

TO: CITY MANAGER 1996 SEPTEMBER 4  
FROM: DIRECTOR PLANNING & BUILDING OUR FILE: 10.332  
SUBJECT: BURNABY LAKE SPORTS COMPLEX DEVELOPMENT CONCEPT  
PURPOSE: To propose a revision to the Burnaby Lake Sports Complex Development Plan Concept in the Central Valley area.

---

**RECOMMENDATIONS:**

1. **THAT** Council endorse in principle the revised Burnaby Lake Sports Complex Plan Concept as outlined in this report as a basis for review and comment by the Parks and Recreation Commission, the Environment and Waste Management Committee and the Traffic & Transportation Committee (Transportation & Transit Division).
2. **THAT** upon completion of the review of the proposed plan by the Parks Commission, the Environment and Waste Management and Transportation Committees, the lands identified in the Plan for sports field, conservation and ancillary purposes be rezoned to P3 (Parks and Public Use) for administration by the Parks and Recreation Commission.

**R E P O R T**

**1.0 BACKGROUND**

On 1976 November 8, Council adopted a development plan concept for the area between the Norland Avenue Industrial area, Still Creek, The Trans-Canada Highway and Burnaby Lake Regional Nature Park. This plan is known as the Burnaby Lake Sports Complex Development Plan Concept and is shown on the *attached* Figure 1.

The City has been assembling land in the area and is now the owner of the large majority of the land within the area covered by the existing plan. The size of the plan area is in the order of 60 acres, not including the developed private sites such as Eight Rinks, the Jamatkhana, the Scandinavian complex and a small church site (see *attached* Figure 2).

The objective of the existing plan is to provide for a comprehensive private and public sports and recreational centre in the City. The plan recognized a unique development opportunity associated with strategically central and highly accessible location. However, the implementation of the plan's objectives has met only limited success. A variety of proposals have been submitted over the years including the Pacific Sports Complex (major spectator/arena facility), a Sports B.C. training and office centre, private indoor racquet sports centres, private clubs similar to the Hollyburn Club, outdoor water parks, tennis clubs and an elite soccer centre. Some of these have not advanced due to reductions from senior government funding sources or other financing difficulties and other contributing factors such as soil conditions and land costs.

The time is considered opportune to revisit the plan and to focus on a new direction. The plan needs to address a number of prevailing environmental, economic and transportation issues that can provide a more contemporary plan related to the present and projected needs of the City.

## **2.0 INFLUENCING ISSUES RELATED TO PROPOSED REVISED PLAN**

### **2.1 Sports Field Supply**

The Parks and Recreation Department has been reviewing the need for additional sports fields in the City and has determined that the demand for sports fields far exceeds our present supply, especially in the age groups that require full-size field dimensions. To help address this shortfall, provision for additional sports fields in this area is being recommended.

Increasingly communities are turning to artificial turf surfaces given that an artificial turf field with lights can accommodate the equivalent of up to four turf fields. While these fields have a higher initial capital cost than turf fields, only about a quarter of the land is needed to accommodate the same amount of play. Annual maintenance costs are also much less for artificial turf. These factors make it a desirable option in Burnaby where high land costs and limitations of available park space exist.

The Parks and Recreation Department view this area as a suitable site for accommodating a mix of grass and artificial fields over the longer term that will provide a complementary addition to the existing fields in the surrounding area that can become a focus for regular and tournament play.

A critical determinant in locating artificial field locations in this area relates to soil stability. Only sites with relatively good ground conditions are considered suitable to avoid differential settlement problems that would be unacceptable for an artificial field surface.

## **2.2 Tournaments and Tourism Considerations**

The Burnaby Tourism Strategy was adopted by Council on 1993 March 8. As a component of that strategy, reference is made to sports and tournament resources in the City. It was noted that over the past years, Burnaby has become a provincial destination for sports tournaments with players and their families spending significant dollars that are added to the Burnaby economy.

Burnaby is in a position to expand on its reputation as a tournament destination. The development of the artificial fields referred to in section 2.1 above, combined with additional natural fields that complement the existing Burnaby Lake sports fields, will make this a sports field complex notable for its tournament abilities. Combined with this are the existing Burnaby Lake Rink and the adjacent multi-purpose rink facility under construction, which when combined with the Eight Rinks complex and the Burnaby Winter Club facility provide an unmatched opportunity for hockey tournament play at a large scale.

The C.G. Brown pool and the adjacent Burnaby Lake Regional Nature Park are adjunct facilities that add to the attractiveness of this area.

To help bolster this tournament/tourism concept, a motor hotel facility that could provide accommodation for participants and their families attending tournament events could be beneficial. This would be an additional marketing benefit for such a facility beyond the normal services provided to the general tourist and business communities.

## **2.3 Environmental Issues**

The proposed location for the sports complex lies south of Still Creek and west of Kensington Avenue, within the floodplain of the Brunette Watershed and connected to the conservation lands of Burnaby Lake Regional Nature Park. With the exception of knolls in the west and southeastern sectors of the site, the area is predominantly flat and poorly drained, reflecting the underlying peaty soils characteristic of the lower Still Creek and Burnaby Lake region. No natural watercourses are present within the study area although there are drainage channels that convey water to Still Creek. The groundwater table is typically close to the surface (0.1m - 0.5m) and flows in a slow and relatively undifferentiated path towards Still Creek and Burnaby Lake. It is anticipated that the development of sports field will not adversely impact the ground water. However, water quality and in particular the potential for increased sedimentation and nutrient runoff are issues that must be addressed.

Currently the area is dominated by a variety of wetland deciduous plant communities (e.g. Cottonwoods, Alder, Big Leaf Maple, Hardhack, reeds, grasses). A limited amount of upland forest habitat that includes a few Douglas Fir can be found on the western knoll adjacent to Ardingley. In general the area supports a variety of wildlife including birds (e.g. swainson's thrush, pileated woodpecker, rufous-sided towhee), mammals (e.g. coyotes, raccoons, squirrels), reptiles (e.g. Garter Snake), and invertebrates (e.g. insects). To date no red or blue listed species have been identified as utilizing the area.

Development will inevitably displace existing vegetation and therefore reduce wildlife habitat. Some of these losses can be mitigated by conserving large areas of land unsuitable for development and linking them to one another with a network of greenways. Possible areas unsuitable for development include a 200 meter buffer strip of wetland between the development area and Still Creek (underlying depth of peat and proximity to Still Creek) and the Sperling landfill (underlying organic and mineral soils). Further mitigation may be achieved through the application of the City's IPM principles to the public lands not supporting development.

The study area has, historically, been subject to significant site disturbance. Located near Kensington Avenue is the old Sperling landfill site that was active in the 1960's and therefore contains a mixture of unconsolidated organic material and mineral soils. While this area is not considered severely contaminated it has been recommended that it not be excavated and that development not unnecessarily disturb it, particularly with respect to active recreation facilities. To the north of Darnley Avenue is an area that has been used for the deposition and stockpiling of clean fill from construction sites, most recently from the Burnaby Lake Rink project. There is also a large GVSSD sewer line that runs northwest to southeast, through the middle of the site, from Norland Avenue to Kensington Avenue. No roads or formal trails have been built in the area although pedestrians and cyclists are creating informal paths.

The primary environmental characteristic of the study area that largely restricts development in the area is the significant presence of unstable peaty soils, covering approximately 80% of the study area and ranging in depths from 2 to 9 meters with a high water table during winter. Construction on these peaty soils is difficult and expensive as described in Golder Associates preliminary geotechnical analysis of 1996 August 12: "placement of fill, even of relatively limited thickness, over weak and highly compressible peats and underlying soft silts and clays will induce large and continuing settlements over a period of many years. Extensive, long term preload treatment can reduce but not eliminate future settlements; consequently some settlements must be anticipated and are expected to be significantly greater than the 25 to 50 mm tolerances understood to be required to permit construction of high quality, artificial turf playing fields."

As a result of the geotechnical investigation the only sites that possess soils stable enough for the development of artificial fields are the two knolls and their underlying glacial till. Unfortunately the knolls account for approximately 20% of the study area thereby limiting the location and size of the artificial field development (see **attached** Figure 3). Furthermore the western knoll, centred roughly on the Laurel Street/Ardingley Avenue intersection, is the only one with sufficient space and flexibility to accommodate play fields.

The deeper peaty soils can support the construction of natural turf fields as these fields are more tolerant of differential settlement. Nonetheless sufficient preloading and subsurface preparation is required to minimize settlement and keep maintenance costs and field playability respectable. The area north of Darnley where stockpiling of fill is currently occurring represents the most likely area for natural turf fields.

#### **2.4 Private Recreational Development Sites**

One of the major elements of the existing plan for the area is to provide an opportunity for private or quasi-public recreational uses to locate in close proximity to the civic sports uses to allow a concentration of those types of facilities which are of common benefit and interest to all participants, spectators and visitors to the Sports Complex and the nearby Burnaby Lake Regional Nature Park.

It is felt that the opportunity for additional private participation in the area should be continued, albeit at a lower scale. The location of these private recreational uses should be located in a way that strengthens a core presence and that complements the more active uses that would be associated with a grouping of high use artificial fields.

Uses such as private tennis/winter clubs, a training centre for gymnastics or sports medicine centre could be accommodated on sites presently owned by the City that bear the proper relationship with existing uses and sports fields proposed for the area. Careful attention to architectural unity and scale will be required to help establish a sense of core community as will the provision of open space and more formal connections between buildings and other uses.

A recent amendment to the Zoning Bylaw provides for indoor recreational uses requiring larger areas and higher ceiling heights to locate in industrial areas subject to a rezoning to a 'L' sub-category of each of the industrial districts. As part of the City's industrial lands strategy, staff will be reviewing the possibility and merits of encouraging some such uses on the existing M2 industrial lands on Norland Avenue which are adjacent to the sports complex area.

## 2.5 East-West Major Collector

The Burnaby Transportation Plan provides for a major collector roadway linking Kensington Avenue with Norland Avenue to provide a continuous route through to Still Creek Avenue and ultimately Boundary Road to serve the Central Valley area. This roadway has previously been referred to as the “Darnley Connector” or the “Norland/Kensington Connector”. This route was intended to address access and egress difficulties associated with the use of the Norland Avenue/Sprott Street intersection to and from the Central Valley industrial area. It was also intended to be used as a truck route.

The location of such a facility has been the subject of previous discussion and review. Wherever possible the roadway should be positioned to ensure that the environmental impacts of the roadway are minimized and that the roadway can be complementary to the land use configuration and transportation requirements for the area.

## 3.0 PROPOSED CONCEPT PLAN

The proposed concept plan for the area (see *attached* Figure 4) deals with a number of influencing issues that are outlined in Section 2 of this report. In some instances, these issues reflect competing interests and highlight the need to incorporate a balancing of these needs and desires in the recommended concept plan. Staff believe that the proposed plan provides this balance.

The *attached* Figure 5 provides a more detailed layout incorporating the elements of the proposed Concept Plan for the Central Sports Complex Area. This design has been prepared to provide more specific information in relation to the uses proposed to assist those reviewing the plan in the concept approval process and its implementation.

The plan incorporates six major elements as described in the following:

### 3.1 Private Development Area

This area is situated on the most southerly portion of the study area and includes three component sites:

- ▶ the existing 8 Rinks complex
- ▶ two private recreational development sites strategically located adjacent to Kensington Avenue between Sprott Street and the proposed Connector. These two sites encompassing an area of about 9.6 acres are City owned and intended to be sold or leased for private recreational purposes.

- ▶ a 6.2 acre private development site bounded by Norland Avenue, Ardingley Avenue and Laurel Street primarily intended for family oriented motor hotel purposes that would in part assist the attractiveness of the sports complex as a tournament/tourist facility. This site is also owned by the City and would need to be rezoned (using Comprehensive Development zoning) prior to its marketing either on a long term lease or sale basis. Attention will need to be given that the site planning and design of this facility closely integrates it with the adjacent sport complex uses.

### **3.2 Artificial Field Complex**

The concept plan provides for the eventual establishment of three lighted fields with artificial surfaces, two of which have dimensions intended for soccer and field hockey play and one capable of accommodating Canadian football. The requisite parking, viewing areas and associated field house facilities have also been provided for in the conceptual plan. A central plaza facility is proposed as a focal point for this high activity area. This complex has an area of about 7.6 acres. Greenway corridors are proposed on the southern and eastern edges of the artificial field area, separating this zone from the adjacent private development areas. Pedestrian access to and from the rink and pool complex on the east side of Kensington Avenue would be via a signalized pedestrian at-grade crossing at the new Kensington-Laurel intersection.

### **3.3 Conservation Area**

The conservation area occupies the northern and northeastern portions of the study area and is intended to protect a range of plant communities that provide important habitat for birds and mammals and that due to local environmental sensitivity, limitations of soils and or previous land uses are not developable. Along Still Creek are wetland areas dominated by shrubs and grasses and within the Sperling Landfill site are emerging stands of alder and cottonwood. Collectively these plant communities provide a complex canopy for raptors, passerine birds and small mammals that will support nesting sites while providing areas rich with important invertebrate food sources. In addition the continuous nature of the conservation area and its associated greenways provide strong linkage to the conservation areas within Burnaby Lake Regional Nature Park.

The conservation area includes:

- ▶ a minimum of 200 meter buffer area between Still Creek and the proposed field development north of Darnley
- ▶ the former Sperling landfill site west of Kensington.

- ▶ a 70 meter wide greenway providing a wide uninterrupted vegetated connection between the Sperling landfill site and the Still Creek conservation area..
- ▶ the possibility for an engineered wetland within the Still Creek conservation area to serve as a biological filtration system for the control of sediment and nutrients that run-off the developed areas.
- ▶ Greenway connections south of the proposed connector.

### **3.4 Kensington-Norland Connector**

The plan has sought to incorporate this connector in a way that best relates to the proposed active and more passive uses in the area, as well as the larger transportation requirements for the Central Valley portion of the City as identified in the Burnaby Transportation Plan. It is staff's view that the alignment proposed is superior to previously proposed alignments. From the Norland Avenue end, this road follows the Darnley Street right-of-way from to Ardingley where it then follows a path adjacent to the GVSDD sewer easement at an northerly offset of about 11 metres until it assumes the existing Laurel Avenue right-of-way up to Kensington Avenue. The major collector route has a parallel separated sidewalk on its northern edge for the entire length from Kensington to Norland Avenue. The roadway is proposed to be built to a reduced 40 foot standard to lessen environmental impact with provision for one moving lane in each direction including an extra two foot width for bicycles and on-street parking. This route is intended to function as a truck route. The proposed connection of Ardingley Avenue to the connector is to provide for access to and from the proposed uses south of the connector and assumes the prior upgrading of Sprott Street from Kensington to the Freeway and the addition of a free flowing right turn lane on Kensington north of Sprott Street.

The connector has been incorporated into the Plan as a future development element. The first phase of road improvement could see the improvement of turning movements at the Norland/Sprott intersection through signalization.

### **3.5 Playing Fields - Natural Grass Surfaces**

Three sports fields with natural grass surfaces are proposed for the area immediately north of the Norland-Kensington Connector and involve an area of about 9.2 acres. All three are dimensioned for soccer play, while the westerly two are also configured for adult baseball play. Parking and the associated field house/change room facilities are provided in proximity to the fields, north of the connector road. Provision for pedestrian crossing is made at the intersection of Ardingley and the new Norland-Kensington Connector.

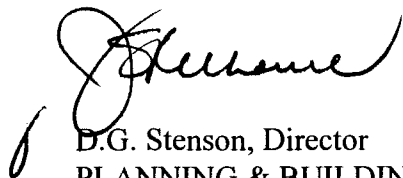


**3.6 Laurel/Ardingley Industrial Enclave**

This existing industrial area is presently zoned M2 (General Industrial District) and is proposed to keep its industrial designation. However as Council is aware, the City is embarking on an updated Industrial Lands Strategy which will be addressing supply and demand issues as well as new industrial development guidelines in keeping with projected trends. As part of this upcoming review, these lands will be reviewed in relationship to the adjacent uses proposed and the most appropriate industrial use guidelines for their development/redevelopment.

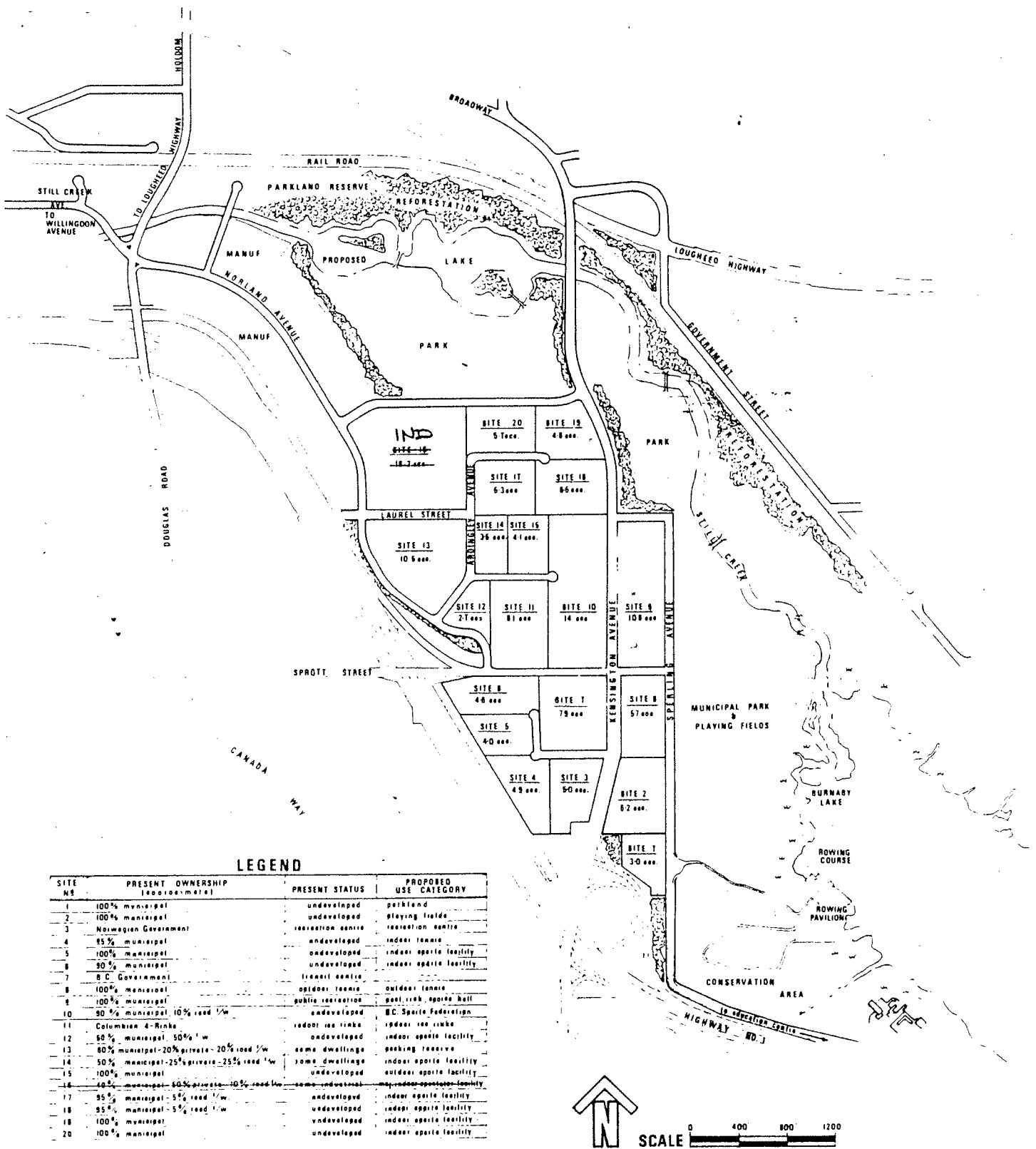
**4.0 PLAN APPROVAL**

Given the past issues and interests associated with this area, it is recommended that Council endorse the proposed Concept Plan in principle as a basis for a review of the Plan by the Parks and Recreation Commission, the Environment and Waste Management Committee and the Traffic & Transportation Committee (Transportation & Transit Division). Upon completion of these reviews the lands in the final plan designated for sports fields, conservation and ancillary uses can be rezoned to P3 (Parks and Public Use) for administration by the Parks and Recreation Commission.

  
D.G. Stenson, Director  
PLANNING & BUILDING

  
JSB:KC/db  
Attachment

- cc: Deputy City Manager - Corporate Labour Relations
- Director Engineering
- Director Finance
- Director Recreation & Cultural Services



**LEGEND**

SITE No	PRESENT OWNERSHIP (Approximate)	PRESENT STATUS	PROPOSED USE CATEGORY
1	100% municipal	undeveloped	parkland
2	100% municipal	undeveloped	playing fields
3	Norwegian Government	recreation centre	recreation centre
4	95% municipal	undeveloped	indoor tennis
5	100% municipal	undeveloped	indoor sports facility
6	90% municipal	undeveloped	indoor sports facility
7	B.C. Government	transfer centre	
8	100% municipal	outdoor tennis	outdoor tennis
9	100% municipal	public recreation	pool, club, sports hall
10	90% municipal, 10% road 'w'	undeveloped	B.C. Sports Federation
11	Columbian 4-Rinks	indoor ice rinks	indoor ice rinks
12	60% municipal, 50% 'w'	undeveloped	indoor sports facility
13	80% municipal-20% private-20% road 'w'	some dwellings	parking reserve
14	50% municipal-25% private-25% road 'w'	some dwellings	indoor sports facility
15	100% municipal	undeveloped	outdoor sports facility
16	40% municipal-60% private-10% road 'w'	some industrial	indoor sports facility
17	95% municipal-5% road 'w'	undeveloped	indoor sports facility
18	95% municipal-5% road 'w'	undeveloped	indoor sports facility
19	100% municipal	undeveloped	indoor sports facility
20	100% municipal	undeveloped	indoor sports facility

**Figure 1 - 1976 Development Plan Concept:  
Burnaby Lake Sports Complex  
not to scale**

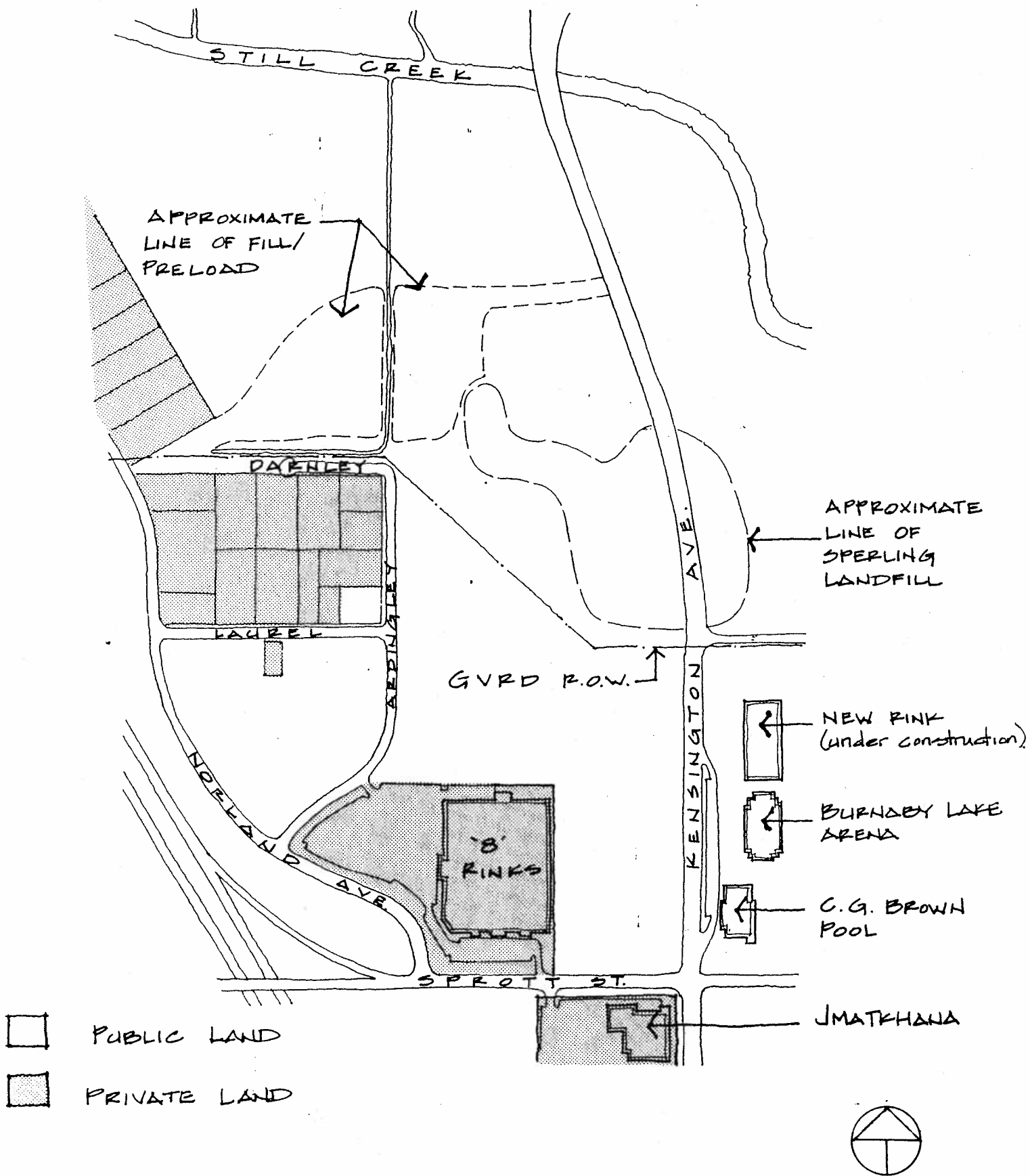


Figure 2 - Existing Conditions/Ownership:  
 Central Valley Sports Complex  
 not to scale

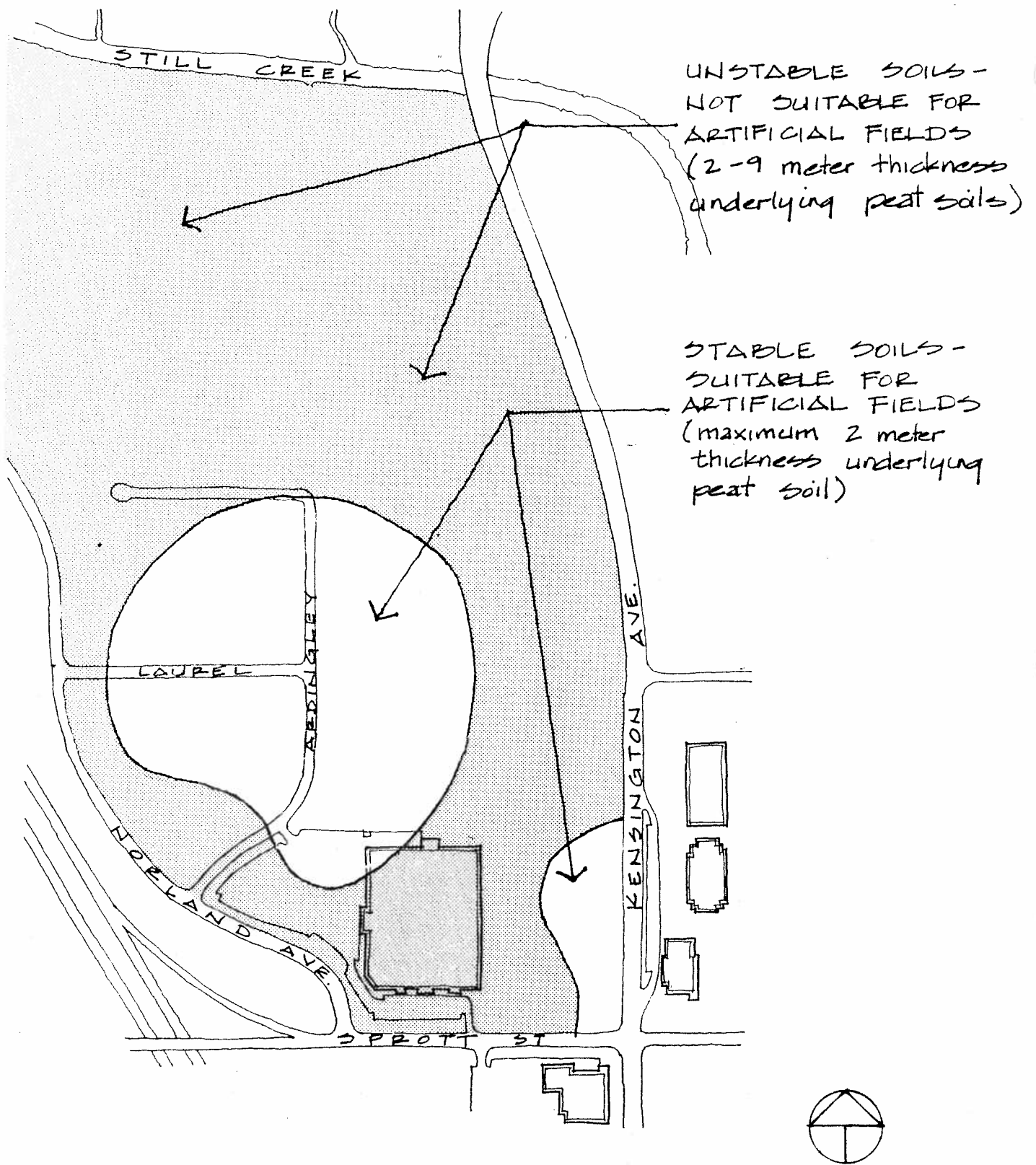


Figure 3 - Soil Capability:  
Central Valley Sports Complex

(from Golder Associates 1996)

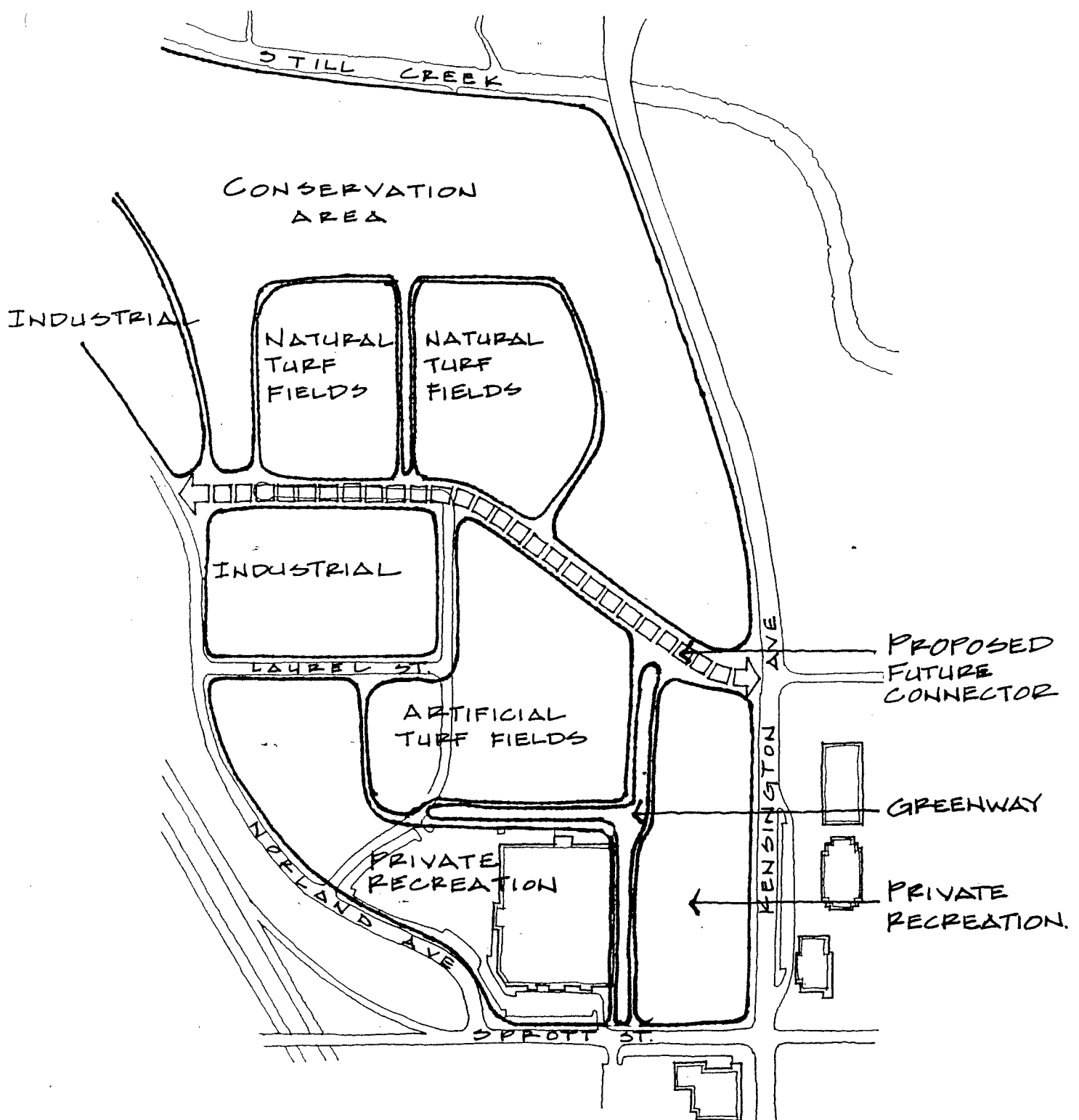
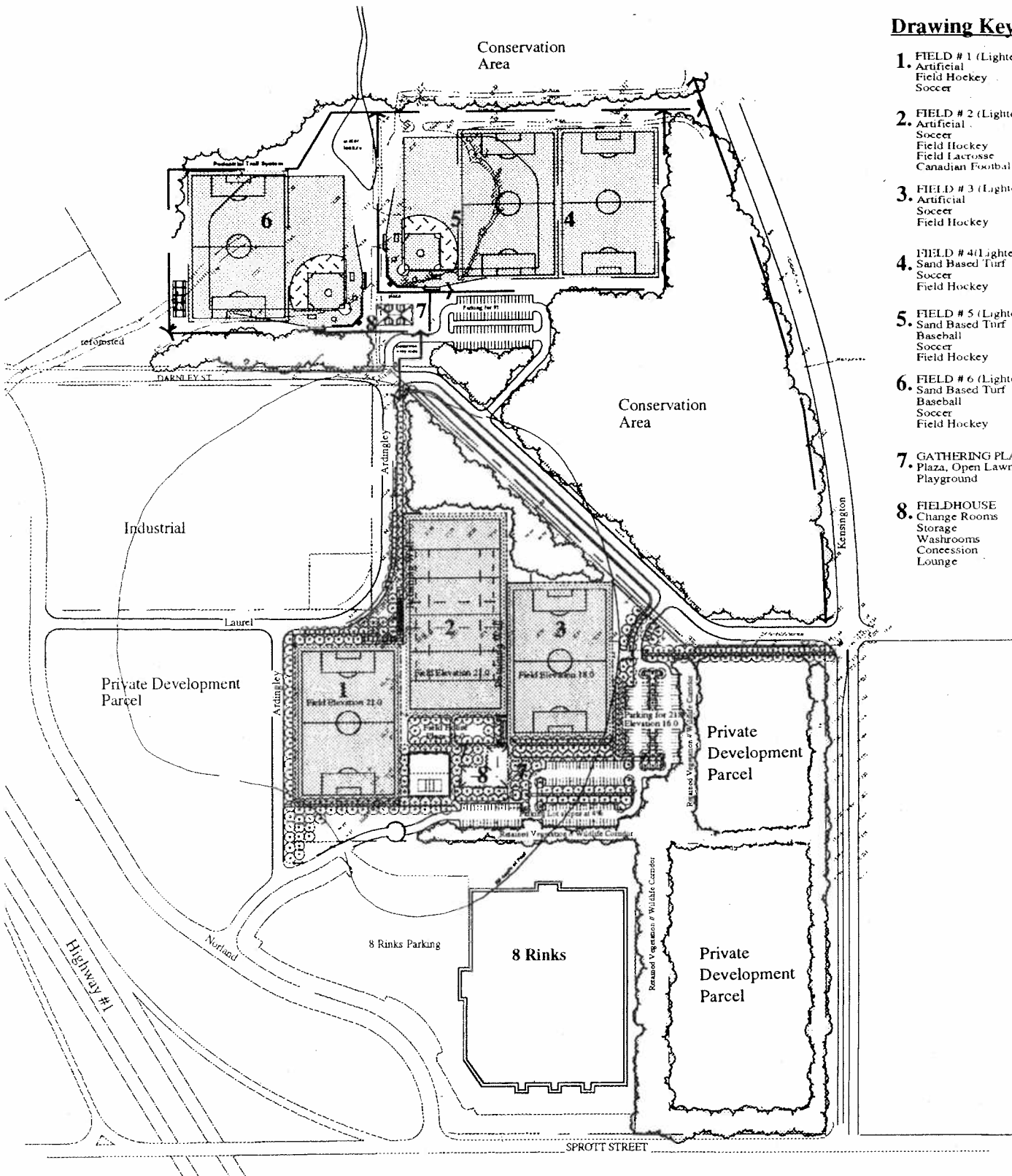


Figure 4 - 1996 Proposed Concept Plan:  
 Central Valley Sports Complex  
 not to scale

**Drawing Key**

1. FIELD # 1 (Lighted)  
Artificial  
Field Hockey  
Soccer
2. FIELD # 2 (Lighted)  
Artificial  
Soccer  
Field Hockey  
Field Lacrosse  
Canadian Football
3. FIELD # 3 (Lighted)  
Artificial  
Soccer  
Field Hockey
4. FIELD # 4 (Lighted)  
Sand Based Turf  
Soccer  
Field Hockey
5. FIELD # 5 (Lighted)  
Sand Based Turf  
Baseball  
Soccer  
Field Hockey
6. FIELD # 6 (Lighted)  
Sand Based Turf  
Baseball  
Soccer  
Field Hockey
7. GATHERING PLACE  
Plaza, Open Lawn  
Playground
8. FIELDHOUSE  
Change Rooms  
Storage  
Washrooms  
Concession  
Lounge



**Figure 5 - 1996 Draft Development Plan  
Central Valley Sports Complex**

DURANTE •  
KREUK • LTD

Scale 1:500  
11/18/96  
1/18/97  
1/18/97  
1/18/97



City of  
**Burnaby**  
Parks and Recreation  
Design Section