DESIGN PATTERNS FOR AN URBAN WATERFRONT

--A CASE STUDY: DESIGNING THE SEA-WALK OF WEST VANCOUVER

By

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ABSTRACT

The paper consists of five steps. The first step is to study and explore theories of order, time image, and meaning of place. A hypothetical equation is proposed which defines a place as having three basic components: time, order and meaning. Special attention is paid to the time image of a place through the thesis. The second step is to organize the theories as a set of systematic design ideas. Twelve design categories are further introduced, which include Rhythm, Season, Celebration, Layer, Future, Sequence, Derelict, Night, Center, Boundary, and Sacred Places.

The third step is to generate a set of patterns for the waterfront design under twelve design topics. Pattern is a bridge between principle and design. The conversion of a design idea into a design pattern can be seen as a procedure to test the validity of design ideas. The fourth step is to apply the design patterns to a specific site on the West Vancouver Waterfront. In a sense, the application of the patterns is an experiment, aimed at testing the patterns, hence the whole thesis as a hypothesis. The final step is to review and evaluate the thesis and the project.
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INTRODUCTION

The objectives of this study are: first, to study and explore theories of order, time image, and meaning of place; second, to organize them as a set of systematic and practical design patterns; to apply the patterns in an urban waterfront design project; and finally to evaluate pattern application.

To begin with, the paper proposes a hypothetical equation. It defines a place as having three basic components: time, order and meaning. Time refers to the temporal image of place. Every place has a temporal context. For example, place has past, present, and future. And everything happening in a place, such as human activities, also has a time context. Order indicates the physical order of place. Order harmonizes a place, making it a "whole". An ideal order is the one which brings a "living" wholeness to the design. Finally, the meaning of place reveals our emotional involvement with a place. It is a part of our conscious mind to seek meaning behind the physical appearance.

The research efforts, however, are not spent evenly on each of the three basic components. Special attention is paid to the time image of a place, and the generation and application of time patterns in design. Time pattern is an untouched topic in the field of pattern study. In a sense, the thesis will be a complement to Christopher Alexander's A Pattern Language (Town * Building * Construction), since most of its patterns only concerning the order of place. The meaning of place is a very
complicated issue in design. It is highly personal and subjective; it is related to mood, emotion, education and cultural background of people; and cannot be judged as good or bad. Nevertheless, the paper explores the meaning of place, so that all three components of place can be integrated.

The second step is to elaborate on each basic component. The first basic component of place studied is the time image of place. Most of the ideas on the time image of place in this paper are evolved from Kevin Lynch's book *What Time is This Place?* (Lynch, 1972). The paper expands and categorizes Lynch's ideas, which give rise to seven topics on the creation of the time image. The seven topics are Rhythmical Recurrence, Seasons, Celebrations, Layers of History, Night Image, Future Image, Derelict Sites and Ruins, and Sequence in Space.

The second basic component is the order of place, an idea mainly from Christopher Alexander's unpublished manuscript *The Nature of Order and the Art of Building*, (Alexander, Unpublished manuscript, 1989). In this book, he seeks the living qualities in art work, including painting, sculpture, pottery, and architecture. He identifies fifteen ways in which order is created. This paper chooses two topics from the book--Center and Boundary, both of which are most relevant to the creation of the place order. Center is where the living quality of place begins, and where our attentions are focused in a place; Boundary is the point from which a place is forming, and from which a place becomes distinctive.
The third basic component is the meaning of place. The ideas on the meaning of place are derived from a number of people, including Norberg-Schulz (Architecture: Meaning and Place, 1988), E. Relph (Place and Placelessness, 1976) and Fritz Steele (The Sense of Place, 1981). Three design topics on creating the meaning of place are identified. These are sacredness, intimacy, mystery.

The third step is generating a set of patterns for the waterfront design under twelve design topics. Pattern normally refers to a diagram, a model, or archetype. A pattern has at least two qualities: revealing the basic components of a "thing", and indicating the stable relations between the components. To see a place and human activities in a place as patterns is to understand a higher level place experience. Pattern is also a bridge between principle and design. The process of converting a design idea into a design pattern can be seen as the first step towards the design application of the idea and also as a procedure to test the validity of design ideas.

The fourth step is to apply the design patterns to a specific site on the West Vancouver Waterfront. There are two projects in the waterfront—a site plan for the Seawalk and a design for Dundarave Park. In a sense, the application of the patterns is an experiment, aimed at testing the patterns, hence the whole thesis as a hypothesis. If the hypothesis (that a place is composed of the three basic components, which can be used as a guideline in the creation of place) is legitimate, the final
design should bring out something successful and distinctive. Pattern generation and experimental design are conducted simultaneously, in the hope that the generation and application of patterns would help to shape one another.

And finally, the last step is to review and evaluate the thesis and the project. Pattern generation and pattern application are the two central issues in the paper, and are the major topics of evaluation. The following table depicts the general structure of this research:
### DESIGN PATTERNS FOR AN URBAN WATERFRONT
--- A Case Study: Design the Seawalk of West Vancouver

| FIRST STEP:                              | PLACE                        |
|                                        | PHYSICAL + ORDER            |
| (three components of place)            | TIME + MEANING              |
|                                        | PHYSICAL + ORDER            |

| SECOND STEP:                            | CENTRE + RHYTHM + INTIMACY + |
| (twelve topics)                        | SEASON + MYSTERY + CELEBRATION + |
|                                        | LAYER + CELEBRATION + LAYER + |
|                                        | NIGHT + FUTURE + DERELICT + |
|                                        | SEQUENCE                     |

| THIRD STEP:                             | PATTERN GENERATION          |
| (27 patterns)                           |                             |

| FOURTH STEP:                            | PATTERN APPLICATION:        |
| (2 Projects)                           | Site Plan for the Seawalk of West Vancouver |
|                                        | Design of the Dundarave Park |

| FIFTH STEP                              | EVALUATION OF THE THESIS    |
|                                        |                             |
CHAPTER ONE

PLACE AND ORDER, TIME AND MEANING OF PLACE

1.1 PLACE

Combines Flay Fields of Rice, Texas, USA (National Geographic, April, P 465)
1.1.1 THE CONCEPTION OF PLACE

Our identity is inseparable from the identity of place. Our life, especially in early years, strongly relates to places; and places, in turn, characterize all aspects of our life. As Relph says: "To be human is to live in a world that is filled with significant places; to be human is to have and to know your place" (Relph, 1980, P3). We can see that the characteristics of a certain group of people often stem from the distinctiveness of their place—their living area. Some characteristics are obvious, for example, the language and the costume of different countries and regions; others are subtle, perhaps difficult to describe, like accent, facial expression, and the look in the eye. The look in a person's eye, if you pay attention, can be an accurate way to tell whether or not a person belongs to a certain place.

In my home-town, a regional center, I noticed that one can tell how far a visitor's village is from that town by the way he says "mom". In our town, we use "mar [ma:]”, a relatively new form of address derived from the western "mom"; in the suburbs, "ma'r" [ma:r]; in the next village, "nar [na:]"; still further, "nia [nia:]", and "niang", traditional addresses; and in the remote mountain areas, the word "nie [nie]". We can hear these related yet different pronunciations as the distance from the centre changes. In a place with history, this kind of subtle difference pervades all aspects of life. The examples show that people and places are intertwined—people's identity depends on
their belonging to the place. As the French philosopher Gabriel Marcel concludes: "An individual is not distinct from his place; he is that place" (cited by Relph, 1980, P43).

"Place" is a common word in English. Its daily meanings cover most aspects of place as it is used in design. According to The American Heritage Dictionary (Berube, Margery S., et al, P946, 1982), it first refers to a portion of space big or small, including:

1. A setting for a person to sit or stand, e.g., a place at a table;
2. A definite location, such as a house, an office, or a city square;
3. An area, such as a particular town or city; and
4. A region, such as a country or a part of a country.

It also means physical or social order, which may imply that order is an essential part of place. For examples, "everything is in place" and "he overstepped his place".

As a verb, "to place" means to give something a particular position, to find a living quarter for some one, or to rank in a order or sequence. The best of all is the verb phrase "take place", which means "happen" and "occur". This suggests that a place is essential for any happening or occurrence.

1.1.2 TOWARDS A PHENOMENOLOGICAL UNDERSTANDING OF PLACE

From a phenomenological point of view, conception of place is more fundamental, related to our existence and being. Phenomenology is now often used as a philosophical foundation for the study of place. It is a philosophical tradition that takes as its starting point the phenomena of the lived-world, of immediate
experience, and then seeks to clarify these phenomena in a rigorous way by careful observation and description (Relph, Preface, 1980).

As it is understood by F. Lukermann, a geographer, place is a complex integration of nature and culture which has developed and is developing in particular locations, and which is linked by flows of people and goods to other places. A place is not just a location of something; it is the location as well as everything that occupies that location seen as an integrated and meaningful phenomenon (cited by Relph, 1980, P3). Written as an equation, place = location + events. However, two issues are missing in this equation. One is time. It is the context within which the events happen. The other is meaning. Meaning is our emotional connection with a place. A place is characterised by the beliefs of man. The hypothetic equation proposed in this paper is: PLACE = TIME + ORDER + MEANING.

First, every place has temporal images. As Lynch reflects: "The quality of an individual's temporal image of a certain place is a basic component of the sense of the place, and is a crucial factor for a designer in managing environmental changes. On the other hand, the external physical environment plays a role in building and supporting that image of time" (Kevin Lynch, 1972, P1). To understand the temporal image of place, it is important to notice: a) a place is emerging and becoming--it has a past, a present, and a future. For example, Vancouver city is growing on an area of land, which was covered by untouched forests before;
b) a place displays the rhythms of natural and human occurrences. For example, every winter the Ottawa River becomes an icy "road", on which people can walk; c) a place has the quality of allowing a specific activities to happen at special times. For example, the beach is a place for summer. There are two kinds of temporal measurement, physical time and psychological time. Physical time is to perceive time as something objective and evenly continuous. Psychological time is subjective to people's mind, broken, and discontinues.

Secondly, place has physical orders. A place is a location consisting of a variety of physical elements. Order implies a) A structure: a place is related to other things and places. It is located at a particular point in a particular level of a structure. Each place is connected to all other places by a system of spatial interactions and transfers; they are part of a framework b) An Entity: a place is a unique entity. Each place is itself separate and complete with its own boundary and centre. For examples, a city square, a fire place, or a window place. (E Relph, 1980, P3).

Finally, a place has meaning. If we only view place in a purely logical way, perhaps, order and time are enough. However, place is not only what it is, but also what we sense or want it to be. Every place has some quality which allows us to develop an emotional attachment, perhaps evoke a feeling of mystery, sacredness, or intimacy, and identity.
Relph defines place as centre of action and intention, "the essence of place lies in the largely unself-conscious intentionality that defines places as profound centers of human existence" (1980, P 43). Place is the space where life occurs; is a space which has a distinct character (Norberg-Schulz, 1979, P5). Therefore, place has meanings (also called the character, and the spirit of place), which are characterized by the beliefs of people.

Up to now, we have defined place as phenomenon related to our fundamental experience of the world. It has three major components: time, order, and meaning. The following will elaborate these components individually.
1.2 TIME IMAGE OF PLACE

The Big Ben, 1964, huile sur roile (Jean Dallaire, 1979)
1.2.1 TIME AND TIME IMAGE OF PLACE

Time is a short and ordinary word. We take time for granted, like the air we breathe. No matter what we do and where we are, we are immersed in the sea of time. Time is embodied everywhere in the physical world. The time image of place is critical for the creation of place. As Lynch says in *What Time if This Place?:* "The quality of an individual's temporal image of a certain place is a basic component of the sense of the place, and is a crucial factor for a designer in managing environmental changes" (1972, P1).

Since time is abstract and invisible. The key point in the creation of temporal place images is to reveal the time images with the help of the changes in the spatial context. A clock is a perfect example--its face and hands translate time into spatial alternation (Lynch, 1972, P14). In fact, time images are created by finding a relative, spatial measurement for a temporal measurement.

The work of De Long, a psychologist and professor of architecture at the University of Tennessee, vividly demonstrates this temporal-spatial relationship. Since 1976, de Long has been conducting precise observation under carefully controlled conditions on how different people experience the passage of time when they are interacting with environments of different scales (Edward Hall, P136, 1983).
De Long finds that time and space are functionally interrelated. His conclusion is that the brain speeds up in direct proportion to environment. The smaller the environmental scale, the slower the time (Edward Hall, 1983). This conclusion fits our daily experience too. The smaller the scale, the more intimate the space; an intimate space makes us feel more comfortable, and time consequently slows down. Using small scale structures and buildings is an effective way to slow down time.

Giving place a clear time image is a conventional practice in Chinese urban design. Chinese traditionally named and ranked scenic sites in and around a city. The name of a place always has a special time attached, at which time the place is at its best in terms of poetic experience and visual beauty. For example, the Eight Most Prominent Sites around Beijing were named by one of the emperors of the Qing Dynasty (A.D. 1644—1911). These are:

1) Lush-green mountains outside the Great Wall
2) Trees outside Gate Jee in the Fog
3) Luogo Bridge under the Dawn Moon
4) Rainbow over Jade Spring
5) Snow-covered West Mountain under Blue Sky
6) Jeon Island in the Shadow of Spring Trees
7) Autumn Waves of Taiyie Lake
8) Golden Fort in the Setting Sun

Beijing: Yesterday and Today, Chou, 1980

Relatively, the traditional site-seeing also had a time quality—people visited a special site at a special time to get a special kind of place experience.
1.2.2 Physical Time and Its Design Application

There are many kinds of time conceptions such as clock time, calendar time, or relative time. But in relation to design, we deal mainly with two kinds of time: physical time and psychological time. Physical time is perceived as something objective and evenly continuous. Psychological time is subject to person's mind. It is broken and discontinuous. Some points in time are more meaningful and important than some others. Physical time and psychological time are two parts of the time image of a place. Both are critical in the creation of that place.

Throughout history, many philosophers and scientists focused their attention on physical time. Two of the most distinguished are Isaac Newton and Albert Einstein. Isaac Newton perceived time (and space) as a homogeneous and continuous absolute—one of the basic absolutes of the universe. In his conception, time was abstract, absolute, and independent of objects. It was linear, uniform in flow, irreversible, and divisible, which meant that time could be used as a standard for measuring events (Edward Hall, 1984, P21). The typical examples of physical time are clock and calendar time. This temporal paradigm is still the dominant way in which most people's conception of time operates. Although they are very accurate, and sophisticated human inventions, the clock and calendar are abstract in telling us the flow of time.

The flow of time is more vividly sensed with the help of natural or man-made rhythms. People perceive rhythm better than
the abstracted clock time\(^1\). Evolving in the rhythmic world, all forms of life seem to exhibit some degree of temporal coordination. We can conclude that temporal nature is an essential part of the universe, and of all life forms. In the creation of place, the revealing of physical time, and hence creating a time image of a place is an important issue.

In creating the physical time image of a place, the guideline should be to display environmental change by transforming the scene, or shifting the viewpoint of the observer, so that the change can be made sufficiently palpable to be perceived in the experiential present (Lynch, 1972, P168). There are a number of methods available to us for shaping the image of physical time in a certain place.

1) Accentuating natural rhythms in a place, such as a creek, a water spring, or a float;
2) revealing seasonal changes, like winter gardens, autumn trees;
3) creating a special night image, such as a fireplace, or light fountain;
4) considering the possibility of future development; and,
5) putting the emphasis on the sequence of space, especially the sequences along the major approaches to the site.

After Newton, there came another and new time concept—Einstein's theory at relative time. To Einstein, time was reversible, heterogeneous, and discontinuous. It is interesting to note that the heterogeneity and disintegration of time are also true in our minds. To humans in every-day life, time is not

\(^1\) Digital clock displays precise time, but it gives us little sense of time structure or movement. Better, the ball topping the Greenwich tower rises slowly, then drops just at noon, to give exact observatory time to the ships in the river (Lynch, P67, 1972).
perceived as rigid physical time. Some points in time are more significant than others. Later when dealing with Mircea Eliade's sacred time form his *The Sacred and the Profane*, we will find an amazing similarity between the two (Mircea Eliade, 1959).

### 1.2.3 Psychological Time

In his *Time and Timelessness*, Peter Hartocollis comments that time is conceivable in two broad ways: as a subjective experience, or what is known as psychological time, and as objective experience, or clock, and calendar time (Hartocollis, P3, 1983). However, the use of physical time concepts in the description of human events is often artificial and misleading in our daily life. Simply to view time in the same units and dimensions as the physicist employs in describing events ignores the living quality of time.

In fact, societies and individuals demonstrate vast differences in their constructions and uses of time; temporal perceptions and attitudes change within an individual both during a single day and throughout his or her life span (Bernard Gorman, 1977 Pvi). We have all experienced a certain discontinuity and heterogeneity of time. "There is the comparatively monotonous time of our work, and time of celebration and spectacles—in short, 'festal time'" (Mircea Eliade, 1959, P71). This living quality of time is studied by psychologists, who regard time as subjective personal experience—the human sense of time.
In contrast to physical time, which is relatively fixed and regular, psychological time is more subjective, obviously influenced by its context, or setting, and the emotional and psychological states of individuals (Edward Hall, 1983, P19). Some days in a year are chosen for the annual celebrations and festivals in every society. In China, a traditional agricultural society, most festivals stem from people's emotional response to seasonal patterns of farming. The most important festival—the Spring Festival (Chinese New Year), also the first day of Spring in Chinese lunar calendar, is a exciting reaction to the beginning of another year-long challenge. The second most important festival, the Moon Festival, on the 15th of August in the Chinese Lunar Calendar, is a celebration of the harvest.

Every society has its own special times in its collective psychological time image. Another significant aspect of psychological time is its strong attachment to place. No event can occur without a context. Whenever a celebration takes place, it has a great influence on the time image of the place in which it occurs.

1.3.4 PHENOMENOLOGICAL TIME

Phenomenology, which originated about 1905 with the German philosopher Edmund Husserl, is "the study of all appearances in human experience, during which considerations of objective reality and of purely subjective response are temporarily left out of account" (Margery Berube, ed., 1982).
In his *The Sacred and the Profane* (Eliade, Mircea, 1959), Mircea Eliade shows the differences in total human experience of time between a religious person and a nonreligious man. A religious person experiences "sacred time", while a nonreligious person only experiences "profane time". Mircea Eliade contends that time has a different meaning for religious people:

For religious man time, like space is neither homogeneous nor continuous. On the one hand there are the intervals of a sacred time, the time of festivals (by far the greater part of which are periodical); on the other hand there is profane time, ordinary temporal duration in which acts without religious meaning have their setting.

*The Sacred and the Profane*, 1959, P68

We can see that sacred time is repeatable and reversible and does not change. In mythical time people do not age, for they are magic; by putting themselves in sacred time, people subconsciously reaffirm and acknowledge their own divinity (Edward Hall, 1983, PP24-25).

This temporal quality is inaccessible to nonreligious people, for whom, time can present neither break nor mystery; time constitutes man's deepest existential dimension; it is linked to his own life, hence it has a beginning and an end, which is death, the annihilation of life. We see sacred time as a sanctified psychological time. Understanding sacred time, helps us to understand psychological time at a higher level. Psychological and phenomenological time reveal the time image of place with the relation of special human events—celebrations and festivals. Such events provide accents of fantastic imagery and high energy
to the daily cycle of life. These special times often give special looks to places, and make places remarkable.

The final issue on the time image of place is the creation of derelict site. Allowing a site to gently slip into such a state is a simple, effective, and inexpensive way to carry a sense of past landscapes into the future (Paterson, 1989, P 30).

In conclusion, there are two ways to perceive the passage of time, physical time, psychological time (which includes "sacred time"). There are seven issues considering the creation of time images of place. All of these seven topics will be used as guide-lines for the generation of temporal patterns in the next chapter. To list them:

FIVE ISSUES ON THE IMAGES OF PHYSICAL TIME:

1) Natural Recurrence
2) Seasonal Image
3) Night Image
4) Future Image
5) Sequence in Space

THREE ISSUES ON THE IMAGES OF PSYCHOLOGICAL TIME:

1) Celebrations and Festivals
2) Layers of Previous Occupancy
3) Derelict Sites and Ruins
1.3 THE ORDER AND MEANING OF PLACE
1.3.1--1.3.2 THE ORDER OF PLACE

Vegetable Tissue: Hard Maple Under 315 Microscope (Lewis R. Wloberg, Plate 49)
1.3.1 Mechanistic Order and Holistic Order

We live in an ordered world. Our universe is an ordered universe. The galaxy, the milky way, the solar system, the earth and the moon all have their positions in regulated orbits. Order is related to our perception of goodness in our life. Order means health to our body, efficiency to our daily work, and power and strength for an army. In these cases, we in fact understand order as a functional and mechanistic order—a good arrangement, as a state in which all components or elements are arranged logically, comprehensively or naturally (Cayne, ed., 1988, P705).

Mechanistic order has been a dominant world view for centuries, and still is today. According to Christopher Alexander in his unpublished The Nature of Order, the mechanistic idea of order originated with Descartes about 1600. Descartes explained that one can find out how something works by pretending that it is a machine (Alexander, Chapter 1, P7, 1988). However, one important role—the observer is missing in this mechanistic view. Therefore, this philosophy failed to perceive the lived-experience of the world.

We can take as an example, the design of beaux-arts architecture of later 18th century in France. Everything in the design, from the proportions of the facade, and the order (of the pillars), to the lay-out of the details, has been rationalized and regulated in order. In beaux-arts architecture, all of the rules from Greek and Roman architecture are further made absolute. the
result is that, although we can feel happiness behind Greek architecture, and powerfulness and glory behind Roman architecture, we only feel rigidity and coolness behind the, usually heroic, beaux-arts architecture.

The same evolution occurred in the official Chinese architecture. Style did not change for about 2000 years, but was always being refined and re-refined. Volume after volume of rules were written and re-written. By the time of the Qing Dynasty (A.D. 1644-1911), everything from the form and colour of tiles to the procedure for making a small beam was regulated. Comparing a building in the Tong Dynasty (A.D. 618-907) with a building of the same type in the Qing Dynasty, we find boldness and unconstrained originality from the former, but the rigid perfection, and lifeless gorgeousness in the latter.

The conclusion is simple. In the early time in both cultures, parts of a building were defined out of the consideration that a building is a whole; in the later time, a building was constructed out of the well-regulated parts, and the wholeness was missing. In other words, we can say that fossilized mechanistic order causes lifelessness, and human-intervened, "rough", and holistic order brings out life.

Alexander understands order as having an essential relation to "life" and "wholeness". He says that we must see things in their wholeness, not as parts or fragments, and we must recognize every thing, even an apparently inanimate thing like a building, as something real (Alexander, 1988, Chpt-1, P16). His view of
holistic order has three components. First, the elements of an ordered living subject are "wholes", for example, the root, trunk and branch, and the leaf of a tree are such holistic elements. To be elements, they must be distinguishable, visible and recognizable, because at the same level they are coherent or visible wholes. Second, the living subject (the tree) is an order among wholes, and a living single whole. And finally, this living single whole is a part of a larger whole (for example the landscape). In conclusion, he reflects: "What we call order is any condition in which relatively coherent wholes are built out of other wholes" (Alexander, Chpt-1, P18, 1988).

1.3.2 Center and Boundary

From about 1967 to about 1985, Alexander looked at things or parts of things--buildings, tiles, stones, windows, and so on--comparing them, and trying to find out the common features in them, which were the most deeply whole and most alive. He identified fifteen ways in which order is created, in which life-giving wholes emerge. These fifteen ways are Levels of Scale, Centers, Boundaries, Alternating Repetition, Positive Space, Good Shape, Local Symmetries, Deep Interlock, Ambiguity, Contrast, Graded Variation, Roughness, Echoes, the Void, Inner Calm, and Not Separateness ((1988, Chpt-5, P 80). Center and Boundary, the most relevant two to landscape design, are chosen in this paper as a part of guidelines for the pattern generation: Center and Boundary.
1. A Center develops a special field-like effect between the centers which surround it, to achieve its own field-like unity. In design, Center is normal understood to deal with the things in the middle of a place. However, a more profound understanding of center is to view it as a place where a quality instead of something (e.g. meaning, function, or experience) is concentrated. Therefore, a place not only has a physical center (which is not necessarily in the middle), but also has a functional center, a center of experience, or a center of activities.

2. Boundary shows how the field-like effect can be introduced by the creation of a ring-like center, made of smaller centers which surround and intensify the first and also unite it with the centers beyond it. Boundary can be anything that supports the formation of center. A strong boundary is essential to the insideness of place.²

² Insideness is the sense of being inside a place. "To be inside a place is to belong to it and to identify with it, and the more profoundly inside you are the stronger is this identity with the place" (Relph, P49, 1979).
1.3.3--1.3.4 MEANING OF PLACE

The Spirit of Place (Hakan Petterson, 1989, P97)
1.3.3 GENIUS LOCI

The last basic component is the meaning of place. The ideas on the meaning of place come from the work a variety of people, including Norberg-Schulz, E. Relph, Fritz Steele and Laurie Olin (Landscape Journal, P.149--P168, 1988). Every place has meaning. Place speaks to us in a non-verbal way; it conveys to us ideas, very often symbolically; and stirs our emotions by its ambience.

The meanings of place are the basic mode in which the world is "given". To quote Laurie Olin, "consistently, landscapes have induced feelings of fascination, awe, fear, contemplation, amusement, and delight—in short, visual and sensory interest and stimulations of all sort" (P195, 1988). On the other hand, we may say that place is simply place, it is only that humans by their nature experience place in a meaningful way. In the words of Norberg-Schulz: "It is one of the basic needs of man to experience his life-situations as meaningful" (1980, P5).

In his book GENIUS LOCI (Norberg-Schulz, 1979), Norberg-Schulz uses a Roman conception, "Genius Loci", to refer to the meaning of place. According to ancient Roman belief, every "independent" being has it genius, its guardian spirit. This spirit gives life to people and places, accompanies them from birth to death, and determines their character or essence (Norberg-Schulz, P18, 1979). Thus, the genius denotes what a thing is, or to use the words of Louis Kahn, the genius is "what a thing wants to be". It is similar as a character in a novel,
once his/her spirit has been established, even the author can not change the character's fate.

Several qualities are related to the meaning of place. Firstly, the meaning of place is a non-verbal expression, it cannot tell a story as literature does. However, it creates a general "atmosphere", a property of place which everybody can perceive immediately. "They (landscapes) can express certain things, can possess symbols and refer to ideas, event, and objects extrinsic to their own elements and locus, and in certain circumstances can be didactic and/or highly poetic (Laurie Olin, Landscape Journal, P185, 1988).

Second, the meaning of a place is a complex totality, which often is so distinct that one word seems sufficient to grasp its essence (Norberg-Schulz, P16, 1980). However, place always has one meaning. It is possible that place has different meanings at different levels. For example, we may be able to find a intimate corner in a sacred place. Even more, meanings at different levels might be contradictory; or a place may have exactly opposite meanings for different people.

Finally, the meaning of place does not have an obvious relationship to the size or scale of a place. Sometimes, a small detail can mean more than a whole site. "In the primitive societies we find that even the smallest environmental details are known and meaningful, and that they make up complex spatial structure" (Norberg-Schulz, P21, 1980). Unfortunately, in our
modern time we often neglect the effectiveness of using details and decorations to intensify the meaning of place.

1.3.4 THE TYPICAL MEANINGS OF PLACE

Although the meaning of a place is complicated and subtle, place generally does share several representative characteristics: sacredness, mystery, and intimacy. Sacred landscapes are among the oldest and incontestably most meaningful landscapes. They are associated with spiritual values, especially those of the original myths of ancient peoples (Laurie Olin, Landscape Journal, V7(2), P159, 1988). Inspiration for the sacredness of place may come from the following aspects of life:

1) The religious and philosophical views of the world;
2) the cultural traditions towards dwelling and place creation;
3) the vision towards the future of a place;
4) the attitudes and beliefs towards life; and,
5) the deep emotional involvement, and profound attachment with a place

Intimate landscapes characterize the essential quality of dwelling, which is mostly related to the daily and personal life of people. An intimate place usually has several qualities:

1. Roughness: An intimate place tends to have more variety than unity; it is more intricate and entangled than plain and pure.

2. Highly personalized and closely related to daily life: intimate places are mostly marked with the taste and character of a person, or a small group of people. It is generally true that the more the publicity a place has, the less it is intimate.

3. Smallness of scale: Because of the close relation with every-day life, an intimate place always has a small scale. It is a place of plain immediacy and efficiency.
Mysterious landscapes are always related to the unknown rules or powers, something within comprehension, but (partially) beyond understanding. There are a wide range of techniques for creating mystery:

1. play with distance/moongate, frame, view to far away places "here and there".
2. depth: thick wall, thick woods
3. layering of objects
4. light: cathedral-rose window
5. detail and pattern
6. play with contradiction
7. anthropomorphizing
8. the obscure in sequence
9. things out of place
10. things that are incomplete
11. things that are sudden, unexpected and surprise
12. limited access

Note from Lecture of Professor Douglas Paterson, 1989

These three meanings can be found in the basic categories of our landscapes, which include landscapes of work, mysticism and worship, dwelling (both individually and collectively), authority, and pleasure. Sacredness is common to landscapes of work, worship, and authority; intimacy is found in landscapes of work, dwelling, and pleasure; while mystery occurs in landscapes of mysticism and worship, and authority (Laurie Olin, Landscape Journal, V 7-2, P150, 1988).

Methods of injecting meaning into a designed landscape range from creating tableaus with recognizable creatures and figures to abstract references implied by the structure or arrangement of non-representational elements totally unrelated to those to which the design refers (Laurie Olin, Landscape Journal, V 7-2, P160). Generally, there are three ways: Denotation, Connotation, and
expression. Denotation is a direct display of the subject through other forms of visual arts, for example, sculpture, story calligraphy, and poems, and architecture. Connotation is "the reference of the work to things not present but invoked" (Laurie Olin, P160, 1988). Often-used methods include symbols and metaphor. The last one is expression, which is to create a mood or feeling through style. We can conclude that order is an essence of place, and Center and Boundary are two important issues in the creation of ordered landscape. We can also make conclusions that meaning of place reveals a special relationship between place and people, and basic place meanings include sacredness, mystery, and intimacy.
CHAPTER TWO  PATTERN GENERATION

Animal Tissue: Internal Ear of Guinae Pig (enlarged 250 times), (Lewis R. Wolberg, 1970, Plate 145)
INTRODUCTION

The word "pattern" normally refers to a stable, representative plan (or diagram, idea, model, and sample), which is worth following, or imitating. With respect to a place, pattern means "the consistent combinations of environmental elements, such as things, structure, activities or recurring events" (Steele F, 1971, P139).

Noticeably, there are only a few activity patterns behind a great number of our daily activities. Let us analyze the activity patterns of fulltime students. Throughout the year, there are a great number of activities happening in our lives, but the patterns behind them are only few, in fact, only three. First, the weekday pattern: it includes preparing (getting up, taking a shower, and having breakfast), studying (attending classes and seminars, going to the library, and talking to classmates and professors), and relaxing (going home again, having dinner, watching television, and going to bed). Second, the weekend pattern: the events include entertaining, socializing, cleaning and shopping. And finally, the yearly pattern: as students, we basically study at school when school is in session (with middle and final term exams), work in the summer, visit home at Christmas time. There are also some other high spots happening occasionally, like camping in the summer, and skiing in the winter. Notice that it is not simply the activities but the patterns of our activities that decides who we are. There are only two patterns—the weekday pattern and the yearly pattern—
that are exclusively for fulltime students. Almost all people share the weekend pattern. It is only these two patterns which distinguish fulltime students from other people.

The same things happen to a place. Although a diversity of events happen at a place every day, there are relatively fewer patterns behind the events. Our experiences therefore depend not simply on the physical environment, but on the patterns of events. To quote Alexander: "In order to define this life quality in buildings and towns, we must begin by understanding that every place is given its character by certain patterns of events that keep on happening there" (1979, P55). If the patterns are good, the place is alive; if not, the place dead. It is clear that patterns play a concrete and objective role in determining the lived quality of any given place. To see a place in pattern is a higher-level place experience.

Chapter One deals with place, time image of place, and physical order and meaning of place. This chapter, Chapter Two, is intended to convey the design ideas of time, order, and meaning of place into design patterns. Pattern generation is, in a sense, a procedure to test the eligibility of the ideas.

**HOW TO FIND PATTERN**

A pattern must be deep and capable of generating life. It must also be shared by many people. Alexander has several rules for discovering a qualified pattern:

1. We must first define some physical feature of the place, which seems worth abstracting.
2. Next, we must define the problems, or the field of forces which this pattern brings into balance.
3. Finally, we must define the range of contexts where this system of forces exists and where this pattern of physical relationships will indeed actually bring it into balance.

The Timeless Way of Building, 1979, P243-53

In summary, every pattern must be formulated in the form of a rule which establishes a relationship between a context, a system of forces which arises in that context, and a configuration which allows these forces to resolve themselves in that context.

THE ESSENCE OF A PATTERN

A pattern links the theory of principles with the applications of design. Its aim is to bring out and enlighten design ideas, but it cannot be understood as a site specific design concept in itself. It should not be too ambiguous for a designer to apply it on a site, and not so narrow as to limit the designer's imagination. As Alexander indicates, a pattern must have the following major components to act as a bridge between ideas and designs.

1. To strike the balance between being too narrow and too loose, you must express and visualize a pattern as a kind of fluid image, a morphological feeling, a swirling intuition about form, which captures the invariant field which is the pattern.

2. Then, once you discover a fluid field of relationship like this, you must redefine it, as an entity, to make it operational.

3. For the same reason you must be able to draw it.

4. And finally, for the same reason too, you must give it a name.

The Timeless Way of Building, Alexander, PP 263-67, 1979,

Through his works A Pattern Language, The Timeless Way of Building, and The Nature of Order (unpublished), Christopher Alexander consistently searches for the explanation and re-
creation of the "lived quality" in architecture, landscape, and other art works. He says that this quality can be sensed but cannot be named. He makes a continuous effort to re-create this quality in a holistic way. His A Pattern Language (Christopher Alexander et al, 1977) represents this effort. In fact, what he desires is to create a place that is comfortable and intimate, like the old towns and old buildings he often mentions and analyzes.

By following his patterns, we can create an ordered place with an intimate character. But intimacy is only one of many good qualities of places. There are many other characteristics, or Genius Loci, such as sacredness, dereliction, and mystery. We need places with different characters, and do our best to create these places. (This is why the topic "intimate", as well as, "sacredness", and "mystery" are chosen as the guidelines for the pattern generation.)

As is indicated above, every pattern must have a site context. A site context includes the name and function of the site, the size (or shape) of the site, and the location of the site in a larger structure. Under each topic in this paper, there are usually three levels of pattern. One is in the general landscape context; the others are in site and design detail contexts. The following list provides a brief view of the patterns at different levels under the twelve topics.
A LIST OF PATTERNS FOR A WATERFRONT DESIGN

CATEGORY OF PATTERN:

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<tr>
<th>TIME</th>
<th>Rhythm</th>
<th>Season</th>
<th>Celebration</th>
<th>Layer</th>
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<td>Future</td>
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<td>Night</td>
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| ORDER | Center | Boundary |

MEANING Sacred Places

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<th>Scale</th>
<th>Landscape Context</th>
<th>Site Context</th>
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<td>Time Devices as Decorations</td>
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### 2.9 MATERIAL AND CONSTRUCTION

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### 2.10 CENTER

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### 2.11 BOUNDARY

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<td>4.12.1 Graves in the Park</td>
<td>4.13.3 Site Specific Signs</td>
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2.1 RHYTHMICAL RECURRENCE

A Natural Stream (Howard Hibbard, 1980, P121)
2.1 RHYTHMICAL RECURRENCE

Many good places display rhythmical recurrences of sounds or views, such as the rise and fall of tides and the chiming of a clock bell. These recurrences generate a quiet and comfort ambience.

Rhythmic action is enjoyed by young children. It appears to be a fundamental way of orienting themselves to the world about them. Rhythm is often connected with mental health, with learning and memory, and with states of security. Our bodies are filled with rhythms: heartbeat, breathing, sleeping and waking, the increasing and decreasing of hormones, and the activity and inactivity of the brain. But not all of these rhythms can be perceived easily.

There are also many rhythmical processes in the landscape. Some of them are natural, such as cycles of sun and moon, waves and tides of the sea, and periods of wind and rain. Others, like clocks, drums, and bells, are artificial. Most rhythms can be displayed directly. There are simple and fascinating natural cycles of change, such as flames, clouds, sunsets, flowing water, surf, grass rippling and reflecting sun light.

Making the rhythms more perceivable is the crucial for the creation of the time image of place. To do this, we can either amplify a hidden change or transfer it to a more visible one. A good landscape architect knows how to amplify the sight and sound of flowing water in the site. For example, the lotus is a traditional aquatic plant in Chinese gardens, whose large leaves amplify the rhythm of the rain in the summer.
We can also create visual-visual, visual-sound, and sound-sound transformations. For example, the moment of sunset can be heightened by sound or by surfaces to catch and intensify the shifting colour. Bells might be rung at the moment of high or low tide, or at the rising or setting of the sun or the moon. Surfaces that catch the light and change character as the sun angle shifts, or plants that transform themselves with the seasons are ways to emphasize rhythm. Therefore, in the design of waterfront parks, make sure to do the following:

2.1.1 DISPLAYING NATURAL RHYTHMS

In the landscape of all sizes and types, make sure to find, define, or create natural recurrences, instead of neglecting and eliminating them. For example, when there is a creek or pond, try to preserve it. In a place where wind is strong, reveal it by flags, or wind instruments. The natural recurrences include: sun, moon, wave and tide, wind, and weather of the day, to name only a few.

The Japanese painting shows how to make the wind visible by using a "flying fish" (Art Museum at Indiana University, 1980, P206).
2.1.2 THINGS FLOATING

Tides and waves are enjoyable natural rhythms. People like to be near water and on the water to enjoy the motion of the sea. Along the edges of a water body, whether the shore of the sea, the banks of the river and lake, or the border of pond, build docks, paths, fishing piers, and flower gardens which are afloat on the water.

A floating amphitheatre—the park's most popular unit in the summer, Columbus, Ohio (Ann Breen ed, Urban Waterfronts 85', 1986).

2.1.3 TIME DEVICES AS DECORATIONS

Time devices, such as clocks, bells, and sundials are satisfying outdoor sculptures. They not only tell time, but also are symbols of time. Do not limit the concept of the time device as something that tells us the hours of a day, but think of it as
anything that measures and visualizes rhythmic occurrences. For example, a bell may ring at the high and low tides to accentuate the tide; a chair may tell you how many people have used it before you; a new tree may be planted in a plaza every year, so people can tell the age of the place by the number and size of trees.

Therefore, in a corner of a park, along a path, and on a street, where a "something" is needed as a focal point, or decoration, think of using a time device.
2.2 SEASON

SPRING, SUMMER, AND WINTER
(Royal LePage Calender 1989)
2.2 SEASONS

Every place has its own seasonal characteristics, which should be emphasized in our designs.

As we spend more of our lives in interior environments, we are deprived of many natural clues to the passage of seasons. We isolate ourselves in glass boxes, or in buildings without windows. Seasons play important roles in our lives and emotions. In the literature of many cultures, spring is considered as a beginning of a new year, a symbol of birth and revival. Summer implies growing and developing, autumn harvesting and celebration, and winter resting and rewarding.

Every place is a site of seasonal attraction, simply because of its geographic location. The seashore is a place for summer. Snowy mountain-peaks are special in winter. There are also many seasonal signs in a place. Plants transform themselves with the seasons. Flowers and trees, especially deciduous trees, are very obvious seasonal signs. Human activities in places are also different. Seasonally oriented activities have clear a relation with places. Consequently, parks should be planned and designed with consideration of the seasons, and seasonal activities. Here is a list of seasonally oriented activities:

winter park: snow, ice sculpture festivals, skiing, and skating, walking in the rain.
Summer park: swimming, surfing, water-games, boating, canoeing, sunbathing.
Spring park: seeing flowers, trees, picnicking
Autumn park: watching the colours changes of plants, and picnicking.
2.2.1 FRUIT TREES

Fruit trees are distinctively seasonal plants. Plant small orchards of fruit trees in parks and gardens; plant fruit tree grove, or individual fruit trees in small yards and along paths and streets.

2.2.2 SEASONAL DECORATION

Each of the four seasons has its own characteristic, and poetic meanings. Just as people change their clothes when seasons change, the decorations for each place should also change with the season. By doing this, we give places a particular seasonal look.

There should be the details designed for attaching decorations (such as posters and flags) on the walls of buildings, or on light posts. Some elements of a building, or a structure, such as roof of a shelter, surface of steps can be designed to change with seasons.

A. Light Post at Christmas Time, Macon, Georgia, USA
B. The Light Post of Vancouver, BC, Canada
2.3 CELEBRATIONS

Copacabana, Bolivia: Jam-packed pilgrims, many from foreign lands, crowed Copacabana each year to honour her famous Virgin (National Geographic, February 1966, P171).
2.3 CELEBRATIONS

Urban environments offer endless possibilities for theatre and all sort of spaces can be incorporated into the energy of a celebration. (Urban Waterfronts '85, 1986, P125)

A place without a special time is like a society without a festival, and a person without a birthday. The special time makes a place easy to name, and clear to remember. The Vancouver Expo '86 site would have been much less noticeable, if there had not been a special event. In this case, the presence of the place has been enlarged by the special event of celebration. This enlargement of presence can be stronger, if a special time is given repetitively. Because the presence of a place will connect with both past and future. The special moment may be at various intervals, eg., monthly, annually, or biannually. The event can be political, religious, or a festival occasion. It may have connections with a city, a community, a neighbourhood, or a special person.

Since the beginning of time, people in cultures everywhere have found the need to express communally their relationship to the earth and the passage of seasons. This expression involves confronting their demons and exorcising their fears and anxieties; as well as, celebrating their gods and acknowledging their connection with each other and the universe. These wonderful occasions provide accents of fantastic imagery and high energy to the daily cycle of life. (Breen, 1986, PP 117-125).
Festivals and celebrations have always been geared towards comprehensive participation. They raise the energy level of the entire community by taking place in public space and transforming the ordinary environment into the location for a magical experience. These distinctive events always give places a special look, as the flowers are on display, temporary structures are built. The temporary structure, if favoured by the public can be replaced by a permanent one, as the tomb of Lenin. Besides the old festivals we have, such as New Year's Eve, Halloween Day, Christmas, and Thanksgiving, many new "vocabularies" have been created for celebrations. For example, huge balloons of all colours, cold fires (low temperature chemical fire) for building decoration, wrapping for a bridge, and skating and skiing festivals are all new manifestations (Breen, 1986, PP 117-125).

Functionally, celebration and festival are times when a place is in its maximum usage. Accordingly, if a place is designed for a special event, its functional capacity undoubtedly can meet the usage in normal times.

2.3.1 PLACE WITH FESTIVALS AND CELEBRATIONS

Every park should be a place for special events. Every event should be programmed for its highest point, which are celebration. If there are no historical events to remember, a design can create new "vocabularies" of celebration. Give a special look to the place at this special time by flags, flowers, temporary structures, other related decorations.
Christos wrapping of the Pont Neut Created a major event in Paris, bringing hundreds of thousand of people out to celebrate at the water's edge (Urban Waterfronts '85, 1986, P125).

2.3.2 BIRTHDAY MARKS

The birthday of anything, structures, furniture, trees, even bricks and tiles are the same importance as people's birthdays. From time to time, remember to give them a birthday mark.

A tree with the date of planting on the campus of the University of British Columbia.
2.4 LAYERS OF HISTORY

Apartment towers loom over a lonely tailoring shop on Parliament Street, Toronto (Boris Spremo, 1983, P141)
2.4 LAYERS OF HISTORY

We prefer to select and create our past and to make it a part of our life.

What Time is This Place, 1972, P37

The survival of the past conveys a sense of security and continuity. It is a painful experience to visit a place and find out everything in one's memories has gone or changed. In Genius Loci, there is a story from the German-born American architect Gerhard Kallmann which illustrates what the experience means:

Visiting at the end of the Second World War his native Berlin after many years of absence, he wanted to see the house where he had grown up. As must be expected in Berlin, the house had disappeared, and Mr. Kallmann felt somewhat lost. Then he suddenly recognized the typical pavement of the sidewalk: the floor on which he had played as a child. And he experienced a strong feeling of having returned home.

Genius Loci, 1979, P 21

Deep in our mind, a portion of the past that has been saved as good is not merely a promise that we are living both in present and past; further, it is a promise that the future will save our present. This is one reason that cities with a long history are more comfortable place for "dwelling" than new cities. In an old city, where streets, buildings and plazas display visible accumulation of historical events, we can feel the depth of time.

Layers, like annual rings of a tree, are a visible accumulation of overlapping traces from successive periods. In the landscape, "Layers" can be a gathering of buildings, parts of a building or pieces of structures of different periods.
Coexistence of the old and the new heightens the contrast and complexity and makes visible the process of change.

To many people, saving the past merely means preserving the historical site, the place with a significant past. They tend to neglect the importance of many small things in the previous place, such as a seat, a threshold, or an old path. In fact these apparently trivial things convey a more intimate sense of a past. A society needs to notice the potential of special sites, which may be often neglected. 1. historic routes; 2. agricultural and horticultural landscapes; 3. industrial landscapes; 4. unique litter places and spaces; 5. heritage trees; and 6. famous views (Paterson, 1990, P3).

2.4.1 HERITAGE PRESERVATION

Layers of the past and the present must be considered in landscape design, especially, in heritage sites. Try to save the evidence of the previous occupation of a place. Preserving the signs of different times, and arranging them together as layers. Choose an area that represents the past of the place, differentiate it from the surroundings by giving it a boundary, and making a clear indication of the place.

2.4.2 BUILT-IN OLD TRACES

In the detail design of historical places, use the method "layer" by: 1. preserving former buildings, or parts of buildings. For example, a former base, if strong enough, can still be used as the base of new structure. 2. making use of old building material in the new construction. For example, pieces of old
buildings, boats, machines can be enjoyable sculptures in the landscape. Functionally, iron chains from an old boat can be used as a part of a fence; a wheel of a wagon as a part of gate. The wall of an old building could be the pavement by simply being laid down.

An Old Facade as a New Platform

Fence Made of Used Car Wheals
2.5 NIGHT

In the Modern world night is a place of bright city lights for most citizens. Night skies, black waters, moonlight shadows or a field of clover glowing in the night, distant light from kerosene lamp, and dark woods with the sounds of the night are rarely experienced.

Heritage Landscapes in British Columbia, Paterson, 1989, P31

Experiencing a place at night can enrich people's sense of the place. Places without a satisfying night image are less welcoming to people. People enjoy going out at night. Under the dark sky, night is the time to enjoy loneliness and quiet. Watching stars and the moon, we think of our existence and position in the universe.

In darkness, the earth is covered by a mist of uncertainty and secretness, which unifies the whole space. However, the secretness and uncertainty of night also causes fear, which prevents people from places such as parks. Therefore, efforts must be made to help people to overcome the fear, otherwise they will not use the park at night. The following facts should be considered to solve the dilemma.

1. **Proper Distance**: distance often overwhelms the intentions of people. If a park is too far from residents, they won't use it. According to Alexander, people intend to use a park more frequently, when it is within three-minute walk distance, or 750 feet from their home or working place (Alexander, P308, 1977);

2. **Adequate Population Density**: in parks, like other public places, users brings about more using; abusers allure more abusing.

3. **Pattern of Light**: if the light in a park is too strong, there is no privacy; if the light is too dim, the darkness frighten people.

4. **Safety**: safety is a major concern of people in deciding whether or not they will use a park.
Ignorance about night use of a urban park often comes from the thought that there are not enough activities happening at night. In fact, the night activities can give more character to a place. Obviously, a night park should not be too far from a residential area, or town-centers. The night park should not be too large nor the space too intricate. Hidden corners isolated from a open space should be avoided. It is not necessary to design all of the parks for night life, but we must open some urban parks in the central area for night use.

2.5.1 NIGHT LIFE AND NIGHT PARK

Choose the site of a night park in a populous area. Give it more lights than its surroundings. Program one or several special activities for the park. The following are for design reference:

1. resting, strolling, and jogging;
2. star-watching, lantern displaying;
3. fire-works display, music, light-fountain, laser-show, music bind, play and drama;
4. restaurant, and coffee, and tea;
5. campfire stories, evening candlelight celebration.
2.6 FUTURE

The spatial environment need not be subjected to plans of awesome future extent. It is more rational to control the present, to act for near-future ends and to keep the longer future open, to explore new possibilities, to maintain the ability to respond to change.

*What Time is This Place?*, Lynch, 1972, P95

The future seems to be something that lies ahead of us, something to be explored with hope and effort, or it may seem to be rushing toward us, beyond our control (Lynch, 1972, P90). A place is bound to change, but when it changes too fast, we lose the hint about the future image of the place. In fact, our problem today is severe, "the pace and scale of current development has increased to the point at which entire landscapes can be obliterated quickly and without much thought" (Paterson, 1989, P1). We should manage the changes, to make a place seem continuous with the near future just as each place should be continuous with the past.

Place should always been seen as "developing", charged with predictions and intentions (Lynch, 1972, P98). The clearer the future image of a place, the better the sense of the place. Lynch even thinks of using environment to display change instead of permanence, for example, using temporary structures to refer the structure in the near-future.

A most important role for the near-future is to make the future predictable and controllable. From this point of view, any development that is too large in scale, and built too quickly
will not be able to accommodate to the past or future of the place.

Making changes visible is another way to tell people the immediate future of a place, otherwise, the event appears unpredictable and frightening to people. It is better to announce projects in the environments where they occur, the more tangible the clues connected to the future objects the more effective.

2.6.1 SMALL SCALE DEVELOPMENT

When a development is too large in scale, or built too quickly, it overwhelms the land and its people. A large scale development must be divided into comprehensible pieces, and contracted to different designers and construction companies.

2.6.2 MAKE CHANGE VISIBLE

Make changes visible by informing the community about the plan and design by using models, boards, hoardings or temporary structures on the site.

2.6.3 THE WAITING LAND

There is something we should do for the land waiting to be developed instead of letting it become a plot of lost land. We can use waiting lands for: a. planting trees, b. temporary structures, or c. temporary displays.
2.7 DERELICT SITES AND RUINS

Old Wagon, Waskatenau (Royal LePage Calendar, 1989)
2.7 DERELICT SITES AND RUINS

Derelict places and ruins appeal to the romance in all. Allowing a site to gently slip into such a state is a simple, effective, and inexpensive way to carry a sense of past landscapes into the future.

*Heritage Landscape In British Columbia, 1989, P 30*

We often think of our urban parks as tidy and neat places. We treat them artificially, the flower beds are trimmed like table cloths or painted designs. The paths are clean, fresh from the department store. However, nature has its own law that most times we cannot comprehend thoroughly.

There is a large piece of forest in Vancouver's Stanley Park that is grown by man after a selective logging about 70 years ago. In that forest, there are large evergreen trees grown on a continuous lawn—very neat and pleasant to our eyes. Beside it, there is another piece of forest grown without any human intervention. There are deciduous trees, evergreen trees, shrubs and all kinds of grasses, which looks messy and out of order. The difference between the two is that the natural forest is full of life. Birds and animals like the place, but they seldom visit the ordered land, although they are very close.

Our ordered attitude towards place also brings disciplines upon ourselves by the signs "keep out of the lawn!" and "No dancing, No loud Music!". We let the place manipulate us instead of the opposite. We sacrifice our opportunity of moving and behaving freely, in favour of the visual order. We should have as many places as our states of mind. People enjoy visual order, but sometimes they also enjoy a place that has less rules. Children,
especially, want a place to explore to satisfy their curious minds. They want a place where they can dig the ground, climb trees, hide their own "Treasures"—a place such a marsh, a neglect wood, a back lane, a wild garden.

If we do not give people places to satisfy their destructive needs, they create it anyway—most times, through vandalism and in the wrong place. Why not give them a legal place for their activities instead of denying their needs under the name of education. In Holland, there are escape towns, where laws are looser, youth can go there to escape for awhile, if they want to take the risk. In Japan, a special area is assigned for teenagers where they can dance in public.

These are all derelict sites which are healthier, and more capable of stable growth than the more clipped and artificial parks. The site can be left alone without too many cares. Derelict sites are also economically sound, because they have minimal maintenance and operation costs.

A simple solution: designate pieces of derelict land, and propose minimal to no intervention. Do not use artificial means to change the place. Perhaps, good design is not to design at all, or to suggest deliberate community neglect of the place. Land appropriate for these purposes could be one of the followings (Paterson, lecture, 1989):

a. land belonging to nobody
b. abandoned sites--farms, industry, building
c. plants growing wild
d. land unsuitable for any other use, for example, swamp, river-side, beaches.
2.7.1 DERELICT SITE

Every community\textsuperscript{3} should have at least one derelict site for children and teenagers, where there would be no regulation of correct usage. Furniture that otherwise would be abandoned could be used to furnish the site. Users could freely reorganize the place, and further manipulation would be appreciated. People should have the right to dance, make fires, and play loud music.

2.7.2 GARDEN GROWING WILD

In some parts of a park, grow grass, mosses, shrubs, flowers, and trees in a way which comes close to the way that they occur in nature: intermingled, without barriers between them, without bare earth, without formal flower beds, and with all boundaries and edges made in rough stone, brick or wood which become a part of the natural growth.

2.7.3 ADVENTURE PLAYGROUND

A castle, made of cartons, rocks, and old branches, by a group of children for themselves, is worth a thousand perfectly detailed, exactly finished castles, made for them in a factory. Set up a playground for the children in the park, make it a place with raw materials of all kinds—nets, boxes, barrels, trees, ropes, simple tools, frames, grass, and water—where children can create and re-create playgrounds of their own.

\footnote{\textsuperscript{3}According to Alexander, the population of a community should be around 7,000 people. "Decentralize city governments in a way that gives local control to communities of 5,000 to 10,000 persons" (Alexander, P73, 1977).}
SEQUENCE

The basic function of a path is to link different spots together. But this is far from enough. A good path in a park should compose good views into a "symphony".

Time has played some role in the environmental design of the past but usually a secondary or accidental one. The great exceptions are the processional settings: the approaches to gods, kings and the dead. Most other examples of time in architecture are the product of chance. Landscape architecture, on the other hand, particularly in the stroll gardens of Japan and in the English romantic gardens, has developed a method of exhibiting a large landscape as a series of contrasting pictures, seen in sequence (Lynch, 1972, P167).

The linear nature of the path provides the opportunity to organize views and events along the path thorough time. When designing a path, the key point is to consider observer motion, to arrange the environmental change while traversing it. Lynch refers to this as a temporal meshing. The example he gives is a road that may expose the historical layers of a city, so that "baroque squares in contrast to new shopping centres, ancient foundations at the skyscraper's foot. Paths can link places of contrasting episodic quality, as in the stroll garden" (Lynch, 1972, P184).

SITE CONTEXT

The context of a site can be studied by considering the sequences along the approaches to the side. Be sure that the following sequences are considered:
1. The sequences along the major approaches to the park, which include considerations of beginning, climax, and end of the sequence; and of the experiences along the sequences, for example, immediacy, high and low, and outside and inside.

2. The sequence of all parks and other open spaces in the city. How does the park relate to other parks and open spaces.

3. The sequences experienced by different people. For example, how do the people on the car feel the sequence? How does the cyclist feel the sequence?

2.8.2 PATH AND REST

Usually, people need a rest in the walk within the interval of 5 to 10 minutes. Make sure to arrange resting places or events along a walk, with a distance of 5 to 10 minutes walk, which is approximately 1,250 to 2,500 feet.4

4 According to Alexander, three minutes' walk is about 750 feet in distance (Alexander, P308, 1977).
2.9 MATERIAL AND CONSTRUCTION

Roof (Photography Yearbook '78, P79, by Beverly Bean)
2.9 MATERIAL AND CONSTRUCTION

Certain materials and forms age well. They develop an interesting pattern, a rich texture, an attractive outline. Others are at their best only when clean and new; as they grow old, they turn spotted and imperfect.

What Time is This Place, Lynch, 1972, P44

Good material has an organic quality. It becomes more attractive and more pleasant as it grows, decays, and scars. Most traditional materials have this quality. Materials such as stone and brick weather handsomely; they increase the value of old buildings through time.

However, many modern materials don't have this quality. Plastic, steel, and many other man-made materials, only look elegant and pleasant when they are new, but dull and dreary when old. As Alexander finds: "modern materials tend to be flimsy and hard to maintain—so that buildings deteriorate more rapidly than in a pre-industrial society" (Alexander, 1977, Pattern 107). A modern building, like modern product, e.g., a TV or a radio, depreciates its value while getting old.

Very often, the quality of materials mainly relates to the surface texture of the material instead of the materials themselves. Most modern materials have too smooth and slick a surface, they become imperfect when scarred. On the other hand, materials with organic quality usually have a intricate surface texture on the surface. Time and use usually enhance this intricacy.

Hence, by improving the texture of a certain material, we can usually change its temporal quality. For example, some types of
concrete have a smooth and dull surface that becomes ugly when exposed over time. However, when the surface texture is improved, the result can be remarkable.

A. smooth concrete  B. small stone built  C. surface with texture surface (UBC, SUB Building)

Intricate textures can also be formed in the way we assemble material. A large piece of glass rarely has the organic quality possessed by the glass window of an old church. Similarly, a large concrete path has no organic quality compared to a paving with cracks between the concrete bricks. The cracks between the stones and the frames between the glass unify the window and paving. A large glass with a broken corner is unpleasant, but a framed window with a broken glass, or a variety of glass in the window can be a pleasant view. In addition, the cracks between the bricks allow glasses and mosses to grow, the edge of the brick to decay, and develop the intricate surface.

2.9.1 TIMELESS MATERIALS

Choose materials that will weather handsomely. If not, a designer must try to change the surface texture of this material, or use small units and construct them in the way it will carry the sign of use and time. For example:

1. Use bricks and tile which are soft baked, low fired—so that they will wear with time, and show the marks of use.
2. Create intricate texture on the surface, by combining or building in other materials, or making the surface rough so that catch the rain, and age well.

3. An alternative is to use small units of a certain material and pile them in the way to form a rich texture, like the mosaic on the Islamic buildings.

A. A Modern Window

B. An Old Window (Howard Hibbard, 1980, P 172)

2.9.2 TIMELESS WAY OF CONSTRUCTION (Alexander, 1977, Pattern 274)

Asphalt and concrete surfaces outdoors are easy to wash down, but they do nothing for us, nothing for the paths, and nothing for the rainwater and plants. On paths and terraces, lay paving stones with a loose joint between stones, so that grass and mosses and small flowers can grow between the stones. Lay the stones directly into earth, not into mortar, and of course, use no cement or mortar in between the stones.
2.10 CENTER

Dwelling as a Center in the Landscape, County Tipperay, Ireland (National Geographic, September 1969, P375).
Many natural processes have centers of action: the action radiates outward from some system of centers.

\textit{The Nature of Order, 1989, Chpt 6, P7}

When we view a natural process of growth, like the growth of a seed, or an embryo, the center plays an important role. The center is not necessarily the thing in the middle. It is the spot where the force and intention is forming or formed. For example, a king is always in the center of a procession regardless of his physical position, whether in the middle, at the front, or at the rear, because he is the focus of attention. As Alexander remarks: "the center is the fact that there is a powerful field effect at that point, gathering and concentrating the energy of the surrounding objects, and concentrating them, to form the center. The life comes from the existence of this center" (Alexander, 1989, Chpt 4, P 35). Center is a place or space where the following things happen:

1. Centers arise in space. This happens for reasons which have purely to do with existence and presence of other centers.
2. Each center is created by configurations of other centers.
3. Each center has a certain life or intensity.
4. The life or intensity of one center gets increased or decreased according to the position and intensity of other nearby centers, and "centers help centers".
5. The centers gives us an accurate picture of things we loosely call whole. They are the fundamental elements of wholeness, and the degree of wholeness, or life, of any given part of space depends entirely on the presence and structure of their centers there.

\textit{The Nature of Order, Alexander, 1989, Chpt-4 PP 22-23}
Elements serving as a center in the landscape can be a building, a tree, a space, or a pond. Basically they fit into two categories—nodes and landmarks, which are identified by Lynch. Nodes are the strategic foci into which the observer can enter, typically either junctions of paths, or concentrations of some character (Kevin Lynch, 1960, P 72). Landmarks are the point references considered to be external to the observer; they are simple physical elements which may vary widely in scale. There seems to be a tendency for those more familiar with a city to rely increasingly on systems of landmarks for their guides—to enjoy uniqueness and specialization, in place of the continuities used earlier (Kevin Lynch, 1960, P 78).

2.10.1 HIERARCHY OF CENTERS IN THE WATERFRONT

When designing a landscape, regardless of its size, we should identify, or create centers at all levels. Keep the idea of the hierarchy of centers in mind.

2.10.2 SOMETHING ROUGHLY IN THE MIDDLE

A public space without a middle is quite likely to stay empty. Between the paths which cross a public square or courtyard or a piece of common land choose something to stand roughly in the middle: a fountain, a tree, statue, a clock-tower with seats, a windmill, a bandstand. Make it something which gives a strong and steady pulse to the square, drawing people in toward the center. Leave it exactly where it falls between the paths; resist the impulse to put it exactly in the middle. (Alexander, 1977, Pattern 126).
2.11 BOUNDARY

A boundary is not that at which something stops but, as the Greeks recognized, the boundary is that, from which something begins its presencing.

Heidegger, cited in The Genius Loci, 1979, P20

Boundary is an essential element for all forms. Nations have borders, seas have shores, rivers have banks, buildings have walls, and cells, basic units of life have cell-walls. In a sense, architecture is "the wall between the inside and the outside" (cited by Norberg-Schulz, 1979, P 15). Boundary is so critical for a military building that constructing a fort only means to build a wall. It is said that the art of Chinese urban design is mostly the art of using walls to define urban space. This image of boundary is deeply rooted in Chinese culture, even reflected in the characters:

| 玉 | 国 — a jade within a boundary |
| 冬 | 园 — garden—earth, pond, and birds within a boundary |
| 稳 | 稳 — stability—something old within a boundary |

Every form must have a boundary. As Alexander says: "the need for boundaries comes about as a result of need for functional separations and transition between different systems" (Alexander, 1989, Chpt 6, P9). A boundary has two functions. One function is to separate a thing (a nation, a building, or a cell) from the outside, to achieve its distinctiveness and coherency; the other is to contact and connect the outside. Because of the unique functions of both uniting and separating, a boundary must be
considered as distinct, and have the capacity of connecting the area on either side of it (Alexander, 1989, Chpt 5, P20).

A boundary can be anything with these two functions, no matter if it is two-dimensional or three-dimensional. It could be a line, a plane, a mass, or a space. Form with a holistic quality, most often, has a surprisingly large boundary (Alexander, 1989, Chpt 5, P 21). Perhaps, it is more accurate to say it has a strong boundary—strong in mass, structure, or density, not necessarily in size. When we view the world, we must see boundaries in different levels, in other words, a hierarchy of boundaries.

We can say that urban edges are the boundaries of a city. In the Image of The City, Kevin Lynch defines edge as one of the major elements (among path, district, center, landmark) to decide the image of city (Lynch, 1960, PP 62-66). In the city, edges are usually the boundaries between two kinds of areas. The continuity and visibility of edge is crucial to its imageability. Strong edges are not necessarily impenetrable; they are uniting seams, rather than isolation barriers.

2.11.1 BOUNDARIES IN LANDSCAPE

A boundary is essential for any kind of landscape to maintain its own identifiable character. Encourage the formation of a boundary around the waterfronts, parks, and other urban open spaces, to separate them from the surrounding areas. Form this boundary by closing down streets and limiting access. Place gateways at those points where the restricted access paths cross the
boundary. Strong boundaries can be thick hedges, strong fences, double-columned street trees, or walls.

2.11.2 THICK WALLS

In many places walls and fences between outdoor spaces are too high; but no boundary at all does an injustice to the subtlety of the divisions between the space (Alexander, 1977, Pattern 243). Thick walls is one type of strong boundary for a place. Surround a park, or a part of a park with low walls, about 16 inches high, and wide enough to sit on, at least 500mm wide. We can create a thick wall by considering the following (Paterson, lecture, 1989):

1. Using layering: make walls of different time or different materials and construct them together.
2. Assigning it a function: a wall can be used for sitting, sleeping, even a platform.
3. Creating a small space inside the wall: a space for storage, a cave for child, or a hole for lights.

Thick Wall, on the campus of University of Georgia, USA
2.12 SACRED PLACES

Wailing Wall, Women's Section, Jerusalem (Max Yavno, 1981, P64)
2.12 SACRED PLACES

The world becomes apprehensible as world, as cosmos, in the measure in which it reveals itself as a sacred world.

_The Sacred and the Profane, 1959, P 64_

In the past, the world has been experienced as a world of qualities and meanings. Thus it became a common world, which formed a basis for sharing and participation. Mircea Eliade describes a different picture of a religious person's view of the world in his _The Sacred and the Profane_ (Mircea Eliade, 1959). For a religious person, place is not homogeneous: some places are close to the God, other places are not. Hence, making sacred places or finding them in nature was a perpetual effort in religious societies.

To live as closely as possible to God reveals one of the deepest meanings of sacred place. A religious person seeks a communication between the three cosmic levels—earth, heaven, and underworld. The communication is expressed through the image of "axis mundi", such as a universal pillar, a temple, a niche, or a tree. For them the axis mundi is at the very center of the universe, for the whole of the habitable world extends around it (Mircea Eliade, 1959, PP 36-37). Hence there is a system of the world prevalent in the traditional society:

a. A sacred place constitutes a break in the homogeneity of space;

b. This break is symbolized by an opening through which passage from one cosmic region to another is made possible;

c. Communication with heaven is expressed by one or another of certain images, all of which refer to the axis mundi: pillar, ladder, mountain, tress, vine, etc;

c. around this cosmic axis lies the world (=our world), hence
the axis is located in the middle, at the navel of the earth; it is the center of the world.

The Sacred and the Profane, 1959, P 37

SKY WORLD OF THE HIMALAYAS: Boulder as big as a house carries a Buddhist prayer repeated line upon line "O the jewel in the lotus!" The rock's unknown carver may have sought to commemorate dead relatives or to cure an illness. He may have wished to promote the granting of favours or simply to speed himself along the path to nirvana. Regardless of purpose, the massive symbol of devotion lies rooted to the path where each Buddhist traveller can earn merit merely by passing it (National Geographic, October 1966, P567).

Today's society, to a certain extent, keeps this tradition of sanctifying place. We still find some places which are more sacred than others. In Athens, Georgia, an old man erected a stone with his testament in front of his big tree, which says no one is allowed to cut down the tree without his permission. His effort turns this tree into a sacred and famous place. However, instead of relating sacred places with God, we interpret sacred place as those which occupy a special meaning in
our emotional and spiritual lives. They represent the values we place on living. These places are identified as following in our times:

a. Place of worship;
b. Sites of pilgrimages
c. Areas of special myths and legends;
d. Places of birth, love and death;
e. Memorials
d. Special places in the landscape such as the top of the highest mountain; and
e. Areas of natural disasters.

Heritage Landscapes in British Columbia
Paterson, 1989, P15

2.12.1 DEFINING THE SACRED PLACE

In landscape of all sizes and scales, it is our job to find, or define sacred places, to make our lives more meaningful and worth living. Define a sacred place by naming the place, giving it a center and a boundary.

2.12.2 GEOLOGICALLY ADVANTAGED PLACE

The special geological locations in a place, such as highest, and lowest sites, or sites at different ends, by their very natures, are sacred. In the design of a landscape, identify and emphasize these locations.

2.12.3 GRAVES OF FAMOUS CITIZENS

In the urban park, there are should be corners dedicated to people who contributed to the city, such as mayors, or famous citizens. Let them live with the people instead of letting them sleep in obscure places. Give each of these sites an edge, a path, and a quiet corner where people can sit. By custom, this is hallowed ground.
2.12.4 IMAGINATIVE AND SITE SPECIFIC SIGN

Signs, by definition, convey messages. Good signs, such as a small landmarks, should immediately identify the nature of a specific place. "Through the attention to detail, character, and location an effective sign can hint at the values and activities of the times. They can help us appreciate the uniqueness of each place and, in so doing, develop in us a greater sense of respect and empathy for the place" (Paterson, 1989, P36).
A Panoramic View of West Vancouver's Waterfront, seen from Lions Gate Bridge (Cover Page, Ramsey, 1986)
3.1 INTRODUCTION

The application of patterns to design can be seen as an experiment to test the validity of the patterns. The site selected for this experiment is the seawalk of West Vancouver between Ambleside Park and Dundarave Park. Two results are expected from this experiment: First, exploring a proper procedure of applying patterns to a specific site; second, modifying and examining the patterns to make them practically usable.

Noticeably, the design patterns generated in this thesis (most of which are temporal patterns) are not sufficient in themselves for a practical and comprehensive project. Therefore, several patterns from Alexander's *A PATTERN LANGUAGE* are used in the design procedure.

3.1.1 THE CHOICE OF SITE (See Analysis Drawing No.1 Site Context, Appendix B, P114)

The site on the waterfront of West Vancouver was carefully selected. To be an appropriate site for testing the patterns, especially, the temporal patterns, the site has to have plenty of human activities, as well as, natural rhythmical recurrences. It has to be in Greater Vancouver, so that frequent site investigation can be carried on, and first-hand information obtained. It, preferably, should be a site on waterfront, for waterfront is one of the distinguishing characteristics of Greater Vancouver. Finally, it has to be a site requiring improvement, since public participation and support for this project are anticipated. The waterfront of West Vancouver, fortunately, meets the above requirements.
3.1.2 HISTORY OF WEST VANCOUVER AND ITS WATER FRONT

West Vancouver is located on the north side of Burrard Inlet west of "First Narrows", across from Vancouver City. It is a sea-oriented community with a lengthy, scenic and rugged shoreline. West Vancouver became a municipality in 1912. The community developed along the waterfront and up the lower slopes of the Coast Mountains. The waterfront between Ambleside and Dundarave was the starting point of the city.

Historically, development in West Vancouver has been primarily waterfront recreation homes. The municipality grew as a residential community with no industry. In 1938, the construction of the Lions Gate Suspension Bridge at the First Narrows marked the turning point in West Vancouver's development in changing the community from recreation oriented to commuter residential. Today, the waterfront from Ambleside to Dundarave still is the most developed area in West Vancouver, and one of the most used and alive waterfronts in the region. From morning to midnight, there are always people strolling, walking and playing along the seawalk.

To improve the landscape quality requires a continuous effort by the community. A continuous walkway from Dundarave Pier to Cleveland Dam is a major goal of the 1980 West Vancouver community Plan. The Official Community Plan Bylaw, 1988 emphasized the enhancement of Waterfront:

b. Public access to the waterfront should be encouraged by improved signage, better access and parking facilities,
clearance programmes, and by generally increasing public awareness of waterfront resources.

c. In cooperation with the Greater Vancouver Regional District and the Squamish India Band, West Vancouver will work to secure completion of the seawalk from Dundarave to the Capilano River and northward along the riverbank to the Cleveland Dam.

d. The "Ambleside-by-the-Sea" concept at the foot of 14th Street should become a focal point of public awareness of West Vancouver's Maritime character.

e. Council will continue to protect the natural features of the waterfront by restricting structures on the foreshore.

3.1.3 SITE ZONING (See Analysis Drawing No.1 Site Context, Appendix B, P114)

The attributes of the function, character, visual resource, and convenience of design can be used to divide the waterfront between Ambleside and Dundarave into four zones:

1. Ambleside Park—an open urban green space;
2. Existing single family residencies(Between 13th and 17th Street). The houses, according to the Community Plan will be removed in a long run;
3. Centennial Seawalk between 17th-25th Street—an existing 12' walk along the sea; and
4. Dundarave Park—an existing disordered park with great enhancement potential.

For more information about the site, see Appendix A, Historic and Current Views of the Waterfront. It is a photographic collection, consisted of 33 old and new pictures.

5 "Ambleside-by-the-Sea" is an urban design package, approved by the Municipality Council in 1985. One of the decision is to reclaim the waterfront residences on 14 to 17 blocks and transfer them into an open space.
3.2 SITE PLAN FOR THE SEAWALK OF WEST VANCOUVER

In doing this project, the whole site was analyzed according to the patterns, and suggestions proposed for the further improvements; then, a site plan for the seawalk was completed according to the analysis and proposed improvements. In the following paragraphs, the patterns used to analysis each specific issue are shown between the dashed lines.

3.2.1 SITE ANALYSIS

1) SEQUENCE--SITE CONTEXT (See Analysis Drawing No.2, Appendix B, P115)

<table>
<thead>
<tr>
<th>PATTERN</th>
<th>SITE CONTEXT</th>
<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.8.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.8.2</td>
<td>MOVE AND REST</td>
<td></td>
</tr>
</tbody>
</table>

1. NORTH-SOUTH SEQUENCE:

a. Reinforcing the connection between waterfront, city, and mountain by considering the sequence along the north-south streets: from 13th to 25th Street.
b. Proposing a new Mountain-to-Sea Walk from Dundarave Park, along the 25th Street, to the top of the Hollyburn Mountain.

B. WEST-EAST SEQUENCE:

a. River walk (along Capilano Trial to Cleveland Dam); Seawalk from Ambleside to Dundarave;
b. Sequence of West Vancouver's coastline: all of the parks along coastline can be connected by: a. coast ferry; b. B.C. Railway
c. Sequence of activity nodes along the walk, five minute intervals of walk and rest.

<table>
<thead>
<tr>
<th>Nodes</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>--BC Rail Bridge</td>
<td>(3)</td>
</tr>
<tr>
<td>--Ambleside Lagoon</td>
<td>(1)</td>
</tr>
<tr>
<td>--Celebration Park</td>
<td>(1)</td>
</tr>
<tr>
<td>--Entrance and Hollyburn Shipyard</td>
<td>(2)</td>
</tr>
<tr>
<td>--Heritage Square</td>
<td>(1)</td>
</tr>
<tr>
<td>--John Lawson Park</td>
<td>(2)</td>
</tr>
<tr>
<td>--McDonald Park</td>
<td>(3)</td>
</tr>
<tr>
<td>--Navvy Jark Point Park</td>
<td>(2)</td>
</tr>
</tbody>
</table>
The High Point Park (3)
The Centennial Seawalk Park (3)
Bellevue Entrance (3)
Dundarave Park (1)

2) RHYTHMICAL RECURRENCE (See Analysis Drawing No.3, Appendix B, P116)

PATTERN 2.1.1  DISPLAY NATURAL RHYTHMS  P36
PATTERN 2.1.2  THINGS AFLOAT  P37

NATURAL WATER BODIES CONSIDERED AS NATURAL RHYTHMS:

a. Modifym the Ambleside Lagoon: making it a reinforced tidal pool, and restoring a marsh for wild-life;
b. accentuate Lawson creek by designing a pond at the end; and
c. highlighting the experiences of Mcdonald Creek and Marr Creek in the McDonald Park and Dundarave Park.

THINGS AFLOAT:

d. Hollyburn Shipyard Marina
e. Five floats along the seawalk--John Lawson float, Hollyburn Creek, Navvy Jack floats, Dundarave float.

3) SPECIAL EVENT (See Analysis Drawing No.6, Appendix B, P117)

PATTERN 2.3.2  CELEBRATIONS AND FESTIVALS P44

Pattern 2.3.2 helps the programming of special events along and beside the seawalk. The celebrations and festivals on the waterfront will bring life to the waterfront, and provide more opportunities along the seawalk. The places programmed with special events are as follow:

a. The east end of Ambleside Park will be a place for Summer Dog Festival with events such as, dog racing, dog performance, dog pageant.
b. Community Celebration Park in the middle of Ambleside Park is designed for outdoor performing, maypole dancing, ballroom dancing, square dancing, picnicking, art work display;
c. The area in front of Hollyburn Shipyard will become a Water Sport Center. The special events happening here include Ambleside to Dundarave boat racing (or dragon boat racing), sailing, canoeing, Sunday and holiday coastal ferry.
d. Celebration times assigned to The Centennial Seawalk are
community walk days and community dressing-up walk day,
e. Dundarave Park will be a place for West Vancouver Summer Music Festival. Dundarave pier will be a destination for the Ambleside to Dundarave boat racing.

4) LAYERS OF HISTORY (See Analysis Drawing No.5, Appendix B, P118)

A. STRUCTURES CONSIDERED AS "LAYERS"
   a) The two existing piers in Ambleside park, b) the pier in Ambleside Landing Park, c) John Lawson Pier, and d) Dundarave Pier

B. BUILDING CONSIDERED AS "LAYERS"
   a) BC Rail Bridge, b) Hollyburn Shipyard, and the Ramp c) Heritage Square, d) A reassembled play-house Beside Lawson Creek, and e) Peppi's Restaurant.

C. PARKS CONSIDERED AS "LAYERS"
   a) Heritage Park (Ambleside Landing Park), b) John Lawson Park

5) NIGHT IMAGE (See Analysis Drawing No.6, Appendix B, P119)

NIGHT PARK:
   Three Parks along the seawalk will be designated as night parks. These are Celebration Park in the East, Heritage Park in the middle, and Dundarave park in the west. The section of seawalk between Celebration Park and Dundarave Park will be lighted for night walking.

6) DERELICT SITE (See Analysis Drawing No.7, Appendix B, P120)

a) Marsh, as a typical derelict site, is a good habitat for wildlife. Associated with the improvement of Ambleside Lagoon, a marsh will be restored along the shoreline in the
east side of Ambleside Park.
b) The single family blocks between 14 and 17th Street on the waterfront are planned to be a site of minimal maintenance and operation costs, a place for gardens to grow wild.
c) The block between John Lawson Park and John Lawson Creek will be designed as "Adventure Playground". It is proposed to use as many as possible old building materials to build the playground.

7) BOUNDARY (See Analysis Drawing No.7, Appendix B, P120)

PATTERN 2.11.1 WATERFRONT BOUNDARY P68

B. C. Railway, Bellevue Ave, and the double rows of trees serve as a strong boundary to be waterfront section from B.C. Railway Bridge to The 18th Street. BC Railway with its high base help to form a strong boundary for the centennial seawalk.

8) SACRED PLACES (See Analysis Drawing No.7, Appendix B, P120)

PATTERN 2.12.1 THEME PARK P73
PATTERN 2.12.2 GEOLOGICALLY ADVANTIGED PLACE P74

As an effort to increase the "sacredness" of the seawalk, a memorial park, the Centennial Seawalk Park is proposed at the foot of 23rd Street. The park, which is twice as wide as the seawalk, also serves as an activity "pocket", where people can stop and rest. Twelve red maple trees in the park represent the provinces and territories of Canada. Special attentions are payed to Navvy Jack Point--the most projected point, and Believer Park--the highest point along the seawalk, both of them are special geological places.

9) OTHER PATTERNS FROM PATTERN LANGUAGE (See Analysis Drawing No.8, Appendix B, P121)

PATTERN 30 Activity Nodes
PATTERN 53 Main Gateways
PATTERN 72 Local Sport
PATTERN 74 Animals
PATTERN 102 Family of entrance
10) THE TOPOLOGY OF SEAWALK

A. PIER

B. STEP

C. WALL

D. BRIDGE AND TRELLIS

E. SLOPE

F. OUT-LOOK
11) SITE CIRCULATION

Besides the seawalk, the following circulation systems have also been considered: a) Coastal Ferry Route, b) Railway Route, c) Automobile Access, d) The Handicapped Access e) Bike route f) Walk Route, and g) Service Route.

3.2.2 The Site Plan Drawing

The above eleven major considerations constitute the majority of the programming of the design. Pattern analysis is one step next the "shaping" of a place. To completely shape a place, the following additional design procedures are needed:

a. Site special information;
b. emotional involvement with the site and design;
c. a design process to find the right outcome among the unlimited numbers of "shapes" that fits into a same pattern; and
d. the intention to create a place with meanings. The most important of these are sacredness, mystery, and intimacy.

Three design drawings were completed as a result of this design procedure. These are:

Design Drawing No. 1  Site Plan for the Seawalk of West Vancouver (Ambleside Park)
Design Drawing No. 2  Site Plan for the Seawalk of West Vancouver (From 14th Street to 18th Street)
Design Drawing No. 3  Site Plan for the Seawalk of West Vancouver (From 18th to 25th Street)
Design Drawing No. 1  Site Plan for the Seawalk of West Vancouver (Ambleside Park)
Design Drawing No. 2 Site Plan for the Seawalk of West Vancouver (From 14th Street to 18th Street)
3.3 DESIGN THE DUNDARAVE PARK
The View of Dundarave Park from Dundarave Pier
3.3.1 SITE DESCRIPTION (See Analysis Drawing No.9, Appendix B, P122)

The delightful Dundarave Park comprises six building lots. At the beginning of this century, Dundarave area belonged to Mr. R. E. McNaughton, who was one of the "Fathers of West Vancouver". He named his subdivision "Dundarave" after his ancestral home in Scotland. Seen from Dundarave Park, the view of the outer harbour, Vancouver Island and the shoreline is better than it is at Ambleside Park. A panorama of the foreshore from Point Atkinson in Lighthouse Park to Navy Jack Point can be appreciated against the back drop of Hollyburn Mountain.

CLACHAN HOTEL (PEPPI'S RESTAURANT)

One of the first business establishments in this area was the Clachan Hotel, now Peppi's Restaurant. It was a one-story building with a broad veranda on two sides and was located on the waterfront (See Picture 9 and 10, Appendix A, P104). It was aptly named, the Gaelic translation being "meeting place".

DUNDARAVE PIER

The municipality first built this pier in 1914. It proved to be too exposed for its original purpose, that of a ferry slip. However, it became a tourist attraction and an on-shore fishing facility. It was in 1916 that the pier came to its own, with the beginning of annual Dundarave Regatta, an aquatic event which, for years, drew the best swimmers in British Columbia to the competition (See Picture 11, Appendix A, P104).
MARR CREEK

On the east side of the pier can be seen a concrete culvert, which is the discharge point of Marr Creek. This creek takes its name from George Marr, who was probably Dundarave's first officially-registered white settler. He came to Dundarave around the turn of the century and established a lumber camp close to this creek, which flows underground from just north of Marine drive to its exit into the sea.

VEGETATION

Vegetation is another natural endowment of Dundarave Park. The trees include three over 40' tall cedars, and approximately 20 mature plum trees. There is also a 12' tall hedge, over 10 species deciduous and evergreen trees, and shrubs.

3.3.2 SITE ANALYSIS

1) SEQUENCE--SITE CONTEXT (See Analysis Drawing No.10, Appendix B, P123)

There are two major sequences in the urban context: considering the park as both the epilogue and the prologue of the sea--waterfront--city--mountain sequence; and considering the park as both the prologue and the epilogue of the seawalk from Dundarave to Ambleside.

2) RHYTHMICAL RECURRENCE (See Analysis Drawing No. 11, Appendix B, P124)

Marr creek provides an excellent opportunity for displaying natural rhythms. Unfortunately, it is covered up and goes
underground after the Marine Drive. According to the pattern DISPLAY NATURAL RHYTHM, the creek should be revealed and "celebrated" in the park.

The experience of a natural creek is accentuated by a series of waterfalls, rapid currents, quiet water ponds, bridges over the creek, and steps and slope down to the creek. There are also plants and flowers beside and over the creek. All of these efforts are intended to "condense" the topographical elements of a natural creek, so that the experience of a natural creek can be recreated in the park.

3) SPECIAL EVENT (See Analysis Drawing No.12, Appendix B, P125)

PATTERN 2.3.2 CELEBRATIONS AND FESTIVALS P44
PATTERN 2.3.3 BIRTHDAY MARKS P45

In the design, two special events have been considered, which, to a large extent, shaped the appearance of the park. Firstly, the central part of the park is considered as a place for summer festivals of different performances, such as concerts, rock and roll bands, plays and dramas of various kinds, or any large or small performance from the community. An outdoor theatre with three performing areas is designed for different scales of performances. There are three spaces of different sizes, which can be used for different size groups. The stair seats, combined with steps, make a multi-functional use possible. The fountain in the middle is preserved.

Secondly, Dundarave Pier is considered as a place of celebration—a destination for the Ambleside-Dundarave life boat racing. The design emphasizes this sense of destination providing a
welcoming stage for the audience. The tall posts with flags serve as an indication of arrival.

4) LAYERS OF HISTORY (See Analysis Drawing No.13, Appendix B, P126)

The valuable historic "layers" on the site include Peppi's restaurant, Dundarave pier, and old trees. Peppi's restaurant is located in the centre of the park. Its function as a restaurant conflicts with the character of the park as a public place. The design propose the conversion of Peppi's into a public building, the West Vancouver History Museum. Columns, balconies, a patio, and ramps are added, which are intended to "root" the building into its surroundings. The historical appearance of the building is restored (see Picture 9, Appendix A, P104).

All valuable trees are enclosed by fences, tree planters, or benches. Labels are added to show the age, name and species of the trees. Additional modification to the Pier includes a small bridge added close to the end of the pier, which emphasizes the the final ending of mountain-to-sea sequence.

5) WHEEL-CHAIR ACCESSIBILITY AND HANDICAPPED PARKING (see Analysis Drawing No.14, Appendix B, 127)

Handicapped accessibility is presently a major social issue. In West Vancouver, a favourite place for the senior citizen, a park accessible by wheel-chair is a necessity. This special need changes the appearance of the park, especially, the steps below the entrance. Wheel-chair audiences also have their own special
balconies, and ramps to buildings and washrooms in the design.

6) BOUNDARY (See Analysis Drawing No.15, Appendix B, P128)

PATTERN 2.11.1 WATERFRONT BOUNDARY

The row of trees along Lower Bellevue Ave is intended to give a strong boundary to the park. A hierarchy of boundaries are formed by trees, building edges, roads, and other structures.

6) DERELICT SITE (see Analysis Drawing No.16, Appendix B, P129)

PATTERN 2.7.1 DERELICT SITE

The beach in the park has already had a derelict quality due to the logs which are scattered here and there. Instead of having fine sand, it has clay and stone, which adds a character of roughness—a visual quality of dereliction.

8) NIGHT IMAGE (see Analysis Drawing No.16, Appendix B, P129)

PATTERN 2.5.1 NIGHT LIFE IN THE CITY

Light posts are designed around the performing area, along the pier, and around major functional places, such as washrooms, and parking lots.

8) SEASONAL IMAGE (see Analysis Drawing No.17, Appendix B, P130)

PATTERN 2.2.2 SEASONAL DECORATION

Seasonal decoration for the park and the light posts
3.3.3 DESIGN EXPLANATION

Design Drawing No.4 Site Design of Dundarave Park
Design Drawing No.5  Axonometric Drawing of the Design
Design Drawing No. 6 Sections
3.4 EVALUATION

3.4.1 WHICH PATTERNS ARE MORE USEFUL AND STIMULATING

In the whole design process some patterns worked better than others. The most stimulating and compelling patterns in the design are under these three categories: A. Rhythmic Recurrence; B. Celebrations and Festivals; and C. Layers of History. These concern three major aspects of waterfront parks: the natural elements and natural happenings, the human activities, and the existing status.

Other categories of patterns are secondarily influential. These are Derelict Site and Ruins, Night Image, Sacred Places, Sequence, and Boundary. Besides the sequence and boundary, the other three issue are conditional. For example, there might be only a few derelict sites in this waterfront. The same is true for Night Image and Sacred Places. Order of place—sequence and boundary in this case—are not sufficient in themselves to make a place special. In other words, patterns can make a disorderly place ordered, but the time and meaning patterns make an ordinary place distinguished.

The least useful categories of patterns are Season, Future, and Center. There is a great potential in seasonal patterns, if more research is done to refine the pattern for use in the planting plan. The future patterns are more concerned with development planning and administration than with design ideas. Center Patterns most times did not prove useful. This was perhaps because Boundary Patterns are more efficient and
powerful in landscape. In the landscape, center is often a space, which is formed by boundary.

The following is a list of the patterns with asterisks to indicate their levels of success. The most frequently used patterns, and most compelling patterns are labelled with three asterisks; then there are patterns with two and one asterisk; the patterns which are not marked are the least useful.

2.1.1*** Displaying Natural Rhythm in the Waterfront
2.1.2* Building Things That Are Afloat
2.1.3* Time Devices as Landscape Ornament

2.2.1* Fruit Trees in the Park
2.2.2** Seasonal Decoration

2.3.1*** Park with Festivals and Celebrations
2.3.2* Birth Date

2.4.1** Heritage Preservation
2.4.2*** Building in Traces of the Past

2.5.1* Night Park
2.5.2 Dancing in the Park

2.6.2 Making Changes Visible
2.6.3 Empty lots

2.7.1** Derelict Sites
2.7.2** Gardens Growing Wild
2.7.3** Adventure Playground
2.8.1*** Site of Sequences
2.8.2** Path and Resting Place

2.9.1** Timeless Materials
2.9.2** Timeless Way of Construction

2.10.1 Hierarchy of Centers
2.10.2* Something Roughly in the Middle

2.11.1** Waterfront Boundary
2.11.3** Thick Walls

2.12.1* Theme Park
2.12.2 Graves in the Park
2.12.3** Imaginative and Site Specific Sign
(27 Patterns In Total: Four Patterns with three asterisks; Eleven patterns with two asterisks; Seven patterns with one asterisk; and five patterns without any).

3.4.2 ON THE LEVEL THAT THE PATTERN WORKS WELL

A. On the level of urban context, the patterns do not work well. Perhaps, the lack of the stimulating patterns on the urban level causes weakness in the integrity and consistency of the project-site plan of the seawalk.

B. Middle Level, on the level of a park (for example, Dundarave Park), the patterns work very well. The four most successful patterns (patterns with four asterisks) deal with the design issues on this level.

C. It is hard to say whether or not the patterns work well on the detail design level, because the lack of detailed design in this project. As with the seasonal patterns, the two patterns on the materials and construction could be very strong, if developed further.
APPENDIX A  HISTORIC CURRENT PICTURES OF THE WATERFRONT

This part provides two collections of old and new pictures of the site. The first eleven photos give historic images, dating back as far as 1913; while the other twenty-one depict the existing status of the waterfront. There is a map before both collections, showing the locations from which the photographs were taken.

COLLECTION I  HISTORIC PHOTOGRAPHS OF THE WATERFRONT (Picture 1 to 11)
Picture 1, Looking up Lawson Avenue (Now 17th Street) from Hollyburn Wharf in Winter, circa 1913

Picture 2, P.G.E. Railway Trestle 19 to 20th Street, In Use 1914-1928. Circa 1915

Picture 3, The Beach West of 14th Street, Ferry No. 5 Approaching Pier, circa 1917
Picture 4, Swimming at the East Side of Ambleside Wharf, at the Foot of 14th Street, 1919

Picture 5, P.G.E. Railway Tracks, Bellevue Ave Between 22 to 23 th Street, circa 1925

Picture 6, Looking East from 23 rd Street, Along Shoreline, 1936
Picture 7, Aerial View of W. Vancouver Showing Ambleside, Hollyburn Mountain, Sentinel Hill, Capilano River, Delta and the Lions, 1934

Picture 8, Aerial View of Dundarave, Hollyburn, Ambleside, Park Royal British Properties, 1948
Picture 9, The Clachan Hotel, 1912 (Rambey, P81, 1986)

Picture 10, Dundarave Pier and Clachan Hotel, 1912 (Ramsey, P114, 1986)

Picture 11, Dundarave Regatta, circa 1920 (Ramsey, P135, 1986)
COLLECTION II EXISTING STATUS OF THE WATERFRONT (Picture 12-33)

This collection gives a present visual images of the waterfront. While trying to cover the whole site evenly, the collection especially focuses on the seawalk and Dundarave Park.
Picture 12, Beginning of the Capilano Walkway, Looking Towards North

Picture 13, End of the Seawalk and Before Entering the Capilano Walkway, Looking Towards North-East

Picture 14, Seawalk at the East End of Ambleside Park, Looking Towards West
Picture 15, Tree Grove at the East End of Ambleside Park, Looking Towards North

Picture 16, Seawalk in the Middle Part of Ambleside Park, Looking Towards East

Picture 17, Seawalk in the Middle Part of Ambleside Park, Looking Towards West
Picture 18, Hollyburn Shipyard, Looking Towards North-West

Picture 19, The 13th Street, Looking Towards North

Picture 20, A Preserved Historical Building in the Heritage Square at the Foot of the 14th Street, Looking Towards South
Picture 21, The 14th Street, Looking Towards North

Picture 22, B.C. Railway at the End of 16th Street, Looking Towards West

Picture 23, John Lawson Park with a Picnic Shelter in the Middle, Looking Towards West
Picture 24, Lawson Creek on the Beach, Looking Towards North

Picture 25, Beginning of the Centennial Seawalk at the Foot of 18th Street

Picture 26, The 19th Street, Looking Towards North from the Seawalk
Picture 27, Argyle Park, Looking up Towards the North

Picture 28, Seawalk and the High-rise Condominiums, Looking from the Foot of 24th Street Towards East

Picture 29, Seawalk and Dundarave Park, Looking from the Foot of 24th Street Towards West
Picture 30, The 24th Street, Looking from the Seawalk Towards North

Picture 31, Looking up the 25th Street from Dundarave Pier

Picture 32, Looking Down Dundarave Park at the Cross-Point of the 25th Street and Lower Bellevue Ave
Picture 33, A Panoramic View of Dundarave Park, Looking Towards East
APPENDIX B ANALYSIS DRAWINGS

Analysis Drawing No. 1
Site Plan for the Seawalk of West Vancouver
Site Context—Site Location and Site Zoning
Analysis Drawing No. 2
Site Plan for the Seawalk of West Vancouver
Site Analysis--Sequence
Analysis Drawing No. 3
Site Plan for the Seawalk of West Vancouver
Site Analysis—Rhythmical Recurrence
Analysis Drawing No. 4
Site Plan for the Seawalk of West Vancouver
Site Analysis--Special Events
Analysis Drawing No. 5
Site Plan for the Seawalk of West Vancouver
Site Analysis--Layers of History
Analysis Drawing No. 6
Site Plan for the Seawalk of West Vancouver
Site Analysis--Night Image
Analysis Drawing No. 7
Site Plan for the Seawalk of West Vancouver
Site Analysis—Boundary, Sacred Places, and Derelict Sites
Analysis Drawing No. 8
Site Plan for the Seawalk of West Vancouver
Site Analysis--Patterns From Alexander
Analysis Drawing No. 9
Design of Dundarave Park
Site Analysis—Existing Status of Dundarave Park
Analysis Drawing No. 10
Design of Dundarave Park
Site Analysis—Sequence
Analysis Drawing No. 11
Design of Dundarave Park
Site Analysis—Rhythmical Recurrence
Analysis Drawing No. 12
Design of Dundarave Park
Site Analysis—Special Events
Analysis Drawing No. 13
Design of Dundarave Park
Site Analysis—Layers of History
Analysis Drawing No. 14
Design of Dundarave Park
Site Analysis—Wheel-Chair Accessibility
Analysis Drawing No. 15
Design of Dundarave Park
Site Analysis—Boundary
Analysis Drawing No. 17
Design of Dundarave Park
Site Analysis--Seasonal Image
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