DISCOVERY PARKS
COMMUNITY PLANS

Research and Development Facilities
Willingdon (BCIT) Site

THE CORPORATION OF THE DISTRICT OF BURNABY

Planning & Building Inspection Department
Russell Vandiver Architects
DISCOVERY PARKS COMMUNITY PLANS

Research and Development Facilities
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THE CORPORATION OF THE DISTRICT OF BURNABY
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WILLINGDON (BCIT) SITE

DISCOVERY PARK COMMUNITY PLAN

(Updated to 1988 November 14)

1.0 DISCOVERY PARK CONCEPT

1.1 Objectives

Discovery Parks Incorporated has been created in order to implement the objective of increasing the productivity of British Columbia industry, to enable it to compete effectively in the international market and to maintain a broad and strong economic base in the Province.

The role of Discovery Parks is to attract capital intensive, high technology industry and investment to the Province by developing campus style research parks adjacent to the educational institutions. Furthermore, Discovery Parks will facilitate greater interaction between industry and the Universities, and promote the growth of a reciprocal relationship enabling the Universities to orient their resources to serve industry and to secure employment for their graduates.

The intent is to create a Research and Development oriented centre appropriate to the site and surrounding environment, reflecting a high standard of aesthetic values, and satisfaction of ecological concerns.

1.2 Benefits and Multiplier Effects

In general, there are a number of evident benefits and multiplier effects accruing from this overall proposal and these would include the following:

d) Provide possible specialized research and development expertise for industries located in Burnaby, and tend to attract or generate new industries to Burnaby which will utilize systems or manufacture high technology products developed at the Discovery Parks, or which will provide materials and services required by research facilities within the Discovery Parks.

e) Provide high quality development which would serve as a model for other similar scaled developments and which would further strengthen Burnaby’s tax base.

f) Indicate Burnaby’s support for the general policy of developing new secondary industries in Canada and, in particular, in British Columbia and assist the overall
economy in achieving a competitive edge through the promotion of creative re-
search activities.

Discovery Parks will be oriented to medium to large research firms requiring a separate building, as well as to the small and medium sized firms requiring short term “incubator” space on a leased basis in a shared building. The small firm will be catered to in a multi-tenant facility with shared accessory facilities such as cafeteria and recreational areas. The facility will contain leasable office and laboratory areas and will have a transformation capability allowing the development of shared accessory services such as computer services.

1.4 Generalized Planning Concepts

The generalized planning concepts for the Discovery Parks development include the following:

a) Create a park-like environment in the research park.

b) Create an integrated campus style development by clustering units around a common open space.

c) Develop a multi-tenant building that sets the stage for the cluster development.

d) Locate shared facilities and user amenities in the multi-tenant building to facilitate opportunities for social and intellectual interaction.

e) Locate parking below grade, as much as possible, to preserve open space.

f) Utilize open space within a cluster as a visual and functional focus of pedestrian activity.

g) Separate vehicular and pedestrian traffic within and between clusters.

h) Provide pedestrian links and recreational opportunities between clusters to enhance the concept of the park.

i) Preserve the natural landscape around and between clusters to the highest extent possible.

j) Encourage compatible quality of design among the cluster buildings while allowing individual user identification.

k) Phase development to complete a cluster before starting a new cluster.

2.0 ROAD ORIGATIONS AND STANDARDS

Appropriate rights-of-way 26.2m (86 feet) wide would be dedicated to accommodate Sanderson Way to Willingdon Avenue and Gilmore Way to Sanderson Way. The future extension of Carlton Street north from Spruce Street would require a 30.17m (99 feet) wide right-of-way dedication. Dedications for road widening along Willingdon in the vicinity of Sanderson Way may be required subject to a detailed study. Required road width standards and public separated sidewalk locations are outlined on Sketches 2 and 4.

The road pavement width of the public internal street will be 11m (36 feet) subject to the provision of pavement widenings where appropriate at intersections and resulting from detailed traffic and transit requirements. This 11m road width rather than a 14m (46 foot) standard is subject to Council concurrence to a request by the developer that no on-street parking be permitted along the public streets within the community plan area. Approval of the 11m road width is also subject to the provision of extensive boulevard landscaping at strategic locations along the road in addi-
tion to the standard street tree planting and grassing. This additional landscaping will apply in particular to intersection locations.

3.0 ARCHITECTURAL APPROACH

The general architectural concept should conform to a "pavilion in a park" approach emphasizing lower scaled buildings and use of high quality building materials. The established maximum building statistics for each of the major segments of Discovery Park should conform to the overall outlined community plan concepts. The statistics would include maximum site coverage on the net development sites, and maximum on-surface parking with any required or desired additional parking to be under-building. The building heights should not exceed four storeys nor 15 metres. A building of 4 storeys which accommodates research laboratories may be increased in height to 18 metres to allow for the extra height required within each storey for laboratory servicing.

Building scale is a direct function of building height and site coverage. Furthermore, the preservation of open green space in the area is vitally dependent upon the extent to which buildings are permitted to occupy the available ground space. In order to implement these important considerations of site coverage and scale, the statistics outlined in Appendix "A" have been established to provide detailed guidelines for each of the development sites of Discovery Park. Sketches 1 to 5 also form part of this community plan.

4.3 SITE CLEARING AND LANDSCAPE GUIDELINES

Conservation Area in this community plan is defined as one of the following:

a) Existing treed area left untouched.

b) Existing treed area that will be scrubbed and/or replanted with better native tree specimens by the developer.

c) Cleared areas which will be replanted with native tree specimens by the developer.

d) Cleared area that will be landscaped and used for the purpose of outdoor recreation.

The conservation areas under definitions (a), (b), and (c) as indicated in Sketch 2 will be protected by registered covenant, and no buildings should be constructed on such areas. Conservation areas under definition (d) may have small structures that provide shade and shelter as part of the use of outdoor recreation. Fitness trails and pedestrian walkways may be permitted in all conservation areas.

Every effort should be made to retain existing specimen quality trees and existing vegetation where appropriate. All cleared areas not paved or built upon shall be landscaped. Buildings adjacent to Willingdon Avenue and Canada Way should be set back a minimum 20m from the road rights-of-way and the setback area should be well treed and landscaped.

Landscaped screening should be provided for:

a) Mechanical/electrical equipment

b) Garbage collection areas

c) All parking and other large paved areas, large open spaces, large blank walls, and fences (mesh or solid)

d) Loading areas

e) Rear of single faced signs

Landscape drawings are required in conjunction with the registration of conservation area
covenants. Detailed landscape plans encompassing the development site shall accompany detailed architectural proposals submitted for approval.

5.0 PARKING AREAS AND ACCESS ROADS

A vital factor to consider within the objective of maintaining a significant amount of open green space and quality development is the extent of permissible surface parking. Surface parking lots within the development site should be minimized so as not to seriously detract from the quality of the development and be a wasteful and inefficient use of valuable land in the precinct. The following formula as well as the Appendix “A” statistics comprise a maximum guide for establishing the extent of surface parking.

Extent of permissible surface parking = 10% of net remaining site after building is located on the site (driveways not included). (This formula is subject to adjustment in conjunction with specific amendment rezoning proposals).

The remainder of the required parking would be suitably located underground. Convenient visitor parking should be provided. Any surface parking areas should be broken up, at random but frequent intervals, by planted openings of substantial size. Concrete curbs should separate all paving from landscaped areas.

In maintaining the concept of a landscape park development and low profile access road, no vehicular parking will be allowed on Sanderson Way to Willingdon Avenue and Gilmore Way to Sanderson Way. The construction of these public streets by the developer will be accompanied by an appropriate high quality landscaped boulevard treatment within the rights-of-way, with continued maintenance of landscaping the responsibility of Discovery Parks Incorporated.

Parking structures will be permitted only in the sense that they would be classed as buildings and would be subject to the maximum permitted floor area and site coverage, and to the cluster building concept. Such parking structures should have a facing material to screen all vehicles completely from view and have a quality architectural appearance compatible with other Discovery Park buildings.

6.0 PARKING REQUIREMENTS

The Burnaby Zoning By-law at this time includes the following parking requirements for specified uses:

**Research Laboratories**

1 for each 3 employees or 1 for each 93m² (1,001.08 sq. ft.) of gross floor area, whichever is the greater.

**Business, Administrative and Professional Offices**

1 for each 46m² (495.16 sq. ft.) of gross floor area.

**Places of Public Assembly**

1 for each 10 seats or 1 for each 9m² (96.88 sq. ft.) of floor area in areas without fixed seats which are used or intended to be used for public assembly, excluding playing surfaces.
All regulations of Schedule No. VIII Off-Street Parking and Schedule No. IX Off-Street Loading of the Burnaby Zoning By-law 1965 should be adhered to.

7.0 SPECIFIED DESIGN GUIDELINES

7.1 Lighting
The proper lighting of building(s), parking areas, courtyards, or other relatively large open areas requires the expertise of professional consultants. Lighting design should correlate energy conservation with aesthetic, architectural, and safety factors. Site lighting should be discrete and of high quality. Tall "freeway type" fixtures are unacceptable.

7.2 Signs
Generally speaking, the fewer and smaller the better. These basic premises should always be considered:
(a) proper scale and proportion as related to the environment and project building(s);
(b) use of architecturally co-ordinated materials and finishes;
(c) proper location on building(s) or site; and
(d) if illuminated, the use of soft concealed, nonglare lighting.
The Burnaby Sign By-law should also be adhered to. Professional design of signs is recommended - high architectural quality and character is essential.

7.3 Visible Fencing
Every effort should be made to avoid fencing in general (including security fencing). Necessary fences should be architecturally designed and be softened and screened wherever possible with new planting or existing vegetation.

7.4 Mechanical Equipment
Major systems requiring large components (e.g. air-conditioning, storage tanks, etc.) should be located in mechanical rooms completely within the building envelope. Surface mounted roof equipment should not be considered unless screening is low profile and completely integral with the overall architectural design of the building.

Of importance is the complete concealment from visual impact - from on or off the site of:
1) Storage tanks
2) Air conditioning or other mechanical equipment
3) Duct work
4) Cooling towers
5) Generators
6) Transformers
7) All but very small flues/vents
8) Unsightly structures
9) Other non-architectural appurtenances
Concealment to be consistent with the necessary operation of the apparatus.
7.5 Outdoor Storage
Outdoor storage is not permitted.

7.6 Outdoor Research Testing Areas
Outdoor research testing areas should be located in unobtrusive limited locations on a development site and be fully architecturally screened from view. Outdoor testing areas should be limited to functions without noise or visual emissions, primarily of a passive nature.

7.7 Utilities
The installation of all electrical, telephone, and cable servicing and all other wiring; and transformers and storage tanks underground throughout the development. Meters, etc. must be totally screened from normal sight lines on or off the site.

The developer is responsible for the provision of all services necessary to service his development sites to the approval of the Director Engineering.

8.0 PERMITTED USES
Research and development are the proposed principal uses in the Willingdon Site Discovery Park. Although the appropriateness of manufacturing and assembly uses on the Willingdon site is subject to compatibility with the current regional institutional character of the overall area and with the existing stable single-family dwelling neighbourhood to the west and south; on balance, the carefully controlled development of ancillary manufacturing and assembly uses can be supported. This support is due to the general urban developed context of this overall area, the reasonable proximity of related high quality industrial uses north of Canada Way, the intention of the developer to provide a well buffered and landscaped high quality development, the internalization and the proposed unobtrusiveness of any contemplated manufacturing and assembly uses to the primary research and development function of this Discovery Park development.

The approval by the Municipality of permitted uses for the Willingdon Site Discovery Park is subject to compliance with the following information and conditions which shall form part of the governing Comprehensive Development (CD) Zoning By-law.

8.1 List of Permitted Uses
The following uses are permitted:
a) Research laboratories.
b) Business and professional offices related to the primary research function.
c) Reproduction processes related to the primary research function such as printing, blueprinting, photostating,
lithographing, engraving, stereotyping, publishing and book binding.
d) Internalized pilot plants in which processes planned for use in production can be tested and the development of high technology prototypes.
e) Limited support facilities such as recreation and social facilities, convenience com-
mmercial facilities, eating facilities, and in-
ternal maintenance and machine shops
subject to the specific approval of each
such proposed facility by the Municipality.

f) Storage buildings.

g) Accessory buildings and uses including the
internal display, internal storage, and in-
ternal retail sale of goods produced or
stored on the premises.

h) Living accommodation for a caretaker or
watchman, if such living accommodation
is essential to the operation of the facility,
subject to the following:

i) to be located within a new principal
building housing a permitted use, on a lot
with a minimum area of 0.8 ha (1.9768
acres)

ii) to be provided for a maximum of two
adults (By-law Number 7056-77-04-04)

iii) to form an integral part of the principal
building and to be included in the build-
ing plans thereof

iv) to be fully separated from the primary
use by walls, partitions or a floor

v) to be provided with an entrance
separate from that of the primary use

vi) to have a maximum floor area of 56m²
(602.80 sq. ft.)

8.2 “High Technology” and “Ancillary Manufacturing or Assembly” Definitions

Ancillary manufacturing or assembly uses
shall be limited to high technology prototype
development or to the manufacture of high
technology products which are clearly related
to the principal on-site research and develop-
ment use on each development site.

“High Technology” Definition

High Technology industry is knowledge
based. The “raw materials” of high technology
industry are highly educated professionals
with scientific and technical expertise. The
product is applied knowledge in the form of
sophisticated components, processes, designs,
information and such, characterized by their
high value ratio. High technology industry is
environmentally clean, personnel intensive,
information rich and relatively small scale.
High technology industry is research inten-
sive, people oriented, and should be located
near centres of knowledge such as univer-
sities.

“Ancillary Manufacturing or Assembly” Definition

Ancillary manufacturing or assembly func-
tions are those that are subsidiary and subor-
dinate to and supportive of the principal
research function. Acceptable ancillary
manufacturing or assembly functions would
be only those which arise out of the research
function. “Manufacturing” is defined in the
Burnaby Zoning By-law as including those
operations which are a necessary part of, and
clearly related to, the production of the ar-
ticles or goods specified. The term “Manufac-
turing” may also include repairing of the
items specified.

8.3 Conditional Requirements

a) Ancillary manufacturing or assembly uses
shall be a required and necessary part of
the principal research activity. No tenant
genred exclusively in manufacturing or
assembly shall be permitted to occupy
space in Discovery Park.
b) Ancillary manufacturing and assembly uses shall be those that can co-exist with an adjacent or proximate residential area with a minimum of conflict.

c) Research or technology which is directly related to products designed for the destruction of human life will not be permitted.

8.4 List of Permitted Ancillary Manufacturing and Assembly Uses

The following are permitted ancillary manufacturing, processing, finishing or assembly uses of a light industrial character resulting in small scale products and subject to compliance with Sections 8.1, 8.2, 8.3, 8.5 and 8.6 of this Community Plan.

a) Electronic and electrical products such as transistors, semi-conductors, small computers, scanners, monitors, and compact communication devices.

b) Optical, fiber optical, and photographic products and equipment.

c) Scientific and professional instruments for measurement, data recording, monitoring, simulation, and evaluation as applied to such fields as medicine and resources industries.

d) Laser technology, radiology, x-ray and ultrasound depending on the clear definition and assured safety of the specific proposed endeavour within these fields.

e) Pharmaceuticals and drugs.

f) Energy and environmental research.

g) Process design, process simulation.

8.5 Enclosure of Permitted Uses

All permitted uses shall be housed completely within an enclosed building, except for permitted parking, loading facilities, and research testing areas subject to Section 7.6 of this Community Plan.

8.6 Environmental Health and Safety Concerns

Nothing should be done which is or will become an annoyance or nuisance to the surrounding areas by reason of unsightliness, the emission of odours, liquid effluents, ionizing or non-ionizing radiation, dust, fumes, smoke, vibration, noise or glare; nor shall any-
applicable codes, regulations, legislation, and by-laws administered by these agencies relative to annoyances, nuisance, health, and safety shall be adhered to. (See Appendix “B” for further details.)

9.0 GENERAL COMMENTS

9.1 The development sites will be landscaped in accordance with the approved plans in conjunction with the completion of individual buildings. The release of occupancy permits is also subject to the completion of required services.

9.2 The architect should familiarize himself with all conditions imposed by the appropriate jurisdiction(s) through zoning ordinances, building codes, and other applicable regulations and with the applicable community plan conditions.

9.3 Undeveloped sites must be maintained in a natural condition and kept free of debris, fill, or unapproved (by Discovery Parks Incorporated and Municipality) parking.

9.4 The lessee and his consultants are encouraged to discuss all building and site development questions early in the design stage with the Municipal Planning staff.

9.5 For both short and long term benefits, the services of architects, engineers, and other professional consultants are required for all external alteration proposals of consequence to site or building(s) including building identification signs.

10.0 PLANS REVIEW PROCEDURES (MUNICIPAL)

10.1 Zoning
The entire Discovery Parks Incorporated site is zoned to the Comprehensive Development District. This Community Plan is the Comprehensive Development Plan required by the rezoning by-law. Various prerequisites and the requirement to enter into a Servicing Agreement by Discovery Parks Incorporated are included in the rezoning report.

(Development Permits required in the original Discovery Parks rezoning have been
superseded and have been replaced by the amendment Comprehensive Development rezoning process.)

11.0 COMMUNITY PLAN SKETCHES AND STATISTICS

The attached Sketches 1 to 5 and overall Discovery Park statistics, Appendix “A”, comprise part of the Community Plan.

The Community Plan includes:

a) An illustration of maximum building site coverage, maximum surface parking, building layout scenario, road network, and prime access locations (Sketch 3).

b) Designated conservation areas, minimum building setback lines and landscaped recreation open space areas (Sketch 2).

c) Delineation of development sites (Schedule “A”, Sketches 1, 2 and 3).

d) Cluster developments are proposed for the development sites “C” and “D” (Schedule “A”, Sketches 1, 2 and 3). A typical cluster development is illustrated on Sketch 5.

e) Road rights-of-way dedications, road standards and general separated sidewalk locations (Sketches 2, 3 and 4).

f) Watercourse between Sites “E” and “F” to be retained in its natural condition and protected by easement (Sketches 2 and 3).

With respect to the drainage channel over Site “I”, the Municipality agrees that an easement and engineering details will not be required at this time but will be required at a future date at the time that the applicant applies for rezoning for a proposal within Site “I” which affects this feature (Sketch 2). The Municipality agrees that realignment of the subject drainage channel would be acceptable in order to avoid any proposed buildings which are submitted in conformance with the adopted Community Plan cluster building concept. Whether the drainage channel is to be piped or left in an open condition would be resolved at a future date and the proposed solution would be subject to the approval of Council.

g) Public pedestrian walkways protected by easement will be constructed by the developer:

i) along the Avondale Street alignment between Sites “F” and “G”.

ii) northeast of the Huxley Avenue and Spruce Street intersection between Sites “A” and “D”.

h) A pedestrian linkage from the Discovery Parks site to Willingdon Avenue (Sketches 1, 2 and 3).

A grade separated pedestrian crossing of Willingdon Avenue (Sketches 1, 2 and 3). The timing and funding arrangements for the construction of the grade separated crossing are still to be resolved.

i) The 1.73 ha (4.27 acre) site on the south-east corner of Moscrop Street and Willingdon Avenue to be designated for park use (Sketches 1, 2 and 3).

j) A maximum height of two storeys for the faces of the buildings within Site “D” which are located directly adjacent to the single family dwelling area to the south and west (Sketch 3).

k) Temporary buildings or structures are not permitted except for construction purposes and for a duration not to exceed the construction period.
### COMMUNITY PLAN STATISTICS

**Willingdon (BCIT) Site - Discovery Park 1980 August 25**

(Updated 1988 November 14)

<table>
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<th>Site</th>
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<th>Conservation Covenant</th>
<th>Conservation Other</th>
<th>Net Area</th>
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<td></td>
<td>(118,864 sf)</td>
<td>(7,563 sf)</td>
</tr>
<tr>
<td>G</td>
<td>21,682 m²</td>
<td>6,091 m²</td>
<td></td>
<td>15,591 m²</td>
<td>24</td>
<td>5,204 m²</td>
<td>3.0</td>
<td>15,611 m²</td>
<td>1,039 m²</td>
</tr>
<tr>
<td></td>
<td>(233,139 sf)</td>
<td>(65,565 sf)</td>
<td></td>
<td>(167,826 sf)</td>
<td></td>
<td>(55,953 sf)</td>
<td></td>
<td>(167,860 sf)</td>
<td>(11,172 sf)</td>
</tr>
<tr>
<td>H</td>
<td>16,517 m²</td>
<td>3,962 m²</td>
<td></td>
<td>12,555 m²</td>
<td>25</td>
<td>4,129 m²</td>
<td>3.0</td>
<td>12,387 m²</td>
<td>842 m²</td>
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<tr>
<td></td>
<td>(177,602 sf)</td>
<td>(42,648 sf)</td>
<td></td>
<td>(135,145 sf)</td>
<td></td>
<td>(44,400 sf)</td>
<td></td>
<td>(133,201 sf)</td>
<td>(9,052 sf)</td>
</tr>
<tr>
<td>I</td>
<td>38,115 m²</td>
<td>4,770 m²</td>
<td></td>
<td>27,465 m²</td>
<td>24</td>
<td>9,148 m²</td>
<td>3.0</td>
<td>27,444 m²</td>
<td>1,831 m²</td>
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<tr>
<td></td>
<td>(410,280 sf)</td>
<td>(51,345 sf)</td>
<td></td>
<td>(295,640 sf)</td>
<td></td>
<td>(98,470 sf)</td>
<td></td>
<td>(295,414 sf)</td>
<td>(19,695 sf)</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>24</strong></td>
<td></td>
<td><strong>77,808 m²</strong></td>
<td>2.75</td>
<td><strong>213,029 m²</strong></td>
<td><strong>16,680 m²</strong></td>
</tr>
<tr>
<td></td>
<td><strong>324,119 m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>(836,645 SF)</strong></td>
<td></td>
<td><strong>(2,290,634 sf)</strong></td>
<td><strong>(179,354 sf)</strong></td>
</tr>
</tbody>
</table>

**Note:** All measurements are in square meters and square feet. (Acres)
Environmental Health and Safety Performance Standards

GENERAL

Some tenants of Discovery Parks will have operations which are particularly sensitive to various environmental factors. It is important that all tenants recognize this, and design their buildings to minimize the impact of their operation on other tenants and on the community surrounding the Park.

The Community Plan for the Willingdon campus of Discovery Parks includes the following general statement:

"Nothing shall be done which is or will become an annoyance or nuisance to the surrounding areas by reason of unsightliness, the emission of odours, liquid effluents, dust, fumes, smoke, vibration, noise or glare nor shall anything be done which creates or causes a health, fire or explosion hazard, electrical interference or undue traffic congestion. All regulations and requirements of Federal, Provincial, Regional and Municipal regulatory agencies and the currently applicable codes, regulations, legislation and bylaws administered by these agencies relative to annoyances, nuisances, health and safety should be adhered to."

The following guidelines give specific standards where these can be identified and tenants are expected to comply with them within the intent of the general statement.

In some cases these standards may be more stringent than regulations of Burnaby Municipality. In all cases, the more stringent standard will apply. Burnaby will only be responsible for inspection and enforcement up to their own standards and where the standards which follow are more stringent, Discovery Parks will have the responsibility for ensuring that the standards are complied with.

The fact that a bylaw or regulation is not mentioned in these performance standards does not mean that it is inoperative.

Discovery Parks Incorporated will maintain a current list of contacts in the various controlling agencies, to assist tenants with securing necessary approvals.

HAZARDS

All research operations shall be carried out with reasonable precautions taken against fire and explosion hazards. Buildings shall be constructed in accordance with all applicable codes regarding such hazards.

These codes include the National Fire Code and the British Columbia Fire Services Act covering the manufacture, sale, storage and carriage of inflammable substances. The regulations of the Workers Compensation Board shall be followed with respect to handling and storage of harmful substances.
At all Discovery Parks Incorporated Research Parks the Burnaby Fire Prevention Bylaw #5096 (1968) with amendments thereto is applicable.

NOISE

Noise emitted into the community from Discovery Parks Incorporated locations situated in Burnaby will be subject to the requirements of the Burnaby Noise or Sound Abatement Bylaw No. 7332. Noise levels within the confines of Discovery Parks Incorporated locations shall, in addition, comply with regulations set out herein. These latter regulations will be enforced by Discovery Parks Incorporated whereas noise emitted into the adjacent community will be monitored and regulated by the Municipality of Burnaby.

"Noise Level" or "Sound Level" in the context of this performance standard, means the noise or sound level in decibels as measured on the "A" scale of a sound level meter which meets the Canadian Standards Association Standard Z107.1 (1973) for Type 1 or Type 2 meters.

"Continuous Noise" means any noise continuing for a period or periods totalling more than three minutes in any fifteen minute period of time and "Non-Continuous Noise" means any noise continuing for a period or periods totalling less than three minutes in any fifteen minute period of time.

Repetitive impulse noise shall be considered as continuous noise if the number of impulses in any fifteen minute period of time exceeds 180 and shall be considered as non-continuous noise if the number of impulses in any fifteen minute period is equal to or less than 180. Where the period between successive repetitive impulses is one second or less, the impulse noise shall be measured with a sound level meter set on "slow" response. Where the period between successive repetitive impulses is greater than one second, the impulse noise shall be measured with a sound level meter set on "impulse" response where "impulse" response is defined by International Electrotechnical Commission Publication 179A.

Noise level measurements taken within Discovery Parks Incorporated locations by representatives of Discovery Parks Incorporated will be conducted at the exterior of the leased site from which the noise originates or, where the extent of a leased site is not defined, at any point within 15m of any building within the Discovery Park Incorporated Research Park other than buildings leased by the tenant responsible for the noise.

Continuous noise having a tonal or impulsive character shall not exceed 50dBA. Other continuous noise shall not exceed 55dBA.

Non-continuous noise having a tonal or impulsive nature shall not exceed 75dBA. Other non-continuous noise shall not exceed 80dBA.

Noise of a temporary nature resulting from construction and maintenance of grounds and facilities and noise associated with emergency situations will not be regulated by Discovery Parks Incorporated but where such noise is emitted into the adjacent community, Burnaby Bylaw No. 7332 must be complied with.
VIBRATION

Ground vibration shall not exceed a peak particle velocity of $1.5 \times 10^{-4}$ m/sec in any of three mutually perpendicular directions measured immediately beneath the surface of the ground. Ground vibration shall be measured at the exterior of the leased site from which the vibration originates or, where the extent of a leased site is not defined, at any point within 15m of any building within the Discovery Parks Incorporated Research Park other than buildings leased by the tenant responsible for the vibration.

DUST, SMOKE, ODOURS, GASES

All these emissions are controlled by the Greater Vancouver Regional District's Quality Control Staff who administer the Provincial Government's Pollution Control Act through the Greater Vancouver Regional District Air Pollution Control Bylaw Number 92. All industries, firms and businesses that produce emissions in their operations will require a permit.

GLARE AND ILLUMINATION

No tenant's building(s) or operations shall create a continuous glare so as to adversely affect another tenant or an adjoining site outside of the Park. Exterior illumination shall have an architectural character. Site flood lighting, by means of building mounted or tall "freeway-type" fixtures is unacceptable.

IONIZING RADIATION

Ionizing radiation shall be controlled in accordance with the regulations of the Atomic Energy Control Board, and the radiation protection service of the Province of British Columbia.

NON-IONIZING RADIATION

All non-ionizing radiation (lasers, microwaves, ultraviolet radiation, etc.) shall not adversely affect any operations or equipment other than those of the originator of the radiation. Appropriate single or mutual scheduling of operations are permitted. Standards for this section are found in the Canadian Labour Code SOR 74-601 with amendments "Radiation Emitting Devices Act" and SOR 72-66 Canada Dangerous Substances Regulations.

WASTE

All waste criteria are covered by the regulations pursuant to the Greater Vancouver Regional District Sewerage and Drainage District Act governing the admission of waste into sewers. Where there is a possibility of chemical material entering the sewer, tenants are required to construct a sampling sump. The location of the sump within the building should be discussed with the Burnaby Environmental Health Department.
SKETCH 1 General Surveyed Layout
SKETCH B Example Building Layout Scenario

NOTE: THESE TWO BUILDINGS MUST FACE
      TWO STORY BUILDING TO THE NORTHWEST
      TO THE SOUTH AND WEST.

NOTE: THE PLAN DEMONSTRATES THE MAXIMUM
      ALLOWABLE ELEVATION OF THE DEVELOPMENT.
      IT DOES NOT DEMONSTRATE THE EVENTUAL
      BUILDING SHAPES.
SKETCH 5 Typical Cluster Development