

May 2, 2008

EBA Project: K23101193
ISSUED FOR REVIEW

The Focus Corporation Ltd.
P.O. Box 840
Suite 201, 611 - 10th Avenue North
Golden, BC V0A 1H0

Attention: Ms. Elise Pare, P.Eng.
Project Manager

Dear Ms. Pare:

**Subject: Preliminary Geotechnical/Geohazard Assessment
for Kicking Horse Mountain Resort Expansion, Golden, BC**

1.0 INTRODUCTION

Kicking Horse Mountain Resort Ltd. (KHMR) has retained EBA Engineering Consultants Ltd. (EBA) to provide a preliminary geotechnical/geohazard assessment for the proposed KHMR expansion. This preliminary assessment is intended to review the presently available information, to identify potential geohazards and to develop recommendations for further studies.

2.0 BACKGROUND INFORMATION

EBA assembled and reviewed the following available information:

- Geotechnical Assessment Report for Whispering Pines Townhouses, Kicking Horse Mountain Resort, Golden, BC. Prepared by R.T. Banting Engineering Ltd. November 2001.
- Geotechnical Assessment for Future Development Zones – 2001. Prepared by R.T. Banting Engineering Ltd. December 2001.
- Geotechnical Assessment Report for Proposed Selkirk Resort Homes. Prepared by R.T. Banting Engineering Ltd. December 2003.
- Snow Avalanche Risk Zone Mapping for the Southern (Terminator) Portion of the Development Area. Prepared by Chris Stethem & Associates Ltd. November 24, 2004.

- Terrain Assessment for the proposed Cabins in the Woods Subdivision at Kicking Horse Mountain Resort near Golden, BC. Prepared by Forsite Consultants Ltd. March 18, 2005.
- Geotechnical Report for the Proposed Cabin in the Woods and Cedar Creek Estates Subdivision at Kicking Horse Mountain Resort near Golden, BC. Prepared by Forsite Consultants Ltd. May 8, 2005.
- Geotechnical Assessment Report for Phase 2 of Selkirk Resort Homes at Kicking Horse Mountain Resort, Golden, BC. Prepared by Forsite Consultants Ltd. September 14, 2005.
- Culvert Placement (under Kicking Horse Trail). A technical memo prepared by EBA. June 21, 2007.
- Cedar Creek Roadway Drainage and Stability. A technical memo prepared by EBA. June 25, 2007.
- Historical aerial photographs.

2.1 REGIONAL GEOLOGY

A geologic map obtained from the on-line BC Geologic Survey suggests that the bedrock in the Resort boundary consists of quartzite, limestone, marble and slate.

2.2 AERIAL PHOTOGRAPHS

EBA reviewed a series of aerial photographs of between Years 1945 and 2001. Of particular relevance were:

- 15BCB01035 Nos 8 – 11 (2001);
- 15BCB01032 No's 176 – 178 (2001);
- 15BC86087 No's 011 – 015 and 084 – 086 (1986);
- A12298 – 149 to 152 (1949); and
- A9579 - 27 to 31 (1945).

Landslides of a large scale within the Resort area are not apparent on the aerial photographs, however, some areas of probably geotechnical risk (ie. steep slopes, soft soils, poor drainage) were noted.

2.3 SUBSURFACE CONDITIONS

Based on the existing reports, the subsoil in the resort area is summarized in Table 1 below.

TABLE 1: SUMMARY OF SUBSOIL		
Project Site	Generalized Subsoil	Report Sources
Cedar Creek Roadway	Weathered compact (sandy) till over dense basal till; Sloughing and seepage noted	EBA File K13101094
Selkirk Resort Homes Phase 2	Silty sand till over silty till or fractured bedrock Groundwater seepage noted	Forsite Consultants File #417-6
Woods and Cedar Creek Estates Subdivision	Dense till of silt, sand and cobble mixture over basal till Groundwater seepage noted	Forsite Consultants File #417-1
Woods Subdivision	Silt and sand glacial till deposits over basal till Groundwater table at 0.5 to 0.7 m below ground surface	Forsite Consultants
Selkirk Resort Homes	Compact sandy silt over stiff to hard silt till Groundwater table at 1.3 m below ground surface	R.T. Banting Engineering File: selkirkgeofinalreport
Future Development Zones - 2001	Loose silty sand and gravel over very stiff silt till over shale bedrock Groundwater seepage noted	R.T. Banting Engineering File: 6877 DevGAtestpitsmi1
Whispering Pines Townhouses	Sandy silt overlaying very stiff clayey silt till or shale bedrock Groundwater seepage noted	R.T. Banting Engineering File: 6877 WHISPINES GA

3.0 PRELIMINARY GEOTECHNICAL ASSESSMENT AND RECOMMENDATIONS

Based on the information available at the time of this study, this section summarizes the results of the preliminary geotechnical assessment for the proposed Resort expansion, and provides preliminary geotechnical recommendations.

We have summarized the findings of the airphoto interpretation on the attached Figure 1. The resort area has been classified according to the following”

Class A – Areas of low geotechnical and geohazard risk. Development in these areas can be expected to include typical site improvement and drainage control.

Class B – Areas of moderate geotechnical and geohazard risk. Given the lack of obvious slope instability within the boundaries of the development, these zones are typically wet, boggy areas, where both site work and foundation preparation would involve significant design and construction works. These zones also include potential set-back or set-forward zones from areas with steeper slopes (i.e. north-east corner of the proposed resort boundary).

Class C – Areas of significant geotechnical risk (probability of occurrence greater than 10% in 50 years).

A site reconnaissance will be required to confirm and/or refine the boundaries of all zones and to develop appropriate mitigation recommendations.

A more detailed description of the various geohazards and geotechnical aspects of the proposed resort development are presented below.

3.1 SLOPE STABILITY

Ground slopes were identified in several previous terrain and geotechnical assessments. Slopes are typically in the range of 5 to 20%, and local gully slopes are up to 50%. Water seepage and sloughing conditions were observed during the previous geotechnical assessments and the construction monitoring.

Based on the existing subsurface information, EBA believes that groundwater is typically perched in the near surface sandy till, and that the underlying basal silty till is generally impervious. Although the basal till is generally dense, the till may become weakened and softened once it is exposed to water. Given the fact that shallow sloughing and surficial slope failures were noted during the previous construction, slope stabilization measures are expected to likely consist of sub-drainage system installation, buttressing with free-draining rock and erosion control. This should be best determined during the future detailed geotechnical investigation stage for the proposed expansion, and geotechnical recommendations for slope stabilization can be provided on a site specific basis.

3.2 SNOW AVALANCHE RISK ZONES

EBA reviewed the report titled “Snow Avalanche Risk Zone Mapping for the Southern (Terminator) Portion of the Development Area” prepared by Chris Stethem & Associates Ltd. dated Nov. 2004. In the studied portion of the Resort area this report identifies three avalanche risk zones: the White Zone (a low risk zone permitted for permanently occupied structures); the Blue Zone (a medium risk zone permitted for unoccupied structures); and the Red Zone (a high risk zone not permitted for new buildings). EBA understands that a few other snow avalanche risk assessments were previously performed across the Resort.

EBA recommends that all of the previous avalanche risk assessment reports should be provided to EBA for review. If the previous avalanche risk assessments do not cover the proposed expansion area, a new avalanche risk assessment should be performed by qualified avalanche risk assessment personnel.

3.3 SWAMP AREAS

Several swamps were previously identified within the resort boundary. The water in the swamps recharges the surrounding areas, and causes groundwater seepage into the nearby development areas. EBA suggests that further hydrogeological and geotechnical studies be conducted to delineate the groundwater regime area and flow directions in the swamp influenced areas where proposed developments are considered. A setback distance between the swamp and the development area can therefore be determined.

3.4 FOUNDATIONS

Since very stiff to hard (silty) basal till and bedrock exist at shallower depths in the Resort boundary, a conventional footing foundation system is likely considered to be suitable for the proposed buildings. However, localized wet soft soils may be encountered in the proposed building areas, and subgrade improvement may be required. This will be identified during the future detailed geotechnical investigation phase, and addressed in the future site specified geotechnical report.

3.5 EARTHWORKS

Earthwork for new developments consists of site grading, excavation, site servicing, and trench backfilling. Typical geotechnical issues are related to excavation side slopes, groundwater seepage and dewatering, specifications of backfill materials, and suitability of onsite excavated materials for reuse.

Based on the information obtained during the previous geotechnical assessment and construction, groundwater seepage control should be expected in numerous areas. Seepage control may entail subsurface drains and control of surface water infiltration. Onsite soils might be suitable for reuse. However, this should be best determined during the future detailed geotechnical investigation phase.

3.6 FUTURE GEOTECHNICAL STUDIES

EBA proposes future geotechnical studies for the proposed resort expansion. The geotechnical studies may consist of:

1. An on-site geohazard assessment to refine/confirm the assumptions and recommendations contained in this report;
2. A field test pit program;
3. A laboratory program; and
4. Preparation of a geotechnical report

EBA should conduct a preliminary geohazard assessment to confirm the suitability of construction of the proposed expansion. EBA will undertake a site reconnaissance to identify evidence of landslides, swamps and groundwater seepage across the site.

EBA proposes to excavate testpits to depths up to 4.5 m below existing site grades or refusal on bedrock whichever is shallower. The number and locations of the testpits will be further determined prior to the detailed geotechnical investigation. The purpose of the investigation will be to define subsurface conditions on proposed expansion site.

A laboratory testing program will be undertaken for the soil samples taken from the test pits in order to determine engineering index. The laboratory testing may include moisture contents, Atterberg Limits, gradation, California bearing ratios (CBR) and standard Proctors. EBA will refine the laboratory testing program once the actual soil samples are retrieved from the test pits.

Following the field and laboratory work, we will prepare a geotechnical report. The report will summarize the results of the investigation and present geotechnical recommendations for site development. The geotechnical report would address, but is not limited to:

- Site soil and groundwater characteristics.
- Site suitability for intended development.
- Recommendations for foundation design.
- Recommendations for pavement road design.
- Preliminary slope stability assessment.
- Set back requirements for the buildings.

4.0 CLOSURE

We trust the information provided in this report meets your needs. This report has been prepared for the exclusive use of Kicking Horse Mountain Resort Ltd. for the specific application to the subject site. This report is to be read in conjunction with the attached General Conditions which form a portion of this report. Any uses of this report by a third party or any reliance on or decisions made, based on this report, are the responsibilities of those third parties. EBA accepts no responsibility for damages, if any, suffered by any third party a result of decisions made or actions taken based on this report. Please contact the undersigned if you require any clarification or further information.

ISSUED FOR REVIEW

This Issued for Review report is provided solely for the purposes of client review and presents our findings and recommendations to date. Our findings and recommendations are related only through an "Issued for Use" report, which will be issued subsequent to this review. One should not rely on the interim recommendations made herein. Once our report is issued for use, the "Issued for Review" report should be either returned to EBA or destroyed.

Respectfully submitted,
EBA Engineering Consultants Ltd.

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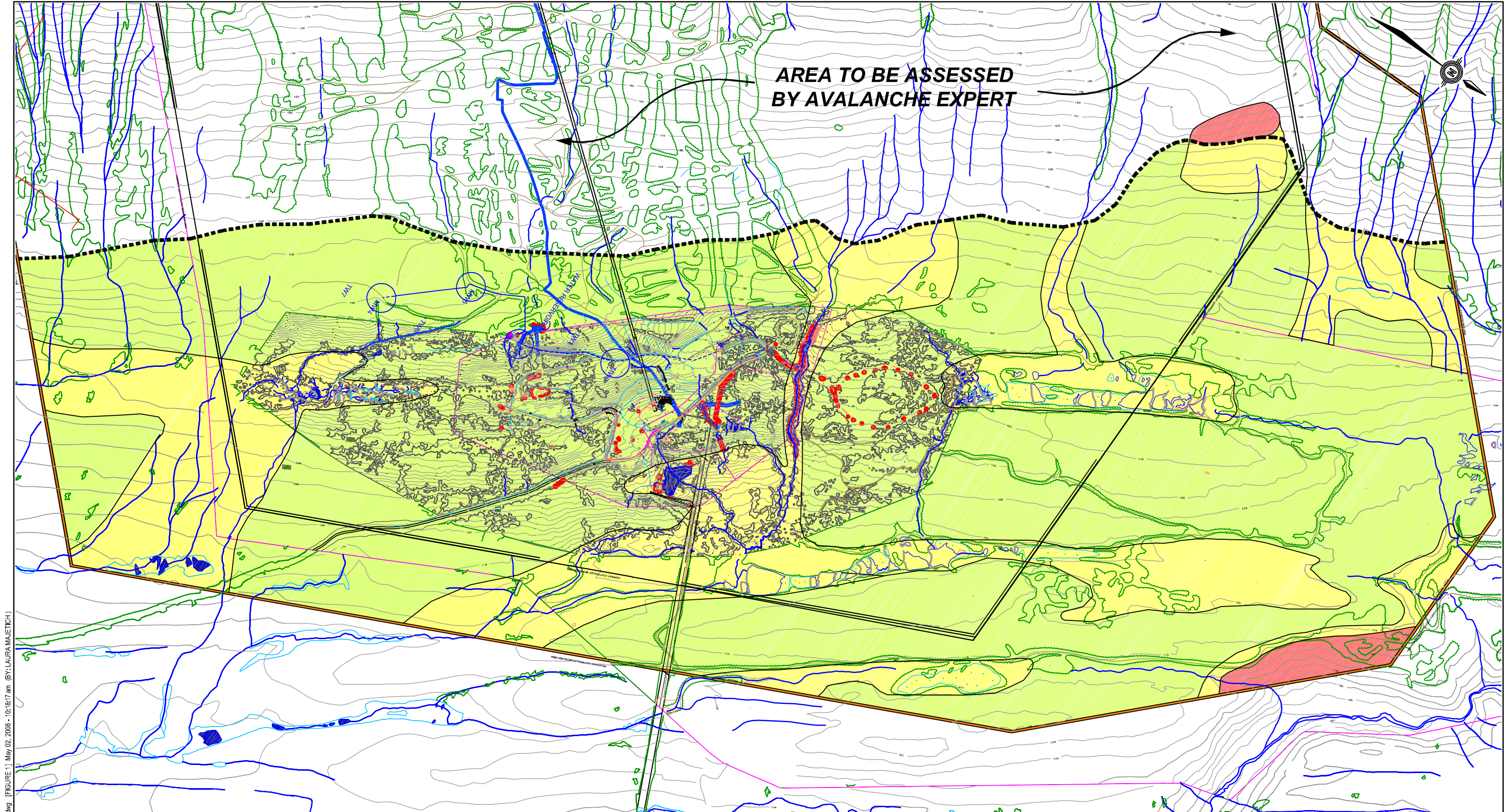
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/bi/tmkp

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Enclosures: Figure 1 Preliminary Geohazard Assessment
Geotechnical Report – General Conditions

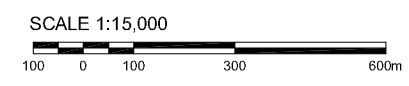


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LEGEND		
<div></div>	CLASS C -	AREAS OF SIGNIFICANT GEOTECHNICAL OR GEOHAZARD RISK.
<div></div>	CLASS B -	AREAS OF MODERATE GEOTECHNICAL OR GEOHAZARD RISK. SITE SPECIFIC ASSESSMENT & INVESTIGATION REQUIRED TO DETERMINE APPROPRIATE MITIGATION OPTIONS AND/OR RECOMMENDATIONS.
<div></div>	CLASS A -	AREAS OF LOW GEOTECHNICAL AND GEOHAZARD RISK. FURTHER SITE INVESTIGATION REQUIRED TO CONFIRM PRELIMINARY ASSESSMENT.

- NOTES**
- 1) PRELIMINARY HAZARD CLASSES BASED SOLELY ON AIRPHOTO INTERPRETATION & REVIEW OF EXISTING REPORTS
 - 2) FIELD REVIEW REQUIRED TP REFINE POLYGON BOUNDARIES & CONFIRM OFFICE/PRELIMINARY ASSESSMENT

ISSUED FOR REVIEW



CLIENT		PRELIMINARY GEOTECH & GROUNDWATER ASSESS			
Kicking Horse Mountain Resort		PRELIMINARY GEOHAZARD ASSESSMENT			
EBA Engineering Consultants Ltd.	PROJECT NO. K23101193	DWN LM	CKD SM	REV 0	FIGURE 1
	OFFICE EBA-KELOWNA	DATE MAY 1, 2008			

GEOTECHNICAL REPORT – GENERAL CONDITIONS

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA's client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

3.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

4.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

5.0 SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgmental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

6.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

7.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

8.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

9.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

10.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

11.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

12.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the client's expense upon written request, otherwise samples will be discarded.

13.0 STANDARD OF CARE

Services performed by EBA for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions in the jurisdiction in which the services are provided. Engineering judgement has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

14.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

15.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EBA shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EBA shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA's instruments of professional service will be used only and exactly as submitted by EBA.

The Client recognizes and agrees that electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.