

Chapter 8  
**FACILITIES AND INFRASTRUCTURE**

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**1. Introduction:**

*Purpose:*       The purpose of this report is to identify the existing review processes of the College's facilities and infrastructure and to determine the effectiveness of those review processes.

*Scope:*       The scope of the report includes all reviews of College buildings and the supporting infrastructure. The supporting infrastructure includes electrical, plumbing, and telecommunications subsystems. It also includes the maintenance subsystems for all of the above. It did not include educational equipment in detail such as chemistry, physics, biology, electrical etc. lab/shop equipment. It did not include service levels which are being addressed by the Service Review Subcommittee.

**2. Planning and Review Activities:**

In the time since the last institutional review, the following review activities have taken place:

*Master Site Development Plan* - prepared by the consultants, Resource Planning Group in 1991. This review is a periodic review.

*The Post Secondary Facility Audit Level One* - this is a Ministry initiated overview that inventories buildings and their status/condition. The audit is seen as "a fundamental step in the planning process for new buildings, replacements, renovations and additions" (quoted from the Level One Audit Manual). This is the first year of the program and was completed by CNC in February 1999. As this is the first time for this report, it is classified as periodic.

*Five-Year Capital Plan* - this is an annual review prepared for the Ministry. It lists all anticipated minor and major capital projects related to building and infrastructure for the next five years. Project size ranges from \$7000 for new quarry tiles in the kitchen to \$24,000,000 for a major building expansion for the Trades Division. It includes current

year submissions for Access Funded Projects, Safer Campus Funded Projects, Minor Capital Projects, and Increase Utilization Projects.

*Building Facilities Reports* - these are periodic reviews outlining the condition of buildings prior to renovation. In January of 1999, John English, Dean of Trades, completed reports for the Ogilvie Campus, the Danson Campus, and the Mackenzie Building.

*Room Utilization Report*- this is an annual review showing the utilization of each room from time booked and from a seat booked perspective.

*Preventative Maintenance System* - this is an on-going operational review of the status and condition of equipment and building components. It tracks utilization, wear and tear on equipment and integrates preventative maintenance activities as part of the routine operations of the Physical Plant Department. It does not track maintenance of educational equipment such as microscopes or lathes.

*Operations Study of the Building Services Division*- this is a periodic review to: “identify alternative organizational models for the Building Services Division” and to “identify organizational and technical opportunities to maintain or improve services while containing or reducing costs” and to “identify and recommend the necessary qualifications and experience for all supervisory positions within the Building Services Division”.

**Effectiveness of existing review processes:**

In this section we assess how well the various reviews meet the suggested SCOEA criteria.

**Evaluation of Periodic Reviews of Facilities and Infrastructure:**

	<b>Criteria</b>	<b>Master Site Development Plan (June '91)</b>	<b>Building Facilities Reports (Jan '99)</b>	<b>Operations Study (Dec '97)</b>	<b>Facility Audit Level One (Mar '99)</b>
1.0	Consider that goals/objectives are:				
1.1	- explicit	-	-	-	-
1.2	- consistent with strategic plan	-	-	-	-
1.3	- developed in consultation with stakeholders	-	-	-	-
1.4	- reviewed and revised as prompted by annual indicators, etc.	-	-	-	-
2.0	Includes a summary of the relevant indicators and trends which are collected annually	<b>FTE &amp; enrolments</b>	-	-	
3.0	Examines management of facilities & infrastructure operations including:				
3.1	Measures of client satisfaction	-	-	-	
3.2	Measures against established	<b>yes</b>	<b>yes</b>	<b>yes</b>	

	regulatory and professional standards where appropriate				
4.0	Examines operations fiscal management	-	yes	yes	
5.0	Includes:				
5.1	- consultations with stakeholders	yes	yes	yes	
5.2	- results are made available to stakeholders	yes	yes	yes	
5.3	Produces a clear summary of the findings and recommendations from the review:	yes	regarding safety	yes	

### Evaluation of Annual Reviews of Facilities and Infrastructure

	Criteria	Five Year Capital Plan	Room Utilization Report
1.0	Are the following indicators reviewed:		
1.1	- capital funding ratio	-	-
1.2	- capital maintenance costs:	-	-
1.3	- capital replacement schedules	yes	-
2.0	Maintenance cost/sq metre	-	-
2.1	- cleaning	-	-
2.2	- airconditioning	-	-
2.3	- heating	-	-
3.0	Operational costs:		
3.1	- repair & maintenance	-	-
3.2	- space utilization	-	yes
4.0	Computerization:		
4.1	- ratio of employees/computers	-	-
4.2	- age of computers	-	-
4.3	- degree of Internet access	-	-
4.4	- percentage of classrooms wired for LAN access	-	-
5.0	Instructional Media		
5.1	- percentage of classrooms wired for cable TV access	-	-

#### 4. Use of findings and recommendations of the reviews:

##### *Master Site Development Plan - (periodic review)*

This plan has been used to guide the development of large capital projects on the campus such as the recent Library/Student Services addition and the location of the residences.

##### *The Post Secondary Facility Audit Level One*

This review is a status report that makes no recommendations. It will likely form part of the required documentation for Provincial funding of future capital projects in the Five Year Capital Plan.

*Five-Year Capital Plan* (annual review)

At the moment the contents of this plan are not widely known or distributed in the institution even though many of the items on the plan do eventually get approved by the Provincial Government and implemented. The backup documentation for the plan is limited with the result that the cost estimates are not always realistic by the time the projects are approved and often the funds allocated are found to be inadequate.

*Building Facilities Reports* (periodic review)

These are new reports that will form the basis for improvements to the Trades buildings.

*Room Utilization Report*- (annual review)

This report is occasionally referred to when utilization rates appear low, but is not widely circulated if at all so does not influence decisions below senior management.

*Preventative Maintenance System* -(ongoing review)

This is an operational system that will eventually guide preventative maintenance for all equipment under the supervision of the Physical Plant department.

*Operations Study of the Building Services Division*- (periodic review)

Progress on the recommendations in this study continue within the affected departments under the supervision of the Administrative Vice-President. Regular updates are provided to the V.P.

5. **Have the recommendations that affect the management of facilities and infrastructure occurred?**

*Master Site Development Plan* - (periodic review)

Generally the plan has been followed but it is now 9 years old and plans for the new Trades area vary somewhat from the original layouts in the Master Plan.

*The Post Secondary Facility Audit Level One*

This report is an external requirement for the Provincial Government and does not contain any recommendations.

*Five-Year Capital Plan* (annual review)

Many of the projects in the five year capital plan(1998) are being implemented especially in the areas of Safer Campus, and minor Capital Projects.

*Building Facilities Reports* (periodic review)

The recommendations in these reports will be used in renovation for the Trades buildings.

*Room Utilization Report*- (annual review)

This report documents usage levels of rooms but makes no recommendations.

*Preventative Maintenance System* - (ongoing review)

This system identifies/schedules maintenance tasks which are then carried out by the Physical Plant Department.

*Operations Study of the Building Services Division- (periodic review)*

The recommendations have been reviewed and the most feasible ones have been implemented or scheduled to be implemented.

## 6.0 Conclusions and Recommendations

### Preliminary Reviews/Audits

Before useful evaluations/reviews can be conducted, we need to establish goals and objectives against which to measure our achievements.

**Recommendation 8.1:** We recommend that each area:

- establish written measurable goals and objectives for managing the following functions/areas:
- facilities management (Physical Plant)
  - infrastructure components:
    - data communications services (Computer Services)
    - telecommunications services (Computer Services)
    - CATV services (Instructional Media Services)

We would expect that the goals and objectives would be driven by input from the Board, Senior Management, the Academic plans, and of course each department itself.

**Recommendation 8.2:** We also recommend that the departments named in Recommendation 8.1 recommend/create a set of relevant indicators that will reflect utilization factors and status factors for each facility and infrastructure component so that progress towards goals and objectives can be determined. An explanation of possible factors follow:

Utilization Factors:

- to answer the questions for each facility or infrastructure component:
  - how much is it used (e.g. room utilization, bandwidth utilization)
  - how much is it available for use? (Accessibility)
- what percentage of time is it unavailable when it is in fact needed? (Uptime, downtime)
  - how much could it be used? (What is its capacity?)
- to answer the following questions for relevant infrastructure component:
  - what is its penetration across the campuses of the College (e.g. what percentage of offices have CATV, Aspen telephone service, computers, Internet access)

Status Factors:

- to answer the following questions for each facility and/or infrastructure component:
  - what condition is it in?
  - what does it cost us to maintain? (As a percentage of original cost and/or replacement cost)
  - when will it need a major overhaul?
  - when will it need to be replaced? (Expected life cycle when purchased, and expected life now?)

The appropriate measures/indicators will depend a great deal upon what goals and objectives are being adopted by the College.

### **Annual Reviews:**

**Recommendation 8.3:** For each department to conduct an annual internal review

- utilizing the set of indicators selected in 6.1.2 above to determine where improvements have been made or need to be made
  - evaluating the usefulness of the indicators and where appropriate establish new ones
- identifying important areas for improvement through capital acquisition or improvement

For the Five Year Capital Plan

- we see this document being the carryover document for not only the special government funded improvements but also for our own plans. The large carry-over projects would come from the Master Site Development Plan. Smaller projects might come from annual or other periodic reviews of facilities and infrastructure.

### **Periodic Reviews:**

**Recommendation 8.4:** We recommend that the Master Site Development Plan be updated every ten years to ensure that we have a direction for future expansion. A key input to the Master Site Development Plan would be the Strategic Plan of the College.

It appears the Ministry is implementing a type of periodic evaluation to support their usage and dependence upon our Five Year Capital Plan. The first step is the Level One Audit which is expected to be followed by more detailed audits of facilities.

**Recommendation 8.5:** We recommend that the various infrastructure components be reviewed periodically on a three to five year cycle. They might comment upon the usefulness of installed technologies but for future needs these reviews should concentrate on capacity measures and forecasts as opposed to specific technologies as solutions. For example, the addition of two new Technology training programs in the next five years would create a potential need for data network expansion and/or improvements. It may

be impossible to specify exactly what new technologies would be used for the expansion/improvements. However, we can likely project the volume of data network usage based on projected enrolments, staffing levels, and the actual training programs being introduced. With such projections we have at least an idea of what capacities we need to plan for and therefore introduce into the Five Year Capital Plan.

**Recommendation 8.6:** We recommend that the annual capital budgeting process be reviewed every five years to ensure that it is meeting the needs of the all the stakeholders who should be represented in the process

**Recommendation 8.7:** We recommend that the room utilization report (if it is determined to be an important measure) be circulated among those who will be accountable for room utilization with the goal of establishing norms for room utilization.