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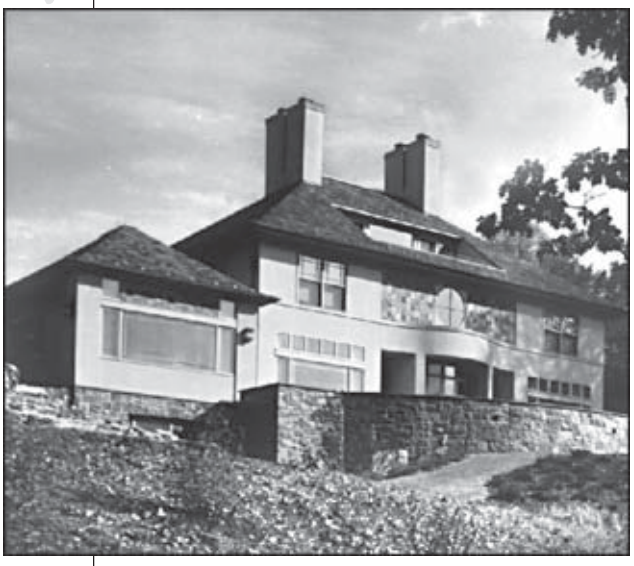
Project plan

BELLA COOLA

The Bella Coola Development Study merges community requirements for the envisioned facility and the alternative approaches to building on the Bella

Coola Northern Pointe site. Consultants' reports regarding structural considerations and tree evaluation are included for their continued application to the problem. An effort has been made to work with the full extent of space requirements currently voiced by the Western Division Management Center and the Bella Coola Village Organization. Other organizations were queried to form the basis of judgment in determining the overall need. This recognizes that as the program development progresses, tenant requirements may change, but the essential square footage and cubic limitations for a below grade structure will remain. In addition, it has been envisioned that jointly required facilities would be available for all organizations to use on a shared basis, utilizing movable walls for privacy.



Spectacular solar site: the southern face along Grant Road will provide enough solar energy for the entire three level structure.

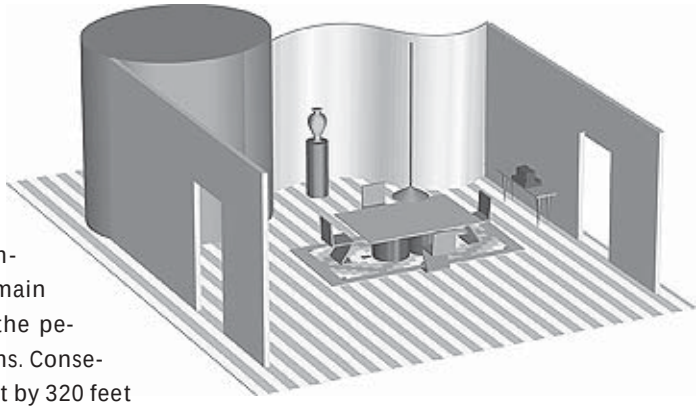
In utilizing the Northern Pointe site, it is initially assumed that the envisioned facilities would be largely accommodated below grade, and that above grade structures would be intended to accommodate those functions demanding particular visibility and identity, such as a community recreation center.

It is very possible that significant heating and cooling economies would be achieved by virtue of underground construction and the application of appropriate solar collection techniques. The southern face of proposed structures along Grant Road offer optimum orientation for collection of solar energy. Additionally, natural illumination of below grade spaces would significantly improve the quality of the indoor environment and has been recognized as an important component of the project.

Available Space Analysis

On the schematic site plan of the Northern Pointe site, a total area of some 200 feet by 450 feet is indicated as the proposed maximum extent of below grade development. In addition, we believe that a 345 feet by 475 feet area to the north of the community center may be considered for future inclusion in Northern Pointe development plans, although it is not under consideration in this study.

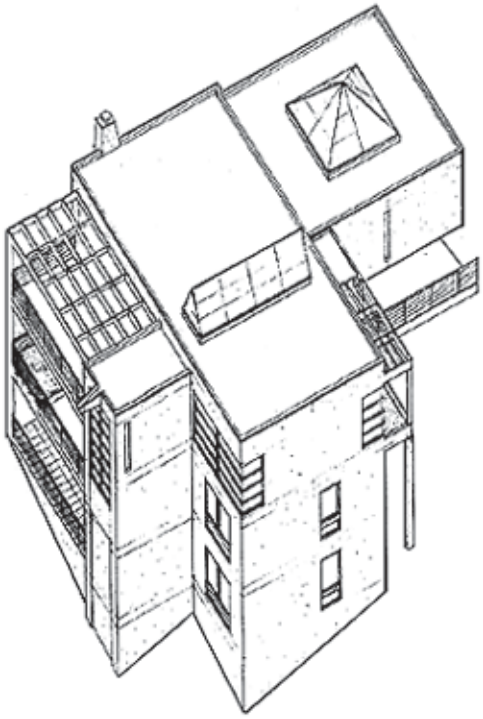
Preservation of thirty-one major trees identified in the northeast corner of the site would significantly reduce the total space available for development. It is recommended that the soil should remain undisturbed within 25 feet of the perimeter of the trees' root systems. Consequently, an area of some 185 feet by 320 feet would be excluded from development plans in an effort to preserve the grove of Douglas Fir trees.



An open design: interior plan of lower level conference room utilizes moving dividing walls to create privacy amongst community.

Preliminary analysis of the site has indicated that it would be feasible to construct three below grade levels. However, structural considerations of excavation and proximity to adjoining buildings may be reviewed. With these parameters in mind, it can be calculated that, for below grade construction alone, there is cubage available to accommodate 273,650 square feet of space in three levels. This assumes that recommended measures would be taken to preserve the Douglas Fir trees, and utilized in the design.

The extent of above grade construction is constrained by a desire to limit the maximum height of new construction to about 25 feet to 28 feet above grade, and to largely preserve the present garden environment of the site. It should be noted that extensive above grade construction would impair efforts to provide natural illumination for below grade spaces. Automobile ramp access from Grant Road to below grade parking will need to be given further consideration as well.



Skylights, balconies, and sunken gardens provide light to below grade levels.

Light and View Considerations

There is little doubt that the facility envisioned for the Northern Pointe site will largely rely upon adequate introduction of natural light and view to the underground levels to achieve a comfortable and successful indoor environment. This could be accomplished through the use of sunken gardens which would adjoin below grade working areas to provide light as well as important visual orientation and variety. It can be recognized that sunken gardens or other light-searching architectural elements will require substantial space to be fully effective.

A recent study of such underground architectural spaces notes that many of the kinds of space with which we are dealing, would, "because of the dominant modes of activity within them, require relief by physical or visual connection to adjacent high activity areas or the external environment, or both. Characteristic occupancy of such spaces would by relatively secondary and routinized. Characteristic examples of such spaces would be conference centers, classrooms, and offices" (superscript 1 here).

It is our judgment that the quantity and quality of natural light and external views deemed adequate for underground spaces in the Northern Pointe Development cannot be established with certainty, owing to the pre-

liminary nature of this study and the large number of unresolved controlling factors. Yet it is evident that space will be required and must be set aside for natural light.

Accordingly, we believe that space for natural light and view must be initially allocated on the basis of approximate judgment in lieu of more fixed guidelines. To this end, 15% of the total gross floor area, or some 42,500 square feet, is allocated for natural light and view throughout the underground areas. We expect that during further development of this project, new information may suggest some adjustment of this allocation.

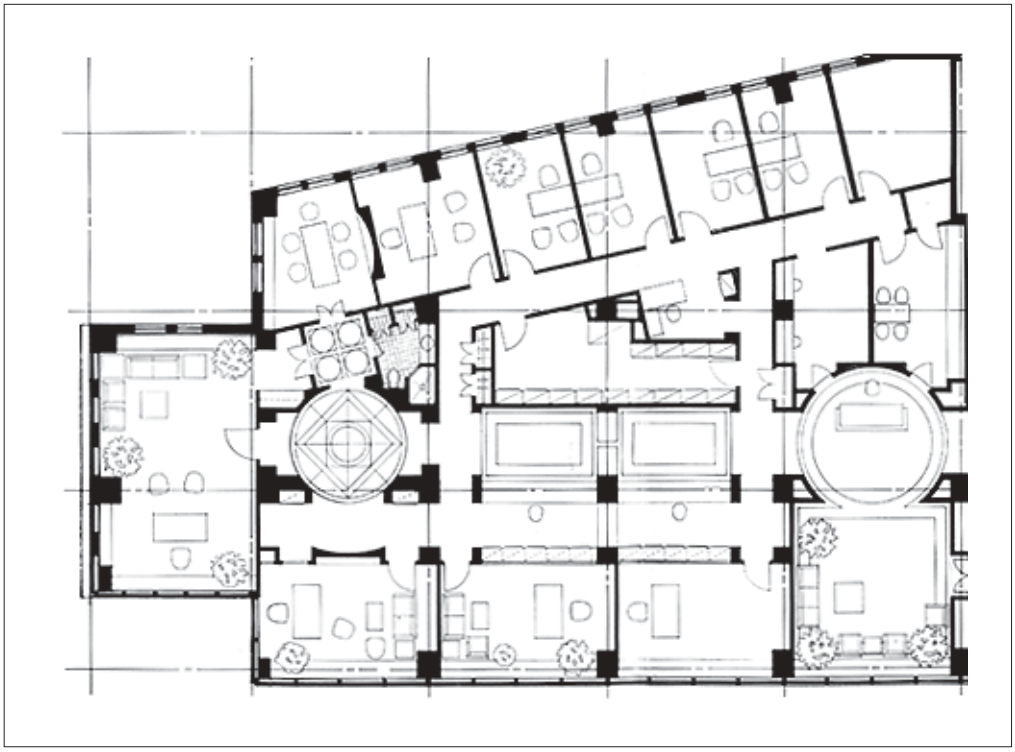
Conclusions

Preceding analysis has delineated the clear limitations of space available for development below grade on the Northern Pointe site. At this juncture it would appear reasonable to expect that 166,350 square feet of space could be accommodated below grade, easily accommodating the three-level design. Further expansion below grade to the north of the Grant Community Center may constitute valuable space available for further development, although it has not been studied herein or included in available space estimates.

Although the constraints on above grade construction do not directly translate into clear limitations of available space, examination of a range of options has led to a recommendation to accommodate 32,000 square feet of space in two buildings above grade. In the time frame of Northern Pointe development it is felt that the Douglas Fir trees alone would merit preservation during construction, although replacement planting of a number of major trees is envisioned to follow construction. The current space planning figures reflect these assumptions.

The resulting total 253,850 gross square feet of space estimated to be available for development exceeds the current requirements of 250,000 square feet by a moderate amount. We would not necessarily suggest any further increase in the program size to more closely match the space available for development.

There is considerable leeway for adjustment of the siting and configuration of the above grade buildings under consideration. At this level of investigation, only schematic studies of this question can be undertaken. A number of schemes of massing options have been studied, and the strongest two have been selected for illustration to suggest alternate ways to approach this unique problem. At this stage, it is suggested that the recommendations in this study be equally reviewed.



Above is a detail from the proposed expansion plan to north of the Grant Community Center.