

TABLED DOCUMENT NO. 101-88(1)
TABLED ON

MAR 23 1988

DEVELOPMENT PLAN

Government Library

MAR 23 1988

Government of N.W.T.
Yellowknife, N.W.T.

Young Offender Secure Custody Facilities





Development Plan

**Young Offender
Secure Custody Facilities**

Northwest Territories

Prepared for

Government of the Northwest Territories

Department of Social Services
Yellowknife, Northwest Territories X1A 2L9

Prepared by

Ferguson Simek Clark, Engineers and Architects

4910 - 53rd Street, Box 1777
Yellowknife, Northwest Territories X1A 2P4
Telephone (403) 920-2882

In association with

William Wood Consulting Limited

195 West 21st Avenue
Vancouver, British Columbia V5Y 2E3
Telephone (604) 877-1531

March 1987

CONTENTS DEVELOPMENT PLAN

Section 1	Summary of the Plan	
	The Long Term Plan	1
	Overall Capacity	1
	Estimated Cost	1
	Figure 1, Distribution of Existing Facilities	2
	Figure 2, Distribution of Proposed Facilities in Long Term	2
	Estimated Demand	3
	Figure 3, Regional Projections, Average Daily Count	3
	Planning Principles	3
	Alternative Scenarios	3
Section 2	Introduction	
	Existing Facilities	5
	Current Plans	5
	Purpose of Project	5
	Project Objectives	5
	Initial Analysis	6
	Planning Committee	6
	Report Structure	7
	Security Designations	7
Section 3	Estimated Demand for Services	
	Analytical Process	9
	Current Utilization	9
	Figure 4, Peaks and Averages, Secure Custody	9
	Regional Utilization	10
	Detained Youth	10
	Figure 5, Average Daily Counts, 1985/86	10
	Projected Population	10
	Projected Demand	10
	Figure 6, Regional Population Projections	11
	Figure 7, Regional Population Projections, Boys, 12 to 17	11
	Figure 8, Average Daily Count Estimates for Four Regions	12

Section 4	Key Planning Principles	
	Conceptual Framework	13
	Philosophical Principles	13
	Operational Policies	13
Section 5	Service Delivery Alternatives	
	Distribution Criteria	15
	Distribution Scenarios	15
	Scenarios Qualified	15
	Figure 9, Scenario One	16
	Figure 10, Scenario Two	16
	Figure 11, Scenario Three	17
	Figure 12, Scenario Four	17
	Scenarios Quantified	18
	Figure 13, Estimated Capacities, Custody Facilities	18
	Scenario One Assessed	19
	Scenario Four Assessed	19
	Scenario Three Assessed	19
	Scenario Two Assessed	19
	Inuvik Options	20
Section 6	Development Strategy	
	Overall Plan	21
	Facility Plans	21
	Figure 14, Distribution of Proposed Facilities in Long Term	21
	Iqaluit Plan	22
	Figure 15, Demand Projections, Iqaluit Facility	22
	Yellowknife Plan	22
	Inuvik Plan	22
	Fort Smith Region Plan	23
	Figure 16, Demand Projections, Yellowknife Maximum Security Unit	24
	Figure 17, Demand Projections, Inuvik Facility	24
	Figure 18, Demand Projections, Fort Smith Region Facility	24
	Anticipated Phasing	25
	Figure 19, Preliminary Definition, Implementation Phases	25
	Capital Costs	25
	Figure 20, Preliminary Design and Construction Schedules	26
	Figure 21, Estimated Total Project Costs	26
	Operating Costs	27
	Figure 22, Estimated Annual Operating Costs	27

Appendix A	Supporting Statistics	
	Purpose	29
	References	29
	Maps	29
	Charts	29
	Figure 23, NWT Regions	30
	Figure 24, Possible NWT Division	30
	Figure 25, Regional Average Daily Counts, 1985/86	31
	Figure 26, Peaks and Averages, Detained Youth at YCC	31
	Demand Calculations	31
	Figure 27, Demand Projections, Central NWT	32
	Figure 28, Regional Demand Estimates, Secure Custody	32
	Figure 29, Demand Estimates, Secure Custody Facilities	33
Appendix B	Small Secure Custody Facility	
	References	35
	Summary of Program	35
	Residential Component	35
	Program Component	36
	Administration	36
	Support Component	37
	Perimeter Security	37
	Expansion	37
	Figure 30, Space List, 12-Bed Secure Custody Facility	38
	Figure 31, Spatial Organization, 12-Bed Secure Custody Facility	39
Appendix C	Large Secure Custody Facility	
	Summary of Program	41
	Residential Component	41
	Program Component	42
	Administration	42
	Support Component	42
	Perimeter Security	42
	Figure 32, Space List, 20-Bed Secure Custody Facility	43
	Figure 33, Spatial Organization, 20-Bed Secure Custody Facility	44

Appendix D	Maximum Security Facility	
	Summary of Program	45
	Residential Component	45
	Program Component	45
	Administration	46
	Support Component	46
	Perimeter Security	46
	Figure 34, Space List, 14-Bed Maximum Security Facility	47
	Figure 35, Spatial Organization, 14-Bed Maximum Security Facility	48
Appendix E	YCC Site Planning	
	Purpose of Analysis	49
	Shared Services	49
	Profile of the Facility	49
	Modes of Access	50
	Engineering Viability	50
	Figure 36, Preliminary YCC Site Plan	52
Appendix F	Renovation Feasibility, Inuvik	
	Intent of Analysis	53
	Design Alternatives	53
	Costing Summary	53
	Option Selected	53
	Suitability of Site	53
	Existing Building	54
	Proposed Retrofit	55
	Building Code	55
	Figure 37, Preliminary Floorplan, Inuvik Renovation	56
	Figure 38, Wall Section, Inuvik Renovation	57

Appendix G

Profile of Communities

Summary of Assessment	59
Assessment Criteria	59
Scale of Demand	59
Support Services	60
Figure 39, Numerical Comparison of Communities	60
Justice Resources	60
Social Services	60
Travel Logistics	61
Impact Mitigation	61
Economic Benefits	61
Site Availability	61
Costs	62
Figure 40, Possible Sites, Cambridge Bay	63
Figure 41, Possible Sites, Coppermine	64
Figure 42, Possible Sites, Rankin Inlet	65
Figure 43, Possible Sites, Eskimo Point	66
Figure 44, Possible Sites, Baker Lake	67

Appendix H

Detailed Cost Estimates

Capital Costs	69
Figure 45, Estimates of Total Project Costs	69
Figure 46, Cost Estimates for Alternatives	70
Cashflow Estimates	70
Figure 47, Cashflow Projections	71
Operating Costs	71
Figure 48, Estimates of Payroll and Operating Costs	72
Operating/Maintenance	72
Figure 49, Estimates of Operating and Maintenance Costs	72
Staffing Requirements	73
Figure 50, Staff-to-Capacity Ratios	73

Appendix I

List of Participants

Planning Committee	75
Contributors	75
Consultant Team	76

SECTION 1

SUMMARY OF THE PLAN

The Long Term Plan

Figures 1 and 2 illustrate the current and planned distribution of secure custody facilities for young offenders in the Northwest Territories (NWT). In the long term, the plan would be to replace the three existing facilities in Yellowknife, Hay River, and Fort Smith with the following four new units:

- **Eastern Arctic Secure Custody Facility, Iqaluit**

Continue with the current plan for a new 12-bed facility on the site of the Baffin Correctional Centre (BCC), but make specific provision in the design to easily increase the total long term capacity to 17 beds. This unit would serve the Baffin, Keewatin, and Kitikmeot Regions.

- **NWT Maximum Security Facility, Yellowknife**

Proceed as soon as possible to provide a 14-bed maximum security unit to be constructed as a separate building on the site of the Yellowknife Correctional Centre (YCC). This unit would accommodate high security risk young offenders from throughout the NWT.

- **Inuvik Region Secure Custody Facility, Inuvik**

Within the next two fiscal years, complete renovations to a Canadian Forces building in Inuvik to accommodate a 12-bed young offender facility. This unit would serve young offenders from the Inuvik Region, plus those from the Kitikmeot and other regions who fit into the land-oriented program.

- **Fort Smith Region Secure Custody Facility, Fort Smith or Hay River**

As the final phase of the plan, build a new 20-bed unit to serve the Fort Smith Region. Depending on the results of further analysis, this facility would be located in either Fort Smith or Hay River. Unlike the urgency associated with the other young offender facilities, implementation of the Fort Smith Region Secure Custody Facility could be deferred for up to ten years.

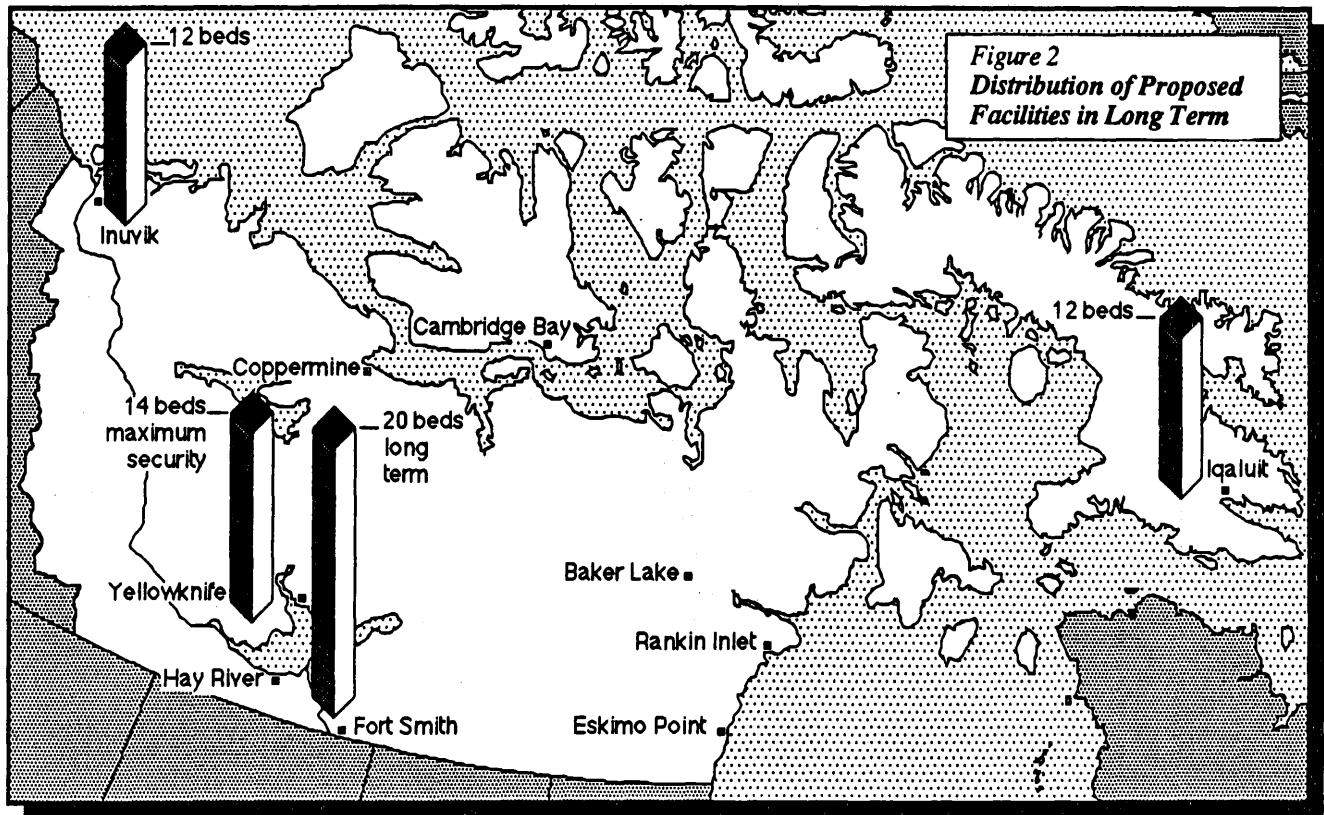
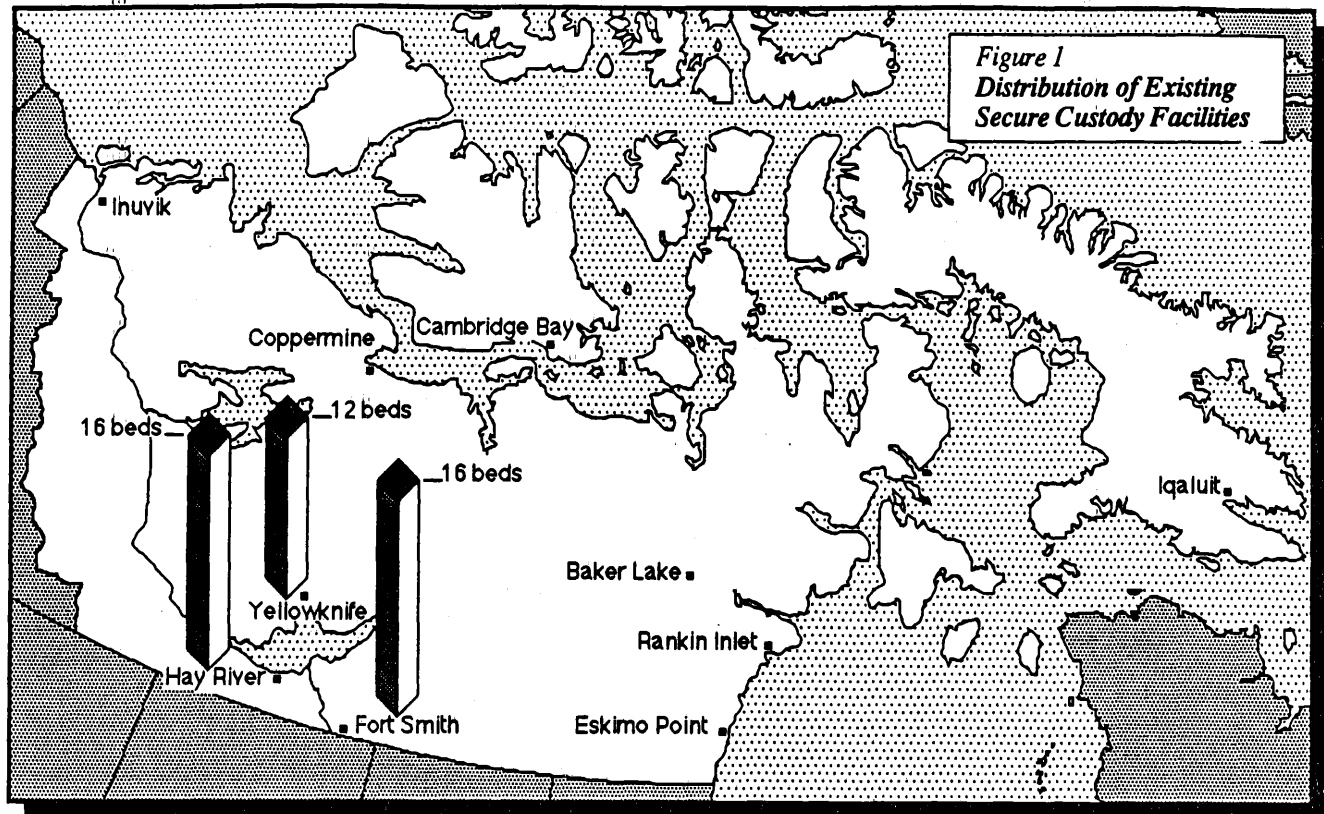
Overall Capacity

Assuming that the Iqaluit unit is not expanded, the new facilities would comprise a total capacity of 58 beds, a one-third increase over the existing 44-bed total. In addition to providing a more equitable regional distribution of service, the planned facilities will meet the anticipated need for secure custody in the NWT until beyond the turn of the century.

Estimated Cost

Preliminary analysis indicates that implementation of the facilities in Iqaluit, Yellowknife, and Inuvik could be completed by the summer of 1990 at an estimated cost of \$5.7 million. Future commitments for a new facility in the Fort Smith Region were estimated at an additional \$2.6 million.

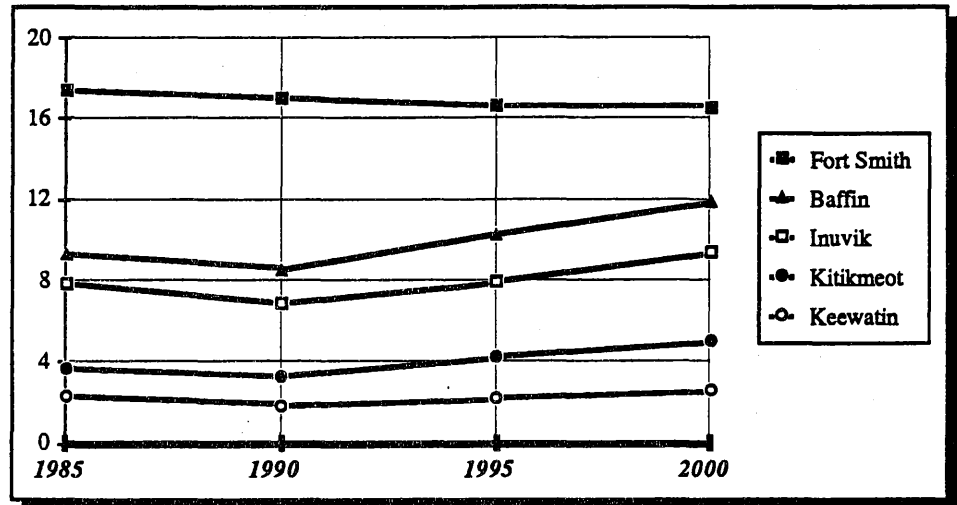
Costs are quoted in current, first-quarter 1987 dollars. Allowances for escalation, which are in the order of five percent per annum, would depend on the anticipated time of tendering.



Estimated Demand

Based primarily on the projected population of adolescents, it was estimated that by 2000 the demand for secure custody in the NWT will grow from the current average of approximately 41 to nearly 46 young offenders, including youth being detained prior to disposition. Figure 3 illustrates the best estimates of future demand for each region. Since there is considerable fluctuation in the actual numbers in custody, facilities were planned with capacities greater than the average count.

*Figure 3
Regional Projections,
Average Daily Count*



Planning Principles

The following key philosophical and operational principles influenced the scale, distribution, and nature of the the planned secure custody facilities:

- To house young offenders separate from adult offenders as specified in the Young Offenders Act.
- To house young offenders with secure custody sentences separate from those with open custody dispositions.
- To provide facilities as close as possible to each young offender's residence.
- To provide the same level of service to female as to male young offenders.
- To place each young offender in the least restrictive setting consistent with community safety and individual needs.
- To house high security risks separate from other young offenders.
- To build secure custody facilities with capacities of at least 12 beds to maintain operating costs at an acceptable level.

Alternative Scenarios

Prior to deciding on the preferred plan, several alternative service delivery scenarios were examined, including:

- **The relatively centralized option of providing facilities in Yellowknife and Iqaluit only was rejected, since it did not respond well to the principle of regionalization. Also, operational problems were anticipated with combining high security offenders with other young offenders in secure custody.**
- **Insufficient demand was projected to warrant provision of the minimum 12-bed facility for the central arctic. However, the number of young offenders from the Keewatin and Kitikmeot Regions should be monitored to determine if and when a secure custody facility may be justified.**

SECTION 2 INTRODUCTION

Existing Facilities

At present, there are three secure custody facilities for young offenders in the NWT (reference **Figure 1** in **Section 1**):

- **Yellowknife:** a 12-bed unit in a renovated portion of the YCC, primarily used for higher security young offenders.
- **Hay River:** a 16-bed facility in a renovated receiving home, used to accommodate male young offenders.
- **Fort Smith:** a 16-bed facility in a renovated receiving home, used to accommodate girls and younger boys.

None of these existing facilities are considered satisfactory for long term secure custody of young offenders. Most lack program space and all possess other shortcomings related to security, operational effectiveness, energy efficiency, and environmental quality. Further, contrary to the policy of regionalization, all three facilities are located in the Fort Smith Region.

Current Plans

Prior to initiating this study, plans were approved to proceed with design of a 12-bed medium security young offender facility to be located on the grounds of the BCC in Iqaluit. This Eastern Arctic Young Offender Facility is the first step towards replacing existing young offender secure custody facilities in the NWT.

Purpose of Project

Parallel with plans for the new Iqaluit facility, the Government of the Northwest Territories (GNWT) wanted to formulate a development strategy for the provision of young offender secure custody facilities for the entire NWT. Ferguson Simek Clark in association with William Wood Consulting was retained to produce such a Development Plan.

Project Objectives

The following specific project objectives, based on the Request for Proposals and modified through subsequent discussions, defined the nature and content of this Development Plan for Young Offender Secure Custody Facilities in the NWT:

- To determine the need for secure custody facilities for each region in the NWT.
- To define the most appropriate size, type, and location of facilities to meet the estimated need.
- To define facilities requirements for young offender facilities, including necessary spatial relationships.
- To examine the feasibility of renovating a Canadian Forces building in Inuvik as a secure custody unit.
- To examine the feasibility of replacing the existing YCC young offenders unit by constructing a maximum security facility on the YCC site.

SECTION 3

ESTIMATED DEMAND FOR SERVICES

Analytical Process

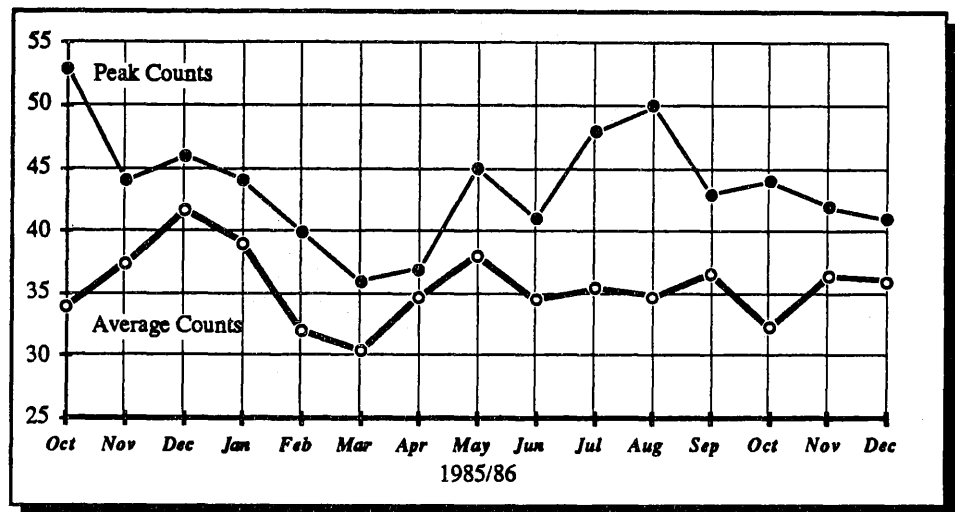
The steps followed to assess the need for young offender secure custody facilities were:

- To establish the current level of utilization by determining the average daily count (ADC) for young offenders sentenced to secure custody in the recent past.
- To determine the current ADC for each of the five NWT regions.
- To estimate the current ADC for youth detained in secure custody prior to disposition.
- To estimate future demand for secure custody based on the total number of 12 to 17 year-old boys in each region according to GNWT population projections.
- To allow for judgements regarding future conditions to modify the demand calculations.
- To determine the actual number of beds to be provided by allowing for peaks in the day-to-day demand in relation to specific service delivery scenarios. This step in the analysis is addressed in Section 5.

Current Utilization

Figure 4 presents the peak and average daily counts for young offenders sentenced to secure custody in the NWT for the 15-month period, October 1985 to December 1986. October 1985 was chosen as the starting point for the assessment of current utilization since it represented the beginning of a relatively stable period following the introduction of the Young Offenders Act. The results of this analysis indicated that, on average, there were approximately 36 young offenders in secure custody at any one time for the base 1985/86 year.

*Figure 4
Peaks and Averages,
Secure Custody*



Regional Utilization

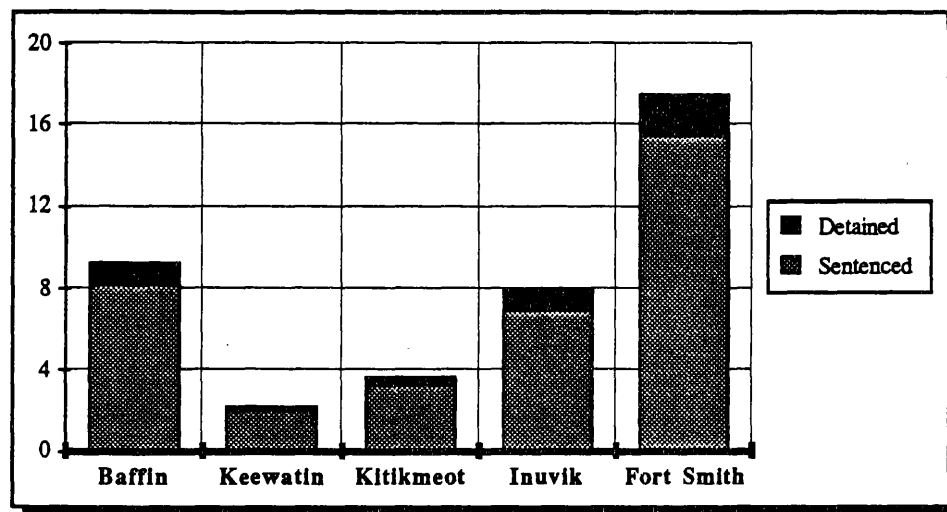
Determining the current ADC for each of the five NWT regions was difficult since these data are not kept on a routine basis. Consequently, the division into regional average daily counts (reference Figure 5) was based on comparison with peak counts and other information available by region. Reference Figure 25 in Appendix A for details of the analysis.

Detained Youth

An analysis of recent data (reference Figure 26 in Appendix A) indicated that, while the actual numbers fluctuate greatly, youth detained in custody prior to disposition account for approximately 13 percent of the number of sentenced young offenders in secure custody. This estimate, which is reflected in Figure 5, yields a current total NWT average daily count in secure custody of close to 41 young offenders.

As expected, the Fort Smith Region accounts for the largest demand for secure custody with the Baffin and Inuvik Regions each generating approximately half the Fort Smith levels. There are very few young offenders in secure custody from the Kitikmeot and Keewatin Regions.

Figure 5
Average Daily Counts,
1985/86



Projected Population

Figure 6 illustrates the current NWT regional population estimates to the year 2000 according to GNWT Bureau of Statistics. It indicates that each region will grow, albeit at somewhat different rates.

However, the numbers of young persons is not expected to increase at the same rate as the overall population. Consequently, the target population for this study was identified as 12 to 17 year-old boys, since the vast majority of young offenders are male. Figure 7 illustrates that the estimated number of adolescent boys will reduce until the mid-1990's before increasing. Further, the rates of change in various areas will differ with the Baffin and Kitikmeot Regions experiencing the largest percentage increase.

Projected Demand

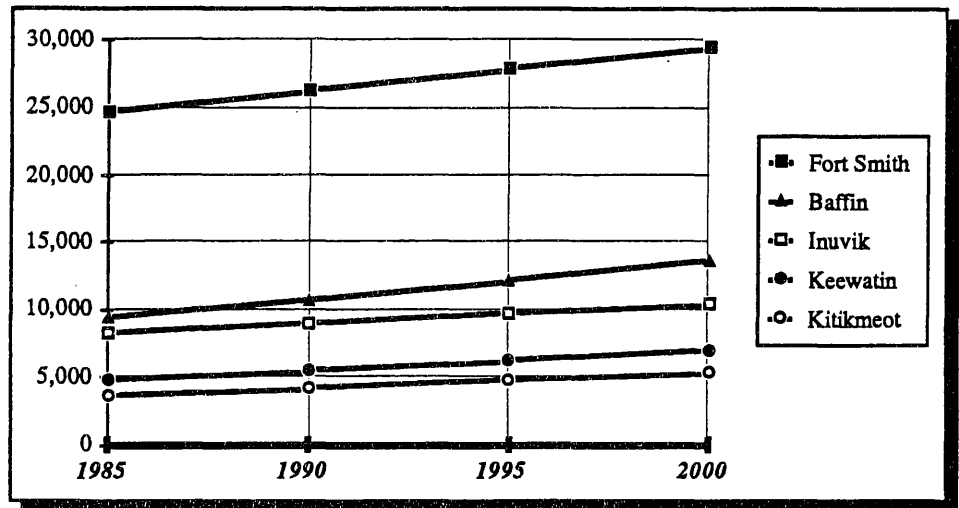
Figure 8 illustrates the best estimates of future demand for secure custody of young offenders based on the following:

- Demand for secure custody will be in proportion to the total number of adolescent boys in the population.

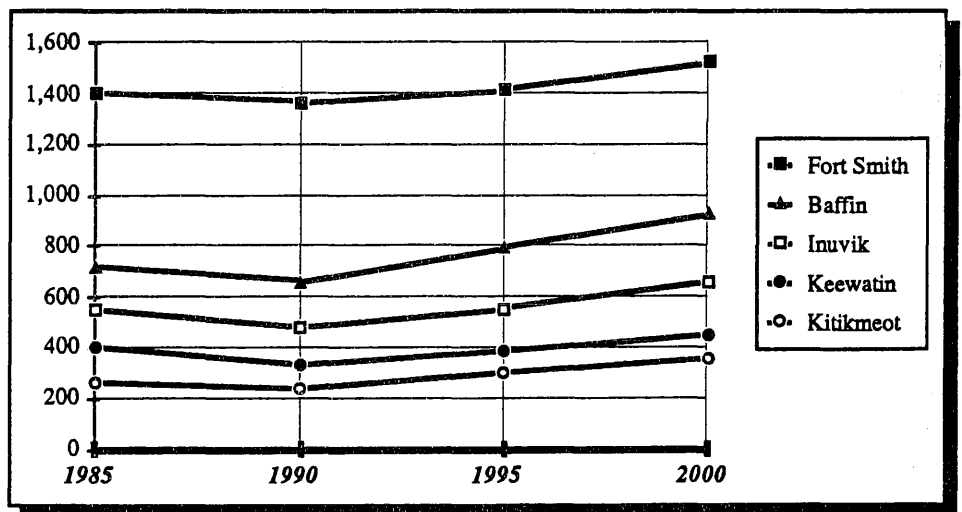
- The demand estimates for the Kitikmeot and Keewatin Regions were combined, since a facility may be justified only if it served both regions. Reference **Figure 3** for forecasts of future average daily counts in Kitikmeot and Keewatin.
- In all regions except Fort Smith, it was anticipated that improvements in open custody and community-based programs for young offenders would be offset by increased social problems resulting in delinquency.
- In the Fort Smith Region, the demand for secure custody was reduced by approximately 10 percent to account for expected improvements in open custody and community-based programs.

Overall, by the year 2000, the demand for secure custody in the NWT was estimated to grow by approximately 12 percent from the current average count of approximately 41 to nearly 46 young offenders. Reference **Figures 28 and 29** in Appendix A for detailed calculations of future demand.

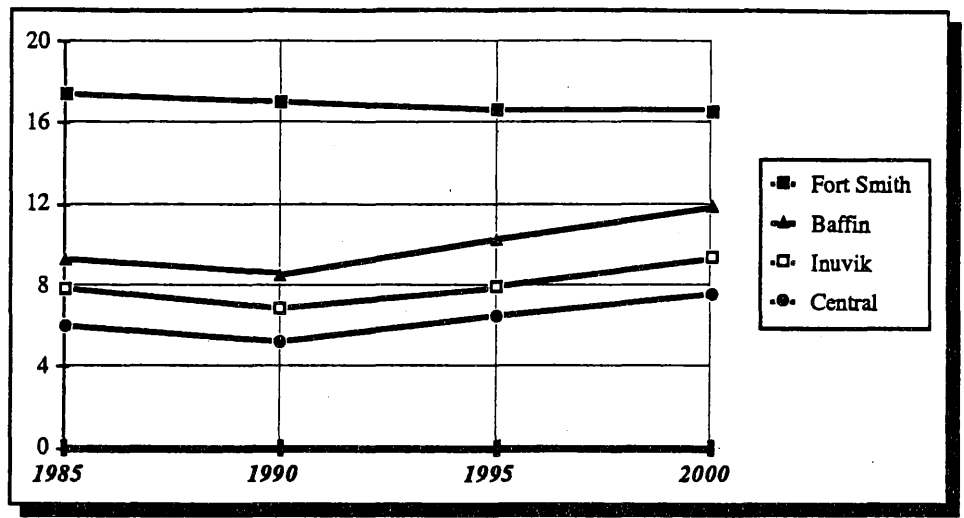
*Figure 6
Regional
Population Projections*



*Figure 7
Regional
Population Projections,
Boys, 12 to 17*



*Figure 8
Average Daily
Count Projections,
Four Regions*



SECTION 4

KEY PLANNING PRINCIPLES

Conceptual Framework Section 4 presents key philosophical, operational, and facilities planning principles which form the conceptual framework for the recommended plan to provide young offender secure custody facilities in the NWT.

Philosophical Principles The following philosophical principles and policies have influenced the scale, distribution, and nature of the proposed young offender secure custody facilities:

- To house young offenders separate from adult offenders, as specified in the Young Offenders Act.
- To house young offenders with secure custody sentences separate from those with open custody dispositions. As a result of current policy-level discussions, it is possible that in the future open and secure custody young offenders could be held in the same facility.
- To provide facilities as close as possible to each young offender's residence.
- To provide the same level of service to female as to male young offenders.
- To place each young offender in the least restrictive setting within the limits of law, community safety, and the needs of individual young offenders.
- To integrate secure custody facilities with the community through a variety of mechanisms, such as using community resources, encouraging volunteers, and involving the offenders in community service work.
- To continue to hold pre-disposition detained youth, commonly referred to as 'remands', together with sentenced young offenders.
- To differentiate those young offenders who are deemed a high security risk and house them separately in a single maximum security facility.

Operational Policies The following operational and facilities planning principles and policies have influenced the size, spatial organization, and cost of the proposed young offender secure custody facilities:

- To build secure custody facilities with capacities of at least 12 beds to maintain operating costs at an acceptable level. Reference page xxx and Figure 50 in Appendix H for an analysis of staff required for various building capacities.
- To avoid building secure custody facilities with a capacity of more than 25 beds.

- To recognize that it will be difficult to recruit and train qualified personnel for the young offender secure custody facilities, particularly outside of the Fort Smith Region.
- To provide for the accommodation of girls in each medium security facility, but not in the maximum security facility.
- To provide a mix of single and double-occupancy bedrooms, largely to allow the staff placement options in response to individual preferences as well as security and program objectives.
- To provide all single-occupancy bedrooms in maximum security.
- To organize the residential component of secure custody-facilities into groups of approximately 8 to 15 beds.
- To maximize the involvement of young offenders in maintenance chores such as food preparation, laundry, cleaning, and groundskeeping.
- To emphasize active staff supervision as the primary means of maintaining security.

SECTION 5

SERVICE DELIVERY ALTERNATIVES

Distribution Criteria

The extent of distribution was the primary variable to be determined in addressing the range of alternatives available for the provision of Young Offender Secure Custody Facilities. At the most centralized extreme, one facility would serve the whole of the NWT. On the other hand, in response to the principle of bringing government services to the people, it would be best to have facilities in as many communities as possible. In the context of the small and dispersed NWT population, an ideal would be to have a facility for secure custody of young offenders in each of the five regions.

A second consideration in the development of service delivery scenarios relates to degree of specialization. For secure custody facilities, the most important aspect of specialization is the designated security level. The most generic alternative is to have each regional facility accommodate young offenders of all security classifications. A practical alternative for the NWT is to have one maximum security unit to house the most difficult young offenders from all regions.

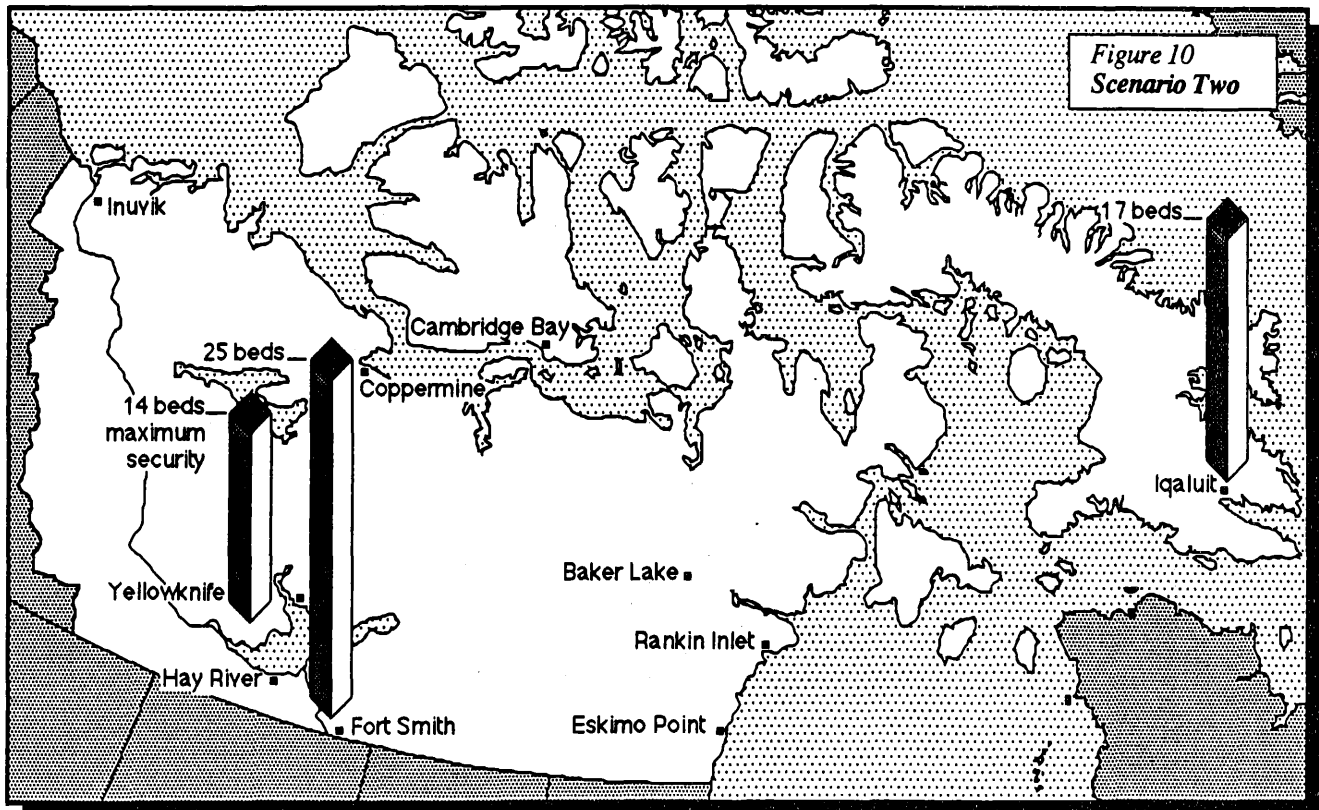
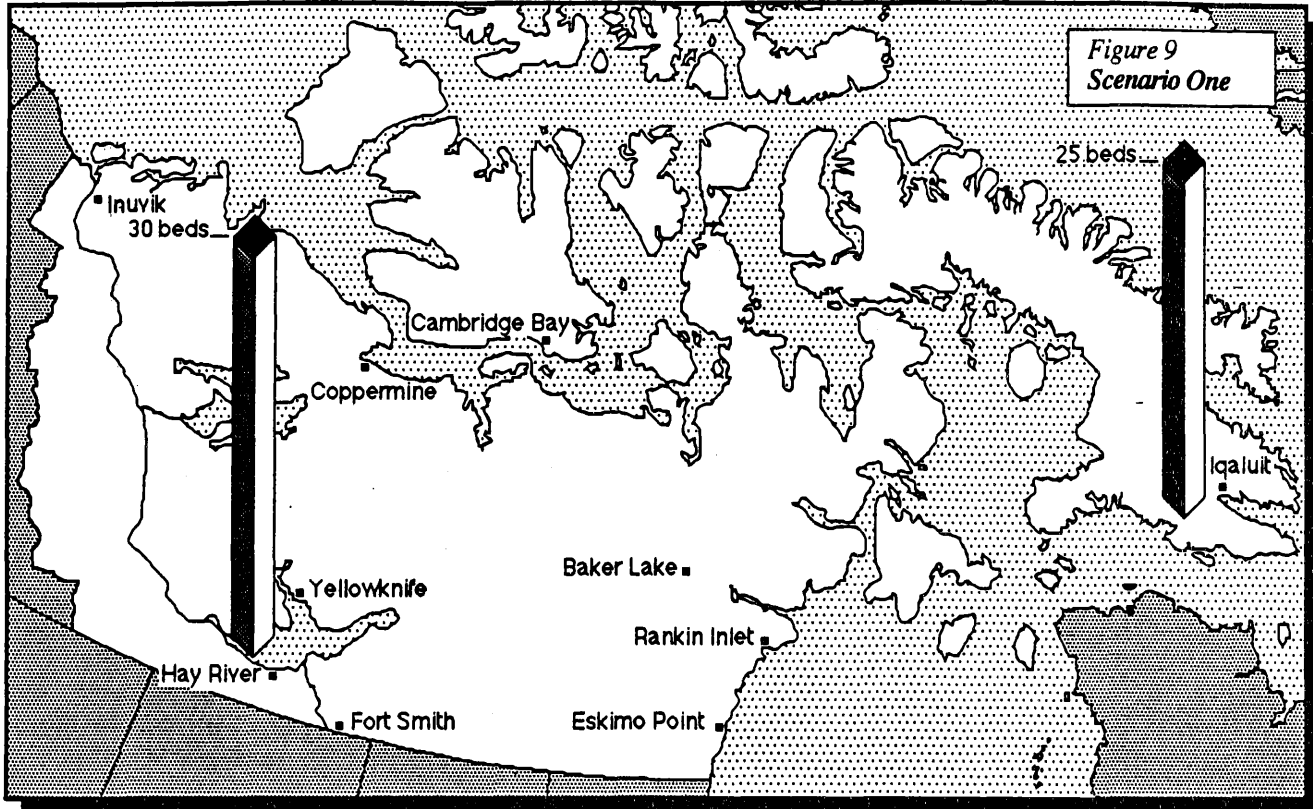
Distribution Scenarios

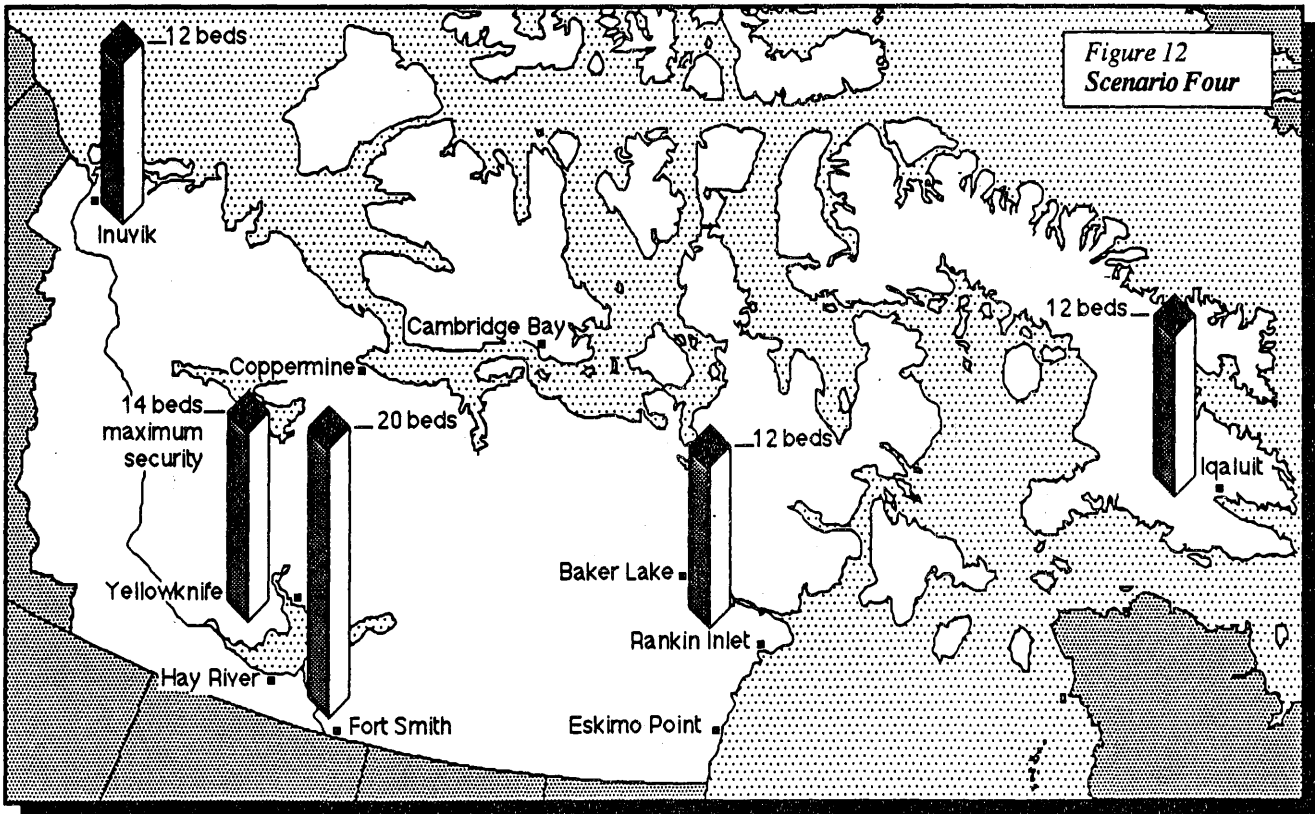
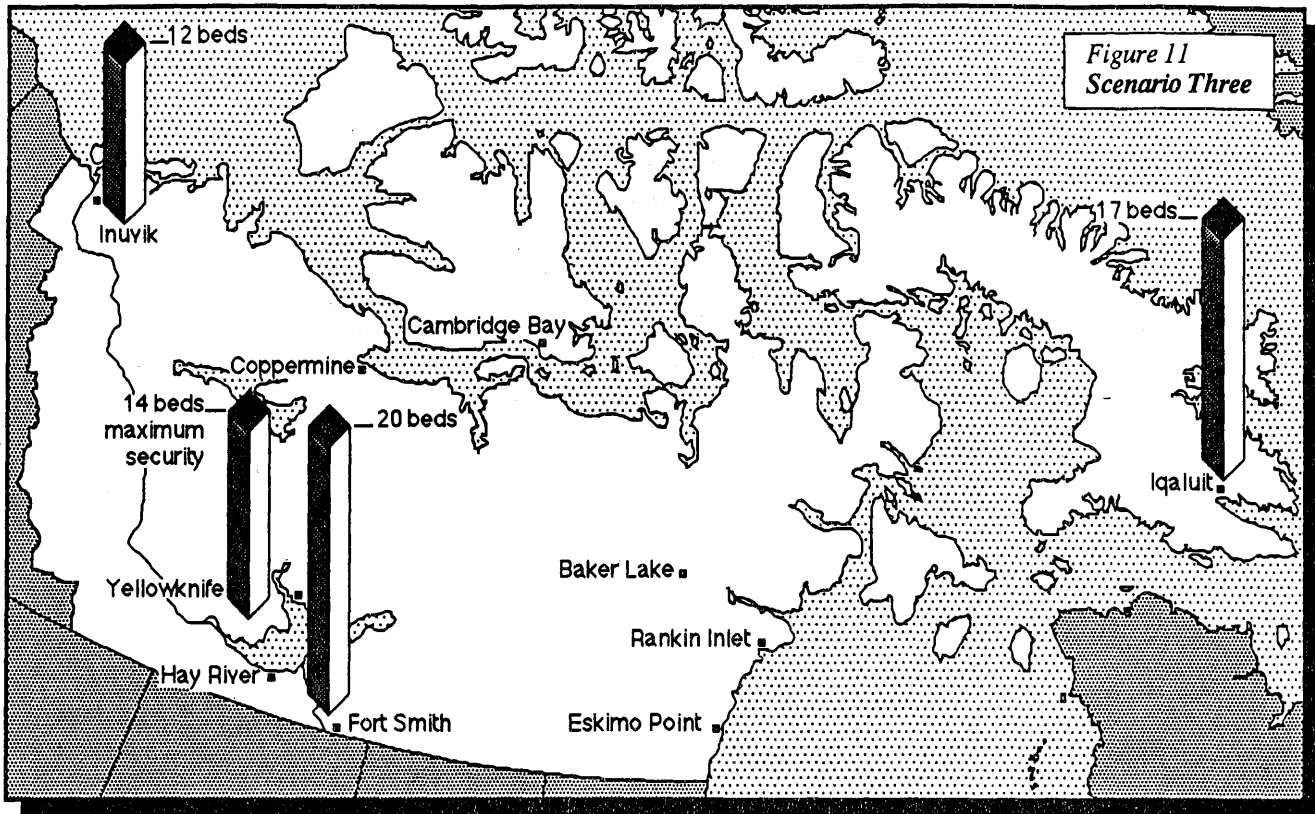
After considering the extent of decentralization and specialization, the following four service delivery scenarios were identified for further analysis (reference Figures 9 to 12):

- **Scenario One**, comprising combined secure custody and maximum security facilities in Yellowknife and Iqaluit. In the context of a divided NWT (reference Figure 9), Iqaluit would meet all the needs of Nunavut, while the Yellowknife would serve the western territory.
- **Scenario Two**, comprising a maximum security facility in Yellowknife, plus secure custody facilities in Iqaluit and in either Hay River or Fort Smith (reference Figure 10). The Yellowknife facility would serve the whole NWT, with Iqaluit and Hay River/Fort Smith serving Nunavut and western NWT, respectively.
- **Scenario Three**, would be similar to Scenario Two except that a third secure custody facility would be added in Inuvik (reference Figure 11).
- **Scenario Four**, would be similar to Scenario Three except that a fourth secure custody facility would be built in Rankin Inlet, Cambridge Bay, Baker Lake, Coppermine, or Eskimo Point to serve the Keewatin and Kitikmeot Regions (reference Figure 12).

Scenarios Qualified

Theoretically, the most centralized option would be to have one facility, presumably located in Yellowknife, to serve the whole NWT. This alternative was not seriously considered, since approval has already been received for the planning of a secure custody facility in Iqaluit. Also, the single institution required would be larger than the ideal maximum capacity of approximately 25 beds.





Similarly, a more distributed scenario with facilities in each of the Keewatin and Kitikmeot Regions was not pursued, since the level of demand in each of these regions was clearly much less than the preferred minimum 12-bed facility.

Finally, although Scenarios One, Two, and Three describe the areas served in terms of a divided NWT, it is **not** necessary for division to proceed to validate these service delivery alternatives. If the NWT remains as at present, it is clear that there will be a more regionalized form of government in the future. Similarly, changes in the boundary between Nunavut and the western territory are unlikely to have a significant impact on the scale of demand for each potential custody facility.

Scenarios Quantified

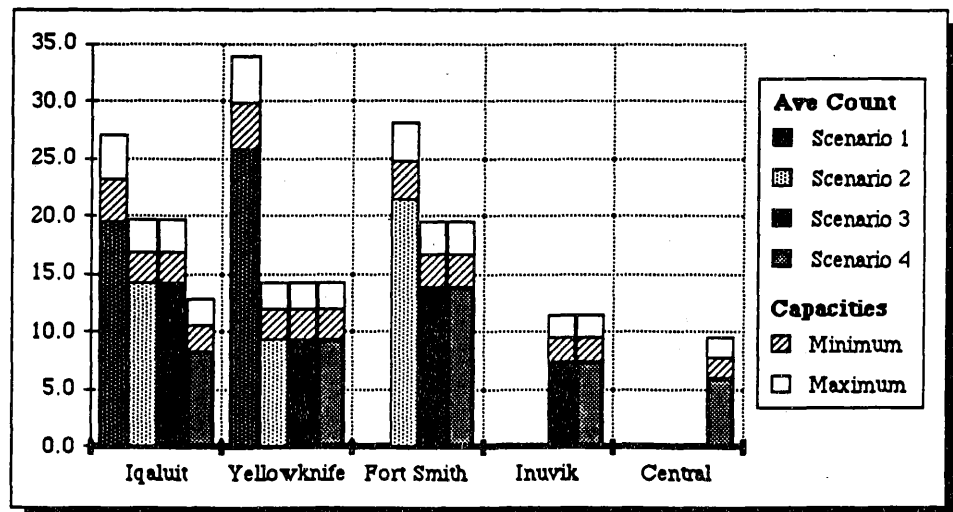
Next, the long term demand for secure custody facilities was estimated for each of the four service delivery scenarios. The anticipated average daily count for each facility is illustrated in **Figure 13**. The numbers of young offenders and detained youth who would be considered maximum security (and therefore transferred to the Yellowknife facility in all but Scenario One) was estimated as 30 percent for the Baffin Region, 15 percent for the Fort Smith Region, and 20 percent for the remaining regions. Reference **Figure 28** in Appendix A for detailed calculations.

To estimate the actual number of beds to be provided, it was necessary to apply the following 'peaking factors' to allow for fluctuations in demand:

- Add at least 25 percent and not more than 50 percent for facilities with average daily counts of less than 10.
- Add at least 20 percent and not more than 40 percent for facilities with average daily counts of between 10 and 20.
- Add at least 15 percent and not more than 30 percent for facilities with average daily counts of more than 20.

Figure 13 illustrates the results of applying the peaking factors to obtain estimates of the minimum and maximum capacities of facilities in each scenario for the level of demand anticipated by the year 2000.

*Figure 13
Estimated Capacities,
Custody Facilities*



Scenario One Assessed Scenario One, with relatively large facilities provided in Yellowknife and Iqaluit only, was perceived as a viable alternative, but was considered less desirable than the other three scenarios because:

- The relatively centralized distribution of facilities did not respond well to the principle of providing services as close as possible to the young offenders' residences.
- The facility required for Yellowknife would be somewhat larger than the ideal maximum 25-bed capacity.
- Inclusion of maximum security young offenders would result in operational restrictions which would adversely affect all residents.

Scenario Four Assessed Scenario Four was considered impractical for the foreseeable future, since insufficient demand was projected to warrant providing the minimum 12-bed facility to serve the Keewatin and Kitikmeot Regions (reference Figure 27 in Appendix A). However, the number of young offenders originating in these two regions should be monitored closely with the view to providing a secure custody facility in the long term. Reference Appendix G for a discussion of the relative merits of five communities as a potential location for a future secure custody facility for the central NWT.

Scenario Three Assessed

Scenario Three has facilities in Iqaluit, Yellowknife, Inuvik, and the Fort Smith Region. This distribution of secure custody facilities was selected as the most appropriate for the NWT over the next ten to fifteen years, since:

- The concept of a central Maximum Security Unit in Yellowknife will allow each of the regional secure custody facilities to operate with a more rehabilitative emphasis.
- Sufficient demand is anticipated to warrant the provision of facilities with capacities of 12 or more beds, which will yield acceptable overall operating budgets.
- The three most populous regions (Fort Smith, Baffin, and Inuvik) will be provided with secure custody facilities.
- Young offenders from the remaining two regions (Kitikmeot and Keewatin) will be accommodated closer to home, both geographically and culturally, than at present.

Scenario Two Assessed The primary difference between Scenarios Two and Three is that Scenario Two has no secure custody facility in Inuvik. Scenario Two was considered viable and an acceptable alternative to Scenario Three. In fact, a strategy should be adopted which focuses on Scenario Three with the provision of a facility in Inuvik, but allows for the possibility of 'falling back' to Scenario Two with facilities in Iqaluit, Yellowknife, and Hay River/Fort Smith only.

Inuvik Options

If, after further planning and deliberation, it is decided not to proceed with the Inuvik facility, then the scale of facilities to be provided in the Fort Smith Region (reference **Figure 17**) and, to a lesser extent, the Baffin Region should be re-assessed. **Section 6**, which presents a description of the preferred development strategy, combines aspects of Scenarios Three and Two. The future plan for young offender secure custody facilities also includes some long term reference to the Keewatin/Kitikmeot facility of Scenario Four.

SECTION 6

DEVELOPMENT STRATEGY

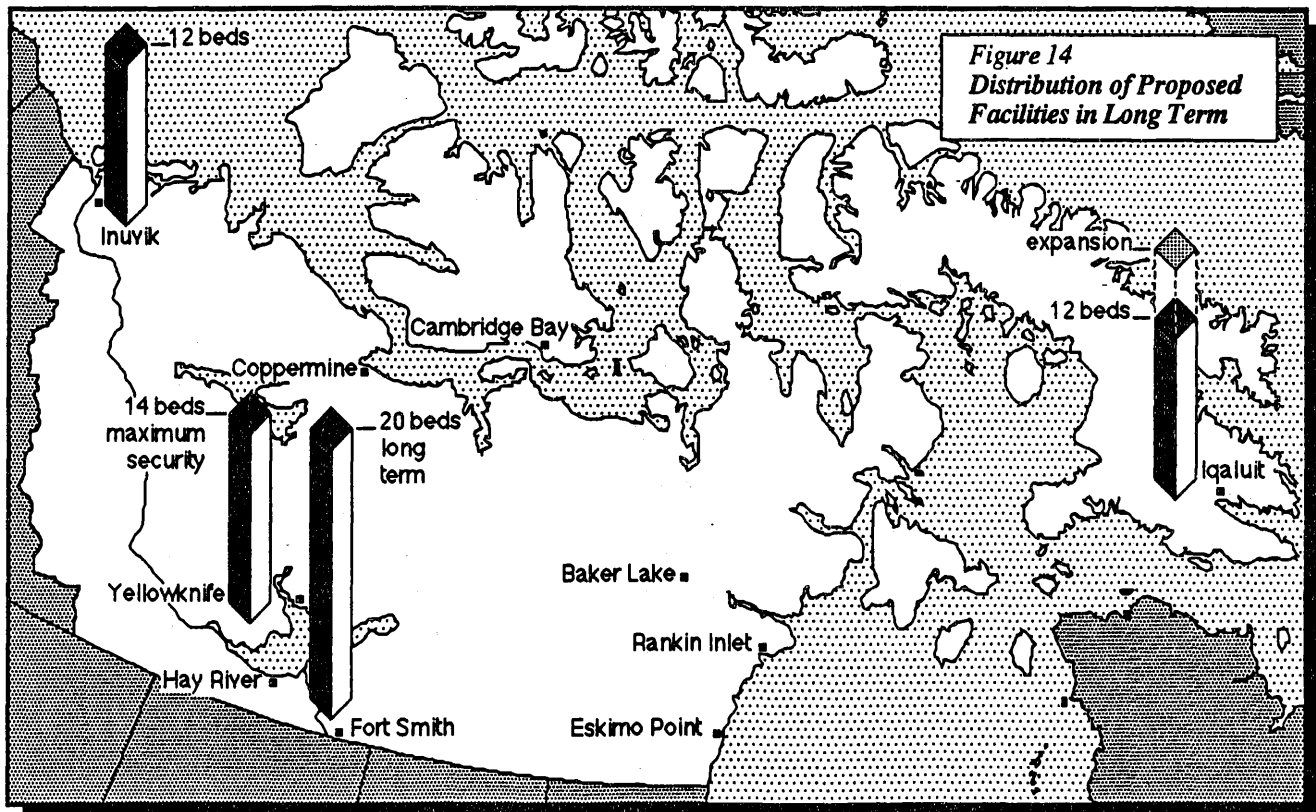
Overall Plan

As outlined in the previous section and illustrated in Figure 14, the long term plan for young offender secure custody in the NWT would comprise facilities in Iqaluit, Yellowknife, Inuvik, and in either Hay River or Fort Smith. Implementation of the Iqaluit, Yellowknife, and Inuvik buildings should proceed as soon as possible. Specific plans to build a single facility to serve the Fort Smith Region can be developed at a more relaxed pace, since the existing facilities in Hay River and Fort Smith are adequate for the next five to ten years.

In addition, the development strategy for secure custody should allow for the possibility that further study, chronic under-utilization, or continual operational problems may result in the elimination of the Inuvik facility from the overall plan. Finally, a long term strategy should bear in mind that a fifth facility to serve the Kitikmeot and Keewatin Regions may be implemented sometime in the longer term.

Facility Plans

The first step toward the delineation of a specific development strategy for secure custody facilities was to determine the size of each proposed building. Next, the most appropriate means of providing each facility was explored. The following subsections present the recommended capacities and building option for each young offender secure facility, together with a summary of relevant considerations.

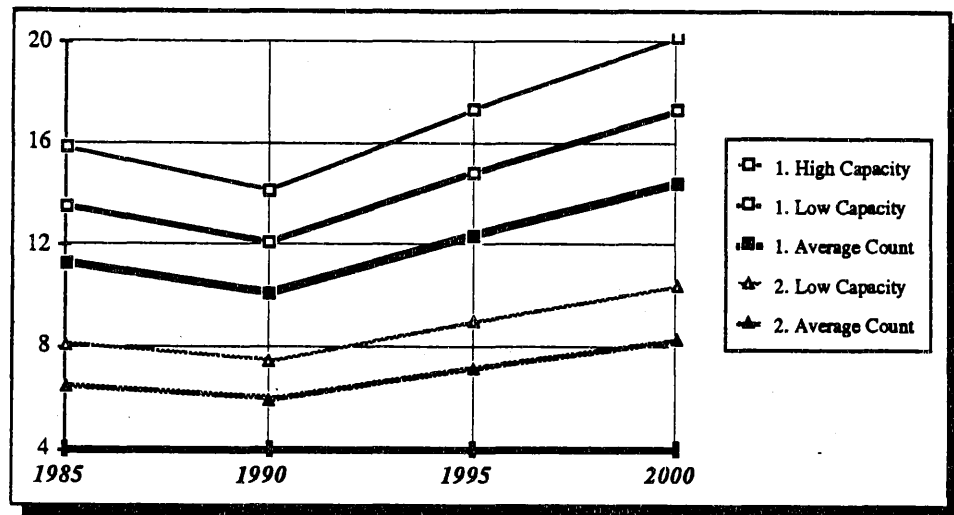


Iqaluit Plan

The strategy for Iqaluit is to continue with the current plan to construct a new 12-bed facility on the BCC site, but make specific provision to add another 5 beds for a potential long term capacity of 17 beds.

The primary set of demand projections illustrated in **Figure 15**, which assume that no facility is built in the Kitikmeot or Keewatin Region, indicate that the planned 12-bed facility will be overtaxed by the early 1990's. It will be possible to relieve the pressure in the short term by continuing to send young offenders who may not be considered maximum security, but represent an increased risk, to Yellowknife. The pressure on Iqaluit may be further reduced by transferring some offenders, particularly those from the Kitikmeot Region, to Inuvik.

*Figure 15
Demand Projections,
Iqaluit Facility*



Yellowknife Plan

The Yellowknife Maximum Security Young Offender Facility should accommodate up to 14 residents. As illustrated in **Figure 16**, this 14-bed capacity will meet the anticipated demand to 2000 and beyond.

Provision of a separate new young offender building on the YCC site is feasible, as described in **Appendix E**. Although more detailed planning is required to fully explore the issues, the most promising alternative is to place the new unit on a corner of the YCC site (reference **Figure 36** in **Appendix E**) with separate vehicular access to the young offender unit, delivery of meals to the young offender unit from the YCC kitchen, and shared use of the YCC gymnasium by young offenders.

Inuvik Plan

The Inuvik Secure Custody Young Offender Facility should be built with the minimum recommended capacity of 12 beds. Further, as described in **Appendix F**, the GNWT should take advantage of the opportunity to accommodate the program in a renovated Canadian Forces building which is currently available.

As **Figure 17** indicates, the Inuvik Region itself is not likely to generate sufficient demand to maintain the centre at optimal utilization until after the turn of the century. There are, however, several ways to improve the viability of the Inuvik facility, including:

- Reduce the number of staff slightly during periods when the facility has a consistently low average daily count (reference **Figure 50** in **Appendix H** for staffing estimates at lower capacities).
- Creatively exploit the opportunities for larger areas presented in the renovation plans to enhance the program offered (reference **Figure 37** in **Appendix F**).
- Develop a specific rehabilitative orientation, such as a 'land program', which would be appropriate for selected young offenders from areas outside the Inuvik Region, particularly the Kitikmeot Region.
- Consider the Inuvik as a backup facility to other centres in the NWT young offender secure custody network.
- Renovate the Canadian Forces building as a 'medium term refit' rather than a major retrofit (reference **Appendix F**) so that the capital investment being risked is minimized in the event that the Inuvik facility proves inordinately difficult to staff or uneconomical to operate.

Fort Smith Region Plan In the long term, the existing secure custody facilities in Hay River and Fort Smith should be replaced with a new building designed to accommodate up to 20 young offenders. Further, the building design should provide a clear indication of how to add an additional 5 beds plus associated support space.

The secondary set of demand projections illustrated in **Figure 18**, which assumes no Inuvik facility, indicate that the planned 20-bed facility will be overtaxed by the early 1990's. Unlike the Iqaluit situation, it is not likely that expansion in Fort Smith Region facility would be necessary for the foreseeable future.

Further study is required to determine the most appropriate location of the Fort Smith Region facility. The communities of Fort Smith or Hay River appear to be the most promising alternatives. In the case of Hay River, one specific option would be to build on the existing site. However, initial analysis indicated that it would be very difficult to build the new facility on the south side of the site with the existing facility continuing to operate.

Additional issues which should be addressed in future planning of the Fort Smith Region Secure Custody Facility include:

- Is it possible to maintain the Fort Smith and/or Hay River facilities for alternative uses for the Department of Social Services, such as open custody for young offenders?
- At what point should secure custody be discontinued for each of the existing facilities? Specifically, when the Inuvik facility becomes fully operational, will it be advisable to stop sending young offenders with secure custody dispositions to existing centres in either Hay River or Fort Smith?
- Is it possible to maintain continuity by arranging the closure of either existing facility so that the staff move directly from their current location into the new facility when it opens?

Figure 16
Demand Projections,
Yellowknife
Maximum Security Unit

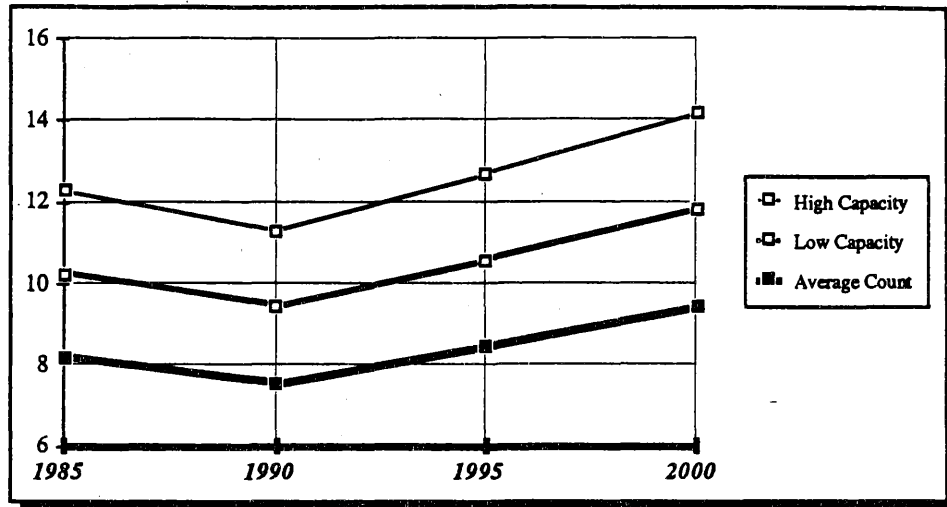


Figure 17
Demand Projections,
Inuvik Facility
Fort Smith Region

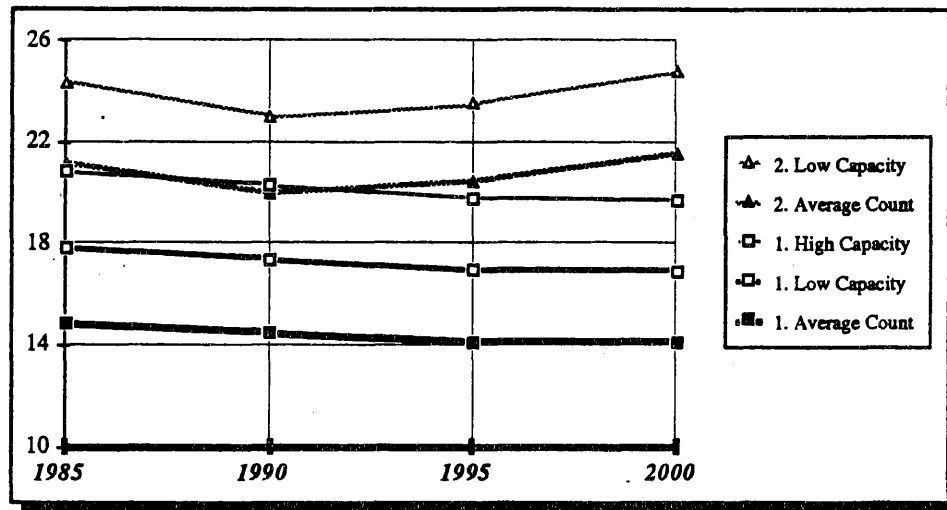
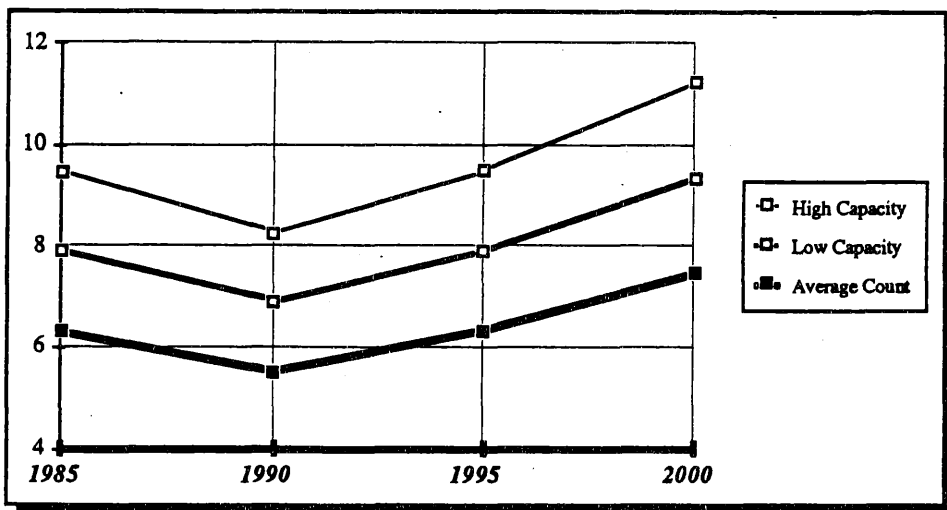


Figure 18
Demand Projections,
Fort Smith Region
Facility
Inuvik Facility



**ADDENDUM TO DEVELOPMENT PLAN FOR YOUNG OFFENDERS
SECURE CUSTODY FACILITIES**

Figures 17 and 18 on Page 24 of the report are erroneous.
Figures 17 should read Demand Projections, Fort Smith Region
and Figures 18 should read Demand Projections, Inuvik Facility.

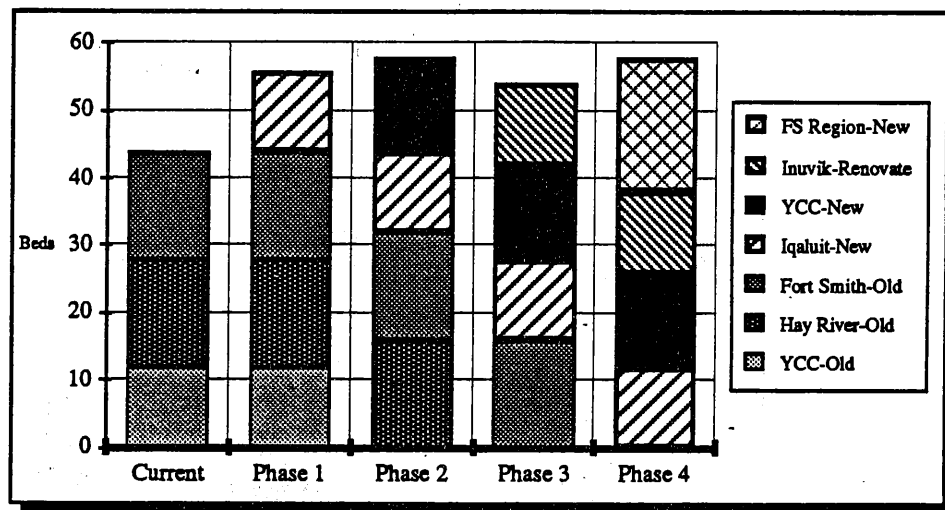
Anticipated Phasing

Figure 19 illustrates the definition of the development strategy into four phases, the first three of which should proceed as quickly as possible:

- **Phase 1**, which has already begun with the approval to proceed with design, comprises the addition of the Iqaluit facility to the existing inventory of secure custody beds.
- **Phase 2**, which should be initiated as soon as possible, consists of replacing the existing YCC young offender unit with a new freestanding Maximum Security Facility on the YCC site.
- **Phase 3** entails completing renovations to the Canadian Forces building in Inuvik.
- **Phase 4**, which would be the final, long term step in implementing the plan, comprises the replacement of the existing Fort Smith and Hay River facilities with a single new building in a location yet to be determined.

Figure 20 presents tentative design and construction schedules for proposed building projects in Iqaluit, Yellowknife, and Inuvik. It is anticipated that the Fort Smith Region Facility would be implemented within five to ten years. Any facility being considered for the central arctic most likely would not be available until after the turn of the century.

*Figure 19
Preliminary Definition,
Implementation Phases*



Capital Costs

It is estimated that the total project costs to construct secure custody facilities in Iqaluit, Yellowknife, and Inuvik will be approximately \$5.7 million. As indicated in Figure 21, the cost to provide young offender facilities in each of the four designated locations is estimated as follows:

- | | |
|------------------------------|-------------|
| • Iqaluit Facility | \$2,546,000 |
| • Yellowknife Facility | \$1,894,000 |
| • Inuvik Facility | \$1,243,000 |
| • Fort Smith Region Facility | \$2,642,000 |

The estimated cost to build a secure custody facility in the central arctic varies from approximately \$2.2 to 3.0 million, depending on the community selected.

All capital cost estimates are quoted in current, first-quarter 1987 dollars. Allowances for escalation, which are in the order of five percent per annum, would depend on the anticipated time of tendering. Reference Figures 45 to 47 in Appendix H for details of the total project cost estimates.

Figure 20
Preliminary Design and Construction Schedules

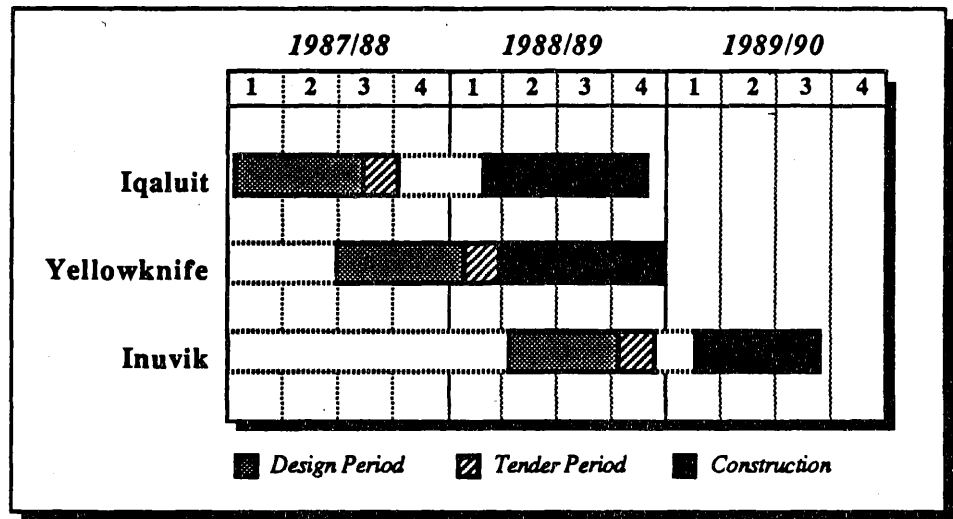
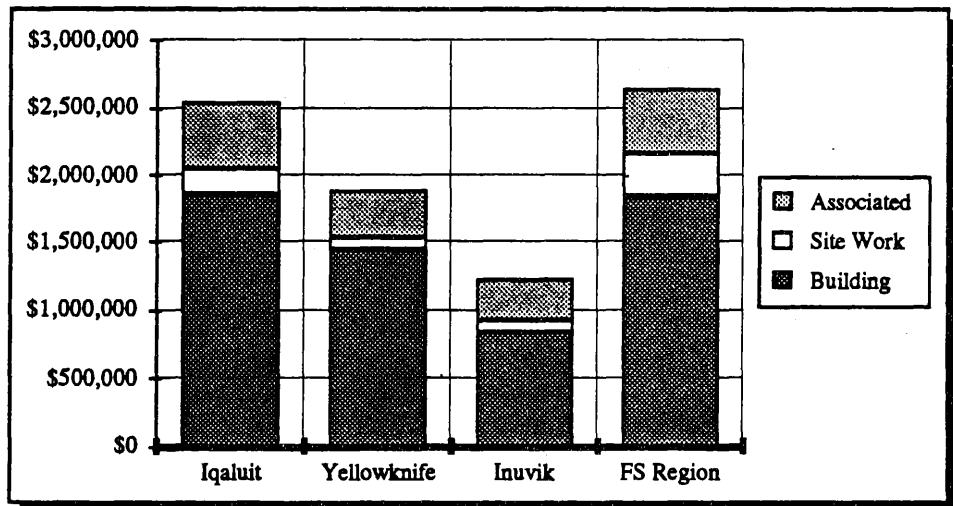


Figure 21
Estimated Total Project Costs



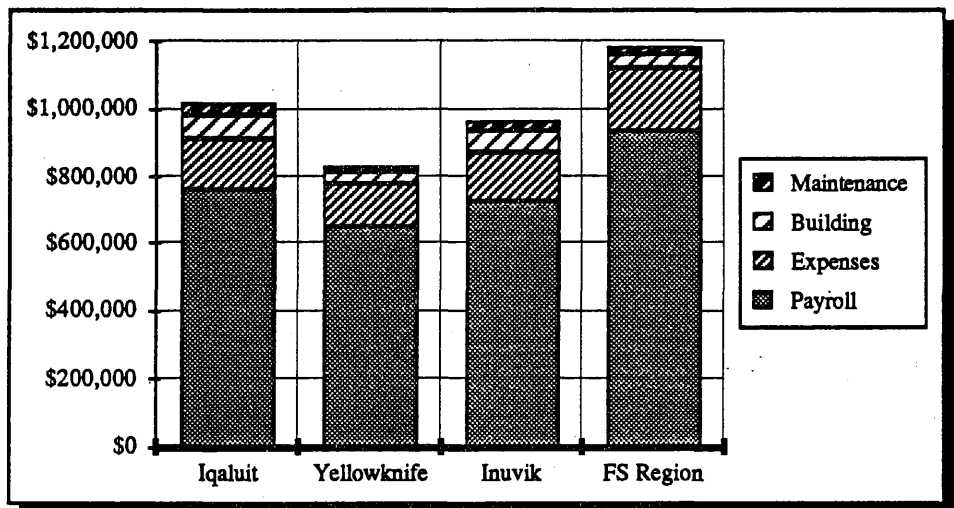
Operating Costs

Figure 22 illustrates preliminary estimates of annual operating costs for each of the four proposed facilities as follows:

- Iqaluit Facility \$1,020,000 per year
- Yellowknife Facility \$832,000 per year
- Inuvik Facility \$969,000 per year
- Fort Smith Region Facility \$1,186,000 per year

Reference Figures 48 and 49 in Appendix H for detailed estimates of anticipated annual operating expenditures, including salaries, benefits, expenses, and maintenance costs.

*Figure 22
Estimated Annual
Operating Costs*



APPENDICES

Young Offender Secure Custody Facilities



APPENDIX A SUPPORTING STATISTICS

Purpose

The purpose of Appendix A is to present supplementary and more detailed data in support of the material outlined in the body of the report, with particular reference to Sections 3, 5, and 6.

References

The following documents were used as background information in relation to needs assessment and other statistical analysis:

- Population Estimates, June 1985, Bureau of Statistics, GNWT.
- Census Population and Occupied Private Dwellings, 1986, Northwest Territories, Interim Census Counts.
- Special Computer Run, Population Projections Including Target Group (Boys, 12 to 17), Bureau of Statistics, GNWT.
- Numerous Statistical Reports, Social Services.
- Special Computer Runs, YJIS Record Tracking, Social Services.
- Boundary and Constitutional Agreement for the Implementation of Division of the Northwest Territories, January 1987.
- Northwest Territories, Young Offenders Act, Proposed Youth Services, Westbrook Management Centre, October 1985.
- Northwest Territories, Inventory of Facilities for Young Offenders, Westbrook Management Centre, January 1986.
- Northwest Territories, Young Offenders Act, August to November 1985 Data, Westbrook Management Centre, January 1986.

Maps

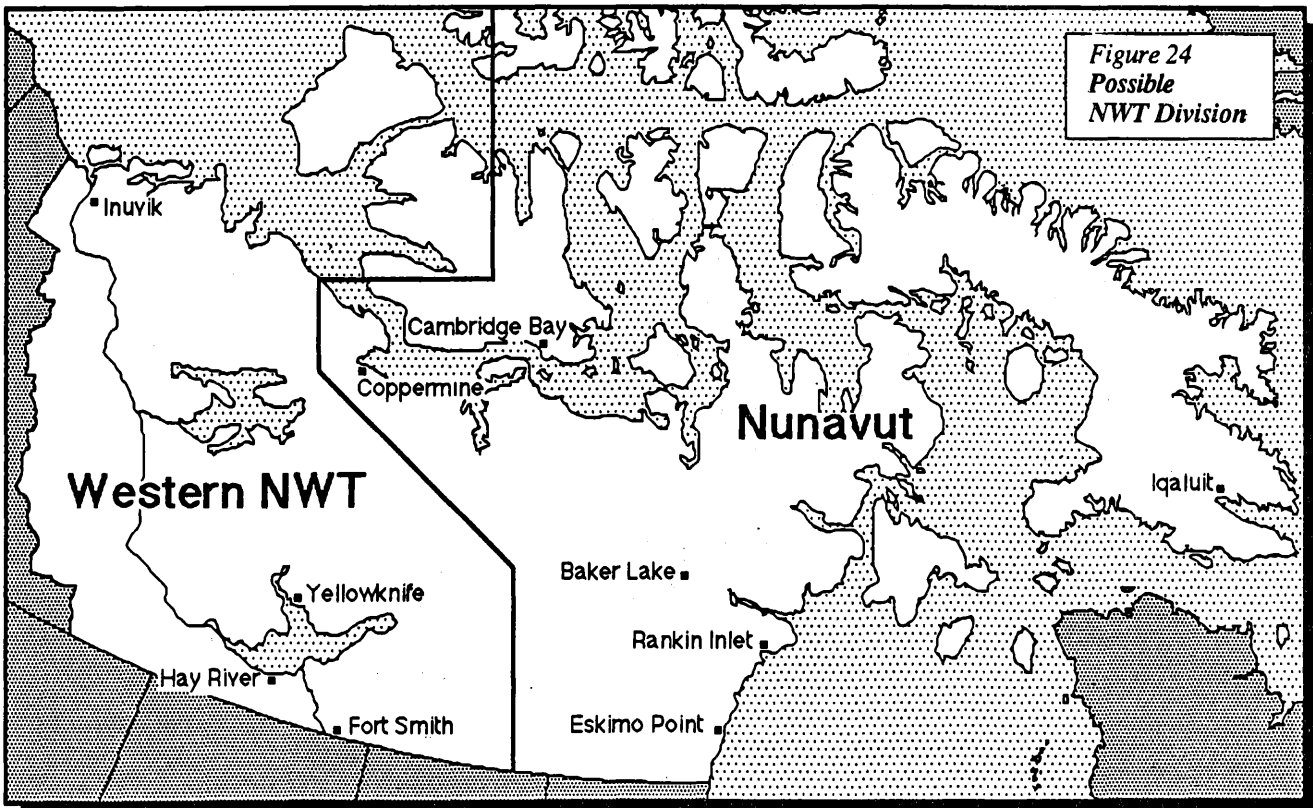
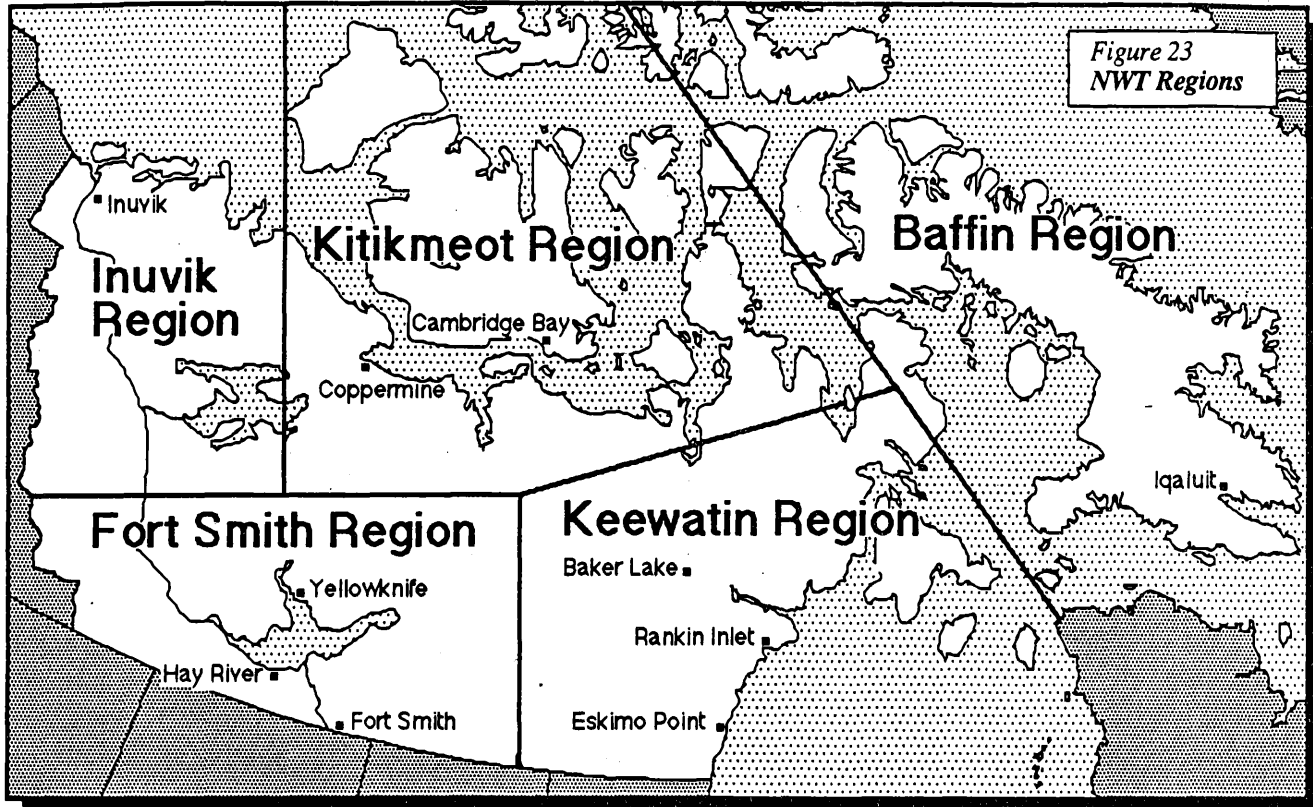
Figure 23 illustrates the boundaries for the five NWT regions referred to throughout the report.

Although it is recognized that the exact boundary delineated in Figure 24 has been rejected subsequent to the January 1987 agreement, the divisional map has been included to indicate, in very general terms, the area of Nunavut and the western NWT.

Charts

Figure 25 indicates the various analyses used to estimate the scale of current secure custody utilization in the five regions. The sources referenced to in the legend are explained further as follows:

- **Peak Counts** bases the division of average count according to the average of peak counts for each month over the 1985/86 period.
- **Westbrook** refers to the previous demand analysis by Westbrook Management Centre.

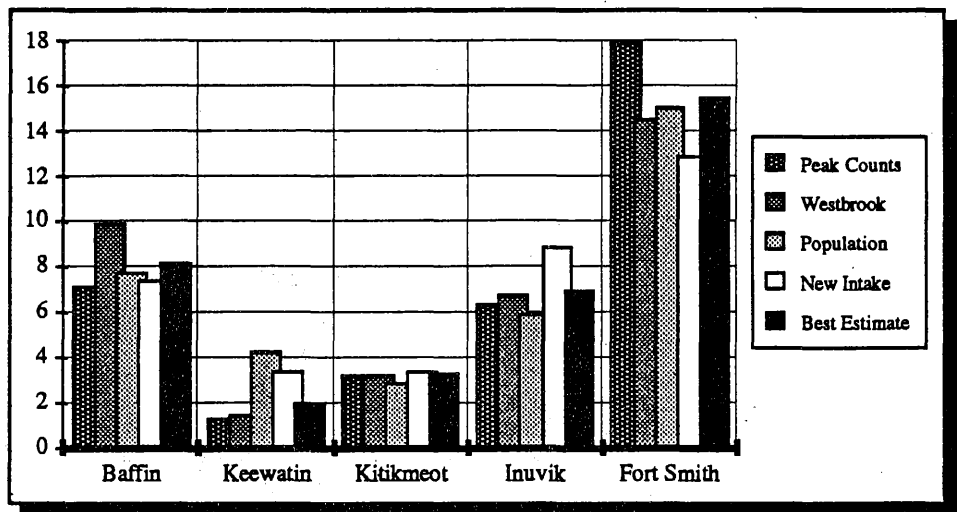


- **Population** calculates the average count in proportion to the regional populations.
- **New Intake** bases the average count on the number of new young offenders admitted to secure custody.

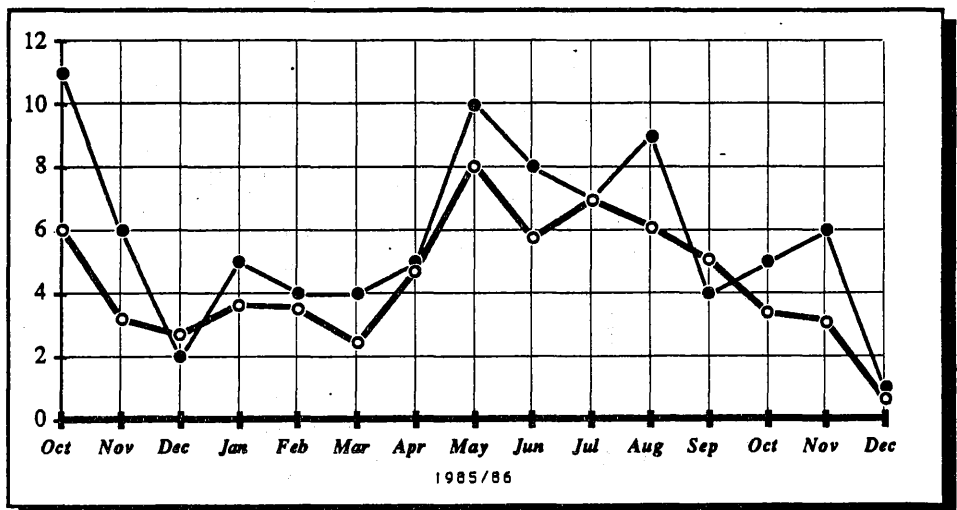
Figure 26 presents the actual average and peak counts for detained youth at the YCC young offender unit over the period of October 1985 to December 1986.

Parallel with Figures 14 to 18 in Section 6, Figure 27 presents estimated demand for secure custody facilities in the Keewatin and Kitikmeot Regions.

*Figure 25
Regional Average Daily
Counts, 1985/86*



*Figure 26
Peaks and Averages,
Detained Youth at YCC*



Demand Calculations

Figures 28 and 29 are part of an integrated worksheet wherein the future need for secure custody facilities was calculated. In reviewing Figure 29, the following should be noted:

- Projection Series 1 for the Iqaluit facility assumes that there is no Central NWT facility, whereas Projection Series 2 assumes that a Central NWT facility be built in addition to the Iqaluit unit.
- Projections for the Inuvik facility include young offenders from the Inuvik Region only. In actual practice, the numbers would be somewhat higher as young offenders from parts of the Kitikmeot Region would be accommodated in Inuvik.
- Projection Series 1 for the Fort Smith Region facility assumes that the Inuvik facility is provided, whereas Projection Series 2 assumes no Inuvik unit.

Figure 27
Demand Projections,
Central NWT

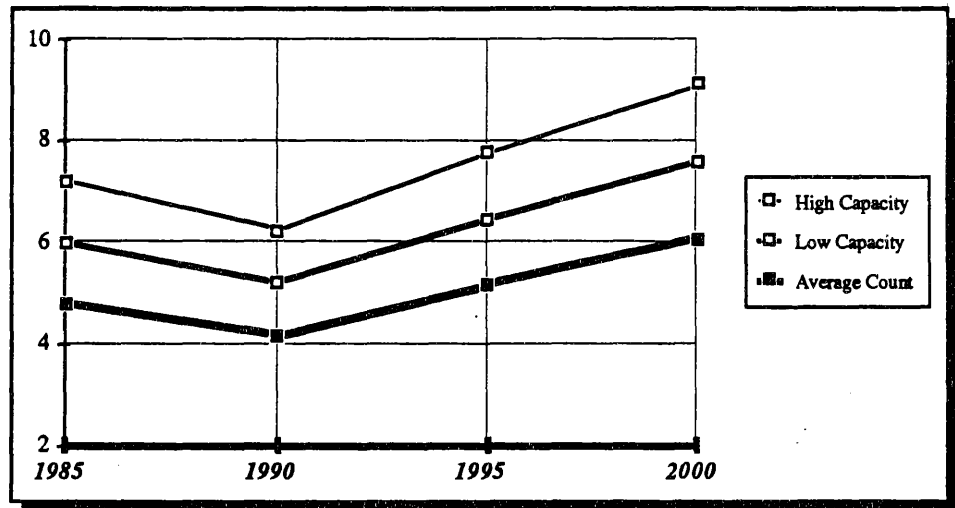


Figure 28
Regional Demand
Estimates,
Secure Custody

Total Population	1985	1990	1995	2000
Baffin	9,528	10,843	12,265	13,746
Keewatin	4,832	5,531	6,246	7,008
Kitikmeot	3,634	4,192	4,782	5,332
Inuvik	8,228	9,049	9,781	10,495
Fort Smith	24,790	26,377	27,959	29,478
NWT Total	51,012	55,992	61,033	66,059
Boys, 12 to 17	1985	1990	1995	2000
Baffin	723	663	801	928
Keewatin	402	331	388	451
Kitikmeot	266	238	306	361
Inuvik	553	483	555	656
Fort Smith	1,404	1,368	1,420	1,528
NWT Total	3,348	3,083	3,470	3,924
Average Count	1985	1990	1995	2000
Baffin	9.3	8.5	10.3	11.9
Keewatin	2.3	1.9	2.2	2.6
Kitikmeot	3.7	3.3	4.3	5.0
Inuvik	7.9	6.9	7.9	9.4
Fort Smith	17.5	17.1	16.6	16.6
NWT Total	40.7	37.7	41.3	45.5

Figure 29
Demand Estimates,
Secure Custody Facilities

		1985	1990	1995	2000
Iqaluit Custody Facility					
<i>note (a)</i>	1. Average Count	11.3	10.1	12.4	14.4
	1. Low Capacity	13.6	12.2	14.9	17.3
	1. High Capacity	15.8	14.2	17.4	20.2
<i>note (b)</i>	2. Average Count	6.5	6.0	7.2	8.4
	2. Low Capacity	8.1	7.5	9.0	10.4
	2. High Capacity	9.8	9.0	10.8	12.5
	Planned Capacity	0	12	12	17
Yellowknife Security Unit					
	Average Count	8.2	7.5	8.5	9.5
	Low Capacity	10.2	9.4	10.6	11.8
	High Capacity	12.3	11.3	12.7	14.2
	Planned Capacity	0	14	14	14
Inuvik Custody Facility					
	Average Count	6.3	5.5	6.3	7.5
	Low Capacity	7.9	6.9	7.9	9.4
	High Capacity	9.5	8.3	9.5	11.2
	Planned Capacity	0	12	12	12
Fort Smith Region Facility					
<i>note (c)</i>	1. Average Count	14.9	14.5	14.1	14.1
	1. Low Capacity	17.9	17.4	17.0	16.9
	1. High Capacity	20.8	20.3	19.8	19.7
<i>note (d)</i>	2. Average Count	21.2	20.0	20.5	21.6
	2. Low Capacity	24.4	23.0	23.6	24.8
	2. High Capacity	27.6	26.0	26.6	28.1
	Planned Capacity	0	20	20	20
Central NWT Facility					
	Average Count	4.8	4.2	5.2	6.1
	Low Capacity	6.0	5.2	6.5	7.6
	High Capacity	7.2	6.2	7.8	9.1
	Planned Capacity	0	0	0	0

Notes

- a. Projection Series 1 assumes no Central NWT facility*
- b. Projection Series 2 assumes a Central NWT facility*
- c. Projection Series 1 assumes an Inuvik facility*
- d. Projection Series 2 assumes no Inuvik facility*

APPENDIX B SMALL SECURE CUSTODY FACILITY

References

The facilities programs presented in Appendices B, C, and D incorporated planning guidelines from the following references:

- Project Brief, Eastern Arctic Young Offender Secure Facility, 12 Beds, Social Services, November 1986.
- Juvenile Justice Standards Relating to Architecture of Facilities, American Bar Association, 1980.
- Proposed Guidelines, Community-Oriented Secure Custody Facilities, Ontario Ministry of Community and Social Services, January 1987.
- Interior Youth Containment Centre, Facilities Program, British Columbia Buildings Corporation, December 1986.
- Guidelines and Prototypical Design for a Community-Based Secure Facility for Young Offenders, Brenda Beck, University of Calgary, June 1986.
- Technical Criteria for Detention and Correctional Facilities, Alberta Public Works, Supply and Services.
- Design Development Report, Calgary Young Offender Centre, Raines Barrett Partnership, June 1986.
- Facility Program, Southern Alberta Youth Development Centre, Strathmore, Brawn Parsons Wood Planning Partnership, May 1979.

Summary of Program

According to the Development Plan described in the body of this report, very similar small secure custody facilities will be constructed in Iqaluit and Inuvik. If an additional unit is provided in the central arctic, it, too, would follow a similar program.

The small secure custody facility consists of living accommodation for 12 young offenders together with required support functions. As indicated in Figure 30, approximately 486 net m² total area will be required to accommodate these functions. With new construction as in Iqaluit, the total estimated building area is approximately 715 m², while in the renovation considered for Inuvik, the gross area is estimated at over 770 m².

As illustrated by Figure 31, the individual spaces within the facility can be organized into four functional components: Residential, Program, Administration and Support. Key operational assumptions for each component are outlined below.

Residential Component

The Residential Component will consist of a single 12-bed living unit, organized into three 4-bed modules, as follows:

- One double-occupancy room and two single-occupancy rooms.

- One double-occupancy room and two single-occupancy rooms.
- Two double-occupancy rooms.

Each module will share an individual washroom, consisting of a toilet, lavatory, and shower stall.

Rooms will contain a bed, desk, and chair, plus a storage closet and cupboard for each occupant. Room doors will not be lockable, but secure storage for personal possessions will be provided within each room.

It has been assumed that girls could be housed within the living unit. Two single rooms will be located so as to permit their being segregated as separate sleeping accommodation for girls if required. Program activities will be fully co-educational.

A small quiet room will be used for temporary, disciplinary dissociation, when residents need to 'cool off' away from the rest of the group. Normally, the room will be used up to an hour or two only, and is not intended for overnight use.

Residents will be responsible for all personal maintenance and cleaning, as well as assisting with the preparation of meals. A small laundry facility will be provided for cleaning personal clothing and institutional linen. A standard domestic-scale kitchen will be available for preparation of meals within the residential unit.

Social spaces will include a conversation area with comfortable seating, and a larger area for passive recreational activities (card playing, table games, television), as well as for dining and other functions requiring all residents to be assembled together.

Program Component

Program facilities will include:

- a moderate-sized active recreation room, crafts room, and associated storage facilities.
- a fenced outdoor playing field.
- a classroom to accommodate up to half of the residents at one time, together with a teacher's office.
- a meeting/interview room to be used for meetings with staff and visitors.
- an office to be shared by child care supervisors and available to special program personnel as required.

It has been assumed that community facilities like gymnasias and ice rinks will be used on a shared basis for specific activities including team sports. Major equipment items such as snowmobiles and kayaks which might be acquired for outdoor programs will be stored outside of the main building.

Administration

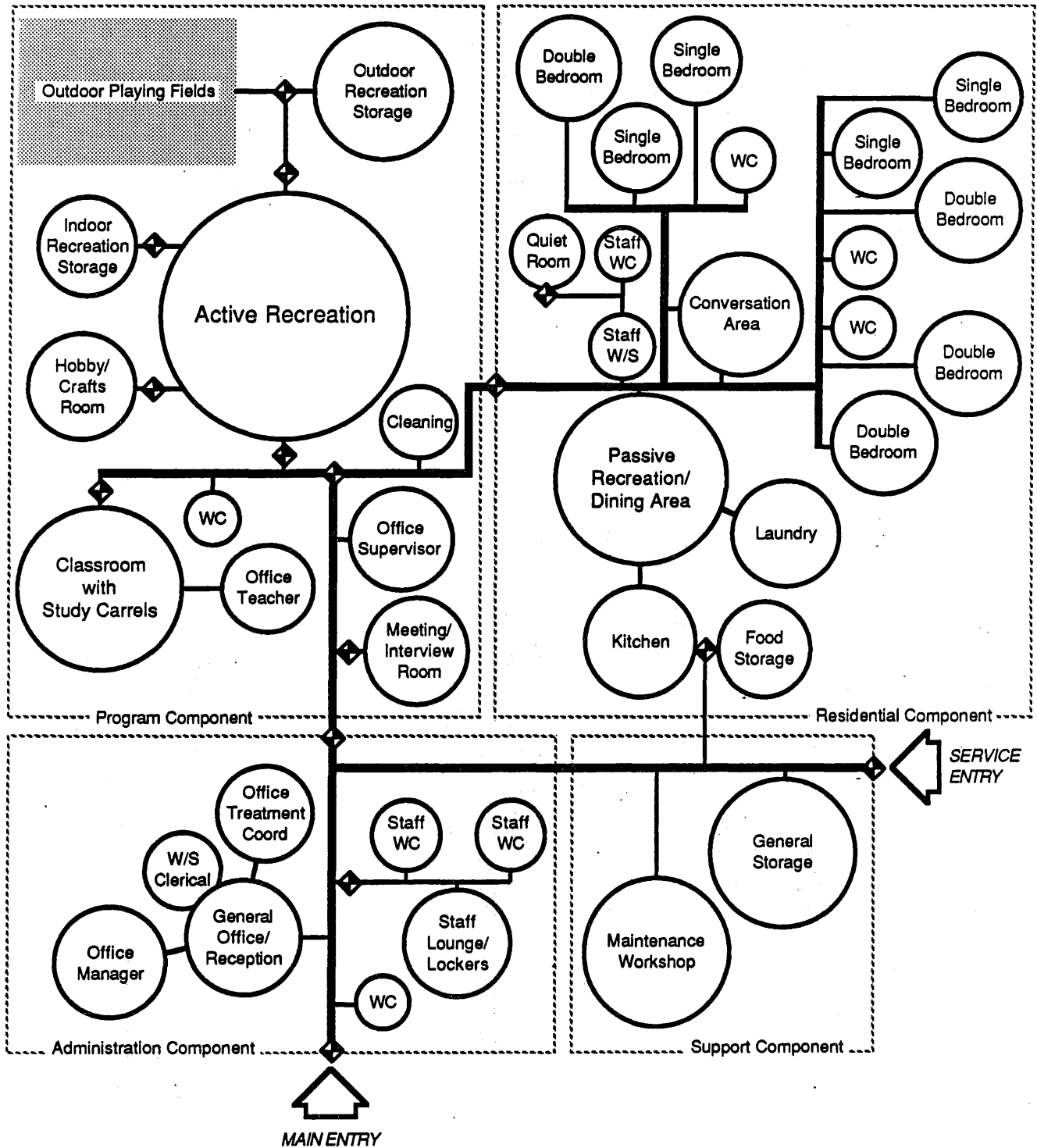
Separate office and support facilities for staff will be provided outside of the living unit.

- Support Component** General building storage will be provided, together with a small maintenance workshop for use by outside contractors and, possibly, residents.
- Perimeter Security** With the exception of Administration, all facility components will be located within the building security perimeter. Residents could have supervised access to all areas within this perimeter.
- Expansion** Increasing the capacity of the facility to accommodate another five residents, as may be required in Iqaluit, would necessitate an additional 82.5 net m², as indicated below:
- Three single-occupancy bedrooms at 8.0 m² each
 - One double-occupancy bedroom at 13.0 m²
 - One washroom with shower at 5.0 m²
 - One clerical workstation at 7.5 m²
 - Add 6.0 m² to the conversation area
 - Add 8.0 m² to the passive recreation/dining area
 - Add 12.0 m² to the food storage area
 - Add 7.0 m² to the classroom

Figure 30
 Space List, 12-Bed
 Secure Custody Facility

<i>Residential Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Bedroom, Double Occupancy	4	13.0	52.0
Bedroom, Single Occupancy	4	8.0	32.0
Washroom with Shower	3	5.0	15.0
Conversation Area	1	14.0	14.0
Passive Recreation/Dining Area	1	32.0	32.0
Laundry and Linen Storage	1	12.0	12.0
Workstation, Child Care Staff	1	4.5	4.5
Staff Washroom	1	3.0	3.0
Quiet Room	1	5.0	5.0
Kitchen	1	14.0	14.0
Storage, Food	1	9.0	9.0
Cleaning Equipment/Supplies	1	6.0	6.0
<i>Program Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Active Recreation Area	1	75.0	75.0
Storage, Indoor Recreation	1	11.0	11.0
Storage, Outdoor Recreation	1	20.0	20.0
Hobby/Crafts Room	1	14.0	14.0
Meeting/Interview Room	1	10.0	10.0
Classroom with Study Carrels	1	25.0	25.0
Office, Teacher	1	9.5	9.5
Office, Supervisors	1	11.0	11.0
Washroom, Program Area	1	3.0	3.0
<i>Administration Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Office, Manager	1	14.0	14.0
Office, Treatment Coordinator	1	9.5	9.5
Workstation, Clerical	1	7.5	7.5
General Office/Reception Area	1	15.0	15.0
Staff Lounge/Lockers	1	10.0	10.0
Staff Washroom with Shower	2	5.0	10.0
Staff/Visitor Washroom	1	3.0	3.0
<i>Support Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Maintenance Workshop	1	20.0	20.0
Storage, General	1	20.0	20.0
Total Net Area			486.0
<i>Efficiency Factor, New Construction</i>			<i>68%</i>
Estimated Gross Area, New Construction			714.7
<i>Efficiency Factor, Renovations</i>			<i>63%</i>
Estimated Gross Area, Renovations			771.4

Figure 31
Spatial Organization,
12-Bed Secure Custody Facility



APPENDIX C LARGE SECURE CUSTODY FACILITY

Summary of Program As outlined in the body of this report, the long term plan is to construct a relatively large secure custody facility in either Hay River or Fort Smith.

The large secure custody facility consists of living accommodation for 20 young offenders together with required support functions. As indicated in **Figure 32**, approximately 660 net m² total area will be required to accommodate these functions. Assuming new construction, the total estimated building area is approximately 971 m².

As illustrated by **Figure 33**, the individual spaces within the facility can be organized into four functional components: Residential, Program, Administration, and Support. Key operational assumptions for each component are outlined below.

Residential Component The Residential Component will consist of a 20-bed living unit, organized into five 4-bed modules, as follows:

- One double-occupancy room and two single-occupancy rooms.
- One double-occupancy room and two single-occupancy rooms.
- One double-occupancy room and two single-occupancy rooms.
- One double-occupancy room and two single-occupancy rooms.
- Two double-occupancy rooms.

Each module will share an individual washroom, consisting of a toilet, lavatory, and shower stall.

Rooms will contain a bed, desk, and chair, plus a storage closet and cupboard for each occupant. Room doors will not be lockable, but secure storage for personal possessions will be provided within each room.

It has been assumed that girls could be housed within the living unit, and it is possible that in the future one of the modules could be designated as a female unit. Consequently, one of the modules will be located so as to permit its being segregated as separate sleeping accommodation for girls if required. Program activities will be fully co-educational.

A small quiet room will be used for temporary, disciplinary dissociation, when residents need to 'cool off' away from the rest of the group. Normally, the room will be used up to an hour or two only, and is not intended for overnight use. In addition, a single isolation room will be provided. This room will be used both to segregate incoming residents for a day or two while awaiting a medical examination, and for longer periods of disciplinary dissociation, including overnight stays.

Residents will be responsible for all of their own maintenance and cleaning, as well as assisting with the preparation of meals. A small laundry facility

will be provided for cleaning personal clothing and institutional linen. A standard domestic-scale kitchen also will be provided for preparation of meals within the residential unit.

Social spaces will include two separate conversation areas with comfortable seating, and a larger area for passive recreational activities (card playing, table games, television), as well as for dining and other functions requiring all residents to be assembled together.

Program Component

Program facilities will include:

- a moderate-sized active recreation room, crafts room, and associated storage facilities.
- a fenced outdoor playing field.
- a classroom to accommodate up to half of the residents at one time, together with a teacher's office.
- a meeting/interview room to be used for meetings with staff and visitors.
- an office to be shared by child care supervisors.

It has been assumed that community facilities like gymnasias and ice rinks will be used on a shared basis for specific activities including team sports. Major equipment items such as snowmobiles and kayaks which might be acquired for outdoor programs will be stored outside of the main building.

Administration

Separate office and support facilities for staff will be provided outside of the living unit.

Support Component

General building storage will be provided, together with a small maintenance workshop for use by outside contractors and, possibly, residents.

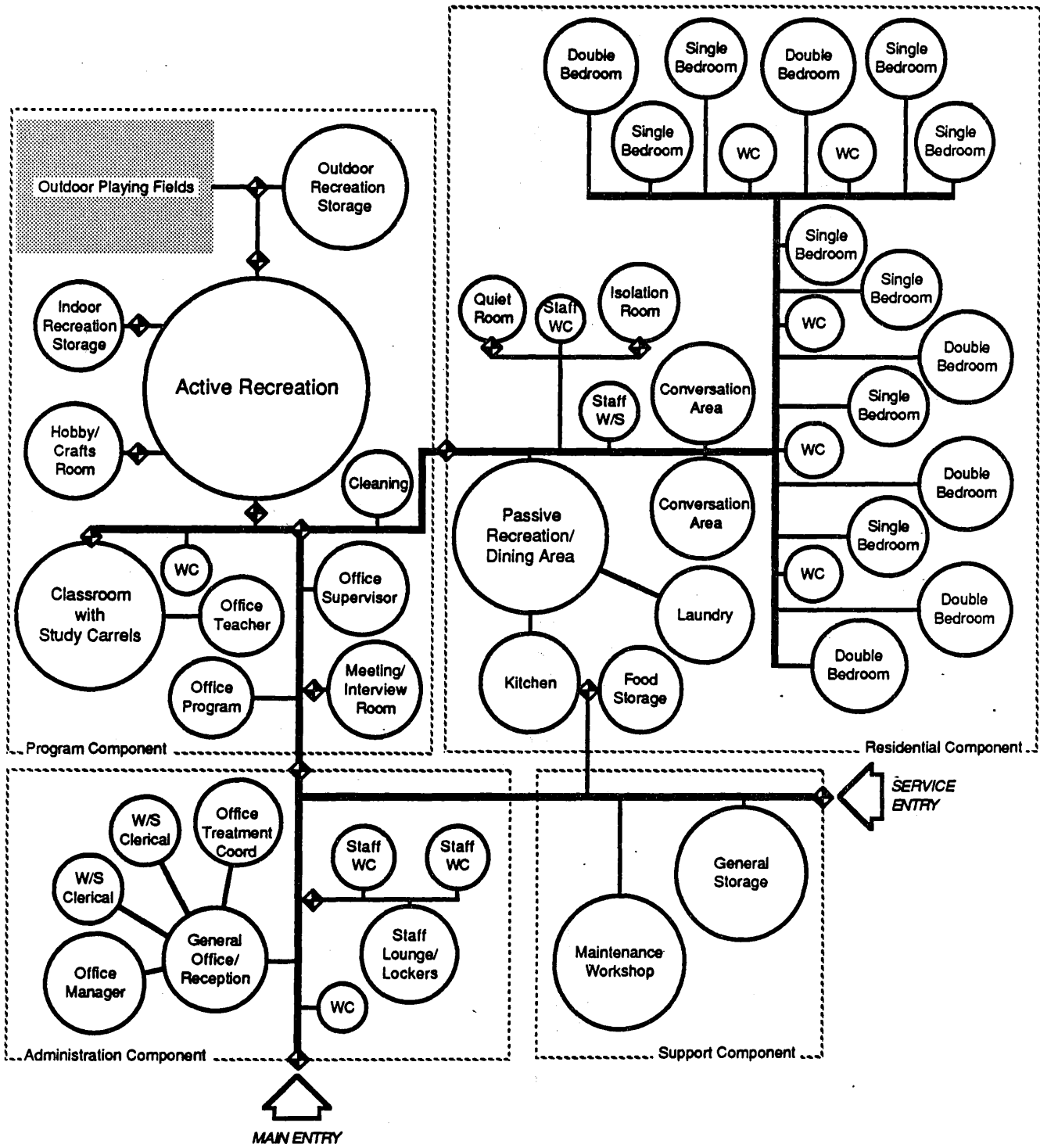
Perimeter Security

With the exception of Administration, all facility components will be located within the building security perimeter. Residents could have supervised access to all areas within this perimeter.

Figure 32
 Space List, 20-Bed
 Secure Custody Facility

<i>Residential Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Bedroom, Double Occupancy	6	13.0	78.0
Bedroom, Single Occupancy	8	8.0	64.0
Washroom with Shower	5	5.0	25.0
Conversation Area	2	11.0	22.0
Passive Recreation/Dining Area	1	48.0	48.0
Laundry with Linen Storage	1	12.0	12.0
Workstation, Child Care Staff	1	4.5	4.5
Staff Washroom	1	3.5	3.5
Isolation Room	1	8.0	8.0
Quiet Room	1	5.0	5.0
Kitchen	1	18.0	18.0
Storage, Food	1	12.0	12.0
<i>Program Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Active Recreation Area	1	90.0	90.0
Storage, Indoor Recreation	1	11.0	11.0
Storage, Outdoor Recreation	1	20.0	20.0
Hobby/Crafts Room	1	18.0	18.0
Meeting/Interview Room	1	12.0	12.0
Classroom with Study Carrels	1	37.0	37.0
Office, Teacher	1	11.0	11.0
Office, Supervisors	1	11.0	11.0
Office, Program Personnel	1	9.5	9.5
Washroom, Program Area	1	5.0	5.0
Cleaning Equipment/Supplies	1	6.0	6.0
<i>Administration Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Office, Manager	1	14.0	14.0
Office, Treatment Coordinator	1	9.5	9.5
Workstation, Clerical	2	7.5	15.0
General Office/Reception Area	1	18.0	18.0
Staff Lounge/Lockers	1	12.0	12.0
Staff Washroom with Shower	2	6.5	13.0
Staff/Visitor Washroom	1	3.0	3.0
<i>Support Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Maintenance Workshop	1	20.0	20.0
Storage, General	1	25.0	25.0
Total Net Area			660.0
<i>Efficiency Factor, New Construction</i>			<i>68%</i>
Estimated Gross Area			970.6

Figure 33
Spatial Organization,
20-Bed Secure Custody Facility



APPENDIX D MAXIMUM SECURITY FACILITY

Summary of Program

The maximum security facility planned for Yellowknife will consist of living accommodation for 14 young offenders from throughout the NWT, in addition to required support functions. As indicated in Figure 34, approximately 532 net m² total area will be required to accommodate these functions. Assuming new construction, the total gross building area is estimated as 805 m².

As illustrated by Figure 35, the individual spaces within the facility can be organized into four functional components: Residential, Program, Administration, and Support. Key operational assumptions for each component are outlined below.

Residential Component

The Residential component will consist of a single 14-bed living unit, containing 14 single-occupancy bedrooms.

There will be a single, joint-use group washroom, containing lavatories, toilets, and urinals. There will be a separate, joint-use shower room with 4 shower stalls.

Rooms will contain a bed, desk, and chair, plus a storage closet and cupboard for each occupant. Room doors will be lockable by staff. Residents will be locked in their rooms at night.

Female young offenders being held in secure custody will not be housed at the maximum security facility, and no designated sleeping accommodations are required.

A small quiet room will be used for temporary, disciplinary dissociation, when residents need to 'cool off' away from the rest of the group. Normally, the room will be used up to an hour or two only, and is not intended for overnight use.

Residents will be responsible for all personal maintenance and cleaning, as well as assist with serving meals. A small laundry facility will be provided for cleaning personal clothing and institutional linen. Meals will be prepared at the central YCC kitchen facility, but a small servery will be provided within the residential unit.

Social spaces will include a conversation area with comfortable seating, and a larger area for passive recreational activities (card playing, table games, television), as well as for dining and other functions requiring all residents to be assembled together.

Program Component

Program facilities will include:

- a moderate-sized active recreation room, crafts room, and associated storage facilities.
- a fenced outdoor playing field.

- a classroom to accommodate up to half of the residents at one time, together with a teacher's office.
- a meeting/interview room to be used for meetings with staff and visitors.
- an office to be shared by child care supervisors.

There will be shared-use of YCC playing fields, gymnasium, and other major recreational facilities for team sports and similar activities. In addition, young offenders will have limited, strictly-supervised access to community facilities such as a swimming pool.

A medical examination room will be provided for use by outside medical staff. Residents requiring hospitalization will be treated outside of the facility.

Administration

Separate office and support facilities for staff will be provided outside of the living unit.

Support Component

General building storage will be provided, together with a small maintenance workshop for use by outside contractors and, possibly, residents.

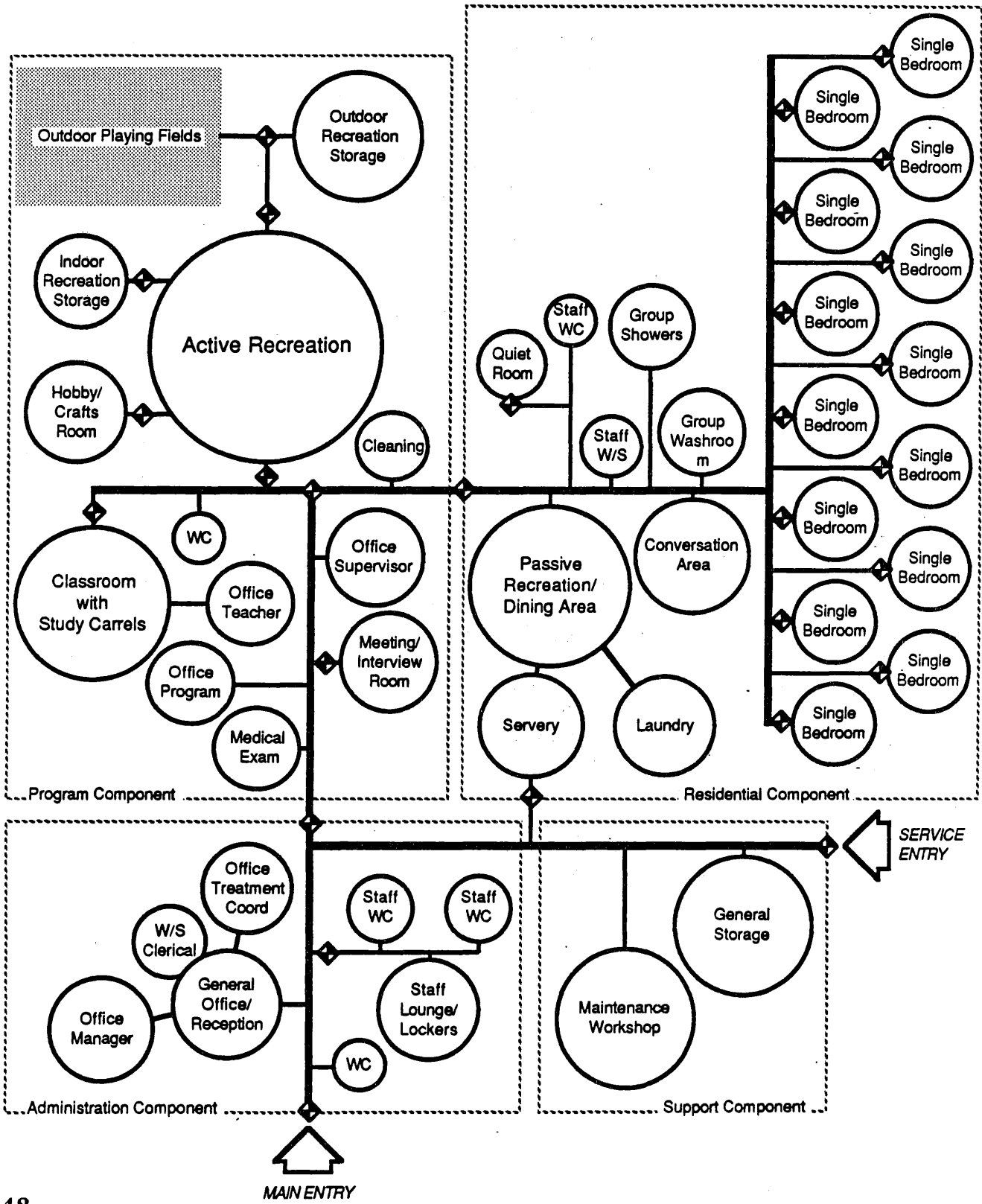
Perimeter Security

With the exception of Administration, all facility components will be located within the building security perimeter. Residents could have supervised access to all areas within this perimeter.

Figure 34
Space List, 14-Bed
Maximum Security
Facility

<i>Residential Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Bedroom, Single Occupancy	14	8.0	112.0
Group Washroom	1	12.0	12.0
Group Showers	1	8.0	8.0
Conversation Area	1	16.0	16.0
Passive Recreation/Dining Area	1	34.0	34.0
Laundry with Linen Storage	1	12.0	12.0
Workstation, Child Care Staff	1	4.5	4.5
Staff Washroom	1	3.0	3.0
Quiet Room	1	5.0	5.0
Servery	1	8.0	8.0
<i>Program Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Active Recreation Area	1	75.0	75.0
Storage, Indoor Recreation	1	11.0	11.0
Storage, Outdoor Recreation	1	20.0	20.0
Hobby/Crafts Room	1	14.0	14.0
Meeting/Interview Room	1	10.0	10.0
Classroom with Study Carrels	1	28.0	28.0
Office, Teacher	1	9.5	9.5
Office, Supervisors	1	11.0	11.0
Office, Program Personnel	1	9.5	9.5
Medical Examination Room	1	9.0	9.0
Washroom, Program Area	1	3.0	3.0
Cleaning Equipment/Supplies	1	6.0	6.0
<i>Administration Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Office, Manager	1	14.0	14.0
Office, Treatment Coordinator	1	9.5	9.5
Workstation, Clerical	1	7.5	7.5
General Office/Reception Area	1	15.0	15.0
Staff Lounge/Lockers	1	12.0	12.0
Staff Washroom with Shower	2	5.0	10.0
Staff/Visitor Washroom	1	3.0	3.0
<i>Support Component</i>	<i>Units</i>	<i>m2/unit</i>	<i>Area</i>
Maintenance Workshop	1	20.0	20.0
Storage, General	1	20.0	20.0
Total Net Area			531.5
<i>Efficiency Factor, New Construction</i>			<i>66%</i>
Estimated Gross Area			805.3

Figure 35
 Spatial Organization,
 14-Bed Maximum Security Facility



APPENDIX E YCC SITE PLANNING

Purpose of Analysis

Yellowknife Correctional Centre site and facilities were examined to determine the capacity of existing site services, and the potential for sharing of resources between the adult and young offender facilities. Design studies were conducted to test the feasibility and preliminary cost assessments of locating a Maximum Security Young Offender Facility on the YCC site. The issues considered were:

- Level of shared services, particularly in relation to the benefits of sharing versus the attendant loss of control.
- Modes of access for visitors, escorted young offenders, and service vehicles.
- Profile/presence of the facility, particularly in relation to the goal of maintaining an image of 'separate and apart'.
- Viability of the development from cost and engineering points of view.

Figure 36 illustrates the proposed location of the young offender unit on the southwest corner of the YCC site, in the context of anticipated future development of the grounds.

Shared Services

The current planning assumption is that the young offender unit will have meals delivered from the YCC kitchen and young offenders will use the YCC gymnasium. Further work is required, however, to finalize these plans for sharing with YCC.

Conceptually, shared services will be provided on a fee-for-service basis. Costs would include operating and maintenance costs on gymnasium and equipment. Meals provided from the YCC kitchen would be offered on a catered/contract basis. Young offenders would not participate in the kitchen work program, although they would be responsible for serving and clean-up at the young offender unit.

Additional benefits of locating the young offender unit on the YCC site include backup by YCC security staff in crisis situations, plus shared scheduling of outside services such as dentist, barber, and psychologist.

Profile of the Facility

The consensus of the Planning Committee was that the young offender facility should have an independent presence on the site. Not only does this reflect the requirements of the Young Offenders Act, it also serves to mitigate confusion for first-time visitors.

The primary reason for situating the proposed young offender building in the southwest corner of the YCC site was to create a distinct entity. As the opposite (northeast) corner is already slated for the construction of a Conditional Release Centre (halfway house) in 1990/91, the southwest corner presents the most promising alternative.

Modes of Access

Access issues which were addressed included:

- Access between buildings on the YCC site.
- Separate visitor/public access from Kam Lake Road.
- Auxiliary/support access.

Maximum security would be maintained on site by allowing no young offenders to be unsupervised outside of the young offender facility. Access between buildings could be provided via a concrete and wire-mesh elevated walkway. Preferably, however, the transport of meal carts, young offenders to the gymnasium, and other similar requirements would be through the use of vehicles. This vehicle option is not only less expensive (the facility will require a van for other purposes in any event), but much more flexible, than constructing a permanent and secure link.

YCC would be responsible for delivering meals to the rear kitchen door for pickup by staff of the young offender unit. Similarly, a van could deliver young offenders to the rear door of the gymnasium where they would be received by YCC staff at specific times each day.

Access to the young offender unit by lawyers, staff, social workers, family, and other visitors would be through separate entry from Kam Lake Road.

Access for garbage pickup, deliveries, and fire truck would be via an extension of the existing YCC truck turnaround to the rear of young offender building. This routing effects a continuous pedestrian link between the two buildings.

Engineering Viability

Issues addressed in considering the physical viability of locating the young offender unit on the YCC site included:

- The bedrock profile.
- Access to sewer and water.
- Available electrical power
- Road access.

At the nearest tested location bedrock is approximately 6 m below grade, making piling costs expensive, but acceptable. Further tests should be conducted prior to final location of the building.

Sewer access is available immediately off the site at the proposed northwest corner location. Access for water service, however, is problematic. Currently a 100 mm mainwater line services YCC. In 1985, the City of Yellowknife requested that YCC add a fire pump to facilitate supply from YCC's water storage tanks to the new sprinkler system installed in Phase I renovations. It was felt that the 100 mm line would be inadequate for these purposes. With the future addition of the Young Offender and Conditional Release Centres, it is expected that the City will request new incoming service.

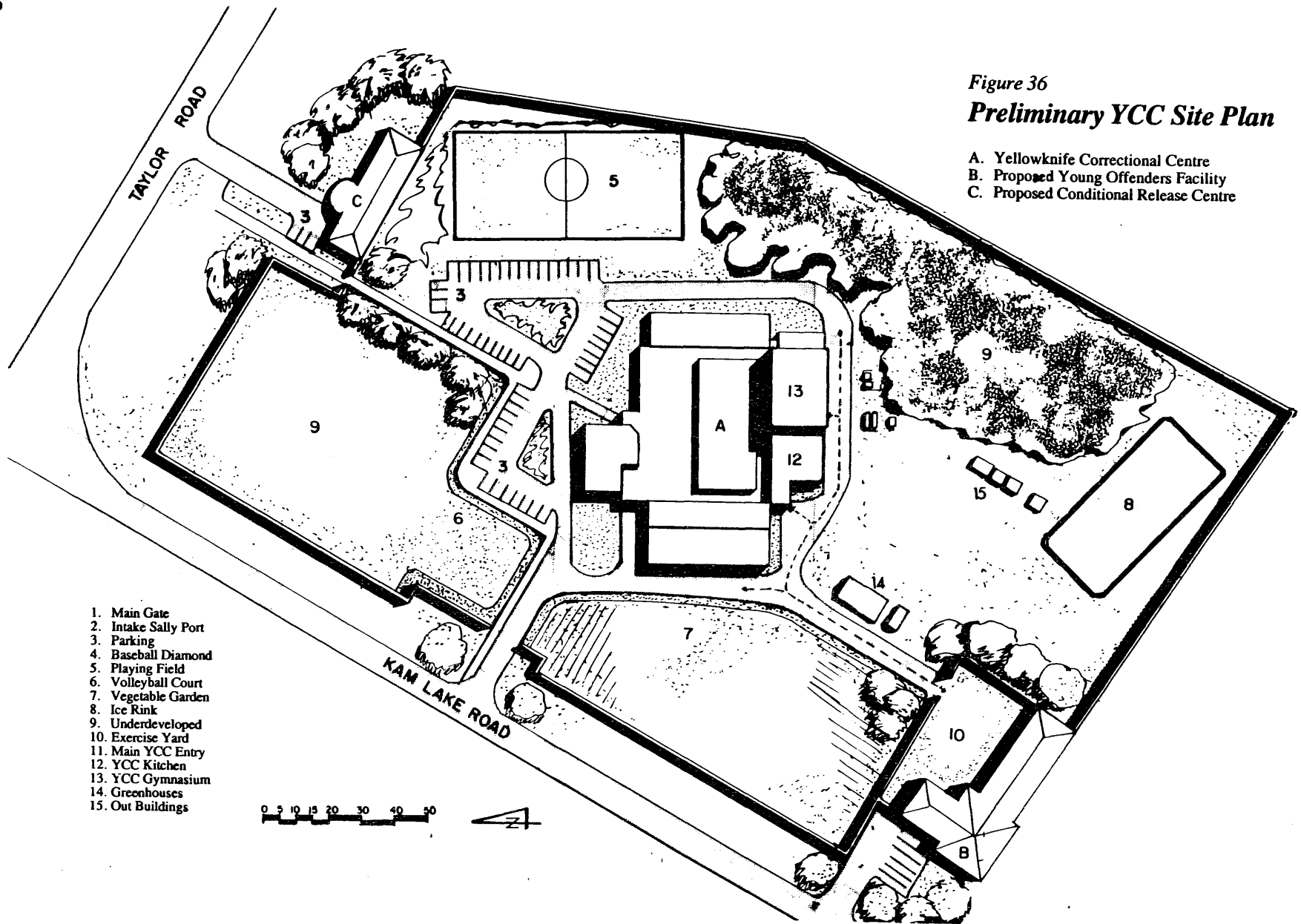
In this context, the proposed Young Offender site is well-located insofar as it is close to an existing 200 mm water main. Two further possibilities exist:

- The City may request that the old 100 mm service be abandoned and replaced with a 150 mm supply off the above-mentioned 200 mm main to supply the entire site. This is because two separate water supplies onto one site contravenes local bylaws.
- The City may re-consider the issue within the next few years and allow water to be obtained via the existing building.

Whatever the outcome of the above, the site proposed is the best location for proximity to existing services, and not out of reach from the existing supply. Finally, road access is immediately adjacent and power enters the site overhead directly north of the proposed location.

Figure 36
Preliminary YCC Site Plan

- A. Yellowknife Correctional Centre
- B. Proposed Young Offenders Facility
- C. Proposed Conditional Release Centre



1. Main Gate
2. Intake Sally Port
3. Parking
4. Baseball Diamond
5. Playing Field
6. Volleyball Court
7. Vegetable Garden
8. Ice Rink
9. Underdeveloped
10. Exercise Yard
11. Main YCC Entry
12. YCC Kitchen
13. YCC Gymnasium
14. Greenhouses
15. Out Buildings



APPENDIX F RENOVATION FEASIBILITY, INUVIK

Intent of Analysis

The Canadian Forces building in Inuvik was studied by examining previous analyses and conducting a site survey which addressed architectural, civil, mechanical, and electrical aspects. The intent of the feasibility study was to examine the viability of renovations to the old Canadian Forces facility, and to compare this option with new construction.

Design Alternatives

Design alternatives were explored for converting the building into a Secure Custody Young Offender Facility based on an initial definition of requirements. Reference Figure 37 for an initial design scheme. Preliminary estimates of renovation costs were calculated for the most promising design alternative (reference Figure 47 in Appendix H).

Two renovation options were considered. The first option was a 20-year retrofit which would cost almost as much as new construction. The second option was a more limited renovation aimed primarily at meeting program requirements with minimal upgrading to the facility systems.

Costing Summary

Referring to both capital and operating cost estimates over a 10-year period, renovation would save a total of approximately \$471,000 compared with new construction. Reference Figures 45, 46, and 49.

Ultimately, the original capital expense of the renovation would be lost on construction of a more permanent facility. This loss, however, should be seen in the context of the advantages the 10-year period offers with regard to planning an appropriate facility for a region whose economy is in flux. In addition, a new facility may have a useful life of perhaps only 10 to 15 years longer than the renovation.

Option Selected

The second 'minimum renovation' option was adopted over both a 'premium retrofit' and new construction because:

- The premium retrofit would cost almost as much as new construction while retaining the constraints of any renovation and the isolated site.
- In the minimum renovation, savings are achieved at the expense of higher operating and maintenance costs. Thirty-one years marks the theoretical breakeven point at which time the combination of capital and operating costs for the renovated facility will be the same expenditure as new construction. This is acceptable considering that the average life expectancy for a building in the NWT is only 25 years.

Suitability of Site

The site of the Canadian Forces building is 6 km from downtown Inuvik and, while it may enhance the perception of public safety, the site's relative isolation is not in keeping with the intent to integrate with the community. The problems associated with the isolated site could be mitigated with the provision of transportation to and from the facility for staff, young offenders, and visitors. Further, a 'wilderness' program orientation could take advantage of the building's location.

Existing Building

The building was assessed during a two-day site visit in mid-February 1987. Generally, the structure was found to be sound. Certain code violations need to be overcome at little additional cost. The following summarizes the results of the technical assessment:

- **Building Envelope**

The floors are 38 mm x 184 mm wood joists filled with batt insulation for an RSI value of about 3.7. Walls are 38 mm x 140 mm filled with 100 mm batt insulation for an RSI value of 2.5. The roof is a freespan truss system with a vented attic and ceiling insulation for an RSI value of 3.7. While these factors are below the current standard of RSI 5.25 and 7.5 for walls and roofs respectively, the actual materials appear to be in good condition. Ceiling insulation appears as new, with wall and ceiling vapour barrier intact. While the wall insulation did not appear to have sagged, it must be assumed that some deterioration has occurred. There did not appear to be any evidence of condensation or roof leakage in the ceiling materials.

- **Doors and Windows**

Exterior doors and windows will have to be completely replaced. Extensive infiltration was evident in the double-hung windows and the insulated metal doors and frames reveal heavy wear. The interior doors, which are solid-core, stain grade birch with institutional brass hardware, should be salvaged wherever possible.

- **Wall, Floor, and Ceiling Finishes**

Generally, wall finishes are in marginally good condition, but will require extensive re-sanding and painting at the very least. Approximately half of the existing wood fibre glued-in-place acoustical tiles require removal. In more than one-third of the building, cement-asbestos board was installed as a fire-resistant flooring underlay. For health purposes, this asbestos material should be removed.

- **Mechanical System**

Mechanical systems appear in good working order. Boilers are five years old and oversized, even at full backup. All ductwork is insulated and some fire-dampers exist. In a new layout, new diffusers, dampers, and balancing will be required. The system was not turned on at the time of the visit and should be fully inspected prior to design. Local GNWT maintenance personnel indicated that all cast-iron piping may have to be replaced due to sediments in the water system. This would be required in any event, since most of the plumbing will be relocated in any proposed design scheme.

- **Electrical System**

The existing electrical systems appear in good order. All distribution (wiring) is contained in conduit. The as-new two-stage Edwards fire alarm system, which is connected to the local fire hall, is intact. Much of the protection equipment for the old communications machinery is no longer required.

Proposed Retrofit

As outlined in the wall section illustrated in **Figure 38**, our recommended retrofit involves complete replacement of interior wall, ceiling, and floor finishes. This will enable a complete new vapour barrier and insulation installation. Insulation in the walls and ceilings can be upgraded by at least 50 mm (RSI 1) in each portion of the building envelope. New exterior doors and windows (tempered glass) will be required, as well as complete new finishes with proprietary flamespread ratings.

In order to ensure a watertight building skin, the existing metal roofing should be replaced with a new light-gauge standing-seam metal roofing.

Existing mechanical/electrical systems will be re-used wherever possible. The double-floor system will easily facilitate installation of new plumbing and electrical distribution, although wiring in conduit and non-PVC piping is required in order to maintain a non-rated floor.

Building Code

Since no detention quarters are provided within the wood-frame skin, a Group B Division 2 Building Code classification should satisfy all requirements. However, this will imply that no involuntary detention will be allowed. Exterior doors will have to be provided with electric sensors to detect opening and closing. Any confinement room would have to be located outside the building perimeter and be of non-combustible construction.

Figure 37
**Preliminary Floorplan
 Inuvik Renovation**

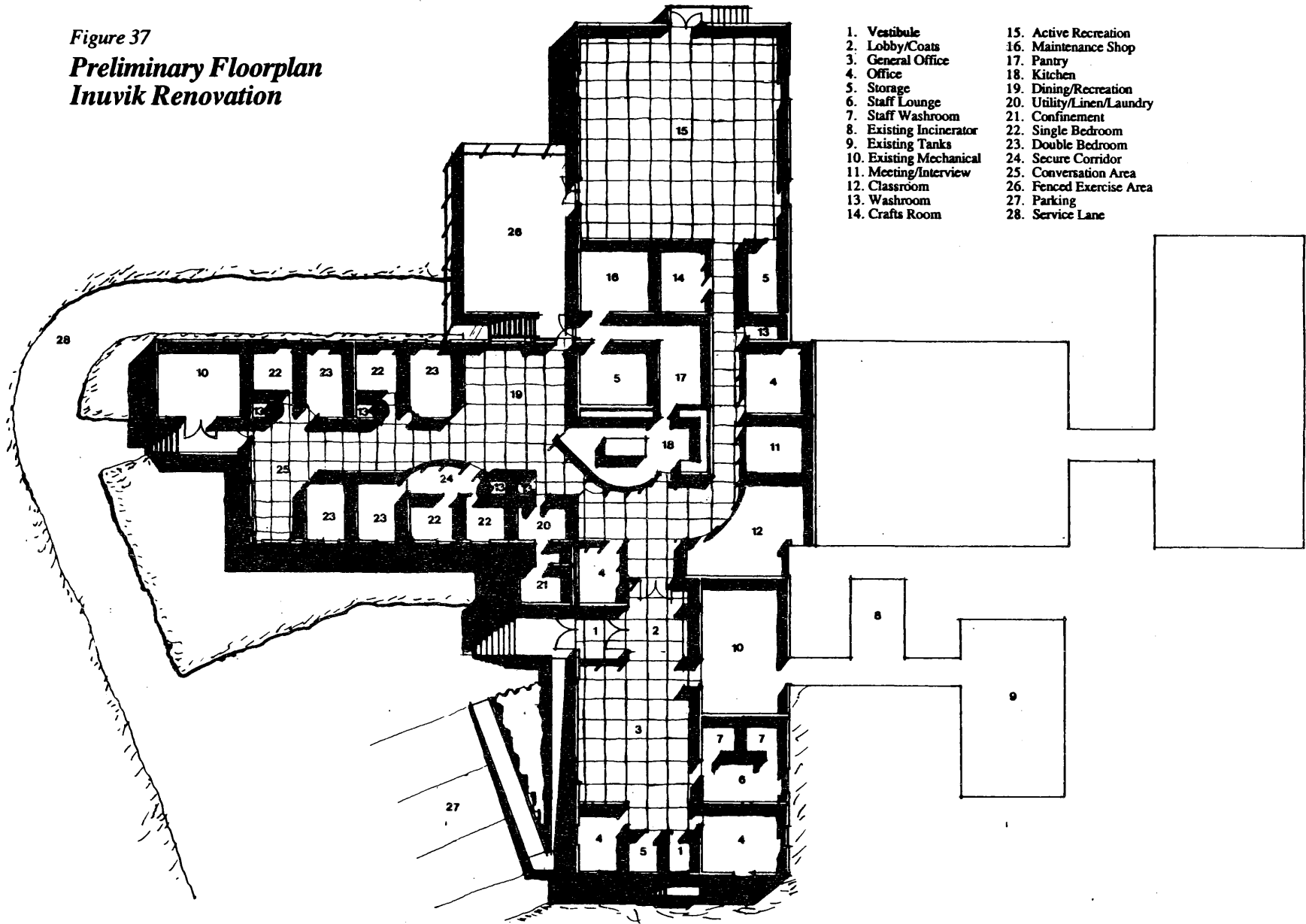
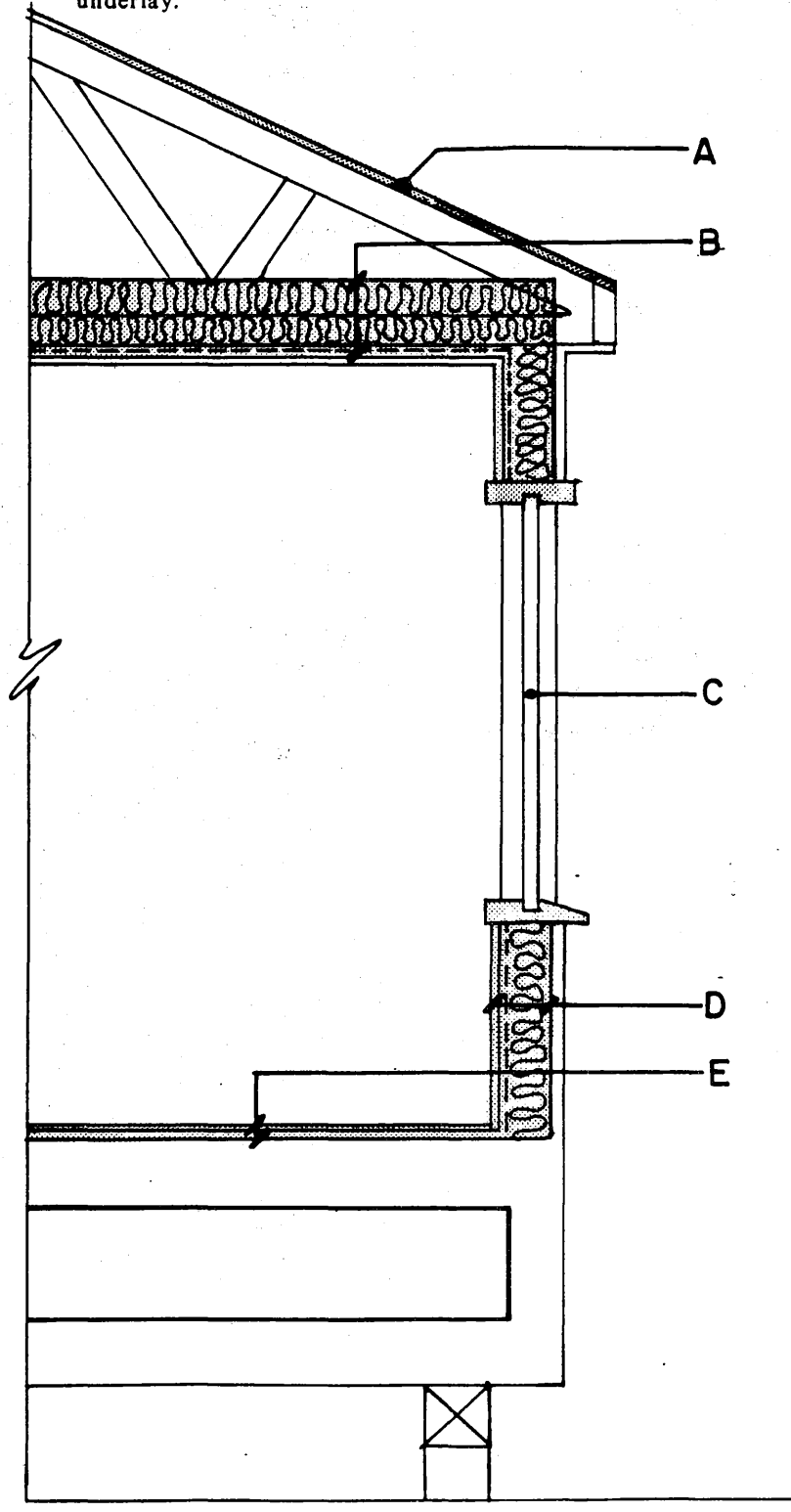


Figure 38
Wall Section, Inuvik
Secure Custody Facility

- A. Remove and replace existing metal roof.
- B. Remove ceiling tiles, drywall vapour barrier and replace. Upgrade insulation with additional 50 mm fiberglass batt.
- C. Replace existing windows with double glazed wood windows with sull sash.
- D. Remove drywall, vapour barrier and replace. Upgrade from 100 mm to 150 mm fiberglass batt insulation.
- E. Replace floor finishes throughout and remove existing cement asbestos board underlay.



APPENDIX G PROFILE OF COMMUNITIES

Summary of Assessment As outlined in Section 6 and further amplified in Appendix A, insufficient demand was projected for the foreseeable future to warrant providing a secure custody facility to serve the Kitikmeot and Keewatin Regions. However, in 10 to 20 years, when the regions have grown and other secure custody facilities become overtaxed, consideration again may be given to placing a young offender secure custody facility within a Kitikmeot or Keewatin community. In particular, the viability of a central arctic facility should be re-assessed at the same time as examining the need to expand the Iqaluit facility.

In general, a comparative assessment of Cambridge Bay, Coppermine, Rankin Inlet, Baker Lake, and Eskimo Point revealed that there is no clear *best choice*. However, when reviewing those selection criteria which are amenable to numerical analysis (reference Figure 39), Rankin Inlet most frequently ranks highest.

Assessment Criteria A comparison of the relative merits of locating a small secure custody facility in the five communities addressed several criteria, including the:

- Capacity of each community to provide the necessary recreational, educational, and medical support services.
- Anticipated travel costs for both young offenders and government personnel.
- Perceived ability of each community to minimize the negative social impacts associated with the proposed facility.
- Perceived relative economic benefits resulting from employment created.
- Availability and cost of suitable building sites.

These and other criteria are summarized in Figure 39 and discussed in the remaining subsections. Figure 39 presents material extracted from a community profile database which was developed using several sources of information, including:

- NWT Data Book, 1986-87, Outcrop Ltd., 1986.
- Northwest Territories Community Profile, Lynn Elkin Hall and Associates, June 1986.

Scale of Demand

There are more young offenders in the Kitikmeot Region than in the Keewatin Region, although the populations of the Keewatin communities are larger than Cambridge Bay or Coppermine. Basing the choice of location on the principle of placing the facility where there are the most clients would favour Cambridge Bay. On the other hand, there is more *potential* demand in Eskimo Point or Rankin Inlet. The number of young offenders noted in Figure 39 encompasses all dispositions including secure custody, open custody, and probation.

Support Services

As outlined in Figure 39, there is little to distinguish the five communities in terms of medical, educational, or housing services and facilities. Further, all communities have a community hall, an arena, and an active recreation committee. With the exception of Eskimo Point, all communities have a library. As regional centres, Rankin Inlet and Cambridge Bay tend to have a somewhat higher level of support services than the remaining three communities.

Figure 39
Numerical Comparison of Communities

Numeric Factor	Rankin Inlet		Baker Lake		Eskimo Point		Cambridge Bay		Coppermine	
	quantity	rank	quantity	rank	quantity	rank	quantity	rank	quantity	rank
Population, 1986	1,352	1	1,034	3	1,201	2	930	4	920	5
Proportion Inuit	89%	5	100%	1	97%	3	92%	4	98%	2
Boys, Aged 12-17, 2000	107	2	87	5	122	1	88	4	91	3
Young Offenders, 1985	19	3	17	4	6	5	30	1	26	2
YOA Offences, 1985	47	4	52	3	11	5	106	1	98	2
Nursing Station Beds	4	3	3	5	4	3	6	1	4	3
Medical Personnel	8	1	5	4	6	3	7	2	4	5
School Enrolment	403	1	267	3	393	2	258	4	224	5
Housing Units	115	5	207	2	210	1	128	4	189	3
RCM Police Personnel	4	2	2	5	2	5	4	2	3	4
Justices of the Peace	2	4	2	4	2	4	4	1	3	2
Legal Personnel	3	1	0	4	0	4	1	2	0	4
Social Services Personnel	8	3	3	1	3	5	5	4	4	2
Takeoffs and Landings	5,518	1	3,877	3	1,091	5	3,877	2	1,942	4
Distance to Yellowknife (km)	1,088	4	960	3	1,080	5	960	2	595	1
Distance to Iqaluit (km)	735	1	1,327	2	1,344	3	1,722	4	2,156	5
UIC Claimants	76	1	55	2	51	3	31	5	34	4
Project Cost (\$ millions)	2.211	2	2.211	2	2.211	2	2.296	5	2.296	5
Ranking Totals	44		56		61		52		61	

Justice Resources

Court travels on circuit to each of the five communities, where proceedings are held in a variety of temporary settings such as community halls, hotel meeting rooms, and school gymnasiums. All communities have RCMP Detachments and Justices of the Peace. All but Cambridge Bay have a Youth Justice Committee in place. Overall, Rankin Inlet and Cambridge Bay have more developed justice system services.

Social Services

In an effort to more evenly distribute services across the NWT, regional Social Services offices in Rankin Inlet and Cambridge Bay soon will be re-located to Baker Lake and Coppermine, respectively. Since proximity to the regional office generally is perceived as an asset, coordination with Social Services delivery favours Baker Lake and Coppermine over the other three communities.

Day care centres are available in all but Eskimo Point and Coppermine. Group homes are operational in all but Baker Lake and Eskimo Point. In general, Rankin Inlet and Cambridge Bay have the greatest availability of related social service resources.

Travel Logistics

From a travel perspective, Rankin Inlet is the best choice, particularly in the context of a divided NWT with the orientation much more towards Iqaluit than Yellowknife.

Rankin Inlet has the busiest airport of the five communities studied, and is a central point for northern air routes to and from Yellowknife, Iqaluit, and Winnipeg. Air service to Baker Lake, Eskimo Point, and other Keewatin communities radiate from Rankin Inlet. Rankin Inlet is well accessed by barge from Churchill.

Cambridge Bay is accessed by barge one or two times per year and by air via Yellowknife three times a week. It is also an air centre to Coppermine and most other Kitikmeot communities.

Impact Mitigation

Determining the ability of a community to accept a new program such as a young offender secure custody facility is a very difficult task. Before speculating on how the five communities may effectively *absorb* a new institution, two points should be made:

- If and when a new facility is justified from a demand perspective, community leaders should be involved in determining the site selection as well as other aspects of the facility's program and operations.
- The nature of the facility's program will have a major influence on which community is selected as the most appropriate location. For example, a wilderness-oriented program may be more successful in Cambridge Bay or Baker Lake than in Rankin Inlet, which may be the best choice for a more community-oriented program.

Because of histories as government centres, Rankin Inlet and Cambridge Bay may be more tolerant communities than the other three hamlets studied. Conversely, there is a perception among some persons interviewed that the communities in Coppermine, Baker Lake, and, possibly, Eskimo Point may resist the location of a secure custody facility.

Economic Benefits

All five communities suffer from unemployment, although the ratio of Unemployment Insurance claimants to population is higher for Rankin Inlet and Baker Lake. Eskimo Point has a relatively healthy economy with many small businesses. The number of local persons who could be employed by a young offender secure custody facility would very much depend on the availability of an adequate training program. The relative economic need of each community ultimately is the subject for political debate.

Site Availability

Figures 40 to 44 illustrate that in each community there are long term plans for the assembly of lots for future use. A preferred site should be located on the periphery of a residential area close to shared services such as gymnasium, nursing station, community hall, and school. The following summarizes the general availability of sites in each community:

- **Cambridge Bay** (reference Figure 40), land is available and municipal site services are adequate. However, since most new planned development is slated for outlying areas, the availability of sites close to educational and recreational facilities is limited.

- **Coppermine** (reference **Figure 41**), has a wide variety of lots planned for future development, all close to appropriate community facilities.
- **Rankin Inlet** (reference **Figure 42**), municipal services are supplied by utilidor, allowing unencumbered use of sprinklers and adding a kind of safety factor to the facility. With regard to site availability, a secondary core with planned development around the Gordon Robertson Educational Centre (GREC) is slated for the next five years. The area designated community/institutional use would be ideal for the proposed facility. A revised community plan will be available soon.
- **Eskimo Point** (reference **Figure 43**), an area has been designated for future residential development. A property on the north edge of this new area would be appropriate for a secure custody facility.
- **Baker Lake** (reference **Figure 44**), there are several potential sites available including a location between the current developed area and the growth zone to the east. A revised community plan will be available soon.

Costs

Capital and operating costs were reviewed (reference **Figures 46 and 49**) and, while little difference was found, the Keewatin is a somewhat less expensive region due to reduced transport costs.

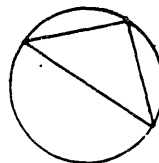


FIGURE 40
CAMBRIDGE BAY

LEGEND

- | | |
|----------------------------|----------------------------|
| 1. RCMP | 5. SCHOOL |
| 2. NURSING STATION | 6. OPEN CUSTODY GROUP HOME |
| 3. FUTURE COMMUNITY CENTRE | 7. ROAD TO AIRPORT |
| 4. ARENA | 8. GOVERNMENT OFFICES |

 5-YEAR RESIDENTIAL LAND DEVELOPMENT



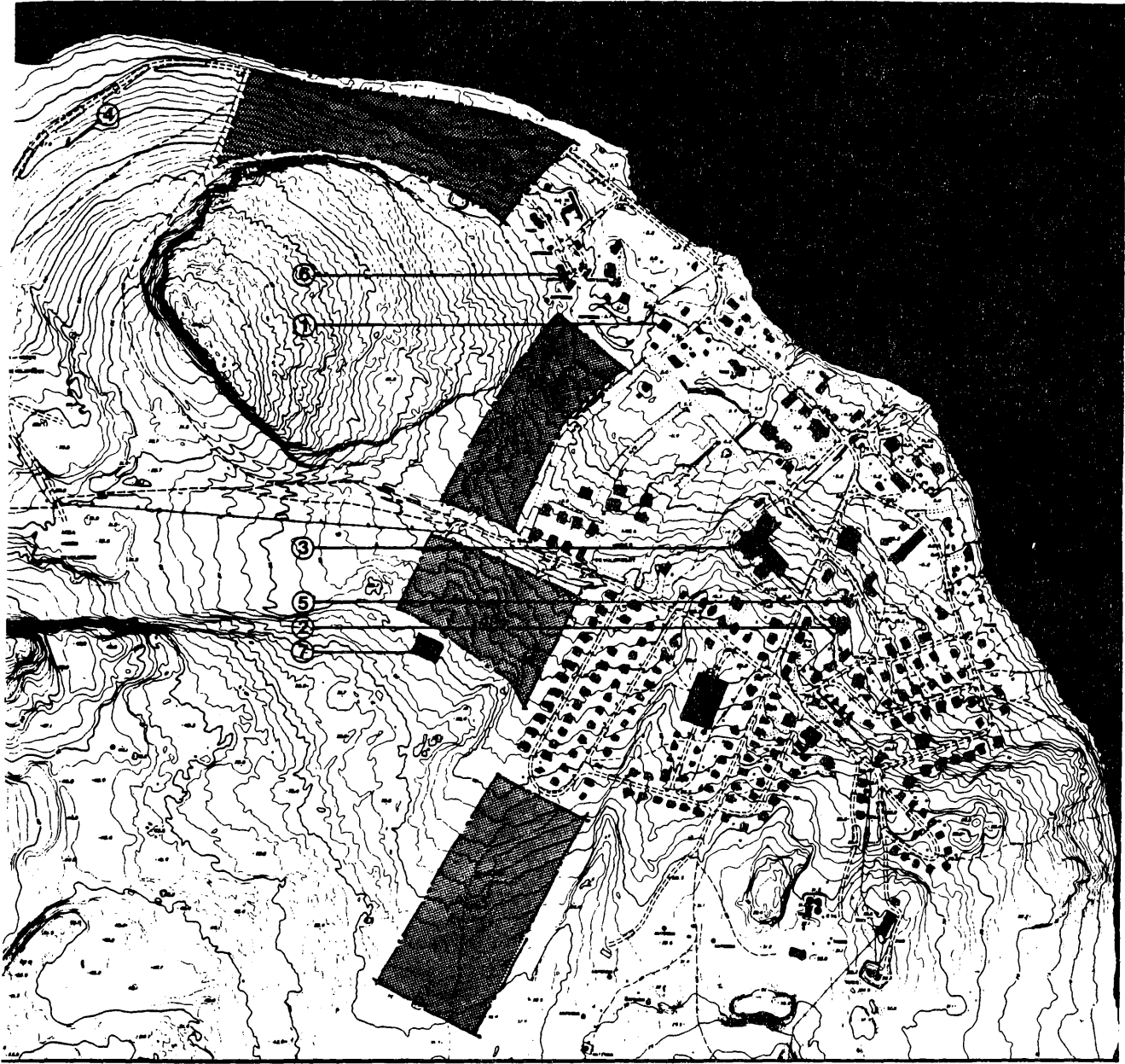
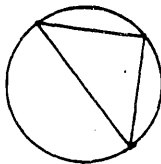


FIGURE 41

COPPERMINE

LEGEND

- 1. RCMP
- 2. NURSING STATION
- 3. SCHOOL
- 4. ROAD TO AIRPORT



- .5 SETTLEMENT OFFICE
- .6 OPEN CUSTODY GROUP HOME
- .7 GOVERNMENT OFFICES

 5 YEAR RESIDENTIAL LAND DEVELOPMENT

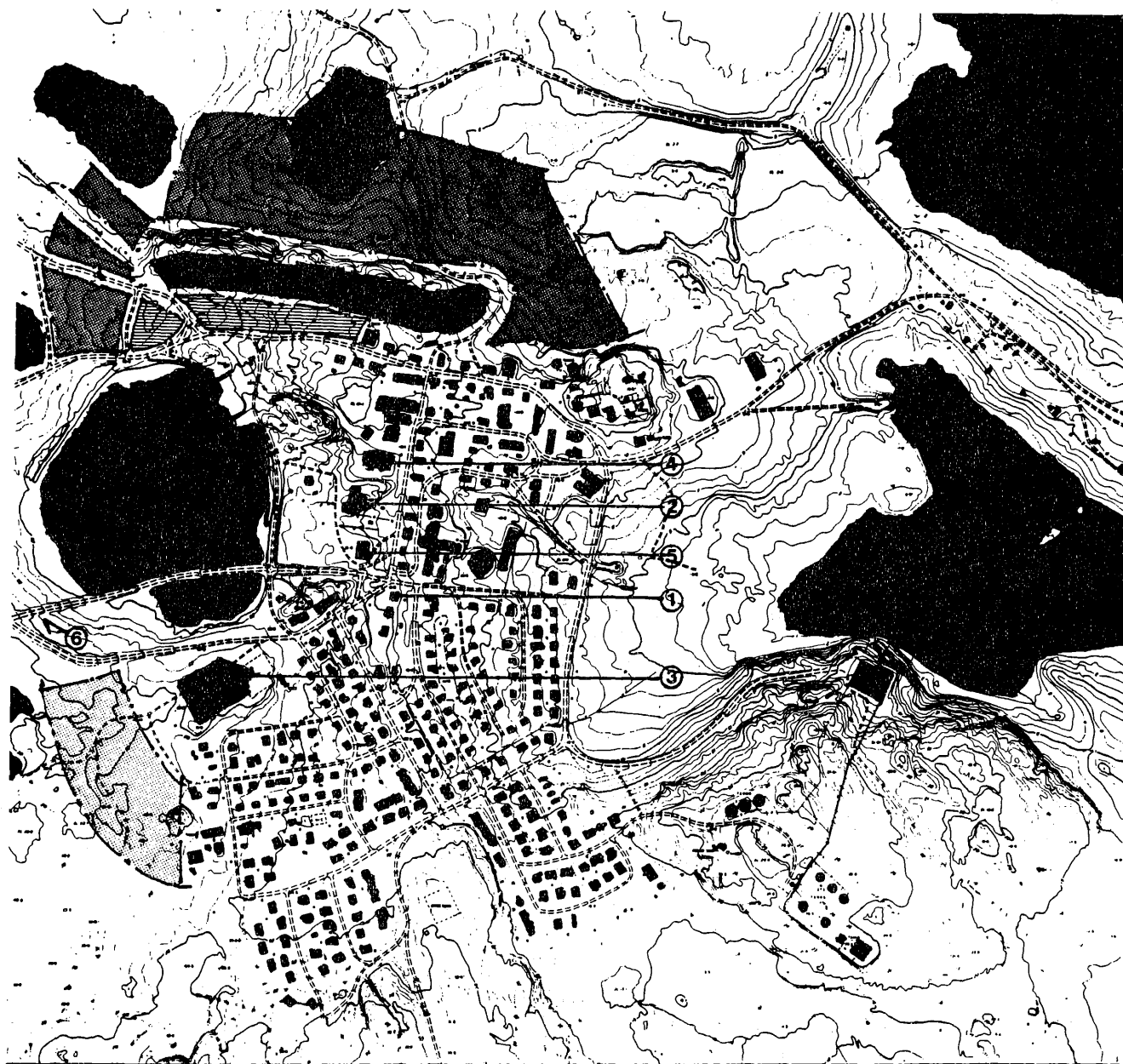




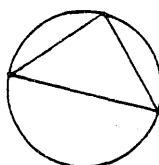


FIGURE 42

RANKIN INLET

LEGEND

- | | |
|-----------------------|--|
| 1. RCMP |  CURRENT RESIDENTIAL DEVELOPMENT |
| 2. NURSING STATION |  GREC |
| 3. SCHOOL |  FUTURE COMMUNITY INSTITUTIONAL USE |
| 4. GOVERNMENT OFFICES |  5 YEAR RESIDENTIAL DEVELOPMENT |
| 5. HAMLET OFFICES | |
| 6. ROAD TO AIRPORT | |



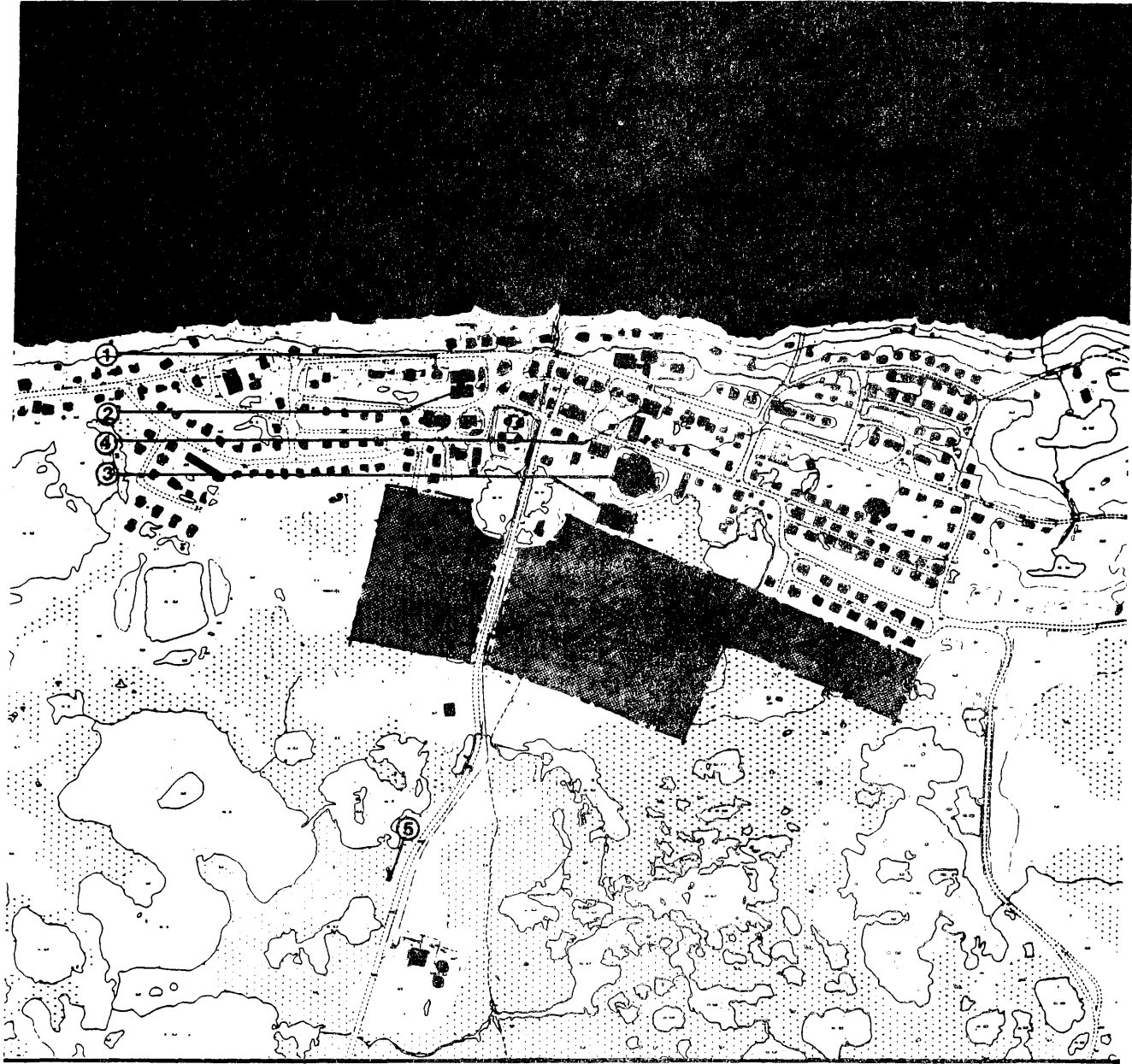
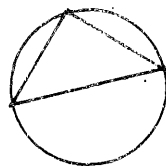


FIGURE 43

ESKIMO POINT

LENGEND

- 1. RCMP
- 2. NURSING STATION
- 3. SCHOOL(S)



- 4. HAMLET OFFICE
- 5. ROAD TO AIRPORT

■ 5-YEAR RESIDENTIAL LAND DEVELOPMENT

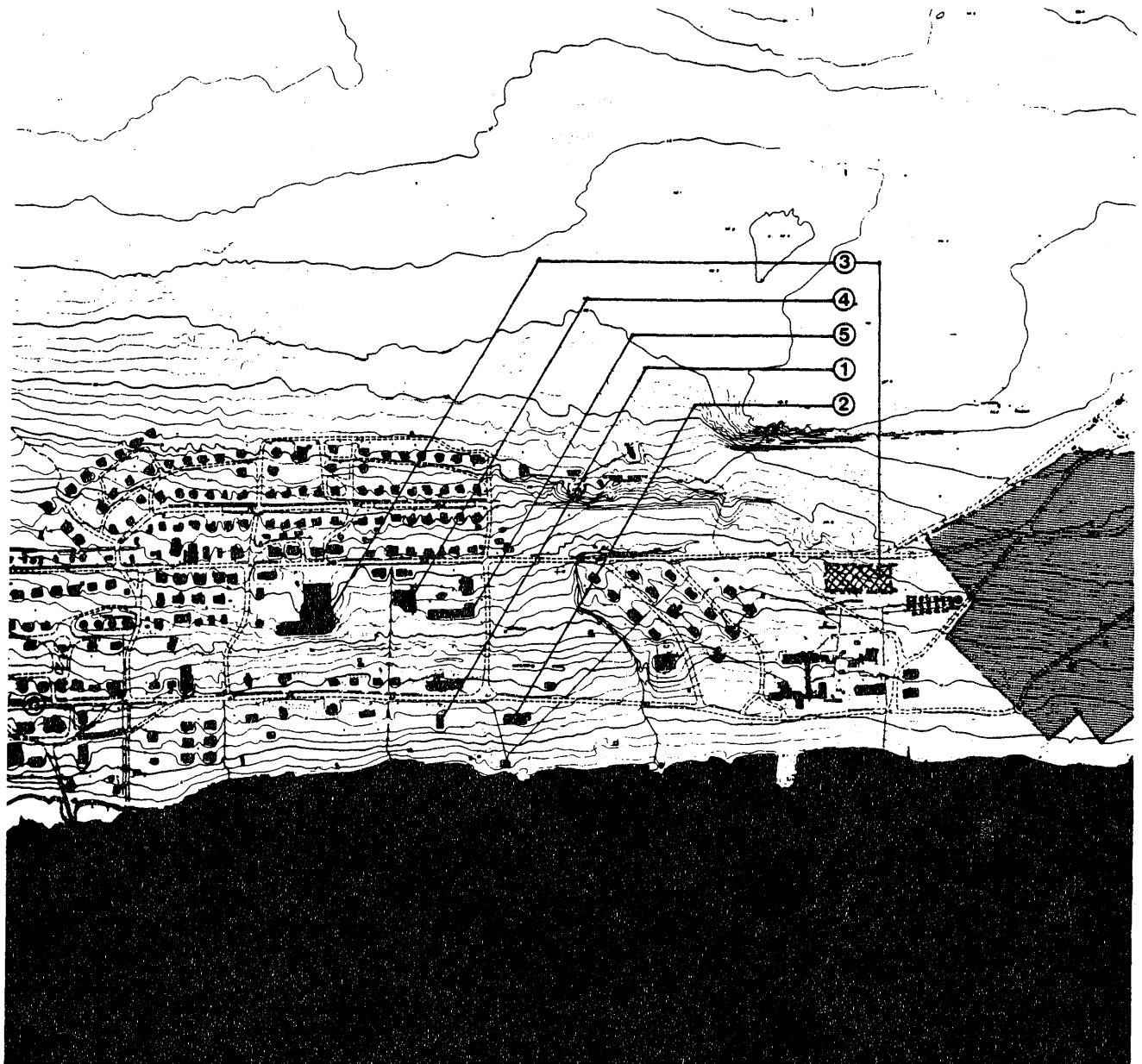
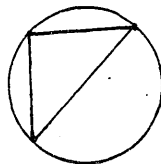


FIGURE 44
BAKER LAKE

LEGEND

- 1. RCMP
- 2. NURSING STATION
- 3. SCHOOL



- 4. HAMLET OFFICE
- 5. GOVERNMENT OFFICES
- 6. ROAD TO AIRPORT

 5-YEAR RESIDENTIAL LAND DEVELOPMENT

APPENDIX H DETAILED COST ESTIMATES

Capital Costs

Figure 45 presents construction and associated project costs for the four buildings which comprise the Development Plan. Figure 46 outlines the equivalent capital cost estimates for the following construction alternatives considered during the study:

- The new construction option for the provision of a secure custody facility in Inuvik.
- Provision of the Central NWT facility in either Cambridge Bay or Coppermine (Kitikmeot option).
- Provision of the Central NWT facility in Rankin Inlet, Baker Lake, or Eskimo Point (Keewatin option).
- Initial estimates of expanding the Iqaluit facility to provide an additional five-bed capacity.

Figure 45
Estimates of Total Project Costs

Project Option	Iqaluit New	Yellowknife New	Inuvik Renovate	FS Region New	Total
Capacity in Beds	12	14	12	20	58
Gross Area-m ²	714.7	805.3	771.4	970.6	3,262
Cost per m ²	2,600	1,800	1,100	1,900	\$1,839
Building Cost	1,858,220	1,449,540	848,540	1,844,140	6,000,440
Demolition	0	0	30,000	100,000	130,000
Site Development	200,000	100,000	50,000	225,000	575,000
Construction Cost	2,058,220	1,549,540	928,540	2,169,140	6,705,440
Consultant Fees	205,822	154,954	116,068	216,914	693,758
Consultant Expenses	40,000	10,000	25,000	15,000	90,000
GNWT Allowance	75,000	35,000	45,000	75,000	230,000
Furniture & Equipment	167,240	144,954	128,646	165,973	606,812
Total Project Cost	2,546,000	1,894,000	1,243,000	2,642,000	8,325,000
Cost Per Bed	212,200	135,300	103,600	132,100	143,500

In reviewing Figures 45 and 46, the following guidelines and definitions should be noted:

- Unit costs (\$/m²) were based on recent data from comparative construction projects throughout the NWT, notably the school construction program.
- Reference Appendices B, C, and D for a detailed listing of the spaces comprising the estimated gross building areas.
- Consultant fees are 10 percent of Construction Cost, except for renovations where the fee is 12.5 percent.

- Furniture and equipment allowances were estimated as nine percent of Building Cost, except for the Yellowknife Maximum Security Facility which was estimated at 10 percent due to anticipated extras for security hardware. Furniture and equipment for the Inuvik renovation was based on nine percent of the estimated cost of new construction.
- Total Project Cost numbers were rounded to the nearest thousand dollars.
- No allowances have been made for escalation of construction and other costs between now (first-quarter 1987) and the time of tendering for each of the projects. Current estimates of escalation are in the 5 percent per annum range.

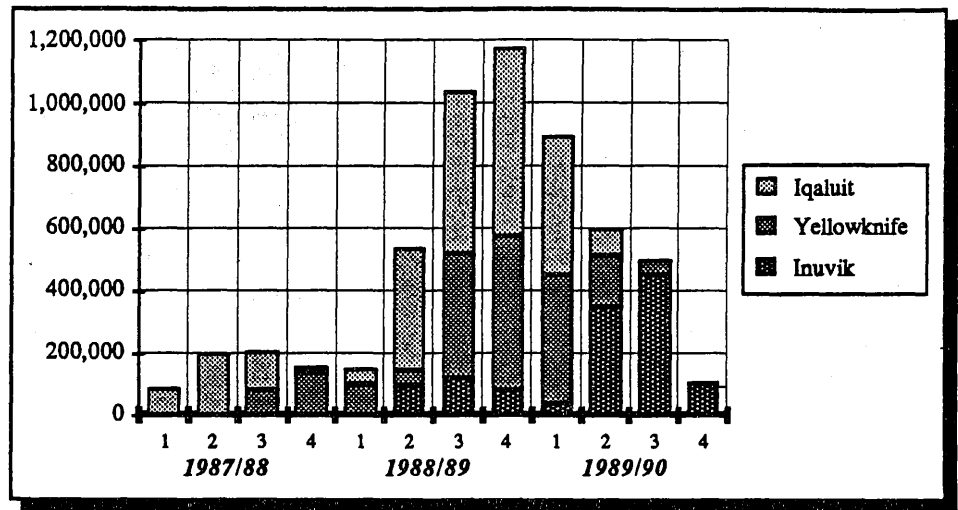
Figure 46
Cost Estimates, Options

Project Option	Inuvik New	Central Kitikmeot	Central Keewatin	Iqaluit Addition
Capacity in Beds	12	12	12	5
Gross Area-m2	714.7	714.7	714.7	118.0
Cost per m2	2,000	2,400	2,300	2,800
Building Cost	1,429,400	1,715,280	1,643,810	330,400
Demolition	0	0	0	0
Site Development	150,000	150,000	150,000	5,000
Construction Cost	1,579,400	1,865,280	1,793,810	335,400
Consultant Fees	157,940	186,528	179,381	41,925
Consultant Expenses	25,000	40,000	40,000	8,000
GNWT Allowance	45,000	50,000	50,000	10,000
Furniture & Equip't	128,646	154,375	147,943	16,520
Total Project Cost	1,936,000	2,296,000	2,211,000	412,000
Cost Per Bed	161,300	191,300	184,300	82,400

Cashflow Estimates

Figure 47 presents a preliminary analysis of the quarterly expenditures related to the implementation of the Iqaluit, Yellowknife, and Inuvik building projects. This estimate of cashflow, which was based on the design and construction schedules outlined in Figure 20, indicates that \$656,000 would be spent in 1987/88, \$2,913,000 in 1988/89, and \$2,114,000 in 1989/90.

Figure 47
Cashflow Projections



Operating Costs

In reviewing Figure 48, which presents annual operating cost estimates for the four buildings comprising the Development Plan, the following factors and definitions should be noted:

- All salaries and other data were based on current 1987 prices. Annual salaries were rounded to the nearest five hundred dollars.
- Benefits were based on 9.5 percent of salary.
- The NWT Settlement Allowance varies from community to community.
- The Price Factor was based on five percent of Salaries plus Benefits and Settlement Allowance.
- The Housing Allowance is \$5,400 per employee per year.
- Overtime/Casual costs were estimated at five percent of total Salaries.
- Total Payroll and Total Operating costs were rounded to the nearest thousand dollars.
- Expenses, which comprise travel, supplies, and services expenditures, were estimated at 20 percent of Total Payroll.
- Building Operations and Maintenance costs, which were rounded to the nearest hundred dollars, are presented in Figure 49.

Figure 48
Estimates of Payroll and Operating Costs

	Iqaluit		Yellowknife		Inuvik		FS Region	
	Staff	Cost	Staff	Cost	Staff	Cost	Staff	Cost
Manager	1.0	41,000	1.0	41,000	1.0	41,000	1.0	41,000
Deputy Manager	1.0	38,000	1.0	38,000	1.0	38,000	1.0	38,000
Administrative Clerk	1.0	22,500	1.0	22,500	1.0	22,500	1.5	33,750
Instructor	1.0	35,500	1.0	35,500	1.0	35,500	2.0	71,000
Program Staff	0.0	0	0.0	0	0.0	0	1.0	33,000
Cook	1.0	29,000	0.0	0	1.0	29,000	1.5	43,500
Child Care Supervisor	1.0	29,500	1.0	29,500	1.0	29,500	2.0	59,000
Child Care Worker	11.0	302,500	11.0	302,500	11.0	302,500	13.0	357,500
Totals, Staff/Salaries	17	498,000	16	469,000	17	498,000	23	676,750
Benefits		47,310		44,555		47,310		64,291
Settlement Allowance		68,425		0		37,672		0
Price Factor		30,687		25,678		29,149		37,052
Housing Allowance		91,800		86,400		91,800		124,200
Overtime/Casual		24,900		23,450		24,900		33,838
Total Payroll Costs		761,000		649,000		729,000		936,000
Expenses		152,200		129,800		145,800		187,200
Building Operations		71,400		35,400		62,500		41,900
Maintenance		35,700		17,700		31,300		21,000
Total Operating Costs		1,020,000		832,000		969,000		1,186,000
Cost Per Bed	12	\$85,000	14	\$59,400	12	\$80,800	20	\$59,300

Operating/Maintenance The estimates of annual expenditures to operate and maintain the buildings studied is presented in Figure 49. Anticipated costs for electricity, heating, hot water, and water supply were calculated using a program developed by Ferguson Simek Clark. The program takes into account general building design features as well as site-specific climatic conditions. Janitorial and other maintenance costs were calculated as half of the operating cost. This allowance may be somewhat less than expected since much of the basic building upkeep will be the responsibility of the young offenders under the supervision of child care staff.

Figure 49
Estimates of Operating and Maintenance Costs

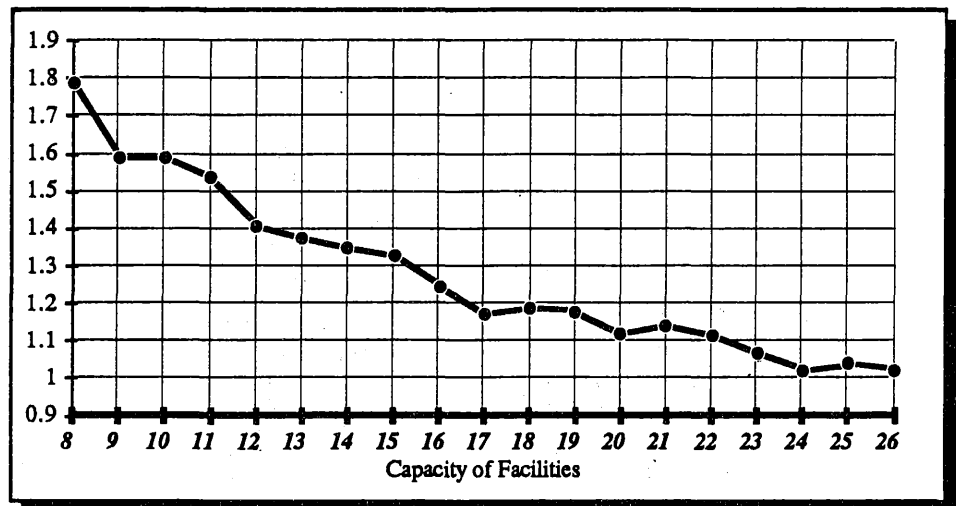
Project	Iqaluit	Yellowknife	Inuvik	Inuvik	FS Region	Keewatin	Kitikmeot
Option	New	New	Renovate	New	New	Rankin	Cambridge
Gross Area	714.7	805.3	818.0	714.7	970.6	714.7	714.7
Electricity	47,190	13,350	36,960	26,965	28,060	44,942	43,758
Heating	13,701	10,083	15,310	10,479	9,067	21,465	24,194
Hot Water	1,734	1,754	1,503	1,503	2,184	2,120	2,158
Water/Sewer	8,760	10,220	8,760	8,760	2,628	8,760	8,760
Operating	71,386	35,407	62,533	47,707	41,940	77,287	78,871
Maintenance	35,693	17,704	31,267	23,854	20,970	38,644	39,435
TOTAL	107,100	53,100	93,800	71,600	62,900	115,900	118,300

Staffing Requirements

Figure 48 specifies the staff required to operate each of the four facilities comprising the Development Plan. The process which led to the conclusion that these four buildings should be implemented included the analysis of staff requirements for secure custody facilities varying in size from 8 to 26 beds.

Figure 50 presents the results of this analysis by plotting the ratio of total staff required to capacity in beds. The results illustrate that the larger facilities need proportionately fewer staff than the smaller institutions. A key factor in explaining this 'economy of scale' is that a minimum of two staff are required on night shift in even the smallest secure custody facility. This staffing analysis was the critical factor in setting the practical minimum size for a secure custody facility at 12 beds.

Figure 50
Staff-to-Capacity Ratios



APPENDIX I LIST OF PARTICIPANTS

Planning Committee

Laura Comishen, Program Research Officer, Young Offenders
Department of Social Services

Dave Paul, Manager, Young Offenders Unit, Yellowknife Correctional
Centre
Department of Social Services

Sandy McPherson, Manager, Secure Facility, Hay River
Department of Social Services

Carole Tetlow, Project Officer, Architectural Division
Department of Public Works and Highways

Contributors

Bob Cowcill, Deputy Minister
Department of Social Services

Bronwyn Watters, Chief, Social Service Programs
Department of Social Services

Diane Doyle, Director, Young Offenders
Department of Social Services

Gwen Ewan, Program Officer, Young Offenders
Department of Social Services

Sheldon Nider, Coordinator, Young Offenders Information Systems
Department of Social Services

John Dillon, Superintendent, Yellowknife Correctional Centre
Department of Social Services

John Simpson, Planning Officer-Training, Policy, Planning and Support
Services
Department of Social Services

John Van Gulick, Regional Superintendent, Kitikmeot Region
Department of Social Services

Robie MacIntosh, Regional Superintendent, Keewatin Region
Department of Social Services

Paul Donnelly, Regional Superintendent, Inuvik Region
Department of Social Services

Bill Davidson, Manager, Children's Facilities, Inuvik
Department of Social Services

Bob McQuarrie, Member of the Legislative Assembly
Government of the Northwest Territories

Judge Michel Bourassa
Territorial Court of the Northwest Territories

Al Milton, Administrator, Territorial Court Administration
Department of Justice

Staff Sergeant Jim Scott, Criminal Operations Branch, "G" Division
Royal Canadian Mounted Police

David Aikens, Manager, Contracts and Capital Planning
Department of Public Works and Highways

Ralph Joyce, Territorial Statistician
Bureau of Statistics

Grant Gibson, Planning Technician, Kitikmeot Region
Department of Municipal and Community Affairs

Marla Allison, Regional Superintendent, Keewatin Region
Department of Municipal and Community Affairs

Consultant Team

William Wood, Project Director
Principal, William Wood Consulting Limited

Peter Ferguson, Co-director
Senior Civil Engineer, Ferguson Simek Clark, Engineers and Architects

Rod Kirkwood, Designer/Planner
Architectural Designer, Ferguson Simek Clark, Engineers and Architects

Gerald Finger, Facilities Programmer
Associate, William Wood Consulting Limited