

POLICY REPORT DEVELOPMENT AND BUILDING

Date:

July 5,2004

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Meeting Date:

July 20, 2004

TO:

Vancouver City Council

FROM:

Director of Current Planning

SUBJECT:

CD-1 Text Amendment -

Vancouver General Hospital (Underground Power Plant)

800 West 12th Avenue

RECOMMENDATION

THAT the application by Bunting Coady Architects to amend CD-1 By-law No. 4472 for Vancouver General Hospital to permit an Underground Power Plant as a principal use for steam and power generation, be referred to a Public Hearing together with,

- (i) plans received March 31, 2004
- (ii) draft CD-1 By-law amendments, generally as contained in Appendix A, and,
- (iii) the recommendation of the Director of Current Planning to approve the application;

FURTHER THAT the Director of Legal Services be instructed to prepare the necessary amending by-law, generally in accordance with Appendix A, for consideration at Public Hearing.

GENERAL MANAGER'S COMMENTS

The General Manager of Community Services RECOMMENDS approval of the forgoing.

COUNCIL POLICY

• On April 22, 2004, Council endorsed a planning implementation program for the Vancouver General Hospital (VGH) Precinct. The planning implementation program is assisting VGH through the review of proposed developments within the Precinct,

articulating CD-1 text amendments consistent with the VGH Precinct Policy Statement, and processing subsequent rezoning applications. This subject text amendment rezoning application has arisen from this review.

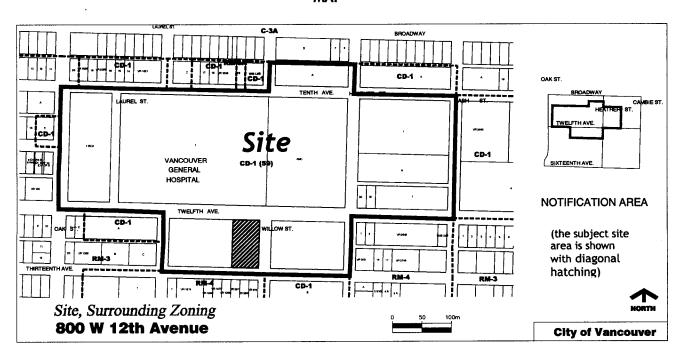
- Vancouver General Hospital (VGH) Precinct CD-1 Guidelines adopted by City Council November 7, 2002 seek to provide a moderating transition in use and scale from the Broadway corridor to adjacent moderate density residential areas.
- Vancouver General Hospital (VGH) Precinct Policy Statement adopted by Council on June 15, 2000 provides the guiding policy for evaluating future zoning and development in the precinct.

PURPOSE and SUMMARY

This report assesses an application to amend the Comprehensive Development District (CD-1) By-law for Vancouver General Hospital to accommodate a replacement Underground Power Plant as a principal use, with at-grade public open space to be located on a site previously planned for a 4-storey Medical Technology development.

The rezoning application proposes to define and add a use term for Underground Power Plant as a principal use on this site. The application also proposes to delete setbacks applying to a portion of the development site. These setbacks were defined in the by-law for the purpose of regulating above-grade development (medical technology buildings) and are not applicable to the development of an underground power plant. Staff recommend the deletion of this site from sub-area B of the CD-1 By-law as a medi-tech building is no longer proposed for this site.

MAP



DISCUSSION

Background: The current CD-1 zoning for the Vancouver General Hospital lands was developed out of an extensive public consultation process which resulted in the Vancouver General Hospital (VGH) Precinct Policy Statement, from which the current master plan is derived.

The goals and principles of the VGH Precinct Policy Statement include:

- fostering a greater and more legible ordering with a stronger, less institutional sense of identity;
- integrating the precinct more effectively with the surrounding community;
- creating an acceptable transition from a major employment centre to moderate density residential areas;
- providing a minimum of 5.1 acres of contiguous public open space with very public edges to encourage use by surrounding communities as well as the hospital precinct population; and
- promoting environmentally-friendly "green" building principles in new and retrofitted structures.

While the Policy Statement noted that a replacement below-grade power plant was proposed near the 11th Avenue and Willow Street corridors, it became apparent as VGH further developed its phasing plans that a location at the SW corner of Willow Street and 12th Avenues would be significantly better. The previously proposed site would have impinged on the footprint of a proposed underground parking facility, effectively cutting it in two and complicating its planning and construction and increasing construction costs. Also, the previously proposed site would have required some demolition of the Heather Pavilion, which is an "A" listed building in the Vancouver Heritage Register. That location also posed design challenges for the formal concept of public open space planned for the block in front of the historic Heather Pavilion.

Staff support the proposed location for the underground power plant, noting that its development at this location would also result in the replacement of an existing well-used public open space, provide an interactive public art/water feature, while forgoing development of a medical technology building on this site, as permitted in the current zoning. This will create an improved transition from the Hospital to the adjacent medium density residential areas.

Two amendments to the zoning would be required to accommodate the development of the underground power plant as proposed. The application therefore proposes to:

- amend setback provisions within the subject sub-area B of the CD-1 by-law; and
- define and permit underground Power Plant as a principal use on this site.

Setback provisions within sub-area B, intended to regulate the development of above-grade buildings, are an unnecessary and problematic constraint on the proposed development of the power plant. This is because setbacks technically apply to development both above and below grade. Staff support the proposal to amend setback provisions in the by-law.

Staff also recommend deletion of this site from sub-area B of the CD-1 By-law. This would preclude the development of a medical technology building on this site without a further rezoning application.

Defining and adding Underground Power Plant as a permitted principal use within the CD-1 By-law is deemed necessary because VGH proposes that this facility be able to share steam with Children's and Women's Hospital (C&W) and potentially serve other offsite users. As such, it cannot be considered as a use "customarily ancillary to" the on-site hospital use.

Environmental Implications: An underground power plant serving demand beyond VGH is consistent with City and GVRD objectives to reduce air emissions. As a principal use, the VGH underground power plant would be able to share excess steam energy with Children and Women's Hospital as it is sufficient to meet combined VGH and C&W campus demands. There may be further potential in the future to sell steam to other nearby larger-scaled energy users, at a much higher level of efficiency than would be achieved by individual users.

The primary fuel supply for the plant is proposed to be natural gas. The back-up fuel for the plant is proposed to be No. 2 low-sulphur Fuel Oil, delivered by truck. This back-up fuel is presently seldom used (approximately 1 day per year). Staff note that any increase in size of the plant or usage of the specified back-up fuel presents a potential planning issue, given the residential context. Air quality implications of using this alternative fuel source if it should increase over time is of concern to members of the community, City and GVRD staff.

To address concerns over any potential increased quantity or decreased quality of emissions over time, Staff recommend that prior to enactment of the rezoning, suitable arrangements be made to the Satisfaction of the Director of Legal Services, the General Manager of Engineering Services and the Director of Planning which ensure that the operation of underground power plant will meet or exceed the GVRD's Current Emissions Standard for Stationary Combustion Processes. Any future proposals to expand production will require a development permit application which will be assessed as a conditional use.

Sound Attenuation: Noting its location near a residential community, the applicant seeks to reduce plant noise levels to the greatest extent possible and has proposed measures to ensure that this facility will meet or exceed current Noise Control By-Law requirements. Staff recommend that the proposed acoustical measures be incorporated into the final design as a condition of approval of the development application.

Form of Development: An underground power plant with open space above, will result in a more sensitive transition to existing residential development south of West 13 Avenue. Street frontages will provide a more open "green edge" that creates passive enjoyment of the open space and opens up distant views which would not be available with the currently-zoned development.

Community Benefit: The location of the power plant will increase by almost 50% the amount of publicly accessible green space contemplated under the Council approved master plan for this site and will create an improved transition to the residential community to the south. The sub-grade location of the power plant on this site, offers a significantly better urban design response than the development of a medical technology building contemplated in the master plan at this location. A proposed water feature and an integrated, interactive public art feature for residents, patients, employees and visitors, also offers a more substantial public amenity.

Public and Urban Design Panel Input: Staff conducted public consultation related to this proposal (details in Appendix C). The majority of public commentary was supportive of the proposed development. Issues raised by members of the community include potential noise, vibrations, steam venting, and emissions. These issues will be addressed through conditions of rezoning.

The Urban Design Panel unanimously supported this proposal, (see detailed commentary in Appendix C)

PUBLIC BENEFIT CONTRIBUTIONS

Previously approved community amenity contributions reflected in conditions of rezoning and legal agreements related to the VGH Precinct will continue to apply. Other public benefits resulting from previous development approvals also remain in effect.

In accordance with Council's motion of April 22, 2004, as this rezoning application would not result in any new floor area or new uses within the CD-1 By-law which would generate additional civic amenity needs, no additional community amenity contributions need to be made by the applicant.

Development Cost Levies (DCLs): DCLs will apply to the newly constructed floor area of the development on this site at the approved City-wide rate of \$64.58 per m² (\$6.00 per sq. ft.)

CONCLUSION

Staff support defining and adding underground Power Plant as a permitted principal use within this CD-1 as it would provide energy at a much higher level of efficiency than would be achieved if the individual users fulfilled their own energy needs

Staff also support the application to amend setbacks in the VGH CD-1 By-law to accommodate the underground power plant at this location because it results in a better urban design response by providing a more sensitive transition to existing residential development south of West 13th Avenue and effectively replaces the existing park with open space and a significant public art installation. The location of the power plant will increase significantly the amount of publicly accessible green space provided for this transition block south of 12th Avenue.

Staff recommend a condition of enactment which addresses future potential increases in the quantity or decreases in the quality of air emissions from this facility, and helps ensure regional air quality emission standards for such a facility are met.

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DRAFT AMENDMENTS - CD 1 BY-LAW NO. 4472

Note: An amending by-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

Uses:

- Define "Power Plant" in section 2.2 to mean a plant for the generation of steam power to serve on and off site users.
- Add the following as section 4.5:
 - "4.5 Except for access points approved by Council as part of the form of development, a power plant must be underground."

Sub-areas

 Delete the designation of this subject site (SW corner of 12th Avenue and Willow Street) as "sub-area B"

Setbacks

Delete setback specified in section 8.1.6 and amend Figure 4 accordingly.

PROPOSED CONDITIONS OF APPROVAL

Note: The below are draft conditions which are subject to change and refinement prior to the finalization of the agenda for the Public Hearing.

- a) THAT the proposed form of development be approved by Council in principle, generally as prepared by Bunting Coady Architect, in plans stamped "Received City of Vancouver" March 31, 2004 provided that the Director of Planning may approve alterations to this form of development when approving the detailed scheme of development as outlined in (b) below.
- b) THAT, prior to approval by Council of the form of development, the applicant shall obtain approval of a development application by the Director of Planning, who shall have particular regard to the following:
 - i) Design development better integrate landscape, and open space/structures lighting design, with the potential Willow Street pedestrian corridor and public open space on the Nurse's Residence site.
 - ii) Design development to the public art component to clarify design intent, functionality and anticipated maintenance protocols to ensure on-going use and longevity.

Note to applicant: Testing of systems prior to installation is encouraged to ensure that field operations involving pedestrian interaction, is achievable.

iii) Confirmation of required signage.

Note to applicant: Conceptual design and location should be submitted if signage is anticipated. Consideration should be given to an interpretive aspect that informs the public of the site's use/function.

- iv) design development to take into consideration the principles of CPTED (crime prevention through environmental design) having particular regard for;
 - a) providing open visibility into the park from adjacent streets and pedestrian ways,
 - b) providing less dense, more useable landscaping adjacent to existing parking structure,
 - c) reducing opportunities for graffiti.
- v) Provision of a Landscape Plan illustrating common and botanical name, size and quantity of all existing/ proposed plant material. Plant material should be clearly illustrated on the Landscape Plan and keyed to the Plant List. The landscape plan should include the public realm treatment (to the curb) and all existing or proposed street trees, adjoining walkways, surface materials, and public utilities such as lamp posts, hydro poles, fire hydrants, etc. should be noted.

Note to applicant: All street trees, adjoining walkways, surface materials, and public utilities such as lamp posts, hydro poles, fire hydrants, etc. should be noted. Further comments may be outstanding.)

- vi) Provision of arboricultural services, where necessary, including submission of reports, site supervision and letters of undertaking;
- vii) Provision of tree removal/protection/replacement plan;
- viii) Design development to overall open space design to better integrate the pedestrian circulation paths from within the site, across Willow St. and to proposed adjacent development;
- ix) Design development to overall open space design to minimize opportunities for crime;

Note to applicant: Structures in park-like settings may pose an opportunity for loitering, crime, grafitti and other property damage. To increase site safety, all proposed structures, interactive art, water features, and landscape massing will require further Staff review, detailed drawings and revisions, where necessary.

- x) Design development to submit a detailed lighting plan to increase safety, ensure night way finding and minimize glare to adjacent sites;
- xi) provision of detailed large scale (1/4" or 1:50) architectural sections and elevations, illustrating the detailed treatment of amenities on slab: vents, art installations, hard surface areas (typical), water features and planters;
- xii) Design development to public realm to anticipate future comments on street design pending adjacent site development, input from stakeholders, Engineering Streets Division and Park Board;

Note to applicant: New street trees should be noted "Final species, quantity and spacing to the approval of the City Engineer and Park Board." Contact Eileen Curran (871-6131) of Engineering Streets Division regarding street tree spacing and quantity. Contact Bill Stephen (257-8587) of Park Board regarding tree species;)

- xiii) Design development to landscape/public art amenities to anticipate future comments or request for detailed drawings and written specifications;
- xiv) Provision of sufficient site seating (wheelchair access);
- xv) Design development to ensure proposed pre-cast concrete planks and hard surfaces are not hazardous or hinder wheelchair movement;
- xvi) Provision of an Operations Management Plan.

Note to applicant: The plan should address general operations, site maintenance, systems emissions, lighting, acoustical performance, landscape, security and communication protocols to ensure that impacts to residents and pedestrians are minimised.

v) Provision of a Construction Management Plan.

Note to applicant: The plan should address the anticipated length of construction activity, and related site management including staging, security, parking, deliveries, storage, debris, dust, noise, lighting and communication/24 hour liaison to ensure that impacts to residents and pedestrians are minimised.

- vi) Incorporation of acoustical measures in the final design as outlined in the acoustic report submitted by Daniel Lyzun & Associates on May 28, 2004 and concurred with by the Medical Health Officer (Senior Environmental Health Officer) in order to reduce noise impacts by the site on the surrounding neighbourhood.
- c) THAT, prior to enactment of the CD-1 By-law, the registered owner shall:
 - i) Make arrangements to the satisfaction of the Director of Legal Services, in consultation with the General Manager of Engineering Services and the Director of Planning to require that the operation of the Underground Power Plant meets or exceeds the GVRD's Current Emissions Standard for Stationary Combustion Processes.
 - ii) Clarify all charges registered in the Land Title Office against title to the lands (a charge summary, including copies of all charges, must be provided) and include the modification, extension or release of any charges deemed necessary by the Director of Legal Services.

Site, Surrounding Zoning, and Development: The subject 3992 m² project site of this CD-1 Text amendment is bounded by 12th Avenue on the North, Willow Street on the East, 13th Avenue on the south and the VGH Parkade on the West. Most of the proposed project lies within the current sub-area B designation of the 139 085m² (34.4 acre) Vancouver General Hospital Comprehensive Development District. The site is presently occupied by public open space. The properties to the south are zoned RM-4 and are developed with multiple dwellings.

Proposed Development: The proposed development consists of an Underground Power Plant, with its roof constituting an at-grade landscaped garden and water feature with interactive public art. The building will emerge from below grade in the form of an elevator and stair structure at the northwest edge of the site. This building is the front door for access and loading as well as the fire fighting access point. Other elements of the building which are proposed to emerge from below include steam vents, exhaust stacks and skylights for the building below, which will become an integral part of an interactive public art piece by artist Alan Storey, working collaboratively with the architects, landscape architects and building engineers. The proposed materials are glass, stainless steel and concrete.

Functional Overview: The primary fuel supply for the plant is proposed to be natural gas. This will be supplied to the plant by Terasen from an existing underground main. The back-up fuel for the plant is proposed to be No. 2 low- sulphur Fuel Oil, delivered by truck and stored in two 100,000 litre double-walled, fibreglass storage tanks. Provisions for a third fuel oil storage tank have been made to accommodate the plant's build-out capacity. VGH currently has an "interuptable service" contract with their natural gas supplier, Terasen. This means the plant must switch from natural gas during peak demand times and use alternate fuels which to date has been lower grade No. 4 fuel oil. This flexibility to use alternate fuels is designed into the replacement power plant. Although presently seldom used, (an approximate average of 1 day per year)

Public Input: The proponent held a public open house on March 10, 2004 to introduce the proposed development to surrounding area residents and business owners. The Open House was attended by approximately 80 people.

City Staff held a Public Open House followed by a Public Information Meeting on June 7, 2004 was attended by over 70 people. The majority supported the proposed development, noting that the proposed re-creation of the existing open space was preferable to the medical technology building presently permitted for this site in the zoning. Several concerns were raised over potential noise, vibrations, steam venting, and emissions. The latter concern related particularly to those occasions when the plant would use alternate fuel sources.

Additional commentary included seeking ways to incorporate elements of an accessible healing garden into the landscape plan.

Urban Design Panel Commentary: On June 9, 2004, the Urban Design Panel reviewed this proposal and supported it unanimously. The panel offered the following comments:

"Panel's Consensus on Key Aspects Needing Improvement:

- Further clarification of the design and detailing strategy of the power plant site with respect to the integration and contrast between both of the adjacent walkway and the park:
- Design development to enhance the relationship of the parkade edge with respect to landscape and building integration.

Related Commentary:

The Panel found the project to be very playful and dynamic. There were no concerns about the use, and the location of the stacks was considered appropriate. The public art was thought to be well integrated and exciting and a good counterpoint to the lawn across the street. One Panel member questioned whether it might be possible to use LED technology with changing colours in the lighting strategy. One Panel member questioned whether the stacks could be something other than stainless steel, suggesting a colour might add to the playfulness of the scheme.

It was noted there are some mid-block linkage issues between this project and the adjacent Nurses' Residence that need to be resolved. There was also a question about the relationship of this park to the proposed linear greenway and whether there could be more of a connection in terms of entry locations, etc. The applicant was urged to coordinate the landscape plan with the adjacent Nurses' Residence project. As well, the relationship between the walkway and the adjoining park should be clarified as there may be an opportunity to enhance the separation of these roles.

The Panel had no concerns about safety and security. One Panel member expressed the hope that the project would not be over-lit in response to CPTED concerns, preferring the use of ambient and background lighting to create the perception of safety as opposed to a lot of pole lighting in the centre. One Panel member questioned the quantity of trees between the stacks and the parkade in terms of it being a place where vagrants could camp out. Lighter landscape, possibly with paths through, might be considered.

A suggestion was made that the diagonal entry for fuelling on 12th Avenue may be too generous and encourages jaywalking.

There was a recommendation to build on the healing aspects of the scheme for the benefit of both patients and staff.

It was recommended that mock-ups be built prior to implementation of the public art program to better understand some of the structural dimensions and mechanical-electrical requirements, etc. There was also a recommendation to consider an education component - plaques and signage to indicate what is going on inside and underneath to educate the public on the benefits of the power plant.

There was a recommendation for further design development to the entry lobby to make it less like a building and more of a simple sculptural object in the plaza. Also, there was a

recommendation to give some consideration to overlook onto the pavilion roof from surrounding buildings."

FINANCIAL IMPLICATIONS

There are no financial implications for the City associated with this application.

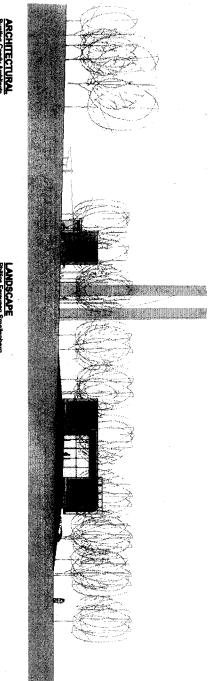
Social Implications: There are no major positive or negative social implications to this proposal. There are no implications with respect to the Vancouver Children's Policy or Statement of Children's Entitlements.

Comments of the Applicant:

We thank City staff for thorough and timely review and are in general agreement with the City's analysis and recommendations for approval. We look forward to working out the details of the agreement at a later date.

FOR VANCOUVER GENERAL HOSPITAL **ENERGY CENTRE**

800 WEST 12TH AVENUE VANCOUVER, BC, CANADA



ARCHITECTURAL
Bunting Coady Architects
300-171 Weter St, Vancouver B.C. V6B 1A4

COVER SHEET
CONTEXT PLAN & EXISTING PHOTOS
SURVEY PLAN

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LANDSCAPE
Phillips Farevasg Smallenberg
2327 Yew St. Vancouver B.C. V6K 3H1

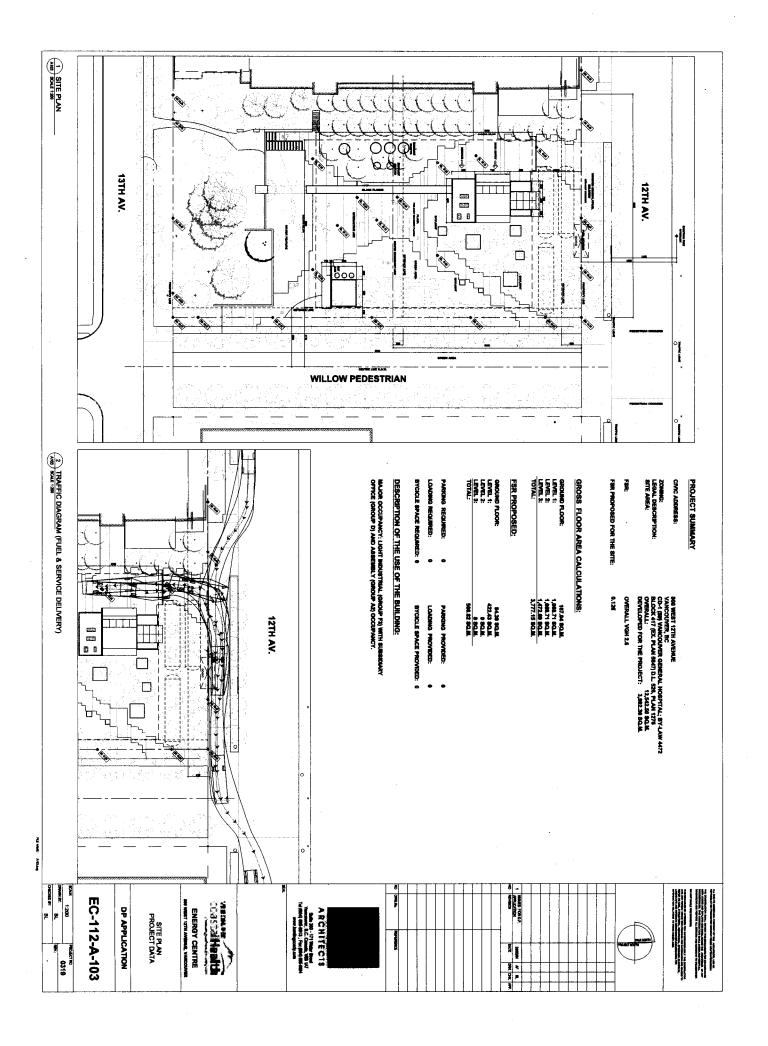
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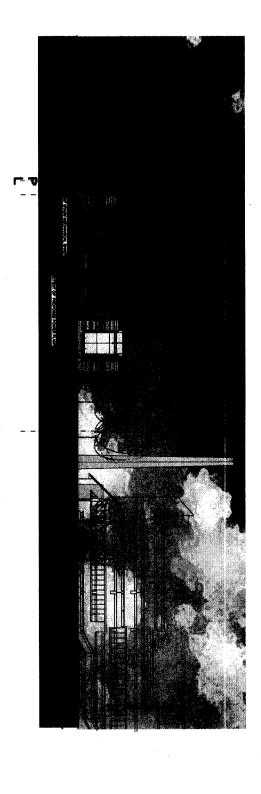


ENERGY CENTRE

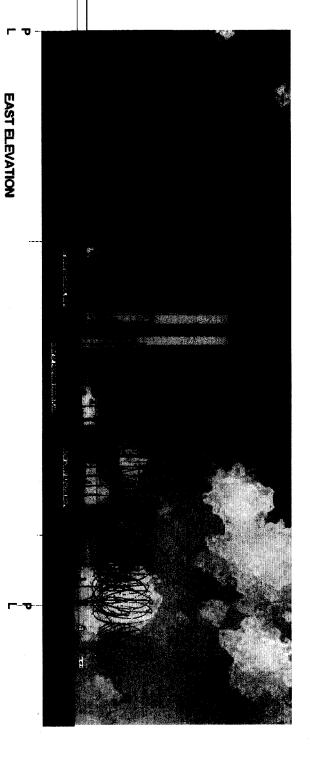
FOR VANCOUVER GENERAL HOSPITAL

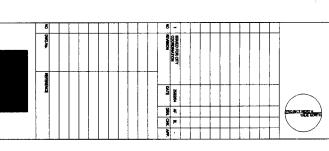
800 WEST 12TH AVENUE VANCOUVER, BC, CANADA





NORTH ELEVATION





ARCHITECTS

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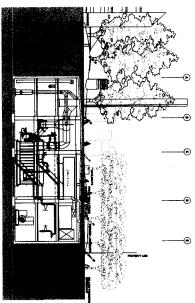
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SITE ELEVATION NORTH & EAST

D.D. REPORT

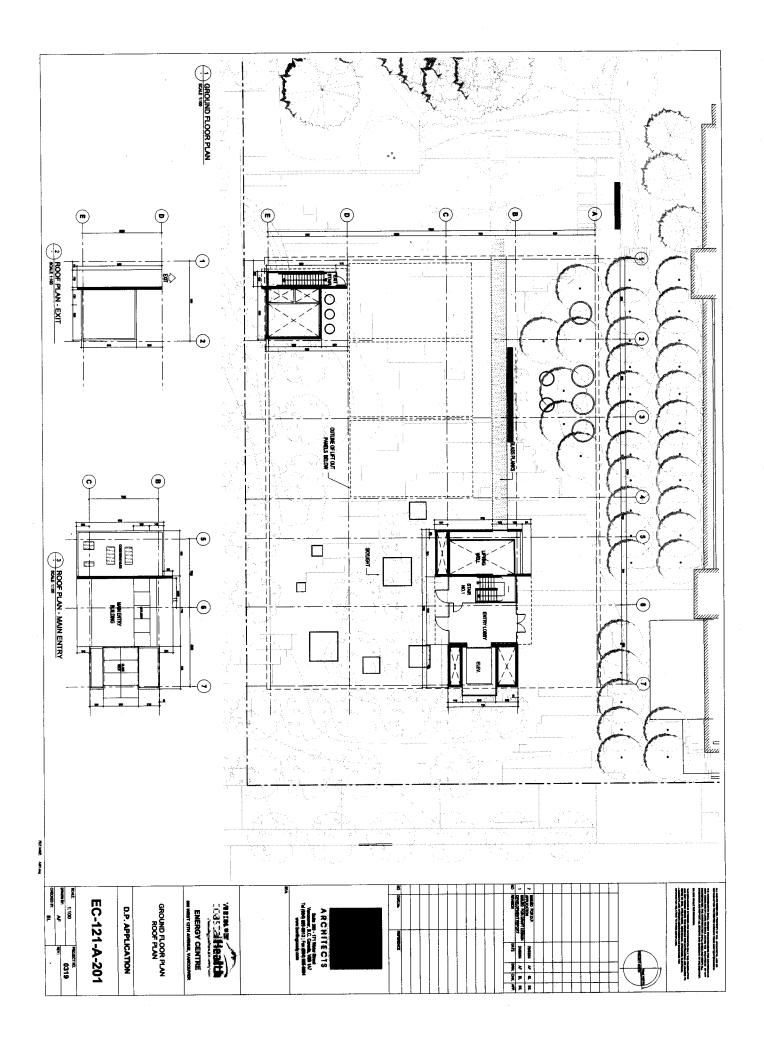
SITE SECTION NORTH-SOUTH

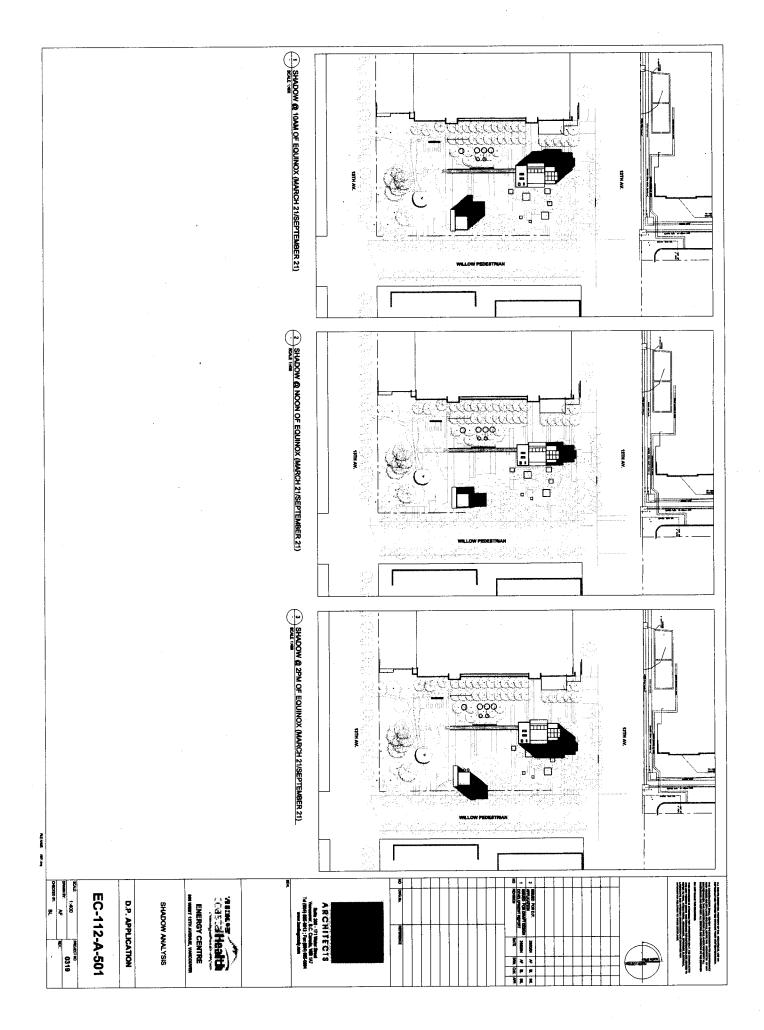




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APPLICANT, PROPERTY AND DEVELOPMENT PROPOSAL INFORMATION

Street Address	800 West 12 th Avenue
Legal Description	BLOCK 417 (EX PLAN 5647) D.L. 526, PLAN 1276
Applicant / Architect	Bunting Coady Architects
Property Owner / Developer	Vancouver General Hospital

SITE STATISTICS

	GROSS	DEDICATIONS	NET
SITE AREA	3992.3 m ² (42, 974 sq. ft)	N/A	3992.3 m ² (42, 974 sq. ft)

DEVELOPMENT STATISTICS

	DEVELOPMENT PERMITTED UNDER EXISTING ZONING	PROPOSED DEVELOPMENT
ZONING USES (sub-area b)	CD-1 Cultural and Recreational Uses; (Community Centre or Neighbourhood House) Dwelling Uses; Institutional Uses (Child Day Care Facility, Hospital and Special Needs Residential Facility - Congregate Housing)	CD-1 (Amended) Add Power Plant as a permitted principle use.
MAX. FLOOR SPACE RATIO	2.6	0.126 (FSR proposed for this site)
SETBACKS (sub area C)	2m from any future boundary adjoining a public open space approximately 38m south of 12 th Avenue	Delete setbacks which bisect this site. (delete section 8.1.6)
PARKING SPACES	0 (required)	0 (provided)
BICYCLE PARKING	0 (required)	0 (provided)