



May 4, 2015

Northern Vision Development LP
Suite 200 – 2237 2nd Avenue
Whitehorse, YT Y1A 0K7

ISSUED FOR USE
FILE: W14103563-01
Via Email: tlove@nvdpl.com

Attention: Mr. Taylor Love, Director of Business Development

Subject: Tagish Avenue Extension - Geotechnical Evaluation
Bennett Lake Residential Development
Carcross, YT

1.0 INTRODUCTION

At the request of Mr. Taylor Love, Director of Business Development of Northern Vision Development LP, Tetra Tech EBA Inc. (Tetra Tech EBA) has completed a geotechnical evaluation for the Tagish Avenue extension within the Bennett Lake Residential Development site in Carcross, YT.

The work has been completed in accordance with Tetra Tech EBA's March 26, 2015 proposal. Authorization to proceed was received in the form of a signed Services Agreement dated March 31, 2015.

1.1 Background

The Tagish Avenue extension between Austin Road and 9th Street is proposed to become the main access road into the Bennett Lake Residential Development area. Urban Systems has completed design work for the extension so the main purpose of this evaluation is to ensure the design profile (including the cut/fill balances using in situ soils) could be achieved along with addressing specific construction concerns.

2.0 SCOPE OF SERVICES

The Tetra Tech EBA task list included:

- A drilling program to confirm that proposed cut depths could be achieved;
- An evaluation of the soils encountered and an assessment of the soil for use as backfill in fill areas; and
- Discussion of sideslope and backslope angles, erosion control measures and the disposal of storm runoff.

3.0 SITE INVESTIGATION PROGRAM

On April 24, a drilling program was completed along the Tagish Avenue extension right-of-way between Station 0+000 (intersection with 9th Street) and Station 0+560 (intersection with Austin Road). A total of 7 boreholes were drilled at Stations 0+440; 0+356; 0+295; 0+255; 0+180; 0+068; and 0+026. All boreholes were drilled to a depth of 4.5 m with a Nodwell mounted CME 75 drill rig equipped with solid flight augers. The drilling contractor for this project was Donjek Drilling of Whitehorse, YT. During drilling, samples were collected at regular intervals; detailed borehole logs were prepared; and UTM coordinate locations were recorded using a handheld GPS unit. Upon completion, all boreholes were backfilled to grade to ensure safe site conditions.

The locations of the boreholes drilled are presented on Figure 1 of this letter report.

4.0 LABORATORY TESTING PROGRAM

All samples collected were returned to Tetra Tech EBA's Whitehorse laboratory for basic index testing to assist with soil classification. Tests performed included natural moisture content testing on all samples along with a sieve analysis and standard Proctor maximum dry density test performed on a bulk sample comprised of all moisture content samples combined, thoroughly mixed and properly split into appropriate sized samples for the completion of the two tests.

5.0 SITE CONDITIONS

5.1 Terrain Classification Information

According to the Morison, McKenna and Davies terrain mapping, the subject site is located within the Carcross Soil Complex. Conditions associated with this terrain polygon include:

- The surficial soils throughout the majority of the Carcross town site consist of fine to medium grained eolian sand;
- The eolian sand and dune topography noted throughout the study area are considered well drained;
- Below the eolian sand, fine-grained glaciolacustrine soil is typical but was not encountered within 4.5 m of the locations drilled; and
- The surface expression is considered to be rolling with moderate to steep slopes throughout.

5.2 Soil Conditions

At the time of drilling, all tree cover had been removed from the right-of-way. Conditions noted in the seven boreholes drilled along the Tagish Avenue extension were very consistent with fine- to medium-grained sand noted throughout the entire subject site. Some areas had sparse ground cover and a thin veneer of organics overlying the eolian sand.

No groundwater or bedrock was encountered at the locations drilled.


6.0 RECOMMENDATIONS

Drilling has confirmed that design grades can be achieved. Laboratory testing has confirmed that the sand from the cut areas is marginally frost-susceptible (if allowed to become saturated); however, the sand is considered suitable for use during roadway embankment construction. Suggestions and recommendations are presented below.

6.1 Roadway Construction

Subgrade construction will require the following:

- Grubbing and stripping will be required to expose the eolian sand subgrade soils. The volume of grubbing and stripping should be minimal as very little root mat was noted along the Tagish Avenue corridor.
- Subgrade will be constructed with fine grained, uniformly graded sand. Contractors typically find that fine grained sands are difficult to work with. The uniform nature of the sand and lack of natural moisture will make the compaction process challenging. A significant amount of water will be needed to facilitate the compaction process.

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- The cut and fill areas along the Tagish Avenue extension are a series of short sections with steep slopes. It is very important that the general contractor not place excessively thick lifts in order to facilitate equipment travel. To minimize potential for settlement, lift thickness should not exceed 200 mm and adequate time must be allowed for proper moisture conditioning and compaction in order to achieve a minimum of 95% of standard Proctor maximum dry density (per ASTM D698) on each lift placed. Material placed in the final meter should be compacted to at least 98% of standard Proctor maximum dry density (per ASTM D698).
 - Since the sand samples collected during the current drilling program were so consistent, a standard Proctor test was completed in accordance to ASTM D698 and the maximum dry density result for the bulk sample of eolian sand can be used during compaction testing.

6.2 Sideslope and Backslope Construction

As previously presented in the reconnaissance level report, all cut back slopes and fill sideslopes should be constructed no steeper than 3:1 (horizontal:vertical). Since this may be an optimistic recommendation it is important that the constructed slopes be protected or vegetated as soon as possible to reduce the potential for surface erosion. Preventative measures include:

- Proper compaction during embankment construction. Poorly compacted sand will be prone to excess erosion.
- The transition areas between cuts and fill are very susceptible to erosion. It is understood that these slopes will be armoured with 1M rip-rap (300 mm angular rock). This will not only protect the slopes but will act as a velocity dissipater for surface water running out of cut areas down along fill embankments.
- Revegetation along back slopes and side slopes is challenging on the sandy soils and there will not likely be enough organics collected during stripping to be of much help. This office has tried to contact Randy Lewis of Arctic Alpine Seed Ltd. This company has been successful with establishing seed blends for revegetation on various mine reclamation projects. Unfortunately, messages have not been answered but contact information can be supplied, if requested.
- There are numerous erosion blanket products on the market. This method of erosion control has been very successful and although costs may be prohibitive, it can be considered for use on this project.

6.3 Roadway Structure and Construction

The Tagish Avenue extension is considered to be a low-volume road. The presence of well drained, non-frost susceptible sand along the entire length allows us to create a roadway structure design that is based on traffic patterns only and ensures that additional granular structure will not be required to mitigate the potential for frost heave.

In 2008, this office completed a pavement structure evaluation for use in Carcross, YT. In this report, design options were based on the following soil parameters:

- A subgrade modulus of 7 MPa was assumed based on sand subgrade soils and CBR data on similar soils;
- Structural layer coefficients of 0.14 (for 20 mm crushed basecourse aggregate) and 0.10 (for pit run sub-base aggregate) were used for design.

Based on the analysis performed using AASHTO design procedures and DARWin proprietary software, a roadway structure design comprising a prepared subgrade, 200 mm of pit run sub-base gravel and 200 mm of crushed

basecourse gravel was considered appropriate for areas without asphalt. For the construction of the Tagish Avenue extension, this roadway structure is considered acceptable for the BST surfaced roadway.

Subgrade, sub-base and basecourse surfaces should be properly constructed and compacted to at least 98% of standard Proctor maximum dry density (per ASTM D698). In advance of applying BST, the basecourse should be re-graded, moisture conditioned and compacted to at least 100% of standard Proctor maximum dry density.

All imported granular materials (crushed basecourse and pit run sub-base) must meet the gradation limits as presented in Table 1. All materials must be placed in lifts not exceeding 200 mm in compacted thickness.

Table 1: Imported Gravel Gradation Specifications (YTG Aggregate Specifications)

20 mm CRUSHED BASECOURSE (GRAN A)		80 mm PIT RUN SUB-BASE (GRAN D)	
Particle Size (mm)	% Passing by Mass	Particle Size (mm)	% Passing by Mass
20.000	100	80.000	100
12.500	64 – 100	25.000	55 - 100
5.000	36 – 72	12.500	42 – 84
2.500	18 – 54	5.000	26 – 65
1.250	12 – 42	1.250	11 - 47
0.315	4 - 22	0.315	3 - 30
0.080	3 – 6	0.080	0 - 8

7.0 CATCH BASIN DESIGN INPUT

It is understood that open bottomed catch basins will be constructed in cut areas to minimize the amount of surface water generated. To assist with design, a theoretical hydraulic conductivity determination has been completed based on sieve analysis results. This determination is based on numerous theoretical equations and for this assessment, methods developed by Hazen, Slichter, Beyer and Zunker were used to generate a geometric mean. For the rock pit sizing (area of the base) on this project, it is recommended that $1E^{-04}$ be used for rock pits constructed in the eolian sand.

8.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Northern Vision Development LP. Tetra Tech EBA Inc. does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Northern Vision Development LP, or for any Project other than the proposed development throughout the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in the Tetra Tech EBA Inc. General Conditions presented in Appendix A of this report.

The information and recommendations presented herein are based on current and historical geotechnical information from investigations conducted throughout the Carcross town site. The conditions presented herein are believed to be representative for the site. However, if conditions differ from those presented in this report are encountered during subsequent phases of development; we request that Tetra Tech EBA be notified so that conditions encountered can be re-evaluated in light of new findings.

9.0 CLOSURE

We trust this report meets your present requirements. Should you have any questions or comments, or clarification of any of the recommendations presented is required, please contact the undersigned at your convenience.

Sincerely,
Tetra Tech EBA Inc.



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Attachments:	Figures	Figure 1 – Site Plan Showing Borehole Locations
	Appendix A	Tetra Tech EBA's General Conditions – Geotechnical
	Appendix B	Borehole Logs and Laboratory Test Results



FIGURES

Figure 1 Site Plan Showing Borehole Locations



LEGEND

- - BOREHOLE LOCATION



CLIENT



NORTHERN VISION
DEVELOPMENT LP



TETRA TECH EBA

**TAGISH AVENUE EXTENSION
CARCROSS, YUKON**

SITE PLAN SHOWING BOREHOLE LOCATIONS

PROJECT NO.	DRAWN	CKD	REV
W14103563-01	CB	MCP	0
OFFICE	DATE		
EBA-WHISE	April 30, 2015		

Figure 1

APPENDIX A

TETRA TECH EBA'S GENERAL CONDITIONS

GENERAL CONDITIONS

GEOTECHNICAL REPORT

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 Tetra Tech EBA's Client. Tetra Tech 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 Tetra Tech EBA's Client unless otherwise authorized in writing by Tetra Tech 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 Tetra Tech EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where Tetra Tech EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed Tetra Tech EBA's instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by Tetra Tech EBA shall be deemed to be the original for the Project.

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

Electronic files submitted by Tetra Tech EBA have been prepared and submitted using specific software and hardware systems. Tetra Tech EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, Tetra Tech 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.

4.0 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. Tetra Tech 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.

5.0 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.

6.0 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. Tetra Tech 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.

7.0 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.

8.0 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.

9.0 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.

10.0 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.

11.0 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.

12.0 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.

13.0 SAMPLES

Tetra Tech 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.

14.0 INFORMATION PROVIDED TO TETRA TECH EBA BY OTHERS

During the performance of the work and the preparation of the report, Tetra Tech EBA may rely on information provided by persons other than the Client. While Tetra Tech EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, Tetra Tech EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.

APPENDIX B

BOREHOLE LOGS; LABORATORY TEST RESULTS AND SOIL CLASSIFICATION INFORMATION

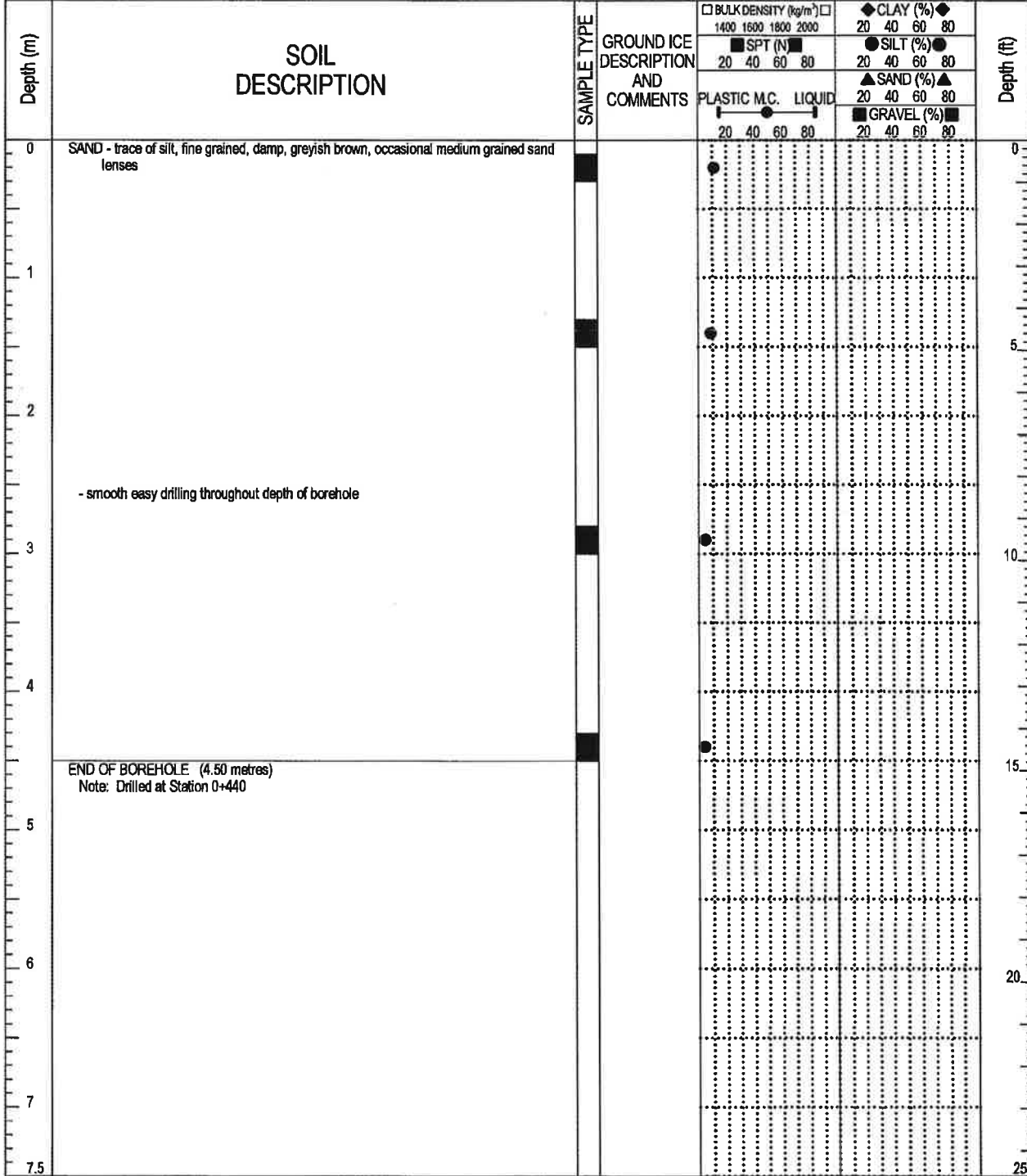
MODIFIED UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION		GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA			
COARSE-GRAINED SOILS More than 50% retained on 75 µm sieve*	GRAVELS 50% or more of coarse fraction retained on 4.75 mm sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines GW, GP, SW, SP GM, GC, SM, SC Borderline Classification requiring use of dual symbols		
		GRAVELS WITH FINES	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines			
		SANDS More than 50% of coarse fraction passes 4.75 mm sieve	CLEAN SANDS	GM		Silty gravels, gravel-sand-silt mixtures	
			SANDS WITH FINES	GC		Clayey gravels, gravel-sand-clay mixtures	
	SANDS More than 50% of coarse fraction passes 4.75 mm sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines		$C_u = D_{60} / D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
		SANDS WITH FINES	SP	Poorly graded sands and gravelly sands, little or no fines		Not meeting both criteria for GW	
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures		Atterberg limits plot below "A" line or plasticity index less than 4 Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols	
		SANDS WITH FINES	SC	Clayey sands, sand-clay mixtures		Atterberg limits plot above "A" line or plasticity index greater than 7 $C_u = D_{60} / D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures		Not meeting both criteria for SW	
		SANDS WITH FINES	SC	Clayey sands, sand-clay mixtures		Atterberg limits plot below "A" line or plasticity index less than 4 Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols	
FINE-GRAINED SOILS (by behavior) 50% or more passes 75 µm sieve*	SILTS Liquid limit	<50	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands of slight plasticity	For classification of fine-grained soils and fine fraction of coarse-grained soils. <div style="text-align: center;"> PLASTICITY CHART </div>		
		>50	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
	CLAYS Above "A" line on plasticity chart negligible organic content Liquid limit	<30	CL	Inorganic clays of low plasticity, gravelly clays, sandy clays, silty clays, lean clays			
		30-50	CI	Inorganic clays of medium plasticity, silty clays			
		>50	CH	Inorganic clays of high plasticity, fat clays			
	ORGANIC SILTS AND CLAYS Liquid limit	<50	OL	Organic silts and organic silty clays of low plasticity			
		>50	OH	Organic clays of medium to high plasticity			
	HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils		*Based on the material passing the 75 mm sieve Reference: ASTM Designation D2487, for identification procedure see D2488. USC as modified by PFRA	
	SOIL COMPONENTS					OVERSIZE MATERIAL	
	FRACTION	SIEVE SIZE		DEFINING RANGES OF PERCENTAGE BY MASS OF MINOR COMPONENTS		Rounded or subrounded COBBLES 75 mm to 300 mm BOULDERS > 300 mm	
PASSING		RETAINED	PERCENTAGE	DESCRIPTOR			
GRAVEL coarse fine	75 mm	19 mm	>35 %	"and"	Not rounded ROCK FRAGMENTS >75 mm ROCKS > 0.76 cubic metre in volume		
	19 mm	4.75 mm	21 to 35 %	"y-adjective"			
SAND coarse medium fine	4.75 mm	2.00 mm	10 to 20 %	"some"			
	2.00 mm 425 µm	425 µm 75 µm	>0 to 10 %	"trace"			
SILT (non plastic) or CLAY (plastic)	75 µm		as above but by behavior				

T1 Modified Unified Soil Classification.cdr

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH01
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670196N; 515980E; Zone 8	

SAMPLE TYPE	<input checked="" type="checkbox"/> DISTURBED	<input type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> A-CASING	<input type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND



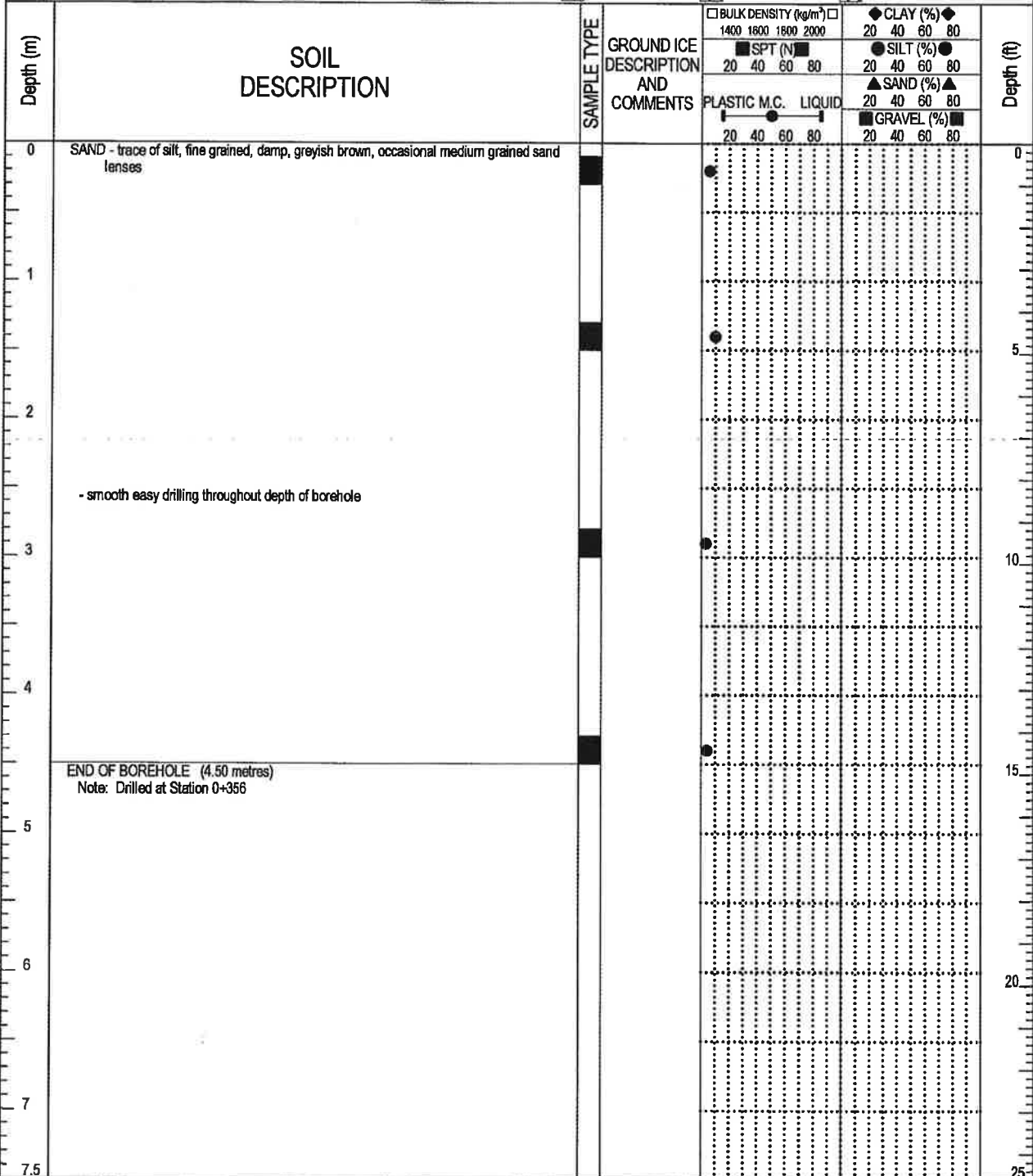
TETRA TECH EBA


LOGGED BY: MP
REVIEWED BY: JRT
DRAWING NO:

COMPLETION DEPTH: 4.5m
COMPLETE: 15/04/24
Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH02
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670252N; 515918E; Zone 8	

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BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND




 TETRA TECH EBA	LOGGED BY: MP	COMPLETION DEPTH: 4.5m
	REVIEWED BY: JRT	COMPLETE: 15/04/24
	DRAWING NO:	Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH03
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670303N; 515879E; Zone 8	

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BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND


Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	GROUND ICE DESCRIPTION AND COMMENTS	BULK DENSITY (kg/m ³)		CLAY (%)		SILT (%)		SAND (%)		Depth (ft)
				1400	1600	1800	2000	20	40	60	80	
0	SAND - trace of silt, fine grained, damp, greyish brown, occasional medium grained sand lenses											0
1												5
2												10
3	- smooth easy drilling throughout depth of borehole											15
4												20
5	END OF BOREHOLE (4.50 metres) Note: Drilled at Station 0+295											25
6												
7												
7.5												

 TETRA TECH EBA	LOGGED BY: MP	COMPLETION DEPTH: 4.5m
	REVIEWED BY: JRT	COMPLETE: 15/04/24
	DRAWING NO:	Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH04
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670333N; 515863E; Zone 8	

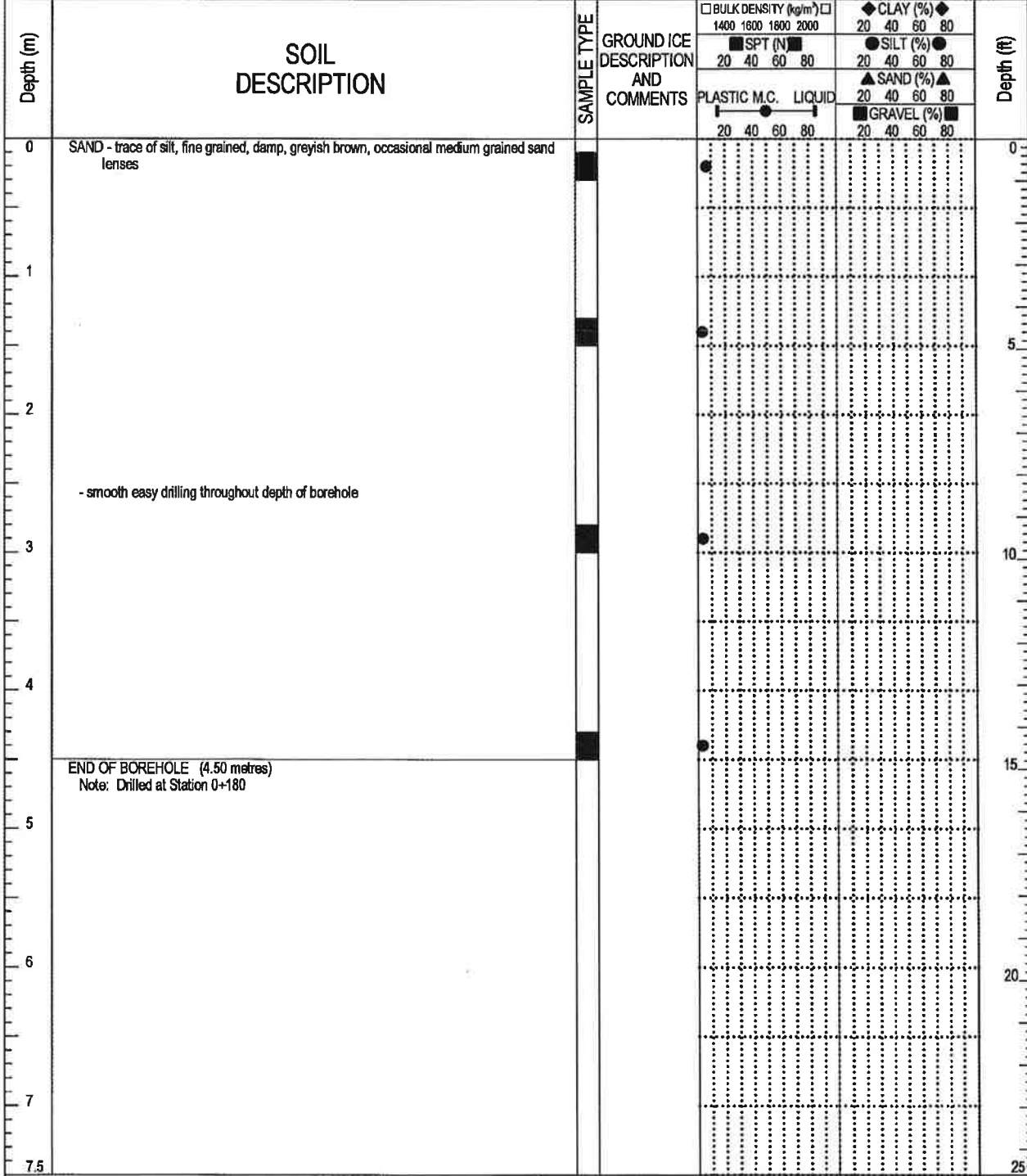
SAMPLE TYPE	<input checked="" type="checkbox"/> DISTURBED	<input checked="" type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> A-CASING	<input type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	GROUND ICE DESCRIPTION AND COMMENTS	BULK DENSITY (kg/m ³)		CLAY (%)		SILT (%)		SAND (%)		Depth (ft)
				1400	1600	1800	2000	20	40	60	80	
0	SAND - trace of silt, fine grained, damp, greyish brown, occasional medium grained sand lenses											0
1												5
2												10
3	- smooth easy drilling throughout depth of borehole											15
4												20
5	END OF BOREHOLE (4.50 metres) Note: Drilled at Station 0+255											25
6												
7												
7.5												

 TETRA TECH EBA	LOGGED BY: MP	COMPLETION DEPTH: 4.5m
	REVIEWED BY: JRT	COMPLETE: 15/04/24
	DRAWING NO:	Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH05
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670385N; 515806E; Zone 8	

SAMPLE TYPE	<input checked="" type="checkbox"/> DISTURBED	<input type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> A-CASING	<input type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND



LOGGED BY: MP
 REVIEWED BY: JRT
 DRAWING NO:

COMPLETION DEPTH: 4.5m
 COMPLETE: 15/04/24
 Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH06
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W14103563-01
Carcross, Yukon	6670462N; 515719E; Zone 8	

SAMPLE TYPE	<input checked="" type="checkbox"/> DISTURBED	<input type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> A-CASING	<input type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

Depth (m)	SOIL DESCRIPTION	SAMPLE TYPE	GROUND ICE DESCRIPTION AND COMMENTS	BULK DENSITY (kg/m ³)		SPT (N)		PLASTIC M.C. LIQUID		CLAY (%)		SILT (%)		SAND (%)		GRAVEL (%)		Depth (ft)
				1400	1600	1800	2000	20	40	60	80	20	40	60	80	20	40	
0	SAND - trace of silt, fine grained, damp, greyish brown, occasional medium grained sand lenses																	0
1																		5
2																		10
3	- smooth easy drilling throughout depth of borehole																	15
4																		20
5	END OF BOREHOLE (4.50 metres) Note: Drilled at Station 0+068																	25
6																		
7																		
7.5																		



TETRA TECH EBA

LOGGED BY: MP

REVIEWED BY: JRT

DRAWING NO:

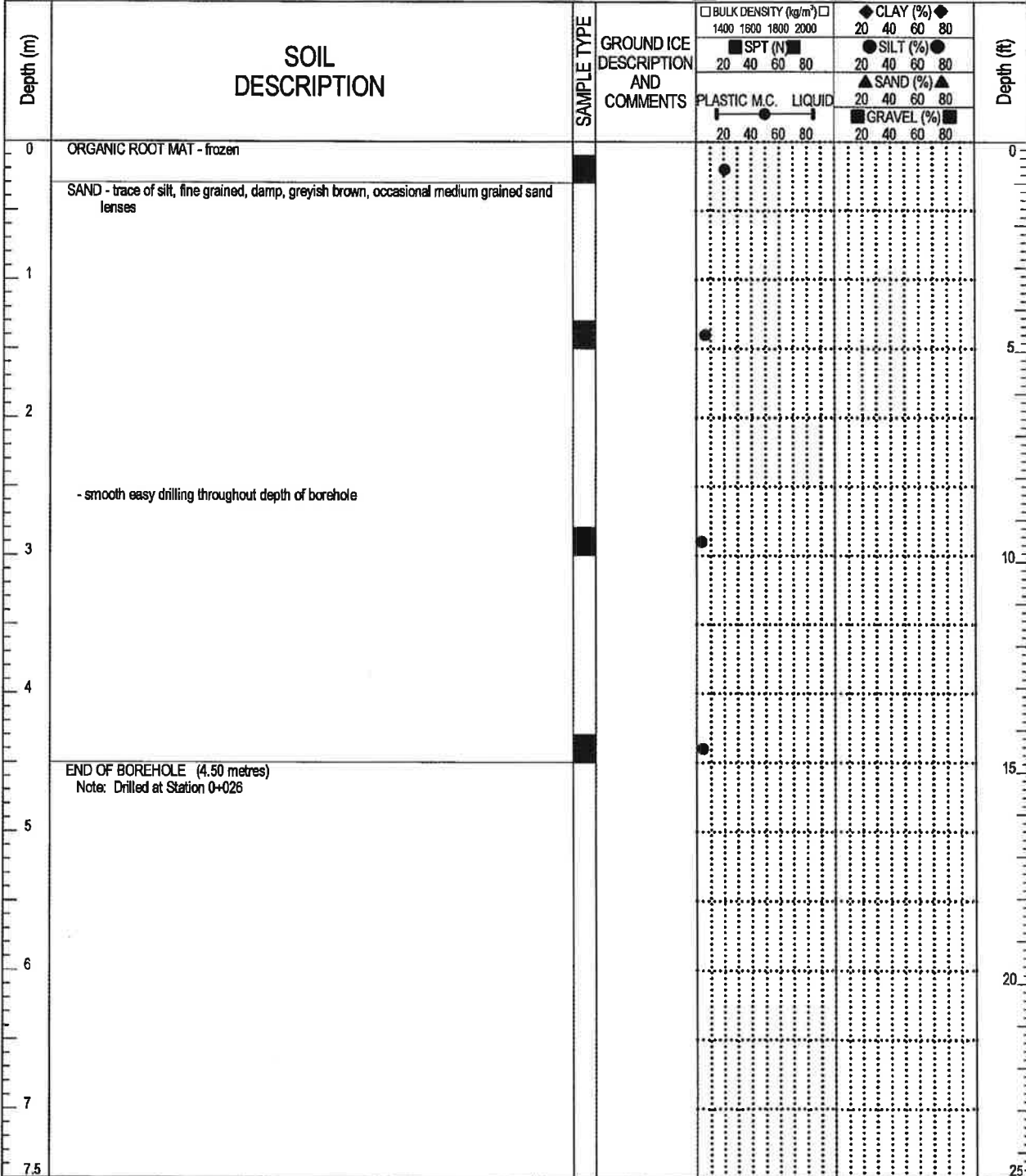
COMPLETION DEPTH: 4.5m


COMPLETE: 15/04/24

Page 1 of 1

Tagish Avenue Extension	Northern Vision Development LP	BOREHOLE NO: BH07
Bennett Lake Residential Development	Drill: Nodwell Mounted CME 75	PROJECT: W/14103563-01
Carcross, Yukon	6670491N; 515690E; Zone 8	

SAMPLE TYPE	<input checked="" type="checkbox"/> DISTURBED	<input type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> A-CASING	<input type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> CORE
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input checked="" type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

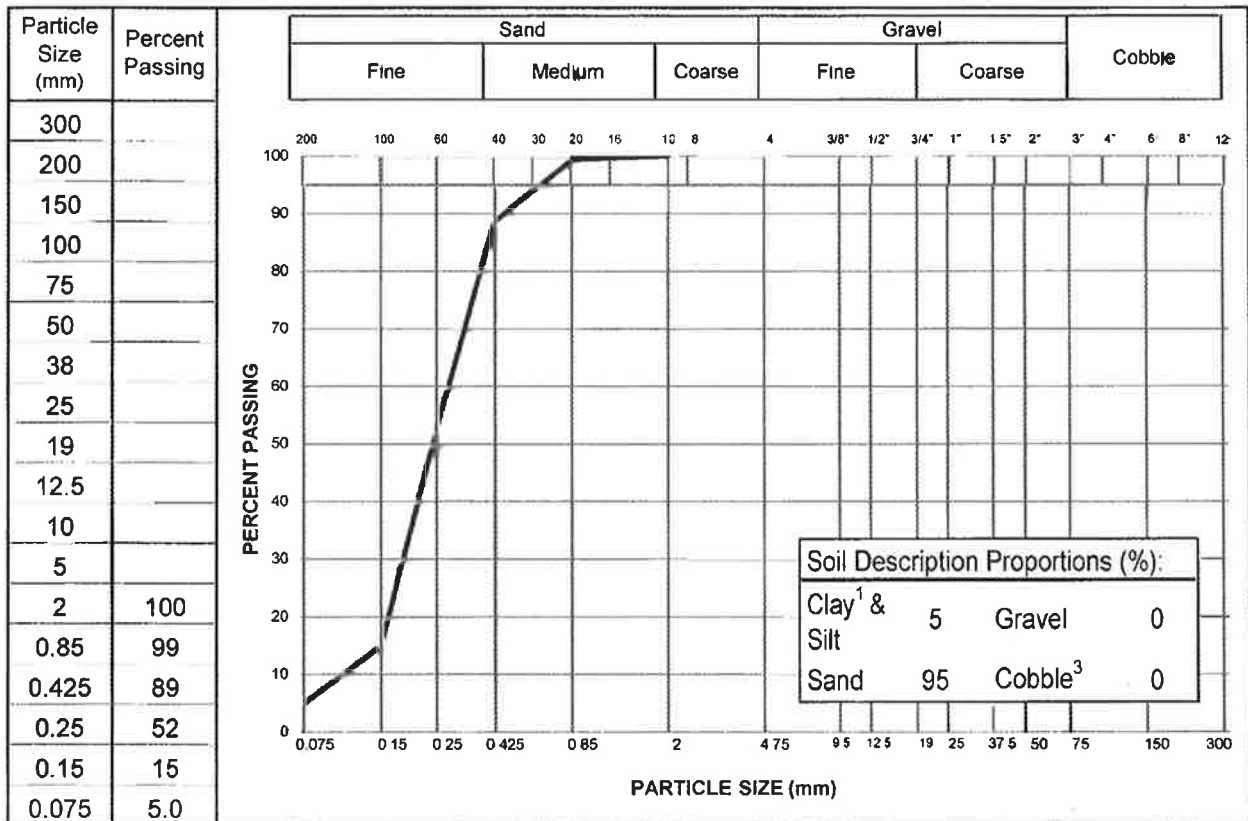


 TETRA TECH EBA	LOGGED BY: MP	COMPLETION DEPTH: 4.5m
	REVIEWED BY: JRT	COMPLETE: 15/04/24
	DRAWING NO:	Page 1 of 1

PARTICLE SIZE ANALYSIS REPORT

ASTM D422, C136 & C117

Project:	Tagish Avenue Extension	Sample No.:	Mixed Samples
Project No.:	W14103563-01	Material Type:	
Site:	Carcross, YT	Sample Loc.:	BH01 - BH07
Client:	Northern Vision Development	Sample Depth:	0.3 - 4.5 m
Client Rep.:	Taylor Love	Sampling Method:	Grab
Date Tested:	April 28, 2015	By:	AMT
Date Tested:	April 28, 2015	Date sampled:	April 24, 2015
Soil Description ² :	SAND - trace silt	Sampled By:	MCP
		USC Classification:	Cu: 2.5 Cc: 1.1
Moisture Content:	5.7%		



- Notes:
- ¹ The upper clay size of 2 um, per the Canadian Foundation Engineering Manual
 - ² The description is visually based & subject to EBA description protocols
 - ³ If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: C.E.T.

Data presented hereon is for the sole use of the stipulated client. Tetra Tech EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of Tetra Tech EBA. The testing services reported herein have been performed to recognized industry standards, unless noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, Tetra Tech EBA will provide it upon written request.

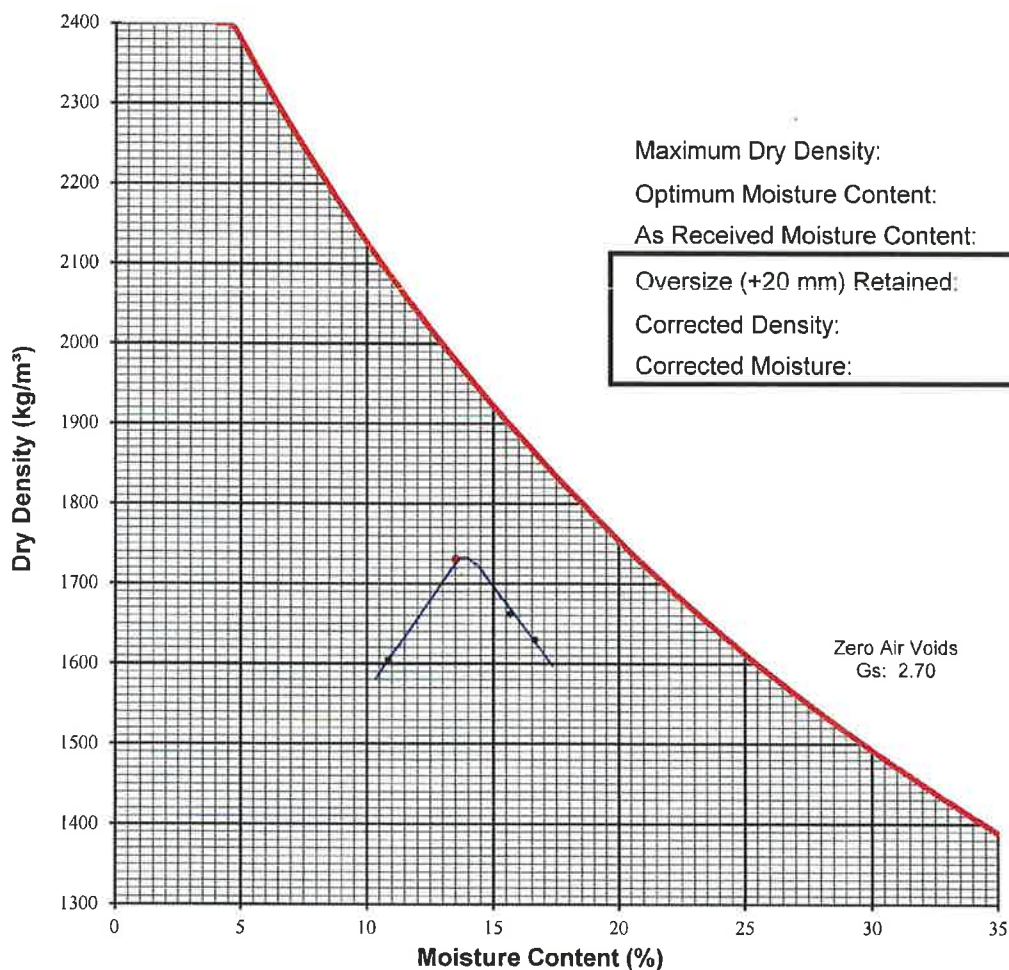


MOISTURE-DENSITY RELATIONSHIP (Proctor) REPORT

ASTM D698 Standard

Project: Tagish Avenue Extension - Carcross, YT
 Client: Northern Vision Development
 Attention: Taylor Love
 Project No.: W14103563-01
 Description: SAND - trace silt
 Source: _____

Sample No.: Mixed Samples
 Sampled By: MCP
 Sample Date: April 24, 2015
 Test Date: April 27, 2015
 Preparation: Oven Dry
 Compaction: Manual



Remarks: _____

Reviewed By: C.E.T.

Data presented hereon is for the sole use of the stipulated client. Tetra Tech EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of Tetra Tech EBA. The testing services reported herein have been performed to recognized industry standards, unless noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, Tetra Tech EBA will provide it upon written request.



SECTION 2

Addenda to Tender



CARCROSS TAGISH DEVELOPMENT CORPORATION

BENNETT LAKE DEVELOPMENT - TAGISH AVE.

CARCROSS TAGISH DEVELOPMENT CORPORATION

**BENNETT LAKE DEVELOPMENT
TAGISH AVENUE**

**Reference No: 3409.0009.01
CCDC 4 (2011) UNIT PRICE CONTRACT**

ADDENDUM NO. 1

Date: August 25, 2015

Tenderers are advised that Addendum No. 1 to Contract "Bennett Lake Development – Tagish Avenue, Carcross Tagish Development Corporation" is hereby issued by the Carcross Tagish Development Corporation. This addendum shall be incorporated into and form part of the tender documents as if it had been written into the original. Tenderers must confirm receipt of this addenda on page 1 of the Form of Tender.

The purpose of the additions, alterations and deletions of this addendum is to give force and effect the following:

Invitation to Tenderers:

Tender Documents and reference material for this contract will be distributed by hardcopy and electronically in digital format (pdf format) by Urban Systems Ltd.

To access the digital format, please follow the following link:

"ftp://TagishAvenue:Tenderdocs@ftp.urbansystems.ca"

Username: TagishAvenue

Password: Tenderdocs

Note that this FTP site and username will be deleted when the tender closes.

Instruction to Tenderers:

Section 2.0 – Submission Requirements: The location for the submission of tenders is revised.

Remove and replace clause 2.1 with the following:

"2.1 Each Tender shall be addressed to the *Owner* in a sealed envelope clearly marked with the Tenderer's name, the *Contract* Name and the *Contract* Reference Number. The sealed envelope containing the fully executed Form of Tender, and all required documents, shall be delivered before the *Tender Closing* to the *Owner* in accordance with the Invitation to Tender and the Instructions to Tenderers at the following location:

Address: CARCROSS TAGISH DEVELOPMENT CORPORATION
409 Black Street
Dana Naye Ventures Building
Whitehorse, Yukon Y1A 2N2

Attention: Justin Ferbey, CEO"

General Requirements:

Section 01 35 43 – Environmental Procedures, Clause 1.4, Site Clearing and Plant Protection

Add: "1.4.4 The dune vegetation is considered fragile. The removal of vegetation can lead to erosion and destabilization of the dunes. The contractor shall minimize the disturbed footprint through the use of good construction procedures. For example, stockpiling, construction vehicles and vehicle parking should not damage vegetation that would otherwise remain upon completion of the Works."

Clarifications to Bidders:

1. **Gabion Wire Mesh:** The gabion wall wire mesh can either be hot dip galvanized or PVC covered wire all in accordance with the Specifications, Section 31 36 13 Gabions.

END OF ADDENDUM #1

SECTION 3

Norcope Construction Group's Tender Submission

Form of Tender, Bonding and Insurance



CARCROSS TAGISH DEVELOPMENT CORPORATION

BENNETT LAKE DEVELOPMENT - TAGISH AVE.

FORM OF TENDER

FORM OF TENDER

CONTRACT: BENNETT LAKE DEVELOPMENT - TAGISH AVE.

REFERENCE NO. 3409.0009.01

TO: CARCROSS TAGISH DEVELOPMENT CORPORATION
(HEREINAFTER CALLED "THE OWNER")

1.0 WE, THE UNDERSIGNED:

- 1.1 have received and carefully reviewed all of the *Tender Documents*, including the Instructions to Tenderers, and the following addenda:

NO 1 (AUG 25 2015)
(ADDENDA, IF ANY)

- 1.2 have full knowledge of the *Place of the Work*, and the *Work* required; and
1.3 have complied with the Instructions to Tenderers; and

2.0 ACCORDINGLY WE HEREBY AGREE:

- 2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Tender Documents*, in strict compliance with the *Tender Documents*; and
2.2 to achieve *Substantial Performance* of the *Work* on or before October 29, 2015; and
2.3 to do the *Work* for the *Tender Price*. For the purposes of tender comparison, our offer is to complete the *Work* for the *Tender Price* as set out on Appendix "A" of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Prices*, and excludes *Value Added Taxes*.

3.0 WE CONFIRM:

- 3.1 that we understand and agree that the quantities as listed in the *Schedule of Prices* are estimated, and that the actual quantities may vary.
3.2 that the following appendices are attached to and form a part of this Tender:
3.2.1 the *Tender Deposit* as required by Article 8.0 of the Instructions to Tenderers; and
3.2.2 the appendices as listed in Article 4.7 of the Instructions to Tenderers.
3.3 This Tender is made without any connection, collusion, knowledge, comparison of figures or arrangement with any person or persons submitting a Tender for this same *Contract*.

4.0 WE AGREE:

- 4.1 that this Tender shall be irrevocable and open for acceptance by the *Owner* for a period of forty-five (45) calendar days from the day following the *Tender Closing*, even if the tender

FORM OF TENDER

of another Tenderer is accepted by the *Owner*. If within this period, the *Owner* delivers a *Notice of Award* by which the *Owner* accepts our Tender, we shall:

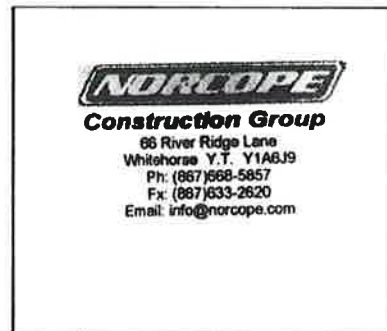
- 4.1.1 within ten (10) *Business Days* of receipt of the written *Notice of Award*, deliver to the *Owner* the following:
 - a. a *Contract Schedule*, as provided by GC 3.5 of the General Conditions to the *Contract*;
 - b. a letter of account from the Workers' Compensation Board – Yukon Territory indicating that the Tenderer's account with Workers' Compensation Board – Yukon Territory is in good standing. This letter is to be current and dated within ten (10) *Business Days* prior to the *Tender Closing*;
 - c. a copy of the insurance policies as specified in GC 11.1 – INSURANCE of the General Conditions to the *Contract* indicating that all such insurance coverage is in place;
 - d. such bond(s) as set out in Article 9.0 of the Instructions to Tenderers;
 - e. such further and other documents as required by the *Tender Documents*;
- 4.1.2 within fifteen (15) *Business Days* of receipt of the written *Notice of Award*, execute the *Contract Documents* in triplicate.
- 4.1.3 within two (2) *Business Days* of receipt of written *Notice to Proceed*, or such longer time as may be otherwise specified in the *Notice to Proceed*, commence the *Work*; and
- 4.2 that, if we receive written *Notice of Award* of this *Contract* and, contrary to Article 4.1 of this Form of Tender, we:
 - 4.2.1 fail or refuse to deliver the documents as specified by Article 4.1.1 of this Form of Tender; or
 - 4.2.2 fail or refuse to commence the *Work* as required by the *Notice to Proceed*, or
 - 4.2.3 fail or refuse to execute the *Contract Documents* as specified by Article 4.1.2 of this Form of Tender,
 - 4.2.4 then such failure or refusal will be deemed to be a refusal by us to enter into the *Contract* and the *Owner* may, on written notice to us, award the *Contract* to another party. Furthermore, the *Owner* shall be at liberty to enforce the *Owner's Remedies*. It is agreed and acknowledged that the *Owner's Remedies* would include the forfeiture of the *Tender Deposit* submitted by us with our Tender.
- 4.3 that, if we receive written *Notice of Award* of this *Contract*:

FORM OF TENDER

- 4.3.1 we shall furnish at our expense a *Performance Bond* and *Labour and Materials Payment Bond*. For the purposes of this Article, both of these bonds shall be referred to as the "Bonds";
- 4.3.2 the *Performance Bond* shall guarantee the faithful performance of the *Contract*, and in default thereof, shall protect the *Owner* against any losses or damage arising by reason of our failure to faithfully perform the *Contract*;
- 4.3.3 the Bonds shall be issued by a Surety Company licensed in the Yukon Territory and satisfactory to the *Owner* in the amount of 50% of the *Contract Price*; and
- 4.3.4 the *Performance Bond* shall remain in force as a maintenance Bond for the *Maintenance Period* as defined in the General Conditions to the *Contract*.

5.0 OUR ADDRESS AND CONTACT INFORMATION IS AS FOLLOWS:

Address: 66 RIVER RIDGE
Phone: 867 668 5857
Fax: 867 683 2620
E-mail: info@norcope.com
Attention: _____



This Tender is executed this 2 day of Sept., 20 .

Contractor:

Norcope Env Hd

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)

ARTICLE A-4 CONTRACT PRICE

FORM OF TENDER - Appendix "A"
 (Refer to Invitation to Tenders for description)

SCHEDULE OF PRICES

Tenderers are directed to Section 01 22 17 of the General Requirements for the Measurement and Payment clauses for each of the item listed in the Schedule of Quantities and Prices.

All prices and Quotations including the *Tender Price* shall include all taxes, but shall not include *Value Added Tax*.
 (*Value Added Tax* shall be shown separately.)

Item	M&P	Description	Est Qty	Unit	Unit Price	Extended
1.0 General						
1.1	2.1	Mobilization and De-mobilization	1	LS	\$ 14 100	\$ 14 100
1.2	2.2	Temporary Site Fencing	95	l.m.	\$ 10	\$ 950
2.0 Earthworks						
2.1	2.3	Clearing and Grubbing	1	LS	\$ 12 000	\$ 12 000
2.2	2.4	Common Excavation	5,990	cu.m.	\$ 6.50	\$ 38 935
2.3	2.5	Common Fill	5,990	cu.m.	\$ 6.50	\$ 38 935
2.4	2.6	Imported Subgrade Fill	360	cu.m.	\$ 25.00	\$ 9 000
2.5	2.14	Gabion Retaining Wall	74	cu.m.	\$ 220	\$ 16 280
3.0 Roadworks						
3.1	2.7	Bitumous Surface Treatment	4,125	sq.m.	\$ 18.00	\$ 74 250
3.2	2.8	Granular Base	5,600	sq.m.	\$ 14.10	\$ 78 960
3.3	2.8	Granular Sub-base	5,950	sq.m.	\$ 10.50	\$ 62 475
3.4	2.9	Sub-grade Preperation	5,950	sq.m.	\$ 1.50	\$ 8 925
4.0 Drainage						
4.1	2.10	Open Bottom Catch Basin	4	ea	\$ 2850	\$ 11 400
4.2	2.11	Rock Armouring - Ditch	18	ea	\$ 440	\$ 7 920
4.3	2.11	Rock Armouring - Slope	135	sq.m.	\$ 120	\$ 16 200
4.4	2.12	Straw Mat and Hydroseed (Optional Work)	1,917	sq.m.	\$ 9.00	\$ 17 253
5.0 Site Amenities						
5.1	2.13	Signs	5	ea	\$ 1000	\$ 5 000
Contingency Allowance						\$ 20,000.00
Subtotal						\$ 476 492.96
GST (5%)						\$ 23 824.65
Total						\$500 317.60 EB

* NOTE. 70% OF ALL HOURS WILL BE OFFERED TO (FIRST CHOICE)
 CTFN THRU AN AGREEMENT WITH ANDY CARVILL

FORM OF TENDER

FORM OF TENDER – APPENDIX “B”

RELEVANT EXPERIENCE OF SUPERINTENDENT

Name of Superintendent: JOSH SMITH - 15 YEARS EXP.

Type of Project: PIPING / ROAD CONSTRUCTION
Dates: 2012
Project Name: WHISTLEBEND 1 AND 2
Responsibility: DEVELOP FULL UNDERGROUND SERVICES + ROADWAYS
Employer: YTG

Type of Project: PIPING / ROAD CONSTRUCTION
Dates: 2014 - ONGOING
Project Name: VILLAGE OF MAYO PHASE 1 & 2
Responsibility: DEVELOP FULL UNDERGROUND SERVICES + ROADWAYS
Employer: YTG

Type of Project: HIGHWAY
Dates: 2014
Project Name: ROBERT CAMPBELL II Y
Responsibility: BUILD NEW HIGHWAY
Employer: YTG

FORM OF TENDER

FORM OF TENDER – APPENDIX “E”

(Refer to Invitation to Tenders for description)

PRELIMINARY CONSTRUCTION SCHEDULE

INDICATE SCHEDULE WITH BAR CHART WITH MAJOR ITEM DESCRIPTIONS AND TIME

MILESTONE DATES SEP 20, 25, 30

ACTIVITY	TENDER CONSTRUCTION SCHEDULE									
	(Indicate units of duration, e.g. weeks, months, etc.)									
	1	2	3	4	5	6	7	8	9	10
MOB / FENCING (1 day)	█									
EARTHWORKS (11 days)	█	█								
ROAD WORKS (8 days)		█	█							
DRAINAGE (5 days)			█	█						
SIGNS (1 day)				█						

ESTIMATED CONSTRUCTION COMPLETION DATE: SEP 30 (20 - 23 DAYS FROM START)

END OF SECTION



**YUKON WORKERS'
COMPENSATION
HEALTH AND
SAFETY BOARD**

401 STRICKLAND STREET
WHITEHORSE YUKON
Y1A 5N8
TEL: (867) 667-5645
FAX: (867) 393-6279
TOLL FREE: 1-800-661-0443

August 12, 2015

Customer Number 06011-07484

CORPORATION OF THE CITY OF WHITEHORSE
2121 - 2ND AVENUE
WHITEHORSE YUKON Y1A 1C2
CANADA

Attention:

Dear Sir/Madam:

LETTER OF CLEARANCE - ASSESSMENT

RE: NORCOPE ENTERPRISES LTD. o/a NORCOPE ENTERPRISES LTD.

This letter is to confirm that the above-referenced employer has complied with both the payroll reporting and payment requirements of the Yukon Workers' Compensation Health and Safety Board (YWCHSB) and is in good standing until 30-SEP-2015.

Please note that this is proof of insurance. It is not a statement that this company is in compliance with Occupational Health and Safety (OH&S) requirements. To ensure your and your subcontractors' compliance with the OH&S Act and regulations, please refer to them on our website (www.wcb.yk.ca)

If you have any questions, please call me at 867-667-5095 or you may use our toll free number: 1-800-661-0443 ext. 5095.

Employer Services Officer



Northern Safety Network Yukon
478 Range Road
Whitehorse, Y.T., Y1A 3A2
Phone: 867-633-6673
Fax: 867-633-6391
www.yukonsafety.com

August 13, 2015

Letter of Good Standing

Company Name: Norcope Enterprises Ltd.
Address: 66 River Ridge Lane
Whitehorse YT
Y1A 6J9

Certificate No: 2006 - 81

Please be advised that the above named applicant is an active participant in the COR program and holds a valid Certificate of Recognition (COR) through the Northern Safety Network Yukon. An external audit has recently been completed by an NSNY endorsed external auditor.

Issue date: August 13, 2015

Valid To: September 13, 2015

Sincerely,

A handwritten signature in cursive script that reads "Andria J".

Andria Janiga
COR Coordinator
Cc: Sheila Sergy, Executive Director



Performance Bond – CCDC

Standard Construction Document
CCDC 221 - 2002
Bond No.: 0270000281



Bond Amount: \$227,106.07

NORCOPE ENTERPRISES LTD. as Principal, hereinafter called the Principal, and **ROYAL & SUN ALLIANCE INSURANCE COMPANY OF CANADA**, 18 York Street, Suite 800, Toronto, Ontario, M5J 2T8, a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship in all Provinces and all Territories in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto **CARCROSS TAGISH FIRST NATIONS** as Obligee, hereinafter called the Obligee, in the amount of **TWO HUNDRED TWENTY SEVEN THOUSAND, ONE HUNDRED SIX ----- 07/100 Dollars (\$227,106.07)** lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS the Principal has entered into a written contract with the Obligee, dated the **10TH** day of **SEPTEMBER, 2015** for

BENNETT LAKE DEVELOPMENT - TAGISH AVENUE

hereinafter referred to as the Contract.

The Condition of this obligation is such that, if the Principal shall promptly and faithfully perform the Contract then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever the Principal shall be, and declared by the Obligee to be, in default under the Contract, the Obligee having performed the Obligee's obligations thereunder, the Surety shall promptly:

- 1) Remedy the default, or;
- 2) Complete the Contract in accordance with its terms and conditions or;
- 3) Obtain a bid or bids for submission to the Obligee for completing the Contract in accordance with its terms and conditions and upon determination by the Obligee and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as work progresses (even though there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to pay to complete the Principal's obligations in accordance with the terms and conditions of the Contract and to pay those expenses incurred by the Obligee as a result of the Principal's default relating directly to the performance of the work under the Contract, less the balance of the Contract price; but not exceeding the Bond Amount. The balance of the Contract price is the total amount payable by the Obligee to the Principal under the Contract, less the amount properly paid by the Obligee to the Principal, or;
- 4) Pay the Obligee the lesser of 1) the Bond Amount or 2) the Obligee's proposed cost of completion, less the balance of Contract price.

It is a condition of this bond that any suit or action must be commenced before the expiration of two (2) years from the earlier of 1) the date of Substantial Performance of the Contract as defined in the lien legislation where the work under the Contract is taking place, or, if no such definition exists, the date when the work is ready for use or is being used for the purpose intended, or 2) the date on which the Principal is declared in default by the Obligee.

The Surety shall not be liable for a greater sum than the Bond Amount.

No right of action shall accrue on this Bond, to or for the use of, any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated the **18TH** day of **SEPTEMBER, 2015**.

SIGNED AND SEALED in the presence of:

NORCOPE ENTERPRISES LTD.

Principal

ROYAL & SUN ALLIANCE INSURANCE COMPANY OF CANADA

JEANETTE LAWRENCE, Attorney-in-Fact

Labour and Material Payment Bond

(Trustee Form)

Standard Construction Document

CCDC 222 - 2002



Bond No.: 0270000281

Bond Amount: \$227,106.07

NORCOPE ENTERPRISES LTD. as Principal, hereinafter called the Principal, and **ROYAL & SUN ALLIANCE INSURANCE COMPANY OF CANADA**, 18 York Street, Toronto, Ontario, M5J 2T8, a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship in all Provinces and all Territories in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto **CARCROSS TAGISH FIRST NATIONS** as Oblige, hereinafter called the Oblige, in the amount of **TWO HUNDRED TWENTY SEVEN THOUSAND, ONE HUNDRED SIX ----- 07/100 Dollars (\$227,106.07)** lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS the Principal has entered into a written contract with the Oblige, dated the **10TH** day of **SEPTEMBER, 2015** for

BENNETT LAKE DEVELOPMENT - TAGISH AVENUE

in accordance with the Contract Documents submitted, and which are by reference made part thereof and are hereinafter referred to as the Contract.

The Condition of this obligation is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, by the prevailing rates in the equipment marketplace in which the work is taking place.
2. The Principal and the Surety, hereby jointly and severally agree with the Oblige, as Trustee, that every Claimant who has not been paid as provided for under the terms of its contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its contract with the Principal and have execution thereon. Provided that the Oblige is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Oblige or by joining the Oblige as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Oblige against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Oblige by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them may use the name of the Oblige to sue on and enforce the provisions of this Bond.
3. It is a condition precedent to the liability of the Surety under this Bond that such Claimant shall have given written notice as hereinafter set forth to each of the Principal, the Surety and the Oblige, stating with substantial accuracy the amount claimed, and that such Claimant shall have brought suit or action in accordance with this Bond, as set out in sub-clauses 3 (b) and 3 (c) below. Accordingly, no suit or action shall be commenced hereunder by any Claimant:
 - a) unless such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Oblige, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or Territory in which the subject matter of the Contract is located. Such notice shall be given:
 - i) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal, or under the lien Legislation applicable to the Claimant's contract with the Principal, whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal;
 - ii) in respect of any claim other than for the holdback or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal;
 - b) after the expiration of one (1) year following the date on which the Principal ceased work on the Contract, including work performed under the guarantees provided in the Contract;

Labour and Material Payment Bond

(Trustee Form)

Standard Construction Document

CCDC 222 - 2002



- c) other than in a Court of competent jurisdiction in the Province or Territory in which the work described in the Contract is to be installed or delivered as the case may be and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.
4. The Surety agrees not to take advantage of Article 2365 of the Civil Code of the Province of Quebec in the event that, by an act or an omission of a Claimant, the Surety can no longer be subrogated in the rights, hypothec and privileges of said Claimant.
5. Any material change in the Contract between the Principal and the Obligees shall not prejudice the rights or interest of any Claimant under this Bond, who is not instrumental in bringing about or has not caused such change.
6. The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of claims made under the applicable lien legislation or legislation relating to legal hypothecs, whether or not such claim is presented under and against this Bond.
7. The Surety shall not be liable for a greater sum than the Bond Amount.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated the 18TH day of SEPTEMBER, 2015.

SIGNED AND SEALED in the presence of:

NORCOPE ENTERPRISES LTD.

Principal

ROYAL & SUN ALLIANCE INSURANCE COMPANY OF CANADA

JEANETTE LAWRENCE, Attorney-In-Fact



WILSON M. BECK
INSURANCE SERVICES (KELOWNA) INC.

CERTIFICATE OF INSURANCE
Certificate No. 2014-25

CERTIFICATE HOLDER: Urban Systems Ltd.
 550-1090 Homer Street Vancouver, BC V6B 2W9

DESCRIPTION: Bennett Lake Development - Tagish Avenue

NAME OF INSURED: Norcope Enterprises Ltd.

This is to certify that insurances as described herein, have been arranged through this office for the insured named above on whose behalf this Certificate is executed and we hereby certify that such insurances are in full force as of this date, but only with respect to the type(s) of insurance for which a policy number, policy period, and limits of liability or amount is shown. Aggregate limits shown may have been reduced by paid claims.

SCHEDULE OF INSURANCE

TYPE OF INSURANCE	COMPANY AND POLICY NUMBER	POLICY TERM (MM/DD/YY)	LIMITS OF LIABILITY AMOUNT OF INSURANCE
<input checked="" type="checkbox"/> Commercial General Liability including Non-owned Automobile (per occurrence)	Certain Underwriters as arranged by I3 Underwriting Managers Inc. Policy #I3-2230	Effective Date 09/23/15 Expiry Date 09/30/15	Bodily Injury & Property Damage Inclusive / Aggregate (Products Completed Operations only) \$5,000,000.00 \$5,000,000.00
PARTICULARS OF INSURANCE			
<input checked="" type="checkbox"/> Urban Systems Ltd. and Carcross Tagish Development Corporation as an Additional Insured (s) <input checked="" type="checkbox"/> 30 Days Notice of Cancellation or Material Change to Urban Systems Ltd. and Carcross Tagish Development Corporation <input checked="" type="checkbox"/> Severability of Interest or Cross Liability <input checked="" type="checkbox"/> 12 Months Completed Operations Extension			
<input checked="" type="checkbox"/> Builders Risk	Peace Hills General Insurance Policy #K15346	Effective Date 09/23/15 Expiry Date 10/23/15	\$444,212.00 At the Site \$100,000.00 Transit \$100,000.00 Temporary Locations
PARTICULARS OF INSURANCE			
<input checked="" type="checkbox"/> All Risk, including Flood & Earthquake <input checked="" type="checkbox"/> Urban Systems Ltd. and Carcross Tagish Development Corporation as an Additional Insured (s) <input checked="" type="checkbox"/> 30 Days Notice of Cancellation or Material Change to Urban Systems Ltd. and Carcross Tagish Development Corporation			
<input checked="" type="checkbox"/> Contractors Equipment	Economical Insurance Group Policy #004955271	Effective Date 09/23/15 Expiry Date 09/30/15	\$5,000,000.00 Catastrophe Limit
<input checked="" type="checkbox"/> Indicates that the Coverage/Endorsement indicated is included			

TERMS AND CONDITIONS

This document is furnished as evidence to the Certificate holder named herein that the policy(ies) described herein have been effected to provide coverage as shown. Limits may have been reduced by paid claims. This Certificate is subject to all limitations, exclusions and conditions of the above policy or policies as they now exist, or may hereafter be endorsed. This document is furnished to you as a matter of information only. The issuance of this document does not make the person or organization to whom it is issued an additional insured, nor does it modify in any manner the contracts of insurance between the Insured and the Insurers. Any amendment, change or extension of such contracts can only be effected by specific endorsement. Should the contracts of insurance be cancelled, assigned or changed during the policy period in such manner as to affect this document, the Insurers will endeavour to give notice to the holder of this document, but failure to give such notice shall impose no obligation of any kind upon us or upon the Insurers.

Dated: September 23, 2015;JE

Wilson M. Beck Insurance Services (Kelowna) Inc.

E. & O.E.

Authorized to sign on behalf of Insurers

Lower Mainland
 #303-8678 Greenall Avenue
 Burnaby, BC V5J 3M6
 Phone: (604) 437-6200
 Fax: (604) 437-5347

Southern Interior
 InVue Tower, #107 – 2040 Springfield Rd.
 Kelowna, BC V1Y 9N7
 Phone: (250) 763-3840
 Fax: (250) 762-9633

Alberta
 Suite 640 – 1414 8th Street SW
 Calgary, AB T2R 1J6
 Phone: (403) 229-2060
 Fax: (403) 229-2021

