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***Infrastructure Requirements of
the Nunavut Government:
A Supplementary Report of the
Nunavut Implementation Commission***

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Nunavut Hivumukpalianikhaagut Katimayit
Nunavut Implementation Commission
Commission d'établissement du Nunavut
September 8, 1995

The Hon. Ron Irwin,
Minister,
Department of Indian Affairs and
Northern Development,
Ottawa, Ontario ..

The Hon. Nellie Cournoyea,
Government Leader,
Government of the Northwest Territories,
Yellowknife, NWT

Mr. Jose Kusugak,
President,
Nunavut Tunngavik Inc.,
Iqaluit, NWT

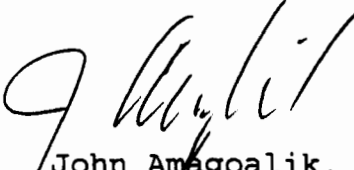
Dear Mr. Irwin, Ms. Cournoyea, and Mr. Kusugak,

On behalf of the Nunavut Implementation Commission (NIC), I am writing further to my letter of August 17, 1995, concerning work of the Commission supplementary to its earlier report, **"Footprints in New Snow"**.

At this time, I am pleased to supply you with a supplementary report of the Commission entitled **"Infrastructure Requirements of the Nunavut Government"**. This report examines, in some detail, the infrastructure requirements associated with the establishment of the Nunavut Government along the organizational lines set out in **"Footprints in New Snow"**. It also sets out capital and operations and maintenance costs relating to required infrastructure.

The Commission would be pleased to discuss this report with you, or any other work of the Commission, at a convenient time.

Yours sincerely,


John Amagoalik,
Chairperson

INFRASTRUCTURE REQUIREMENTS OF THE NUNAVUT GOVERNMENT:

**A SUPPLEMENTARY REPORT OF THE NUNAVUT IMPLEMENTATION
COMMISSION**

September 8, 1995

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1. Introduction

Under the Nunavut Political Accord the Government of Canada is committed to funding reasonable incremental costs of establishing the Government of Nunavut . The Nunavut Implementation Commission (NIC), established under the Nunavut Act to make various recommendations concerning the Government of Nunavut, submitted a proposed organizational model in the March 31, 1995 report entitled "Footprints in New Snow."

As part of its mandate, the Commission is required to identify and recommend the infrastructure requirements for the Capital Of Nunavut and the proposed organizational structure of its government. For its March 31, 1995 report, the Commission did not have the time nor the in-house technical expertise to undertake this task in detail. The Commission retained Price Waterhouse Management Consultants to assist in estimating the costs of creating and running the Nunavut Government. As part of the planning process for Nunavut, a Joint Technical Infrastructure Working Group co-chaired by Public Works and Government Services Canada and the Department of Public Works and Government Services of the GNWT was established early in 1994. Price Waterhouse Management Consultants contacted Public Works and Government Services in Ottawa, and arranged for that department to identify the infrastructure and the associated costs.

As a result of the very tight timetable given to Price Waterhouse Management Consultants, it was not possible to complete all of the requirements for identifying, scheduling and costing the infrastructure, nor was it possible for Public Works and Government Services Canada to work jointly with the Government of the GNWT's representatives on the Joint Technical Infrastructure Working Group to prepare this analysis.

On April 25, 1995, a meeting was held in Yellowknife with officials of Public Works and Government Services Canada and the GNWT and the Technical Infrastructure Working Group was formally requested by the NIC to identify and recommend the public infrastructure and the incremental costs for the capital of Nunavut and the proposed organizational structure for the Nunavut Government. This analysis was to be completed for the three capital scenarios of Rankin Inlet, Iqaluit and Cambridge Bay, as recommended in "Footprints in New Snow". The Commission provided the terms of reference for this task (see Appendix A).

On May 4, 1995 the NIC received a letter from the Nunavut Secretariat ,Department of Indian Affairs and Northern Development (DIAND), on behalf of the federal government, GNWT, and Nunavut Tunngavik Incorporated(NTI), identifying areas in its March 31,1995 report where further advice and clarification was requested from the Commission. One of these areas involved infrastructure development. The letter indicated that the GNWT and Public Works and Government Services Canada were

prepared, jointly and individually, to lend their assistance to the NIC on the technical aspects of this work. The Public Works and Government Services officials participated in the initial joint meeting on April 25, 1995 and in some follow-up discussions. It was left, however, to the Government of the NWT to undertake all of the research required to identify the incremental infrastructure and the associated costs. This report, therefore, represents the analysis and work of the GNWT on behalf of the NIC.

The objective of this report is to identify the incremental infrastructure and the costs for construction, operations and maintenance of public infrastructure required as a result of the establishment of the Government of Nunavut under the March 31, 1995 model proposed by the NIC. Ultimately the program costs associated with this incremental infrastructure will have to be incorporated as well.

2. Incremental Growth: Concept and Definition

The establishment of the Nunavut Territory in 1999 will result in impacts on the infrastructure of a number of communities in Nunavut where territorial government functions are placed, and not just on the infrastructure of the community selected as the capital. Accordingly, the NIC maintains that there are direct incremental costs, consistent with the following definition:

Direct Incremental Costs

Capital and Operations and maintenance (O&M) costs which are primarily or exclusively attributable to decisions to construct or provide infrastructure to support directly the operation of functions of the new Nunavut Government (e.g. office buildings, courthouses, staff housing, land development for government facilities, additional school space, etc.).

Each capital program undertaken by the GNWT includes the principle of "future investment" (water supply systems are built with a minimum 10-year horizon, land is supplied on the basis of a 3-year inventory, classrooms are built with a 70% capacity at occupancy, etc.). All future investments are made on the basis of known population statistics and in keeping with approved program standards and criteria.

If division-related growth - - - growth related to establishing the Government of Nunavut - - - consumes some or all of the future investment in any community, the Government of Nunavut either have to invest more capital, to invest capital earlier than originally planned, or to do a combination of both. Investments that need to be made now would result in different outcomes if division related growth factors were known and applied to capital planning. Accordingly, the NIC maintains that division and establishment of the Government of Nunavut will also entail indirect incremental costs, as defined below:

Indirect Incremental Costs

The capital and O&M costs associated with incremental growth, beyond currently projected levels, or above currently projected rates, which has the effect of reducing the available capacity of existing public infrastructure (territorial or community) and dictating early replacement or produces immediate requirements for expansion of existing infrastructure.

3. Assumptions of March 31, 1995 Government of Nunavut Model

In general, NIC's March 31, 1995, model for the Government of Nunavut describes a decentralized form of territorial government with new (incremental) Government of Nunavut jobs allocated to 11 communities throughout the Nunavut Territory. The same incremental Government of Nunavut job increase of 600 full-time equivalent positions (FTE) is assumed for each of three scenarios:

- Scenario 1: Iqaluit as capital
- Scenario 2: Rankin Inlet as capital
- Scenario 3: Cambridge Bay as capital

New Positions

The incremental Nunavut FTEs in each community for each scenario provided by NIC are listed in Table 1 of Appendix B.

Demographics

The following NIC demographic assumptions have been used in this report to determine the population growth in each community:

- Household size = 4.20 for households currently within Nunavut;
- Household size = 2.70 for households from outside Nunavut;
- Job multiplier = 1.40
Multiplier applied to any new Government of Nunavut positions to determine the additional new jobs created in the community. (Note: This multiplier value is assumed to include new jobs in the private sector, and in the federal government sector);
- Spouse Factor = 1.1 (for every 100 new Government of Nunavut employees, 10 are assumed to be married to other territorial government employees; this factor of 1.1 also applies to multiplier jobs);
- For all new jobs, the employees are assumed to be hired as follows:

- 25% from within the community
- 25% from other communities within Nunavut
- 50% from outside Nunavut, including existing GNWT employees from Yellowknife; i.e., 75% of the employees (and their households) will be hired outside the community (Note: These factors are assumed to apply to all new Government of Nunavut positions as well as multiplier jobs);
- Community populations are based on the 1991 census values; and,
- Population growth rate = 2.40% (since the 1991 census)

Using these assumptions the population increase in a community due to each new Government of Nunavut FTE is as follows:

$$\begin{aligned} &\text{Household size (average)} \\ &= 4.2 \text{ (within Nunavut) } \times (25\% + 25\%) + 2.7 \text{ (outside Nunavut) } \times 50\% \\ &= 3.45 \end{aligned}$$

$$\begin{aligned} &\text{Population increase per new Government of Nunavut FTE.} \\ &= \frac{3.45 \text{ (household size) } \times 1.4 \text{ (multiplier) } \times 0.75 \text{ (net local hire)}}{1.1 \text{ (spouse factor)}} \\ &= 3.2932 \end{aligned}$$

Housing Mix

Staff housing be provided to all Government of Nunavut households according to the following housing mix assumptions:

- 5% single family housing;
- 50% multifamily - row housing; and,
- 45% multifamily - apartment (low rise).

The type of staff housing is preliminary. As the staff housing policy is refined the type of multifamily housing could be modified to facilitate a gradual transition from leased housing to home ownership to meet the accommodation needs of some staff.

Program Levels of Service

According to the Nunavut Political Accord, the scope and quality of programs and services of the Nunavut Government are to recognize the scope and quality of programs and services of the GNWT. For the purpose of identifying the infrastructure, the current capital standards and criteria of the GNWT are used for identifying and costing infrastructure needs.

Division Planning Cycle

The GNWT maintains a 5-year capital plan for all infrastructure programs. In addition, the GNWT makes long-term, 20-year projections of its infrastructure needs using the Capital Needs Assessment; therefore a 20-year cycle - - - from 1996/97 to 2015/16 - - - was assumed.

It is critical to understand that changes in the proposed model of the Government of Nunavut, if any are made, would affect the total number of Government of Nunavut jobs, and in turn, the distribution of Government of Nunavut jobs. The multiplier effects might change as well, in all or some of the 11 communities facing incremental population changes under the NIC model if the model is changed in any substantive aspect.

4. Incremental Population Growth

The incremental population growth projections, for all 11 communities affected by the recommended NIC model, have been calculated and are presented in Appendix B.

5. Infrastructure Programs

General Descriptions

Currently, the GNWT delivers a comprehensive range of infrastructure in support of programs throughout Nunavut. General descriptions of the following infrastructure are provided in Appendix C:

- Schools;
- Cultural Facilities;
- Health/Social Service Facilities;
- Justice (Courts, Corrections);
- Municipal Buildings;
- Recreational Play Space;
- Water Systems;
- Sewage Systems;
- Solid Waste Disposal;
- Vehicles;
- Land Development;
- Air Transportation;
- Marine Transportation; and,
- Bulk Fuel Storage.

How Capital Projects are Delivered

A GNWT capital construction project is typically carried out in stages, starting with the initiation of a project and ending with the warranty period following occupancy. The entire cycle will usually span a period of five years because of three major factors: the approvals required in the capital planning process; the schedules for sealift that prevent the start of the construction season until mid or late summer; and, the short construction season itself.

The following are the typical stages:

Initiation

The sponsoring department initiates the project by including it in the GNWT Capital Plan. Projects are based on GNWT standards and criteria. There may be additional analysis at this stage to determine the type of project; for example, whether to renovate an existing building or to replace it. The site for the project is selected at this stage, in consultation with the community government.

Planning

At this stage, the project is defined in enough detail to allow the design to proceed. The client, working with the project team, sets out what is required and the standards that apply. The site and land are secured with community government approval.

Design

Architectural or engineering consultants are hired to provide design and other professional services during construction. The consultants are selected through requests for proposals, which are sent to northern consultants.

The design is reviewed with the client and the project team on a regularly basis, and client approval of the completed design is required before construction can proceed. The consultant is expected to follow GNWT design standards and guidelines.

Tendering

When the design has been completed, the contract for construction is then publicly tendered. There are special approaches to construction that may be used in order to maximize local and northern business and employment opportunities. These special approaches are detailed in Appendix D.

Consultation with communities at an early stage is important in selecting a special approach to construction. The GNWT Business Incentive Policy applies to all construction contracts.

Construction

The approach taken determines how the project is managed. There may be a single contract with a general contractor or several small contracts directed by a construction manager. The contractor is usually paid in several payments (progress payments) as the construction proceeds. Site inspections are scheduled during the period of construction and the client may take part in these inspections.

Warranty

The warranty period starts at the completion of the project and usually lasts one year. During the warranty period, design and construction defects are corrected and the work and process used to carry out the project are evaluated.

Leasing

For the purposes of the infrastructure assessment, it has been assumed that all housing and general office space would be leased, as would the Legislative Assembly facilities.

Whether leased from the private sector or constructed as government-owned assets, the standards for design and construction are essentially the same. For staff housing, the standards developed by the NWT Housing Corporation have been used, as well as the mix of detached, multi-family and apartment housing called for in the model assumptions. For leased assets, the schedule and various steps in the planning, design and construction of facilities are the same as if they were owned by the Government of Nunavut, except that certain aspects of implementation varies.

The GNWT normally issues requests for proposals to acquire leased facilities. Requests for proposals include general specifications on the space required, location, standards of construction and maintenance expected, lease terms, northern involvement and a sample lease agreement.

Each proposal is evaluated against a number of weighted criteria, including design, northern and local content, cost and location. When a lease has been awarded, the proponent may hire consultants and contractors to design and construct the buildings. The Government may reserve the right to approve the design and to participate in the inspection process during construction. Over the term of the lease, the owner is responsible for operations and maintenance, including the payment of taxes and insurance. Where practical, utilities (heating fuel, electricity and water) are paid by the tenant, rather than the owner.

Infrastructure and Population Changes

In assessing the incremental costs of population growth projected under the NIC model for the Government of Nunavut, three types of project changes have been considered from the standpoint of costing:

Changes in project scope

These changes concern projects which are already included in the GNWT Capital Plan or the Capital Needs Assessment, but which need to be changed to suit the incremental requirements resulting from establishment of the Government of Nunavut. In most cases this means a facility would be increased in size and the incremental costs identified would comprise the difference between the revised cost and the original project cost.

Change in project timing

These changes concern projects which are already included in the GNWT Capital Plan or the Capital Needs Assessment, but which must be done earlier than originally planned due to the establishment of the Government of Nunavut. In the case of these projects, the incremental costs would be the cost of financing the projects from their new dates of construction to the original planned dates, as expressed in terms of net present value.

New project

These changes concern projects which are required only because of establishment of the Government of Nunavut and were not anticipated in the GNWT capital plan or the Capital Needs Assessment. The total costs of these projects are incremental costs. There are some projects which involve a combination of changes in project scope and changes in project timing. Incremental costs for these projects are calculated accordingly.

Certain types of infrastructure are specially sensitive to population increments. In communities of the size found in Nunavut, an increase of only 200 to 300 people might create a need for entirely new facilities, rather than expansion of existing facilities. Examples of this kind of facilities are schools, water supply systems (reservoirs), solid waste disposal sites, staff housing, and office buildings.

Other types of facilities may be expanded in stages to accommodate increments of several hundred people in the community, including health and social service facilities, cultural facilities, recreational play space, and air and marine transportation facilities.

Some other types of facilities are not considered sensitive to community population increments of several hundred people, including court houses, municipal office buildings and the Legislative Assembly building.

Incremental Major Infrastructure Projects

Appendix E illustrates infrastructure projects that will be needed in relation to the incremental population growth resulting from establishment of the Government of Nunavut consistent with the March 31, 1995 proposed model.

Appendix F shows all new projects (i.e., projects which would not have occurred in the 1996/97 - 2015/16 planning horizon without division of the NWT) for schools, cultural, justice, health and social services, and air and marine transportation facilities. New projects costing more than \$100,000 for municipal buildings, water/sewage and solid waste programs are taken into account. Appendix G shows all capital projects greater than \$2 million currently proposed for Nunavut regardless of division.

6. Financial Analysis: Total and Incremental Costs

How Capital Estimates Have Been Developed

The cost estimates for the incremental infrastructure needed to address the incremental growth have been developed on the basis of current GNWT Capital Standards and Criteria, using current and recent costs for comparable projects and community construction cost indices.

Costing Methods

As noted previously, infrastructure that is required for Nunavut will be required at different times over the 20-year period from 1996/97 to 2015/16. For the Government of Nunavut infrastructure required for each scenario, the total costs have been calculated in actual (1996) dollars, and have been discounted by means of a present value formula. Present value is an accepted method to properly bring the benefits of expenditures in future years - - - for example, on infrastructure projects - - - into today's values. An 8% discount rate (net of inflation) has been used in the present value calculation.

20 - Year Profile of Total and Incremental Infrastructure Costs

The following pages present graphs profiling the year-by-year flows of total funding for infrastructure and associated O&M from 1996/97 to 2015/16 for all Nunavut communities under each of the three capital scenarios. The top graph in each scenario shows overall capital and O&M funding identified for all 25 Nunavut communities regardless of territorial division.

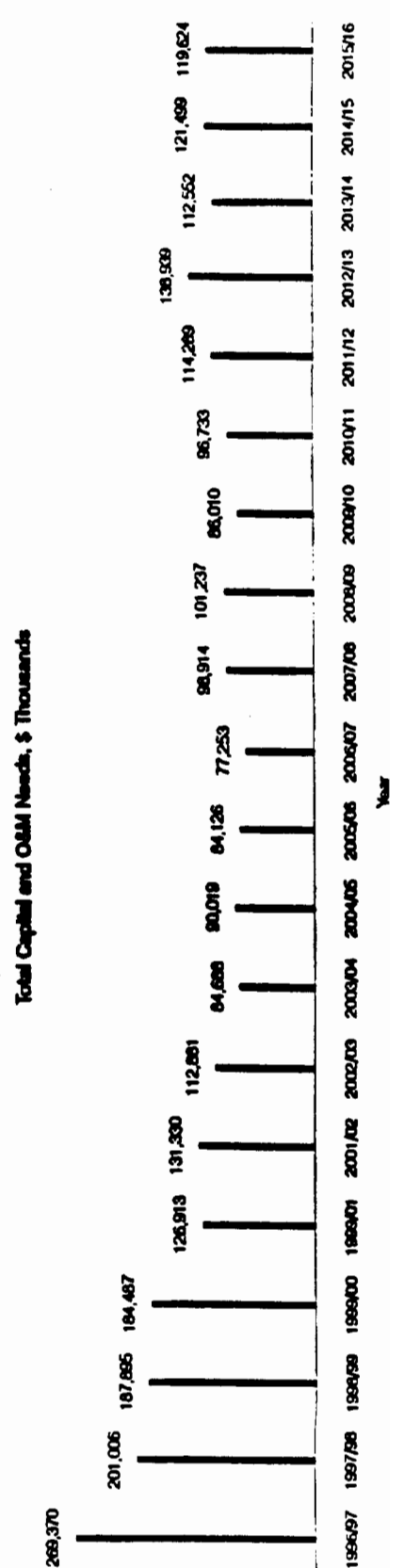
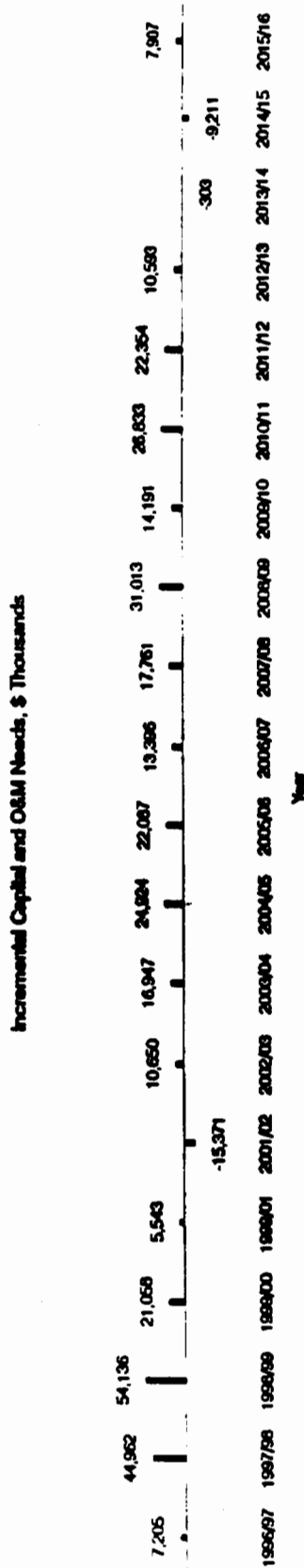
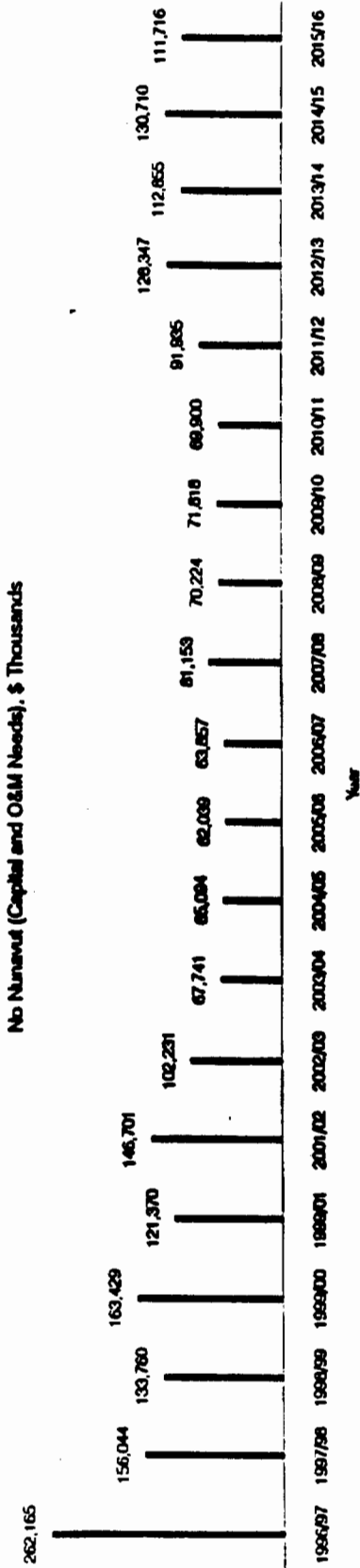
The middle graph in each scenario shows the incremental funding for the 11 communities involved in the NIC model for Government of Nunavut establishment.

Under all three scenarios, the greatest annual infusions of incremental funding would be required in 1997/98 and 1998/99.

The middle graphs also show "negative" incremental funding in certain years under each scenario. In Scenario 1 (Iqaluit as capital), there is negative incremental funding in 2001/02, 2013/14, and 2014/15. In Scenario 2 (Rankin Inlet as capital) and Scenario 3 (Cambridge Bay as capital), there is negative incremental funding in 2001/02. These do not represent "losses" to the Government of Nunavut, but show that funding for infrastructure required to meet incremental growth needs has been moved ahead to earlier years in order for the work to be carried out when required.

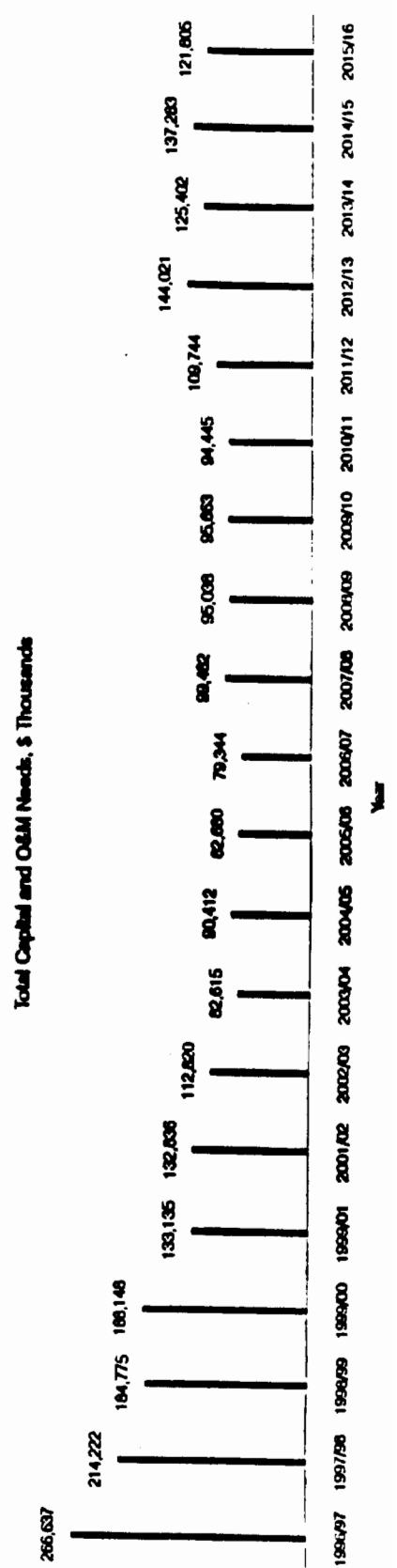
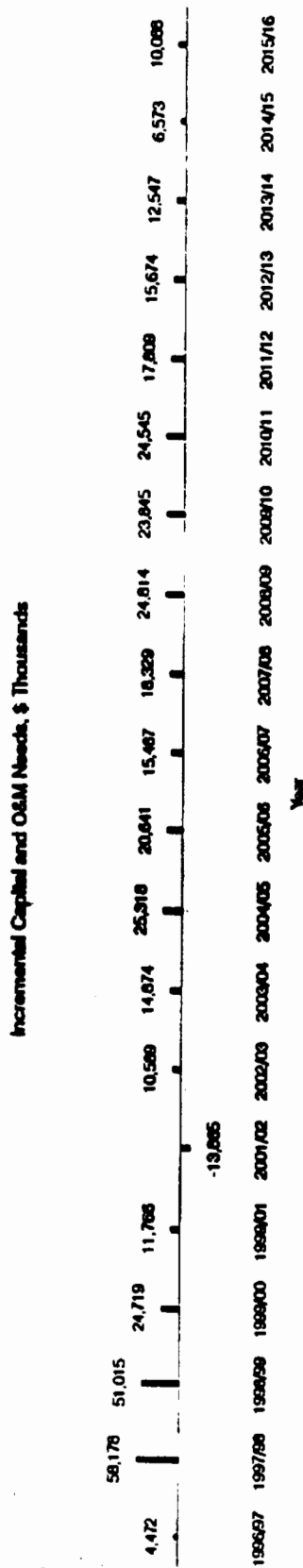
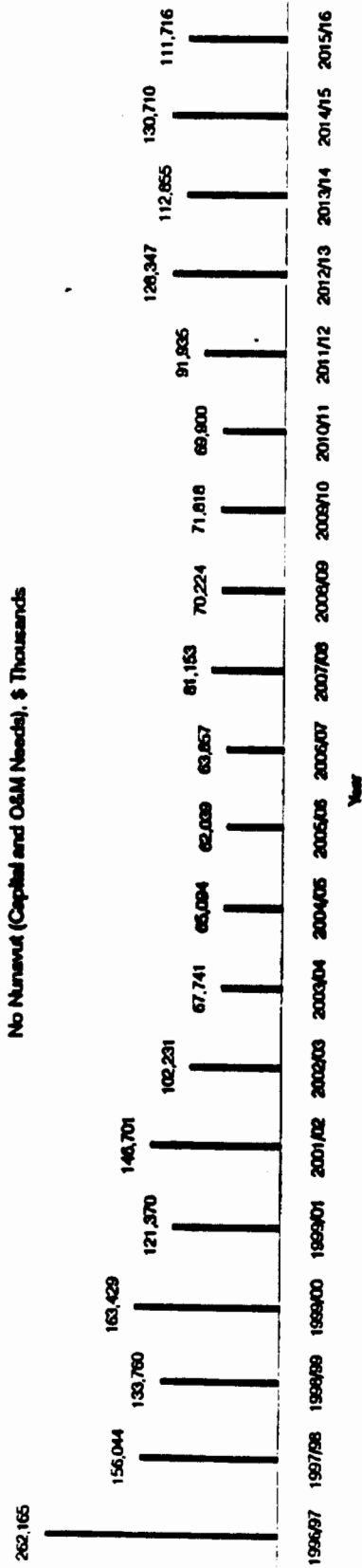
Nunavut Incremental Cost - All 25 Communities
 Scenario 1: Iqaluit as Capital

July 31, 1995



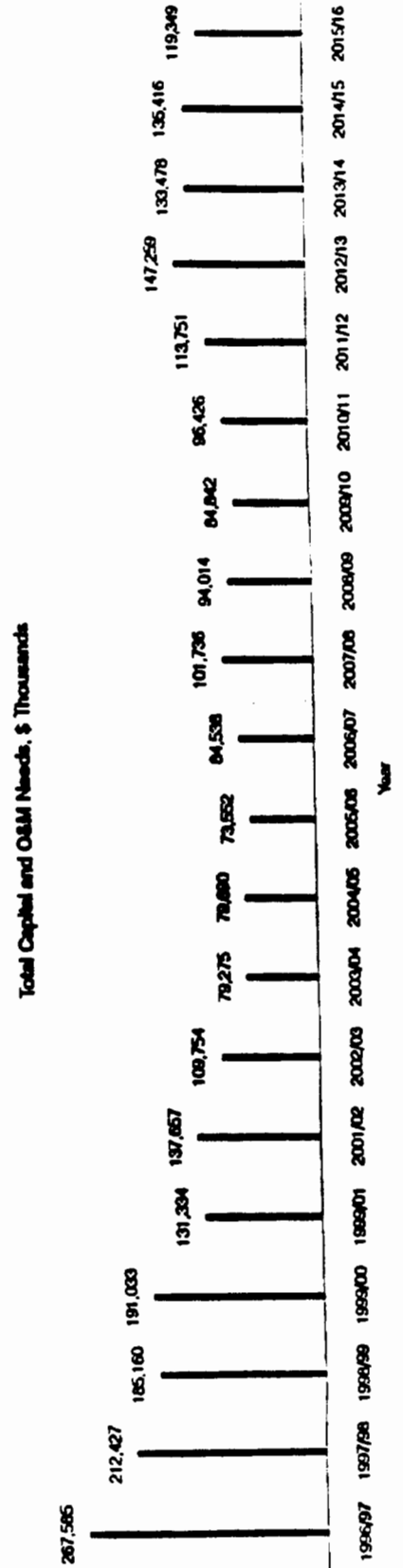
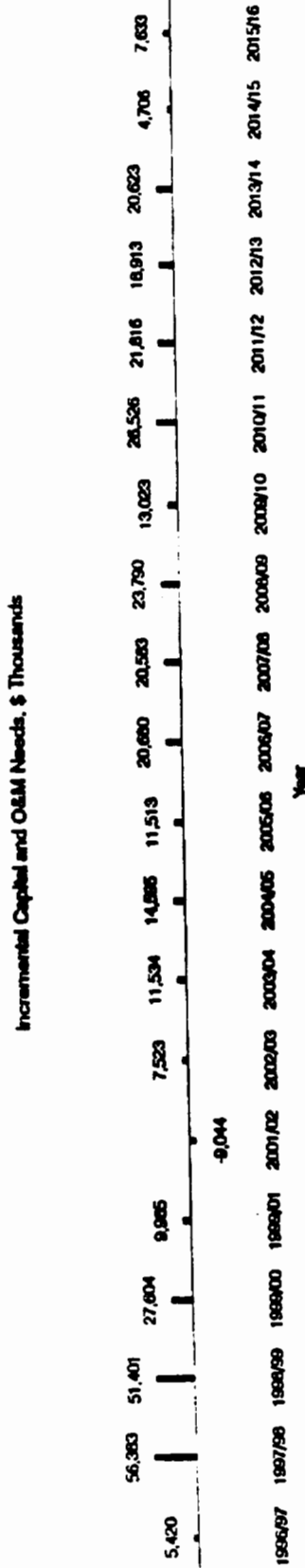
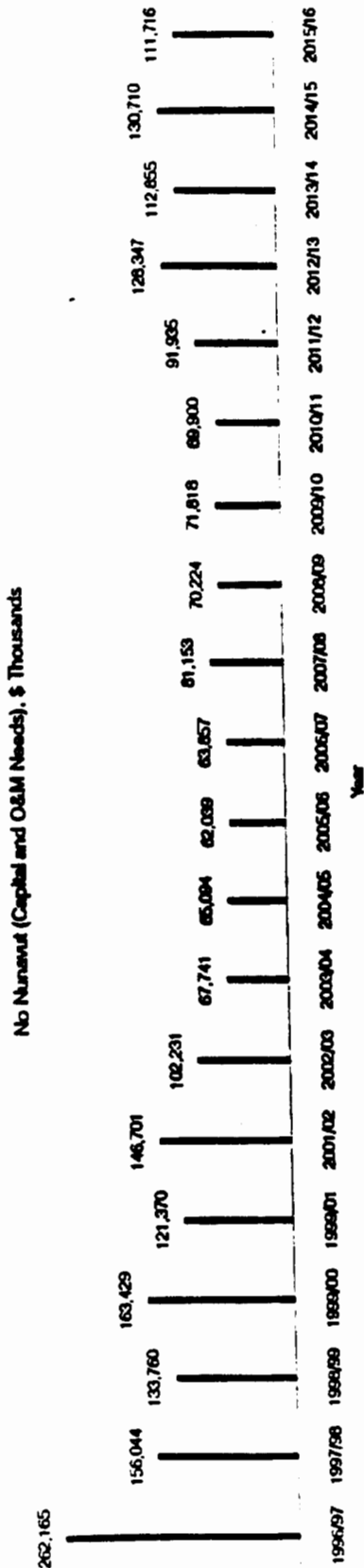
Nunavut Incremental Cost - All 25 Communities
 Scenario 2: Rankin Inlet as Capital

July 31, 1995



Nunavut Incremental Cost - All 25 Communities
 Scenario 3: Cambridge Bay as Capital

July 31, 1995



Total and Incremental Costs

The incremental costs, from 1996/97 to 2015/16, of the incremental growth projected from the NIC proposed model of the Government of Nunavut are as follows:

	Total	Present Value (1996)
Scenario 1 (Iqaluit)	\$326,700,000	\$188,400,000
Scenario 2 (Rankin Inlet)	\$377,400,000	\$207,000,000
Scenario 3 (Cambridge Bay)	\$365,200,000	\$199,500,000

The incremental costs for each of the infrastructure components are presented in Appendix H.

O&M Costs - Government of Nunavut Assets

O&M costs includes the costs of repairs, scheduled maintenance and utilities (heat, electricity, water delivery and sewage disposal) for Government of Nunavut-owned assets. O&M costs do not include items such as insurance, payments of grants in-lieu of property taxes, etc.

For the purposes of this report, O&M costs have been treated in the same manner as capital cost estimates. O&M costs have been determined only for the incremental component of each project and presented in 1996 dollars.

Maintenance and Repairs

The estimates are based on historical repair costs and include a component for scheduled maintenance as determined within the GNWT Maintenance Management System. The labour rates used in the analysis are called "fully burdened" rates and represent the equivalent cost of contracted labour. For vehicles, the maintenance costs also include the cost of fuels.

The maintenance estimates do not include the costs of custodial services for assets owed by the Government of Nunavut, such as schools. Custodial services are generally provided through program delivery. Program delivery costs are not included in this report.

Utilities

Estimates of utility costs are based on historic consumption levels and costs for similar existing facilities. Current utilities rates have been used; therefore, there is no allowance in the costs for utility rate increases.

Utility costs for staff housing and office space have been included in the lease costs for these facilities, except where the tenants in staff housing pay for utilities directly under the "user pay" program.

O&M Costs for Municipal Buildings

Estimated O&M costs for municipal buildings have been based on standard factors incorporated in the GNWT Municipal Operating Assistance Policy.

O&M Costs for Solid Waste Disposal

Estimated O&M costs have been based on standard factors in the GNWT Municipal Operating Assistance Policy.

O&M Costs for Land Development

Estimated O&M costs for the roads, drainage and street lighting constructed as part of land development projects have been based on standard factors in the GNWT Municipal Operating Assistance Policy.

O&M Costs not included in this Report

This report has focussed on the incremental O&M costs associated directly with the physical upkeep of infrastructure. Operating costs associated with the delivery of programs supported by the infrastructure have not been included in this report. For example, O&M costs for regular repairs, scheduled maintenance, and utilities to schools have been included, but O&M costs such as teachers' salaries, school supplies, and student transportation services, have not. Some typical program O&M cost items not included, are:

- staff salaries and benefits;
- consumable program needs, such as school text books, video, and audio systems;
- contracted services for programs (for example, consultants);
- general office supplies; and
- workstations (including computers).

The GNWT has committed itself to research and identify the program O&M costs related to the incremental infrastructure resulting from establishment of the Government of Nunavut.

Infrastructure Utility Costs

The infrastructure assessment includes three basic types of utility services infrastructure: water/sewage services, petroleum products, and electrical power.

The growth in population forecast for each community impacts directly on the capacity of these utility services and the capital investment in new infrastructure. For each utility, the rate structure, subsidy programs and source of funds are factors in determining the "incremental" costs resulting from the establishment of the Government of Nunavut.

In general, it has been assumed that any infrastructure costs that could be included in the rate base, without increasing the rates, are not incremental costs. Only those costs that would result in a rate increase have been considered incremental. For the purposes of calculating the utility cost for all new infrastructure, the current rates have been used.

Water/Sewage Services

Infrastructure may include water reservoirs, treatment plants, truck fill stations, lagoons, tank truck and buried water/sewer pipe distribution/collection systems. The fixed infrastructure is funded by the GNWT and the costs are not recovered in the rates charged to the users. The capital and O&M costs for the water and sewer tank trucks used in those communities without piped services - -the majority---, are funded in the rate base. It is assumed that the growth in demand for these services will cover the cost of any additional trucks needed and therefore these costs are not considered incremental. The full capital costs of all other infrastructure, however, is considered incremental, and is not included in the rate base.

Under the GNWT Water and Sewage Services Subsidy Program, private and commercial users are subsidized by the GNWT. The increase in volumes would result in a corresponding increase in the cost of this subsidy program. These costs have not been calculated and are not included in this report.

Petroleum Products

The GNWT is responsible for the supply and distribution of heating and diesel fuels, automotive gasoline and aviation fuels in most Nunavut communities. The GNWT owns the bulk fuel facilities in all except one community, and contracts for local delivery. The GNWT or the contractor may own the fuel delivery trucks, depending on the community. The selling price for the fuel does not recover GNWT investment and inventory financing. The price does include the operation and maintenance of the facilities, purchase of privately owned trucks and the maintenance of both GNWT and privately owned trucks.

For the purposes of incremental costs, it has been assumed that all growth in O&M costs would be recovered in prices charged and that all capital costs, including new trucks, would be incremental. The one exception to this approach would be at Cambridge Bay, where the fuel facilities are privately owned and the price of fuel includes a "capital recovery" component. The inventory financing costs allow the bulk purchasing of fuel during the annual resupply, which is drawn down over 12 months. The inventory financing costs include the costs of accounts receivable and are estimated at an average of \$1.4 million (present value) for each scenario. These costs are not included in the assessment of incremental infrastructure costs.

Electrical Power

All costs of electrical power generation and distribution, and the approved rate of return, are recovered in the rate base. The NWT Power Corporation (NWTPC) has projected possible impacts on the rates at each community, but the study is preliminary. The NWTPC currently has an application for a new rate structure before the NWT Public Utilities Board and, until a decision is made on this application, cannot forecast with certainty the implication of Nunavut on customer rates. In the long term, an increase in loads resulting from Nunavut could improve plant efficiency and tend to lower the cost of service.

There is a subsidy program in place that subsidizes the cost of power for all private homeowners and renters and certain businesses in Nunavut. This program is funded by the GNWT as owner of the NTPC. The growth in Nunavut would increase the cost of the subsidy program. These costs have not been calculated and would be dependent on the changes in electrical rates.

7. Comparison of GNWT Incremental Cost Analysis with Government of Canada Analysis

As part of the Price Waterhouse Management Consultants costing study, the Public Works and Government Services (PWGSC) undertook an analysis of the incremental growth and costs resulting from the NIC model for the Nunavut Government, and provided its estimates to NIC on March 10, 1995. The GNWT approach to estimating incremental growth and costs has differed from that of STET in several important aspects, including the following:

- the GNWT study has used a 20 year planning horizon; the PWGSC study used a five year horizon;
- the GNWT study is based on 1996 dollars; the PWGSC study is based on 1994 dollars;

- the GNWT study has presented incremental costs in present value;
- the GNWT study has based its cost estimates on project-specific costs of infrastructure in Nunavut communities; the PWGSC study relied on a unit cost approach, using broad planning assumptions;
- the GNWT study considered a lease approach for estimating the costs for the Nunavut Legislative Assembly building and for Government of Nunavut staff housing and offices; the PWGSC study considered capital costs;
- the GNWT study included infrastructure-related O&M cost estimates; the PWGSC study did not; and
- the PWGSC study did not include cost estimates for some infrastructure programs addressed in the GNWT study, including cultural facilities, social services facilities, courts and correctional facilities, and air and marine transportation facilities.

Some of the differences between this study and the study completed prior to March 31, 1995, by PWGSC are related to the severely compressed time frame for the first study. There was not sufficient time available for this work to be accomplished jointly by the GNWT and PWGSC under the Joint Infrastructure Technical Working Group. Also, there was not time to get into the same level of detail as the recent GNWT review.

8. Conclusions

This study has identified the incremental infrastructure necessary for the three capital scenarios and the proposed organizational structure for the Nunavut Government. Also, this report presents estimates of the incremental costs, from 1996/97 to 2015/16, of the infrastructure needed in Nunavut to establish the Government of Nunavut in accordance with the organizational model proposed by the NIC in its report of on March 31, 1995, "Footprints in New Snow". The report has identified the incremental costs in both total dollars (1996 dollars shown in the year of construction), and in dollars discounted by present value calculations to 1996, for each of the three capital scenarios advanced by the NIC.

It is important to note that the GNWT considers these estimates to be Class D estimates, net of inflation, developed using current design and construction costs, and factoring in GNWT northern community construction cost indices. Class D is a preliminary estimate, due to limited or no project site information, indicating the approximate magnitude of the cost of a proposed project based on the client's broad requirements (Class D estimates were, also, provided in the initial study by PWGSC).

The incremental costs of O&M directly required for the maintenance of the infrastructure

have been included in these cost calculations; however, program O&M costs associated with the delivery of programs supported by the infrastructure have not been included. These latter costs, in the view of the NIC, represent an additional burden which must be considered within the context of the Nunavut Political Accord. The GNWT is committed to further work to identify the appropriate program O&M costs associated with incremental Nunavut infrastructure.

9. Recommendations

To meet the incremental infrastructure required for establishment of the capital of Nunavut and recommended organizational structure for the Nunavut Government, the NIC recommends the following:

The incremental infrastructure identified in this study and summarized in the attached appendices be provided as proposed over the 20 year planning horizon from 1996/97 to 2015/16; and

The capital and operations and maintenance funding identified in the study for the incremental infrastructure be provided by the Government of Canada consistent with the government's commitments and obligations under the Nunavut Agreement and the Nunavut Political Accord.

10. The Next Steps

The NIC considers the estimates in this report to provide a sound guide to the overall forecasting and costing of infrastructure requirements in the period leading up to division, and - - - for the Government of Nunavut - - - in the period after division up to 2015/16. Several outstanding issues need to be resolved by the stakeholders before detailed infrastructure project planning may be undertaken, including the following:

- approval of the capital site for Nunavut by the Federal Government;
- concurrence on the size of the Government of Nunavut public service and the distribution of Government of Nunavut jobs among Nunavut communities;
- concurrence with population assumptions (including average family size, number of Government employees per family, secondary employment growth rates, the degree of local and Nunavut-hired Government staff);

- concurrence with the appropriateness of a 20 year planning cycle, from 1996/97 to 2015/16;
- concurrence with the reasonableness of incremental cost definitions; and,
- concurrence with the recommended implementation schedule for establishment of the Government of Nunavut after 1999.

APPENDIX A

**REQUEST FROM NUNAVUT
IMPLEMENTATION COMMISSION**

(April 24, 1995)

July 31, 1995

Technical Requirements of the Nunavut Implementation

Commission regarding Nunavut Infrastructure

BACKGROUND

As part of the mandate of the Nunavut Implementation Commission, the Commission is required to identify and recommend the infrastructure needs for the Capital and organizational structure of the Nunavut Government, and to recommend the construction schedule. Before this task could be undertaken the Commission needed to undertake two other important tasks;

1. - Recommend the organizational design of the Government.
2. - Recommend the Capital options for the Government.

At the Feb. 24 th meeting of the Commission in Iqaluit, approval was given to the design model for the Government. Based on this model the Commission was able to identify the specific new Nunavut Government positions that would be established and located in both the Capital and the Regional and Auxiliary Regional Centers proposed in the organizational structure.

It was, also, agreed that the infrastructure needs of the Nunavut Government would be identified for the organizational model applied to three remaining potential Capital locations; Iqaluit, Rankin Inlet, and Cambridge Bay.

SPECIFIC INFRASTRUCTURE REQUIREMENTS.

The following is a summary of the specific infrastructure information requirements of the Commission.

1. - To identify the new infrastructure required for the establishment of the Nunavut Government.
2. - To identify the Capital cost of the new infrastructure and the annual funding to operate and maintain the infrastructure.

3. - To identify the existing infrastructure that needs to be replaced or expanded earlier than necessary to meet the impact of the establishment of the Nunavut Government.
4. - To identify the incremental cost associated with the early expansion or replacement of existing infrastructure and the annual operation and maintenance costs associated with expansion.
5. - To identify the annual cost to lease, operate and maintain the new staff housing and office space required to establish the Nunavut Government.

The scope and quality of programs and services of the Nunavut Government are to be the same as the scope and quality of programs and services of the Government of the NWT. Therefore, for the purpose of identifying the infrastructure needs, the current capital standards and criteria of the GNWT are to be used for identifying and costing the infrastructure needs.

TIME TABLE

To facilitate a submission to the Federal Cabinet in the Fall of 1995 the Commission made the commitment to produce a comprehensive report by the end of March 1995. One of the chapters in this report was to address the infrastructure needs of the new Nunavut Government and the associated Capital and operation and maintenance costs.

RESPONSIBILITIES

The Commission neither had the time nor the necessary technical expertise to properly identify and cost the infrastructure. As part of the planning process for Nunavut, a Joint Technical Infrastructure Working Group co-chaired by Public Works and Government Services Canada and the Department of Public Works and Government Services in the GNWT was established.

The Commission believed that this Working Group would be the appropriate organization to identify and recommend the infrastructure and the associated costs. Price Waterhouse, the company retained by the Commission to undertake a financial study of the Nunavut Government contacted representatives on the Working Group to obtain this analysis and input.

August 21, 1995

As a result of the extremely tight timetable provided by the Commission for this exercise it was not possible to complete all of the requirements and both the chapter in the report and the appendices reflect the current state of this work and the requirements to complete the exercise. The Commission believes that the work will be completed over the next two months .

It is the desire and expectation for this work to be completed and refined jointly by the Federal and Territorial members of the Infrastructure Working Group.

APPENDIX B

TABLE 1 - NEW POSITIONS WITH GOVERNMENT OF NUNAVUT

TABLE 2 - INCREMENTAL POPULATION GROWTH PROJECTIONS

July 31, 1995

TABLE 1: NEW POSITIONS WITH GOVERNMENT OF NUNAVUT

REGION/ Community	Capital Location Scenario		
	Iqaluit	Rankin Inlet	Cambridge Bay
BAFFIN			
Iqaluit	99	2.5	2.5
Pangnirtung	80	41	41
Pond Inlet	77	53	37
Cape Dorset	67	0	8
Igloolik	93.5	61.5	66.5
Sub-total Baffin	416.5	158	155
KEEWATIN			
Rankin Inlet	33.5	216	-3
Arviat	55	76	27
Baker Lake	28	99	17
Sub-total Keewatin	116.5	391	41
KITIKMEOT			
Cambridge Bay	29	15	255
Coppermine	33	36	97
Gjoa Haven	5	0	52
Sub-total Kitikmeot	67	51	404
TOTAL	600	600	600

TABLE 2: POPULATION PROJECTIONS FOR ESTABLISHMENT OF GN

SCENARIO 1 - IQALUIT as Capital

REGION/ Community	New Positions	Population							
		Base 1991	Without 1999	Additional 1999	With 1999	Without 2009	With 2009	Without 2019	With 2019
BAFFIN									
Iqaluit	99	3552	4,311	328	4,637	5,491	5,907	6,995	7,524
Pangnirtung	80	1135	1,387	263	1,651	1,783	2,121	2,291	2,728
Pond Inlet	77	974	1,180	254	1,434	1,501	1,823	1,908	2,318
Cape Dorset	67	961	1,142	221	1,363	1,417	1,691	1,758	2,097
Igloolik	93.5	936	1,142	308	1,450	1,465	1,860	1,879	2,385
KEEWATIN									
Rankin Inlet	33.5	1706	2,113	110	2,223	2,761	2,905	3,607	3,795
Arviat	55	1323	1,618	181	1,799	2,082	2,315	2,678	2,977
Baker Lake	28	1186	1,418	92	1,510	1,773	1,889	2,217	2,362
KITIKMEOT									
Cambridge Bay	29	1116	1,360	96	1,455	1,741	1,863	2,228	2,385
Coppermine	33	1059	1,286	109	1,395	1,640	1,779	2,091	2,268
Gjoa Haven	5	783	976	16	992	1,285	1,307	1,692	1,720
Total	600			1,976					

SCENARIO 2 - RANKIN INLET as Capital

REGION/ Community	New Positions	Population							
		Base 1991	Without 1999	Additional 1999	With 1999	Without 2009	With 2009	Without 2019	With 2019
BAFFIN									
Iqaluit	2.5	3552	4,311	8	4,319	5,491	5,502	6,995	7,009
Pangnirtung	41	1135	1,387	135	1,522	1,783	1,956	2,291	2,514
Pond Inlet	53	974	1,180	175	1,355	1,501	1,722	1,908	2,190
Cape Dorset	0	961	1,142	0	1,142	1,417	1,417	1,758	1,758
Igloolik	61.5	936	1,142	203	1,345	1,465	1,725	1,879	2,212
KEEWATIN									
Rankin Inlet	216	1706	2,113	711	2,824	2,761	3,690	3,607	4,821
Arviat	76	1323	1,618	250	1,869	2,082	2,404	2,678	3,092
Baker Lake	99	1186	1,418	326	1,744	1,773	2,181	2,217	2,727
KITIKMEOT									
Cambridge Bay	15	1116	1,360	49	1,409	1,741	1,804	2,228	2,309
Coppermine	36	1059	1,286	119	1,405	1,640	1,791	2,091	2,284
Gjoa Haven	0	783	976	0	976	1,285	1,285	1,692	1,692
Total	600			1,976					

SCENARIO 3 - CAMBRIDGE BAY as Capital

REGION/ Community	New Positions	Population							
		Base 1991	Without 1999	Additional 1999	With 1999	Without 2009	With 2009	Without 2019	With 2019
BAFFIN									
Iqaluit	2.5	3552	4,311	8	4,319	5,491	5,502	6,995	7,009
Pangnirtung	41	1135	1,387	135	1,522	1,783	1,956	2,291	2,514
Pond Inlet	37	974	1,180	122	1,302	1,501	1,655	1,908	2,105
Cape Dorset	8	961	1,142	26	1,168	1,417	1,449	1,758	1,798
Igloolik	66.5	936	1,142	219	1,361	1,465	1,746	1,879	2,239
KEEWATIN									
Rankin Inlet	-3	1706	2,113	-10	2,103	2,761	2,748	3,607	3,590
Arviat	27	1323	1,618	89	1,707	2,082	2,196	2,678	2,825
Baker Lake	17	1186	1,418	56	1,474	1,773	1,843	2,217	2,305
KITIKMEOT									
Cambridge Bay	255	1116	1,360	840	2,199	1,741	2,816	2,228	3,604
Coppermine	97	1059	1,286	319	1,606	1,640	2,047	2,091	2,611
Gjoa Haven	52	783	976	171	1,147	1,285	1,510	1,692	1,989
Total	600			1,976					

POPULATION PROJECTIONS

	Population 1991 Census	Growth Rate (% per yr)
BAFFIN		
Iqaluit	3552	2.45
Pangnirtung	1135	2.54
Pond Inlet	974	2.43
Cape Dorset	961	2.18
Igloodik	936	2.52
KEEWATIN		
Rankin Inlet	1706	2.71
Arviat	1323	2.55
Baker Lake	1186	2.26
KITIKMEOT		
Cambridge Bay	1116	2.50
Coppermine	1059	2.46
Gjoa Haven	783	2.79

Employer	Multiplier Factor	Household Size	Spouse Factor	Staff Hired From:	
				Within Comm.	Other Nun.
GN	1.00	3.45	1.10	25.0%	50.0%
Private	0.30	3.45	1.10	25.0%	50.0%
Federal	0.10	3.45	1.10	25.0%	50.0%
Municipal	0.00	3.45	1.10	25.0%	50.0%
Other	0.00	3.45	1.10	25.0%	50.0%
Total / Average	1.40	3.45	1.10	25.0%	50.0%

Household Size

From Within Nunavut	4.2000
From Outside Nunavut	2.7000
Average	3.4500 (Household Size Within x % Within)+(Household Size Outside x % Outside)

Overall Population Increase = GN Jobs x 3.293182 (Household Size x Multiplier Factor x Outside Hire / Spouse Factor)

APPENDIX C

GNWT INFRASTRUCTURE

IN SUPPORT OF

PROGRAMS IN NUNAVUT

July 31, 1995

CONTENTS

Schools

College Program

Cultural Facilities

- Library Services
- Museums & Heritage
- Language Bureau
- Television & Radio Services

Justice

- Court Services
- Corrections Services

Municipal Buildings

- Parking Garages
- Maintenance Garages
- Community Offices
- Fire Halls
- Fire Protection

Recreational Facilities

- Additional Facilities
- Above Ground Pools and Pool Enclosure
- Curling Rinks
- Gyms
- Halls
- Arenas
- Open Play Space

Health & Social Services Facilities

- Health Centres and Stations
- Hospitals
- Facilities for Elderly & Handicapped Persons
- Facilities - Residential Care, Alcohol and Drug
- Family Violence Shelters
- Residential Care - Children

Water Supply and Treatment

Water Distribution and Sewage Collection

Sewage Treatment and Disposal

Solid Waste Management

Vehicles - Road Maintenance Equipment

Land Development

CONTENTS

Air Transportation Facilities

- Airport Buildings
- Airport Earthworks & Electrical
- Airport Miscellaneous
- Airport Vehicles & Equipment

Marine Transportation Facilities - Community Wharves

Petroleum Products

SCHOOLS

Program Description

Program Objectives

Deliver kindergarten to grade 12 (K-12) school programs to all Northwest Territories children of school age. A focus on distance education and transfer of senior secondary grades to the communities, has provided the Department an opportunity to provide a uniform level of educational service to all students no matter where their residency is.

Capital Facilities

Schools: primary (K-3); elementary (4-6); junior high (7-9); senior high (10-12) or combination thereof.

Equipment, furnishings and playground equipment.

School residences fall under the Schools Program. With the advent of grade extensions to the communities, the Department is gradually removing itself away from large student residences or the creation of new student residences. Only in cases where clear justification can be established will new school residences be built.

Criteria

As governed by the Education Act, schools are provided in recognized communities in the NWT having at least 10 students.

Location, stability of community, projected school population and cost of alternatives are all taken into account in determining the nature and scale of facilities to be provided.

Capacities of schools are calculated on a weighting of 22 pupils per classroom (including kindergarten at a full time equivalence), and an adjusted weighting of 11 or 22 pupils for specialty teach space.

COLLEGE PROGRAM

Program Description

Program Objectives

Provide continuing education programs to adults, in particular, literacy upgrading, personal development, and skill training leading to employment. Offer vocational and post secondary courses tailored to the specific needs of the north. Delivery courses in response to community and business demands.

Capital Facilities

Education buildings, furnishings and equipment, student residences. Includes Community Learning Centres (CLC's) and regional campus facilities.

Criteria

Courses are offered in communities where requested and where the Government of the Northwest Territories determines that there is sufficient demand for programs, or in centralized regional campuses where established infrastructure can best respond to educational needs.

This program may use dedicated space or it may be in joint-use facilities with other programs. Refer to the Department's Capital Standards and Criteria.

The division of Arctic College into two distinct entities in 1995 has created needs for both an eastern and western college.

Standards

Refer to the Department of Education, Culture and Employment Capital Standards and Criteria. Facility standards will be project specific; developed to serve the defined

LIBRARY SERVICES

Program Description

Program Objectives

To meet the informational, educational and recreational needs of Northwest Territories' residents by means of library computerized online and CD-ROM databases, information networks, books, periodicals, reference materials, audio and video cassettes.

Capital Facilities

Computer workstations, terminals, communication lines, modems, communication application and operation software, online and CD-ROM databases; renovation and expansion (including start-up collections); shelving, photocopying equipment, televisions, VCRs, tape recorders, other specialized library equipment and furnishings.

Criteria

The Department of Education, Culture and Employment recognizes six categories of libraries and/or library construction/expansion projects:

- (a) territorial facility, of which there is one, owned and operated by GNWT,
- (b) regional facility,
- (c) combined community library facility,
- (d) stand alone community facility,
- (e) leasehold facility,
- (f) expansion/replacement of existing facilities.

The department has developed detailed operating criteria for each category of library facility. Demonstration of need, confirmation of community support, the quality and adequacy of the proposed facility, and projections of capital cost, operating cost and operating revenues are among the factors which the department considers in reviewing applications for capital funds.

The department has developed detailed criteria for library furniture and equipment grants. Factors considered are generally parallel to the ones mentioned above.

July 31/95

MUSEUMS & HERITAGE

Program Description

Program Objectives

Interpret and preserve the cultural heritage of the Northwest Territories. Provide professional, technical and financial support to other agencies which share these objectives to assist them in developing infrastructure and programs.

Authority

The Historical Resources Act authorizes the GNWT to establish museums and provide for the administration, preservation and maintenance of historic places and museums.

The Heritage Services Policy provides for a museum operation at the Prince of Wales Northern Heritage Centre, for the protection of significant heritage buildings, and for support for community heritage initiatives.

Cabinet has directed that capital support be provided to land claim authorities to help establish facilities for Aboriginal cultural institutes.

Capital Items

The Prince of Wales Northern Heritage Centre is the only museum owned and operated by the Government of the Northwest Territories. Capital funds are required for maintaining, upgrading and expanding the facility to meet continuing and new needs. Specialized equipment is required to meet the needs of the professional programs housed at the Prince of Wales Northern Heritage Centre. Capital development funds are used to commission studies related to the planning of community museums and heritage facilities.

New and existing community heritage facilities are supported through the provision of capital funds for planning, construction, maintenance and enhancement of those facilities, and for the purchase of specialized equipment.

LANGUAGE BUREAU

Program Description

Program Objectives

Meet the needs of the Legislative Assembly, of GNWT departments, and of the people of the NWT for language interpreting, translating and communication services. Provide facilities for interpreter training.

Capital Facilities

Interpreting and translating equipment. Three general classes of facilities are provided: permanent, portable and transportable.

Criteria

Permanent Simultaneous Interpretation System (SIS) facilities are established in locations where there are permanent training facilities.

At least one portable SIS booth is provided for each region of the Northwest Territories. Additional portable booths are purchased based on the number of interpreters on staff and the level of usage of existing booths.

At least one transportable SIS unit is provided for each language in each Region of the NWT. Additional transportation units are purchased where demand for usage exceeds 60% of time.

Standards

Permanent Simultaneous Interpretation Systems (Physical Facilities) Guide (Canadian General Standards Board).

Portable Simultaneous Interpretation Systems (Physical Facilities) Guide (Canadian General Standards Board).

Electroacoustic Performance of Simultaneous Interpretation Systems Guide (Canadian General Standards Board).

A standard of 6 interpreters per booth and where the demand for usage exceeds 50% of the time.

July 31/95

TELEVISION & RADIO SERVICES

Program Description

Program Objectives

Bring public broadcast services, both radio and television, to Northwest Territories communities not served by the Canadian Broadcasting Corporation (CBC) and satisfy Government of the Northwest Territories needs for video and public television programming, and creation of multimedia distance learning resources.

Capital Facilities

Reception and rebroadcast systems for radio and television.

Distance learning and production facilities.

Criteria

CBC provides public broadcast services in communities larger than 500. This program serves communities not served by CBC, provided that the commercial power supply is adequate to run the equipment.

In the case of video production facilities, broadcast quality production equipment conforming with Canadian broadcast standards when warranted by potential savings over cost of rental to meet the needs of government departments and agencies. Studios are provided when warranted by potential savings over cost of rental of studio. Further investment in these areas will be considered only after a cost-benefit analysis.

In the case of distance learning (multimedia) production facilities, production equipment and authoring tools sufficient to meet the requirements of government departments and agencies, including colleges and divisional boards of education.

Standards

Department of Education, Culture and Employment specifications cover a standard package of essential equipment which meets Federal standards for satellite receive and rebroadcast equipment.

TELEVISION & RADIO SERVICES

Video equipment must meet standards set out in the "Engineering Standards and Practices Guide" of the Canadian Broadcasting Corporation.

Computer equipment and software must meet standards set by the Department of Education, Culture and Employment to ensure compatibility, reliability, and reasonable time to obsolescence.

COURT SERVICES

Program Description

Program Objectives

Provide facilities needed for operation of the NWT court system.

Capital Facilities

Courthouses.

Criteria

Courthouses are placed where needed, according to level of activity; generally, at the administrative centres of more populated regions and districts.

Standards

Department of Justice has developed detailed standards for the planning and design of court facilities.

CORRECTIONS SERVICES

Program Description

Objectives

Provide for the safe custody, detention and rehabilitation of youth and adult sentenced offenders, and youths and adults remanded in custody.

Capital Facilities

Minimum, medium and maximum security correctional facilities (correctional centre, remand centre, youth treatment centre).

Criteria

The Department has developed Standards and Criteria for Adult Correctional Centres, Young Offender Centres and Community Correctional Centres.

Standards

The department contracts consultants in correctional planning to translate program requirements into spatial needs. Standards are based on the documents listed below.

- GNWT Institutional Operations Manual
- Canadian Criminal Justice Association "Manual of Standards"
- Federal Exchange of Service Agreement
- Community Corrections contract for Community Residential Centres
- Provincial Standards Manuals
- Corrections Act and Regulations
- Corrections and Conditional Release Act (Canada)
- Prisons and Reformatories Act (Canada)
- Transfer of Offenders Act (Canada)
- Fine Options Act and Regulations
- Young Offenders Act (Canada and NWT)
- Executive Council Directives
- GNWT Standards and Criteria for Territorial Corrections Facilities

July 31/95

PARKING GARAGES

Program Description

Program Objectives

To provide communities with buildings for proper storage and maintenance of municipal mobile equipment.

Capital Facilities

Parking garages

Criteria

Parking Garages:

Parking garages available only to non tax-based communities as basic municipal infrastructure.

Parking spaces are provided for each piece of road maintenance equipment, and for water and sewage vehicles. Older vehicles which have been replaced and written-off, but kept in service, are not eligible.

The size and number of parking bays required in each community is determined by the number of vehicles to be sheltered, which in turn, is determined by population.

Generally, parking bays are "double deep", large enough to store any two vehicles other than a grader. A grader takes an entire bay. The term "parking bay" as used in this report refers to a double deep bay, unless noted otherwise.

Space for pick-up and garbage trucks will not be funded.

Existing garages may house 1 or 2 vehicles per bay (i.e. they may be single or double deep). Where detailed information about existing garage sizes is absent, it is assumed that the bay space now available is sufficient to shelter all of the road maintenance, water and sanitation vehicles now used in the community. In such cases, it is considered that additional space will be needed to shelter any vehicles currently warranted, but not yet provided.

Standards

Parking Garage: Standard 1 - 4.0 x 9.0 m = 45.0 sq.m;
Standard 2 - 10.0 x 16.0 m = 160.0sq.m

July 31/95

MAINTENANCE GARAGES

Program Description

Program Objectives

To provide communities with buildings for proper maintenance of municipal mobile equipment.

Capital Facilities

Maintenance garages:

All communities may be eligible for funding. A maintenance garage is basic municipal infrastructure.

Generally, communities with a population of greater than 125 and less than 2,500 are eligible for a Standard 1, whereas communities with a population greater than 2,500 are eligible for a Standard 2.

Standards

Maintenance Garage:	Standard 1	1st Floor	10.0 x 16.0 m	= 160 sq.m
		Mezzanine	4.0 x 10.0 m	= <u>40</u> sq.m
				200 sq.m
	Standard 2	1st Floor	15.0 x 16.0 m	= 240 sq.m
Mezzanine		15.0 x 4.0 m	= <u>60</u> sq.m	
			300 sq.m	

COMMUNITY OFFICES

Program Description

Program Objectives

Provide community governments with office space.

Capital Facilities

Community office buildings.

Criteria

One office building is provided to each community. New office space is constructed if none exists.

Existing office space is not replaced unless deemed unsafe or beyond economic repair in accordance with established criteria.

A community office may be built as a separate facility or complexed with other community facilities as long as the criteria governing this decision are satisfied.

The decisions to build or upgrade existing office space, to lease, or to construct a stand-alone building or complex with another program, are based on an analysis of the relative cost-effectiveness of the alternatives.

The amount of office space provided is determined as follows:

<u>Population</u>	<u>Gross Area (m²)</u>	<u>Category</u>
125-500	217	Standard 1
500 -1000	265	Standard 2
1000 -2500	313	Standard 3
2500 - 5000	370	Standard 4

Communities with a population greater than 5000 will be considered on a case by case basis.

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COMMUNITY OFFICES

Standards

In accordance with established Standard Area Standards, the four sizes of office buildings qualify for some or all areas including: council chambers, meeting room, mayor's office, senior administrative officer's office, general office and reception, copy/stationery room, lobby/coffee/coat room areas, entry vestibule, washrooms, janitor's closet, mechanical/electrical room, staff offices.

Parking space is provided for cars, trucks, snowmobiles and other ATVs in accordance with established Parking Space Standards.

Office building designs and construction are governed by all National Building Codes and by various Territorial Acts.

FIRE HALLS

Program Description

Program Objectives

Provide communities with buildings for proper storage for fire trucks and with facilities needed to train volunteer fire fighters.

Capital Facilities

Firehalls

Criteria

One firehall is provided to a community when the population exceeds 100 people. In smaller communities a fire truck parking bay may be provided in a parking garage.

Standards

Four standards have been established based on community population, 10 year population forecast from the scheduled completion date, and the number and size of the fire suppression mobile equipment as funded under the Mobile Equipment Capital Program. The Department will maintain flexibility for extraordinary needs.

Population < 100	Parking Garage Standard 1 (45 m ²)
100 < Population < 1000	Firehall Standard 2 (146 m ²)
1000 < Population < 2500	Firehall Standard 3 (200 m ²)
2500 < Population < 5000	Firehall Standard 4 (450 m ²)

Communities with a population of greater than 5000 will be considered on a case by case basis.

FIRE PROTECTION

Program Description

Program Objectives

Provide communities with equipment for adequate fire protection.

Capital Facilities

- Fire trucks
- Truck mounted dry chemical fire extinguishers

Criteria

In communities where the population is less than 100:

- 1 dry chemical fire extinguisher mounted on a 3/4 ton truck.

In communities of 100 or more:

- 1 triple combination pumper truck.

Communities with over 1,000 people may be eligible to receive two triple combination pumper trucks or a 1050 1GPM fire pumper where the community has an existing piped water and hydrant system. The NWT Fire Marshall determines if there is need for more than one unit considering the population, and the size and cost of any large buildings in the community.

Standards

Dry chemical extinguisher:

136 kg

Fire truck:

4,500L water tank, pump rate 2,840L/min
at 1,030 kPa.

July 31/95

RECREATION ADDITIONAL FACILITIES

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This program summary report deals with facilities which the Department of Municipal & Community Affairs (MACA) classifies as "additional" (as distinct from "basic") facilities.

Additional indoor facilities may include:

- Recreation Additional Facilities
- Curling Rinks

Criteria

Priorities for curling rinks are determined by MACA in consultation with communities, based on:

- community's priorities
- community's population
- existing and projected use patterns
- climate.

Communities are eligible for major additional facilities, based on population. The maximum contribution for every project will be:

\$400,000 for the first 1,000 people;
\$200 per person for the next 1,000 people; and
\$100 per person for any additional people.

Standards

Projects are carried out in accordance with program guidelines.

July 31/95

ABOVE GROUND POOLS & POOL ENCLOSURE

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This Above Ground Pool & Pool Enclosure program deals with facilities which the Department of Municipal and Community Affairs (MACA) classifies as "basic" facilities.

Basic facilities include:

- Community Recreation Planning
- Gym
- Community hall
- Arena
- Open play space
- Above Ground Pool and Pool Enclosure

The community government is expected to contribute to each project an amount as identified in the Municipal Capital Assistance Policy for Basic Infrastructure.

Criteria

All communities which have populations larger than the minimum levels listed below are eligible to receive assistance to construct basic recreational facilities.

QUALIFICATION STANDARDS FOR BASIC FACILITIES

<u>Population</u>	<u>Above Ground Pool Enclosure</u>
150 - up	Yes

July 31/95

CURLING RINKS

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This program summary report deals with facilities which the Department of Municipal & Community Affairs (MACA) classifies as "additional" (as distinct from "basic") facilities.

Additional indoor facilities may include:

- Recreation Additional Facilities
- Curling Rinks

Criteria

Priorities for curling rinks are determined by MACA in consultation with communities, based on:

- community's priorities
- community's population
- existing and projected use patterns

Population criteria are listed below.

QUALIFICATION STANDARDS FOR ADDITIONAL FACILITIES

<u>Population</u>	<u>Sheets</u>	<u>Curling Rink</u>	
		<u>Stand Alone m²</u>	<u>Complexed</u>
500 - 3000	2	596	554
3000 - 6000	4	1062	1020
6000 - 12000	6		
12000 - +	8		

July 31/95

GYMS

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This gym program deals with facilities which the Department of Municipal & Community Affairs (MACA) classifies as "basic" facilities.

Basic facilities include:

- Community Recreation Planning
- Gym
- Community hall
- Arena
- Open play space
- Above Ground Pool and Pool Enclosure

The community government is expected to contribute to each project an amount as identified in the Municipal Capital Assistance Policy for basic infrastructure.

Criteria

All communities which have populations larger than the minimum levels listed below are eligible to receive assistance to construct basic recreational facilities.

QUALIFICATION STANDARDS FOR BASIC FACILITIES

<u>Population</u>	<u>Gym Class Size m²</u>
50 - 125	Com. Assem. 220
126 - 250	Primary 376
251 - 600	Junior 426
600 - up	Secondary 556

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GYMS

Notes

- Gym sizes given are net fixed spatial standards.
- A gym, with separate access, may be provided as part of a school, but funding for gym will not be duplicated in both Education and MACA Programs.
- Facilities may be combined into a recreation complex if beneficial from a program and economical perspective.

HALLS

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This Hall program deals with facilities which the Department of Municipal & Community Affairs (MACA) classifies as "basic" facilities.

Basic facilities include:

- Community Recreation Planning
- Gym
- Community hall
- Arena
- Open play space
- Above Ground Pool and Pool Enclosure

The community government is expected to contribute to each project an amount as identified in the Municipal Capital Assistance Policy for basic infrastructure.

Criteria

All communities which have populations larger than the minimum levels listed below are eligible to receive assistance to construct basic recreational facilities.

QUALIFICATION STANDARDS FOR BASIC FACILITIES

<u>Population</u>	<u>Hall Class Size m²</u>
50 - 400	None
401 - 600	Medium 391
600 - up	Large 478

Notes

- Hall sizes given are net fixed spatial standards.
- Facilities may be combined into a recreation complex if beneficial from a program and economical perspective.

July 31/95

ARENAS

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This Arena program deals with facilities which the Department of Municipal & Community Affairs (MACA) classifies as "basic" facilities.

Basic facilities include:

- Community Recreation Planning
- Gym
- Community hall
- Arena
- Open play space
- Above Ground Pool and Pool Enclosure

The community government is expected to contribute to each project an amount as identified in the Municipal Capital Assistance Policy for basic infrastructure.

Criteria

All communities which have populations larger than the minimum levels listed below are eligible to receive assistance to construct basic recreational facilities.

QUALIFICATION STANDARDS FOR BASIC FACILITIES

<u>Population</u>	<u>Arena Class Size</u>	<u>CSR's</u>	<u>m²</u>
50 - 250	Outdoor		
251 - 600	Medium		1539
600 - up	Large		2004
> 10,000	Competition		2683
> 20,000	Third large		2004

ARENAS

Notes

- Arena sizes given are net fixed spatial standards.
- Facilities may be combined into a recreation complex if beneficial from a program and economical perspective.

OPEN PLAY SPACE

Program Description

Program Objectives

Foster public participation in leisure time sports and other recreational and social activities, in Northwest Territories communities.

Capital Facilities

This Open Play Space program deals with facilities which the Department of Municipal & Community Affairs classifies as basic infrastructure.

The community government is expected to contribute to each project an amount as identified in the Municipal Capital Assistance Policy for basic infrastructure.

Criteria

Open play space: each neighbourhood and "natural community" (recognized community within a larger community) is provided with outdoor facilities. Population standards are:

- Community play space: 1/1000 people. Size, community playfield: 568 m²
- Neighbourhood play space: 1/150 people. Size, community playground: 114 m²
- Outdoor Recreation: 1/3000 people.

HEALTH CENTRES & STATIONS

Program Description

Program Objectives

Provide appropriate facilities for the delivery of community health programs including primary care and public health services, in NWT communities that do not have a major health facility.

Capital Facilities

The Department of Health & Social Services & Hospital/Health Boards operate 44 community health centres (two are leased facilities) and eight health stations (two are leased). In addition there are many ancillary buildings which are located in various communities.

Criteria

Population and federal health program requirements have historically been the primary determinants for constructing health centres/stations in the NWT. As the overall NWT population is growing it can no longer be the sole determinant for providing community health facilities. The health status, service needs, cultural orientation, geographical location and distance from regional and/or Territorial referral centres will be the key determinants for providing community health facilities. The community health centre/station will be designed to meet the existing and future needs of the community plus address future technological innovation.

The current criteria for the provision of a community health centre or station are based on population size as follows:

Health Centres & Stations

<u>Community Population</u>	<u>Catchment</u>	<u>Type of Facility</u>	<u>Typical Gross Size (sq.m)</u>
Less than 250	0	Health Station	130 - 135
250 - 1000	0	Health Centre	480 - 490
1000 - 2000	1000	Health Centre	550 - 600

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HEALTH CENTRES & STATIONS

Standards

The health centre or station will generally comprise basic space elements. There are specific program and design guidelines for each space. A 5% design contingency will accommodate any increase in spaces to meet specific local service requirements. The community health centre/station will be designed to meet the existing and future health service needs.

The development of multi-use spaces in the community health centres/stations as a means of accommodating the increasing services (birthing, visiting medical specialist and teams as well as offices for Social Services functions) will be considered in future designs. In future, technological innovation and the possible introduction of distance medicine services requires health centres and stations to be designed with the flexibility to handle the system requirements.

Historically, health centres have had various types of staff accommodation integral or as an adjunct to the facility. All future health centres and stations will be constructed (renovated) with a single 35 m² unit to accommodate relief staff. Staff accommodation will be provided through the GNWT housing pool. Staff accommodation in the existing health centres will be phased out, as facilities are renovated, and replaced by pool or private housing in the community.

HOSPITALS

Program Description

Program Objectives

Provide Territorial and/or regional health facilities which serve as referral centres and have the necessary institutional programs and services, and consultant specialist services to support community based primary care health services.

Capital Facilities

The inventory of territorial and regional hospitals/referral centres and ancillary buildings (warehouses, staff accommodation, and other structures) is detailed in the table following.

Criteria

Territorial (referral) hospital/health centres may be provided where there is an identified need and a minimum population base (total catchment area) in excess of 10,000. A regional hospital/referral centre may be located in a community with a population in excess of 2,500 and a catchment population of up to 10,000.

The major health facilities will be sized according to need and the range of programs/services which will be delivered. The chart below reflects the nationally used allocation of beds per 1,000 population. This is a standard on which health institutions have historically been designed. In the NWT other criteria including demographics, geography, culture and health status dictate what programs/services and, ultimately, the type of facility and the number of beds which are required. Health services should be delivered, where feasible and appropriate, in the NWT and as close to the resident's home as feasible.

HOSPITALS

Standard Guidelines For Hospital Bed Planning (Beds Per 1,000 People)

<u>Type of Care</u>	<u>Immediate</u>	<u>Catchment</u>	<u>Remote</u>
Acute	4.5	0.6	0.7
Rehabilitation	0.2	0.1	
Psychiatric	0.4	0.2	
Tuberculosis	0.25	0.1	
Chronic/Extended	1.3	1.3	

Current acute beds in the NWT exceed the national standard. Chronic/extended care beds within regional health facilities are approximately equal to the national standard.

The major facilities service both community residents and, to varying degrees, the additional catchment population.

Standards

The Department of Health and Social Services does not presently have space standards for major health facilities (hospitals/referral centres). Historically, major health facilities have been designed using national recognized space standards (90 m² per hospital bed) and guidelines for acute care facilities. The Department of Health and Social Services will use national guidelines as a basis for developing an NWT standard for program areas which will reflect the unique health service requirement of a northern referral centre.

Major health facilities are constructed in accordance with building standards or other regulatory requirements which prevail for special purpose health delivery spaces/areas.

HEALTH/SOCIAL SERVICE FACILITIES - ELDERLY & HANDICAPPED PERSONS

Program Description

Program Objectives

Provide for the accommodation needs of elderly and handicapped persons.

Capital Facilities

- personal care facilities
- group homes for handicapped adults

Criteria

Needs are determined according to population, community submissions, and assessments made by department staff or consultants.

For senior citizen/personal care facilities, a proposal is developed by the community which reflects the needs assessment data. The proposal is reviewed by the Housing and Services for Aged & Handicapped Committee and approval is given based on the number of units requested, the care requested (independent living to 24 hour supervision), the availability of community support services such as homecare, and the overall firm commitment from elders of their intention to move into the facility when completed and at least 50% occupancy is expected in the first year of operation.

For group homes for handicapped adults, a regional needs assessment is completed which considers not only people residing in the NWT but those in southern institutions. A decision to build a facility is made based on the needs of the clients identified (physically and/or mentally handicapped) and the availability of community support services (e.g. life skills training). The average size of such facilities is 6-8 beds and clients are moved to the facility gradually to allow for optimal integration and compatibility. It is expected facilities would attain at least 50% occupancy in their first year of operation.

HEALTH/SOCIAL SERVICE FACILITIES - ELDERLY & HANDICAPPED PERSONS

Standards

Standards for group homes are listed below:

- No more than 2 persons per bedroom
- Single room floor area of 100 sq.ft., 800 cubic feet of space and 7 feet, 6 inches as shortest horizontal dimension
- Double rooms require 160 sq.ft., with 10 ft as shortest horizontal dimension
- Each bedroom must have a window
- Toilet, washbasin, and shower or bathtub for every 4 residents
- Staff office
- Secure storage room
- Living area - 50 sq.ft. per resident
- Laundry room
- Storage
 - outdoor equipment
 - furniture and decorations (200 sq.ft.)
 - food (200 sq.ft.)
 - linen storage (150 sq.ft.)

Vehicles are being purchased for group home projects and will follow the same standards for replacement as those developed for the Department of Public Works and Services.

HEALTH/SOCIAL SERVICES FACILITIES - RESIDENTIAL CARE, ALCOHOL & DRUG

Program Description

Program Objectives

Provide for the rehabilitation of persons afflicted by addiction to alcohol, drugs and solvents.

Provide for prevention of and education on community mental health problems.

Capital Facilities

treatment centres:	Applies only to alcohol and drugs
minor renovations:	Applies to Residential Treatment Centres & Community Alcohol & Drug Projects.

Criteria

The minimum quantitative measure to define the level of service afforded to any community of target population based on approved program requirements.

Level of service is dictated by population figures for individual regions. Need is calculated by using the national standard for treatment beds plus special provision for higher alcohol consumption in the Northwest Territories and National Native Alcohol and Drug Abuse Program standards for native populations. Need for alcohol treatment facilities is currently calculated as 1.0 beds/2,083 population plus an additional 1 bed/455 native persons. The calculated criteria are to be distributed on a 1:1 ratio between treatment centres and halfway houses. Alcohol, Drugs and Community Mental Health Services are delivered through community contribution funding. The recipient of funding in each community is referred to as a project. There is allocated replacement needs capital funding to assist renovations of project facilities to meet the following standards.

HEALTH/SOCIAL SERVICES FACILITIES - RESIDENTIAL CARE, ALCOHOL & DRUG

Standards

The minimum acceptable quality definitions to which facilities will be constructed to ensure the safety of workers engaged in their construction.

- Northern Native Alcohol and Drug Abuse Program
- Department of Public Works and Services Construction Standards
- 50 m²/bed for treatment centres

HEALTH/SOCIAL SERVICES FACILITIES - FAMILY VIOLENCE SHELTERS

Program Description

Program Objectives

This program provides for minor renovations of Family Violence Shelters.

Capital Facilities

None. Funds are allocated by project for the renovation or upgrade of existing facilities.

Criteria

Needs are identified by priority by the Executive Directors, who operate the shelters, in consultation with the Department of Health & Social Services. Projects will be evaluated and approved in accordance with the following criteria:

- a. service capability of the facility:
- b. age and condition of existing facility;
 - 1. very poor condition/poses threat to safety.
 - 2. poor condition/does not pose a threat to safety.
 - 3. relatively good condition/does not pose threat to safety.

Standards

Family violence shelters will be renovated/upgraded as required to provide a safe, healthy and functional environment from which to deliver programs/services. There may be components which are minor code upgrade, however, the overall project is primarily related to minor renovation.

All renovations and upgrades are performed according to applicable building and fire codes, applicable by-laws, and relevant GNWT standards.

HEALTH/SOCIAL SERVICES FACILITIES - RESIDENTIAL CARE - CHILDREN

Program Description

Program Objectives

To provide residential programs for children in the care and custody of the Superintendent of Child Welfare for whom placement in a substitute family home is inappropriate.

Capital Facilities

- group homes
- assessment and treatment centres
- vehicles

Criteria

Needs are determined according to population, community submissions, and assessments made by department staff or consultants.

Need for residential service facilities for children is currently calculated at 13 beds/1,000 population of children 12-17 years of age.

Standards

Minimum standards for residential service facilities are listed below:

- no more than two (2) children per bedroom;
- 6.5 m²/child in single rooms, 4.5 m²/child in double occupancy bedrooms;
- location of group home to facilitate community involvement;
- space for staff administrative work;
- 50 square feet/child in the living area;
- indoor activity space;
- 1 toilet, washbasin and shower for every four (4) children;
- 150-200 square feet for the laundry area;
- 200 square feet for furniture and equipment storage.

HEALTH/SOCIAL SERVICES FACILITIES - RESIDENTIAL CARE - CHILDREN

For residential service facilities caring for mentally or physically handicapped children, Canada Mortgage and Housing Corporation (CMHC) standards for housing the disabled would govern construction.

9-passenger mini-vans are being purchased for residential service facilities, and follow the same standards for replacement as those developed for the Department of Public Works and Services.

WATER SUPPLY & TREATMENT

Program Description

Program Objectives

Provide adequate quantities of safe water for all public uses.

Capital Facilities

Water intakes, water treatment facilities, main water supply pumphouses, water storage reservoirs and associated pumping facilities.

Water transmission mains are included in the Water Distribution and Sewage Collection sub-program.

Criteria

Water supply is provided to all municipal governments.

Standards

Water supply facilities are designed to provide at least 90 Lcd (litres per capita per day) for trucked water systems and up to 225 Lcd for piped water systems to the maximum population expected to be served within a design lifespan of 20 years.

The minimum facilities needed to supply water which is safe for public consumption may include:

- (a) either year-round intakes in a natural source, or year-round intakes in a large raw water reservoir and facilities for filling the reservoir from a natural source each summer, and
- (b) a combination pumphouse and truck fill station, equipped with chlorination and fluoridation systems, and
- (c) stored treated water for firefighting and other recognized potential emergencies in volumes determined as per established criteria.

WATER SUPPLY & TREATMENT

Other governing standards to include:

- Guidelines for Canadian Drinking Water Quality (Health and Welfare Canada),
- Water and Energy Conservation Alternatives for the North,
- Public Health Act
- American Waterworks Association and Canadian Standards Association standards applicable to municipal water systems, and
- License conditions and other orders of the NWT Water Board.

SEWAGE TREATMENT AND DISPOSAL

Program Description

Program Objectives

Provide sewage treatment and disposal facilities as needed for protection of public health and the environment.

Capital Facilities

Sewage lagoons, sewage sump pits, sewage treatment plants, outfall lines.

Criteria

Basic level of sewage services required by a municipal government in order to provide a safe, reliable system.

More advanced treatment facilities may be provided, if warranted by local conditions.

Septic tanks or leach pits may be provided, if they are acceptable considering local soil, drainage, water supply and townsite development conditions.

Standards

All facilities are governed by:

- Public Health Act
- Environmental Protection Act
- Northwest Territories Waters Act (Canada)

WATER DISTRIBUTION & SEWAGE COLLECTION

Program Description

Program Objectives

Provide systems for distribution of water and collection of sewage, as needed to protect public health and to provide acceptable living standards in Northwest Territories communities.

Capital Facilities

Piped water distribution and sewage collection systems, including treated water transmission mains; water pumping, heating and circulation stations; sewage pumping stations; and sewage transmission mains.

Criteria

The Department of Municipal and Community Affairs will fund the most cost effective design alternative. The alternatives considered are to include trucked options.

Standards

- Water and Energy Conservation Alternatives for the North
- Public Health Act
- American Waterworks Association
- Canadian Standards Association standards applicable to municipal water and sewage systems

SOLID WASTE MANAGEMENT

Program Description

Program Objectives

Provide communities with facilities for management of solid waste (includes garbage, hazardous and bulky wastes), to safeguard public health and the environment, and to avoid aesthetic nuisance.

Capital Facilities

A minimum objective for NWT community solid waste management is to provide, in most cases, a "modified landfill" facility, in which waste accumulations are periodically covered with earth. Other disposal facilities using different methods can be provided if warranted by special circumstances or economic advantage.

Solid waste collection vehicles are provided separately, under the Department of Municipal and Community Affairs (MACA) Mobile Equipment program.

Criteria

One modified landfill (or alternate system, if warranted) is provided to each community.

Standards

MACA standards for the selection, design and operation of landfill sites take into account the following factors:

- (a) public health safety and acceptability standards
- (b) environmental protection standards
- (c) conformance to community planning standards
- (d) provision of safe, convenient and efficient operations
- (e) cost-effective selection of site and operations methods
- (f) 20 year planning horizon
- (g) separation distance from Airports/Airstrips
- (h) location and availability of cover material

ROAD MAINTENANCE EQUIPMENT

Program Description

Program Objectives

Provide communities with equipment needed to maintain roads. Summer maintenance includes gravelling, grading and maintaining drainage culverts. Winter maintenance includes plowing and removal of snow as needed to maintain safe passage.

Capital Facilities

Standard pick-up trucks, dump trucks, front-end loaders, bulldozers, motor graders.

Criteria

The basic equipment fleet for each community is determined by population size using a design horizon three years into the future. Additional equipment is provided based on road lengths. Basic equipment allowances are shown below.

USUAL EQUIPMENT ALLOWANCES

<u>Unit</u>	Population	
	<u><100</u>	<u>>100</u>
Pick-up	0	1
Dump Truck	1	1 (or more)
Front-end Loader	1	1
Bulldozer	1	1
Grader	0	1

ROAD MAINTENANCE EQUIPMENT

Standards

GNWT provides stock units. Standards of acceptance and principal optional features are as follows:

Pick-up Truck:	3/4 ton, two or four wheel drive
Dump Truck:	single axle, 6m ³ (8 yd ³)
Front-end Loader:	63 KW (85 HP) to 101 KW (135 HP)
Bulldozer:	123 KW (165 HP)
Motor Grader:	101 KW (135 HP)

LAND DEVELOPMENT

Program Description

Program Objectives

Provide developed land for residential, commercial, industrial, institutional and recreational purposes within non-tax-based communities.

The primary focus of the program is to provide a two year supply of residential lots. The program then provides, where necessary, lots needed for commercial, industrial, institutional or recreational uses.

Capital Facilities

Raw and graded land for development and the construction of roads within a land development area. Grading may involve some or all of: clearing, lot stabilization, and drainage improvements.

Water and sewage service mains and sub-mains are included where piped services exist.

Criteria

Projects must conform to community plans. It is intended to furnish each community with a three year supply of lots to accommodate normal growth according to the approved standards and criteria.

Standards

Lot sizes - residential:

0.054 ha or larger (trucked 24m x 30m, piped 18m x 30m)

Acts and regulations governing land use and zoning.

AIRPORT BUILDINGS

Program Description

Program Objective

To provide for the major rehabilitation/restoration, expansion, and replacement of airport passenger shelters, air terminal buildings, garages, and other airport buildings. This subprogram also includes the provision of new air terminal buildings and airport passenger shelters at existing airports where these facilities currently do not exist as well as the construction of new airport passenger shelters and air terminal buildings as part of new airport development projects.

Capital Facilities

Airport buildings which will be rehabilitated, restored, replaced, expanded and provided include the following:

- passenger cargo shelter, air terminal building, operations building, community airport radio station
- parking garage, maintenance garage
- field electrical building
- navigational aid building(s) for GNWT navigational aids only
- other buildings, as deemed required.

Criteria

Criteria for the rehabilitation, restoration, replacement, expansion and provision of new airport buildings are based on federal and territorial life cycle management practices and standards, operational requirements, changes in population, socio-economic needs and critical aircraft.

AIRPORT BUILDINGS

Standards

Airport buildings are governed by standards in Federal legislation, regulations, codes and authorities, and by those established by the Departments of Transportation, Public Works & Services and Municipal and Community Affairs relative to buildings.

Legal authority for airport buildings under this program is provided in the following legislation, regulations, codes and authorities:

- Public Health Act and Regulations,
- Fire Prevention Act and Regulations,
- Electrical Protection Act and Regulations,
- Petroleum Products Act,
- Boiler and Pressure Vessels Act and Regulations,
- National Building Code of Canada, 1990,
- National Fire Code,
- Aeronautics Act (Canada) and Air Regulations,
- Canadian Electrical Code,
- Canadian Plumbing Code,
- Canadian Oil Installation for Oil Burning Equipment Codes.

AIRPORT EARTHWORKS & ELECTRICAL

Program Description

Program Objectives

To provide for the replacement, re-construction, upgrading and construction/installation of new airport civil surfaces, airfield electrical systems and other equipment.

Capital Facilities & Equipment

Airport civil surfaces, airfield electrical systems and related equipment which will be installed, replaced, upgraded, reconstructed, or provided include the following:

- airport surfaces (gravel/paved) and embankments
- airport access and service roads
- airfield lighting including runway, taxiway and apron edge lighting, threshold identification lights, runway end identification lights, rotating/strobe beacons, hazard beacons, illuminated windsock(s) and other lighting aids and equipment
- approach and navigational equipment (i.e., Precision Approach Path Indicator (PAPI), Differential Global Positioning System (DGPS))
- electrical power

Criteria

Criteria for the upgrading, replacement, reconstruction/installation, and construction of new airport earthworks, airfield electrical systems and related equipment are based on Federal and territorial life cycle management practices and standards, operational requirements and changes in population, socio-economic needs and critical aircraft.

The "critical aircraft" for a specific airport is defined as that aeroplane, of all the aeroplanes the airport is intended to serve, which has the most demanding operational requirements with respect to movement area dimensions, pavement bearing strength and other physical characteristics at that airport.

AIRPORT EARTHWORKS & ELECTRICAL

Standards

Airport earthworks, airfield electrical systems and related equipment are governed by standards in Federal legislation, regulations, codes and authorities and by those established by the Departments of Transportation, Public Works & Services and Municipal and Community Affairs relative to earthworks/pavement, electrical systems and related equipment.

The basic Department of Transportation standard is that all airports should satisfy Transport Canada certification requirements.

Federal legislation and regulations cover the certification, design and operation of all airports in Canada.

Legal authority for airport earthworks, electrical systems and related equipment is provided in the following legislation, regulations, codes and authorities:

- Aeronautics Act (Canada) and Air Regulations,
- Electrical Protection Act and Regulations,
- Canadian Electrical Code,

AIRPORT MISCELLANEOUS

Program Description

Program Objectives

To provide airport planning studies, airport boundary and lot surveys, airport signage, fencing, and other extraordinary items.

Capital Facilities/Equipment

Airport miscellaneous includes the following:

- airport planning studies
- run-up pads
- airport boundary and lot surveys
- airport signage
- airport fencing
- other extraordinary items

Criteria

Criteria for the provision of airport miscellaneous are based on federal and territorial life cycle management practices and standards, operational requirements and changes in population, socio-economic needs and critical aircraft.

Standards

Airport miscellaneous are governed by standards in Federal legislation, regulations, codes and authorities and by those established by the Departments of Transportation, Public Works & Services and Municipal and Community Affairs.

Legal authority for airport miscellaneous items under this program is provided in the following legislation, regulations, codes and authorities:

- National Building Code and Regulations,
- Aeronautics Act (Canada) and Air Regulations.

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AIRPORT VEHICLES & EQUIPMENT

Program Description

Program Objectives

To provide for the purchase of new or replacement vehicles and equipment required for the maintenance of airport facilities.

Capital Equipment

New or replacement airport vehicles and equipment which will be provided for the maintenance of airport facilities include the following:

- self propelled grader
- crawler tractor
- snowblower
- front end loader
- compactor, either drum, wobbly - wheeled or vibratory
- brush cutter/mover
- high speed drag
- runway sweeper
- sand spreader
- runway dye marker
- decelerometer
- runway line marker
- cargo vehicles such as pick-up truck, crew-cab, panel, van, platform/stake/rack/plow and dump truck, truck tractor and tank bodies and other vehicles and maintenance equipment, as deemed required.

NOTE: In many cases, airports are maintained using equipment and vehicles provided for joint use, for both airport and municipal maintenance. Joint use equipment, vehicles and garaging are provided by the Department of Municipal and Community Affairs. The Department of Public Works and Services provides aviation refuelling equipment and tankage, both on and off - airport.

AIRPORT VEHICLES & EQUIPMENT

Criteria

Criteria for the replacement and provision of new airport vehicles and equipment are based on Federal and territorial life cycle management practices and standards, operational requirements and changes in critical aircraft.

Airport vehicle and equipment requirements at Territorial airports are a function of the air transportation needs of the population, both in the specific community and the area generally, and the operational characteristics of the scheduled "critical aircraft" provided by the carrier to meet those needs.

The "critical aircraft" for a specific airport is defined as that aeroplane, of all the aeroplanes the airport is intended to serve, which has the most demanding operational requirements with respect to movement area dimensions, pavement bearing strength and other physical characteristics at that airport.

Standards

Airport vehicles and equipment are governed by standards in Federal legislation, regulations, codes and authorities and by those established by the Departments of Transportation, Public Works & Services and Municipal and Community Affairs relative to vehicles and equipment.

MARINE TRANSPORTATION FACILITIES - COMMUNITY WHARVES

Program Description

Capital Facilities

Currently, the GNWT is responsible for the provision and upgrading of local marine facilities throughout the NWT. The facilities which have been developed and are maintained by DOT, range from small floating or fixed wharves in predominantly inland/freshwater communities to large scale harbours with rubble-mound breakwaters in the coastal communities.

Community marine infrastructure consists of any structure not naturally occurring which provides improvements to local or commercial marine operations in a settlement in the NWT. The Federal government, commercial interests and individual citizens have constructed fixed or floating wharves in selected communities in the past.

PETROLEUM PRODUCTS

Program Description

Program Objectives

Provide for storage dispensing of bulk fuels to meet community needs.

Capital Facilities

- storage tanks
- fuel dispensing equipment
- resupply piping
- delivery vehicles

Criteria

Tankage is constructed to provide sufficient storage for a 10 year forecasted consumption increase.

Forecasting

For tankage capacities, the previous 5 years' average percent increase in sales is applied to the first 3 future years thence 3% for the remaining 7 years; with a 15% safety factor.

Land Reserves

Land is reserved surrounding the bulk fuel storage facility to accommodate a minimum 20 years projected expansion for the facility. Depending on the size to meet this minimum, standard reserve sizes will be used i.e. 100m x 100m, 100m x 80m, 60m x 120m.

New Delivery Equipment

Where there is a long-term delivery contract in place, the delivery vehicles are supplied by the contractor and are not included in the GNWT Capital Program.

July 31/95

APPENDIX D
SPECIAL APPROACHES TO CONSTRUCTION

July 31, 1995

APPROACHES TO CONSTRUCTION OF CAPITAL PROJECTS PUBLIC WORKS AND SERVICES

There are a number of special approaches used by Public Works and Services to deliver capital projects. All of these approaches use procedures to ensure that:

- northern and local workers and businesses are used;
- local room and board is used;
- northern consultants are employed;
- compensation for the high cost of northern operation is provided; and
- on specific projects, training programs are included.

These special approaches are as follows:

1. Public Tender

Contracts are tendered publicly and the contract award is based on the lowest price after adjustment for the Business Incentive Policy. The Business Incentive Policy adjustment discounts the bid according to the amount of local and northern benefit that the bidder intends to provide. The actual use of local and northern workers and businesses is monitored throughout the contract.

Variations of the Public Tender

- Public tender with nominated subcontract(s). Tender documents state that certain components of the work are to be subcontracted to local suppliers or contractors;
- Public tender with the stipulation that capable and available local labour must be used and non-local labour must be approved in advance.

2. Invited Tender

This is a competitive tender where only qualified local or regional contractors are invited to bid. Contractors from outside the community or region are not permitted to bid. It normally applies to small projects and to projects that can provide important opportunities for regional economic development. For invited competitive tenders over \$30,000, approval of the Deputy Minister of Public Works and Services is required.

3. Sole-Source Contracts

Sole-Source Contracts are awarded to one contractor directly without competition. Acceptable circumstances of sole-source contracts are outlined in the Government of the Northwest Territories (GNWT) Contract Regulations and are:

- construction is urgently required and delay would be injurious to the public interest; or
- only one party is available and capable of performing the contract; or
- the contract does not exceed \$1,000 in value.

4. Negotiated Contracts

Negotiated Contracts are awarded to one contractor directly without competition although there may be other contractors available and willing to do the work. Reasons for negotiated contracts are:

- the contractor is a new northern or local company which does not yet have the experience and business skills to secure the contract on a competitive basis; or
- the award is made to a northern or local company due to special circumstances, usually associated with maximizing local and northern involvement or training.

In order to undertake a negotiated contract:

- the initial decision to negotiate a contract requires Executive Council approval;
- the company must be northern owned and the majority of shareholders must be local;
- the contractor is required to use 100% northern and local subcontractors, equipment and labour except where specifically approved by the Minister of Public Works and Services;
- the GNWT may support the payment of a premium as a result of the negotiation of contracts, where the economic development and social benefits defined in the company's business plan equal or exceed the premium to be paid.

It is important to note the differences between the "negotiated" contract approach and the "sole-source" contract approach.

5. Construction Management Approach

Normally, construction contracts require the contractor to take the financial risk for completing the work. The contractor is responsible for his own profit or loss. When the GNWT wants to take greater control of the work particularly to increase local training and employment, or the use of local materials, the Construction Management approach may be used.

The Construction Management approach gives the GNWT more control over working procedures, particularly local involvement. However, the GNWT also assumes greater financial risk.

A construction manager is hired by the GNWT. The construction manager tenders for labour, materials and services separately to achieve the maximum northern and local involvement. Several different contract approaches could be used for these subcontracts, including sole-source, invitational and negotiated tenders. The construction manager also handles payment control, contract administration, accounting and other management aspects of the project.

The criteria for the construction management approach are:

- projects should be smaller and of simpler construction where the potential for local involvement is greater;
- a joint committee may be established composed of community and government representatives to monitor the project.
- the construction manager must have the experience and ability to work with local residents in isolated northern communities;
- the community must indicate its willingness to support this approach;
- it is generally used in smaller communities where local contractors are not available to undertake the project.

6. Special Arrangements

Typically, the GNWT has a consultant prepare drawings that are tendered. This provides maximum control over the finished product. However, other approaches can be used.

- **Design/Build** - Proposals are requested from contractors to provide both the design drawings and the construction. Submissions are based on performance requirements designated by the GNWT. This approach favours larger construction companies, reduces GNWT control over the finished product and reduces the opportunity for standardized design.

- **Lease Back to the GNWT** - A local business may wish to finance the development of a project and lease it back to the GNWT, making a return on the investment over time. This approach is used for offices and warehouses, but is seldom used for public buildings like schools or health centres. Before proceeding with a lease back project, the local business is assessed by the GNWT to determine if it has the expertise and capacity to handle all aspects of such a venture, including the management of the leased premises.

7. Authority Agreements

A community government could also request the authority to manage any phase of a project. Most authority agreements are to manage construction, but design and planning can be considered.

Project management authority is given to the community in varying degrees. Depending on the complexity of the project and the experience of the community council, projects are turned over at any point from planning to construction. The community may engage consulting services for planning or design or they may enter into construction contracts. This approach is often implemented according to the Municipal Capital Assistance Policy. The community is expected to follow existing government policies, procedures and directives (Business Incentive Policy, security, training, northern and local involvement, tender advertising, etc.) when awarding contracts.

Communities undertaking this approach are selected on the basis of capability, willingness and financial involvement. The first step is for the community to formally indicate a willingness to participate. Then the community is assessed by the GNWT through the Departments of Municipal and Community Affairs and Public Works and Services for their capability to undertake partial or full management. The community then signs an agreement with the GNWT that sets out the terms and conditions.

8. Summary

A large variety of project delivery approaches are available. The approach can be tailored to the business, training and employment needs of each community and the specific opportunities available in a particular project.

APPENDIX E

INCREMENTAL INFRASTRUCTURE PROJECTS:

LIST OF TYPICAL PROJECTS

July 31, 1995

GN Office/Administrative

- . office space leases
- . tenant improvements

GN Staff Housing

- . lease costs
- . furniture

Schools

- . school equipment
- . school furniture
- . school playground equipment

Cultural Facilities

- . territorial library
- . information network
- . language bureau facility
- . territorial museum (culture and heritage)

Health/Social Service Facilities

- . Health and Social Services Centres
- . Addictions Facilities
- . Child Welfare Facilities
 - Adolescent treatment centres

Justice (Courts, Corrections)

- . courthouse(for Nunavut Supreme and Territorial Courts)
- . youth treatment centre
- . remand unit

Municipal Buildings

- . community offices
- . maintenance garages
- . parking garages
- . fire halls/fire fighting equipment

Water Systems

- . water supply (including reservoirs, water treatment plants)

Sewage Systems

- . sewage lagoons

July 31, 1995

Solid Waste Disposal

- . disposal sites

Vehicles

- . GN vehicles
- . POL vehicles
- . municipal fire trucks
- . municipal gravel trucks

Land Development

- . developed lots for GN infrastructure and staff housing
- . developed lots for residential housing for new persons in "multiplier jobs" (Federal government, municipal government, private sector)
- . costs for roads, drainage, street lighting, and piped-service connections

Air Transportation Facilities

- . airport relocations
- . airport runway extensions
- . airport runway paving
- . air terminal building expansions
- . airport apron/runway upgrades

Marine Transportation Facilities

- . harbour enhancements
- . resupply wharf construction

Bulk Fuel

- . bulk fuel storage tanks

APPENDIX F
NEW INFRASTRUCTURE PROJECTS
SCENARIOS 1, 2, AND 3

July 31, 1995

NEW PROJECTS

1. Legislative Assembly

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit:</i>	<i>Rankin Inlet:</i>	<i>Cambridge Bay:</i>
<ul style="list-style-type: none"> • Lease (1999 to 2009) \$427,000 • Tenant Improvements \$1,209,000 in 1998/99 • Permanent Building \$18,963,000 in 2009 	<ul style="list-style-type: none"> • Lease (1999 to 2009) \$467,000 • Tenant Improvements \$1,180,000 in 1998/99 • Permanent Building \$18,507,000 in 2009 	<ul style="list-style-type: none"> • Lease (1999 to 2009) \$493,000 • Tenant Improvements \$1,257,000 in 1998/99 • Permanent Building \$18,721,000 in 2009

2. Department of Education, Culture and Employment

A. Schools

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
Pond Inlet: • Ulaajuk School \$1,823,000	Pond Inlet: • Ulaajuk School \$994,000	Pond Inlet: • Ulaajuk School \$820,000
	Rankin Inlet: • Primary Addition \$2,409,000	Cambridge Bay: • New School \$7,394,000
	Arviat: • Qitiglik School \$990,000	Coppermine: • Kugluktuk School \$2,604,000
	Baker Lake: • Ilitsijaqturvik School \$1,898,000	Gjoa Haven: • School Expansion \$1,845,000

B. Cultural Facilities

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit:</i>	<i>Rankin Inlet:</i>	<i>Cambridge Bay:</i>
<ul style="list-style-type: none"> • Library \$552,000 • Info. Networks \$529,000 • Language Bureau \$619,000 • Culture & Heritage \$5,949,000 	<ul style="list-style-type: none"> • Library \$564,000 • Information Networks \$541,000 • Language Bureau \$632,000 • Culture & Heritage \$6,075,000 	<ul style="list-style-type: none"> • Library \$575,000 • Information Networks \$552,000 • Language Bureau \$645,000 • Culture & Heritage \$6,200,000

NOTE In addition to being new, all these projects must be constructed by FY 98/99, to be ready for the new Nunavut Government in FY 1999/00.

3. Department of Justice

A. Courts, Corrections

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit:</i>	<i>Rankin Inlet:</i>	<i>Cambridge Bay:</i>
• Youth Treatment Centre \$2,160,000	• New Courthouse * \$8,048,000	• New Courthouse * \$8,557,000
• Security Upgrade - BCC \$500,000	• Security Upgrade - BCC \$500,000	• Security Upgrade - BCC \$500,000
	• 16-Bed Remand Unit \$6,507,000	• 16-Bed Remand Unit \$6,933,000
	<i>Iqaluit:</i>	<i>Iqaluit:</i>
	• Youth Treatment Centre \$2,160,000	• Youth Treatment Centre \$2,160,000

NOTE: In addition to being new, all projects noted with an asterisk (*) must be constructed by FY 98/99, to be ready for the new Nunavut Government in FY 1999/00.

4. Department of Health and Social Services

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
Health Care Centres		
Iqaluit \$266,000	Rankin Inlet \$5,291,000	Igloolik \$281,000
Pangnirtung \$279,000	Arviat \$266,000	Cambridge Bay \$4,126,000
Pond Inlet \$294,000	Baker Lake \$266,000	Coppermine \$288,000
Cape Dorset \$272,000		Gjoa Haven \$320,000
Igloolik \$281,000		
Total \$1,392,000	Total \$5,823,000	Total \$5,015,000
Alcohol & Drug Treatme \$2,600,000	Alcohol & Drug Treatmen \$2,600,000	Alcohol & Drug Treatmen \$2,600,000
Centre	Centre	Centre
Adolescent Treatment \$1,600,000	Adolescent Treatment \$1,600,000	Adolescent Treatment \$1,600,000
Centre	Centre	Centre

NOTE: In addition to being new, all these projects must be constructed by FY 1998/1998, to be ready for the new Nunavut Government in FY 1999/00.

5. Department of Transportation

A. Air Transportation

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
	<i>Rankin Inlet:</i> <ul style="list-style-type: none"> • Apron Expansion \$1,200,000 • Precision Approach Landing System* \$1,360,000 	<i>Cambridge Bay:</i> <ul style="list-style-type: none"> • Precision Approach Landing System \$2,500,000 • Runway Extension* \$1,000,000 • Runway Paving \$5,000,000

B. Marine Transportation

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
	<i>Rankin Inlet:</i> <ul style="list-style-type: none"> • Harbour Enhancement \$400,000 <i>Baker Lake:</i> <ul style="list-style-type: none"> • Harbour Enhancement \$560,000 	<i>Cambridge Bay:</i> <ul style="list-style-type: none"> • Harbour Development \$500,000 <i>Coppermine:</i> <ul style="list-style-type: none"> • Harbour Improvement \$350,000

NOTE: In addition to being new, all projects with an asterisk (*) must be constructed by FY 98/99, to be ready for the new Nunavut Government in FY 1999/00

6. Department of Municipal and Community Affairs
(not including those projects less than \$100,000)

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit</i>	<i>Pangnirtung</i>	<i>Pangnirtung</i>
• Sewage \$428,000	• Water Supply \$169,000	• Water Supply \$169,000
• Solid Waste \$105,000	• Sewage \$383,000	• Sewage \$383,000
<i>Pangnirtung</i>	<i>Pond Inlet</i>	<i>Cape Dorset</i>
• Water Supply \$472,000	• Municipal Buildings \$1,307,000	• Sewage \$260,000
• Sewage \$757,000	<i>Igloolik</i>	<i>Igloolik</i>
<i>Pond Inlet</i>	• Municipal Buildings \$1,251,000	• Municipal Buildings \$1,251,000
• Municipal Buildings \$1,309,000	• Water Supply \$189,000	• Water Supply \$248,000
<i>Cape Dorset</i>	<i>Rankin Inlet</i>	<i>Arviat</i>
• Water Supply \$676,000	• Municipal Buildings \$1,185,000	• Water Supply \$3,000,000
• Sewage \$655,000	• Water Supply \$1,572,000	<i>Baker Lake</i>
<i>Igloolik</i>	• Solid Waste \$381,000	• Sewage \$110,000
• Municipal Buildings \$1,251,000	<i>Arviat</i>	<i>Cambridge Bay</i>
• Water Supply \$584,000	• Water Supply \$3,000,000	• Municipal Buildings \$2,205,000
• Sewage \$747,000	<i>Baker Lake</i>	• Water Supply \$978,000
<i>Arviat</i>	• Water Supply \$102,000	• Sewage \$2,575,000
• Water Supply \$3,000,000	• Sewage \$657,000	• Play Space \$147,000
<i>Baker Lake</i>	<i>Coppermine</i>	<i>Coppermine</i>
• Sewage \$180,000	• Municipal Buildings \$1,279,000	• Municipal Buildings \$1,279,000
<i>Cambridge Bay</i>		• Sewage \$686,000
• Water Supply \$105,000		<i>Gjoa Haven</i>
• Sewage \$127,000		• Sewage \$399,000
<i>Coppermine</i>		
• Municipal Buildings \$1,279,000		

APPENDIX G

**MAJOR NUNAVUT INFRASTRUCTURE PROJECTS
FOR EACH NUNAVUT SCENARIO**

July 31, 1995

LARGE (Greater than \$2 Million) CAPITAL PROJECTS

1. Department of Education, Culture and Employment

A. Schools

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit</i>	<i>Pond Inlet</i>	<i>Pond Inlet</i>
• Elementary \$6,377,000	• Primary \$6,383,000	• Primary \$6,383,000
• Junior High \$9,738,000	<i>Igloolik</i>	<i>Igloolik</i>
<i>Pond Inlet</i>	• Attaguttaluk \$10,240,000	• Attaguttaluk \$10,240,000
• Primary \$6,383,000	<i>Coppermine</i>	<i>Cambridge Bay</i>
<i>Cape Dorset</i>	• Kugluktuk \$5,426,000	• Illhakvik \$9,385,000
• Pitseolak \$11,014,000	<i>Cambridge Bay</i>	<i>Arviat</i>
<i>Igloolik</i>	• Illhakvik \$2,382,000	• Qitiqlik \$2,655,000
• Attaguttaluk \$10,240,000		
<i>Coppermine</i>		
• Kugluktuk \$6,158,000		
<i>Rankin Inlet</i>		
• Primary \$3,366,000		
<i>Arviat</i>		
• Qitiqlik \$3,234,000		
<i>Baker Lake</i>		
• Illitsijaqturvik \$4,166,000		
<i>Cambridge Bay</i>		
• Illhakvik \$3,090,000		

B. There are no Cultural Facilities in the "no Nunavut" scenario.

2. Department of Transportation

A. Air Transportation

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Cape Dorset</i> <ul style="list-style-type: none"> Relocate Airport \$5,200,000 		
<i>Pond Inlet</i> <ul style="list-style-type: none"> Upgrade Airport \$2,600,000 		

B. Marine Transportation - All projects less than \$2 million

3. Department of Justice

Courts, Corrections

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit:</i> <ul style="list-style-type: none"> Courthouse \$8,224,000 65-bed Correctional Centre \$32,155,000 Renovate BCC \$6,508,000 12-bed Women's Centre \$2,850,000 8-bed Community Correction Centre \$2,000,000 	<i>Iqaluit:</i> <ul style="list-style-type: none"> 65-bed Correctional Centre \$32,155,000 Renovate BCC \$6,508,000 12-bed Women's Centre \$2,850,000 8-bed Community Correction Centre \$2,000,000 	<i>Iqaluit:</i> <ul style="list-style-type: none"> 65-bed Correctional Centre \$32,155,000 Renovate BCC \$6,508,000 12-bed Women's Centre \$2,850,000 8-bed Community Correction Centre \$2,000,000

4. Department of Municipal and Community Affairs

Scenario #1 Iqaluit as Capital	Scenario #2 Rankin Inlet as Capital	Scenario #3 Cambridge Bay as Capital
<i>Iqaluit</i>	<i>Iqaluit</i>	<i>Iqaluit</i>
• Water Supply \$27,827,000	• Water Supply \$27,794,000	• Water Supply \$27,749,000
• Sewage \$8,362,000	• Sewage \$7,944,000	• Sewage \$7,944,000
• Arena \$4,000,000	• Arena \$4,000,000	• Arena \$4,000,000
<i>Arviat</i>	<i>Arviat</i>	<i>Arviat</i>
• Water Supply \$12,500,000	• Water Supply \$12,500,000	• Water Supply \$12,500,000
<i>Pangnirtung</i>	<i>Pangnirtung</i>	<i>Pangnirtung</i>
• Water Supply \$3,940,000	• Water Supply \$3,637,000	• Water Supply \$3,637,000
• Sewage \$4,188,000	• Sewage \$3,814,000	• Sewage \$3,814,000
<i>Pond Inlet</i>	<i>Pond Inlet</i>	<i>Pond Inlet</i>
• Water Supply \$3,869,000	• Water Supply \$3,776,000	• Water Supply \$3,863,000
<i>Igloolik</i>	<i>Rankin Inlet</i>	<i>Rankin Inlet</i>
• Water Supply \$2,251,000	• Water Supply \$2,627,000	• Sewage \$3,313,000
<i>Rankin Inlet</i>	• Sewage \$3,330,000	<i>Cambridge Bay</i>
• Sewage \$3,335,000	<i>Baker Lake</i>	• Sewage \$4,137,000
	• Sewage \$2,401,000	

APPENDIX H

NUNAVUT INCREMENTAL GROWTH

**. SUMMARIES OF INCREMENTAL COST
(PRESENT VALUE)**

. 20-YEAR CASH FLOW SUMMARIES

July 31, 1995

NUNAVUT INCREMENTAL GROWTH

SCENARIO #1 IQALUIT as Capital
COMMUNITY: ALL

INFRASTRUCTURE	INCREMENTAL COST
Legislative Assembly	\$9,927,000
GN Office/Administrative	\$42,247,000
GN Staff Housing	\$39,726,000
GN Staff Housing Furniture	\$7,875,000
Schools	\$12,388,000
Cultural Facilities	\$8,089,000
Health Facilities	\$7,230,000
Justice (Courts, Corrections)	\$21,851,000
Municipal Buildings	\$2,368,000
Recreational Facilities	\$782,000
Water Systems	\$6,713,000
Sewage Systems	\$2,281,000
Solid Waste Disposal	\$421,000
Vehicles	\$2,303,000
Land Development	\$12,178,000
Air Transportation	\$5,158,000
Marine Transportation	\$0
Bulk Fuel Storage	\$6,821,000
Power Supply	\$0
TOTAL	\$188,356,000

Notes:

1. All costs are in present value in \$1996.
2. Vehicles include GN vehicles, POL vehicles, municipal fire trucks and gravel trucks.
3. Land Development costs are for GN, Federal/municipal and private sector staff housing needs, GN institutional needs and private residential needs.

NUNAVUT INCREMENTAL GROWTH

SCENARIO #2 RANKIN INLET as Capital
COMMUNITY: ALL

INFRASTRUCTURE	INCREMENTAL COST
Legislative Assembly	\$9,954,000
GN Office/Administrative	\$41,725,000
GN Staff Housing	\$45,761,000
GN Staff Housing Furniture	\$7,929,000
Schools	\$8,839,000
Cultural Facilities	\$8,050,000
Health Facilities	\$13,136,000
Justice (Courts, Corrections)	\$31,334,000
Municipal Buildings	\$2,517,000
Recreational Facilities	\$124,000
Water Systems	\$4,117,000
Sewage Systems	\$2,462,000
Solid Waste Disposal	\$600,000
Vehicles	\$2,311,000
Land Development	\$14,243,000
Air Transportation	\$5,780,000
Marine Transportation	\$597,000
Bulk Fuel Storage	\$7,512,000
Power Supply	\$0
TOTAL	\$206,991,000

Notes:

1. All costs are in present value in \$1996.
2. Vehicles include GN vehicles, POL vehicles, municipal fire trucks and gravel trucks.
3. Land Development costs are for GN, Federal/municipal and private sector staff housing needs, GN institutional needs and private residential needs.

NUNAVUT INCREMENTAL GROWTH

SCENARIO #3 CAMBRIDGE BAY as Capital
COMMUNITY: ALL

INFRASTRUCTURE	INCREMENTAL COST
Legislative Assembly	\$10,310,000
GN Office/Administrative	\$42,565,000
GN Staff Housing	\$37,841,000
GN Staff Housing Furniture	\$8,049,000
Schools	\$13,553,000
Cultural Facilities	\$8,298,000
Health Facilities	\$12,463,000
Justice (Courts, Corrections)	\$32,253,000
Municipal Buildings	\$4,115,000
Recreational Facilities	\$83,000
Water Systems	\$2,984,000
Sewage Systems	\$2,819,000
Solid Waste Disposal	\$466,000
Vehicles	\$2,396,000
Land Development	\$8,868,000
Air Transportation	\$7,730,000
Marine Transportation	\$685,000
Bulk Fuel Storage	\$3,980,000
Power Supply	\$0
TOTAL	\$199,458,000

Notes:

1. All costs are in present value in \$1996.
2. Vehicles include GN vehicles, POL vehicles, municipal fire trucks and gravel trucks.
3. Land Development costs are for GN, Federal/municipal and private sector staff housing needs, GN institutional needs and private residential needs.

TABLE 0 NUNAVUT INFRASTRUCTURE SCENARIO 0 NO-NUNAVUT CAPITAL AND O&M NEEDS (\$1996)

Category	Present Value	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
ALL 25 COMMUNITIES																					
TOTAL	2,213,089	1,105,776	262,165	133,760	163,429	121,370	146,701	102,231	67,741	65,094	62,039	63,857	81,153	70,224	71,818	69,900	91,935	128,347	112,855	130,710	111,716
CAPITAL	1,403,485	635,098	136,280	87,689	97,568	75,710	77,102	68,190	46,462	42,515	44,315	45,037	56,353	52,204	52,702	49,759	63,106	88,084	78,139	86,762	69,269
O&M	809,604	470,678	125,885	46,081	65,863	45,660	69,599	34,041	21,279	22,578	17,724	18,820	24,800	18,020	19,116	20,141	28,829	42,263	34,716	43,948	42,447
CAPITAL																					
Municipal & Community Affairs	448,307	194,433	40,843	26,950	18,399	20,075	22,084	29,921	22,813	16,005	19,081	17,320	21,721	21,910	18,824	18,289	22,250	26,778	29,547	25,098	8,944
Transportation	178,826	59,610	8,507	7,728	6,897	5,330	5,959	5,479	2,951	2,770	5,937	5,647	6,437	13,624	16,845	14,029	13,180	16,583	16,162	12,803	3,643
Public Works & Services	129,054	66,733	10,891	12,803	10,519	7,256	4,844	4,594	4,144	3,165	4,369	5,502	5,243	7,241	7,352	3,797	4,504	4,867	4,553	4,432	3,409
Renewable Resources	14,967	6,533	1,174	417	374	1,298	1,685	488	1,420	519	1,069	882	1,187	500	945	516	423	330	229	428	846
Economic Development & Tourism	25,406	11,917	2,266	1,284	950	1,157	1,727	1,943	2,252	1,864	1,329	984	1,986	1,847	1,578	1,368	716	370	197	439	333
Education Culture & Employment	382,095	132,013	21,635	19,808	18,648	18,231	17,781	9,409	7,593	11,098	10,578	13,079	15,499	6,662	8,924	11,268	18,860	34,085	26,895	43,474	52,094
Safety & Public Services	78	76	52	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Justice	58,646	49,161	28,846	79	131	674	15,157	332	1,768	1,018	47	16	47	16	16	16	32	16	16	16	0
Health and Social Services	166,066	114,621	24,266	8,902	19,998	21,669	7,885	16,018	3,521	6,078	1,877	1,607	4,223	404	520	476	3,141	3,035	520	72	0
O&M																					
Municipal & Community Affairs	89,661	46,093	8,129	4,329	5,390	4,015	4,417	5,984	4,563	3,201	3,818	3,464	4,344	4,382	3,765	3,658	4,450	5,356	5,909	5,020	1,789
Transportation	64,048	37,073	3,988	3,983	3,632	2,505	2,801	2,575	1,387	1,302	2,790	2,854	3,025	8,403	7,823	6,594	8,195	7,794	7,606	8,017	1,712
Public Works & Services	25,811	14,834	2,178	3,084	2,581	1,451	969	919	829	633	874	1,100	1,049	1,448	1,470	759	901	973	911	866	682
Renewable Resources	2,997	1,546	235	50	83	260	333	89	284	104	218	178	237	100	189	103	85	66	46	86	169
Economic Development & Tourism	5,081	2,743	453	257	190	231	345	369	450	373	266	197	399	369	315	274	143	74	39	88	67
Education Culture & Employment	278,929	125,498	15,794	14,460	13,612	13,308	12,880	6,869	5,543	8,100	7,720	9,548	11,314	4,863	4,982	8,226	13,768	24,882	19,633	31,736	38,029
Safety & Public Services	16	14	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Justice	153,653	124,197	70,337	207	343	1,766	39,711	870	4,632	2,667	123	42	123	42	42	42	84	42	42	42	0
Health and Social Services	169,408	118,681	24,751	8,080	20,386	22,123	8,043	16,336	3,591	6,200	1,915	1,639	4,307	412	530	486	3,204	3,096	530	73	0

TABLE 1 NUNAVUT INFRASTRUCTURE - INCREMENTAL COST (\$1996)
SCENARIO 1 IQALUIT AS CAPITAL

Category	Total	Present Value	1998/99	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
ALL COMMUNITIES	326,676	188,356	44,982	54,136	21,058	5,543	(15,371)	10,650	16,947	24,924	22,087	13,396	17,761	31,013	14,191	26,833	22,354	10,593	(3,040)	(13,877)	(3,033)	(9,211)	7,907
TOTAL	98,118	89,759	7,205	44,982	7,138	(8,431)	(20,375)	(3,075)	4,313	11,834	8,820	104	4,279	17,822	542	12,895	8,395	(3,040)	(13,877)	(3,033)	(9,211)	7,907	
CAPITAL	230,558	96,596	0	53,637	7,138	13,975	14,004	13,725	12,654	13,080	13,287	13,292	13,482	13,391	13,650	13,938	13,959	13,632	13,574	13,287	13,287	13,224	13,224
O&M and Annual	93,808	42,247	0	5,836	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175
Office	87,873	37,471	0	5,836	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175	5,175
Capital (Const. & TI)	5,045	2,366	0	25	345	17	520	798	1,981	1,325	868	(2,437)	(232)	(1,807)	181	2,102	1,563	417	162	(1,254)	(1,254)	111	111
Annual (Lease, Rent)	3,839	1,965	0	25	331	14	4	4	4	4	41	41	41	41	41	41	41	41	41	41	41	41	41
Municipal Buildings	1,206	401	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital	93,268	39,726	0	0	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496	5,496
O&M	9,211	12,388	0	8,444	383	31	(1,964)	2,165	(1,372)	5,225	5,091	1,347	(3,312)	5,987	(7,847)	(3,018)	(3,563)	510	1,293	(5,313)	(5,313)	(5,313)	(5,313)
Staff Housing (O&M-Lease)	7,298	2,909	0	8,444	67	(285)	(1,965)	1,923	(1,865)	5,183	4,681	915	(3,886)	5,480	(1,308)	(3,820)	(4,284)	127	910	(5,696)	(5,696)	(5,696)	(5,696)
Education	10,862	7,230	387	4,204	885	369	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314
O&M	5,532	4,960	387	4,204	885	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Health / Social Services	5,330	2,270	0	0	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314	314
Capital	129	782	0	0	119	220	1,840	1,780	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95	1,95
O&M	10,964	8,069	653	3,450	3,514	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recreation Play Space	7,649	6,677	653	3,450	3,514	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cultural Facilities	3,315	1,412	0	0	195	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
Capital	14,629	21,851	3,342	27,488	18,328	(4,887)	(27,851)	(8,701)	322	328	843	343	383	343	343	343	343	343	343	343	343	343	343
O&M	3,100	5,581	3,342	27,488	18,328	(4,887)	(27,851)	(8,701)	322	328	843	343	383	343	343	343	343	343	343	343	343	343	343
Justice (Courts, Corrections)	11,529	6,280	0	1,163	1,217	243	1,577	1,549	(232)	220	339	2,549	181	(2,486)	991	14,623	10,569	(1,144)	(12,215)	(12,905)	(12,905)	(12,905)	(12,905)
Capital	4,969	8,713	416	463	925	805	(32)	(288)	0	0	208	208	208	(835)	(379)	685	457	875	1,007	(610)	(610)	(1,293)	
O&M	2,866	2,281	0	23	136	494	(153)	(206)	0	440	440	440	440	440	440	440	440	440	440	440	440	440	440
Water Systems (Cap)	293	421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sewage Systems (Cap)	30,568	9,927	0	0	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
Solid Waste Systems (Cap)	20,214	5,954	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Legislative Assembly	10,354	3,972	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital (Const. & TI)	9,342	6,821	62	1,235	3,059	(2,122)	(1,039)	(11)	0	418	2,795	(3,362)	(3,551)	3,650	2,477	(791)	(5)	(192)	(1,198)	(1,198)	(262)	1,915	
Annual (Lease, Rent)	8,342	6,821	62	1,235	3,059	(2,122)	(1,039)	(11)	0	418	2,795	(3,362)	(3,551)	3,650	2,477	(791)	(5)	(192)	(1,198)	(1,198)	(262)	1,915	
Bulk Fuel Storage	9,342	6,821	62	1,235	3,059	(2,122)	(1,039)	(11)	0	418	2,795	(3,362)	(3,551)	3,650	2,477	(791)	(5)	(192)	(1,198)	(1,198)	(262)	1,915	
Capital	4,300	5,156	0	0	0	0	50	1,130	3,050	6,240	1,130	550	490	(450)	(1,170)	330	160	(2,620)	(1,990)	(2,080)	(2,080)	(520)	
Power Supply	0	3,509	0	0	0	0	50	1,130	3,050	6,240	1,130	550	490	(450)	(1,170)	330	160	(2,620)	(1,990)	(2,080)	(2,080)	(520)	
Air Transportation	4,300	1,649	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
O&M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Marine Transportation	4,300	1,649	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capital	4,300	1,649	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
O&M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Vehicles	4,386	2,303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capital	2,337	1,429	0	0	598	1,110	(576)	0	(220)	(80)	601	712	41	283	238	312	527	(153)	16	706	706	(286)	
O&M	2,049	874	0	0	84	140	155	128	128	115	111	111	111	111	111	111	111	122	132	152	136	130	
Staff Housing Furniture (Cap)	13,152	7,875	0	6,576	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Blank	18,958	12,178	2,308	6,808	176	156	367	691	1,716	635	247	958	1,630	508	257	320	359	716	289	279	279	279	
Land Development	5,844	5,319	280	5,594	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capital-Residential	9,064	5,238	2,028	1,225	20	16	210	529	1,539	445	44	753	1,387	263	0	63	100	453	10	0	0	0	
O&M	3,938	1,621	0	17	156	156	157	162	177	190	203	205	243	243	257	257	257	263	279	279	279	279	

TABLE 2 NUNAVUT INFRASTRUCTURE - INCREMENTAL COST (\$1996)
SCENARIO 2 RANKIN INLET AS CAPITAL

Category	Total	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
ALL COMMUNITIES	377,418	4,472	58,178	51,015	24,719	11,766	(13,865)	10,589	14,874	25,318	20,641	15,487	18,329	24,814	23,845	24,545	17,809	15,674	12,547	6,573	10,088
TOTAL	118,585	4,472	58,173	50,111	9,202	(3,988)	(29,809)	(5,064)	180	10,618	5,765	6,45	3,386	10,652	8,835	9,380	2,782	357	(2,719)	(8,656)	(5,138)
CAPITAL	258,833	0	0	904	15,517	15,754	15,944	15,873	14,684	14,702	14,878	14,842	14,931	14,761	15,010	15,185	15,027	15,318	15,206	15,230	15,226
O&M and Annual	93,732	4,472	58,173	50,111	9,202	(3,988)	(29,809)	(5,064)	180	10,618	5,765	6,45	3,386	10,652	8,835	9,380	2,782	357	(2,719)	(8,656)	(5,138)
Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital (Const. & TI)	4,587	0	0	4,587	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual (Lease, Rent)	89,144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Buildings	6,349	0	0	25	416	961	1,911	1,994	2,489	2,856	3,121	3,696	4,208	4,527	4,853	5,142	5,424	5,717	6,006	6,295	6,584
Capital	5,022	0	0	25	402	948	1,433	1,544	1,944	2,256	2,568	2,880	3,192	3,504	3,816	4,128	4,440	4,752	5,064	5,376	5,688
O&M	1,277	0	0	0	14	14	47	41	54	41	81	47	41	41	82	115	115	129	170	170	165
Staff Housing (O&M-Lease)	107,433	0	0	0	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320
Education	11,470	0	0	5,645	260	(91)	(1,436)	4,163	(1,565)	3,330	(214)	4,208	3,696	(4,183)	3,759	5,942	4,205	520	(33)	(5,200)	(3,473)
Capital	6,304	0	0	5,645	56	(295)	(1,640)	4,043	(1,866)	3,121	(530)	3,696	(5,367)	(4,450)	3,638	5,717	3,960	13	(940)	(5,707)	(3,960)
O&M	5,168	0	0	0	204	204	204	204	204	209	318	312	312	312	312	312	312	312	312	312	312
Health / Social Services	19,831	697	7,571	1,594	100	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581
Capital	9,962	697	7,571	1,594	100	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581
O&M	9,869	0	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recreation Play Space	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cultural Facilities	10,702	667	3,524	3,588	203	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
Capital	7,812	667	3,524	3,588	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O&M	2,890	0	0	0	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
Justice (Courts, Corrections)	28,963	1,981	35,529	18,619	1,941	(4,424)	(27,488)	(8,237)	785	791	1,306	806	856	806	806	806	806	806	806	806	806
Capital	9,138	1,981	35,529	17,852	(252)	(6,817)	(29,800)	(10,239)	806	806	806	806	806	806	806	806	806	806	806	806	806
O&M	19,825	0	0	787	2,193	2,193	2,193	2,193	1,368	1,786	546	1,111	(46)	(367)	(206)	(206)	(206)	(206)	(206)	(206)	(206)
Water Systems (Cap)	5,053	73	282	1,643	2,251	(2)	(112)	(569)	(529)	(123)	1,870	1,569	(50)	(871)	(383)	3,067	45	83	(678)	(2,437)	(1,772)
Capital	1,164	0	0	1,221	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484	484
Water Systems (Cap)	455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solid Waste Systems (Cap)	30,293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Legislative Assembly	19,728	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital (Const. & TI)	10,565	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual (Lease, Rent)	10,650	723	5,992	3,980	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)
Bulk Fuel Storage	10,650	723	5,992	3,980	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)	(658)
Capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Supply	9,121	0	0	1,543	2,333	2,333	2,333	2,333	843	1,163	553	483	(117)	473	483	423	(727)	(97)	(397)	213	233
Air Transportation	2,560	0	0	30	1,460	2,050	770	50	410	630	20	(50)	(600)	(10)	0	(60)	(1,060)	(430)	(630)	(20)	0
Capital	8,561	0	0	0	83	283	633	433	433	533	533	533	483	483	483	483	483	483	483	483	483
O&M	1,280	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marine Transportation	960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O&M	4,494	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicles	2,475	0	0	675	828	197	132	249	(170)	55	186	915	(64)	(69)	310	240	15	(62)	189	728	(88)
Capital	2,019	0	0	0	68	125	129	129	135	120	116	120	126	116	107	123	135	129	119	122	82
O&M	13,244	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff Housing Furniture (Cap)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blank	23,027	955	9,817	224	138	591	151	678	585	2,099	202	205	3,651	1,110	424	256	328	713	305	310	277
Land Development	8,518	280	8,191	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital-Residential	10,794	674	1,621	40	453	10	535	438	1,928	1	4	4	3,438	864	170	0	72	456	32	36	1
Capital-Non-residential	3,715	0	0	137	138	141	141	157	171	201	201	201	213	228	254	256	256	257	273	274	276

