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Strategic Initiatives| City of Coquitlam
640 Poirier Street
Coquitlam, BC
V3J 6B1

June 23rd, 2020
File: 17900

Attention: **Aiman Arar**

**Geotechnical Investigation Report: Town Centre Fire Hall Training Structure Replacement
1300 Pinetree Way, Coquitlam**

1.0 INTRODUCTION

We understand the City of Coquitlam is replacing the Town Centre Fire Hall Training Structure. The works would include removal and replacement of existing pavement and curbs, trenching, an extension of services to the proposed training structure, concrete pad foundation for the placement of crane along the north side of the side. We understand that the training structure will consist of stacked steel shipping containers welded together and anchored to a thickened reinforced slab on grade. The height of the structure is anticipated to be approximately 9.7 meters.

GeoPacific carried out an investigation of the soil conditions within the area of the proposed improvements. This report presents the results of our field investigation and makes geotechnical recommendations for the design and construction of proposed development.

This report has been prepared exclusively for The City of Coquitlam and the use of others within their design and construction team but remains the property of GeoPacific.

2.0 SITE DESCRIPTION

The site is located at the southeast corner of the intersection of Pinetree Way and Pinewood Avenue. The site is bounded by a forested area to the west, a residential subdivision to the north, Pinetree Way to the east, and Pinewood Avenue to the south. The site is currently improved with the Coquitlam Town Centre Firehall, a Training Structure, and above-grade parking around the structures and a helicopter pad at the west side of the site. Based on topographic information provided, the site has a slope in the southwest corner, with an elevation change of 7 m in total. The location of the site is shown on Drawing No. 17900-01.

3.0 FIELD INVESTIGATION

GeoPacific conducted a geotechnical investigation on-site on May 26th, 2020 A utility locate was carried out to help ensure the test holes were clear of existing services and utilities. The site investigation consisted of a review of geological maps, visual observations, augered test holes, and sample collection.

Five (5) test holes were advanced to depths of up to 7.6 m as required to identify the soil conditions in the area of the proposed improvements. Five (5) Dynamic Cone Penetration Test (DCPT) soundings were performed to confirm the relative density and consistency of subsurface strata. The soil conditions were logged by a member of our engineering staff and backfilled in accordance with provincial requirements upon completion of logging and sample collection. The test hole locations are shown on our Drawing No. 17900-01 in Appendix A.

One single point soaked California Bearing Ratio (CBR) was performed on samples collected from TH20-04, between depths 0.5 m and 2 m to determine suitability for the pavement design.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

The geology in the region under investigation according to the Geologic Survey of Canada Map 1484A consist of Capilano Sediments comprised of Coquitlam River deltaic and channel deposits. The Capilano Sediments are Pleistocene age deposits comprised of medium to coarse sands, gravel, and cobbles overlying variable thickness of fine-grained sediments including silts and clays. The Capilano Sediments overly Vashon Drift, a well-graded till comprised of silty sand with gravel. Previous experience in the area has shown the contact between the Capilano Sediments and the Vashon Drift is between 35 and 45 meters below the ground surface in the area.

A general description of the soils encountered at our test hole locations is given below:

TOPSOIL or PAVEMENT STRUCTURE

Topsoil or asphalt was identified in most of our test holes. The topsoil extended to depths ranging from 0.2 to 0.5 m below existing site grades.

SILTY SAND/SAND/GRAVELLY SAND

The topsoil and/or pavement structure is underlain by silty sand or sand to sand and gravelly sand with trace silt. Based on our observation the stratum varies in relative density from compact to dense. This layer was noted to extend to the final depth of investigation.

TH20-04 is located close to the top of the slope at the southern portion of the site and the soils there are likely grading fills. The soils at TH20-04 are noted to contain wood fibers and to be loose. The detailed test hole logs are included in Appendix B.

4.2 Groundwater Conditions

Groundwater was not identified during our investigation.

5.0 DISCUSSION

We understand that the work associated with the project will be the removal of the existing training structure and the construction of a new training structure and all associated foundations, civil and infrastructure works including trenching, pavement, concrete slab, curb replacement/configuration and extending services from the exiting Fire Hall building to the location of the proposed training structure. A concrete foundation pad for a crane along the north side of the facility will also be installed.

The parking area near the northwest corner of the fire hall building will be reconfigured to create additional parking stalls with power for charging vehicles

6.0 BUILDING RECOMMENDATIONS

The following recommendations are provided for the onsite construction of the proposed developments.

6.1 Site Preparation

We expect that the depths of stripping at this site will be dictated by the condition of the soils presented on-site. For slab on grade construction, stripping of up to 0.5 m should be anticipated.

It is very important that the stripped subgrade of silty soils should be protected with lean mix concrete (unconfined compressive strength of 5.0 MPa) immediately after final trimming and geotechnical approval to preserve its bearing qualities and that it remain dry and free of ponded water prior to pouring concrete for foundations. Any soften, organic, loose or disturbed subgrade should be removed and replaced with the lean mix concrete or clear crushed gravel beneath the foundations

6.2 Grade Supported Concrete Slabs

In order to provide suitable support for any concrete slabs-on-grade, we recommend that any fill placed under the slab should be granular with not more than 5% by weight passing the 75 μm sieve size (#200 sieve). In addition, this granular fill must be compacted to a minimum of 98 % of its ASTM D698 Standard Proctor Maximum Dry Density while at a moisture content that is within 2 % of its optimum for compaction.

The floor slab should be directly underlain by a polyethylene moisture barrier and a minimum of 100 mm 19 mm clear crushed gravel fill to inhibit upward migration of moisture beneath the slab. The layer of clear crush gravel should be hydraulically connected to the building perimeter drainage system.

6.3 Temporary Excavation and Shoring

We expect excavations to not exceed 1.5 meters. We expect that temporary excavations would be sloped where possible since it is more economical to do so. We would expect that slopes cut at a maximum gradient of 1.5:1 (H:V) can be constructed in the native sandy soils.

Vertical cuts exceeding 1.2 meters in height must be reviewed by a professional engineer as per Work Safe BC requirements.

Some seepage into excavations should be expected from the surficial fill and sand. We envisage that groundwater inflows can generally be controlled with conventional sumps and pumps.

6.4 Foundations and Bearing Capacity

Based on the design drawings provided and our test hole information we envisage that the foundations for the replacement training structure would be placed on the compact sand.

We recommend that foundations placed on the compact sand soils can be designed using a serviceability limit state (SLS) bearing pressure of 120 kPa, and a factored ultimate limit state (ULS) bearing pressure of 170 kPa for use under transient loadings such as those by wind and earthquakes.

We expect that the settlement of foundations designed as recommended should be within the normally acceptable limits of 25 mm maximum and up to about 20 mm differential over a 10 m span.

Irrespective of bearing pressures, foundations should not be less than 450 mm in width for strip foundations and not less than 600 mm in width for square or rectangular foundations.

All foundations subgrade must be reviewed by a geotechnical engineer prior to footing construction

6.5 Seismic Design of Foundations

The subgrade conditions underlying the site may be classified as Site Class D as defined in Table 4.1.8.4.A. of the 2018 British Columbia Building Code.

6.6 Slab-On-Grade Floors Preparation

The floor slab should be underlain by a minimum 150 mm thick of 19 mm clear crushed gravel fill to inhibit upward migration of moisture beneath the slab.

The crushed gravel fill should be compacted to a minimum of 98% of the ASTM D698 (Standard Proctor) maximum dry density at a moisture content that is within 2% of optimum for compaction.

6.7 Foundation Drainage

The structures will be constructed at grade so a perimeter drainage system will not be required.

6.8 Utility Installation

Utility excavations shall be sloped or shored in accordance with the latest Worker's Compensation Board (WCB) Occupational Health & Safety Guidelines. Any excavation in excess of 1.2 metres in height requiring worker-entry must be reviewed by a professional geotechnical engineer.

Light to moderate seepage should be expected during the wet seasons, due to the formation of perched water tables. We expect that inflows may be handled with sumps and sump pumps.

6.9 Earth Pressures on Foundation Walls

We recommend that foundation walls be designated for static and seismic earth pressure.

We recommend that the wall be designed for a static pressure distribution of 6.5 H (kPa) triangular, where H is the height of the restrained soil in meters. Dynamic loading induced by the design earthquake should be added to the static loads and should be taken as 5.0 H (kPa) inverted triangular. The preceding loading recommendations assume that the backfill is clean, free-draining sand and gravel, the backfill is level behind the wall, and the wall is frictionless. Our calculations assume that a back-of-wall drainage system will be installed to prevent the build-up of any water pressure behind the walls.

7.0 PAVEMENT DESIGN AND RECOMMENDATIONS

We understand that the City of Coquitlam requires fire truck access pavements to be designed to support 85,200 lb fire aerial vehicles, including loads that may be imposed by outriggers. Our pavement design was carried out in general accordance with the AASHTO's Guide for Design of Pavement Structures (1993) and supplemented with the BC Ministry of Transportation and Infrastructure Pavement Structure Design Guidelines, (January 26, 2015). The following sections outline the design parameters used in our design.

7.1 Traffic Analysis

Detailed fire truck information was provided to us for review and use in our pavement design. Firetruck axle weights were provided for five different trucks, the largest being a *Smeal Ladder Truck* which resulted in a Load Equivalency Factor (LEF) of 4.865. It is also understood that fire trucks will access the yard 12 times per day. The following Traffic Volume Parameters were used to calculate the design Equivalent Standard Axle Load (ESAL).

Table 1 - Traffic Volume Parameters

AADT:	12
Design Period (years):	30
Growth Factor (%):	2
Design ESALs ($x10^6$):	1.0

7.2 Road Design Parameters

The following design parameters were utilized for the determination of the structural number in the flexible pavement equation as outlined in AASHTO's Guide for Design of Pavement Structures (1993), supplemented with recommendations in the BC Ministry of Transportation and Infrastructure Pavement Structure Design Guidelines Jan. 26, 2015.

Table 2 - Road Design Parameters

Reliability, R (%):	95
Initial Design Serviceability, p_0:	4.2
Design Terminal Serviceability, p_t:	2.5
Standard Deviation, S_0:	0.45
Resilient Modules, M_R (MPa):	127

Subgrade strength was derived from California Bearing Ratio (CBR) testing on soils obtained during our site investigation. A soaked CBR test was completed on *sand and gravel, some silt* material obtained from TH20-04 from an approximate depth of 1.0 m below site grades. A CBR value of 22 was used for our design, corresponding to a resilient modulus of 127 MPa. The results of the CBR are included in Appendix C.

7.3 RECOMMENDATIONS

7.4 Roadway Preparation

Areas designated for road construction shall be stripped of surficial topsoil, vegetation, organics, asphalt fill, and/or other deleterious materials to expose a native subgrade of compact to dense *gravelly sand* to *sand and gravel.* We recommend completing a proof roll on the existing subgrade material prior to the placement of any road structure fill materials.

GeoPacific Consultants should be contacted to review stripping activities and the exposed subgrade prior to the placement of any road structure fills.

7.5 Pavement Structure Thicknesses

Structural layer coefficients of 0.40, 0.14, and 0.10 were used for asphalt concrete, granular base, and granular sub-base respectively. A drainage coefficient of 0.95 was used for both base and sub-base materials. Table 3 below outlines the proposed layer thicknesses for each road section. Pavement sections that require to be fire truck rated should be constructed using the *Heavy-Duty* pavement specification. A *Light-Duty* pavement structure is provided for areas strictly used for conventional vehicles, such as employee parking areas.

Table 3 - Minimum Pavement Structure Thicknesses

Pavement Section	Thickness (mm)			
	Asphalt Surface Course	Asphalt Base Course	Granular Base Course	Granular Sub-base Course
Heavy-Duty	40	60	300	300
Light-Duty	-	75	100	200

7.6 Granular Base and Sub-base

Road base shall consist of 19 mm minus crushed gravel, free from any organics, foreign matter, or deleterious substances. The gravel shall be durable, uniform in quality, and 60% of the gravel shall have at least one fractured face. The aggregate shall conform to the gradation curve given in MMCD Platinum Edition Section 31 05 17 2.10.1 Granular Base and shall have a minimum soaked CBR (ASTM D1883) of 60 at 95% Modified Proctor Dry Density (MPDD). The contractor shall supply a sample of the proposed road base material at least 7 days in advance of the work for sieve, modified proctor, and CBR testing. The material shall be placed in loose lifts no greater than 300 mm and compacted to not less than 95% MPDD (ASTM D1557). Nuclear densometer testing shall be conducted on each lift placed to confirm compaction requirements have been achieved.

Road sub-base shall consist of 75 mm minus crushed gravel, free from any organics, foreign matter, or deleterious substances. The gravel shall be durable, uniform in quality, and 60% of the gravel shall have at least one fractured face. The aggregate shall conform to the gradation curve given in MMCD Platinum Edition Section 31 05 17 2.9 Crushed Granular Sub-base and shall have a minimum soaked CBR (ASTM D1883) of 20 at 95% MPDD. The contractor shall supply a sample of the proposed sub-base material at least 7 days in advance of the work for sieve, modified proctor, and CBR testing. The material shall be placed in loose lifts no greater than 300 mm and compacted to no less than 95% MPDD (ASTM D1557). *GeoPacific Consultants should be contacted to review the compaction of any placed road structure fills.*

7.7 Asphalt Concrete

Asphalt concrete pavement shall be provided and placed in accordance with MMCD specifications. Asphalt mix designs and trial mixes shall be submitted to GeoPacific Consultants for review at least one week prior to paving. The following asphalt mixes are recommended for each pavement section.

Table 4 - Asphalt Concrete Mix Types

Pavement Section	Asphalt Surface Course	Asphalt Base Course
Heavy-Duty	12.5 mm Superpave	19 mm Superpave
Light-Duty	-	MMCD Upper Course #2

During paving operations, GeoPacific Consultants shall perform nuclear density testing on the compacted asphalt surface to provide guidance to the paving contractor. This is to ensure sufficient levels of compaction are met while the asphalt remains in the compactable temperature range. Samples of the asphalt mix shall be collected for Marshall and/or Superpave compliance testing.

8.0 DESIGN REVIEWS AND CONSTRUCTION INSPECTIONS

The preceding sections make recommendations for the design and construction of new improvements. We have recommended the review of certain aspects of the construction within this report. It is the responsibility of the contractors carrying out the work to contact GeoPacific at least 24 hours in advance of construction to arrange for field reviews. In summary, reviews should be requested for the following construction activities.

1. Stripping	Review of stripping depths.
2. Excavation	Review of temporary slopes and soil conditions.
3. Shoring	Review of shoring installation and tests.
4. Engineered Fill	Review of materials and compaction degree.
5. Foundation	Review of foundation subgrade.
6. Slab on Grade compaction.	Review of foundation subgrade / under slab fill materials and
7. Backfill	Review of placement of backfill along foundation walls.
8. Compaction	Review compaction of road subgrade, sub-base and base
9. Sampling	Collection of base and sub-base materials for sieve and proctor tests
10. Asphalt	Density testing asphalt pavement works. Collection of asphalt mixes for Marshall and/or Superpave compliance testing

It is important that these reviews are carried out to ensure that our recommendations have been adequately communicated. It is also important that any contractors working on this project review this document prior to commencing their work.

9.0 CLOSURE

This report has been prepared exclusively for Musqueam Capital Corporation, and for the use of others within their design and construction team, for the purpose of providing geotechnical recommendations for the project. This report remains the property of GeoPacific Consultants Ltd. and unauthorized use or duplication of this report is prohibited.

If you would like further details or clarification please contact the undersigned.

For: **GeoPacific Consultants Ltd.**

Reviewed by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
M. J. KOKAN
21364

JUN 2 4 2020

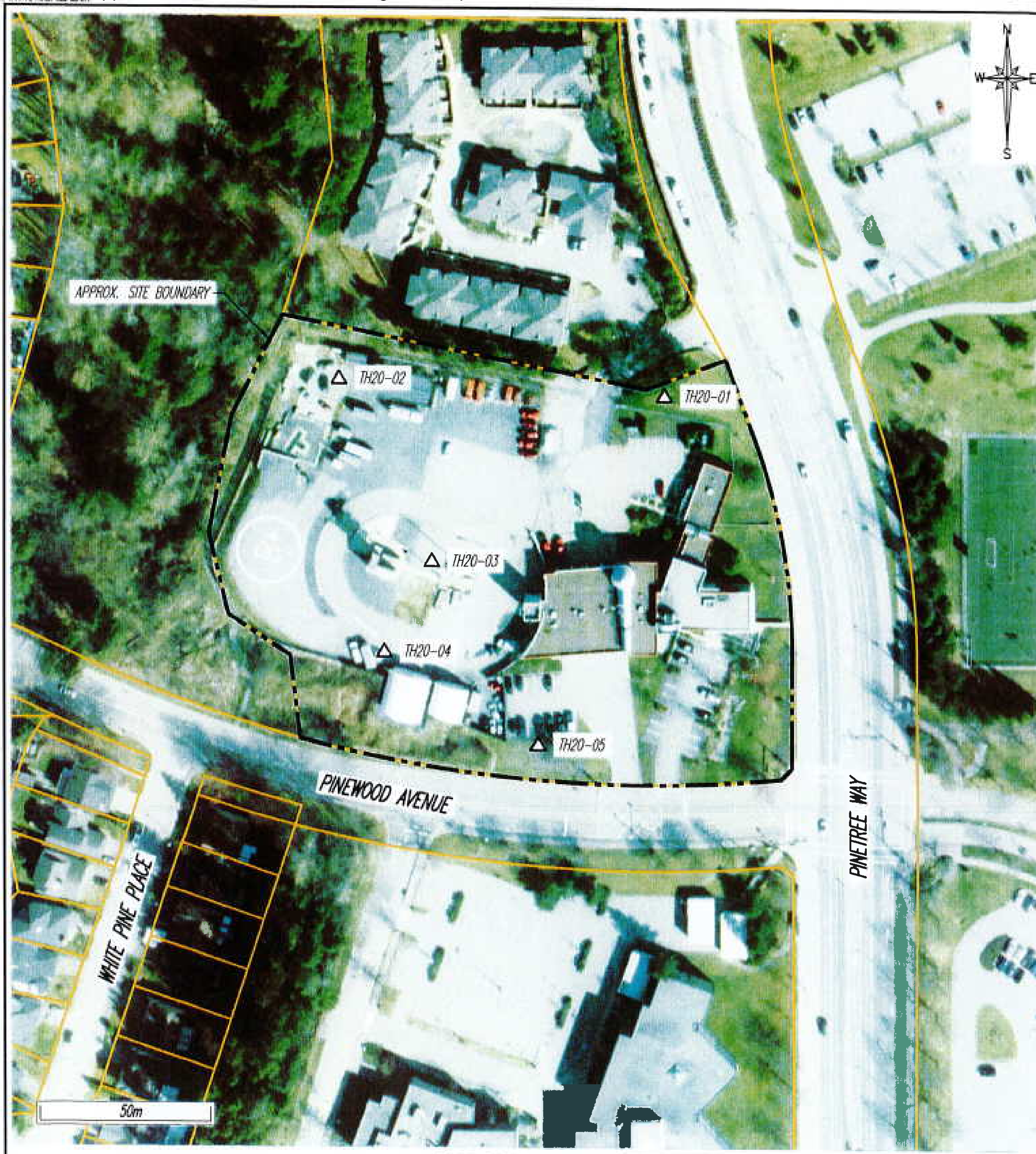
Boris Kolev, M.A.S.c., EIT
Project Engineer

Matt Kokan, M.A.Sc, P.Eng.
Principal

Jakub Szary, B.Sc., AScT
Lab Manager

APPENDIX A

Test hole log site plan



LEGEND:

△ TH19-# – TEST HOLE (TH) LOCATION

SITE PLAN

SCALE = 1:1500

TEST LOCATIONS ARE APPROXIMATE

REVISIONS:	FILE NO.: 17900
A.	
B.	DWG. NO.: 17900-01
C.	

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DATE: JUNE 05, 2020		
DRAWN BY: N.K.	APPROVED BY: M.J.K.	REVIEWED BY: B.K.
SCALE: AS SHOWN		

FIREHALL TRAINING STRUCTURE REPLACEMENT

1300 PINETREE WAY, COQUITLAM, B.C.

TEST HOLE SITE PLAN

APPENDIX B

Test hole logs

Test Hole Log: TH20-01

File: 17900

Project: FIREHALL TRAINING STRUCTURE REPLACEMENT

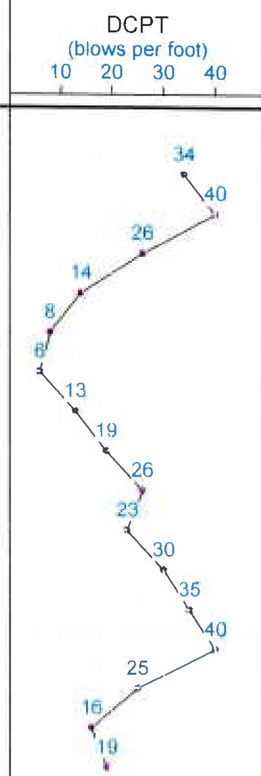
Client: CITY OF COQUITLAM

Site Location: 1300 PINETREE WAY

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC, V6P 6P2
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot)	Groundwater / Well	Remarks
0		Ground Surface					
		Topsoil	0.0				
		Sand gravelly Sand, brown, compact, slightly moist, fine to coarse rounded gravel, medium-grained sand 1.8 m to 2.3 m - brown to yellow sand					
		Sand Sand, light brown, compact, slightly moist, fine-grained sand	2.3				
		Sand gravelly Sand, trace silt, light brown, dense moist, fine to coarse rounded gravel, medium-grained sand fining with depth 4.6 m - some silt	2.7				
		End of Borehole	4.6				



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Method: SOLID STEM AUGER
Date: MAY 26, 2020

Datum: EXISTING GROUND
Figure Number: A.01
Page: 1 of 1

Test Hole Log: TH20-02

File: 17900

Project: FIREHALL TRAINING STRUCTURE REPLACEMENT

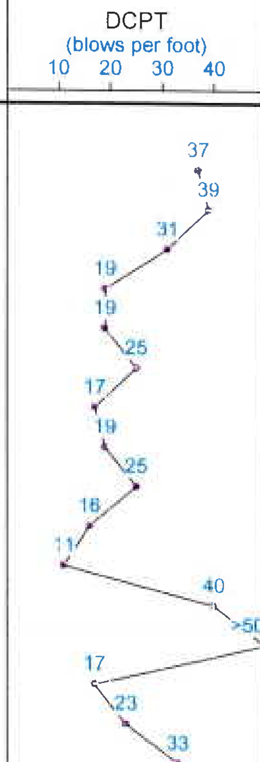
Client: CITY OF COQUITLAM

Site Location: 1300 PINETREE WAY

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC, V6P 6P2
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot)	Groundwater / Well	Remarks
0		Ground Surface					
0 – 5 ft (0 – 1.5 m)		***Sand*** Sand, some gravel, some silt, dark brown, dense to compact, moist, fine sub-rounded gravel 0.9 m to 1.2 m - grey	0.0				
5 – 10 ft (1.5 – 3.0 m)		***Sand*** gravelly Sand, some silt, dark brown, compact, moist 2.1 m - 150 mm medium-grained sand seam	1.5				
10 – 15 ft (3.0 – 4.6 m)		***Sand and Gravel*** Sand and Gravel, some silt, dark brown, dense, moist, fine rounded gravel	3.0				
		End of Borehole	4.6				



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Method: SOLID STEM AUGER

Date: MAY 26, 2020

Datum: EXISTING GROUND

Figure Number: A.02

Page: 1 of 1

Test Hole Log: TH20-03

File: 17900

Project: FIREHALL TRAINING STRUCTURE REPLACEMENT

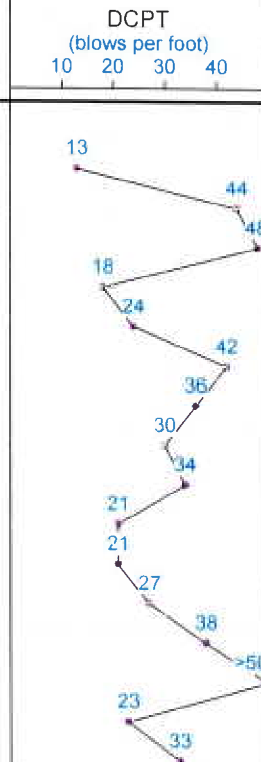
Client: CITY OF COQUITLAM

Site Location: 1300 PINETREE WAY

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC, V6P 6P2
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (m)/Elev (m)	SOIL DESCRIPTION	Moisture Content (%)	DCPT (blows per foot)	Groundwater / Well	Remarks
	Ground Surface				
0.0	**Sand** gravelly Sand, some silt, dark brown, compact, moist, fine rounded gravel				
0.9	**Sand** gravelly Sand, some silt, grey, compact, moist, medium-grained sand, fine to coarse rounded gravel				
	Sand Sand, some gravel, trace silt, brown-yellow, compact, moist, more gravel with depth				
2.1	2.1 m to 3.0 m - yellow-grey				
	Sand Sand, yellow to grey, compact, moist, medium-grained sand fining with depth				
3.0	**Sand** gravelly Sand, trace silt, grey, compact to dense with depth, moist, medium-grained sand				
4.6	End of Borehole				



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Method: SOLID STEM AUGER
Date: MAY 26, 2020

Datum: EXISTING GROUND
Figure Number: A.03
Page: 1 of 1

Test Hole Log: TH20-04

File: 17900

Project: FIREHALL TRAINING STRUCTURE REPLACEMENT

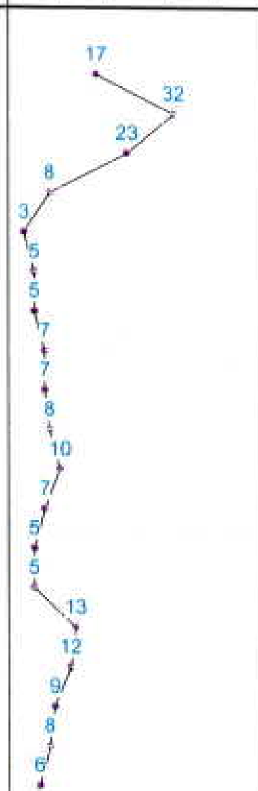
Client: CITY OF COQUITLAM

Site Location: 1300 PINETREE WAY

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC, V6P 6P2
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot)	Groundwater / Well	Remarks
0 ft / 0 m		Ground Surface					
0–8 ft / 0–2.4 m		***Sand*** Sand and Gravel, trace to some silt, dark brown, compact to loose, rounded gravel	0.0				
8–13.5 ft / 2.4–4.0 m		***Sand*** Sand, trace silt, grey, loose, slightly moist, fine to medium-grained sand 1.8 m to 2.1 m - silty Sand, some gravel, brown-orange, moist	2.4				
13.5–20 ft / 4.0–6.1 m		***silty Sand*** silty Sand, dark brown, loose, moist, trace wood fibers, fine-grained sand 5.5 m - becomes grey 5.8 m - becomes yellow	4.0				
20–25 ft / 6.1–7.6 m		***Sand*** Sand, some silt, compact, moist, grey, fine-grained sand 6.1 m to 6.7 m - yellow-grey	6.1				
		End of Borehole	7.6				



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Method: SOLID STEM AUGER
Date: MAY 26, 2020

Datum: EXISTING GROUND
Figure Number: A.04
Page: 1 of 1

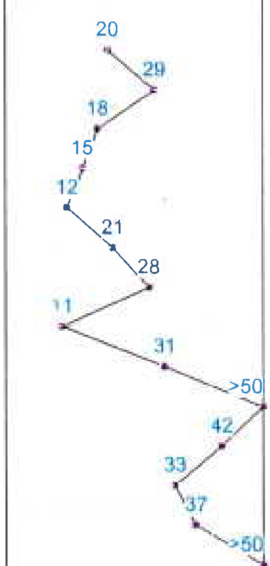
Test Hole Log: TH20-05

File: 17900
Project: FIREHALL TRAINING STRUCTURE REPLACEMENT
Client: CITY OF COQUITLAM
Site Location: 1300 PINETREE WAY

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC, V6P 6P2
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 10 20 30 40	Groundwater / Well	Remarks
ft 0 / m 0		Ground Surface					
0–6 ft (0–1.8 m)		***Silty Sand*** Sand and Gravel, trace to some silt, dark brown, compact, fine rounded gravel	0.0				
6–15 ft (1.8–4.6 m)		***Sand*** Sand, some silt to trace silt with depth, light brown to brown, compact to dense, slightly moist, medium-grained sand, sub-angular gravel	1.8				
		End of Borehole	7.6				



Logged: NP
Method: SOLID STEM AUGER
Date: MAY 26, 2020

Datum: EXISTING GROUND
Figure Number: A.05
Page: 1 of 1

APPENDIX C

California Bearing Ration lab results

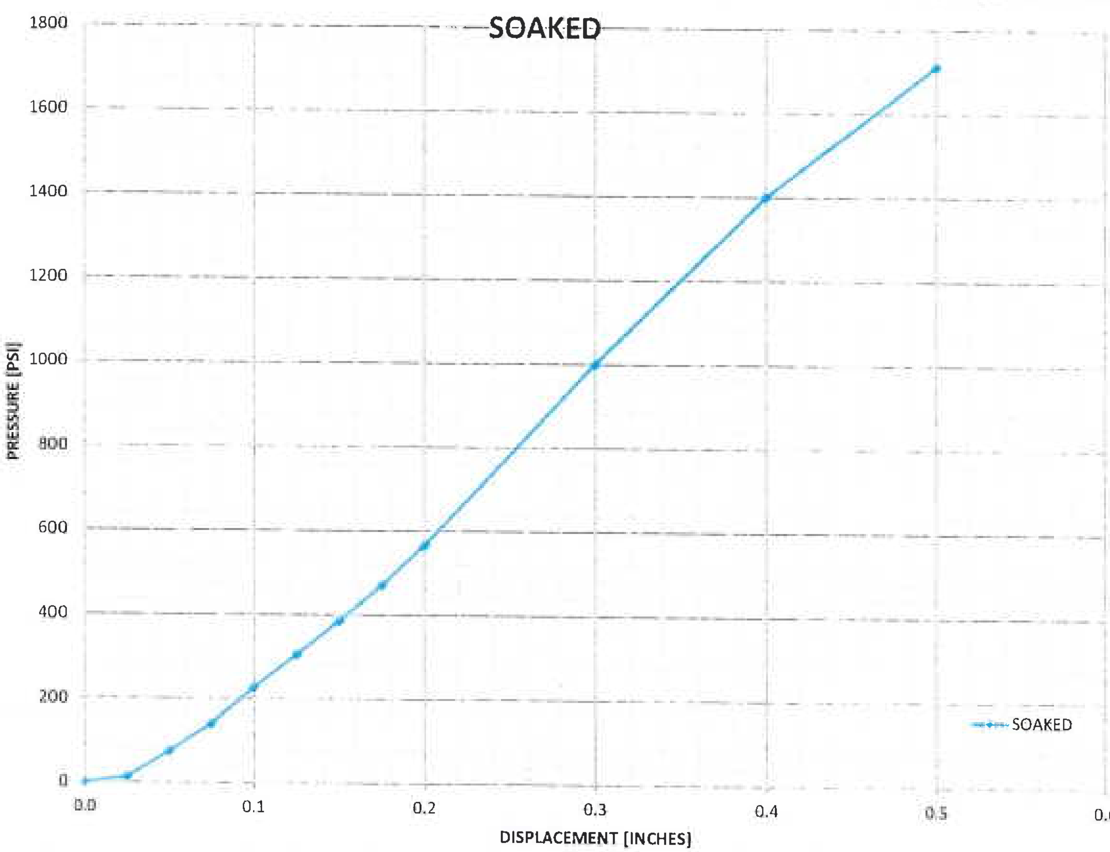
GEOPACIFIC CONSULTANTS

Vancouver Lab
1779 West 75th Ave
Vancouver, BC
V6P 6P2

CALIFORNIA BEARING RATIO - CBR
ASTM D1883

CLIENT:	CITY OF COQUITLAM	JOB #:	17900
PROJECT NAME:	TOWN CENTRE FIRE HALL TRAINING STRUCTURE REPLACEMENT	DATE RECEIVED:	26-May-20
PROJECT LOCATION:	1300 PINETREE WAY, COQUITLAM	DATE TESTED:	29-May-20

TEST PARAMETERS					
COMP. METHOD:	ASTMD1557	SURCHARGE USED:	10 LBS	MATERIAL SOURCE:	NATIVE - TP20-04
MAX. DRY DENSITY:	2160	PERCENT SWELL:	0.0%	SAMPLE TYPE:	SILTY SAND, SOME GRAVEL
OPTIMUM MOISTURE:	6.10%	COMP. MOISTURE:	N/A	SAMPLE ID #:	1



CONDITION	PRESSURE READINGS AT DESIGNATED DISPLACEMENT [PSI]											
	0.000	0.025	0.050	0.075	0.100	0.125	0.150	0.175	0.200	0.300	0.400	0.500
SOAKED	0	14	74	140	227	306	386	471	567	999	1400	1713

COMMENTS:

CONDITION	PERCENT COMPACTIO	CBR VALUE	
		@ 0.100"	@ 0.200"
SOAKED	103.4	22.7	37.8

Per: Cameron Wadsworth, Dip. Tech., GradTech

Lab Technician

Reviewed By: Jakub Szary , B.Sc., AScT

Lab Manager