NNI Incentives Application Form and submit it with their proposal. Failure to do so will result in a denial of any adjustments permitted by the NNI Policy.

Pricing must be stated in actual dollars and cents expressed in Canadian funds. The GN will pay the Goods and Services Tax (GST); however, do not include GST in your proposed pricing.

**It should be noted that the GN will not provide an advance payment to any proponent upon the signing of a contract; therefore requests for such an advance will be denied and the contract will reflect same.**

### **Inuit Content**

In compliance with Article 24 of the Nunavut Land Claims Agreement (NLCA) and the NNI Policy, the GN will provide consideration for Inuit Content. Accordingly, proponents are encouraged maximize business relationships with Inuit Firm sub-consultants and suppliers and hire Inuit workers to work on the project. All information should be provided in detail in the attached NNI Incentives Application Form.

Inuit Content is the dollar value of goods and services provided by an Inuit Firm, and the dollar value of Inuit Employment in carrying out the work, including Inuit employees from an Inuit or non-Inuit Firm. An Inuit Firm is a company that is approved by Nunavut Tunngavik Inc. (NTI) and included in the Inuit Firms Database which is available online at [www.inuitfirms.com](http://www.inuitfirms.com). An Inuk is any person included in the Inuit Enrolment List under the NLCA Article 35, or anyone entitled to be enrolled under that article.

Approximately one (1) point will be awarded for each 10% of work to be done by Inuit Firms where this information has been substantiated in the proposal. Likewise, proponents will be awarded approximately one (1) point for each 10% of work that will be done by Inuit workers where the names and dollar values are provided. No points will be given for values lower than 10%. For example, 8% would be 0.8 points, and 32% would be 3.2.

In order to determine the percentage of work associated with Inuit Firms and Inuit Employment, the following variables are required:

- Total Proposal Price
- Total Labour Costs
- Inuit Labour Costs
- Total Goods & Services (excluding labour)
- Inuit Goods & Services Costs (excluding labour)

Failure to provide this level of detail in your proposal pricing will result in the evaluation committee not being able to determine Inuit Content percentage levels to award points appropriately. This information may be provided in the NNI Incentives Application Form attached with this RFP. An example is provided to assist proponents in filling out the NNI Incentives Application Form. If greater clarification is required, seek assistance well in advance of the RFP closing deadline.

### NNI Incentives Application Form

The following information MUST be provided by proponents wishing to receive any pricing adjustments permitted under the NNI Policy. If the information is not provided or is incomplete, bid adjustments will NOT be granted.

Values provided in this form must be substantiated by the information provided in the proposal. It will be necessary to provide the names of all proposed team members along with their location of residence. Place a check mark in the column where you wish to receive the adjustment. The Evaluation Committee will use the NNI and NTI Registries to verify the status of sub-consultants and suppliers. **If the GN determines that a proposal should or should not receive a bid adjustment pursuant to the NNI Policy, it can adjust the evaluation and scoring of a proposal accordingly.**

<b>Proponent's Name</b>					
<b>I. Employment/Labour/Payroll – Include administrative/operational expenses in payroll values).</b>					
Name & Location of Worker (or proposed new hires)	Labour Cost	Nunavut (7%)	Inuit (7%)	Local (7%)	Other (0%)
	\$				
	\$				
	\$				
	\$				
	\$				
<b>Total Value of Labour</b>	\$				
<b>Value of Inuit Labour</b>	\$				
<b>II. Proponent/Sub-Contractor Amounts – Miscellaneous Expenses including Travel Estimates</b>					
Name & Location of Proponent or Sub-Contractor and Nature of Services	Unit Costs	Nunavut (7%)	Inuit (7%)	Local (7%)	Other (0%)
	\$				
	\$				
	\$				
	\$				
	\$				
<b>Total Goods &amp; Services (excluding labour)</b>	\$				
<b>Inuit Goods &amp; Services (including labour)</b>	\$				
<b>Total Proposal Value</b>	\$				
<p>Note: This information is required in order to apply NNI adjustments. Note: <b>For the purposes of this RFP, the Subject Community is Iqaluit and the Local adjustment will apply to this RFP.</b></p> <p style="text-align: center;">Instructions for completing this form are on the following page. <b>If more space is needed, photocopy and reuse this form.</b></p>					

## **NNI Adjustment Application Form Instructions**

The following guidelines are given to assist proponents in applying for NNI adjustments:

### **I. Employment/Labour (Payroll Expenses):**

This section is for the labour of both the main Consultant (the proponent) and any Sub-Consultants. The work being done by the employees who don't live in Nunavut doesn't qualify for an adjustment. Any portion of payroll dollars for the work that will be done by Nunavut Residents does qualify (Nunavut 7%). If the Nunavut Residents are also Inuit, they qualify for the additional Inuit adjustment (7%). If the Inuit employees are not Nunavut Residents, they do not get the Nunavut adjustment; they only get the Inuit adjustment (7%). If the Nunavut Residents are also local to the benefiting community, then they qualify for the additional Local adjustment (7%). If the Inuit employees are Local Nunavut Residents, they get the full 21% adjustment. Inuit employees who are not Nunavut Residents don't qualify for Local adjustments.

### **II. Other/Miscellaneous Expenses/Sub-Consultants:**

This section is for both the main Consultant (the proponent) and any Sub-Consultants. Some of the work may have to be done by another consultant. This is referred to as a 'sub-contract'. If any other services required for the completion of the contract will be provided by the proponent or any other business, it must be identified here. If the proponent or other company is a Nunavut Business, then they will get the Nunavut adjustment (7%). If they are listed in the NTI Inuit Firms database, then they will get the Inuit adjustment (7%). If the company is listed in both databases, they get both adjustments. If they are also located in the benefitting community, then they get the additional Local adjustment (7%). If the sub-consultant is not on either the NNI or NTI List, it does not qualify for a bid adjustment of any kind.

### **Application of NNI & NTI Adjustments:**

Adjustments are applied to the sub-total dollar values associated with each listed component and sub-consultant or supplier according to their registration status. Accordingly, the Evaluation Committee will check the NNI and NTI databases to verify that the sub-consultant or supplier listed is actually registered and adjustments will be given according to the registered status.

For Example, if the proponent indicates that a company is both a Nunavut Business and an Inuit Firm by placing check marks in the 'Nunavut' and 'Inuit' columns, and the Evaluation Committee determines that the company is included on the NNI Registry but is not included on the NTI Inuit Firms Listing, then the Nunavut adjustment will be allowed and the Inuit adjustment will be denied.

Proponents are hereby reminded that registration in the NNI and NTI registries requires annual updates, therefore, proponents are encouraged to check the NNI and NTI websites to verify the status of any sub-consultants and suppliers they propose in carrying out the work. Proponents should also ensure that their own information is up to date. Refer to the Instructions to Proponents paragraph 6 for website addresses.

**Note:** For the purposes of this RFP, the Subject Community is Iqaluit and the Local adjustment applies to this RFP.

**Total Labour Value:** is the total of all of the individual team members assigned to tasks in the project and listed in each row.

**Total Goods and Services Value:** is the value of the proponent's own involvement, as well as the involvement of other consultants and suppliers with the labour values excluded.

The Evaluation Committee will use this information to apply any pricing adjustments you may be entitled to under the NNI Policy. The websites will be used to verify the information provided for proponents, sub-consultants and suppliers.

**NNI EXAMPLE:**

This scenario is for a solution of services where a small amount of goods may be required to deliver the service. Instead, a substantial amount of labour is required to complete the contract and the costs for any materials necessary for delivering the service are ancillary<sup>1</sup>, and therefore included in the Contractor’s Administration or General Expenses line item in the bid. For this example, we are using the hypothetical value of \$1,000,000 dollars for the proposed total contract price from a company called Local Inuit Nunavut Company (LINC). The contract price is arrived at based on the volume of work to be completed. Note this value was chosen for this example only and is not based on any real prices or a specific volume. It is for illustrative purposes only.

Total Proposal Price of Local Inuit Nunavut Company (LINC): **A    \$ 1,000,000**

The proposal is further broken down to separate the Proponent and sub-contractor labour values from the non-labour portion of the services, and for the purposes of applying bid adjustments, the status of each company is verified.

**Total Proposal Price of LINC \$ 1,000,000**

<b><u>Labour Component</u></b>	<b><u>Worker Status</u></b>	<b><u>Payroll Cost</u></b>
LINC Labour	Inuit, Nunavut, Local (Local Inuit are Nunavummiut)	\$ 200,000
LINC Labour	Non-Inuit, Nunavut based, not Local	\$ 300,000
Sub-Contractor A Labour	Not-Inuit, Not-Nunavut, (Montreal)	\$ 100,000
<b><u>Other Services Components</u></b>		<b><u>Other Service Component Costs</u></b>
LINC Materials	Inuit, Nunavut, Local	\$ 200,000
Sub Contractor A	Not Inuit, yes Nunavut, yes Local	\$ 100,000
Sub Contractor B	Yes Inuit, not Nunavut, yes Local	\$ 100,000

**For the Proponent Company: Local Inuit Nunavut Company (LINC)**

- ✓ Inuit ownership – Included on the NTI Inuit Firms Registry – Yes Inuit
- ✓ Nunavut based and owned – Included on the GN NNI Secretariat Nunavut Business Registry – Yes Nunavut
- ✓ NTI or NNI Registered and based in the community where the Services are required – Yes Local

**For the Sub-Contractor “A”**

- ✓ No Inuit ownership – Not on NTI Inuit Firm Registry – Not Inuit
- ✓ Nunavut based and owned – Included on the GN NNI Secretariat Nunavut Business Registry – Yes Nunavut
- ✓ NNI Registered and based in the community where the Services are required – Yes Local

**For the Sub-Contractor “B”**

- ✓ Inuit ownership – Included on the NTI Inuit Firms Registry – Yes Inuit
- ✓ Nunavut based & owned but NOT listed on the GN NNI Secretariat Nunavut Business Registry – Not Nunavut
- ✓ NTI Registered and based in the community where the Services are required – Yes Local

**This example is given to illustrate two things:**

- 1) How Bid Adjustments are Applied; and
- 2) How Inuit Content (Labour and Firms) is Evaluated

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<sup>1</sup> Minor, subsidiary, supporting.



**1) How the Bid Adjustments are Applied**

**Calculate Allowable NNI Adjustments to Determine NNI Adjusted Bid Price – this is a 2-Part Step**

**Table I. This analysis is based on the Proponent’s identified workforce, and workers to be used by its subs.** Proponents must indicate in their bids the dollar value estimates for workers and indicate if they are Inuit or not, if they are working in Nunavut or not, and which community they’re based in. This level of detail is needed to accurately calculate adjustments. For each value component and status category of labour, the value of the labour will be multiplied by the total allowable adjustment percentage factor.

Estimated Labour/Payroll Expenditures Breakdown Table							
Employers and Labour Forces	Value of Labour (\$)	Nunavut Residents 7%	Inuit Residents 7%	Local Residents 7%	Other Residents 0%	Total Adjustment (%)	Value of Adjustment (\$ x %)
LINC: Inuit based in service community (Local Inuit are considered Nunavummiut)	\$200,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21%	\$ 42,000
LINC: Nunavut workers based outside service area (not LCA beneficiaries)	\$300,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7%	\$ 21,000
Sub-Contractor A: Non-Inuit & not working in Nunavut (not Inuit or Nunavut)	\$100,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0%	\$ 0.00
<b>Total Estimated Labour</b>							<b>\$600,000</b>
<b>Total Estimated Inuit Labour</b>							<b>\$200,000</b>

**Value of Adjustments on Total Labour (\$42,000 + \$21,000) = B \$ 63,000**

**Table II. This analysis is based on the Proponent’s identified Value of Services to be provided by the Contractor and Sub-Contractors.** Bidder must have provided all ‘Own Forces’ amounts and Name(s) and Dollar Values of all intended Sub-Contractors in their bid. To calculate the adjustments, multiply the Value of Services by the Total Adjustment Percentage factor.

Other Services (Excluding Payroll Estimates) Fees/Price Breakdown							
Contractors Names & Line Items	Value of Services (\$)	Nunavut Businesses 7%	Inuit Firms 7%	Local 7%	Other Business 0%	Total Adjustment %	Value of Adjustment (\$ x %)
LINC: Materials & Administration (Nunavut, Inuit & Local)	\$200,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21%	\$ 42,000
Sub-Contractor A: Specific Services (Nunavut and local, but not Inuit)	\$100,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14%	\$ 14,000
Sub-Contractor B: Specific Services (Inuit and Local, not Nunavut)	\$100,000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14%	\$ 14,000
<b>Total of Other Services</b>							<b>\$400,000</b>
<b>Inuit Portion of Total Other Services</b>							<b>\$300,000</b>

**Value of Adjustments on Other Services excluding Labour (\$42K + \$14K + \$14K) = C \$ 70,000**

**To determine the Total Value of Adjustments, add the total adjustments under the Payroll Breakdown Table (B) and the total adjustments from under the Other Services table (C) to find the Total Value of Adjustments:**  
 $(\$63,000 + \$70,000) = \mathbf{D \$ 133,000}$

**III. To determine the Total Adjusted Proposal Price, subtract the Total Value of Adjustments (D) from the Total Proposed Price (A) \$1,000,000: (\$1,000,000 - \$133,000) = E \$ 867,000**

**This is the proposal price value that will be used to determine score in the pricing evaluation.  
See Rate/Price explanation on page 4.**

## **2) How Inuit Content (Labour and Firms) would be Evaluated**

### **Labour Component:**

In order for Proponents to maximize points available for Inuit Labour, they will need to clearly outline their estimates for labour required to deliver the contract. This will include the value of the labour directly engaged by the Proponent company, and the value of labour provided by sub-contractors. Proponents should also be sure to identify the beneficiary status and location of the workers (i.e., Inuit or not, based in Nunavut and if any will be working in any of the communities within the Sealift Area they're bidding on (this will determine Local adjustments). The GN may request a description of the job title (Laborer, Account Representative, Sales Agent, Customer Service etc.), and the value of the labour to deliver the service to that Area; however this information should be included somewhere in the proposal submission.

Note that the Sub-Contractor labour values can only be included if they are part of the Proponent's proposal price, and part of the payroll. If they are charged to the GN separately by another company or contractor, they are not to be included.

### **Other Expenses Component:**

The 2<sup>nd</sup> pricing breakdown table provided on page 2 (Other Services – Excluding Payroll) is provided for the Proponent to identify other expenses and who they're being provided by. This includes all of the other components and costs of delivering the service, including any sub-contracted services, supplies, fuel, administrative costs, overhead, profit margin, hotels, insurance, advertising, transportation costs, maintenance, depreciation, etc.

For the purposes of providing pricing, Proponents should present their pricing in a format similar to the table provided in the RFP. Costs or components that are internal to the Contractor such as profit margin, insurance, overhead etc., should be listed under the Proponent's name and will be considered as 'own forces'. Other components that may be broken out and identified as Inuit and or Nunavut and or Local companies should be listed separately. If the services are being delivered by a Local Inuit or Nunavut firm, they should be listed separately.

Note that Sub-Contractor work values can only be included if they are included in the proposal pricing as part of the overall expenses. If they are charged to the GN separately, they are not to be included.

### **Proposal Scores and Inuit Content:**

From the RFP document, the chart entitled Proposal Rating Schedule; we see that the Inuit Content Rating Criterion includes Inuit Employment (10%) and Inuit Firms (5%). From the information proponents submit on the chart entitled "RFP NNI Adjusted Price Calculation Information", we will complete the scores for Inuit Employment, Inuit Firms and the Bid Adjustment.

**How Inuit Labour is Evaluated:**

To determine the score for Inuit Labour, the GN will award points for the percentage of payroll dollars that is outlined as Inuit Labour. In this example, the total value of Inuit Labour is \$200,000. The total value of all labour is \$600,000. Therefore the score for Inuit Labour is calculated as follows:

$$\begin{aligned} \text{Inuit labour Score} &= \$ \text{ Inuit labour} / \$\text{Total Labour} \\ &= \$200,000 / \$600,000 \\ &= .33 \\ \text{Inuit Labour score} &= \mathbf{3.3/10} \end{aligned}$$

**How Inuit Firms is Evaluated:**

To determine the score for Inuit Firms, the GN will award (approximately) 1 point for each 10% of Inuit Content to be provided for delivering the contract in comparison to the total overall proposal value for the contract. This includes Inuit Labour.

In our example, the total value of Other Services (Supplies/Materials, Contractor or Sub-Contractor) is \$400,000, and the total value of proposed labour is \$600,000. This is a total overall proposes contract value of \$1,000,000. The Inuit portion of the Total Labour component on Table 1 is \$200,000, and the Inuit Portion of the Other Services component on Table 2 is \$300,000. This makes the total Inuit Content \$500,000: (\$200,000 for LINC Inuit Labour + \$100,000 for Sub-Contractor B Labour + \$200,000 for LINC Materials & Admin, etc.)

Accordingly, from our example the proponent LINC would score the following:

$$\begin{aligned} \text{Inuit Firm Score} &= \$\text{Total Inuit Content} / \$\text{Total Contract Value} \\ &= \$500,000 / \$1,000,000 = .5 \\ \text{Inuit Firm score} &= \mathbf{5/10} \end{aligned}$$

**Bid Adjustments** - In terms of NNI Adjustments, our Example Company LINC would have achieved the following adjustments (as illustrated on page 2):

$$\begin{aligned} \text{Adjusted Price} &= (\$ \text{Total Contract Value}) - (\text{Total Adjustments}) \\ &= \$1,000,000 - 133,000 = \mathbf{\$867,000} \end{aligned}$$

$$\begin{aligned} \text{Bid Adjustment Rate} &= \$\text{Total Adjustments} / \$\text{Total Contract Value} \\ &= \$133,000 / \$1,000,000 = .133 \\ &= \mathbf{13.3\%} \end{aligned}$$

**Rate/Price** The proponent with the least costly price, after bid adjustments are applied, for the geographical area, receives a score of 10/10. The next least costly bid after adjustment, receives a score relative to the best score.

**PROPOSAL RATING SCHEDULE**

Item	Rating Criteria		Unit Points Awarded (A)	Assigned Weight (B)	Total Points (A) x (B) = (C)
1	Corporate Profile & Identity (Suitability for Project)			10	
2	Past Relevant Experience of Proposed Team Members			20	
3	Fees and Expenses			30	
4	Design Proposal			25	
5	Inuit Content	Inuit Labour		10	
		Inuit Firms		5	
<b>PROPONENT:</b>				<b>TOTAL:</b>	

Comments: \_\_\_\_\_

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Committee Member: \_\_\_\_\_ Date: \_\_\_\_\_

<b>LEGEND:</b> A – Evaluation Points Awarded B – Weighting Factor C – Sub-Total Weighted Score (A times B)	<b>RATING POINTS:</b> Poor            0 - 3 points Fair            4 - 6 points Good            7 - 8 points Excellent       9 - 10 points
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## **Point Scoring Guidelines**

The following is provided as a guide to assigning an appropriate score relative to the quality of the proposal submission:

1) If the Quality of the Response is:

- No information provided;
- Requirement was not mandatory, but proponent did not provide any information or address the issue;

Award the Following Points:            0 (Zero)

2) If the Quality of the Response is:

- Falls short of meeting basic expectations;
- has a low probability of success.

Award the following points:            1 – 3 (Poor)

3) If the Quality of the Response is:

- Acceptable at a minimum level; meets our basic requirements; has a reasonable probability of success;
- some objectives may be met.

Award the following points:            4 - 6 (Fair)

4) If the Quality of the Response is:

- A sound response; fully meets most of our requirements; very good probability of success;
- achieves all objectives in a reasonable fashion.

Award the following points:            7 - 8 (Good)

5) If the Quality of the Response is:

- Meets all of our requirements; exceeds expectations;
- excellent probability of success in achieving all objectives;
- very innovative.

Award the following points:            9 - 10 (Excellent)

Note that a zero (0) score is reserved only for instances where the proposal does not address an issue that was requested in the RFP or where desired information is not provided. A zero (0) would be used in the event of a proponent not having any Inuit content or for not meeting a minimum standard. It should not be confused with failure to address a mandatory requirement which would render the proposal non-compliant and warrant rejection without further consideration.

## PROPOSAL SUBMISSION FORM

The following information should be provided by proponents wishing to have their proposal evaluated. If the proponent is not legally registered with the Government of Nunavut's Department of Justice, Legal Registries Division, in order to legally do business in Nunavut, then the proponent will be required to register should their proposal be acceptable to the GN.

**COMPANY NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Please indicate if the entity submitting this application is an Incorporated Company:** \_\_\_\_\_

**If yes, which province is the registration in?** \_\_\_\_\_

**Is the company registered in any other province as extra-provincially?** \_\_\_\_\_

**If yes, which province(s)?** \_\_\_\_\_

**AUTHORIZED PERSON(S):** \_\_\_\_\_

**NAME(S) & TITLE(S) IN CAPITAL LETTERS:**  
\_\_\_\_\_  
\_\_\_\_\_

**AUTHORIZED CONTACT PERSON:** \_\_\_\_\_

**PHONE NUMBER:** \_\_\_\_\_

**FAX NUMBER:** \_\_\_\_\_

**E-MAIL ADDRESS:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**AUTHORIZED SIGNATURE(S):** \_\_\_\_\_  
\_\_\_\_\_

**Community & Government Services  
Architectural/Engineering Full Services Agreement**



---

**Project Title**

---

**Location**

---

**Project No.**

---

**Architect/Engineer**

---

**Contract No.**

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### APPENDICES

- A. \_\_\_\_\_ Proposal dated \_\_\_\_\_
- B. Request for Proposal



**ARTICLES OF AGREEMENT**

These ARTICLES OF AGREEMENT made in duplicate this day of \_\_\_\_\_ 20\_\_.

Between:

The Government of Nunavut (referred to hereinafter as the "GN")

And:

\_\_\_\_\_  
\_\_\_\_\_

(referred to in this Agreement as the "Architect/Engineer", hereinafter referred to as "A/E");

witness that the GN and the A/E covenant and agree as follows:

**A1 AGREEMENT DOCUMENTS**

1.1 The documents forming this Agreement between the GN and the A/E are:

- 1.1.1 "Articles of Agreement", Section A;
- 1.1.2 "Terms of Payment", Section B;
- 1.1.3 "General Conditions", Section C;
- 1.1.4 "GN's Responsibilities", Section D;
- 1.1.5 "Architect/Engineer Services", Section E;
- 1.1.6 "Additional Services", Section F;
- 1.1.7 "Architect's Or Engineer's Proposal", Appendix "A".
- 1.1.8 "Request for Proposal", Appendix "B".

**A2 DESCRIPTION OF SERVICES**

*(Include detailed description of project. If applicable, the Project Requirements and Project Brief may be referred to and put in an Appendix).*

**A3 CONTRACT AMOUNT**

- 3.1 Subject to any increase, decrease or set off that may be made under this Agreement, the GN shall pay the A/E, as consideration for the execution of the Services described in this Agreement, a sum of money calculated in accordance with the provisions contained in the "Terms of Payment" at the times and in the manner therein set out.
- 3.2 It is understood by the GN and agreed by the A/E and the GN that the fees are payable only when the Services have been performed to the satisfaction of the GN within the stipulated cost estimate established to perform these Services and any payment in respect of a phase or part of a phase is not to be deemed a waiver of the GN's rights of set-off at law or under this Agreement for costs or expenses arising from default or negligence of the A/E.
- 3.3. The attention of the A/E is drawn to the following statutory provision of Section 46 of the *Financial Administration Act* (*Nunavut*) as amended or re-enacted in successor legislation:
- "It is a condition of every contract made by or on behalf of the Government requiring an expenditure that an expenditure pursuant to the contract will be incurred only if there is a sufficient uncommitted balance in the appropriated item for the fiscal year in which the expenditure is required under the contract."
- 3.4 The maximum amount payable by the GN under this Agreement shall not exceed a total sum of \$ \_\_\_\_\_ unless specifically authorized by a written change order approved by the GN.

SECTION A  
ARTICLES OF AGREEMENT

SIGNED, SEALED AND DELIVERED  
in the presence of:

**ARCHITECT/ENGINEER:**

Architect/Engineer's Full Business Name and Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corporate Seal

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Name and Title

**GOVERNMENT OF NUNAVUT (GN)**

Department of Community and Government Services  
P.O. Box 1000 - Station  
Iqaluit, NU X0A 0H0

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name

END OF ARTICLES

**SECTION B  
TERMS OF PAYMENT**

**TP1 AMOUNT PAYABLE - GENERAL**

1.1 Subject to any other provisions of this Agreement, the GN shall pay the A/E, at the times, in the manner and for the amounts hereinafter set out and the A/E shall accept that amount as payment in full satisfaction for everything furnished and done by him in respect of the Services to which the payment relates.

**TP2 AMOUNT PAYABLE TO THE A/E**

**2.1 PAYMENTS ON ACCOUNT OF BASIC SERVICES**

2.1.1 Fee for Services as described in Section E shall be computed as follows:

A. A Stipulated Sum Fee of  
\$ \_\_\_\_\_.

2.1.2 Progress payments shall be made on a monthly, or mutually agreed basis. Where compensation is based on a Stipulated Sum or Percentage of Construction Cost, monthly payments shall be made so that the Basic Compensation for each phase shall equal the following percentages of the total basic compensation payable.

Schematic Design Phase	_____ %
Design Development Phase	_____ %
Construction Document Phase	_____ %
Bidding or Negotiation Phase	_____ %
Construction Phase	_____ %
Post Construction Phase	_____ %

2.1.3 The GN will pay the Goods and Services Tax (GST).

**2.2 PAYMENTS ON ACCOUNT OF ADDITIONAL SERVICES**

2.2.1 In addition to the fees for services identified in Section E, the GN will pay the A/E for Additional Services, as specified in Section F as authorized by the GN as follows:

*(Here insert basis of compensation including rates and/or multiples of payroll costs for Principals and Employees. Identify Principals and classify Employees if required. All overtime must be authorized in advance by the GN; indicate appropriate rate).*

**2.3 PAYMENTS FOR REIMBURSEABLE EXPENSES**

Reimbursable Expenses, or disbursements, include actual expenditures made by the A/E and the A/E's employees in the interest of the project. These expenses must have the prior approval of the GN.

2.3.1 Reimbursable expenses shall be computed as a multiple of \_\_\_\_\_ times the amounts expended by the A/E. The A/E shall provide the GN with copies of all invoices for reimbursement.

2.3.2 Reimbursable expenses shall include the following:

A. Reproduction of plans, drawings, specifications and other documents, excluding reproductions for the A/E's use.

B. Telecommunication expenses:  
Long distance telephone calls, telex, telegrams, courier service, electronic conveyances and postage.

C. Travel Expenses

Unless noted otherwise, travel and accommodation costs approved by the GN shall be paid in accordance with the rates established under the GN Duty Travel Directive.

Travelling time authorized by the GN during normal working hours shall be chargeable as time worked. Authorized travelling time outside of normal working hours shall be chargeable to a maximum of three (3) hours per day. However, not more than eight (8) hours in any one day shall be claimed for the time spent in travelling.

E. Equipment and Vehicle Rental Costs  
Vehicle rental costs are reimbursable only when the work is done out of town from the A/E's office. CADD equipment and other computer expenses are not considered to be reimbursable unless otherwise noted in Clause "F".

F. Other expenses are herein noted (**list any applicable**):

**TP3 TIME OF PAYMENT**

3.1 The A/E shall, in all cases, deliver on a monthly or mutually agreed basis to the GN, in respect of that payment period, a written progress claim that sufficiently describes any part of the Service that has been completed during that payment period for payment purposes.

3.2 The GN shall, not later than ten days after receipt by the GN of a progress claim referred to in TP 3.1, issue a

**SECTION B  
TERMS OF PAYMENT**

progress report, a copy of which the GN will give to the A/E, that indicates the value of the part of the Services described in the progress claim that, in the GN's opinion, is in accordance with this Agreement and was not included in any other progress report relating to this Agreement.

3.2.1 The progress report referred to in TP 3.2 may take the form of an endorsement of the A/E's progress claim.

3.3 All payments will be made in accordance with the GN payment policy as described in the GN Financial Administration Manual, Directive 803-3. Subject to TP1, Nunavut A/E's shall be paid 20 days after receipt of their progress claim. Non-Nunavut firms shall be paid 30 days after receipt of their progress claim. A Nunavut firm is a firm that is registered in accordance with the Government of Nunavut Nunavummi Nangminiqagtunik Ikajuuti (NNI Policy) and has received a Nunavut designation.

**TP4 PROGRESS REPORT AND PAYMENT THEREUNDER NOT BINDING ON THE GN**

4.1 Neither a progress report referred to in TP 3.2 nor any payment made by the GN pursuant to these Terms Of Payment shall be construed as an admission by the GN that the Services or any part thereof is complete, is satisfactory or is in accordance with this Agreement.

**TP5 DELAY IN MAKING PAYMENT**

5.1 Any delay by the GN in making any payment when it is due pursuant to these Terms of Payment shall not be a breach of this Agreement by the GN.

5.2 When the GN delays in making a payment that is due pursuant to TP 3.3, the A/E shall be entitled to receive interest on the amount that is overdue, in accordance with the GN's Financial Administration Manual, Directive 803-4.

**TP6 RIGHT OF SET-OFF**

6.1 Without limiting any right of set-off or deduction given or implied by law or elsewhere in this Agreement, the GN may set-off any amount payable to the GN by the A/E under this Agreement or under any contract against any amount payable to the A/E under this Agreement.

**END OF TERMS OF PAYMENT**

GENERAL CONDITIONS - CONTENTS

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**GC1 DEFINITIONS**

In this Agreement:

- 1.1 **"A/E"** means the Architect or Engineer as designated in the Articles of Agreement.
- 1.2 **"Construction Contract"** means the contract between the GN and the Contractor for the provision of labour, materials, and equipment for the execution of the Work by the Contractor.
- 1.3 **"Construction Contract Documents"** means the Construction Contract and all documents relating to the Work issued by or through the A/E, including the plans, drawings, specifications, schedules and all variations and modifications thereto.
- 1.4 **"Construction Cost"** means the contract price of all elements of the Work designed or specified by the A/E. Where there is no contract price for all or part of the project, the Construction Cost shall be the estimated cost at current market rates as determined by the A/E and agreed by the GN. Construction Cost does not include the compensation of the A/E and the Sub-Consultants, and other costs such as the cost of the land and rights-of-way.
- 1.5 **"Cost Estimates"**
  - 1.5.1 Class C Estimate

This estimate, which is prepared with limited site information, is based on probable conditions affecting the project. It represents the summation of all identifiable project elemental costs. It is used for program planning, to establish a more specific definition of client needs and to obtain preliminary approval.
  - 1.5.2 Class B Estimate

This estimate is prepared after site investigations and studies have been completed and the major systems defined. It is based on a project brief and preliminary design. It is used for obtaining approvals, budgetary control and design cost control.
  - 1.5.3 Class A Estimate

This is a detailed estimate based on final drawings and specifications; it is used to evaluate tenders.
- 1.6 **"Contractor"** means the person, firm or corporation contracting with the GN to provide labour, materials and equipment for the execution of the Work.
- 1.7 **"GN"** means the Government of Nunavut as represented by the Minister of Community and Government Services (CGS), the Deputy Minister of CGS or any person specially authorized by them to act on their behalf.

**SECTION C**  
**GENERAL CONDITIONS**

- 1.8 **"Project Brief"** means the document describing in sufficient detail the services to be provided to permit the design to proceed. It may include general project information, content plan, time plan, cost plan, and design data, specifically related to the subject project.
- 1.9 **"Project Requirements"** mean instructions and directions in writing, which may include data, documents, plans, drawings, specifications, tendering procedures and pre-tender addenda provided by the GN concerning the project, its administration, time and cost limits and may include the Project Brief.
- 1.10 **"Subconsultant"** means a person, firm or corporation to whom the A/E has subcontracted the whole or any part of the Services.
- 1.11 **"Subcontractor"** means a person, firm or corporation to whom the Contractor has subcontracted the whole or any part of the Work.
- 1.12 **"Services"** means the totality of all labour, materials and equipment used or incorporated into the project by the A/E pursuant to this Agreement. The extent of the services are further defined in the Articles of Agreement, Section A2.
- 1.13 **"Work"** means the totality of all labour, materials and equipment used or incorporated into the project by the Contractor pursuant to the Construction Contract.

**GC2 TIME OF ESSENCE**

- 2.1 Time is of the essence of this Agreement.
- 2.2 The A/E shall submit a detailed schedule suitable to the project for the performance of their Services for the project and shall adhere to the schedule approved by the GN. If a change in the approved schedule becomes necessary, the A/E shall submit a report to the GN and obtain approval for any change therein.

**GC3 SUSPENSION OF SERVICES**

- 3.1 The GN may require the A/E to suspend performance of this Agreement for a specified or unspecified period by giving written notice of suspension to the A/E.
- 3.2 During the period of suspension the A/E shall minimize their payroll costs and operating expenses and within 10 days of the receipt of the notice of suspension, deliver to the GN a schedule of net expenses in respect of which they claim to be reimbursed. The GN will give due consideration to the claim and will make such payment as seems in the opinion of the GN to compensate the A/E for reasonable costs and expenses incurred during the period of suspension.
- 3.3 If the period of suspension is 60 days or less, the A/E shall, upon the expiration of that period, resume the

performance of this Agreement.

- 3.4 If the period of suspension is more than 60 days, and if the GN and the A/E agree that the performance of this Agreement will be continued by the A/E, the A/E shall resume performance of this Agreement subject to any terms and conditions agreed upon by the GN and the A/E (Fees and/or schedule may have to be revised). If agreement cannot be reached to continue this Agreement, the notice of suspension shall be deemed to be a notice of termination.

**GC4 TERMINATION OF AGREEMENT**

- 4.1 The GN may terminate this Agreement at any time by giving a written notice of termination to the A/E. When a written notice is received by the A/E, the A/E shall, subject to any conditions stipulated in the notice, forthwith cease all operations in performance of this Agreement.
- 4.2 If the GN terminates this Agreement because of default by the A/E, the insolvency of or the commission of an act of bankruptcy by the A/E, the A/E shall be liable to and upon demand therefore pay to the GN an amount equal to all loss and damage suffered by the GN by reason of the non-completion of the services by the A/E. If the A/E fails to pay for such loss or damage on demand, the GN shall be entitled to deduct the same from any payments due and payable to the A/E. Termination under this subsection does not operate so as to relieve or discharge the A/E from any obligation under this Agreement or imposed upon them by law in respect to the services or any portion thereof that they have completed.
- 4.3 In the event of termination, the GN will pay and the A/E will accept in full as settlement of all claims, an amount calculated under the Terms of Payment in this Agreement specified for that phase or a proportionate part thereof based on the Services performed together with such further amount as will in the opinion of the GN compensate the A/E for reasonable expenses continuing after the date of termination.
- 4.4. Unless otherwise stated in GC 4.5, the A/E's Services shall be considered complete after the one year warranty period expires whenever corrections required of the Contractor at the end of this period are completed, or after the Final Certificate Of Completion is issued, whichever is the latest. The Warranty Period and Final Certificate of Completion are defined on the Construction Contract.
- 4.5 This Agreement shall terminate on \_\_\_\_\_ 20 \_\_\_\_.

Clause 4.4 applies if no date is inserted here.

**GC5 OWNERSHIP AND USE OF DOCUMENTS**

- 5.1 All surveys, reports, drawings, calculations, designs, plans, specifications, and other data, information and material collected, compiled, drawn and produced including

computer disks and printouts pursuant to this Agreement are the property of the GN and the copyright of this material shall belong to the GN.

- 5.2 Any information given by the GN to the A/E in performing the Services in accordance with this Agreement shall be treated as privileged and confidential.

**GC6 LITIGATION**

- 6.1 This Agreement shall be deemed to have been made in Nunavut and shall be governed by the laws of Nunavut as far as applicable.

- 6.2 In the event of any legal action arising out of this Agreement, the A/E, if originating such action, may sue the GN in the name and style of "The Government Nunavut" and the GN, if originating such action, may commence the action against the A/E in their own behalf in the name and style of the "Government of Nunavut".

**GC7 SUCCESSORS AND ASSIGNS**

- 7.1 This Agreement shall ensure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and assigns.

- 7.2 This Agreement may not be assigned by the A/E, either in whole or in part, without the written consent of the GN.

**GC8 SUBCONSULTANTS**

- 8.1 Neither the whole nor any part of this Agreement may be subcontracted by the A/E without written approval of the GN.

- 8.2 The firms proposed to be used as Subconsultants for these services must also be approved by the GN.

- 8.2 Every Subconsultant agreement entered into by the A/E shall adopt all of the terms and conditions of this Agreement that are of general application.

- 8.3 Neither a Subconsultant nor the GN approval to a Subconsultant shall be construed to relieve the A/E from any obligation under this Agreement or to impose liability upon the GN.

- 8.5 *[Delete this subsection if there is no key subcontractor]*  
The GN and the Consultant having recognized that the following subcontractor(s) is/ are critically important to the successful performance of the Services, agree that the Consultant will retain the following subcontractor(s) in performing the Services and the Consultant will not, without the prior written consent or agreement of the GN, remove or reassign this/these subcontractor(s) during the term of this Agreement, and shall promptly notify the GN should this/these subcontractor(s) become unavailable to the Consultant:

- *[LIST BY NAME AND POSITION] or insert a reference to*

Consultant's Proposal - Project Team Section & include  
the page numbers.

**GC9 NO IMPLIED OBLIGATIONS**

- 9.1 No implied terms or obligations of any kind by or on behalf of the GN shall arise from anything in this Agreement and the express covenants and agreements therein contained and made by the GN are the only covenants and agreements upon which any rights against the GN are to be founded.
- 9.2 This Agreement supersedes all communications, negotiations and agreements, either written or oral, relating to the Services that were made prior to the date of this Agreement.

**GC10 EFFECT OF APPROVALS**

- 10.1 No acceptance or approval by the GN whether expressed or implied shall be deemed to relieve the A/E of their professional or technical responsibility for the plans, drawings, calculations or other material prepared or assembled by the A/E.

**GC11 INDEMNIFICATION BY A/E**

- 11.1 The A/E shall indemnify and save harmless the GN and the Commissioner of Nunavut from and against all claims, losses, damages, costs, actions and other proceedings, made, sustained, brought or prosecuted in any manner based upon, occasioned by or attributable to any injury, infringement or damage arising from any negligent act or omission of the A/E, their servants or agents or persons for whom they had assumed responsibility in the performance or purported performance of his services under this Agreement.

**GC12 RECORDS TO BE KEPT BY A/E**

- 12.1 The A/E shall:
- 12.1.1 maintain full records of the estimated and actual costs of the A/E Services together with all contracts, correspondence, invoices, receipts and vouchers relating thereto;
  - 12.1.2 make all records and material available to audit and inspection by the GN or by persons acting on behalf of the GN when requested;
  - 12.1.3 allow any of the persons referred to in GC 12.1.2 to make copies of and to take extracts from any of the records and material referred to in GC 12.1.1; and
  - 12.1.4 furnish any person referred to in GC 12.1.2 with any information they may require from time to time in connection with such records and material.
- 12.2 The records maintained by the A/E pursuant to GC 12.1.1 shall be kept intact by the A/E until the expiration of two years after the date that a Final Certificate of Completion was issued to the Contractor or until the expiration of such other period of time as the GN may direct.

**GC13 CHANGES IN DESIGN**

13.1 The A/E, if requested in writing to do so by the GN, will make any required changes in the design for the project notwithstanding its previous approval and advise the GN of any effect on the time schedule, budget and other implications of the changes. Nothing done by the A/E to remedy design errors or other problems attributable to shortcomings of the A/E, including persons consulted, employed or supervised by them, shall entitle the A/E to additional fees.

13.2 If the GN requires changes in design or revisions after approval of the Construction Documents for reasons other than design and cost factors within the control of the A/E, the GN will pay the A/E a further amount, in respect of the additional work, to be negotiated between the parties.

**GC14 DISPUTES**

14.1 In the event of a disagreement regarding any aspect of the A/E's services or any instructions given under this Agreement, the A/E may give notice of their dispute in writing to the GN requesting a decision. Such notice shall be delivered to the GN within 14 days of the origin of the disagreement or receipt of the instructions. Pending such decision the A/E shall continue to perform their Services in accordance with the instructions of the GN who shall give its decision in writing to the A/E within 30 days of receiving the said notice. In the event that the A/E is dissatisfied with the decision, they shall continue to perform their Services and, within 14 days from receipt of the decision, they may submit a written request for the Deputy Minister of CGS to review the matter in dispute. The Deputy Minister and the A/E may appoint a mutually acceptable person to mediate in the dispute.

**GC15 ERRORS AND OMISSIONS**

15.1 Notwithstanding any other provision of the Agreement, no fee payment will be made by the GN based on the cost of Services incurred by the A/E, and/or the cost of the Work incurred by the Contractor, to remedy errors or omissions for which the A/E is responsible.

**GC16 LOCAL/NUNAVUT LABOUR**

16.1 Insofar as is practicable the A/E shall employ and use Local, Nunavut, and Canadian labour in the execution of this Agreement and provide labour according to the Nunavut Labour Standards Act.

**GC17 INSURANCE**

***🔗 Note: In some circumstances, this may not be enough coverage; consider***

***the risks and consider consulting with the Risk Management office in the Department of Finance – preferably prior to issuing the RFP]. ✂***

- 17.1 The A/E shall, at their own expense, maintain the following insurance policies in respect of this Agreement unless otherwise stipulated:
- 17.2 The A/E shall without limiting its obligations or liabilities hereto, obtain, maintain and pay for during the period of this Agreement, the following insurance:
- 17.3 Professional Liability Insurance with limits of not less than two million dollars (\$2,000,000) per claim, to cover claims arising out of the rendering of or failure to render any professional service under the Agreement. ✂ ***[Note: This kind of insurance applies to certain kinds of professionals such as accountants, engineers, and architects, and covers 'errors and omissions']***. ✂
- 17.3.1 Workers' Compensation and Safety (WCS) coverage. The Nunavut Workers Compensation Act requires that all persons working in Nunavut be covered under the Nunavut WC program, even if the employer is not a Nunavut-based company. If the Consultant is assessed any extra levies or assessment as a result of an injury or death to an employee (worker) of the A/E or subcontractors or due to unsafe working conditions, these extra amounts will not be reimbursed by the GN.
- 17.3.2 All motor vehicles, watercraft or snowcraft used by the A/E in the performance of the agreement, regardless of ownership, shall be insured by Standard Liability Insurance in an amount not less than two million dollars (\$2,000,000) per occurrence for bodily injury, death and damage to property;
- 17.3.3 Commercial General Liability insurance with limits of not less than two million dollars (\$2,000,000) inclusive per occurrence for bodily injury, death and damage to or loss of use of property. Such insurance shall include but shall not be limited to the following terms and conditions:
- Products and Completed Operations
  - Owners & Consultants Protective
  - Contractual Liability;
  - Broad Form Property Damage;
  - Personal Injury
  - Cross Liability and Severability of Interest;
  - Medical Payments
  - Non-Owned Automobile Liability including contractual liability
  - Underground Property Damage; (in respect to any work involving ground disturbance.) ***[this may be deleted if the contract does not involve construction, survey or demolition]***

**SECTION C**  
**GENERAL CONDITIONS**

- Contingent Employers Liability
  - Employees as Additional Insureds.
- 17.3.4 The insurance policies shall name the GN, its directors, officers, employees, agents and consultants as Additional Insureds, only with respect to the terms of this Agreement (except on Workers Compensation, motor vehicles insurance and Professional Liability insurance), with a cross liability and severability of interests clauses. Such insurance shall be primary without right of contribution from other insurances available to the GN, and shall extend to cover the employees of the insureds hereunder.
- 17.3.5 All insurance policies shall include a provision whereby the insurers agree to provide not less than thirty (30) Days written notice to the GN prior to any insurance policies being materially altered, cancelled, or terminated by the insurers
- 17.3.6 The Consultant must have an account in good standing with its respective Worker's Compensation authority and provide evidence of same to the GN upon request from time to time.
- 17.3.7 The A/E shall be responsible for any deductibles, exclusions and/or insufficiencies of coverage relating to such policies. The A/E 's liability is not capped to the amount of and scope of coverage required under the Agreement.
- 17.3.8 The A/E shall deposit with the GN prior to commencing the work, certificate(s) of insurance evidencing the insurance required by this Agreement in a form satisfactory to the GN and with insurance companies satisfactory to the GN, and shall provide evidence of continuing coverage on request.
- 17.3.9 The A/E will ensure that all individuals (including the Contractor if an individual, and including all employees, officers and subcontractors) who are physically present in Nunavut during the term of this contract have extended medical benefits that cover the full cost of ambulance and medical evacuation.
- 17.3.9.1 Beneficiaries under the Nunavut Land Claim Agreement are automatically covered.
  - 17.3.9.2 Individuals may have extended medical benefits through a group program, including a group program to which their spouse belongs.
  - 17.3.9.3 Individuals present for a short time in Nunavut may buy the necessary coverage with their airfare. In the event this coverage is not in place for an individual who must be medically evacuated while in Nunavut,



**SECTION C  
GENERAL CONDITIONS**

the Consultant will indemnify the GN for the cost of the medical evacuation.

**GC18 CLAIMS AGAINST AND OBLIGATIONS OF THE A/E OR SUBCONSULTANT**

- 18.1 The A/E shall ensure that all their lawful obligations and lawful claims against them arising out of the execution of the Services are discharged and satisfied at least as often as this Agreement requires the GN to discharge its obligations to the A/E.
- 18.2 The GN may, in order to discharge lawful obligations of and satisfy lawful claims against the A/E or a Subconsultant arising out of the execution of the Services, pay any amount, which is due and payable to the A/E under this Agreement, if any, directly to the obligees of and the claimants against the A/E or Subconsultant.

**GC19 CERTIFICATION**

- 19.1 Upon notification of award of this Agreement, the A/E is required to furnish within 14 days, when requested by the GN:
- 19.1.1 Proof of compliance with Nunavut's Engineers, Geologists and Geophysics Act. All plans, reports or similar documents prepared by an Engineer, Geologist or Geophysicist shall bear the NAPEG stamp or seal.
- 19.1.2 Architects must furnish proof of professional standing in a Canadian Provincial organization.

**GC20 OTHER CONDITIONS OF SERVICES**

- 20.1 The Consultant and the GN have mutually agreed upon the following supplemental terms, and nothing in the RFP or the Proposal will supersede the terms listed in this part:
- 20.1.1 *insert in this section any negotiated items or terms that differ from the proposal or RFP - If this is not done, then the entire proposal, as written, will become part of the contract and any negotiations or modifications thereto will be lost. NOTE: This part of the contract requires more thought than the whole rest of it combined. ✂*

**END OF GENERAL CONDITIONS**

GOVERNMENT OF NUNAVUT RESPONSIBILITIES

**GN1 GN'S RESPONSIBILITIES**

- 1.1 The GN shall provide the A/E with the Project Requirements.
- 1.2 The GN shall provide promptly written decisions, instructions, acceptances and other relevant information required by the A/E to enable the A/E to perform the services as scheduled.
- 1.3 If tenders are to be called, the GN shall arrange for such tenders, assemble and issue the tender documents, receive bids and award the Construction Contract.
- 1.4 The following duties and responsibilities of the GN to the A/E are added to this Agreement as noted herein: **None (Initial any additions):** N/A

**AE1 BASIC SERVICES**

The A/E's Basic Services consist of the six phases described in Paragraphs 1.1 through 1.6 and includes any other services included in GC20 which are designated as part of Basic Services.

**1.1 SCHEMATIC DESIGN PHASE**

- 1.1.1 The A/E shall study the Project Requirements furnished by the GN to ascertain the requirements of the project and shall review the understanding of such requirements with the GN. The A/E shall advise the GN of the need for any further information and data including surveys, borings, soundings, and soil reports.
- 1.1.2 The A/E shall provide a preliminary evaluation of the project and a Class C cost estimate. The A/E shall also furnish a proposed project schedule in a format acceptable to the GN as noted in GC 2.2.
- 1.1.3 Based on the mutually agreed upon program and budget, the A/E shall review with the GN, alternative approaches to design and construction of the project.
- 1.1.4 The A/E shall prepare, for approval by the GN, schematic/preliminary design documents consisting of drawings and other documents appropriate to the size of the project illustrating the scale and relationship of project components.
- 1.1.5 The A/E shall participate in a review of the schematic design documents and the Class C cost estimates with the GN. Written approval of the schematic design and estimates must be obtained from the GN prior to commencement of the design development phase.

**1.2 DESIGN DEVELOPMENT PHASE**

- 1.2.1 Based on the approved schematic design documents and the approved budget, the A/E shall prepare, for approval by the GN, design development documents consisting of drawings, outline specifications and other documents appropriate to the size of the project to fix and describe the size and character of the entire project as to architectural, structural, mechanical, and electrical systems, materials, and such other elements as may be appropriate.

**1.2 DESIGN DEVELOPMENT PHASE (Continued)**

- 1.2.2 The A/E shall assist the GN in obtaining preliminary approvals from authorities having jurisdiction, (such as the Safety Division, Territorial Fire Marshal, Health and Welfare Canada and Municipal Governments) as required.
- 1.2.3 The A/E shall prepare a Class B cost estimate.
- 1.2.4 The A/E shall participate in a review of the design

development documents and Class B cost estimate with the GN. Written approval of the design must be obtained from the GN prior to commencement of the contract documents phase.

**1.3 CONSTRUCTION DOCUMENT PHASE**

- 1.3.1 Based on the approved design development documents, the A/E shall prepare construction contract documents consisting of drawings and specifications setting forth in detail the requirements for construction of the project.
- 1.3.2 The A/E shall participate, when requested by the GN, in reviews with the GN when the plans and specifications are 50%, 75% and 100% complete. If requested by the GN, written approvals shall be obtained from the GN at each review stage prior to commencing further work.
- 1.3.3 The A/E shall revise the cost estimate to reflect changes in the design, the tender date or market conditions. A Class A cost estimate will be submitted at the 100% review.
- 1.3.4 The A/E shall assist in obtaining final approvals from authorities having jurisdiction over the project as noted in the design development phase.

**1.4 BIDDING OR NEGOTIATION PHASE**

- 1.4.1 The A/E shall assist the GN in obtaining bids or proposals.
- 1.4.2 The A/E shall review any tenders or proposals that are submitted to verify their completeness and the A/E shall then make a recommendation for the award of a contract.

**1.5 CONSTRUCTION PHASE - ADMINISTRATION OF THE CONSTRUCTION CONTRACT**

- 1.5.1 Unless otherwise provided in this Agreement, the A/E shall provide administration of the Construction Contract as set forth below.
- 1.5.2 The A/E shall conduct inspections at intervals appropriate to the stage of construction that they consider necessary to enable them to determine if the Work is proceeding in general accordance with the Construction Contract Documents. However, the A/E shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, unless otherwise stipulated in this Agreement. On the basis of such on-site observations, the A/E shall keep the GN informed of the progress and quality of the work, and shall endeavor to guard the GN against defects and deficiencies in the work of the Contractor.

**SECTION E**  
**A/E SERVICES**

- 1.5.3 The A/E shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences, or procedures or for safety precautions and programs in connection with the Work, nor will they be responsible for the acts or omissions of the Contractor, Subcontractors, or any other persons performing any of the Work.
- 1.5.4 The A/E shall at all times have access to the Work wherever it is in preparation or progress.
- 1.5.5 The A/E shall determine the amounts owing to the Contractor based on observations at the site and on evaluation of the Contractor's application for payment, and shall issue, in a timely manner, certificates for payment in such amounts, as provided in the Construction Contract Documents.
- 1.5.6 The issuance of a certificate for payment shall constitute a representation by the A/E to the GN based on the A/E's observations at the site as provided in Subparagraph 1.5.2 and on the data comprising the Contractor's application for payment, that the Work has progressed to the point indicated; that, to the best of the A/E's knowledge, information, and belief, the quality of the Work is in accordance with the Construction Contract Documents and that the Contractor is entitled to payment in the amount certified.

**CONSTRUCTION PHASE - ADMINISTRATION OF THE CONSTRUCTION CONTRACT**  
**(Continued)**

- 1.5.6.1 Such certification is subject to continuing evaluation of the Work as it progresses for general conformance with the Construction Contract Documents, to the results of any subsequent tests required by or performed under the Construction Contract Documents, to minor deviations from the Construction Contract Documents correctable prior to completion, and to any specific qualifications stated in the certificate for payment.
- 1.5.7 The A/E shall render interpretations necessary for the proper execution or progress of the Work with reasonable promptness on the written request of the GN and shall render written decisions within a reasonable time, on all claims, disputes, and other matters in question between the GN and the Contractor relating to the execution or progress of the Work or the interpretation of the Construction Contract Documents, when so requested by the GN.
- 1.5.8 Interpretation and decisions of the A/E shall be consistent with the intent of and reasonably inferable from the Construction Contract Documents and shall be in written or graphic form.

**SECTION E**  
**A/E SERVICES**

- 1.5.9 The A/E shall notify the GN of all work which does not conform to the Construction Contract Documents, and the A/E shall make a recommendation as to whether or not said work should be rejected. Whenever, in the A/E's opinion, it is necessary or advisable for the implementation of the intent of the Construction Contract, the A/E will request the GN for special inspection or testing of the work, whether or not such work be then fabricated, installed, or completed.
- 1.5.10 The A/E shall review or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data, and Samples for conformance with the design concept of the Work and with the requirements and intent of the Construction Contract Documents. Such action shall be taken with reasonable promptness.

**CONSTRUCTION PHASE - ADMINISTRATION OF THE CONSTRUCTION CONTRACT**  
**(Continued)**

- 1.5.11 The A/E shall prepare Change Orders and other project documentation required for the GN's review and approval or execution in accordance with the Construction Contract Documents.
- 1.5.12 The A/E shall supply all engineering equipment normally associated with work of this nature including but not limited to slump cones, thermometers, transits, levels, chains, tapes, rods and range poles. Specialized equipment may be purchased or leased by the A/E on a reimburseable basis; however, prior approval of the GN will be required and purchased equipment will become the property of the GN at the conclusion of the Work.
- 1.5.13 The A/E shall coordinate project meetings with the Contractor and their Subcontractors when necessary and the A/E shall attend all such meetings, unless otherwise advised, and report the results of each to the GN with copies of the minutes of each meeting.
- 1.5.14 In the absence of other directions from the GN, the A/E shall submit monthly reports on the progress of the Work.
- 1.5.15 The A/E shall prepare deficiency lists and advise the GN of work to be done in order to complete the project, and prepare an Interim Certificate of Completion in accordance with the provisions of the Construction Contract. The A/E shall carry out further inspections necessary to ensure that all deficiencies are rectified and prepare the Final Certificate of Completion for approval by the GN.
- 1.5.16 The A/E shall take steps towards ensuring that all

operating manuals, warranties, guarantees and instructions are provided to the GN as specified in the Construction Contract Documents.

**1.6 POST CONSTRUCTION PHASE**

1.6.1 The A/E will assess any reported defects or deficiencies arising during the one-year warranty period as specified in the Construction Contract and when requested the A/E shall inspect the work with the GN prior to the expiry of that period. This trip, if required, will be paid for as an additional service. The A/E shall issue on behalf of the GN the necessary instructions to the Contractor if work is required to correct such defects or deficiencies.

**AE2 CONSTRUCTION COST ESTIMATES**

- 2.1 If at any time the A/E considers their estimates indicate costs will exceed the project budget they will immediately advise the GN. If in the opinion of the GN the excess is due to design, costs factors or matters under the control or reasonably foreseeable by the A/E, the GN may require the A/E at their expense and at no additional cost to the GN, do everything by way of revision of design to bring the cost estimate within the project budget.
- 2.2 If the lowest tender for the project exceeds the latest approved estimate of construction as set out in paragraph 1.3.3 by more than 10%, the A/E at their own expense and at no additional cost to the GN shall, if required by the GN, do everything necessary (including redesign) to bring the cost of the tendered work within the limits stipulated.
- 2.3 If the bidding or negotiation phase has not commenced within three months after the A/E submits the Construction Contract Documents to the GN, any estimate of Construction Cost may be adjusted to reflect any change in the general level of prices in the construction industry between the date of submission of the Construction Contract Documents to the GN and the date on which the bids are sought. The cost to adjust such estimate shall be considered an additional service.

**END OF A/E BASIC SERVICES**

**AS1 ADDITIONAL SERVICES**

1.1 The following Services are not included in Basic Services unless so identified elsewhere in this Agreement. They shall be provided only if authorized or confirmed in writing by the GN prior to any work being done. They shall be paid for by the GN as provided in this Agreement, in addition to the compensation for Basic Services.

1.1.1 If the GN requests that continuous representation at the site is required, the A/E shall provide one or more project representatives to assist the A/E in carrying out such responsibilities. Such project representatives shall be selected, employed and directed by the A/E as approved by the GN. The duties, responsibilities and limitations of authority of such project representatives shall be as mutually agreed between the GN and the A/E.

1.1.2 Providing consultation concerning replacement of any work damaged by fire or other similar cause during construction, and furnishing services as may be required in connection with the replacement of such work.

1.1.3 Providing services made necessary by the default of the Contractor or by minor defects or deficiencies in the Work of the Contractor.

1.1.4 Preparing a set of reproducible record drawings showing changes in the work made during construction based on marked up prints, drawings, and other data furnished by the Contractor to the A/E. Drawings to be labelled "As-Built", dated and signed by the A/E.

1.1.5 Preparing operation and maintenance manuals, and/or training personnel for operation and maintenance.

1.1.6 Providing services after expiry of the warranty period.

1.1.7 Providing translation to a language other than the English language.

1.1.8 When requested by the GN, providing a perspective presentation drawing or model for the use of the GN.

1.1.9 Preparing contract change orders to the Construction Contract which do not get implemented.

1.1.10 Providing calculations which establish the optimum insulation values, life-cycle costs and pay-back periods for energy related systems and components.

1.1.11 Providing pre-design services such as surveys and soil investigation analysis.



**SECTION F  
ADDITIONAL SERVICES**

1.1.12 Providing any other services not otherwise included  
in this Agreement as herein noted: **None**

**END OF ADDITIONAL SERVICES**



# **Structured Cabling Guidelines**

**Version 1.5 – June 2012**



# Structured Cabling Guidelines

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## Structured Cabling Guidelines

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### SECTION 1 STATEMENT OF PURPOSE

The Government of Nunavut has developed a Structured Cabling Guideline. These guidelines form part of the Community and Government Services (CGS-IPS). The purpose of this guideline is to ensure industry standards and code compliance, system integrity, vendor performance and to protect the interests of the Government of Nunavut related to telecommunications systems and infrastructure.



## Structured Cabling Guidelines

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### SECTION 2 APPLICABLE SPECIFICATIONS AND STANDARDS

The applicable industry specifications and standards are listed and described. Minimum compliance to the standards is required. Additions and exceptions to the listed specifications and standards are detailed within the Communications Cabling Requirements (Section 3) of this document. Additions, changes or exceptions are not permitted without the approval of CGS-IPS.

#### **2.1 CAN/CSA Standards**

1. CAN/CSA C22.1-09 – Canadian Electrical Code until June 30, 2012.
2. CAN/CSA C22.1-12 – Canadian Electrical Code implemented July 01, 2012.
3. CAN/CSA-T527-94 (Reaffirmed 1999) – Grounding and Bonding for Telecommunications in Commercial Buildings.
4. CAN/CSA-T528-93 (Reaffirmed 1997) – Design Guidelines for Administration of Telecommunications Infrastructure in Commercial Buildings.
5. CAN/CSA-T529-95 – Telecommunications Cabling Systems in Commercial Buildings.
6. CAN/CSA-T530-99 – Commercial Building Standards for Telecommunications Pathways and Spaces.

#### **2.2 ANSI/TIA/EIA Standards**

1. ANSI/TIA/EIA-568-B.1 – Commercial Building Telecommunications Cabling.
2. ANSI/TIA/EIA-568-B.2.1 – Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling.
3. ANSI/TIA/EIA-569-A – Commercial Building Standard for Telecommunications Pathways and Spaces.
4. ANSI/TIA/EIA-606 – The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
5. ANSI/TIA/EIA-607 – Commercial Building Grounding and Bonding Requirements for Telecommunications.
6. ANSI/TIA/EIA TSB-67 – Transmission Performance Specifications for Field Testing of Unshielded Twisted-Pair Cabling Systems.
7. ANSI/TIA/EIA TSB-75 – Additional Horizontal Cabling Practices for Open Offices.
8. ANSI/TIA/EIA-568-B.3. Optical Fiber Cabling Components Standard.
9. ANSI/TIA/EIA-568-B.3-1. Optical Fiber Cabling Components Standard, Addendum
10. Additional Transmission Performance Specifications for 50/125  $\mu$ m Optical Fiber Cables.

#### **2.3 BICSI Standards**

1. BICSI/TDMM – Telecommunications Distribution Methods Manual. (10th. Edition)
2. BICSI/TCIM - Telecommunications Cabling Installation Manual (3rd. Edition).



## Structured Cabling Guidelines

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### SECTION 3 COMMUNICATIONS CABLING REQUIREMENTS

The CAN/CSA-T529-95, the ANSI/TIA/EIA-568 standards and the BICSI/TDMM define the basic elements of the telecommunications cabling system structure. The applicable requirements of those elements as provided to the Government of Nunavut are detailed in this section.

#### **3.1 Horizontal Distribution Cabling**

##### **3.1.1 General**

1. The horizontal cabling is the portion of the telecommunications cabling system that extends from the Telecommunications Room (TR) to the work area Telecommunications Outlet (TO).
2. The horizontal distribution cabling system includes the horizontal cables, the work area telecommunications outlet connections and all mechanical termination connections, patch cords and jumpers located in the telecommunications space.
3. The proximity of horizontal cabling to electrical facilities that generate Electromagnetic Interference (EMI) shall be considered in the design and installation of the telecommunications metallic cabling. The CAN/CSAT530-99 and ANSI/TIA/EIA-569-A standards specify separation of horizontal cabling pathways and spaces from typical sources of EMI.
4. The horizontal distribution cabling shall be a physical star topology. All work area TO shall be connected to a horizontal cross-connect in the designated TR space. Each work area shall be served by a TR located on the same common floor.
5. Horizontal distribution cabling shall contain no more than one intermediate cross-connect or transition point.
6. The four types of cables recognized for use in horizontal cabling are:
  1. 4-pair 100 ohm balanced twisted-pair Category 6 cable.
  2. RG6/U coaxial cable (CCTV/CATV applications only)
  3. 2 or more strands of 50/125  $\mu\text{m}$  multi-mode optical fiber cable.
  4. 2 or more strands of 8.3/125  $\mu\text{m}$  single-mode optical fiber cable.

##### **3.1.2 Copper Distribution Cabling (UTP)**

1. CGS-IPS requires minimum of four (4) balanced twisted-pair, 4-pair cables to be installed to each telecommunications outlet location within work area of 10m<sup>2</sup> (100ft<sup>2</sup>) minimum.
2. All termination equipment used in the horizontal distribution cabling system in the work area TO, intermediate cross-connect and the TR space shall be Insulation Displacement Connection (IDC) type approved for the media category and design application.



## Structured Cabling Guidelines

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3. The maximum horizontal distance in cable length from the horizontal termination equipment connections in the TR space to the work area TO is **90 meters** (295 feet). For each horizontal channel, a total of **10 meters** (33 feet) is permitted for patch cords or jumpers and for equipment cables or cords located in the work area and TR space respectively. The total channel link (horizontal cabling and cords) shall not exceed **100 meters** (328 feet).
4. Horizontal distribution copper cabling shall provide additional cable slack at both ends to accommodate future cabling system changes. Although the exact amount of slack required depends on the size and layout of the connecting hardware of the TR and the work area, the recommended minimum amount of slack:
  - At the TR is 3 m (10 ft).
  - In the suspended ceiling for the telecommunications outlet is 1 m (3.28ft).
5. Do not store slack in bundled loops. Cable loops have been shown to degrade cabling performance. Provide cable slack in an extended loop or in a figure eight configuration to alleviate stress.
6. All horizontal distribution copper cabling shall be minimum Communications Metallic Riser (CMR) (FT-4) rated and specified **Category 6** 100 UTP cabling as required by the project design.
7. Horizontal Distribution UTP Cabling shall provide outer cable jacket colors assigned for Voice and Data applications as listed;

Equipment/ Service Requirement	Cross- Connect Cable Colour	Supplemental Notes
Data/PC connectivity	White or Grey	All PCs switch connected
Telephones	Light/Dark Blue	Analog or Digital handsets

### 3.1.3 Copper Distribution Cabling (Coaxial)

1. Horizontal distribution cabling lengths for CCTV and CATV systems shall be considered in their respective design criteria. All coaxial cabling shall be RG-6/U rated **CMR** (FT-4) minimum 2.2 MHz fundamental frequency.
2. All coaxial cable terminations shall be compression type F. Crimp type connectors shall **not** be used for termination of RG-6/U coaxial cable.



## Structured Cabling Guidelines

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### 3.1.4 Optical Distribution Cabling

1. CGS-IPS requires that any optical fibre cabling incorporated in the horizontal distribution cabling system support the design and performance criteria as specified by CAN/CSA, TIA/EIA and BICSI.
2. All termination equipment used in optical fibre horizontal distribution cabling system in the work area TO, intermediate cross-connect and the TR space shall be ANSI/TIA/EIA 568SC type connector.

### 3.1.5 Distribution Cabling Pathways

1. Typical CGS-IPS requires distribution cabling to be installed via an Overhead Ceiling Distribution system.
2. CGS-IPS requires that all conduit incorporated in the horizontal distribution cabling system support the sizing criteria as specified by CAN/CSA, TIA/EIA and BICSI. The following table is provided within the BICSI/TDMM and shall be referenced;

Inside Diameter (mm)	Trade Size (in)	Cable Outside Diameter mm(in)							
		3.3 (0.13)	4.6 (0.18)	5.6 (0.22)	6.1 (0.24)	7.4 (0.29)	7.9 (0.31)	9.4 (0.37)	13.5 (0.53)
16	1/2	1	1	0	0	0	0	0	0
21	3/4	6	5	4	3	2	2	1	0
27	1	8	8	7	6	3	3	2	1
35	1-1/4	16	14	12	10	6	4	3	1
41	1-1/2	20	18	16	15	7	6	4	2
53	2	30	26	22	20	14	12	7	4
63	2-1/2	45	40	36	30	17	14	12	6
78	3	70	60	50	40	20	20	17	7
91	3-1/2	-	-	-	-	-	-	22	12
103	4	-	-	-	-	-	-	30	14

3. Metallic cable tray shall be installed from the designated TR space in corridor and common ceiling space and must be installed to meet CAN/CSA C22.1-02 requirements. Provide for 25% spare space after the installation is complete.
4. Do **not** allow horizontal pathways or cables to rest directly on or be supported by ceiling panels, support channels (T-bars), vertical supports, or other components of the suspended ceiling. If space is limited, J-supports anchored to concrete or a steel I-beam support may be substituted.
5. When sufficient space is available above the pathway, provide up to 150 mm (6in) between the suspended ceiling and the cabling pathways.





## Structured Cabling Guidelines

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6. Minimum 50mm (2 in) Electro-metallic Tubing (EMT) conduit shall be installed in a continuous run from the ceiling cable tray to the room being serviced by the communications cabling. J-supports may be used where space is available.
7. J-supports shall be used for communications cable within work area location rooms (e.g. classroom) and installed at 1.2m to 1.5m (40 in to 60 in) center to adequately support and logically distribute the communications cable.
8. J-supports shall **not** be used in corridor or common area ceiling spaces. Where their use has been approved, attach utility columns (pac poles) to the main ceiling support channels. The main ceiling support channels must be rigidly installed and braced to prevent both vertical and horizontal movement.

### 3.2 Backbone Cabling

#### 3.2.1 General

1. The function of the intra-building backbone cabling system is to provide interconnections between telecommunication rooms (closets), equipment rooms and entrance facilities.
2. Backbone cabling consists of the backbone cables, intermediate and main cross-connect IDC termination hardware (patch panels) and system patch cords or jumpers used in the Main Cross-connect (MC). Backbone cabling also includes inter-building or campus cabling systems.
3. The proximity of backbone cabling to electrical facilities that generate EMI shall be considered in the design and installation of the telecommunications metallic cabling. The CAN/CSA-T530-99 and ANSI/TIA/EIA-569-A standards specify separation of backbone cabling pathways and spaces from typical sources of EMI.
4. The backbone distribution cabling shall be a hierarchical star topology wherein horizontal cabling cross-connect shall connect directly to the main backbone cross-connect or backbone cabling intermediate cross-connect.
5. Backbone distribution cabling shall contain no more than one intermediate cross-connect or transition point.
6. The four types of cables recognized for use in backbone cabling are:
  - Multi-pair 100 ohm Category 3 twisted-pair cable
  - 4-pair 100 ohm balanced twisted-pair Category 6 cable.
  - RG-11 coaxial cable (CCTV/CATV applications only)
  - 2 or more strands of 50/125  $\mu\text{m}$  multi-mode optical fiber cable.
  - 2 or more strands of 8.3/125  $\mu\text{m}$  single-mode optical fiber cable.



## Structured Cabling Guidelines

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### 3.2.2 Voice Backbone Cabling (UTP)

1. All termination equipment used in the backbone distribution cabling system in the Intermediate Cross-connect (IC) and the MC shall be **IDC** type approved for the media category and design application.
2. The maximum distance in cable length from the horizontal cross-connect to the main cross-connect incorporating Category 3, 100 UTP cabling and connectivity is 800 meters (2624 feet) including a minimum of 1 intermediate cross-connect.
3. All backbone system copper cabling shall be supplied and be minimum of at least one ( 1 ), **CMR** (FT-4) rated and specified **Category 3** inside distribution type, 24 AWG 50-pair minimum,(unless otherwise specified), Unshielded Twisted Pair (UTP). Bix connectors and patch panels are also to be provided and terminated as required to complete the install.

### 3.2.3 Data Backbone Cabling (UTP)

1. All termination equipment used in the backbone distribution cabling system in the intermediate cross-connect and the Telecommunications Room (TR) space shall be **IDC** type approved for the media category and design application.
2. The maximum distance in cable length from the horizontal cross-connect to the main cross-connect incorporating Category 6, 100 UTP cabling and connectivity shall incorporate the 90 meter (295 feet) category criteria including a minimum of 1 intermediate cross-connect.
3. All backbone system copper cabling shall be supplied and be minimum of six ( 6 ) **CMR** (FT-4) rated and specified **Category 6**, 24/23 AWG multi-pair, Unshielded Twisted Pair (UTP) or as required by the project design. Patch panels are to be provided and terminated as required to complete the install.

### 3.2.4 Data Backbone Cabling (Optical Fibre)

1. All termination equipment used in the backbone distribution cabling system in the intermediate cross-connect and the TR space shall be EIA/TIA 568SC type approved for the media category and design application.
2. The maximum distance in cable length from the horizontal cross-connect to the main cross-connect incorporating **multimode optical cabling** and connectivity is **2000 meters** (6560 feet) including a minimum of 1 intermediate cross-connect.
3. The maximum distance in cable length from the horizontal cross-connect to the main cross-connect incorporating **single-mode optical cabling** and connectivity is **3000 meters** (9840 feet) including a minimum of 1 intermediate cross-connect.
4. All backbone system optical fibre cabling shall be **Corning**. It shall be supplied and be one of the following as site conditions permit:
  - A. Minimum OFNR (armored FT-6) rated, 12 fibre strand single mode, or as required by the project design, and meet the following description:



## Structured Cabling Guidelines

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The part number for the universal trunk will be A909012RADAAUxxxM ( length can be in feet or meters – specify with F or M )  
Plug and Play: Universal Trunk, Grip one end, 90-MTP 12 Fiber ( No Pins )  
SM to 90 – MTP 12 fiber ( No Pins ) SM, 12 Fiber, SMF – 28e, AD –  
Interlocking Armored MIC Plenum, End 1 Furcation: A – 24 inch Ribbon  
End 2 Furcation: AU – 24 inch Ribbon. End 1 Grip OD: 1.75”xxx Meters.  
Note: xxx = the length of the cable in feet or meters.

B. Corning C 012E8F-31131-29 12-Strand single mode fibre – CMR ( FT-4 )  
suitable for installation in cable tray or conduit as conditions require.

If terminations are rack mounted the following description:

2 - PCH – 01U Rack mount housing  
2 – CCH-UM12-04-89R Modules

If terminations are wall mounted the following description:

2 – WIC-02P Wall mount housing  
2 – WIC2-DOOR Doors  
2 – CCH-UM12-04-89R Modules

Note: Add an additional thirty ( 30 ) feet on both ends for the cable.

### 3.2.5 Backbone Cabling Pathways

1. Telecommunication Rooms, Equipment Rooms and Entrance Facilities shall provide entrance and egress via EMT and/or Non-metallic conduit (as per Canadian Electrical Code (CEC) requirement) or minimum 300mm (12in) cable tray or combination thereof.
2. Vertical backbone facilities connecting telecommunications spaces shall be via conduit or conduit sleeve.
3. Horizontal backbone facilities connecting telecommunications spaces shall be via conduit sleeve or minimum 300mm (12in) cable tray or combination thereof.
4. All backbone optical cable within the premise shall be installed in cabletray or conduit where required for protection to meet CEC.



## Structured Cabling Guidelines

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### 3.3 Work Area

#### 3.3.1 General

1. For the purposes of this guideline the work area components include the telecommunications outlet box, telecommunications outlet connector, work area cable or cord and work area station equipment.
2. The station equipment can be any one of a number of devices including but not limited to telephones, fax machines, data terminals and computers.
3. For the purposes of this guideline the Electrical/Telecommunications contractor is to supply two- three meter long ( 10 ft. ) Category 6 patch cords, one blue and one white, for each voice/data outlet in the work areas. As well 20 % spare patch cords are to be supplied for the work areas.

#### 3.3.2 Telecommunications Outlet Box

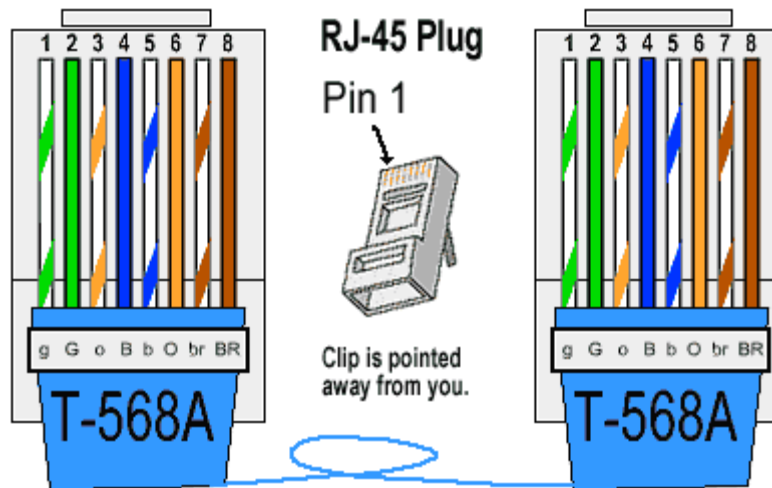
1. Horizontal distribution cabling shall service the TO with a minimum of 19mm EMT type conduit continuous from the outlet box to the accessible ceiling space.
2. Minimum 19mm EMT conduit shall bend 90° from the vertical line into the accessible ceiling space within the common room as the outlet location and shall be bushed to provide protection of horizontal distribution cabling.
3. Telecommunications outlet boxes shall be minimum dual gang, deep set complete with single gang raised tile ring. Plaster rings shall **not** be used at the TO.
4. Each occupant work area must have a minimum of one telecommunications outlet box.
5. The work area telecommunications outlet box should be located within 1 meter (3 feet) of an electrical outlet and installed at the same height if appropriate.
6. Work area telecommunications outlets with unique applications shall be addressed appropriately to conform to industry standards and practices (e.g. system furniture bezels, weatherproof outlets and keystone adaptors).

#### 3.3.3 Telecommunications Outlet Connector

1. Horizontal distribution cabling system TO locations at the work area shall be minimum **4 port** capacity.
2. TO cover-plates at the work area shall be **single-gang** brushed **PVC** type unless otherwise specified within the project design and approved by CGS-IPS.
3. CGS-IPS requires minimum of two (2) Category 6 balanced twisted-pair, 4-pair cable to be terminated to an 8-position, 8-contact (8P8C) modular jack at the work area.
  
4. CGS-IPS standard for color coding at the telecommunications outlet copper UTP

connectors shall be specified as;

- Color **white** for outlet connectors designated for **data** or Local Area Network (LAN) connections.
  - Color **blue** for outlet connectors designated for **voice** or other telephony connections.
5. CGS-IPS standard of acceptance for termination of UTP horizontal distribution cabling shall be T568-A (ISDN) pin assignment as shown;



### 3.3.4 Work Area Equipment Cords

1. CGS-IPS recognizes only work area cables required for data communications equipment (DCE) and data terminal equipment (DTE) as follows;
  - Category 3 in ANSI/TIA/EIA-568-B.2, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components.
  - Category 6 in ANSI/TIA/EIA-568-B.2-1, Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling.
2. When horizontal cabling must be adapted to accommodate specific user needs (e.g., installing a balun), make the adaptations outside (i.e., beyond) the telecommunications outlet/connector.
3. The maximum horizontal cable length of 90 m (295 ft) is based on a maximum length

of 5 m (16 ft) of work area cable. The combined length of equipment cables, work area cords, and patch cords in the TR or ER must not exceed 10 m (33 ft), except when longer work area cables are permitted in conjunction with a Multi-User Telecommunication Outlet (MUTOA).

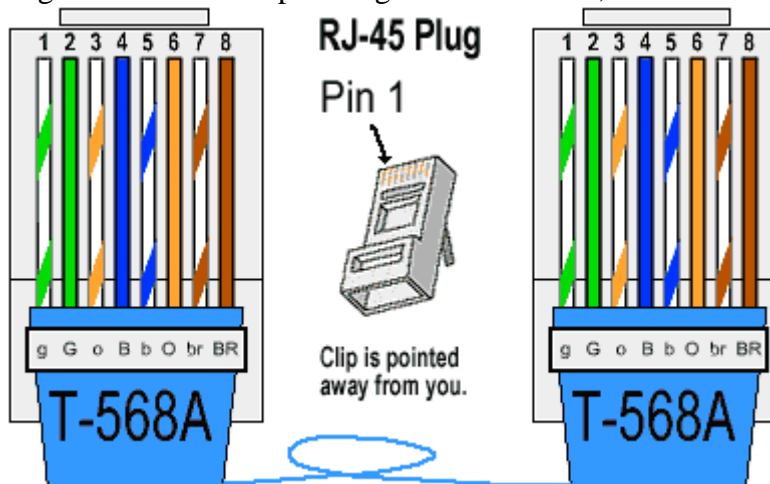
### 3.4 Telecommunications Room (TR)

#### 3.4.1 General

1. Telecommunications Rooms (TR) differ from Equipment Rooms (ER) and Entrance Facilities (EF) in that they are generally considered to be floor-serving or tenant-serving spaces that provide a connection point between backbone and horizontal infrastructures.
2. Telecommunications Rooms (TR) provide an environmentally suitable and secure area for installing:
  - Distribution and backbone cables.
  - Distribution and backbone cross-connects.
  - Rack- and wall-mounted hardware.
  - Telecommunications equipment.

#### 3.4.2 TR Terminations

1. Horizontal distribution and backbone cabling system termination panels within the TR space shall be maximum **48 port** capacity.
2. TR patch panels shall occupy a maximum of **2U** rack space per individual panel.
3. CGS-IPS standard of acceptance for termination of UTP horizontal distribution cabling shall be T568-A pin assignment as shown;



4. CGS-IPS standard of acceptance for termination of UTP data backbone cabling shall be T568-A pin assignment as shown.
  5. CGS-IPS standard of acceptance for termination of UTP voice backbone cabling
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## Structured Cabling Guidelines

- shall be T568-A pin assignment using only two pair (position 1 and position 2) per port.
- CGS-IPS standard of acceptance for termination of optical backbone cabling shall be ANSI/TIA/EIA 568SC connector.
  - Loading of all Telecommunications Systems rack mounted termination hardware within the TR. ( Example below. ) Contact IP-HQ in Iqaluit for final rack layout.

<b>Telecommunications Rack Layouts</b>											
<b>Telecommunications Voice Rack</b>				<b>Telecommunications Data Rack</b>				<b>Telecommunications Voice/Data Rack</b>			
Cable		Cable		Cable		Cable		Cable		Cable	
Units	Mgmt	Units	Units	Mgmt	Units	Units	Units	Mgmt	Units	Units	Units
44		Reserved for future use	44	44	Reserved for future use	44	44	Reserved for future use	44	44	44
43		Reserved for future use	43	43	Reserved for future use	43	43	Reserved for future use	43	43	43
42		Cable Management	42	42	Cable Management	42	42	Reserved for future use	42	42	42
41		Workstation Voice Connections	41	41	Workstation Data Connections	41	41	Reserved for future use	41	41	41
40			40	40		40	40	Backbone to Demark	40	40	40
39		Cable Management	39	39	Cable Management	39	39	Cable Management	39	39	39
38		Cable Management	38	38	Cable Management	38	38	Workstation Voice Connections	38	38	38
37		Workstation Voice Connections	37	37	Workstation Data Connections	37	37	Reserved for Voice Expansion	37	37	37
36			36	36		36	36	Cable Management	36	36	36
35		Cable Management	35	35	Cable Management	35	35	Voice Switch	35	35	35
34		Cable Management	34	34	Cable Management	34	34	Reserve for Voice Switch Expansion	34	34	34
33		Workstation Voice Connections	33	33	Workstation Data Connections	33	33	Cable Management	33	33	33
32			32	32		32	32	Workstation Data Connections	32	32	32
31		Cable Management	31	31	Cable Management	31	31	Reserved for Data Telehealth Expansion	31	31	31
30		Cable Management	30	30	Cable Management	30	30	Reserved for Data Telehealth Expansion	30	30	30
29		VOIP (Voice) Switch	29	29	Data Switch	29	29	Cable Management	29	29	29
28			28	28		28	28	Data Switch	28	28	28
27		Cable Management	27	27	Cable Management	27	27	Reserved for Data Switch Expansion	27	27	27
26		Cable Management	26	26	Cable Management	26	26	Data Switch	26	26	26
25		VOIP (Voice) Switch	25	25	Data Switch	25	25	Reserved for Backbone Switch Expansion	25	25	25
24			24	24		24	24	Reserved for Backbone Switch Expansion	24	24	24
23		Cable Management	23	23	Cable Management	23	23	Cable Management	23	23	23
22		Cable Management	22	22	Cable Management	22	22	Telehealth Router	22	22	22
21		VOIP (Voice) Switch	21	21	Data Switch	21	21	Telehealth Router	21	21	21
20			20	20		20	20	WAN Router	20	20	20
19		Cable Management	19	19	Cable Management	19	19	Empty	19	19	19
18		ASU Connections	18	18	Empty	18	18	ASU Connections	18	18	18
17			17	17	Empty	17	17	VOIP (Voice) Switch	17	17	17
16		Cable Management	16	16	Empty	16	16	Cable Management	16	16	16
15		(Voice) ASU	15	15	Empty	15	15	(Voice) ASU	15	15	15
14			14	14	Empty	14	14	Cable Management	14	14	14
13		Cable Management	13	13	Empty	13	13	Cable Management	13	13	13
12		Empty	12	12	Empty	12	12	(Voice) ASU	12	12	12
11		Empty	11	11	Empty	11	11	Cable Management	11	11	11
10		Empty	10	10	Empty	10	10	Reserved for Analog Digital Expansion	10	10	10
9		Empty	9	9	Empty	9	9	Reserved for Analog Digital Expansion	9	9	9
8		Empty	8	8	Empty	8	8	Empty	8	8	8
7		Empty	7	7	Empty	7	7	Empty	7	7	7
6		Empty	6	6	Empty	6	6	Empty	6	6	6
5		Empty	5	5	Empty	5	5	Empty	5	5	5
4		Empty	4	4	Empty	4	4	Empty	4	4	4
3		Empty	3	3	Empty	3	3	Empty	3	3	3
2		UPS Equipment	2	2	UPS Equipment	2	2	UPS Equipment	2	2	2
1			1	1		1	1		1	1	1

### 3.4.3 Telecommunications Room (TR) Sizing

- Every building is served by at least one TR, with a minimum of one TR per floor. A TR may be an enclosed architectural space serving multiple tenants or an enclosed space serving only one tenant. There is no maximum number of TR that may be provided within a building.
- CGS-IPS recognizes and supports the design criteria for TR sizes as specified by





## Structured Cabling Guidelines

CAN/CSA, TIA/EIA and BICSI. The following table is provided within the BICSI/TDMM and shall be referenced;

If the Serving Area Is...	Then the Interior Dimensions of the Room Must Be at Least...
500 m <sup>2</sup> (5,000 ft <sup>2</sup> ) or less	3.0 m x 2.4 m (10 ft x 8 ft) (See note below)
Larger than 500 m <sup>2</sup> and less than or equal to 800 m <sup>2</sup> (>5,000 ft <sup>2</sup> to 8,000 ft <sup>2</sup> )	3.0 m x 2.7 m (10 ft x 9 ft)
Larger than 800 m <sup>2</sup> and less than or equal to 1,000 m <sup>2</sup> (>8,000 ft <sup>2</sup> to 10,000 ft <sup>2</sup> )	3.0 m x 3.4 m (10 ft x 11 ft)

Notes: ANSI/TIA/EIA-569-B recommends a minimum TR size of 3.0 m x 2.1 m (10 ft x 7 ft). The size of 3.0 m x 2.4 m (10 ft x 8 ft) is specified here to allow a centre rack configuration

Common TRs serving up to 2000 m<sup>2</sup> (20,000 ft<sup>2</sup>) should be 6 m<sup>2</sup> (80 ft<sup>2</sup>). When the area server exceeds 2,000 m<sup>2</sup> (20,000 ft<sup>2</sup>), consider providing more than one common TR.

- CGS-IPS recognizes and supports the design criteria for Telecommunications spaces within smaller buildings and facilities as specified by CAN/CSA, TIA/EIA and BICSI. The following table is provided within the BICSI/TDMM and shall be referenced;

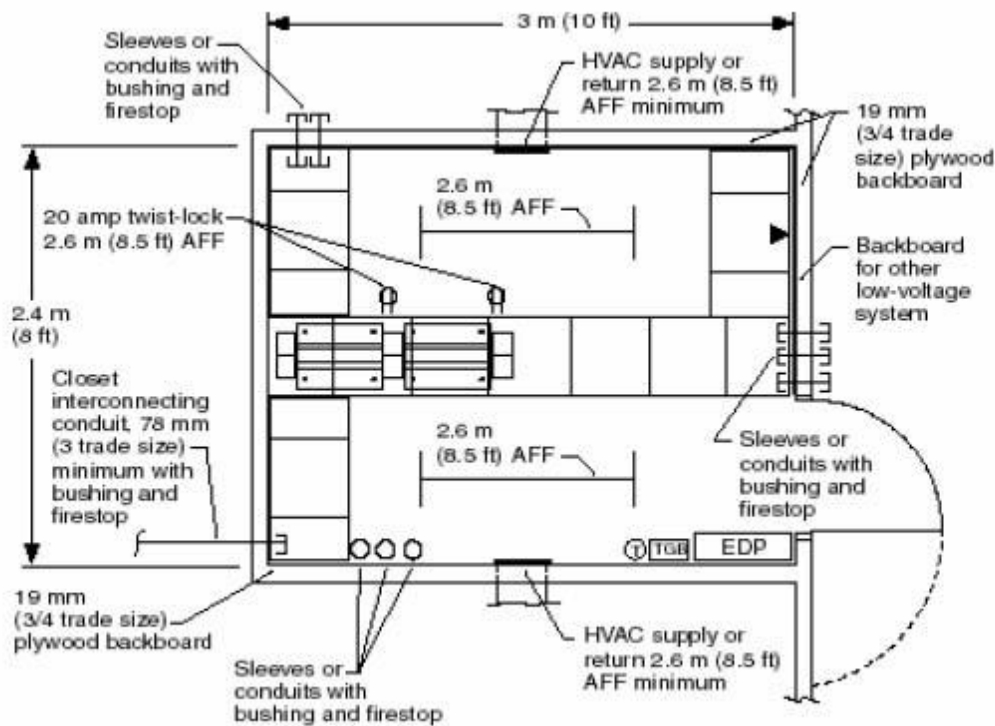
If the Building is Smaller Than...	Then the Interior Dimensions of the Room Must Be at Least...
500 m <sup>2</sup> (5,000 ft <sup>2</sup> )	Shallow rooms
100 m <sup>2</sup> (1,000 ft <sup>2</sup> )	• Wall cabinets • Self contained cabinets • Enclosed cabinets

### 3.4.4 Telecommunications Room (TR) Layout

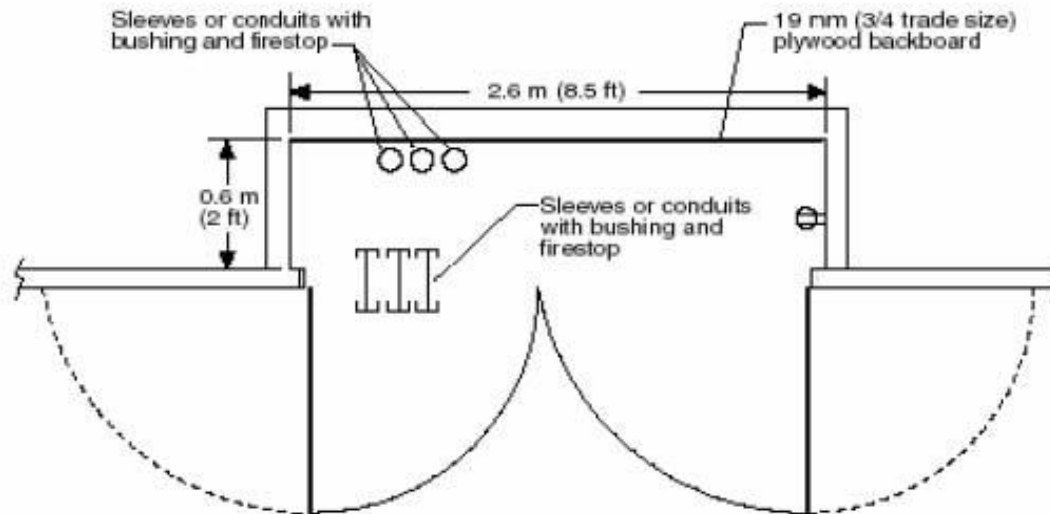
- All equipment racks located within the TR shall be EIA standard spacing #10/32 tapped, 19 inch mounting rails and minimum 44U rack space. Equipment racks shall be complete with vertical cable management on both rack sides and of the same vertical height as the rack. All equipment racks shall be grounded to the main building ground.



2. CGS-IPS requires that equipment racks shall be oriented within the TR to provide minimum **0.8 meters** (2.5 feet) working clearance to the rear from the vertical rails and minimum **1.0 meter** (3.28 feet) working clearance to the front and a minimum of one side from the vertical rails.
3. CGS-IPS requires TR have cable tray installed as a continuous ring along exterior walls to facilitate slack cable loops, sufficient cable support and organization.
4. CGS-IPS requires TR have cable tray installed above all equipment racks and/or bays to facilitate cable drop, cable support and organization.
5. CGS-IPS recognizes and supports the design criteria for TR as specified by CAN/CSA, TIA/EIA and BICSI. The following figure is provided within the BICSI/TDMM and shall be referenced;



6. CGS-IPS recognizes and supports the design criteria for telecommunications shallow rooms as specified by CAN/CSA, TIA/EIA and BICSI. The following figure is provided within the BICSI/TDMM and shall be referenced;



### 3.5 Main Telecommunications Room (MTR)

#### 3.5.1 General

1. A Main Telecommunications Room (MTR) is a room that provides space and maintains a suitable operating environment for large telecommunications and/or computer equipment. An MTR differs from a TR in that they are generally considered to serve a building, a campus, a tenant, or a service provider (SP), whereas TR serve a single floor area of a building.
2. The MTR provides the consolidation point for intra-building backbone cabling and pathways and also the connection point for inter-building backbone cabling and pathways for that building of a campus backbone cabling system.
3. The MTR may also serve as a TR for that floor within a building.
4. An MTR provides an environmentally suitable and secure area for installing:
  - Backbone and distribution cables.
  - Backbone and distribution cross-connects.
  - Rack- and wall-mounted hardware.
  - Telecommunications equipment.
  - Workspace for telecom and network personnel.
  - Owner demarcation point.
  - Service provider (SP) entrance facilities (optional).
  - Service provider demarcation point (optional).



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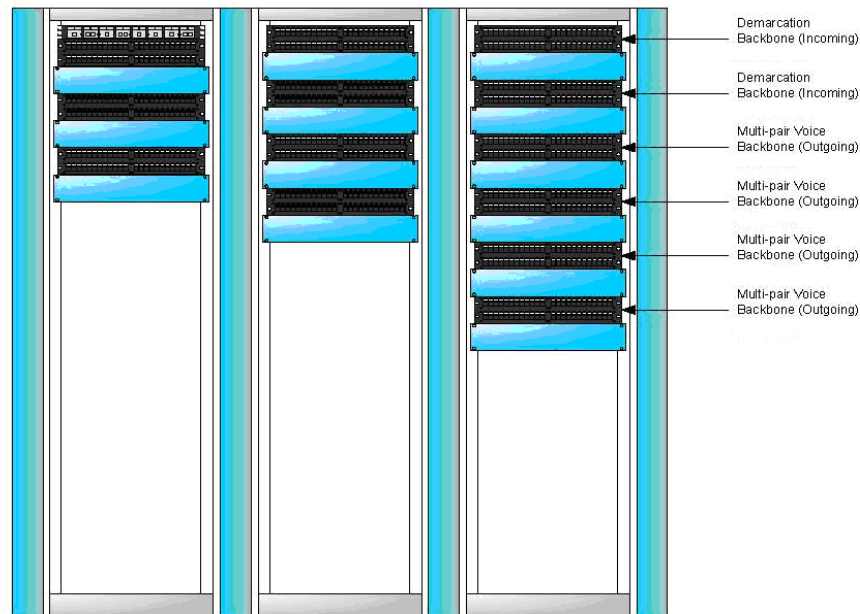
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### 3.5.2 MTR Terminations

1. Backbone and horizontal distribution cabling system termination panels within the main TR/ER space shall be maximum **48 port** capacity.
2. MTR/ER patch panels shall occupy a maximum of **2U** rack space per individual panel.
3. CGS-IPS standard for color coding at the Main Telecommunications Room (MTR) copper UTP termination panels shall be specified as:

Equipment/ Service Requirement	Cross- Connect Cable Colour	Supplemental Notes
Data/PC connectivity	White or Grey	All PCs switch connected
Telephones	Light/Dark Blue	Analog or Digital handsets

4. CGS-IPS standard of acceptance for termination of UTP horizontal distribution cabling shall be ANSI/TIA/EIA 568-A pin assignment.
5. CGS-IPS standard of acceptance for termination of UTP data backbone cabling shall be ANSI/TIA/EIA 568-A pin assignment.
6. CGS-IPS standard of acceptance for termination of UTP voice backbone cabling shall be ANSI/TIA/EIA 568-A pin assignment using only two pair (position 1 and position 2) per port.
7. CGS-IPS standard of acceptance for termination of optical backbone cabling shall be ANSI/TIA/EIA 568SC connector.
8. Loading of all Telecommunications Distribution System rack mounted building backbone termination hardware within the MTR shall be assigned as shown;

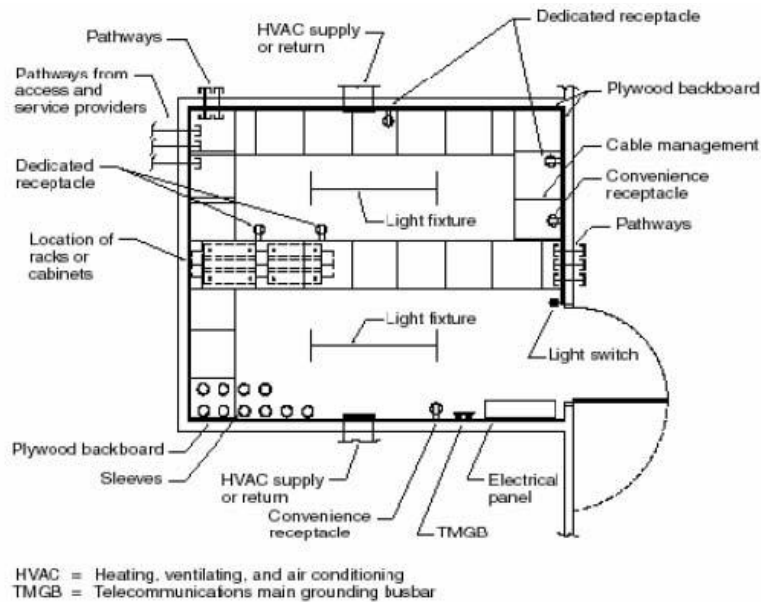


### 3.5.3 MTR Sizing

1. CGS-IPS recognizes and supports the design criteria for MTR/ER sizes as specified by CAN/CSA, TIA/EIA and BICSI. The minimum size requirements for an equipment room shall be 14 m<sup>2</sup> (150 ft<sup>2</sup>).

### 3.5.4 MTR/ER Layouts

1. All equipment racks located within the MTR shall be EIA standard spacing #10/32 tapped, 19 inch mounting rails and minimum 44U rack space.
2. Equipment racks shall be complete with vertical cable management on both rack sides and of the same vertical height as the rack.
3. CGS-IPS requires that equipment racks shall be oriented within the MTR to provide minimum **0.8 meters** (2.5 feet) working clearance to the rear, front and at minimum one side from the vertical rails.
4. CGS-IPS requires MTR rooms have cable tray installed as a continuous ring along exterior walls to facilitate slack cable loops, sufficient cable support and organization.
5. CGS-IPS requires MTR rooms have cable tray installed above all equipment racks and/or bays to facilitate cable drop, cable support and organization.
6. CGS-IPS recognizes and supports the design criteria for MTR as specified by CAN/CSA, TIA/EIA and BICSI. The following figure is provided within the BICSI/TDMM and shall be referenced;



### 3.6 Entrance Facilities

#### 3.6.1 General

1. Telecommunications entrance facilities must enter and terminate in the most suitable location needed to serve the occupants of a building. This service entrance includes the following:
  - The path that these facilities follow on private property.
  - The entrance point to the building.
  - The termination point.
  
2. The type and location of the entrance depend upon the:
  - Type of facility being used.
  - Path the facility follows.
  - Building architecture.
  - Aesthetics.



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3. Service entrances may be required for connections to:
  - The Service Provider (SP).
  - Campus distribution (local area network (LAN), private branch exchange (PBX), etc.).
  - An inter-exchange common carrier (IXC).
  - A central station system for fire or burglar alarms.
  - A community antenna television (CATV) network.
  - A closed circuit television (CCTV) network.

### 3.6.2 Entrance Cables

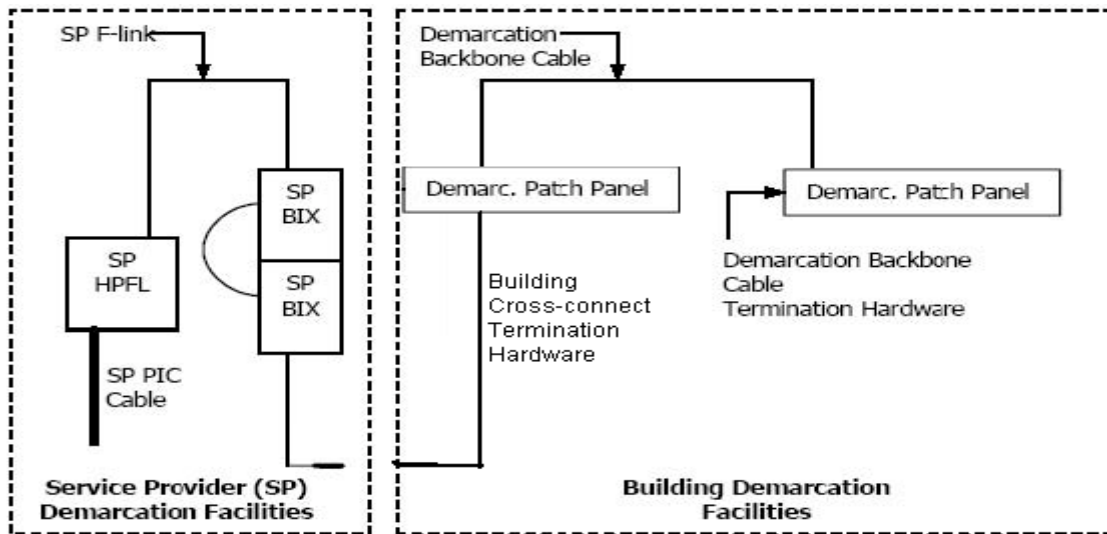
1. Outside plant (OSP) cables are typically unlisted because of the sheath material and filling compounds used within the cables and shall be exposed within the premise for a maximum of 15 m (50 ft) from the building entrance.
2. OSP entrance cables may only extend beyond 15 meters provided they are enclosed in minimum EMT type conduit.
3. Building Entrance Terminals (BET) must provide voltage and current protection, disconnect and fusible link.
4. The protection facilities must comply with CAN/CSA specification C22.2, No. 226-92, "Protectors in Telecommunication Networks," including the high-voltage fault test.

### 3.6.3 Telecommunications Demarcation

1. CGS-IPS requires telecommunications Service Providers (SP) to provide a demarcation point between service provider and owner system liability.
2. CGS-IPS standard SP connector configuration shall be 50 pin RJ-21 male connector.
3. CGS-IPS standard demarcation connector configuration shall be 50 pin RJ-21 connector as shown SP shall be female whilst Building/Customer shall be male.

### 3.6.4 Building Telecommunications Demarcation

1. The building telecommunications demarcation facilities shall include three basic components;
  - Building cross-connect hardware
  - Demarcation backbone cable
  - Building demarcation termination hardware.



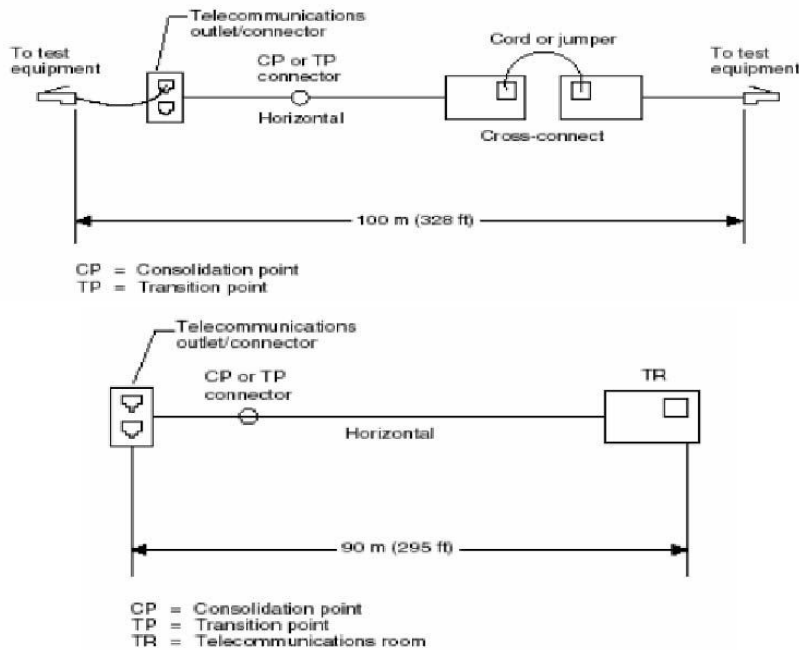
### 3.7 Field Testing

#### 3.7.1 General

1. CGS-IPS requirements in this section address field testing criteria for balanced twisted-pair, fibre optic cabling, coaxial and multi-pair cabling only.
2. Balanced twisted-pair test requirements are defined in:
  - ANSI/TIA/EIA-568-B.1
  - ANSI/TIA/EIA-568-B.2
3. Testing optical fiber cabling systems is specified in:
  - ANSI/TIA/EIA-568-B.1.
  - ANSI/TIA/EIA-568-B.3.
  - TIA/EIA TSB-140.
  - ANSI/TIA/EIA-526-14-A OFSTP 14A—*Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant.*
  - ANSI/TIA/EIA-526-7 OFSTP 7—*Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.*

### 3.7.2 Balanced Twisted-Pair Cable Testing

- ANSI/TIA/EIA-568-B.1 defines two configurations for field testing horizontal Category 6 balanced twisted-pair cabling, “Channel Link” and “Permanent Link” as shown;



- CGS-IPS requires that testing procedures used are applicable to the horizontal cabling configuration to meet field test compliance. Consolidation / Transition points are optional interface points as specified and permitted under CAN/CSA and ANSI/TIA/EIA specifications and are considered a seamless link for acceptance testing.
- The field testing acceptance parameters for balanced twisted-pair cabling are:
  - Wire map (continuity).
  - Length.
  - Insertion loss.
  - NEXT loss.
  - ELFEXT.
  - Propagation delay and delay skew.
  - Return loss.
  - Power sum near-end crosstalk (PSNEXT) loss.
  - Power sum equal level far-end crosstalk (PSELFEXT).





## Structured Cabling Guidelines

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4. Level III field test instruments are required for measurements up to Category 6 and Class E cabling.
5. CGS-IPS requires acceptance testing results to be documented and provided as compliance with the System Administration Requirements section of this document.

### 3.7.3 UTP Backbone Cable Testing

1. CGS-IPS requires Backbone cabling involving lengths within the performance and acceptance requirements to be tested for length, opens and shorts of all pairs terminated within the cable sheath.
2. For Category 6, UTP backbone lengths and channels that do not exceed the length limits for horizontal cables, the test parameters for horizontal cabling **must** be used.
3. CGS-IPS requires acceptance testing results to be documented and provided as compliance with the System Administration Requirements section of this document.

### 3.7.4 Coaxial Cable Testing

1. CGS-IPS requires performance testing on all coaxial cabling used in broadband applications such as CATV and CCTV.
2. Coaxial cable is a low-impedance media, 50 or 75 ohm, with a single transmission path. The most often-performed tests are:
  - DC loop resistance.
  - Impedance.
  - Length.
  - TDR.
  - Attenuation.
  - Noise.
3. The required tests and acceptance depend on the application and the system design requirements.
4. CGS-IPS requires acceptance testing results to be documented and provided as compliance with the System Administration Requirements section of this document.

### 3.7.5 Optical Fibre Cable Testing

1. The BICSI/TDMM recognizes three (3) basic segments of optical fibre cabling;
  - Inter-building backbone (campus backbone cabling).
  - Intra-building backbone (building backbone cabling).
  - Horizontal and centralized cabling



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2. CGS-IPS requires that attenuation testing (acceptance testing) be measure at both applicable wavelengths and bidirectionally.
3. Multimode backbone links are to be tested at 850 nm and 1300 nm in accordance with ANSI/TIA/EIA-526-14-A, Method B, using one reference jumper.
4. Single-mode backbone links are to be tested at 1310 nm and 1550 nm in accordance with ANSI/TIA/EIA-526-7, Method A.1, using one reference jumper.
5. The maximum allowable attenuation for either a horizontal 50/125 µm multimode link is 2.0 dB. This value is based on the loss of two mated connector pairs (one pair at the telecommunications outlet/connector and one pair at the TR) plus 90 m (295 ft) of optical fiber cable.
6. The maximum allowable attenuation for open office cabling, implemented with a Consolidation Point (CP) is 2.75 dB when testing between the horizontal cross-connect and the telecommunications outlet/connector. For open office cabling implemented with a MUTOA, the maximum attenuation is 2.0 dB.
7. Because backbone length and the potential number of splices vary depending on site conditions, an attenuation equation is used to determine acceptance values based on standard component requirements at each applicable wavelength.
8. CGS-IPS establishes acceptable link attenuation budget calculated as:
  - Link attenuation budget = Cable attenuation + connector attenuation + splice attenuation.
  - Cable attenuation (dB) = Attenuation coefficient (dB/km) x length (km)
9. CGS-IPS recognizes and supports the application design requirements of optical cabling as specified by CAN/CSA, TIA/EIA and BICSI.
10. CGS-IPS requires acceptance testing results to be documented and provided for compliance of this section as per the requirements within this document *Section 6 Project Documentation*.

### 3.8 System Administration

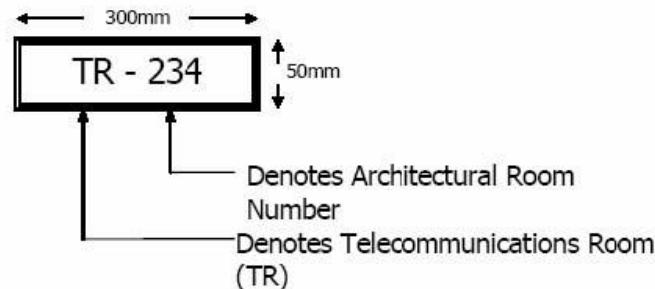
#### **3.8.1 General**

1. Four (4) classes of administration are specified within the ANSI/EIA/TIA606-A standard to accommodate diverse degrees of complexity present in telecommunications infrastructure.
2. CGS-IPS requirements for system administration are **Class 2**.
3. Class 2 administration provides for the telecommunications infrastructure administration needs within a single building.
4. A unique identifier is associated with each element of the telecommunications infrastructure to be administered.
5. All components of the telecommunications administration system shall be designed and installed to last the intended life (**20 year warranty period min.**) of the telecommunications system installed.

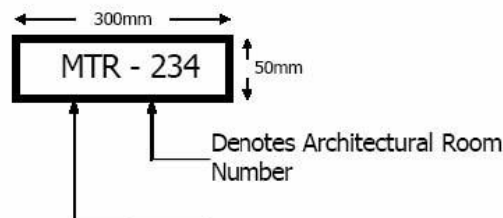
6. CGS-IPS recognizes and supports the administration classification criteria as specified by CAN/CSA, TIA/EIA and BICSI.

### 3.8.2 Telecommunications Spaces

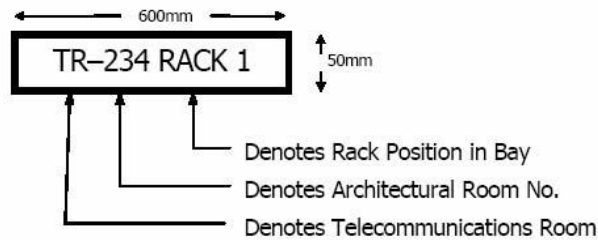
1. All telecommunications spaces within a building shall be uniquely identified as part of a complete administration system.
2. The TR is typically assigned a room designation by the architectural design and that assigned number shall be used within the administration system identifier as shown and shall be a “lamicoid” type plate minimum (50mm H) X (300mm L) secured to the exterior of the door entering that space.



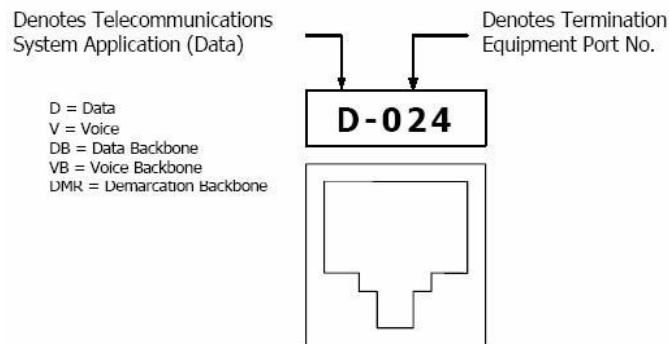
3. The ER or MTR is typically assigned a room designation by the architectural design and that assigned number shall be used within the administration system identifier as shown and shall be a “lamicoid” type plate minimum (50mm H) X (300mm L) secured to the exterior of the door entering that space.



4. All telecommunications equipment racks within the telecommunications space require a unique component identifier as part of the administration system by a “lamicoid” type etched vinyl nameplate, minimum (50mm H) X (600mm L) as shown and secured to the upper horizontal rail of the equipment rack.



5. All telecommunications termination hardware within the telecommunications space requires a unique component identifier as part of the administration system identifiers must be self adhesive thermal transfer type as shown and placed appropriately to indicate all ports.

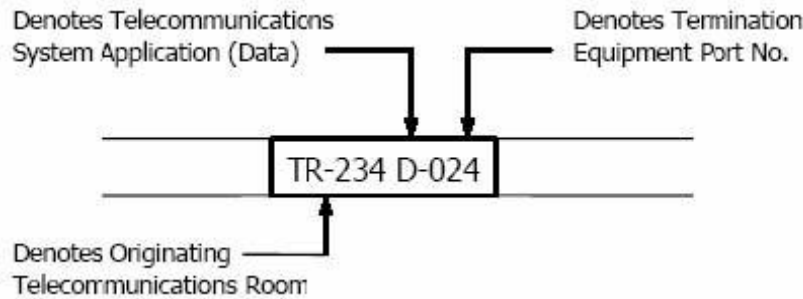


### 3.8.3 Horizontal Distribution System

1. For the purposes of system administration the horizontal distribution system shall include all horizontal system cabling only. All associated termination hardware located within the telecommunications space are addressed in section 3.8.2 and work area administration is addressed in section 3.8.4 of this document.
2. All horizontal cabling shall be uniquely identified with a wrap type self laminating adhesive label with mechanically generated (not hand written) identifier.
3. Horizontal cable identifiers shall denote basic telecommunications system application and originating telecommunications space termination equipment port as shown;

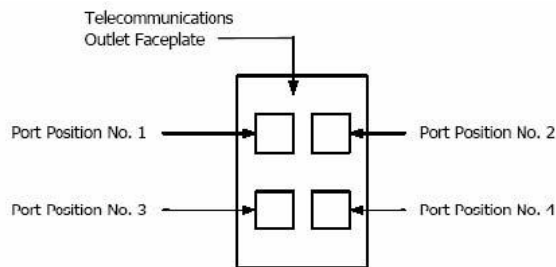


## Structured Cabling Guidelines

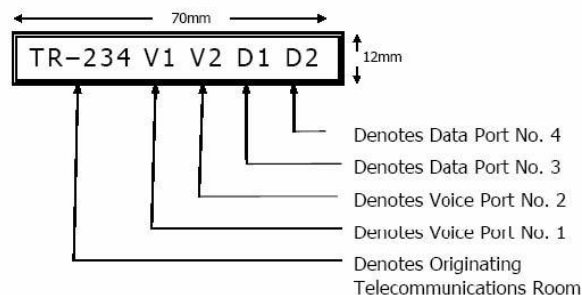


### 3.8.4 Work Area

1. For the purposes of system administration the work area shall include the telecommunications outlet faceplate and all outlet termination hardware.
2. All telecommunications outlet faceplates shall be standard four port configuration with port assignments as shown.

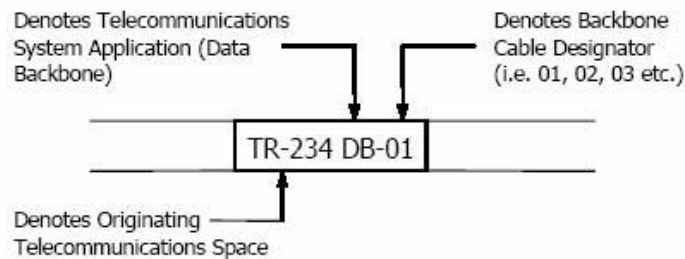


3. All Telecommunications Outlet (TO) locations require a unique component identifier as part of the administration system by a “lamicoid” type etched vinyl nameplate, minimum (120mm H) X (70mm L) and secured to the wall-space centered and above (min. 12mm) the telecommunications outlet faceplate.
4. Telecommunications work area outlet identifiers **must** denote basic telecommunications system application, originating telecommunications space and termination equipment port as shown;



### 3.8.5 Backbone System

1. For the purposes of system administration the backbone system shall include all backbone system cabling only. All administration system requirements for associated termination hardware located within the telecommunications spaces are addressed in section 3.8.2.
2. As described in Section 3.2 of this document, backbone cabling is installed between telecommunications spaces within the building or campus.
3. All backbone system cabling shall be uniquely identified with a wrap type self laminating adhesive label with mechanically generated (not hand written) identifier.
4. Backbone cable identifiers shall denote basic telecommunications system application and originating telecommunications space as shown;



### 3.8.6 Telecommunications Demarcation Facilities

1. For the purposes of system administration, the telecommunications demarcation facilities shall include three basic components;
  - Building cross-connect hardware.
  - Building demarcation backbone cable
  - Building demarcation termination hardware.
2. All Building cross-connect hardware within the telecommunications space requires a unique component identifier as part of the administration system. Identifiers must be self adhesive thermal transfer type and placed appropriately to indicate applicable pair assignments as shown;



## Structured Cabling Guidelines

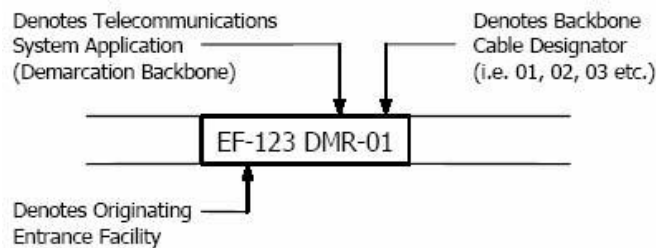
Building Demarcation Backbone  
(2 Pair / Port)

P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12
P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24

Building / Owner RJ-21 Pigtail

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

3. All administration system requirements for associated termination hardware located within the telecommunications spaces are addressed in section 3.8.2.
4. As described in Section 3.6.4 of this document, building demarcation facilities are installed between the service provider entrance facilities and the building backbone termination hardware.
5. All telecommunications demarcation backbone cabling shall be uniquely identified with a wrap type self-laminating adhesive label with mechanically generated (**not hand written**) identifier.
6. All telecommunications demarcation backbone cable identifiers shall denote basic telecommunications system application and originating telecommunications space as shown;





## Structured Cabling Guidelines

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### SECTION 4 CONSULTANT SERVICES REQUIREMENTS

The CAN/CSA, ANSI/TIA/EIA, BICSI and ISO/IEC specifications and standards as listed in Section 2. “Applicable Specifications and Standards” define the basic elements of the telecommunications cabling system structure. CGS-IPS requires design consultants providing services to the Government of Nunavut to prepare contract documents as detailed within this section.

#### 4.1 General Requirements

##### 4.1.1 General

1. CGS-IPS requires consultants providing services to the province to comply with all parameters of the Requirements Guideline document when considering telecommunications infrastructure in two basic categories;
  - • Technical Specifications • •
  - Telecommunications Drawings

#### 4.2 Technical Specification

##### 4.2.1 Document Requirements

1. Consultants must produce a complete Tender Document sub-section “Telecommunications Distribution System” within the electrical specifications.
2. The Telecommunications Distribution System document shall incorporate the BICSI Technical Specifications document format as recognized by CGS-IPS.
3. The Telecommunications Distribution System document shall provide provisioning and implementation requirements and be formatted in three (3) Parts.
  - PART 1 – GENERAL
  - PART 2 – PRODUCTS
  - PART 3 – EXECUTION

##### 4.2.2 Part 1 – General

1. This portion identifies the overall general requirements of the project in reference to the provisioning of telecommunications infrastructure.
2. This section shall provide telecommunications technical specifications within the following sub-sections as required by the project;
  - Summary
  - References (identified in Section 2 of this document)
  - Permits, Fees and Certificates of Approval
  - System Description
  - Submittals
  - Quality Assurance





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- Warranty Requirements
- Delivery, Storage and Handling
- Sequence and Scheduling
- Use of Site
- Continuity of Services

### 4.2.3 Part 2 – Products

1. This portion identifies general requirements of the individual components incorporated in the provisioning of telecommunications infrastructure.
2. This section shall provide telecommunications technical specifications within the following sub-sections as required by the project;
  - Acceptable Manufacturers
  - Fabrication
  - Suitability
  - Voice/Data Building Backbone Cable (including optical backbone cabling as required)
  - Voice Horizontal Distribution Cable
  - Data Horizontal Distribution Cable
  - Optical Fibre Horizontal Distribution Cable (as required)
  - Campus Backbone Cable (campus [inter-building] applications)
  - Service Provider Entrance Facilities (reference Section 3.6.3 Building Telecommunications Demarcation of this document)
  - Voice/Data/Optical Fibre Work Area Outlets
  - Termination Blocks
  - Patch Panels
  - Optical Fibre Patch Panels
  - Optical Fibre Connectors
  - Patch Cords and Jumper Cables
  - Equipment Racks and Cabinets
  - Building Entrance Protectors (campus backbone cabling)
  - Service Provider Entrance Protectors (service provider cables)
  - Spare Parts

### 4.2.4 Part 3 – Execution

1. This portion identifies construction and installation requirements for system vendors when provisioning telecommunications infrastructure.
2. This section shall provide telecommunications technical specifications within the following sub-sections as required by the project;



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- Site Survey
- Handling of Materials
- Protection of Owner's Facilities
- Installation
- Grounding and Bonding
- Labeling & Administration
- Testing and Certification
- Field Quality Control (including RCDD project manager requirement)
- Customer/Owner Orientation and Training
- Project Documentation

### 4.3 Telecommunications Drawings

#### 4.3.1 Drawing File Requirements

1. Consultants must produce contract document drawings and details within the existing project requirements drawings.
2. Consultants shall make drawing files available to the successful project vendor in AutoCAD (.dwg file format) to assist with vendor compliance requirements *Section 5. Vendor Requirements*.
3. AutoCAD generated drawing files shall be produced to address the following requirements;
  - Floor No./Section Telecommunications Distribution System
  - Telecommunications Distribution System Details
  - Telecommunications Space - Rack Details
  - Telecommunications Space - Floor Layout
  - Telecommunications Backbone System

#### 4.3.2 Floor Plan Drawings

1. Floor plan drawings shall indicate the location of the following telecommunications cabling system components;
  - Work area outlet location
  - Telecommunications outlet type (icon specified)
  - Telecommunications outlet configuration (icon specified)
  - Serving telecommunications space location
  - Special requirements/considerations notes

#### 4.3.3 Telecommunications Distribution System Details

1. System detail drawings shall provide additional information required for telecommunications cabling system components including;
  - Outlet icon details and descriptions



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- Special application details
- Special installation requirements
- Architectural details (as required)
- Other detail drawings

### 4.3.4 Telecommunications Space - Rack Details

1. Rack detail drawings shall provide rack elevations for each telecommunications space within the entire project scope.
2. Rack elevation drawings shall provide detailed information for all telecommunications distribution system components within the Telecommunications Room(s) (TR) and Main Telecommunications/Equipment Room (MTR/ER) including;
  - Equipment Rack/Cabinet dimensions and requirements
  - Equipment Rack/Cabinet quantities
  - Termination hardware and loading requirements for
  - Quantity
  - Placement
  - Category requirement
  - Port count
  - System application (e.g. horizontal or backbone)
  - Additional hardware requirements (e.g. horizontal managers, power bars or UPS)

### 4.3.5 Telecommunications Space - Floor Layout

1. Telecommunications space floor layout drawings shall be scale drawings and indicate orientation of equipment and hardware as assigned to the footprint of the space.
2. Floor layout drawings shall provide detailed information for all telecommunications infrastructure components within the TR and MTR/ER including;
  - Equipment Rack/Cabinet location and orientation
  - Horizontal Pathway requirements, location and orientation
  - Backbone Pathway requirements, location and orientation
  - Telecommunications system requirements, location and orientation (e.g. voice and data telecommunications outlet)
  - Associated electrical distribution system requirements, location and orientation.
  - Dimensional and work clearance information
  - Other architectural considerations



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### 4.3.6 Telecommunications Backbone System (Riser Diagram)

1. Telecommunications backbone system drawings shall be single-line type drawings to indicate quantity requirements and associated pathway assignments for all building and campus backbone cabling.
2. Backbone system drawings shall provide detailed information for all telecommunications backbone cabling within and between the TR and MTR/ER including;
  - Backbone cable type and requirements
  - Backbone cable quantity
  - Telecommunications system application
  - Pathway assignment
  - Termination hardware type and location
  - Special considerations



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### SECTION 5 VENDOR REQUIREMENTS

The CAN/CSA, ANSI/TIA/EIA, BICSI and ISO/IEC specifications and standards as listed in Section 2. “Applicable Specifications and Standards” define the basic elements of the telecommunications cabling system structure. CGS-IPS requires vendor firms providing services to the Government of Nunavut to comply with the qualification criteria as detailed within this section.

#### 5.1 Vendor Qualifications

##### 5.1.1 General

1. CGS-IPS requires vendor firms providing services to the province to comply with the requirements within this document *Section 3. Communications Cabling Requirements* when provisioning telecommunications infrastructure.
2. Qualified vendors shall provide technical field services in compliance with labor standards (e.g. Communications Cabling Specialist CCS).
3. Qualified vendors shall maintain current Building Industry Constructions Services International (BICSI) membership.
4. Qualified vendors shall maintain **manufacturer recognition** as a **certified installation contractor** for the telecommunications product solution being implemented.
  - a. The Government of Nunavut recognizes the following two manufacture solutions: **Nordx\Belden and Panduit.**
5. Qualified vendors shall be registered with the Government of Nunavut, Safety Services and will be asked to provide registration prior to awarding work.

#### 5.2 RCDD Project Manager

##### 5.2.1 General

1. The successful Telecommunications Distribution System contractor is required to retain the services of one (1) Registered Communications Distribution Designer (RCDD) for the duration of the project. The RCDD must be identified and the successful vendor must provide a copy of the RCDD current certificate and BICSI membership on a timely basis prior to award of the contract.
  2. The RCDD shall maintain responsibility for the following;
    - Review and accept the Telecommunications Distribution System materials, hardware and related components proposed. Review the proposed pathways and spaces and accept the size and location of all Telecommunications Spaces (TS). Notify the Consultant of any issues or concerns related to CAN/CSA, IEE and TIE/EIA specification compliance.
    - Review and approve Telecommunications Distribution System material
-



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shop drawings prior to submission to the Consultant.

- Attend regularly scheduled project construction and job meetings as requested by the project Consultant.
- Ensure system installation practices and procedures comply with all applicable CAN/CSA, IEE and TIE/EIA specifications and procedures.
- Provide regular project status reports and updates as requested by the project Consultant.
- Observe testing and certification procedures and provide manufacturers assurance and warranty.
- Review and approve all project as-built documentation including drawings, test reports, details and provide current RCDD seal on all.

### 5.3 Certification and Testing

#### **5.3.1 General**

1. Vendors providing services to the Government of Nunavut shall reference and comply with all requirements for telecommunications system certification and testing as specified in this document *Section 3. Communications Cabling Requirements*.
2. Vendors providing services to the Government of Nunavut shall provide Product Manufacturer's Application Warranty for a minimum of Twenty (20) Years.
3. Qualified vendors as specified within this document *Section 5.2 RCDD Project Manager* shall provide **RCDD Letter of Certification** for the complete Telecommunications Cabling System as facilitated for the project.
4. Certification and testing documentation shall be provided as a complete part of the Project Documentation requirements as specified within this document *Section 5.4 Project Documentation*.

### 5.4 Project Documentation

#### **5.4.1 General**

1. Vendors providing services to the Government of Nunavut shall reference and comply with all requirements for telecommunications system project documentation as specified within this document *Section 6. Project Documentation*.



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### SECTION 6 PROJECT DOCUMENTATION

The CAN/CSA, ANSI/TIA/EIA, BICSI and ISO/IEC specifications and standards as listed in Section 2. “Applicable Specifications and Standards” define the basic elements of the telecommunications cabling system structure. CGS-IPS requires vendor firms providing services to the Government of Nunavut to prepare and submit Project Documentation as detailed within this section.

#### 6.1 As-built Drawings

##### 6.1.1 General

1. Vendors shall provide record drawings in both hard copy and CDROM format as part of compliance with this requirement.
2. Record drawings in AutoCAD .dwg file format shall be provided to the vendor by the Consulting Services Provider for the compliance of this section.
3. Record drawings shall provide the following information;
  - All work area telecommunications outlet locations as constructed.
  - Project administration system identifiers for telecommunications outlets as specified within this document.
  - Project administration system identifiers for telecommunications spaces (TR and MTR) as specified within this document *Section 3.8 System Administration*.
4. Hard copy format record drawings shall be provided in “C” size drawings in two (2) complete sets as defined;
  - One complete floor plan drawing set black and white (color optional)
  - One complete floor plan drawing set black and white (color optional) laminated (encapsulated) to be placed in all associated telecommunications spaces)
5. Laminated hard copy record drawings may be provided in sections (C size sheet) related to the telecommunications space servicing a specific floor section or area.

#### 6.2 Test Results

##### 6.2.1 General

1. Vendors shall provide Test Results in CDROM format as part of compliance with this requirement.
2. Test result shall be provided for compliance of this section as per the requirements within this document.



### 6.3 Manufacturers Warranty

#### 6.3.1 General

1. Vendors shall provide a manufacturer generated and supported **Product Warranty** and **Application Assurance** certificates upon completion of installation and acceptance by CGS-IPS.
2. Product Warranty and Application Assurance shall provide coverage of materials and labour for a minimum of **Twenty (20) Years** from date of installation and acceptance regardless of installing agent/vendor status.

### 6.4 RCDD Project Certification

#### 6.4.1 General

1. Vendors shall provide RCDD Project Certificate in hard copy format as part of compliance with this requirement.
2. The RCDD certification shall be provided for compliance of this section as per the requirements within this document.