

DISTRICT OF HUDSON'S HOPE

AGENDA

Council Chambers

Tuesday, October 13, 2015 at 6:00 PM

1. Call to Order:

2. Notice of New Business:

Mayor's List

Councillors Additions

CAO's Additions

3. Adoption of Agenda by Consensus:

4. Declaration of Conflict of Interest:

5. Adoption of Minutes:

M1 September 28th, 2015 Regular Council Meeting Minutes

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6. Business Arising Out of the Minutes:

7. Delegations:

D1 Eileen Gallant – Questions about Budget
(Town Logo Costs/Flowers & Wages/Budget)

Page 6

8. Staff Reports:

SR1 Visitor Centre Yearend Report

Page 9

SR2 MOU between HH RCMP and HH Fire Rescue

Page 15

SR3 Vaping

Page 17

SR4 CAO Actions and other Updates

Page 19

SR5 Strategic Wildfire Prevention-Approval of Operational Fuel Treatment (SWPI-512: Beryl Prairie Operational Treatment, 2015)

Page 100

10. Correspondence:

C1 Letter from Honourable Stephanie Cadieux – MCFD

Page 102

C2 NH-Chetwynd Primary Care Clinic

Page 103

C3	Climate Change	Page 105
C4	1641345-201501 Agency Referral Letter – Mines Act Permit – Leigh Summer	Page 110
C5	A Note of Thanks – Fay Lavallee	Page 149
C6	BC Assessment Re-Org Letter	Page 151
C7	CFIB – Small Business Saturday letter to Councillor	Page 156
C8	Explorer Solutions Airport Familiarization Seminar Invitation – November 9	Page 157
C9	LGMA Fall E-Learning Webinar Series Available	Page 159
C10	Responding to concerns raised at UBCM – MJTST	Page 160
C11	Water Analysis and Results-Lynx Creek GW Solutions	Page 162
C12	BC Hydro Awards Site C Worker Accommodation Contract to ATCO Two Rivers Lodging Group	Page 178
C13	BC Hydro-WAC Bennett dam crest closure-October 11, 2015	Page 179

11. Reports by Mayor & Council on Meetings and Liaison Responsibilities

12. Old Business:

13. New Business:

14. Public Inquiries:

15. Adjournment:



REGULAR COUNCIL MEETING
September 28, 2015
6:00 P.M.
MUNICIPAL HALL COUNCIL CHAMBERS

Present: Council: Mayor Gwen Johansson
Councillor Caroline Beam
Councillor Kelly Miller
Councillor Dave Heiberg
Councillor Nicole Gilliss
Councillor Heather Middleton

Staff: Deputy Clerk, Dwylla Moraice Budalich
Director of Protective Services, Robert Norton

Absent: Councillor Travous Quibell
CAO, Tom Matus
Public Works Foreman, Layton Bressers

Other: 4

CALL TO ORDER:

The meeting called to order at 6:00 p.m. with Mayor Johansson presiding.

1. **NOTICE OF NEW BUSINESS:**
Mayors Additions:
Councillors Additions:
Staff Additions:

2. **ADOPTION OF AGENDA BY CONSENSUS:**
The September 28, 2015 Regular Council meeting agenda was adopted by consensus.

3. **DECLARATION OF CONFLICT OF INTEREST:**

4. **ADOPTION OF MINUTES:**

M1 September 28, 2015 Regular Council Meeting Minutes

RESOLUTION NO. 163

0550-01

M/S Councillors Middleton/Miller

THAT:

"The minutes of the September 14, 2015 Regular Council Meeting be adopted as amended."

CARRIED

5. **BUSINESS ARISING OUT OF THE MINUTES:**

BA1 Paquette Apartments

Council is inquiring if everything is still going according to schedule and will be completed before the snow is upon us.

0890-00

BA2 Diarized Items

List is getting long need to work on items.

0550-01

MI

- BA3 **Cops for Cancer** 0230-01
- Arrived and went to school
 - Gave presentation to kids
 - Had a lunch at the Community Hall and then were on their way again.
- BA4 **Arena Ice** 0810-20
- Scheduled opening date is still October 5, 2015
 - Policy to be drafted for ice to go in after Fall Fair
 - Council suggested it is not after Fall Fair because if the dates ever move for Fall Fair then the ice could potential go in later or really early?
 - Suggested that a date in September be established.
 - Once draft of policy presented to Council date will be decided.
- BA5 **CAO appointment to Partnership Committee** 6660-20
- While down in Vancouver at UBCM our mayor was told by the Pouce Coupe Mayor that he would be advocating for all CAO's to be on the committee rather than only one appointed.
6. **DELEGATION:**
- D1 **Hudson's Hope RCMP Policing Report for August and September 2015** 7400-01
FOR INFORMATION
- D2 **Yellowhead Road and Bridge (North Peace) Ltd. – Winter Maintenance** 0510-20
Presentation
FOR INFORMATION
7. **STAFF REPORTS:**
- SR1 **Surplus Equipment Sale** 1090-01
RESOLUTION NO. 164
M/S Councillors Heiberg/Miller
"Council approve the sale of the following surplus equipment
1998 Chevrolet 4x4 Truck
1996 GMC Truck
1997 GMC Top Kick Dump Truck
Athley Mobil Sweeper
Homelite Gas Generator
Yamaha Get Set
Drill Press
Lift Gate
John Deere Snowblower
by sealed bid "as is, where is" process."
CARRIED
- SR2 **Council Chamber Monitors** 1065
- Monitor has arrived just need to be hooked up
 - Request help to get Mayors PRRD email forwarded to DOHH email
 - Request all setting be standardized on all DOHH computers/laptops
- Staff to contact IT support to get solutions to requests**

8. **BYLAWS:**

- B1 **Fees and Charges Bylaw No. 852, 2015** 3900-20
RESOLUTION NO. 165
M/S Councillors Middleton/Gilliss
"Council to adopt the Fees and Charges Bylaw No. 852, 2015."
CARRIED

9. **CORRESPONDENCE:**

- C1 **PRGT – Socio-Economic Effect management Plan Update Sept 15/15** 6660-20
FOR INFORMATION
- C2 **NH – Protect your health by getting immunized** 0400-80
FOR INFORMATION
- C3 **Nakusp & District – Signed letter to Premier Clark** 6660-20
FOR INFORMATION
- C4 **Destination BC – Visitor Services Network Base Funding** 0400-30
FOR INFORMATION
- C5 **PRGT – Activity Update #28** 6660-20
FOR INFORMATION
- C6 **2015 LNG in BC Conference-October 14-16** 0390-01
FOR INFORMATION
- C7 **Coastal GasLink – Proposed Morice River North Alternate Route** 6660-20
FOR INFORMATION
- C8 **Ministry of Environment – Hudson's Hope water quality issue** 0400-20
5600-05
 - Last samples results are back and were sent to GW Solution to summarize
 - August 27th – landslide specialist from the Ministry was here
 - August 28th – another landslide occurred much bigger than last year's slide
 - Now blocks the Brenot completely – at some point the water will break thru again.
- C9 **SD # 60 Board of Trustees Joint Meeting** 0400-70
 - Lots of interest from council to attend meetingStaff to request more information on Agenda items to be covered at meeting.
RESOLUTION NO. 166
M/S Councillors Miller/Heiberg
"Council to grant travel expenses for all those council members wanting to attend the meeting on December 8th, 2015 with the School District #60 Board of Trustees in Fort St. John."
CARRIED

10. **REPORTS BY MAYOR & COUNCIL ON MEETINGS AND LIAISONS
RESPONSIBILITIES:**

- CR1 **Councillor Miller**
New Fire Hydrant 1100
- Fire hydrant on Monteith has been fixed and looks very nice
 - Great job thanks to Public Works
 - Fire hydrant on Beattie Drive (empty lot next to Sportsman's Parking lot) needs to be done
- Museum 0230-20
- New building has been erected at the museum
 - Museum fundraiser – reminder it is on October 3rd
 - Fundraiser if for the next phase of the project – lock up and displays
- CR2 **Mayor Gwen Johansson**
Meeting with Jay Hill, consultant for Progress 6660-20
- During meeting reiterated issues of Progress presence in Hudson's Hope or lack there of
 - Informed him of the second phase of apartment building that was not completed as well as other issues with accommodation in Hudson's Hope
 - Reference to the Progress camp policy
- Relationship with First Nations 0400-60
- 2012 signed MOU with West Moberly
 - To meet annual with First Nation
 - TLE – Westmo able to claim 18,000 acres – be aware of
 - Peace Moberly Track – area of community interest
 - Does it include HH? Yes
 - Ministry signed an agreement with Saulteau – while at the 7th North BC Natural Summit mayor asked about impact on HH – waiting response from Minister John Rustad
11. **OLD BUSINESS:**
12. **NEW BUSINESS:**
13. **ADJOURNMENT:**
Mayor Johansson declared the meeting adjourned (7:33 p.m.)

Diarized

	DIARY	
	<i>Conventions/Conferences/Holidays</i>	
DY1	<i>PRRD: Solid Waste Disposal</i>	05/12/14
DY2	<i>Airport Resurface and Redevelopment</i>	05/12/14
DY3	<i>Co-Op Correspondence Re: Card Lock</i>	11/12/13
DY4	<i>Capital Projects Meeting (every 6 months)</i>	10/14/14
DY5	<i>Financial Assistance Grant Policy</i>	03/09/15
DY6	<i>Special Events Contract</i>	05/01/15
DY7	<i>Herbicide/Pesticide Bylaw</i>	05/01/15
DY8	<i>2016 Budget Meetings to start in February</i>	05/11/15
DY9	<i>Wood & Tent Policy Changes</i>	07/13/15
DY10	<i>Youth Volunteer of the Year</i>	08/10/15
DY11	<i>Community Rebate – Plant a Tree</i>	08/10/15
DY12	<i>Bylaw 588 to be looked at after Bylaw 852 adopted</i>	09/14/15
DY13	<i>Policy for Ice – Putting in and taking out</i>	09/14/15

Certified Correct:

CAO/Tom Matus

Chair/Mayor Gwen Johansson

DRAFT



DISTRICT OF HUDSON'S HOPE

Delegation to Council Request Form

Name of person or group wishing to appear before Council: _____

Eileen Gallant

Subject of presentation: Budget / Town Logo / Flowers & Wages.

Purpose of presentation:

- ☐ information only
- ☐ requesting a letter of support
- ☐ requesting funding
- ☐ other (provide details)

Contact person (if different than above): _____

Telephone number: 250 - 783 - 5204

Email address: _____

Will you be providing supporting documentation? ☐ Yes ☐ No

If yes: ☐ handouts at meeting
☐ publication in agenda (one original due by 4:30 the Wednesday prior to your appearance date)

Technical requirements:

- ☐ flip chart
- ☐ multimedia projector
- ☐ laptop
- ☐ other _____

DI

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: Mayor Johansson and Council
DATE: 03 December 2014
FROM: Laurel Grimm, Deputy Clerk
SUBJECT: Municipal Signage Update

RECOMMENDATION **FOR INFORMATION**

ADMINISTRATOR COMMENTS:

Tom Matus, CAO

INFORMATION

Council approved \$ 123,287.15 for updating the Municipal Signage as per Estimate No. 161 from Creative Signworks. The total budget for Municipal Signage for 2014 is \$134,908.00.

Installation costs have ended up being higher than originally estimated due to travel costs for equipment and the number of days needed to complete the project.

Council has also added a number of items that were not included in the original quote from Signworks. This includes the Fire Hall Signs, the Logo Mesh at the Arena and the framing of the Welcome Sign, however; we would have been well within budget for all items if these additional installation costs did not arise higher than originally quoted.

Total completed works this year for Signage/Rebranding (minus the installation of the directional signage and kiosk adjustment) is under budget at \$124,178.43.

The Contractors have strongly suggested that the Directional Signs and the adjustment to the Kiosk be postponed until the spring as the possible additional fees for installation due to the frozen ground could be expensive with no guarantee that they would even be able to install them yet we would still be charged equipment and travel expenses. This would also put us over budget this year. We can budget for these additional installation costs in 2015 which would be allowable expenses within the Economic Development Capacity Building Fund grant.

The Welcome Signs and the Destination Signs will be installed this year as they can be completed without breaking ground. The Destination signs are in the final design stages and just need to be inserted into the frames.

All the completed Directional Signs will be delivered to the Municipality and stored here for the winter.

Installation costs for the Directional Signs and to raise the Kiosk on Arena Road has been quoted as follows for spring 2015:

Installation of Directionals (Invoice No.867)	\$10,931.20
Adjustment to Kiosk (Invoice No. 871)	\$ 4,760.00

If Council wishes to view any of the corresponding invoices they are available at the office. It is very unfortunate that we were not able to complete the entire project this year due to weather. Now that we are more aware as to some of the conditions and terms around installation etc. we can anticipate less challenges going into Phase 2.

Report Prepared By:

Laurel Grimm, Deputy Clerk

Year End Report from Visitor Centre

I have come to realize in my tenth season at the Visitor Centre that each year a different topic of conversation will dominate any given summer. Although Site C has always been a topic of conversation I found that this year it was presented many times that the visitor was wanting to see the Peace River "before it got flooded". They had not visited the area before and in accounting their experience of the valley and town they were particularly moved by its beauty.

The second most expressed response was from the visitor travelling South from Fort Nelson. As you are aware Highway 97 South from Fort Nelson to Fort St. John is well utilized with industry vehicles. For the visitor it is not a particular pleasant experience to be sandwiched in that traffic nor is it pleasant to find yourself at a Provincial Campground and your view across the road is of a large work camp. Many expressed that they took the first opportunity to get off Highway 97 and that was to turn right onto Highway 29 at Mile 54. And then they too, were just delighted with the valley views and their arrival into this town. I do have concern for the tourism future for that corridor of highway as word gets out what the conditions of travel are. Although that may be buoyed up by the celebration of 75 years since the construction completion of the Alaska Highway which fall in 2017/

The Playground of the Peace logo is proving to be effective in that I seem to get a lot of requests for camping. However there is no campground on Williston Reservoir in the Hudson's Hope with the exception of the private campground at Williston Resort. We had many phone calls regarding the reservation system on the municipal campgrounds for more information. There were a few snags that the campground attendants could reference more accurately than I but on the whole I think the system worked pretty well. It has been requested frequently for camping on

SRI

Williston Reservoir, even for a BC Hydro campground or recreation site as you see in other parts of the province.

I have noticed a rise in multi-day canoe travellers on the river. This could be 'last chance' users or the lure of "Playground of the Peace" or both. As well development and website info on hiking in the area has increased visitors interested in adventure recreation.

Becky and I drafted a new brochures and had Robin Holstein of RG Strategies do the graphic work. It is good to change the brochure every so often as it offers a fresh perspective and opportunity to update information. Find enclosed a copy of new brochure

Some new items for the visitor centre were

- retail items of hoodies, HH pins and key chains
- Farmer's Market location in Beattie Park worked very well
- security camera replacement on the building to two cameras. almost all the bugs have been worked out
- retailed BC Backroads Mapbook
- participated in the 2nd annual Chetwynd organized motorcycle poker ride. It brought an extra 75 visitors into this visitor centre for the day

The District of Hudson's Hope participates with Destination BC Visitor Services Network Program. As an industry-led Crown corporation, Destination British Columbia works collaboratively with tourism stakeholders across the province to coordinate marketing at the international, provincial, regional and local levels. The program provides us with an annual 'Fee for Service'. This year it has been increased to \$10,000. The Fee for Service eligible costs have been expanded to the expenses directly associated with the delivery of community visitor services; not just the operation of the Visitor Centre. These can include salaries and benefits, training and related professional development

programs, building infrastructure/improvements and other innovative outreach visitor services activities. Please see attached correspondence from Destination BC.

One of the many benefits of the network program is that we keep daily statistics of visitors and visitor information such as where they are from or what their requests are and submit to the stat program. It is then collated and each Visitor Centre in the province has access to daily, monthly and yearly stats. I have attached the stat sheets for the seasons of 2014 and 2015 for comparison and you can see that our visitor stats for the season are up in total. Not a lot but still is good to be on the plus side.

The two students I had the pleasure of working with were Christopher Fequet who has moved on to the College of New Caledonia into a criminology program and Joey Poirier has signed up for a year program in Kelowna studying electronic music production. Interesting choice for both and I'm sure they appreciated the employment at the Visitor Centre to follow these educational pursuits.

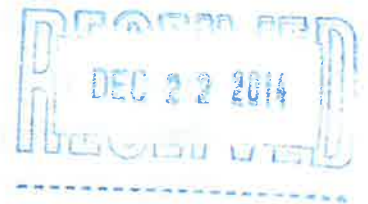
I wish you all a good Thanksgiving as the Visitor Centre closed on October 2, 2015.

Kathy Burseth

Visitor Centre Manager

Destination British Columbia

December 12, 2014



District of Hudson's Hope
PO Box 330
Hudson's Hope, BC
V0C 1V0

RE: Hudson's Hope Visitor Centre

Dear Tom Matus:

It is that time of year when we send the renewal documents for the Visitor Centre Network Program. We have made some changes to the requirements and process for 2015; changes we anticipate will provide more flexibility to the Network and community for the delivery of Visitor Services.

There are **two** documents to be reviewed, completed, signed and returned to Destination BC. The Visitor Services Agreement and the Trade-mark License Agreement are enclosed. Please note the following changes:

- Fee for Service payments will be disbursed in January upon receipt of the **signed original** Visitor Services Agreement and Trade-mark License Agreement.
- The Fee for Service eligible costs have been expanded to the expenses directly associated with the delivery of community **visitor services**; not just the operation of the Visitor Centre. These can include, but are not limited to, salaries and benefits, training and related professional development programs, building infrastructure/improvements and other innovative outreach visitor services activities.
- Notable changes in the Terms & Conditions are:
 - It will be the responsibility of the Sponsor Organization to establish hours of operation that will best serve the visitors to the community. There will no longer be a minimum requirement.
 - Sign requirement is one exterior sign; the requirement for an interior sign has been removed. Please note that it is still required that the Trade-mark poster be prominently displayed.
 - Flying the Visitor Centre flag is optional.
 - It is not required to wear a Visitor Centre uniform and Destination BC will no longer provide them.
 - Training is one of the areas that will be reviewed during 2015, therefore, Destination BC will make the online Tourism/Visitor Information Counsellor training available (at no cost) for those Visitor Centres that **do not** have a certified trainer. As well the suite of WorldHost® online workshops will also be available at no charge. These online training options will be available until our group purchases run out.

Visitor Centre Network Statistics Program 2015
HUDSON'S HOPE
Start Date: 01-05-2014
End Date: 30-09-2014

MONTHLY TOTAL	May-14	Jun-14	Jul-14	Aug-14	Sep-14	TOTAL
Administration Parties/Hour	0.87	1.70	1.91	1.75	1.16	1.47
# of hours	263.50	247.00	247.00	263.50	246.50	1,267.50
# of parties	228	421	472	461	286	1,868
# of parties-event/roaming	0	0	0	0	0	0
# of visitors	430	860	916	989	530	3,725
# of visitors-event/roaming	0	0	0	0	0	0
# of buses	0	0	0	0	0	0
Visitor Origin	207	366	409	424	266	1,672
Local Resident	57	45	64	40	45	251
BC	112	216	242	286	137	993
Alberta	7	33	19	25	14	98
Other Canada	9	11	14	12	12	58
Washington	0	5	2	3	3	13
California	1	2	8	5	3	19
Other US/Mexico	12	33	28	18	18	109
Europe	7	20	25	27	21	100
Asia/Australia	1	1	4	6	12	24
Other	1	0	3	2	1	7
Nights in Community	132	283	307	359	208	1,289
Same day	108	189	237	289	154	977
1	13	48	40	45	29	175
2	3	23	14	7	6	53
3	3	5	8	6	8	30
4-6 (1 week)	2	1	6	4	4	17
7-13 (2 weeks)	0	1	0	0	0	1
14+	3	16	2	8	7	36
Information Requested	506	1,046	1,073	1,148	701	4,474
Accommodation	41	87	49	37	21	235
Adventure Recreation	45	81	95	139	81	441
Attractions / Tours	78	148	135	147	89	597
Maps / Directions	96	188	222	209	126	841
Events / Conferences	6	9	16	37	26	94
Food / Beverage	23	59	58	45	37	222
Transportation	0	5	0	3	2	10
Shopping	4	15	37	19	13	88
Parks	42	89	62	62	73	328
First Nations	2	6	1	3	0	12
Community Services	12	17	13	11	11	64
Investment/Moving	2	2	5	2	1	12
Site Facilities (e.g. Washrooms)	110	228	241	245	169	993
Other	45	112	139	189	52	537
Community Specific Info	116	359	355	336	225	1,391
Bennet Dam	40	114	118	131	57	460
PC Dam	25	78	80	74	54	311
Camping	27	92	78	69	49	315
Fossils	22	60	69	52	59	262
Temp worker	2	15	10	10	6	43

Visitor Centre Network Statistics Program 2015
HUDSON'S HOPE
Start Date: 01-05-2015
End Date: 30-09-2015

MONTHLY TOTAL	May-15	Jun-15	Jul-15	Aug-15	Sep-15	TOTAL
Administration Parties/Hour	1.09	1.64	2.26	2.15	1.53	1.73
# of hours	263.50	252.50	257.50	256.00	240.00	1,269.50
# of parties	286	415	581	550	367	2,199
# of parties-event/roaming	0	0	0	0	0	0
# of visitors	485	828	1,130	1,080	614	4,137
# of visitors-event/roaming	0	0	0	0	0	0
# of buses	0	0	0	0	0	0
Visitor Origin	265	393	533	513	363	2,067
Local Resident	47	57	89	51	74	318
BC	173	231	307	382	210	1,303
Alberta	11	25	64	23	17	140
Other Canada	3	13	16	6	10	48
Washington	0	3	1	6	1	11
California	3	3	2	2	2	12
Other US/Mexico	11	27	24	16	14	92
Europe	11	28	27	24	29	119
Asia/Australia	3	5	2	3	5	18
Other	3	1	1	0	1	6
Nights in Community	204	305	430	443	283	1,665
Same day	152	232	367	371	219	1,341
1	16	35	39	47	23	160
2	3	10	12	17	8	50
3	9	8	6	5	7	35
4-6 (1 week)	3	9	3	1	5	21
7-13 (2 weeks)	2	0	0	0	0	2
14+	19	11	3	2	21	56
Information Requested	603	1,078	1,550	1,452	1,025	5,708
Accommodation	19	64	77	80	57	297
Adventure Recreation	76	123	170	150	104	623
Attractions / Tours	73	150	178	183	114	698
Maps / Directions	115	197	264	245	166	987
Events / Conferences	6	12	57	58	81	214
Food / Beverage	14	59	66	69	55	263
Transportation	1	0	2	6	3	12
Shopping	6	17	35	38	34	130
Parks	30	68	92	66	69	325
First Nations	2	1	3	5	3	14
Community Services	8	22	33	19	12	94
Investment/Moving	1	6	3	2	1	13
Site Facilities (e.g. Washrooms)	145	255	323	303	173	1,199
Other	107	104	247	228	153	839
Community Specific Info	128	247	306	335	208	1,224
Dam Tours	36	95	119	144	79	473
Camping	34	72	84	77	48	315
Hiking	23	33	57	58	35	206
Fossils	21	37	38	54	30	180
Temp Worker	14	10	8	2	16	50

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: Mayor and Council

SUBJECT: Memorandum of Understanding between Hudson's Hope RCMP and Hudson's Hope Fire Rescue

DATE: 13 Oct 2015

FROM: Robert Norton, Director of Protective Services

Hudson's Hope Fire Rescue (HHFR) responds to numerous motor vehicle incidents within its response area annually, and during the majority of these evolutions there is often a requirement for HHFR to provide temporary traffic control to ensure scene safety for responders and the general public.

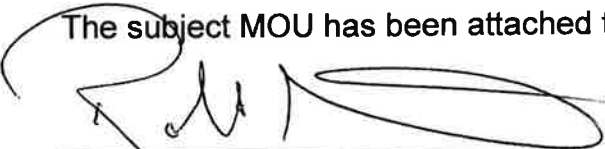
As there are numerous hazards present during these events, improving the safety of our responders is paramount. A review of our procedures and policies has identified a number of areas in which we can improve operational safety and effectiveness.

To address our procedural areas for improvement HHFR had trained three (3) in-house trainers who will provide a provincially recognized traffic control training program to our members which will equip us with the necessary skills to conduct temporary traffic control in an effective and safe manner.

In terms of policy, one area of concern is within the motor vehicle act which states in Section 125 that "unless otherwise directed by a peace officer or a person authorized by a peace officer to direct traffic, every driver of a vehicle and every pedestrian must obey the instructions of an applicable traffic control device". Essentially our members do not have the authority to give direction to drivers unless they are authorized by a peace officer.

Typically our members work closely with RCMP to ensure scene safety, however it may be problematic for HHFR to obtain verbal authorization at all emergency scenes. To that end, I have requested a memorandum of understanding (MOU) from the Hudson's Hope RCMP which gives us written authorization to direct traffic at emergency scenes to ensure scene safety.

The subject MOU has been attached to this report.


Robert Norton, Director of Protective Services

SR2



Royal Canadian Mounted Police Gendarmerie royale du Canada

Security Classification/Designation

Non-sensitive

Cpl Trevor LN Romanchych, NCO i/c
Hudson's Hope Detachment

Your File

Robert Norton,
Fire Chief, Hudson's Hope Fire Rescue,
Director of Protective Services,
District of Hudson's Hope

Our File

2015-09-26

Good Day

**Memorandum of Understanding / Agreement for Assistance for Traffic Control during
Emergency Response at Motor Vehicle Incidents within the Hudson's Hope RCMP
Jurisdiction.**

"Pursuant to Section 125 of the Motor Vehicle Act of BC, authorization is hereby given to Hudson's Hope Fire Rescue for members of the Hudson's Hope Fire Rescue Service attending an emergency scene, where it is necessary, to direct traffic to facilitate the flow of traffic and ensure the safety of those at the scene."

MOU / Agreement is effective immediately and shall remain in effect until it is; changed, modified or cancelled by the Hudson's Hope RCMP Detachment.

Dated: Sept 26, 2015

Respectively,

Cpl Trevor LN Romanchych

NCO i/c Hudson's Hope Detachment

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: Mayor Gwen Johannson and Council

SUBJECT: Vaping

DATE: October 6, 2015

FROM: Tom Matus, CAO

RECOMMENDATION:

That Council direct Administration to further research Vaping policies and prepare a draft policy governing "vaping" within the District of Hudson's Hope.

ADMINISTRATORS COMMENTS:

Wikipedia's definition on "vaping" is as follows:

An **electronic cigarette (e-cig or e-cigarette), personal vaporizer (PV) or electronic nicotine delivery system (ENDS)** is a battery-powered vaporizer which simulates the feeling of smoking, but without tobacco combustion.^[1] Their use is commonly called "vaping".^[2] The user automatically activates the e-cigarette by taking a puff;^[3] other devices turn on by pressing a button manually.^[4] They are often cylindrical, but come in many variations.^[5] Some e-cigarettes look like traditional cigarettes, but others do not.^[6] There are disposable cigalikes which are known as first generation "cigalikes" and there are reusable versions.^[7] Instead of cigarette smoke, the user inhales an aerosol, commonly called vapor.^[8] E-cigarettes typically have a heating element that atomizes a liquid solution known as e-liquid.^[9] E-liquids usually contain propylene glycol, glycerin, water, nicotine, and flavorings.^[10] E-liquids are also sold without propylene glycol, without nicotine, or without flavors.^{[11][12][13]}

The benefits and health risks of electronic cigarettes are uncertain.^{[14][15][16]} There is no evidence they are better than regulated medication for quitting smoking,^[15] but there is tentative evidence of benefit as a smoking cessation aid.^[13] Their usefulness in tobacco harm reduction is unclear,^[17] but in an effort to decrease tobacco related death and disease, they have a potential to be part of the strategy.^[18] Their safety risk is like that of smokeless tobacco.^[19] US Food and Drug Administration (FDA)-approved products, such as nicotine inhalers, are probably safer than e-cigarettes.^[17] Limited evidence suggests e-cigarettes are safer than tobacco.^[20] While high voltage (5.0 V) e-cigarettes may generate formaldehyde agents at a greater level than smoking^[10] when above a standard setting,^[21] reduced voltage e-cigarettes generate very low levels of

SR3

formaldehyde.^[22] Nicotine is associated with cardiovascular disease, potential birth defects, and poisoning.^[23]

Non-smokers who use them risk nicotine addiction.^[24] There is no evidence e-cigarettes are regularly used by those who have never smoked.^[25] E-cigarette use may delay or deter quitting smoking.^[5] E-cigarettes create vapor that consists of ultrafine particles.^[5] The vapor contains similar chemicals to the e-liquid, together with tiny amounts of toxicants and heavy metals.^{[5][25]} Exactly what comprises the vapor varies across and within manufacturers.^[8] E-cigarette vapor contains fewer toxic substances than cigarette smoke,^[5] and is probably less harmful to users and bystanders.^{[5][25]} No serious adverse effects from e-cigarettes have been reported in trials.^[13] Less serious adverse effects include throat and mouth inflammation, vomiting, nausea, and cough.^[5] The long-term effects of e-cigarette use are unknown.^{[3][26]}

Since their introduction to the market in 2004, global usage has risen.^[27] As of 2012, up to 10% of American high school students had used them at least once, and around 3.4% of American adults as of 2011.^[28] In the UK user numbers have increased from 700,000 in 2012 to 2.1 million in 2013. About 60% of UK users are smokers and most others are ex-smokers.^[29] Most e-cigarette users still smoke traditional cigarettes.^[5] Most peoples' reason for using e-cigarettes is related to quitting, but a considerable proportion use them recreationally.^[3] The modern e-cigarette arose from a 2003 invention by Hon Lik in China^[30] and as of 2015 most devices are made there.^[31] Because of the potential relationship with tobacco laws and medical drug policies, electronic cigarette legislation is being debated in many countries.^{[32][33]} The European Parliament passed regulations in February 2014, to come into effect by 2016, standardizing liquids and personal vaporizers, listing ingredients, and child-proofing liquid containers.^[34] The US FDA published proposed regulations in April 2014 with some similar measures.^[35] Manufacturers have increased advertising, using marketing techniques like those used to sell cigarettes in the 1950s and 1960s.^[5] As of 2014, there were 466 brands with sale of around \$7 billion.^{[36][37]}



Tom Matus, CAO

STAFF REPORT:

Report prepared by: Tom Matus, CAO

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: MAYOR JOHANSSON and COUNCIL

SUBJECT: ACTION and other UPDATES

DATE: October 8, 2015

FROM: Tom Matus, CAO

CAO Anticipated Travel:

None at this time.

GPS Cadastral Tie Survey

Work completed on September 17th. Awaiting confirmation from FLNRO that contractor has complied with contract. Close-out Report from McElhanney is attached.

New Horizons Lease Agreement

Submitted name change to MIA. I have received the insurance package of coverage for Associate Members. Am in the process of assessing insurance requirements vis-à-vis the Agreement and Associate Member insurance coverage provided by MIA.

Bullhead Mountain Curling Club

Met with the Executive 4:30pm, on August 18th to discuss lease. Sent draft BMCC agreement for their review and am awaiting their reply.
The repair of the Curling Rink wall completed October 1st, other than awaiting exterior siding panels. Curling Club is able to start ice making on October 2nd.

Atkinson Property

L&M requested to do up a cost estimate for the replacement of W/S and power services for the Atkinson Property for RV use. Attached are two scenarios / drawings for 79 pads: one "C002" for new services construction and one "C003" for rehabilitation of existing services. Cost estimates are forthcoming. L&M has procured the W/S cost estimates for both scenarios and is waiting for the power cost estimate before submitting them to me.

Building Canada Fund – Small Communities Fund – Wastewater Treatment Facility

Awaiting contract from Building Canada Fund – Small Communities Fund. Will present RFD to approve Urban Systems as the Project engineers to Design, and Tender for the construction of the Wastewater Treatment Facility.

Met with Eric Sears of Urbans Systems whom helped complete the application to BCF. Some initial requirements for Ministry of Environment to process. They will send a cost estimate for the engineering/project administration work. BCF contract may dictate tendering process.

Economic Development Strategy

Request resolution from Council to continue working with Integrated Economic Solutions Inc. as per their Marketing Feasibility Study (including Engagement Letter). Documents and report attached to this Agenda Package. RFD is attached.

Video:

We don't have any footage of Forestry, Oil, Gas or Mineral sites/workers. Would anyone have so I may include in the video?

Beaver-Pioneer Cemetery, Dinosaur Tracks Williston Lake

Discussed cemetery and tracks with Chief Roland of WMFN on September 14th, he is forwarding our comments to his administration for further evaluation. Preliminary discussions were favourable.

Special Events Coordinator

Administration has exercised its option to extend this contract with Greta Goddard to August 31, 2016. Will review this contract over the winter and tender in May 2016.

Arena Concession Contract

Kestyn Stacey was the only tender bid received. Should be opening week of October 13th.

DPW Shop:

YRB: Land purchase is complete as of September 29th. Documents attached.

Geotechnical Survey:

Geotechnical study completed on September 4th, Study received September 30th, (study attached for your perusal), which identified concerns with the native soil regarding pavement structure. Northern Geo will be contacted for recommendations during the land development construction. The gist of what we received from Beverly Rodowski of Northern Geo is as follows:

"Based on the sieve analysis of the lower sand layer (below 0.7 m below existing grade) the soil is on the border between being frost susceptible and non-frost susceptible. We have more samples of this layer and I suggest that we do a hydrometer test on this layer to determine the silt and clay content of the fines. Silt is the culprit when it comes to frost-related damage. Depending on the silt content of the lower sand layer the native soil may or may not be suitable. If that layer has a higher clay content than silt no revision to the pavement structure will be required. I should note that the upper sand layer (above 0.7 m) is not suitable due to the silt content.

The native sand will likely be suitable as trench backfill either way, however, a hydrometer test would confirm the frost susceptibility of this layer.

Please let me know if you would like a hydrometer test done on the lower sand layer. I can have the lab start on it today and we would have a result by early to mid next week." Being the week of October 12th.

I have commissioned the tests be done at \$160 each with 3-4 tests being done.

Survey Plan

Survey plan and layout attached for your perusal. McElhaney will do the physical layout of the Shop Pad.

Land Development Tender

Land development tender will include clearing, road and driveway construction, and water main installation to property line. Will have Urban Systems vet tender documents.

Shop RFP

Shop RFP will include all Shop and cement pad construction. Will have Urban Systems to vet RFP and tendering, and do Project Management of the construction of the building.

2015 UBCM QUICK REPORTS:

NORTHERN HEALTH

Cathy Ulrich - President and CEO; Dr. Charles Jago - Board Director

September 22nd, 10am – 10:30am.

Douglas Boardroom, Fairmont Waterfront Hotel, 900 Canada Place Way Vancouver

Doctor: Discussion of assistance with salary to be in-camera. No funding from First Nations Health Authority.

Nurse Practitioners: presently 5 across the Norther Region – 5 more to be hired in 2016, discussions on going for placement location – District of Hudson's Hope is on the list: Provincial licencing which takes 4-5 months. See Angela DeWitt.

Para-Medicine Model: 3 locations in North: Chetwynd, Hazelton and Fort St. James. Order I Council to change regulations. BC Ambulance working out what kind of work a Paramedic can do under their licence in regards to this Para-Medicine Model. BC Ambulance developing an allocation model for long-term Paramedic placements.

Water Advisory:

Appearance of heavy metals at Brenot and Lynx Creeks never seen before though does not appear in any other areas. Municipality has no budget for testing surface or underground water.

Call Sandra Ellison of Industrial Development at UBC, research concern on safe water. Call Ministry of Environment. Refer to Drinking Water Protection Act.

MINISTRY OF HEALTH

Ted Patterson - Assistant Deputy Minister

September 22nd, 1:30pm – 2pm.

Pan Pacific Hotel, R Level - Cypress Suite

Doctor/Funding Clarity: FNHA provides services for First Nations communities, only. Research Federal Government Client Services, Grants? Regional Health Authority?

MINISTRY OF JOBS, TOURISM, SKILLS, AND TRAINING

Asha Baht – Executive Director

September 23rd, 3pm – 3:20pm.

Vancouver Convention Centre, East Building - Exhibition Hall C

Dinosaur Trackway: Ministry is aware and interested in this project. Asha will call Ministry of FLNRO, Destination BC - (JTST funds DBC). DBC will help with developing a tourism strategy though the site requires development for full support of DBC. Scope what research is being done at the site/area. Question UPM?

Progress Energy's Camp Policy: Asha will forward info to Sarah Fraser Executive Director of Regional Economic Operations, Ministry of JTST.

MINISTRY OF ENVIRONMENT

Mark Zacharias – Assistant Deputy Minister

September 23rd, 3:20pm – 4pm.

Vancouver Convention Centre, East Building-Exhibition Hall C

Brenot/Lynx Creek Water Testing: irrigation licence exists within this area; 16 wells. 186 wells have been tested in the province. MZ will follow-up with Ken Paulson Chief Operating Officer with the BC Oil & Gas Commission. Also with Science and Community Environmental Knowledge Fund; and Geoscience BC.

BC AMBULANCE

Jodi Jensen – Chief Operating Officer; Linda Lupini – Executive Vice President

September 24th, 4pm – 4:30pm

Vancouver Convention Centre, East Building-Exhibition Hall C

Para-Medicine Model: First intake of initial pilot program underway: developing new licence for paramedics. Regulatory changes are required within the Licencing Board / Ministry. Accommodation in Union Agreement. District of Hudson's Hope is being considered for 2nd intake trials.

Ambulance Service: noted long ambulance waiting periods and lack of schedules.

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

Scott McKenzie – Regional Director

September 24th, 8:30am-8:45am.

Vancouver Fairmont Waterfront Hotel, Seymour Suite, 2nd level

BC On The Move Survey: Discussed all issues identified in this survey. Osborne St: signage to direct traffic - close access to this street from Canyon Drive?

Light Industrial Zone: Apparently, if the District of Hudson's Hope is the developer then MoTI can partner/assist more easily with the development of this project – will ascertain specifics as this project develops.

Highway 29/Site C: Discussed realignment issues and the District of Hudson's Hope may provide input in regard to the upgrade of areas outside of the Site C affected realignment areas, as no or very little mob/demob costs.

Weeds: Should be a Regional District government issue though MoTI may have to take this on as a priority.

MINISTRY OF FLNRO

September 24th, 9:30am – 10am.

Greg Rawling – Regional Executive Director

Vancouver Convention Centre, East Building – Exhibition Hall C

Water Quality: noted that after fracking was introduced wells have become dry.

Brenot Creek / Lynx Creek: discussion regarding funds to support testing for contaminants (Lithium) – seems favourable though no commitments.

Light Industrial Zone: encourages economic growth; leasing of the lands an option?

Industry Resource Development: Discussion on compensation or benefit sharing for Landowners in Beryl Prairie re industry resources. Noted.

PREMIER CLARK

September 25th, 11am-11:45am

Vancouver Convention Centre, East Building-Exhibition Hall B

Tourism: more visitors to Whistler last year than visitors to the 2010 Olympics; 8K visitors to Tumbler Ridge dinosaur museum.

Forest Fires: 1 degree Celsius rise in temperature resulted in 4 times as many fires.

Seismic Upgrades: \$17M

Operating Debt: accumulating since 1975 eliminated.

Jobs: 150K jobs created over the last 10 years.

Crime Prevention: more resources to fight gangs, roots of crime (children), \$5M on WRAP program.

Communities in Transition: \$75M “Rural Dividend” to communities under 25,000 population, shared \$25M/year “to reinvigorate and diversify their local economies” beginning the 2016/17 fiscal year for three years. We could probably access this “dividend for the development of the Light Industrial Zone. See more info at this link: <https://news.gov.bc.ca/releases/2015PREM0065-001594>.

Rural Connectivity: \$10M over next two years to expand high-speed internet access across BC.

Small Community Fund: \$90 million, provided in equal shares by the B.C. and federal governments, will be available for application in December.

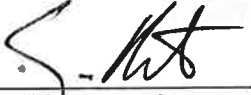
Wildfire Bridge Funding: \$10M for the Strategic Wildfire Prevention Initiative.

Canada/Untied States Softwood Lumber Agreement: ends December 2015. One year to strike new deal with the US.

Read the fully quoted Premier Clark UBCM address at this link: <https://news.gov.bc.ca/stories/premier-christy-clark-addresses-ubcm-delegates-2015>.

BCUC

Registration complete for Intervenor status re BCH 2015 Rate Design Application. See this link for the 2015 Rate Design Application: <https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-matters/2015-rda.pdf>



Tom Matus, CAO

PROJECT CLOSE-OUT REPORT

ESTABLISHMENT OF CADASTRAL TIE POINTS
WITHIN THE DISTRICT OF HUDSON'S HOPE



McElhanney Land Surveys Ltd.
Prepared by: Shawn Klimchuk, BCLS, CLS - Land Surveyor

Date: September 17, 2015
Project: 3111-23847

Project Close-out Report for District of Hudson's Hope

Establishment Of Cadastral Tie Points

Scope of Project

The scope of work for the project consisted of a survey of 22 cadastral tie points within the District of Hudson's Hope. These cadastral tie points, on existing cadastral monumentation, were established for the purpose of creating additional anchor points for use in the District's internal GIS mapping project.

This project was completed by a single 2 man field crew, starting on September 8th, 2015 and working over 2 field days. The project was supervised by Shawn Klimchuk and a combination of GNSS and conventional survey methods were used during the survey.

Methodology

Two static control points, Found Iron Post 21 and Found Concrete Post 5, were established through GNSS ties to BC Active Control Points; Fort St John ACP GCM 981274 was held fixed in adjustment and Fort Nelson ACP GCM 384099 was included as a check on the adjusted coordinates. The 2 static control points were selected as they were central to the project area and had the best windows to the satellite constellation. The GNSS receivers were set-up on these points and allowed to simultaneously collect observations for 5 hours. All receivers used during this project were set to collect at a 1 second intervals. The static baselines were processed using ultra-rapid satellite ephemeris data. See Appendix A for final network adjustment report.

GNSS data collected on these static control points on the second day of the survey was processed through Natural Resources Canada's Precise Point Positioning (PPP) service. These coordinates were compared to the coordinates derived from BC Active Control and differed by less than 0.035m horizontally and vertically. See Appendix B for coordinate reports derived from PPP.

The remaining cadastral tie points were established using Post Processed Kinematic methods. The two GNSS receivers continued to collect observations over the static control points, while a third GNSS receiver was set-up over each tie point and two 2 minutes observations (120 epochs observed) were taken. The baselines between each remaining tie point and the static control points were processed resulting in 4 independent coordinates for comparison. The final coordinate provided is derived from the first observation baseline to the nearest static control point.

One cadastral tie point, Found Iron Post 19, did not have an acceptable window for GNSS observations; so two nails were established nearby and conventional survey methods were used to observe this point.

Challenges Encountered

Around 2:30pm on the first day of the survey, the quality of the GNSS solutions dropped for around 1 hour. This was identified during processing that night and resulted in 2 tie points needing to be re-observed. GNSS pre-planning software was reviewed before the crew started surveying the second day and it was identified that the survey crew should not complete any GNSS observations for 1 hour period around 12:00pm.

The only other challenge encountered was requested monuments 6 and 18 were found disturbed or destroyed. In these cases, the survey crew found a different survey monument that was nearby and shown on the same survey plan.

Conclusion

A combination of survey experience, and effective project planning and management resulted in a survey that was completed accurately, efficiently and as outlined in the project proposal. See Appendix C for a map showing the location of the new cadastral tie points.

APPENDIX**McElhanney Geomatics**

8808 72nd Street
Fort St John
Canada

Phone: 250-787-0356

Project Information		Coordinate System	
Name:	23847150908SCK Static Network.tsp	Name:	UTM
Size:	8 MB	Datum:	NAD 1983 (Canada)
Modified:	08/09/2015 8:33:26 PM (UTC:-7)	Zone:	10 North (123W)
Time zone:	US Mountain Standard Time	Geoid:	Canada Geoid Model
Reference number:		HT2_0	
Description:		Vertical datum:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.000 m

Centering Error: 0.000 m

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 m

Scale on Linear Error [S]: 1.960

Three-Dimensional

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 m

Scale on Linear Error [S]: 1.960

Number of Iterations for Successful Adjustment:	2
Network Reference Factor:	0.78
Chi Square Test (95%):	Passed
Precision Confidence Level:	95%
Degrees of Freedom:	9

Reference Factor:	0.78
Redundancy Number:	9.00
A Priori Scalar:	1.00

Values shown are control coordinates minus adjusted coordinates.

Point ID	ΔNorthing (Meter)	ΔEasting (Meter)	ΔElevation (Meter)	ΔHeight (Meter)
Fort Nelson ACP	-0.008	0.013	-0.027	-0.022

Point ID	Type	North σ (Meter)	East σ (Meter)	Height σ (Meter)	Elevation σ (Meter)
Fort St. John ACP	Grid	Fixed	Fixed		Fixed
Fixed = 0.000001(Meter)					

[illegible]

Fort St. John ACP	6235759.923	?	639460.619	?	691.594	?
IPFD21	6209373.113	0.003	567653.513	0.004	491.689	0.014
PCONFD5	6212290.700	0.003	569878.638	0.004	523.424	0.014

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (Meter)	Height Error (Meter)	Constraint
Fort Nelson ACP	N58°50'24.88917"	W122°35'05.70612"	368.096	0.025	
Fort St. John ACP	N56°14'46.33770"	W120°44'57.66729"	677.319	?	NEe
IPFD21	N56°01'29.34075"	W121°54'52.30652"	478.685	0.014	
PCONFD5	N56°03'02.54451"	W121°52'41.07301"	510.378	0.014	

Adjusted ECEF Coordinates

Point ID	X (Meter)	X Error (Meter)	Y (Meter)	Y Error (Meter)	Z (Meter)	Z Error (Meter)	3D Error (Meter)	Constrain
Fort Nelson ACP	1781802.043	0.009	2787742.630	0.012	5435064.588	0.022	0.027	
Fort St. John ACP	1816313.281	?	3053026.723	?	5280285.914	?	?	NEe
IPFD21	1888783.593	0.005	3032743.200	0.007	5266383.844	0.012	0.015	
PCONFD5	1885600.257	0.005	3031928.901	0.007	5268020.638	0.012	0.015	

Point ID	Semi-major axis (Meter)	Semi-minor axis (Meter)	Azimuth
Fort Nelson ACP	0.010	0.006	4°
IPFD21	0.005	0.004	57°
PCONFD5	0.005	0.004	61°

Adjusted GPS Observations

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
Fort Nelson ACP --> Fort St. John ACP (PV24)	Az.	158°23'28"	0.004 sec	-0.004 sec	-1.923
	Δ Ht.	309.223 m	0.025 m	0.003 m	0.211
	Ellip Dist.	309072.870 m	0.008 m	0.002 m	0.447
PCONFD5 --> IPFD21 (PV14)	Az.	218°15'43"	0.065 sec	0.010 sec	1.723
	Δ Ht.	-31.694 m	0.006 m	0.000 m	-0.086
	Ellip Dist.	3670.519 m	0.002 m	0.000 m	-0.832
Fort Nelson ACP --> PCONFD5 (PV25)	Az.	171°55'19"	0.003 sec	0.004 sec	1.592
	Δ Ht.	142.282 m	0.024 m	0.005 m	0.258
	Ellip Dist.	313545.709 m	0.008 m	-0.005 m	-0.783
IPFD21 --> Fort St. John ACP (PV20)	Az.	70°43'30"	0.009 sec	-0.004 sec	-1.211
	Δ Ht.	198.634 m	0.014 m	0.001 m	0.092
	Ellip Dist.	76521.933 m	0.004 m	0.000 m	-0.223
Fort Nelson ACP --> IPFD21 (PV26)	Az.	172°23'55"	0.003 sec	0.001 sec	0.416
	Δ Ht.	110.589 m	0.024 m	-0.009 m	-0.571
	Ellip Dist.	316118.158 m	0.008 m	0.006 m	1.143
					29/176

PCONFD5 --> Fort St. John ACP (PV19)	Az.	72°17'37"	0.009 sec	0.005 sec	0.641
	ΔHt.	166.941 m	0.014 m	-0.001 m	-0.056
	Ellip Dist.	73452.495 m	0.004 m	-0.002 m	-0.688

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
Fort Nelson ACP	Fort St. John ACP	Az.	158°23'28"	0.004 sec	1 : 39569416	1 : 39506070
		ΔHt.	309.223 m	0.025 m		
		ΔElev.	310.403 m	0.025 m		
		Ellip Dist.	309072.870 m	0.008 m		
Fort Nelson ACP	IPFD21	Az.	172°23'55"	0.003 sec	1 : 39072033	1 : 39037963
		ΔHt.	110.589 m	0.024 m		
		ΔElev.	110.499 m	0.024 m		
		Ellip Dist.	316118.158 m	0.008 m		
Fort Nelson ACP	PCONFD5	Az.	171°55'19"	0.003 sec	1 : 38741220	1 : 38706332
		ΔHt.	142.282 m	0.024 m		
		ΔElev.	142.233 m	0.024 m		
		Ellip Dist.	313545.709 m	0.008 m		
IPFD21	Fort St. John ACP	Az.	70°43'30"	0.009 sec	1 : 20823521	1 : 20840306
		ΔHt.	198.634 m	0.014 m		
		ΔElev.	199.905 m	0.014 m		
		Ellip Dist.	76521.933 m	0.004 m		
IPFD21	PCONFD5	Az.	38°13'54"	0.065 sec	1 : 2280306	1 : 2284305

		ΔHt.	31.694 m	0.006 m		
		ΔElev.	31.735 m	0.006 m		
		Ellip Dist.	3670.519 m	0.002 m		
PCONFD5	Fort St. John ACP	Az.	72°17'37"	0.009 sec	1 : 19813063	1 : 19821959
		ΔHt.	166.941 m	0.014 m		
		ΔElev.	168.170 m	0.014 m		
		Ellip Dist.	73452.495 m	0.004 m		

Date: 09/09/2015 7:01:28 AM	Project: 23847150908SCK Static Network.tsp	Trimble Business Center
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CSRS-PPP (V 1.05 34613)



pcon51		
Data Start	Data End	Duration of Observations
2015-09-09 16:24:00.000	2015-09-09 22:34:00.000	6h 10m 0.00s
Apri / Aposteriori Phase Std	Apri / Aposteriori Code Std	
0.015m / 0.009m	2.0m / 1.939m	
Observations	Frequency	Mode
Phase and Code	L1 and L2	Static
Elevation Cut-Off	Rejected Epochs	Observation & Estimation Steps
10.000 degrees	0.03 %	1.00 sec / 30.00 sec
Antenna Model	APC to ARP	ARP to Marker
APS_APS-3 NONE	L1= 0.095 m L2= 0.086 m	1.812 m

(APC = antenna phase center; ARP = antenna reference point)

Estimated Position for PCON51.150

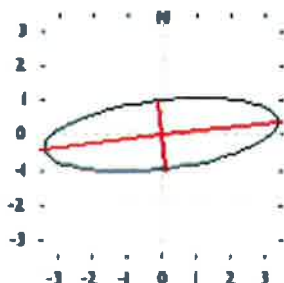
	Latitude (+n)	Longitude (+e)	Ell. Height
NAD83(CSRS) (2002)	56° 03' 02.5443''	-121° 52' 41.0713''	510.362 m
Sigmas(95%)	0.009 m	0.027 m	0.040 m
Apriori	56° 03' 02.401''	-121° 52' 41.272''	510.803 m
Estimated - Apriori	4.421 m	3.477 m	-0.441 m

Orthometric Height
CGVD28 (HTv2.0)

523.408 m

(click here for model and accuracy)

95% Error Ellipse (cm)
semi-major: 3.407cm
semi-minor: 0.986cm
semi-major azimuth: 83° 4' 41.01''



UTM (North) Zone 10

6212290.694m (N) 569878.668m (E)

Scale Factors
0.99965989 (point)
0.99957982 (combined)

(Coordinates from RINEX file used as apriori position)



CSRS-PPP (V 1.05 34613)



ipfd211

Data Start	Data End	Duration of Observations
2015-09-09 16:40:00.000	2015-09-09 22:25:30.000	5h 45m 30.00s
Apri / Aposteriori Phase Std	Apri / Aposteriori Code Std	
0.015m / 0.007m	2.0m / 1.485m	
Observations	Frequency	Mode
Phase and Code	L1 and L2	Static
Elevation Cut-Off	Rejected Epochs	Observation & Estimation Steps
10.000 degrees	-0.07 %	1.00 sec / 30.00 sec
Antenna Model	APC to ARP	ARP to Marker
APS_APS-3 NONE	L1= 0.095 m L2= 0.086 m	1.807 m

(APC = antenna phase center; ARP = antenna reference point)

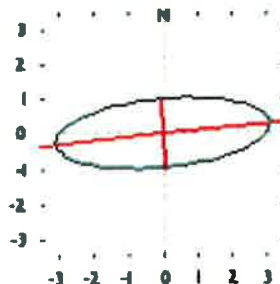
Estimated Position for IPFD211.150

	Latitude (+n)	Longitude (+e)	Ell. Height
NAD83(CSRS) (2002)	56° 01' 29.3402''	-121° 54' 52.3053''	478.653 m
Sigmas(95%)	0.008 m	0.025 m	0.038 m
Apriori	56° 01' 29.344''	-121° 54' 52.339''	478.381 m
Estimated - Apriori	-0.111 m	0.585 m	0.272 m

Orthometric Height
CGVD28 (HTv2.0)

491.658 m
(click here for model and accuracy)

95% Error Ellipse (cm)
semi-major: 3.108cm
semi-minor: 0.989cm
semi-major azimuth: 84° 50' 28.00''

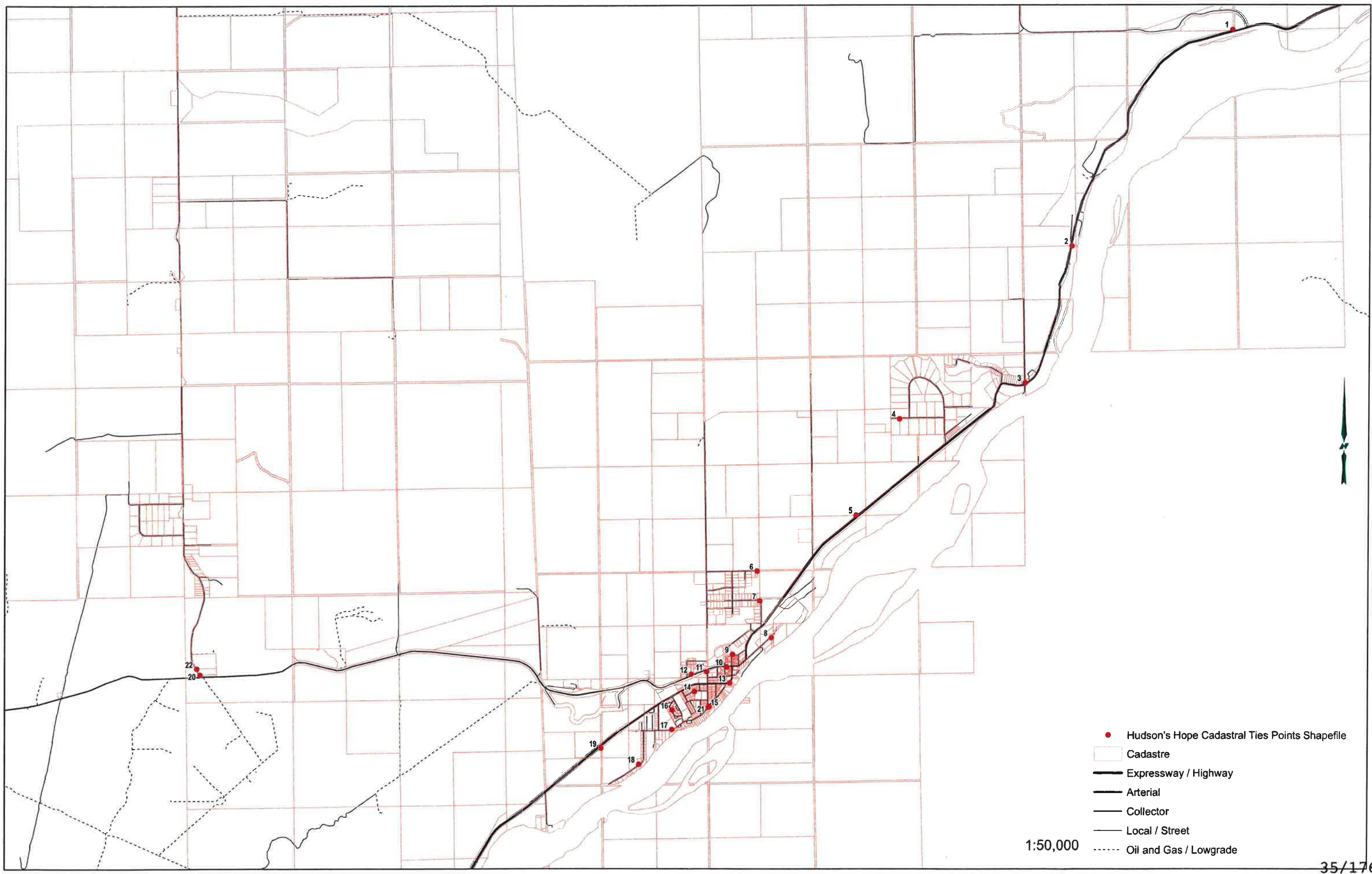


UTM (North) Zone 10

6209373.096m (N) 567653.534m (E)

Scale Factors
0.99965614 (point)
0.99958104 (combined)

(Coordinates from RINEX file used as apriori position)



Tom Matus

From: Curtis Saunders <csaunders@lmengineering.bc.ca>
Sent: October-08-15 4:05 PM
To: Tom Matus
Subject: Update
Attachments: C003 - RVs Using New Underground Construction.pdf; C002 - RVs Using Existing Underground Locations.pdf

Hi Tom,

I just wanted to give you a quick update re: your Atkinson request. You had requested pricing for new underground construction in the roadways; however, I thought it would also be beneficial to do a scenario to evaluate and rehabilitate the existing services (potentially much less costly upfront), especially if the shorter term use is only for RVs. We have obtained much of the required pricing; however, I'm still awaiting some information regarding the electrical servicing aspects. Cost estimates are forthcoming.

Could you review ^{C003}C002 (rehabilitation scenario) and ^{C002}C003 (new construction) scenario to ensure they are what you envisioned. Note that we have used a generous 7.5m spacing between RV units, yielding 79 pads. I will also perform a quick review of a higher yield scenario with closer spacing.

Sincerely,

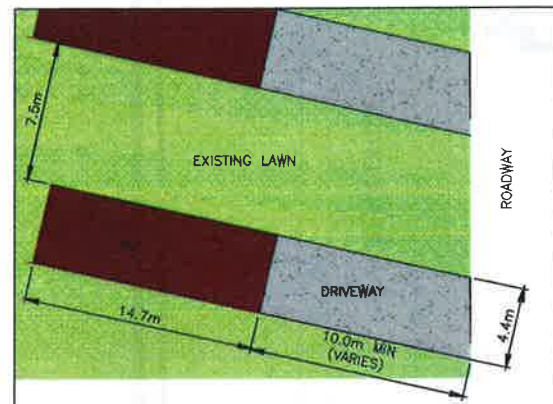
Curtis

Curtis Saunders, B.A.Sc., EIT
Associate

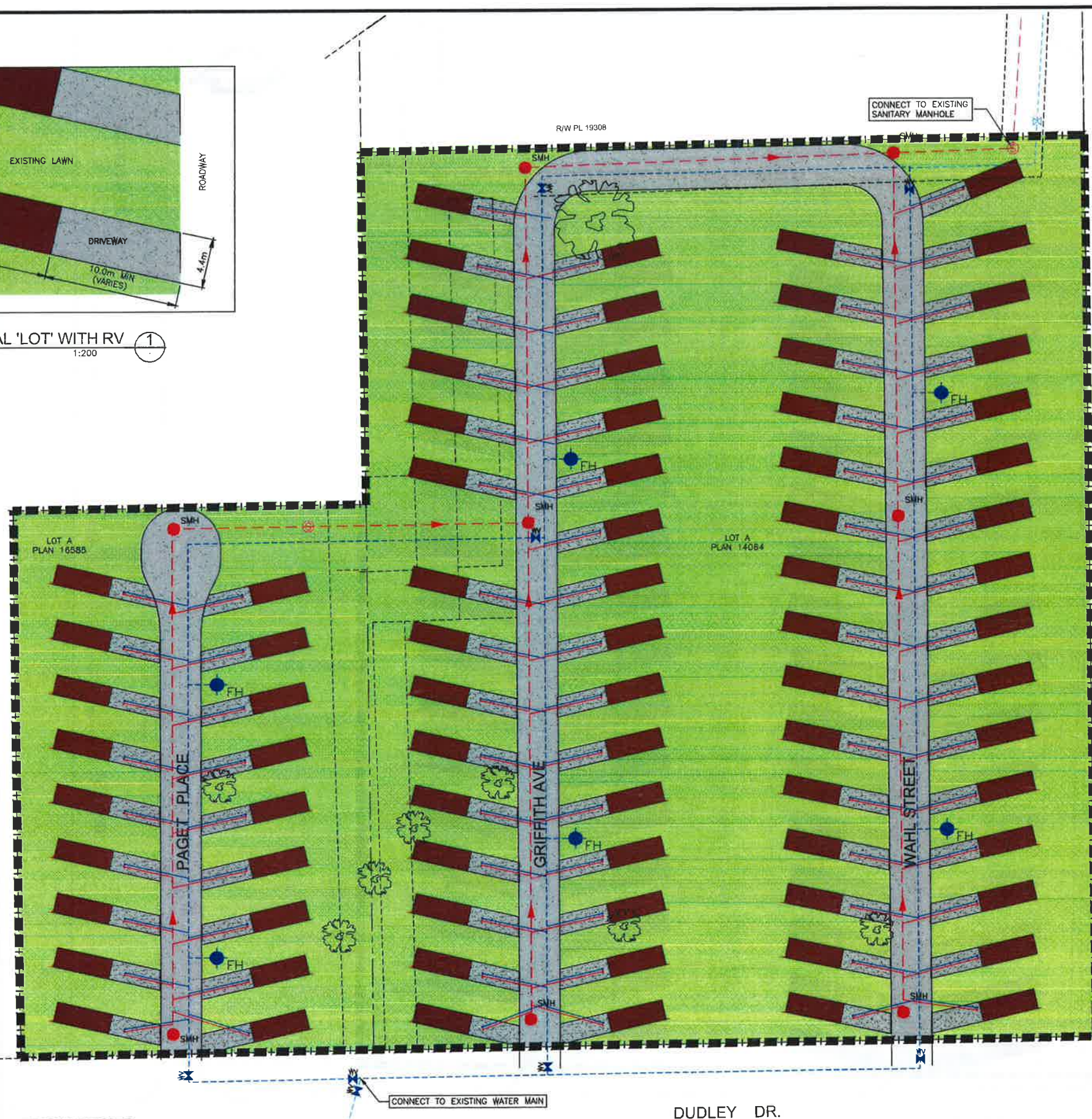


1210 Fourth Avenue,
Prince George, BC
V2L 3J4

T: (250) 562-1977
F: (250) 562-1967



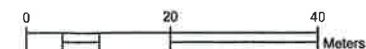
TYPICAL 'LOT' WITH RV 1
1:200



(ARENA DRIVE)

108th ST.

DUDLEY DR.



- LEGEND**
- EXISTING**
- SUBJECT PROPERTY BOUNDARY
 - EX. PROPERTY LINE
 - EX. RIGHT-OF-WAY
 - EX. SANITARY MAIN
 - EX. SANITARY S/L RISER
 - EX. WATER MAIN
 - EX. WATER VALVE
 - PR. SANITARY MAIN
 - PR. SANITARY MANHOLE
 - PR. WATER MAIN
 - PR. FIRE HYDRANT
 - PR. WATER VALVE
 - PR. GRAVEL DRIVEWAY
 - EX. LAWN
 - EX. TREE TO BE RETAINED
 - EX. POWER POLE W/ OVERHEAD POWER LINES
 - EX. STREET LIGHT

LEGAL DESCRIPTION OF PROPERTY
LOT A, PLAN 14064, (& LOT A, PLAN 16585) EXCEPT PLAN H830, SECTION 13, TOWNSHIP 81, RANG 26, W.6.M., PEACE RIVER DISTRICT.

NO.	DATE	REVISION	DR.

L&M
ENGINEERING LIMITED

1210 FOURTH AVENUE
PRINCE GEORGE, B.C.
V2L 3J4
TEL. (250) 562-1977
FAX (250) 562-1967

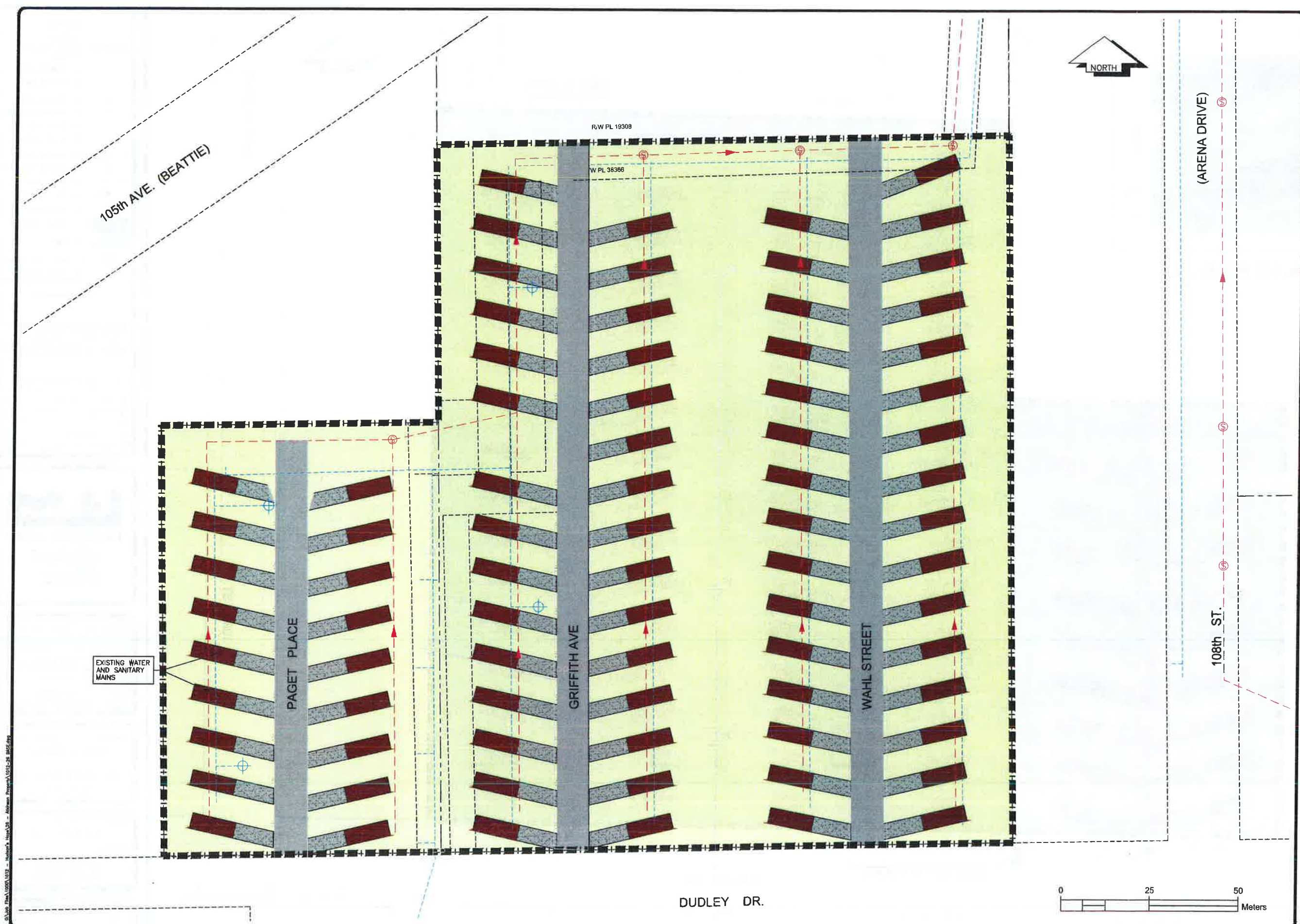
DRAWN:	SOS
CHECKED:	CNS
ENGINEER:	
SURVEY FILE:	
DRAWING FILE:	1012-26 BASE.dwg
CORRESPONDENCE:	
GRID:	
DATE:	23/09/2015
SCALE:	HALF 1:1000 FULL 1:500

DISTRICT OF HUDSONS HOPE
ATKINSON PROPERTY

PROPOSED SERVICING FOR
79 RV SITES

CONSULTANTS' PROJECT No.
1012-26
DRAWING No.
C002

SHEET No.	REV. No.
1 OF 1	0



LEGEND

EXISTING

- EX. PROPERTY LINE
- EX. RIGHT-OF-WAY
- EX. SANITARY MAIN
- EX. SANITARY S/L RISER
- EX. WATER MAIN
- EX. WATER VALVE

NO.	DATE	REVISION	DR.

L&M

ENGINEERING LIMITED

1210 FOURTH AVENUE
PRINCE GEORGE, B.C.
V2L 3J4
TEL (250) 562-1977
FAX (250) 562-1967

DRAWN:	KP
CHECKED:	CNS
ENGINEER:	
SURVEY FILE:	
DRAWING FILE:	1012-26 BASE.dwg
CORRESPONDENCE:	
GRID:	
DATE:	10/09/2015
SCALE:	HALF 1:1000 FULL 1:500

TOM MATUS
ATKINSON PROPERTY

PROPOSED SITE PLAN
& EXISTING UTILITY LOCATIONS

CONSULTANTS PROJECT No.

1012-26

DRAWING No.

C003

SHEET No.	REV. No.
1 OF 1	0

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: Mayor Gwen Johansson and Council
SUBJECT: Economic Development Strategy re Airport Runway, New Light Industrial Zone and Atkinson Property
DATE: October 6, 2015
FROM: Tom Matus, CAO

Resolution Recommendation:


"That Council approve and sign the Integrated Economic Solutions Inc.'s Engagement Letter included in the "Marketing Feasibility Study" which outlines the complete economic development strategy for the airport runway, new Light Industrial Zone and the Atkinson Property."

ADMINISTRATORS COMMENTS:

Key point being the adoption of Sections A to F of the Marketing Feasibility Study. This document charts the path/strategy that we will govern ourselves in the marketing of the three properties. Both parties understand that this is a project in progress and the timelines for completion are open to the point that a measurable progress is in effect. Payment for work by completion will be in effect as per the rates disclosed in the document.

A budget of \$50,000 for this project was approved during the 2015 budget approval process, whereby approximately \$3,000 was used to develop a video to enhance and support this strategy - video will be shown at the Council meeting but will also be dispersed via email. IESI's budget proposal is \$42,950 over the duration of this project.

Note we may terminate this agreement as per Section F of this agreement.



Tom Matus, CAO

District of Hudson's Hope

Marketing Feasibility Study

Submitted to



Tom Matus, Chief Administrative Officer
District of Hudson's Hope

Prepared by:



James Umpherson, Managing Director
Integrated Economic Solutions Inc.

August 24, 2015

The methodology outlined in this proposal is considered confidential and it remains the property of **Integrated Economic Solutions Inc.** This **Integrated Economic Solutions Inc.** proposal submission may not be used for subsequent tenders or for any other purposes than that for which it is intended, as set out in this proposal.

Integrated Economic Solutions Inc.

Engagement Letter

July 26, 2015

Mr. Tom Matus,
Chief Administrative Officer,
District of Hudson's Hope
Box 330, 9904 Dudley Drive,
Hudson's Hope, BC
V0C 1V0

Dear Mr. Matus

The District of Hudson's Hope is pursuing a proactive path of development by directing its energies to take advantage of the potential resource development and the spin-off impacts for the community. In order to ensure that the District maximizes the benefits of the proposed developments, it is imperative for the community to lay a foundation that is built on *why* it is a place of choice for development, *how* to maximize benefits from the resource development in the Region, and *what* actions need to be taken in order to achieve results.

Traditionally, small communities focus on the standardized package of highlights and profile components that every other community possesses. Rather than following the path of every other community, the District of Hudson's Hope can become its own leader: you have an opportunity to differentiate yourself from the rest. In other words, it's not enough to tell the world *what* is great about the District of Hudson's Hope. It is critical to promote *why* the District of Hudson's Hope is great for the potential resident, investor, business, tourist, and developer. By embarking on a Marketing Feasibility Study that integrates residential, commercial, and airport industrial development, the District of Hudson's Hope is establishing a process of *how* to achieve success. *Integrated Economic Solutions* will deliver an approach to place marketing through the four Ps: planning, process, projects, and partnerships.

As per our discussion, *Integrated Economic Solutions (IES)* will set out a process to conduct a Marketing Feasibility Study of the identified residential, commercial, and airport industrial property in Hudson's Hope. Our process will focus on the *Why*, *How*, and *What* of marketing for the District of Hudson's Hope.

The following 4-Phase Marketing Feasibility Study is the recommended process for implementation for the District of Hudson's Hope:

Phase 1: Background Review

This phase involves compiling background information, addressing data gaps, and identifying key issues, trends, and opportunities. This information provides the foundation for framing the feasibility and marketing of the residential, commercial, and airport industrial land development.

In addition to a review of the background documents, key stakeholder interviews will be conducted to gain insight into the identification of opportunities for land development. These interviews will be utilized to identify potential development and partnership opportunities for

marketing the sites.

The feasibility study and opportunity identification includes research into current market trends for residential, commercial, and airport development and attraction demand. During this process we would collect and analyze local, regional, and provincial trends data for the market to determine whether the current and projected conditions appear favourable for land attraction development in the District.

Land Development Analysis:

- ✓ Infrastructure issues and potential solutions;
- ✓ Technology issues and opportunities;
- ✓ Inventory amenities and basic service development;
- ✓ Current economic development efforts; and
- ✓ Major resource development opportunities (i.e. BC Hydro Site C and LNG Project)

Land Use Analysis

It is imperative to understand the current land use in order to determine the feasibility of future land use. To achieve this, ***Integrated Economic Solutions Inc.*** will follow a 4-step process:

1. Examination of Existing Land Use Conditions and Inventory: This process includes a “windshield survey” and data collection of all existing land uses in the District of Hudson’s Hope.
2. Examination of Existing Plans and Intent: Existing land use plans for the area will be collected and examined to understand how they will impact the land designated for development.
3. Potential Land Use Scenarios: Develop potential land use scenarios based on a synthesis of existing plans, discussions with landowners, and major industrial developers in the Region.
4. Public and Stakeholder Comment on Potential Land Use Scenarios: Public meetings, surveys, and input into the marketing of the land to potential partners will be conducted.

Phase 2: Opportunity Evaluation Identification

Based on the research conducted, IES will identify opportunities for the District that best match the market’s requirements and provide recommendations on the project development, including the most appropriate attraction and capital investment opportunities for the identified lands available for development. It must also be noted that, depending on the outcome of the feasibility study, there could remain a recommendation to NOT continue with a marketing plan.

The evaluation criteria of the opportunities for the various land development would include the following:

- ✓ Market demand;
- ✓ Financial viability;
- ✓ Legal permissibility;
- ✓ Administrative and political acceptability;

- ✓ Economic diversification benefit; and
- ✓ Employment creation potential

Land development in the District will be directed towards the private sector with the public sector providing support in the strategic provision of appropriate infrastructure support and facilitation of investment initiatives.

Phase 3: Land Development Marketing Plan

A key element to the project is a focus on sustainability. To achieve this, it is imperative to understand the various aspects to ensure that the marketing project has the traction to create opportunities. The marketing plan would be based on the results of *Phase 2: Opportunity Evaluation Identification*.

Phase 4: Land Development Marketing Implementation and Monitoring

A marketing strategy will be built from the feasibility of the assets within a specific scope of review and would follow the preparation of a land development marketing plan. In other words, the land development marketing plan and implementation & monitoring will be more clearly defined during the feasibility study.

Fees & Project Pricing:

Once the District of Hudson's Hope agrees to the process for the project, *Integrated Economic Solutions Inc.* a complete fee schedule for these services will be developed and submitted for approval.

If you agree that the Marketing Feasibility Study of the identified residential, commercial, and airport industrial property as outlined in this letter adequately addresses the District's vision for the project, please sign a copy of this letter in the space indicated below and return it to *Integrated Economic Solutions Inc.* at james@economicsolutions.ca.

Sincerely,



James A Umpherson, BA, MAES
Managing Director

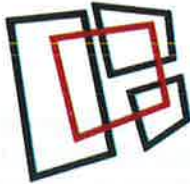
Agreed and Accepted:

_____ District of Hudson's Hope

_____ Date

Section A:

Corporate Profile



Integrated Economic Solutions Inc. is an economic development firm that focuses on an integration process to achieve broader community development goals. Based in Golden, BC with a satellite office in Lloydminster, AB/SK, we have a core group of professionals that have over 20-years experience in rural, Northern, and municipal economic development knowledge and understanding. We have a broad range of experience with local governments, First Nation administrations, Tourism Agencies, Community Economic Development Corporations, diamond mining sector, and oil & gas industry. Our area of focus extends across Canada in the field of economic development, business management, tourism development, and community empowerment and capacity building, consensus management, and principle based decision-making modeling.

IES understands the unique challenges and opportunities specific to rural and Northern communities. Economic development requires a foundation of community leadership, local knowledge, and comprehensive participation of a broad section of the community to effectively achieve empowerment, consensus, and successful implementation. Our ability to integrate and operationalize this into each project underpins our successful development of every strategy, every tactical approach, and every community empowerment initiative. *Integrated Economic Solutions Inc.'s* core services include the following:

- ☑ *Why, How, and What of Economic Development:*
Why pursue economic development, how to approach economic development, and what actions to implement.
- ☑ *Economic Development, Growth, and Diversification:*
A continuous circle of developing current assets, growing the local economy, and diversifying the industry and labour market.
- ☑ *Integrated Economic Solution Process: Community Pillars, Capacity Building, and Policy*
Integrating the 5-community pillars, the 4-capacity building spheres, and a participatory public policy process.
- ☑ *Economic, Tourism and Place Marketing:*
Economic Opportunity Identification, Tourism Sector Assessment, Community Tourism Opportunity Planning, Place Marketing Profile Evaluation, and Place Branding
- ☑ *Workshops/Education/Training, Research/Evaluation/Analysis, and Development Process:*
Capacity-Building Modeling, Economic Impact Analysis and Modeling, and Dependency & Vulnerability Factor Analysis

The IES framework to economic development is an intersection of building local capacity through research based analysis of the qualities necessary to achieve community empowerment and sustainability with a development process to ensure participation that is responsive to the ever-changing dynamics that affect the local economy.

Section B:

Project Understanding

We understand that the District of Hudson's Hope has identified the need to evaluate, market, and develop three separate properties that are residential, commercial, and airport industrial in nature. The identified properties represent significant assets that have the potential to increase revenues for the municipality to build upon current commercial and residential development in the Community. There is a need to diversify both the industrial sectors and types of labour in the Community to ensure long-term sustainability of the local economy and lifestyle. With the ongoing development of various resource industrial projects in the area either in the early stages or moving along the spectrum of completion, Hudson's Hope believes that the land development opportunities for these industries in the Community can be optimized. The BC Hydro Site C Project and the various LNG Projects in the Region and throughout BC open up development and marketing potential for these resource initiatives as well as provide potential residential and commercial opportunities in the Community.

In order to take advantage of these initiatives, it is imperative for the Community to begin the process of developing a feasibility of the current land development assets and to market them as a part of the broader operational opportunities for pre-project development. Once a feasibility study is conducted, a marketing plan is needed that is directed at specific and targeted opportunities for development.

While the detailed development of the project will be examined and confirmed in the pre-project launch meeting with the Council, the following elements provide an initial framework for consideration as key indicators for the feasibility of development and marketing of these community assets:

- ☑ A Steering Committee will be formed during the initial meeting. A Proposed makeup and Terms of Reference will be outlined in the following Scope of Work.
- ☑ An assessment of and evaluation of past developments will be conducted. IES will review and cite potential opportunities all within the methodology of building on local assets and resources within the Community. This assessment will be done in the context of the ongoing resource developments, employing a joint asset inventory assessment model, and land development opportunity analysis. An analysis of the current assets with a focus on potential options.
- ☑ IES will conduct additional research and analysis to ensure the engagement process includes all available material and information in the decision-making process.
- ☑ A Place Branding evaluation and assessment that focuses on 4-issues: Audience, Content, Style, and Logical Structure and Flow of Messaging. These considerations are important to the assessment and evaluation of a community's profile to ensure the marketing efforts are directed at the appropriate audience, provide relevant content, are presented in a style consistent with the messaging, and have a logical structure and flow in messaging.

The four elements provide the preliminary foundation for a framework to guide the Community along a path of land development feasibility and marketing to build upon the current economic development assets.

Section C

Marketing Feasibility Steering Committee

The Steering Committee is intended to support and complement the efforts of *Integrated Economic Solutions Inc.* and provide inputs to and from Council. The Committee is designed to reflect the diversity of interests and wide range of experience and expertise available within the District of Hudson's Hope. It serves as a community advisory Committee to the Project with multi-stakeholder participation.

Committee Scope:

The Steering Committee is intended to reflect the diversity of interests and wide range of economic-related experience and expertise within the District. As a community advisory Committee, it serves as an advisor to the Project as a senior-level, multi-stakeholder committee to support the Marketing Feasibility Study.

The scope of the committee is limited to an advisory role Committee of multi-stakeholders.

- Review and advise on the Marketing Feasibility Study;
- Assist and work with *Integrated Economic Solutions Inc.* through timely and strategic advice on the development and implementation of the Marketing Feasibility Study; and

Purpose

- The Terms of Reference that follow are intended to outline the mutual understanding, roles, and responsibilities between the Committee members and *Integrated Economic Solutions Inc.*
- One of the key roles and responsibilities of the Committee is to provide support to *Integrated Economic Solutions* in its recommendations on the Marketing Feasibility Study to Council.
- The Committee is seen as having a major role in championing the Marketing Feasibility Study as it relates to economic development and economic sustainability and capacity building with the community.

Functional Responsibilities

- Provide broad-based community leadership, experience, and expertise in helping build and effectively promote and support the Marketing Feasibility Study.
- Facilitate an informed discussion of the District's key economic advantages, obstacles, opportunities, and the future direction and vision for economic development.
- Make recommendations for fine-tuning the Marketing Feasibility Study, as required.
- Visibly conveys the ongoing importance of partnerships and alliances in achieving the District's key economic development goals and objectives.

Committee Membership

The members of the Steering Committee are to reflect the various segments of the District's economy.

The members of the Steering Committee will consist of the following:

- Mayor
- One Councilor (As chosen by the Mayor)
- CAO
- Business Services
- Employment Services Representative
- Forestry Sector Representative
- Mining Representative
- Representative from Downtown Businesses
- Representative from Major Developer
- Representative from Real Estate
- Representative from Tourism

The business organizations will submit the names of their representatives for Steering Committee to *Integrated Economic Solutions Inc.*

The other members shall be selected for the Steering Committee based on their past business experience, knowledge of the District, and a commitment to the community. The Mayor and Council shall determine those proposed members for approval.

Terms and Conditions

1. If any member is absent from three (3) consecutive meetings, Council may, upon recommendation from the Committee, declare the position vacant and appoint a successor to fill the vacancy;
2. Council may terminate the appointment of any member at any time, primarily upon the recommendation of the Committee and where reasonable cause is demonstrated;

Governance and Procedure

- ✓ During the first meeting a Chair and Vice-Chair are elected from its membership for the duration of the Project. Appointed members of Council shall not be eligible for election as Chair or Vice-Chair.
- ✓ The Chair and Vice-Chair, with the approval of the Committee, shall establish (or reconfirm) the operating ground rules for Committee meetings and ensure that these are in accordance with generally accepted standards and practices.
- ✓ Regular meetings are to be held monthly, on a date and time agreed to by the Committee, and at other such times as the Committee determines necessary.
- ✓ Special meetings of the Committee may be called by the Chair or Vice-Chair provided that not less than two (2) full business days' notice is given to each member of the Committee.
- ✓ No regular or special meetings of the Committee shall be convened unless the Chair or Vice-Chair is present.
- ✓ A quorum for regular and special meetings of the Committee shall be TBD members.
- ✓ All members shall have equal voting privileges on issues/items where a vote is called, with a simple majority (with quorum) deciding any vote.

Role of District Personnel

- The CAO is deemed to be ex-officio and non-voting participants in the Committee meetings.
- The CAO shall:
 - ✓ Assist the Committee in carrying out its primary purpose, role and responsibilities related to Project; and
 - ✓ Assist the Committee in responding to specific issues that Council has requested be reviewed or considered in more detail
- The Committee Clerk shall:
 - ✓ Prepare agendas, maintain minutes and records, as well as correspondence related to the Committee's ongoing activities.

Reporting

1. The Steering Committee will provide regular briefings to City Council on issues identified to date.
2. The Steering Committee will also prepare updates and a summary of progress for inclusion in its Monthly Report to the District Council.

Section D

Marketing Feasibility Workplan Methodology

The District of Hudson's Hope Marketing Feasibility Study is based on a 4-phase process of background research and situational analysis, opportunity evaluation identification, land development marketing plan, and land development marketing implementation and monitoring. A key component of the approach to successfully developing the District's Marketing Plan is to ensure that there is continuous incorporation of learned and understood elements of the analysis and opportunity evaluation process. In other words, with the continuous changes to the current Northern development environment, it is critical to remain up to date and amenable to the changing conditions.

To achieve an ongoing and expanding iterative approach, a process of research data and engagement feedback spread out over a reasonable time allows for the sharing, learning, and understanding of elements that will provide the basic foundation to marketing the land development projects to the appropriate markets.

The following elements outline the methodology of the project development, timelines of the various tasks, and a budget with a time allotment for each task. There is also an attached schedule of fees for the project.

Methodology

Our proposed workplan is built around Key Factor Analysis (KFA) Model. This approach is based on assessment, review, ideas, and input from targeted stakeholders. The KFA Model will identify gaps, determine their significance, and evaluate whether they can be overcome or "bridgeable".

Phase I: Background Review

This phase involves understanding the land development of the various properties through a process of gathering background information on the current situation and why it's important, collecting data and information to determine in order to find the project focus, and conduct key stakeholder interviews. Stakeholders will be identified through discussions with the Steering Committee and Hudson's Hope staff.

Understanding what's important involves assessing the critical issues that defines the problems and opportunities to marketing the properties. It's here that we understand the issues and their impact recognize our assumptions regarding the marketability of the properties, and determine what we need to know in order to address the marketability and probable course.

Phase II: Opportunity Evaluation Identification

Identifying what results are worthwhile is the crucial component of this phase: it gives an indication of the potential marketability of the properties and what we want to achieve. We want to establish measurable results within a timeframe for completion.

Phase III: Land Development Marketing Plan

This phase of the workplan outlines where we are going, when we will arrive, and how to get there.

Phase IV: Land Development Marketing Implementation and Monitoring

At this stage of the marketing development is where we decide who, when, and how the marketing plan will be implemented. Reviewing the implementation process through monitoring its progress ensures that we know what is going right and what we can learn from it, and what is not going right and how to modify and propose corrective action.

Throughout the project, IES will provide regular project updates to the CAO, and/or Steering Committee. IES will have ongoing communications with the CAO as a part of the project process

① Phase 1: Background Review

1.1: Project Orientation:

The IES project team will visit Hudson's Hope to conduct an initial meeting with the CAO/Council to discuss and set expectations for the project development and implementation. Items for discussion at the Project Orientation will be the following:

- ✓ Identify community priorities and expectations;
- ✓ Clarify the collective understanding of the feasibility purpose, objectives and potential constraints;
- ✓ Discuss the research methodology, data and resources available, identify documents that should be reviewed as background for the project, and potential constraints on data collection;
- ✓ Role of District of Hudson's Hope in the Project;
- ✓ Engage community stakeholders, informant interviewees, and other key participants; and
- ✓ Discuss relationships with other partners, namely, adjacent communities and the Regional District in the overall integration of community marketing efforts

In addition to the specific elements listed, we would also confirm dates for subsequent meetings and report timing.

IES will provide an agenda, facilitate the meeting, and distribute meeting notes.

1.2 Planning Session/Workshop:

During the initial visit to the community, IES will conduct a Planning Session/Workshop that will assist in identifying the focus of the project to ensure that the accomplishments are clear in order to successfully carry out the mission of the project and meet community expectations. At this workshop the following elements will be developed:

- ✓ What is the perceived issue and why it is important?
- ✓ What evidence exists that makes this particular project a high priority and an important focus?
- ✓ What information or data we already have? What do we need to know that we don't know in order for us to resolve this issue?
- ✓ What is the probable cause of this issue?
- ✓ What are the results needed? What is the deliverable?

1.3: Review Background Documents and Studies

Based on the input for the pre-project launch and planning session, IES will collect, review and develop an analysis of all studies and research from current data and information, background reports, and other sources relating to the project development. This initial research and assessment will be based on existing data from publicly available sources. The District of Hudson's Hope agrees to provide IES with copies of any background studies and supporting documents that it has at its disposal.

1.4: Economic Assessment Profile: Market & Provincial Data Research Impacting Hudson's Hope

Based on the input for the pre-project launch and planning session, IES will collect and review all studies and researching relating to the project development. The District of Hudson's Hope and other sources, including, but not limited to, the BC Government, Government of Canada, Regional District, and non-government sources, will supply these documents and studies.

1.4: Economic Assessment Profile: Market & Provincial Data Research Impacting Hudson's Hope

IES will develop an analysis of demographic, industry, and economic activity and trends in Hudson's Hope and in the Region. This assessment will provide a baseline of market and economic conditions that are impacting Hudson's Hope.

1.5: Land Development Analysis

IES will evaluate and provide an assessment on following elements necessary to understand the opportunities that would fit the current infrastructure and economic development processes:

- ✓ Infrastructure issues and potential solutions;
- ✓ Technology issues and opportunities;
- ✓ Inventory amenities and basic service development;
- ✓ Current economic development efforts; and
- ✓ Major resource development review of potential opportunities

1.6: Land Use Analysis:

In order to understand the potential land development possibilities, it is imperative to conduct an examination of existing land use conditions and inventory, plans, and potential scenarios.

1.7: Identification of Key Stakeholders: Development Engagement Process:

Key stakeholders and the development of an engagement process is necessary to ensure IES connects with the appropriate agencies, organizations, and individuals. Based on the information from the pre-project launch, feedback from the workshop and planning session, and the land use analysis, IES will establish a list of stakeholders, with input and guidance from the District of Hudson's Hope, and develop a process to engage in the land development marketing.

1.8: Conduct Key Informant Interviews:

Once key stakeholders have been identified and engaged, IES will conduct key informant interviews and other methods of feedback on the challenges and opportunities to market the land for development. The purpose of this process is to gain further insight into the direction of the marketing opportunities.

Key Deliverables of Phase 1

- ✓ Economic Background Report
- ✓ Engagement Process

② Phase 2: Opportunity Evaluation Identification

2.1: Steering Committee Workshop on Background Review Finding:

The project team will analyze and summarize the feedback from the interviews, research, and information to date. This will include information from research highlights and insights, the workshop findings, informant interviews, and other related material. An analysis and identification of critical issues and actions will be provided in this Workshop to either continue on course or find “course-correction” solutions.

2.2: Land Development Opportunity/Evaluation Matrix:

Based on the research conducted, IES would identify land development opportunities and evaluate each opportunity based on a matrix using the following criteria: market demand, financial viability, legal permissibility, administrative and political acceptability, economic diversification benefit, and employment creation potential.

2.3: Additional Key Informant Interviews:

Following the Steering Committee Workshop, IES will conduct additional key informant interviews. As we move through the process, it will be clear that new information becomes available and it is imperative to engage with the key stakeholders to solicit additional feedback, ideas, thoughts, challenges, and opportunities.

2.4: Identification of Preliminary Opportunities for Development:

Once the evaluation and additional interviews have been concluded, IES will identify a list of preliminary opportunities for development to the Committee for review.

Key Deliverables of Phase 2

- ✓ Land Development Opportunity Evaluation
- ✓ Identification of Preliminary Opportunities for Development

③ Phase 3: Land Development Marketing Plan

3.1: Steering Committee Workshop on Opportunity Evaluation Identification:

The project team will analyze and summarize land development opportunity evaluation matrix, integrate additional key informant interviews into the evaluation process, and outline the preliminary opportunities for development.

This workshop is designed specifically with the “Action Team” in mind. In other words, those that will be involved in the implementation of the plan are the audience and participants. At this workshop the action steps will be defined; the individual or organization will be assigned and accountable for its success; a timetable for carrying out the action will be outlined; resources will be identified to achieve each steps implementation; and feedback loops, including the type of feedback will be used to monitor progress.

3.2: Land Development Marketing Roadmap:

In consultation with the Committee, CAO, and planning personnel, IES would provide a 'roadmap' for each site. This would include specific and unique considerations that might affect the marketing and development the site.

3.3: Preparation of Land Development Packages:

IES will prepare individual land development packages for the three sites focused on the preliminary opportunity identification.

3.4: Land Development Marketing Plan:

A land development-marketing plan will be outlined to provide direction and focus for attracting investors and developers to take advantage of the opportunity identification.

Key Deliverables of Phase 3

- ✓ Land Development Roadmap
- ✓ Land Development Packages
- ✓ Land Development Marketing Plan

④ Phase 4: Land Development Marketing Implementation and Monitoring

4.1: Steering Committee Workshop on Marketing Plan:

With all the relevant information collected, analyzed, and understood, it is at this Steering Committee Meeting where any potential obstacles, challenges, concerns, and corrective action plans are presented and discussed.

4.2: Preparation of Marketing Packages:

Marketing packages will be designed that include the land development packages and any other related material specific to individual target markets based on the opportunity evaluation identification.

4.3: Contact Target Market Developers:

A list of target market developers will be established and contacted to arrange for interviews, meetings, and presentations of the land development opportunities for investment consideration.

4.4: Conduct Target Market Interviews/Meetings/Presentations:

With the land development and marketing packages in hand, target market interviews, meetings, and presentations will be conducted.

4.5: Follow Up with Target Market Developers:

After the interviews, meeting, and presentations follow up will be conducted to discuss next steps.

4.6: Negotiate/Sign Development Agreements:

The final step in the marketing process is to negotiate and sign development agreements with potential land development partners.

Key Deliverables of Phase 4

- ✓ Marketing Packages

- ✓ List of Target Market Developers
- ✓ Timeline and Process for Marketing and Closing Deals

Section E

Project Timeline

The following timeline is based on a flexible schedule, allowing time for effective engagement, consultation, and consensus building at different stages of the process and intervals of time, in order to effectively understand, learn, and share knowledge, address information gaps, and build on the information revealed during the process. Beginning in the fall and wrapping up in early 2016, IES projects a 4-month timeline to complete the *Marketing Feasibility Study*.

Task	Timeline (Month)	September	October	November	December	January	2016
Phase 1: Background Review							
1.1	Project Orientation	✓					
1.2	Planning Session	✓					
1.3	Review Background Documents and Studies	✓					
1.4	Economic Assessment Profile: Market & Provincial Data Research Impacting District of Hudson's Hope	✓					
1.5	Land Development Analysis	✓					
1.6	Land Use Analysis	✓					
1.7	Identification of Key Stakeholders: Development Engagement Process	✓					
1.8	Conduct Key Informant Interviews	✓					
Phase 2: Opportunity Evaluation Identification							
2.1	Steering Committee Workshop on Background Review Findings		✓				
2.2	Land Development Opportunity/Evaluation Matrix		✓				
2.3	Additional Key Informant Interviews		✓				
2.4	Identification of Preliminary Opportunities for Development		✓				
Phase 3: Land Development Marketing Plan							
3.1	Steering Committee Workshop on Opportunity Evaluation Identification			✓			
3.2	Land Development Marketing Roadmap			✓			
3.3	Preparation of Land Development Packages				✓	✓	
3.4	Land Development Marketing Plan				✓	✓	
Phase 4: Land Development Marketing Implementation and Monitoring							
4.1	Steering Committee Workshop on Marketing Plan					✓	
4.2	Preparation of Marketing Packages						✓
4.3	Contact Target Market Developers						✓
4.4	Conduct Target Market Interview/Meetings/Presentations						✓
4.5	Follow Up with Target Market Developers						✓
4.6	Negotiate/Sign Development Agreements						✓

Project Budget

Task	Project Phase	James Umpherson		Wilfred Barranok		Grant Boeling		Total Time (Hrs)	Total Costs
		Project Manager		Business Development		Community Engagement			
		Hrs @	\$	Hrs @	\$	Hrs @	\$		
	Phase 1: Background Review								
1.1	Project Orientation	4.00	\$ 500.00	4.00	\$ 400.00	-	\$ -	8.00	\$ 900.00
1.2	Project Planning Workshop	8.00	\$ 1,000.00	8.00	\$ 800.00	-	\$ -	16.00	\$ 1,800.00
1.3	Review Background Documents and Studies	21.00	\$ 2,625.00	-	\$ -	-	\$ -	21.00	\$ 2,625.00
1.4	Economic Assessment Profile	40.00	\$ 5,000.00	-	\$ -	-	\$ -	40.00	\$ 5,000.00
1.5	Land Development Analysis	16.00	\$ 2,000.00	-	\$ -	-	\$ -	16.00	\$ 2,000.00
1.6	Land User Analysis	8.00	\$ 1,000.00	4.00	\$ 400.00	4.00	\$ 260.00	16.00	\$ 1,660.00
1.7	Identification of Key Stakeholders: Develop Engagement Process	8.00	\$ 1,000.00	4.00	\$ 400.00	4.00	\$ 260.00	16.00	\$ 1,660.00
1.8	Conduct Key Informant Interview	4.00	\$ 500.00	8.00	\$ 800.00	8.00	\$ 520.00	20.00	\$ 1,820.00
	Phase 2: Opportunity Evaluation/Identification								
2.1	Project Meeting Workshop: Background Review Findings	4.00	\$ 500.00	4.00	\$ 400.00	-	\$ -	8.00	\$ 900.00
2.2	Land Development Opportunity/Evaluation Matrix	24.00	\$ 3,000.00	16.00	\$ 1,600.00	16.00	\$ 1,040.00	56.00	\$ 5,640.00
2.3	Additional Key Informant Interviews	-	\$ -	8.00	\$ 800.00	8.00	\$ 520.00	16.00	\$ 1,320.00
2.4	Identification of Preliminary Opportunities for Development	8.00	\$ 1,000.00	16.00	\$ 1,600.00	8.00	\$ 520.00	32.00	\$ 3,120.00
	Phase 3: Land Development Marketing Plan								
3.1	Project Meeting Workshop: Opportunity Evaluation Identification	4.00	\$ 500.00	4.00	\$ 400.00	-	\$ -	8.00	\$ 900.00
3.2	Land Development Marketing Roadmap	8.00	\$ 1,000.00	-	\$ -	-	\$ -	8.00	\$ 1,000.00
3.3	Preparation of Land Development Marketing Packages	16.00	\$ 2,000.00	-	\$ -	-	\$ -	16.00	\$ 2,000.00
3.4	Land Development Marketing Plan	48.00	\$ 6,000.00	-	\$ -	-	\$ -	48.00	\$ 6,000.00
	Phase 4: Land Development Marketing Implementation and Monitoring								
4.1	Project Meeting Workshop: Marketing Plan	4.00	\$ 500.00	4.00	\$ 400.00	4.00	\$ 260.00	12.00	\$ 1,160.00
4.2	Final Draft of Marketing Packages	8.00	\$ 1,000.00	4.00	\$ 400.00	-	\$ -	12.00	\$ 1,400.00
4.3	Contact Target Market Developers	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -
4.4	Conduct Target Market Interview/Meetings/Presentations	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -
4.5	Follow Up with Target Market Developers	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -
4.6	Negotiate/Sign Development Agreements	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -	See Notes	\$ -
	Subtotals:	233.00	\$ 29,125.00	84.00	\$ 8,400.00	32.00	\$ 3,380.00	349.00	\$ 40,905.00
								GST	\$ 2,045.25
								Total	\$ 42,950.25

NOTES:

Task 4.3, 4.4, 4.5, 4.6: These tasks are difficult to calculate since they will be based on the findings from the previous work conducted in Phases 1, 2, 3. As such, once the Final Draft of the Marketing Packages is completed, a separate Project Budget will be submitted to complete these tasks.

Travel Costs: All costs relating to travel to and from the community will be a separate item billed based on BC mileage rates, actual hotel costs, and Northern BC per diem rates.

Section F

Proposed Payment Fee Structure

The proposal payment schedule for the Marketing Feasibility Study for the District of Hudson's Hope would reflect the phasing of our work program, as indicated below:

Invoice	Milestone	Payment % of Total Contract	Payment \$ of Total Contract
Invoice #1	Upon Award of Contract	20%	\$10,737.56
Invoice #2	After Project Meeting Workshop: Background Review Findings	20%	\$10,737.56
Invoice #3	After Project Meeting Workshop: Opportunity Evaluation Identification	20%	\$10,737.56
Invoice #4	Upon Final Draft of Marketing Packages	20%	\$10,737.57
		100 %	\$42,950.25

If, at any time during the project, the District of Hudson's Hope wishes to discontinue the project for whatever reason, a time allocation report card and work performed to that date and expenses incurred would be supplied.

Section G

Project Team

James Umpherson, M.A.E.S.

Managing Director, *Integrated Economic Solutions Inc.*

Project Role: Project Manager, Researcher, Analyst, and Writer

James is an economic development professional, economist, and public policy specialist with a proven track record in research, teaching, workshop facilitation, public policy, process development, and program implementation. He has worked with a cross section of First Nations, local and regional governments, businesses, public stakeholders, and communities for long-term sustainable development. James has a master's degree in Economic Development from the University of Waterloo where he developed an Economic Development Capacity Building Model that examines economic development policy success through a capacity building lens.

Wilfred M. Barranoik, P.Mgr., C.Mgr.

President and Senior Consultant, *WESTRAND Consulting Group Inc.*

Project Role: Business Development & Community Consultation

Wilfred holds the Professional Manager Designation and Charter Manager Designation from the Canadian Institute of Management. He has conducted several workshops and education seminars on management and organizational development; small business and community development; retail development; and marketing development. He is also a specialist in entrepreneurial training needs assessment, business marketing, strategic planning, and community tourism opportunity planning. In addition to his success in the field of community and business development, he is the author of 2-self-help books on business planning and development.

Grant Bealing, MBA

Contract Professional

Project Role: Community Engagement

Grant is a project consultant and advisor with a wealth of experience working with a diverse group of people, projects, and communities. He has worked in the field of project management for the past 10-years, supporting oil & gas development projects. The combination of his experience in the oil & gas sector and his understanding of Northern communities gives Grant a broad based understanding of the needs for communities to address industry needs on the ground and from an operations perspective. It is this combination of skills and knowledge that provides the foundation for his insight and solution based approach to community engagement to support strategic and tactical based recommendations for effective action and implementation.

References

Integrated Economic Solutions Inc.'s client references are based on the key contacts and personnel during our extensive experience and contract with First Nation communities and municipal governments:

Project: Economic Development Strategy

Project Personnel: James Umpherson

Mayor Susan Roline

City of Merritt

☎ : (250) 525-0509

✉ : ssroline@gmail.com

Project: Economic Development Strategy

Project Personnel: James Umpherson

Matt Noble, City Manager

City of Moose Jaw

☎ : (306) 690-1120

✉ : Mnoble2010@hotmail.com

Project: Community Branding & Website Redevelopment

Project Personnel: James Umpherson

Mayor Susan Roline

City of Merritt

☎ : (250) 525-0509

✉ : ssroline@gmail.com

Project: Business Plan

Project Personnel: Wilfred Barranoik

Clayton Burke

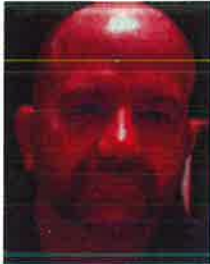
Big River School of Tourism Inc.

☎ : (867) 872-2060

✉ : rivertrails@auroranet.net.ca

Appendix:

Resumes



Education

PhD Studies, 2007-2011

Northern and Canadian Studies
Trent University

Masters of Applied Environmental Studies, 2007

Local Economic Development
University of Waterloo

Bachelor of Arts (Economics & Political Science), 1990
University of Calgary

Professional Experience

2014-Present

Managing Director
Integrated Economic Solutions Inc.

2013-2014

Manager, Community Initiatives
Columbia Basin Trust, Golden, BC

2011-2013

Business & Economic Development Manager
City of Merritt, Merritt, BC

2001-2007

Funding Analyst, Crime Prevention Unit
Calgary Police Service, Calgary, AB

1998-1999

Economic Development Manager
Lac La Martre Development Corporation, Wha Ti, NT

Contact

(250) 272-2441

james@economicsolutions.ca

 <http://www.linkedin.com/pub/james-umpherson/55/4b7/29a>

www.economicsolutions.ca

James Umpherson M.A.E.S

Managing Director, *Integrated Economic Solutions Inc.*

James is a professionally trained economic development and capacity building specialist with a proven track record in research, teaching, workshop facilitation, public policy, strategic development, and program implementation.

His career includes working with a cross section of First Nations, local and regional governments, businesses, public stakeholders, and communities for long-term sustainable development.

James's approach to economic development is based on a foundation of objective analysis of the local economy. The foundation of analysis is based on employing empirical evidence and the tools that support an approach to planning and development of processes for political decision makers to make informed choices. Objective analysis defines the strengths of the local economic sectors, identifies the right target industries, and gives knowledge to decision makers to understand what sets the local economy apart and makes it competitive.

Selected Projects

First Nations, Development Projects, and Impact & Benefit Agreements (IBAs) Course

Client: University of Waterloo & EcD Certification Program
Date: 2014

Economic Development Strategic Plan

Client: City of Merritt
Date: 2013

Fund Development for a Sustainable Future: Gold Country Society Workshop

Client: Gold Country Communities Society
Date: 2013

Economic Development Strategic Planning Workshop

Client: Village of Cache Creek
Date: 2012

Selected Publications and Research

Impact & Benefit Agreements: A Tool for Economic Self-Determination? Multiples, No. 19, July 2013

Northern Sovereignty and Aboriginal Self-Determination, 2010 Annual Association of American Geographers (AAG) Conference, 2010

A Review of Literature on the State and Federalism: How has the North been interpreted as a region from a Canadian and International Perspective? Trent University, 2010

A Review of Sustainable Economic and Political Developments in the NWT: Exploring Government Policies, Political Economies, and Development Agendas, Trent University, 2007



Education

Professional Manager Designation;
Charter Manager Designation
Canadian Institute of Management

Public Relations Certificates
Northern Alberta Institute of Technology

Certificate in Supervisory Management
American Management Association

Adult Education Certificate;
Management Certificate
Cooperative College of Canada

Professional Associations

Canadian Institute of Management (CIM)
Chambers of Commerce – British Columbia & Alberta
Canadian Professional Sales Association

Professional Experience




1995-Present

President, Managing Director & Senior Consultant
WESTRAND Consulting Group Inc.

2008-2010

Executive Vice President
Edmonton Chamber of Commerce & World Trade Centre

Contact

 1-888-924-7526
 wbarranoik@westrandconsulting.com
 <https://www.linkedin.com/pub/wilfred-m-barranoik/4/b06/b69>

www.westrandconsulting.com

Wilfred M. Barranoik P.Mgr. C.Mgr.

Managing Director & Senior Consultant, *WESTRAND Consulting Group Inc.*

Wilfred is a seasoned business executive with over 35 years of senior management, leadership and executive experience in various professions: a business cooperative, independent retail chain and consulting firm. In his consulting practice he has worked with a variety of clients, both in Western and Northern Canada. The main focus of his professional practice is to help people with entrepreneurial dreams plan and achieve their desired success. He uses the same principles when working with organizations and community groups.

His strength in understanding and assisting businesses and communities is enriched by over 35 years' involvement in leadership roles with chambers of commerce and other business organizations across Canada. He has served as President, Vice-President and Treasurer of the Alberta Chamber of Commerce and on the Board of Directors for the Canadian Chamber of Commerce, as well as President of the Northern Alberta/NWT and Director for British Columbia/Yukon branch of the Canadian Institute of Management.

In 2004 he received the P.R.I.M.E. Award (Professional Recognition for Innovation and Management Excellence) from the Canadian Institute of Management.

Selected Projects

Market Development Plan/Marketing Initiative
Client: *WESTMINSTER Party & Tent Rentals Ltd.*
Date: 2013

Strategic Plan/Business Plan Development
Client: *Alberta Junior Forest Wardens Association*
Date: 2007-2013

Business Plan Assessment (USA & Canada)
Client: *Ally Referrals Networks Ltd.*
Date: 2013

Strategic Plan Development
Client: *NeighbourLink, Summerland, BC*
Date: 2013

Community Tourism Opportunity Plan
Client: *Big River School of Tourism*
Date: 2009-2010

Selected Publications

Preparing A Business Plan; Second Edition, WESTRAND Publishing Section, 2006

Preparing A Business Plan: "A Framework for Entrepreneurs", WESTRAND Publishing Section, 1996

Grant Bealing M.B.A.

Contract Professional

Grant provides senior level contract management services. He has a strong background in project management experience that includes mining, oil and gas, pipeline, housing, and infrastructure projects

Grant has a broad spectrum of contracting experience including pipeline facilities, oil sands, mining, construction, camps, large mining processing facilities, small remote drill sites, Northern development, community relations that have involved most contract forms and strategies.

Education

Master of Business Administration;
University of Calgary

Bachelor of Arts (Political Science)
University of Calgary

Contact

 (403) 202-2716
 grant.bealing@gmail.com
 <https://ca.linkedin.com/pub/grant-bealing/29/119/98>

Professional Experience**2012-2015**

Senior Contract Coordinator
Enbridge Large Pipeline Projects

2011-2012

Manager Contract Management
Fluor Canada

2010-2011

Senior Contract Administrator
Foster Creek Projects (Cenova)

2010

Commercial Administrator
Newmonth Mining/Nuna

2008-2009

Contracts Administrator
Voyager Project (Suncor)

2005-2007

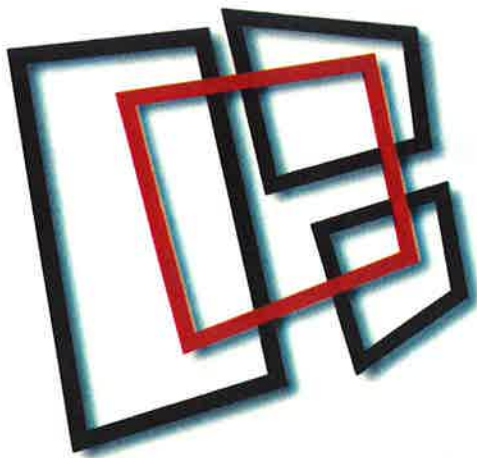
Contracts
GEBCO Inc.

2004-2005

Construction Manager
Red River Inc.

2000-2003

Construction Manager
Lac La Martre Development Corporation



Integrated Economic Solutions

INTEGRATED ECONOMIC SOLUTIONS INC.

Box 2162 Golden, BC V0A 1H0 ■ 250.272.2441 ■ www.economicsolutions.ca

THE DISTRICT OF HUDSON'S HOPE

REPORT TO: Mayor Gwen Johansson and Council

SUBJECT: SHOP DOCUMENTS as per CAO ACTIONS AND UPDATES

DATE: OCTOBER 8, 2015

FROM: Tom Matus, CAO

- 1 YRB LAND TRANSFER / PURCHASE**
- 2 MCELHANNEY LAND SURVEY**
- 3 NORTHERN GEO GEOTECHNICAL STUDY**

LIDSTONE & COMPANY
BARRISTERS AND SOLICITORS

September 30, 2015

BY EMAIL

Tom Matus, CAO
District of Hudson's Hope
Box 330, 9904 Dudley Drive
Hudson's Hope, BC, V0C 1V0

Dear Tom:

Buyer: THE DISTRICT OF HUDSON'S HOPE
Seller: YELLOWHEAD ROAD & BRIDGE (NORTH PEACE) LTD. (INC.NO. 517934)
Property: PID: 029-640-628, LOT 2 SECTION 19 TOWNSHIP 81 RANGE 25
PEACE RIVER DISTRICT PLAN EPP54878
Our File: 10113-106

We are pleased to advise that on today's date, the Transfer documentation was accepted for registration in the Land Title Office under filing Number CA4711765.

We enclose herewith the following for your records:

1. Form A Transfer indicating electronic registration particulars;
2. State of Title showing pending registration; and
3. Our letter to the Seller's lawyer enclosing funds.

We will be applying for a State of Title Certificate as soon as registration has been confirmed and will provide you with a copy of the same in same in due course.

We trust you will find the foregoing to be in order. Should you have any questions, please feel free to contact the writer's office.

Sincerely,


LIDSTONE & COMPANY

Lindsay Parcels
parcells@lidstone.info

LP/lap

Encl.

SUITE 1300 - SUN TOWER - 128 PENDER STREET WEST - VANCOUVER BC - V6B 1R8
TELEPHONE 604-899-2269 - FACSIMILE 604-899-2281 - TOLL FREE 1-877-339-2199
(00337564; 1)

Sep-30-2015 10:46:17.001

CA4711765

PAGE 1 OF 1 PAGES

LAND TITLE ACT
FORM A (Section 185(1))

FREEHOLD TRANSFER Province of British Columbia

Your electronic signature is a representation that you are a subscriber as defined by the Land Title Act, RSBC 1996 c.250, and that you have applied your electronic signature in accordance with Section 168.3, and a true copy, or a copy of that true copy, is in your possession.

Lindsay Arthur
Parcels PIH67V

Digitally signed by Lindsay Arthur
Parcels PIH67V
DN: cn=CA, cn=Lindsay Arthur Parcels
PIH67V, o=Lawyer, ou=Verify ID at
www.juricert.com/LKUP.cfm?id=PIH67V
Date: 2015.09.30 10:31:22 -0700

1. APPLICATION: (Name, address, phone number of applicant, applicant's solicitor or agent)

Lindsay A. Parcels, Barrister & Solicitor
Lidstone & Company, Barristers & Solicitors
1300 - 128 Pender St. W.
Vancouver, BC, V6B 1R8
Document Fees: \$78.10

Tel. 604-899-2269
File No. 10113-106

Deduct LTSA Fees? Yes ☒2a. PARCEL IDENTIFIER AND LEGAL DESCRIPTION OF LAND:
[PID] [LEGAL DESCRIPTION]

**029-640-628 LOT 2 SECTION 19 TOWNSHIP 81 RANGE 25 PEACE RIVER DISTRICT
PLAN EPP54878**

STC? YES ☐

2b. MARKET VALUE: \$ 155,000.00

3. CONSIDERATION: \$ 155,000.00

4. TRANSFEROR(S):

YELLOWHEAD ROAD & BRIDGE (NORTH PEACE) LTD. (INC.NO. 517934)5. FREEHOLD ESTATE TRANSFERRED: **Fee Simple**

6. TRANSFeree(S): (including occupation(s), postal address(es) and postal code(s))

THE DISTRICT OF HUDSON'S HOPE

BOX 330, 9904 DUDLEY DRIVE
HUDSON'S HOPE

BRITISH COLUMBIA
CANADA V0C 1V0

Incorporation No
N/A

7. EXECUTION(S): The transferor(s) accept(s) the above consideration and understand(s) that the instrument operates to transfer the freehold estate in the land described above to the transferee(s)

Officer Signature(s)

Jan Christiansen
Barrister & Solicitor

204 - 1302 Seventh Avenue
Prince George, BC, V2L 3P1

Execution Date

Y	M	D
15	09	29

Transferor(s) Signature(s)

YELLOWHEAD ROAD & BRIDGE
(NORTH PEACE) LTD., by its
authorized signatories:

Name: Kevin Higgins

OFFICER CERTIFICATION:

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c.124, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the *Land Title Act* as they pertain to the execution of this instrument.

TITLE SEARCH PRINT

File Reference: 10113-106

2015-09-30, 10:50:09

Requestor: Lindsay Parcels

****CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN****

Title Issued Under	SECTION 98 LAND TITLE ACT
Land Title District Land Title Office	PRINCE GEORGE PRINCE GEORGE
Title Number From Title Number	CA4637198 BW454587
Application Entered	2015-09-02
Application Received	2015-08-28
Registered Owner in Fee Simple Registered Owner/Mailing Address:	YELLOWHEAD ROAD & BRIDGE (NORTH PEACE) LTD., INC.NO. 517934 #9A - 1750 QUINN STREET PRINCE GEORGE, BC V2N 1X3
Taxation Authority	PEACE RIVER ASSESSMENT DISTRICT
Description of Land Parcel Identifier: Legal Description:	029-640-628 LOT 2 SECTION 19 TOWNSHIP 81 RANGE 25 PEACE RIVER DISTRICT PLAN EPP54878
Legal Notations	THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL GOVERNMENT ACT, SEE BB1502717
Charges, Liens and Interests	NONE
Duplicate Indefeasible Title	NONE OUTSTANDING
Transfers	NONE
Pending Applications Parcel Identifier: Application Number/Type:	029-640-628 CA4711765 FREEHOLD TRANSFER

LIDSTONE & COMPANY
BARRISTERS AND SOLICITORS

September 30, 2015

Jan Christiansen, Barrister & Solicitor
Heather Sadler Jenkins LLP
#204-1302 Seventh Ave
Prince George, BC, V2L 3P1

BY MAIL

Dear Jan:

Buyer: THE DISTRICT OF HUDSON'S HOPE
Seller: YELLOWHEAD ROAD & BRIDGE (NORTH PEACE) LTD.
(INC.NO. 517934)
Property: PID: 029-640-628, LOT 2 SECTION 19 TOWNSHIP 81 RANGE
25 PEACE RIVER DISTRICT PLAN EPP54878
Our File: 10113-106

We are pleased to advise that a Transfer of an Estate in Fee Simple was submitted for registration in the Land Title Office on today's date under number CA4711765 in connection with the above-mentioned transaction. Accordingly, we enclose the sum of \$157,420.58 payable to Heather, Sadler, Jenkins LLP in trust. The enclosed funds are being forwarded to you on your undertakings as contained in our letter dated September 25, 2015.

We trust that the foregoing is satisfactory. If you have any questions, please do not hesitate to contact our office.

Sincerely,


LIDSTONE & COMPANY

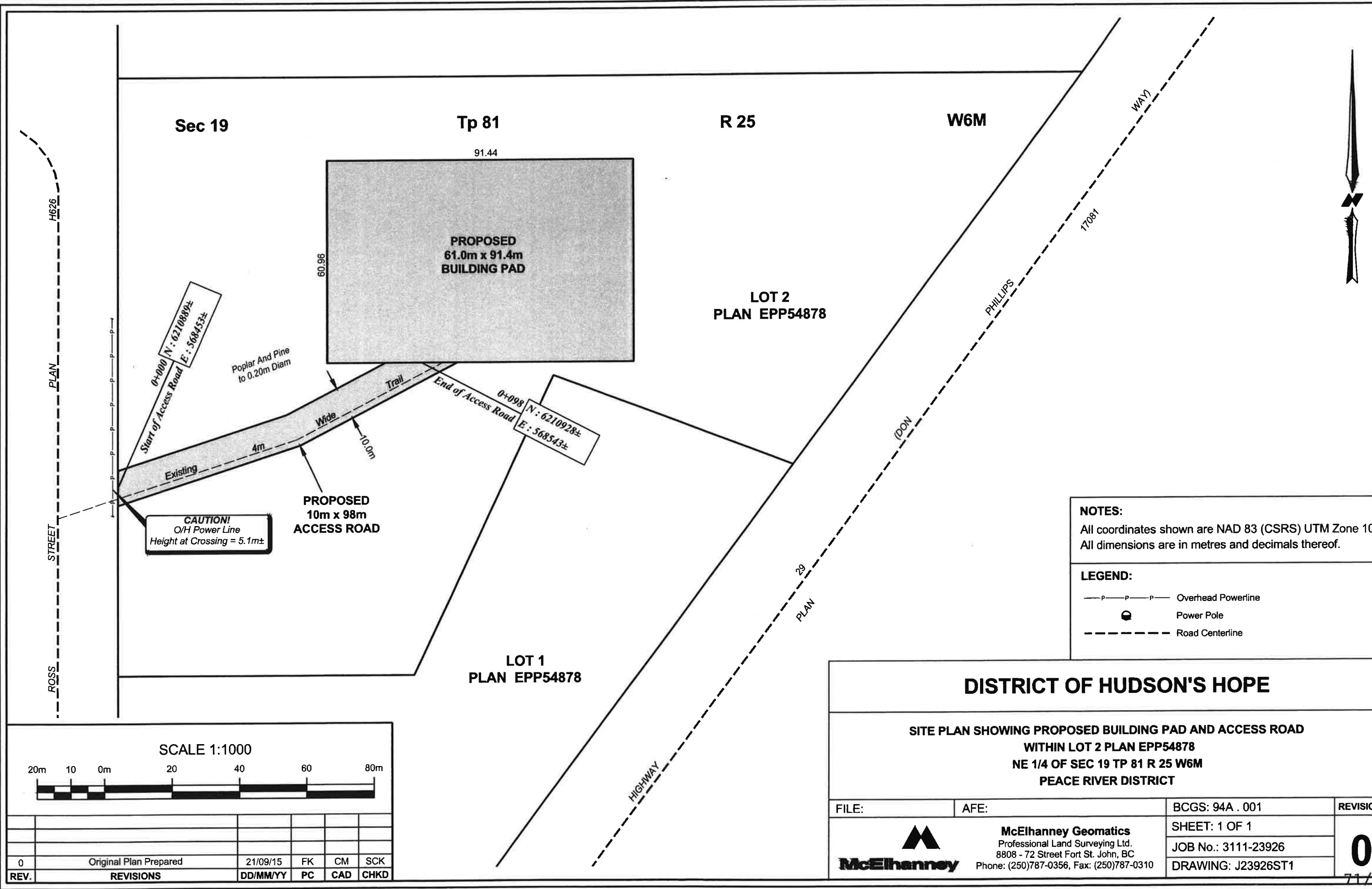
Lindsay Parcels
parcells@lidstone.info

LP/p

Encl.

c. Tom Matus, CAO

SUITE 1300 - SUN TOWER - 128 PENDER STREET WEST - VANCOUVER BC - V6B 1R8
TELEPHONE 604-899-2269 - FACSIMILE 604-899-2281 - TOLL FREE 1-877-339-2199
(00337558; 1)





NOTES:
All coordinates shown are NAD 83 (CSRS) UTM Zone 10.
All dimensions are in metres and decimals thereof.

LEGEND:
— P — P — P — Overhead Powerline
⦿ Power Pole
- - - - - Road Centerline

DISTRICT OF HUDSON'S HOPE

**SITE PLAN SHOWING PROPOSED BUILDING PAD AND ACCESS ROAD
WITHIN LOT 2 PLAN EPP54878
NE 1/4 OF SEC 19 TP 81 R 25 W6M
PEACE RIVER DISTRICT**

FILE:	AFE:	BCGS: 94A . 001	REVISION
 McElhanney Geomatics Professional Land Surveying Ltd. 8808 - 72 Street Fort St. John, BC Phone: (250)787-0356, Fax: (250)787-0310		SHEET: 1 OF 1	0
		JOB No.: 3111-23926	
		DRAWING: J23926ST1	

SCALE 1:1000					
					
0	Original Plan Prepared	21/09/15	FK	CM	SCK
REV.	REVISIONS	DD/MM/YY	PC	CAD	CHKD



NORTHERN
Geo
Testing & Engineering Ltd.

September 30, 2015
Project No.: NG1774

Submitted to: Tom Matus
District of Hudson's Hope
Box 330, 9904 Dudley Drive
Hudson's Hope, BC V0C 1V0

GEOTECHNICAL ASSESSMENT

Proposed New Shop Building
Block C, NE ¼, Section 19, Township 81, Range 25, W6M
Hudson's Hope, BC

Submitted By:
Northern Geo Testing & Engineering Ltd.
9211 – 100th Avenue
Fort St. John, BC V1J 1X6
T. 250.261.6615
E. brodowski@northerngeo.ca



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8.0	CLOSURE	11



1.0 INTRODUCTION

Northern Geo Testing & Engineering Ltd. (Northern Geo) presents our geotechnical engineering recommendations for the proposed new shop development in Hudson's Hope, BC. This report provides geotechnical engineering recommendations for foundation design and associated construction considerations. Attachments to this report include: site and test pit location plans, test pit logs, and laboratory test results.

2.0 SCOPE OF WORK

The scope of work for this assessment was outlined in correspondence between Northern Geo and the District of Hudson's Hope. Northern Geo's scope of work, as described in the correspondence, included the following:

- A geotechnical investigation to assess subsurface soil and groundwater conditions;
- Laboratory testing of selected samples for moisture content, Atterberg limits, grain-size distribution, and soil salinity/resistivity; and,
- Preparation of a geotechnical engineering report summarizing the findings of the geotechnical test pitting investigation and laboratory analyses – including our comments and recommendations for foundation design.

Testing or assessment of soils with respect to environmental considerations is beyond the scope of this report.

Verbal authorization to proceed with this scope was given prior to the geotechnical field investigation. Written authorization to proceed with this scope was received from District of Hudson's Hope on September 9, 2015.

3.0 PROJECT DESCRIPTION

The proposed development will comprise a single story 110 m² steel-framed shop with a 4460 m² gravel park lot and yard area and underground water service. District of Hudson's Hope initially indicated that they would prefer to construct the building on conventional footing foundations. The District of Hudson's Hope indicated that the shop will have a heated concrete slab floor. A conceptual plan was not available at the time of writing this report. Structural design loads and grading details were not available at the time of writing this report. Northern Geo should be provided the opportunity to review the design and revise our recommendations, as necessary.

4.0 METHODOLOGY

A geotechnical test pitting investigation was conducted on September 4, 2015. The investigation included the excavation and sampling of a total of 3 test pits using a back-hoe loader equipped with 0.6 m wide bucket owned and operated by the District of Hudson's Hope. The test pits were advanced to depths ranging from 2.7 m to 3.7 m below the existing ground surface. Underground utility locates were provided by the District of Hudson's Hope.

Sampling and logging procedures for the investigation were as follows:

- Topsoil and groundwater depths, as applicable, were logged for each of the test pits;
- Samples of the disturbed auger cuttings were obtained at various depths for natural moisture content determination; and,



- Dynamic cone penetration tests (DCPT) were performed at each test pit location to a depth of 2.9 m below existing ground surface depth intervals to determine the in-situ soil consistency and relative density of the soils encountered.

The soils encountered during the investigation were sampled and logged by a representative of Northern Geo. Samples obtained during the investigation were tested at our Fort St. John laboratory. Samples for detailed salinity analyses, including soil resistivity, pH, and water soluble sulphate content were submitted to an external laboratory for testing. The results of in-situ and laboratory testing are shown in the laboratory test data (Appendix C), and in Table 1 and Table 2 of this report.

5.0 SITE CONDITIONS

5.1 Site Description

The site is located northeast of Don Phillips Way and Ross Street (Lot B, NE ¼, Section 19, Township 81, Range 25, W6M) in Hudson's Hope, BC. The property is bordered to the north by undeveloped forested land, to the east by undeveloped forested land, to the south by existing industrial development, and to the west by existing industrial development.

The site slopes downward toward the southwest at a gradient that is consistent with the slope class of very gentle to gentle described in the *Soils of Fort St. John-Dawson Creek Area, Soil Survey Report No 42* (Hudson's Hope 94A/SW) as being at a gradient of between 2% and 9%. At the time of the geotechnical investigation the site was undeveloped forested land.

5.2 Surficial Geology

The surficial geology of the site area (Hudson's Hope) comprises alluvial deposits sediments which is consistent with the description of Alluvial Deposits described on *Compilation of Geological Survey of Canada surficial geology maps for NTS 94A and 93P* (Geoscience BC Map 2011-08-1).

5.3 Soil Conditions

5.3.1 Soil Stratigraphy

The soil stratigraphy encountered during the geotechnical test pitting investigation is representative of the approximate test pit locations. Stratigraphy may vary with depth and lateral distance across the site.

Based on the conditions encountered during the test pitting investigation, the general subsurface stratigraphy at the site typically comprises the following soil layers listed in the order of occurrence:

- A layer of topsoil; and,
- A layer of sand and silt; and,
- A layer of sand.

Topsoil: A layer of topsoil was encountered in all test pits extending from the existing ground surface to a depth of 0.05 m below existing ground surface. This layer was described as silty clay, black, and moist with organic inclusions.

Sand and Silt: A layer consisting of sand and silt was observed in all test pits. This layer extended from the bottom of the topsoil layer to a depth of 0.6 m to 0.7 m below existing ground surface.

This layer was described as sand and silt with some clay, red brown, loose, non-plastic, poorly graded, and damp. Grain size distribution tests (hydrometer and sieve analyses) performed on a single sample of this layer indicated that the soil consists of 10% clay-size particles, 36% silt-size particles, 58% sand-sized particles, and no gravel-sized particles. Atterberg limit analyses on a single sample of this layer indicated



the soil is non-plastic. The moisture content of this layer ranged from 3% to 4%. DCPT 'N' values measured from this layer ranged from 4 blows to 16 blows per 102 mm, indicating loose to compact consistency.

Sand / Gravelly Sand: A layer consisting of sand was observed in all test pits. This layer extended from the bottom of the sand and silt layer to the maximum explored depth.

This layer was described as sand with some fines (with fines and gravel content increasing with depth), light brown to grey, loose, non-plastic, poorly graded (well graded with depth), and damp. Grain size distribution tests (sieve analyses) conducted on 2 samples of this layer indicated that the soil consists of 7% to 13% fines, 58% to 93% sand-sized particles, and 0% to 29% gravel-sized particles. The moisture content of this layer ranged from 3% to 18%. DCPT 'N' values measured from this layer ranged from 6 blows to 47 blows per 102 mm with the majority being ≤ 20 , indicating a loose to compact consistency.

5.3.2 Laboratory Test Results

The following tables present the laboratory test results from the selected samples submitted for testing. Included are the results of sieve and hydrometer particle size analyses and water soluble sulfate tests, pH, and resistivity tests. A single Atterberg Limits test was performed and indicated that the soil was non-plastic. All test results have also been included in the laboratory test reports in Appendix C.

TABLE 1: GRAIN SIZE DISTRIBUTION TEST RESULTS

Depth Below Existing Ground Surface (m)	Borehole No.	Gravel (%)	Sand (%)	Silt-size Particles (%)	Clay-size Particles (%)	Soil Description	Soil Classification ¹
0.6	TP15-02	0	54	36	10	SAND	SP
	Borehole No.	Gravel (%)	Sand (%)	Fines (%)		Soil Description	
1.1	TP15-03	0	93	7		SAND	SP
2.6	TP15-01	29	58	13		SAND	SW

¹ Unified Soil Classification System (USCS)

TABLE 2: SULFATE, pH AND RESISTIVITY TEST RESULTS

Depth Below Existing Ground Surface (m)	Borehole No.	Soluble Sulfate Content (%)	Resistivity (Ohm-cm)	pH	Soil Layer
2.7	TP15-02	0.000510	2970	7.78	SAND

5.4 Groundwater Conditions

Groundwater was not encountered during the geotechnical test pitting investigation. A piezometer well was not installed. Groundwater levels can vary seasonally with climatic conditions; the water levels included in this report are representative of the climatic conditions at the time of writing this report.

5.5 Frost Conditions

No frost was encountered during the geotechnical test pitting investigation. Based on the soil conditions encountered during test pitting and the thermal conductivity provided in Figure 13.7 of the Canadian Foundation Engineering Manual, 4th Edition, the estimated frost penetration depth in the Hudson's Hope area has been calculated to be approximately 2.9 m below the existing ground surface. Frost penetration



may vary with soil composition, consistency, and snow cover. Actual frost penetration is subject to change based on environment.

6.0 DISCUSSION & RECOMMENDATIONS

Based on the geotechnical test pitting investigation and subsequent laboratory testing, conventional strip/spread footings foundation are considered suitable for support of the proposed development. The following sections provide further design details related to these recommendations as well as construction design details. Northern Geo should be provided the opportunity to review the structural and final grading details and to revise the recommendations contained in this report, as necessary.

6.1 Seismic Design Parameters

The proposed structure should be designed under the seismic provisions of the British Columbia Building Code 2012 (BCBC) and the National Building Code of Canada 2010 (NBCC). Peak ground accelerations (PGA) and 5% damped spectral response acceleration values $S_a(T)$ are outlined in Table 3 for the reference site based on a 2% probability of exceedance within 50 years (1 in 2,475 year event). These values have been interpolated from the NBCC seismic hazard values. Based on the surficial and bedrock geology described on *Compilation of Geological Survey of Canada surficial geology maps for NTS 94A and 93P* (Geoscience BC Map 2011-08-1) a Site Classification "C" should be used for seismic site response in accordance with Table 4.1.8.4.A of the BCBC.

TABLE 3: SEISMIC DESIGN PARAMETERS

Spectral Response Acceleration				PGA (g)	Values of F	
S_a (0.2)	S_a (0.5)	S_a (1.0)	S_a (2.0)	0.117	F_a	F_v
0.226	0.129	0.061	0.033		1.0	1.0

6.2 Site Preparation

Building, pavement, and slab areas should be stripped of all loose soil, soft soil, frozen soil, fill and/or saturated soil and any other deleterious materials to expose subgrade. Care should be taken to minimize disturbance to the subgrade during stripping of unsuitable materials.

Beneath the building envelope, engineered fill should be compacted to within 2% of the material's optimum moisture content (OMC) and a minimum of 100% of standard proctor maximum dry density (SPMDD). Laboratory standard proctor analysis (ASTM 698) and field density testing should be performed to confirm the compaction standards are achieved.

As good practice, Northern Geo recommends that the subgrade should be sloped away from the building at a minimum of 2% to promote positive drainage. Shallow temporary ditches may be required to control surface runoff. The exposed subgrade should be reviewed by Northern Geo prior to placement of fill.

6.3 Site Grading & Drainage

Surface runoff should be directed away from the building and any excavation at the subject site during and after construction. Finished grades around the building footprint should be graded at least 5% over a distance of 3 m away from the building and any landscaped area. If concrete or asphalt surfacing is provided immediately adjacent to the building, a minimum grade of 2% may be used. High permeability material should not be used for surfacing within 3 m of the building envelopes so as to minimize erosion and ingress of water.



6.4 Temporary Excavation

Temporary excavations more than 1.5 m deep in the excavation may be back-sloped in accordance with *WorkSafe BC's Occupational Health & Safety Regulations, Section 20: Excavations*. We recommend that the temporary excavated slopes be sloped back at 2 Horizontal: 1 Vertical (2H:1V) to a maximum depth of 2 m, and that the cut slopes be reviewed by Northern Geo to assess the stability and provide geotechnical recommendations, as required. The toe of stockpiled soil and the tracks/wheels for heavy equipment should not be placed (or travel) within a horizontal distance equal to the depth of the excavation measured from the edge of the excavated slope.

Should deeper excavations be required, and/or, temporary excavated slopes need to be steeper due to site constraints, temporary shoring may be required.

Trenching and backfilling in advance of pipe placement should be carried out in accordance with local municipal specifications and *MMCD (Master Municipal Construction Documents, Platinum Edition) Specifications Section 312301, Part 1.8*. Groundwater was encountered during the test pitting investigation and may be present during excavation. It is recommended that the excavation proceed in short sections not far in advance of pipe laying, and that backfilling of the pipe be completed to at least above any perched or regional groundwater levels before the end of each day.

The native soil is considered suitable to be re-used as general trench backfill beneath non loading bearing structures. Pipe bedding should be as specified in local municipal specifications. Trench backfill soil under buildings and roadways or under ditches and boulevards should be compacted to within 2% of the material's OMC and a minimum of 100% or 98% control strip maximum dry density (CSMDD) respectively. Laboratory standard proctor analysis (ASTM 698) and field density testing should be performed to confirm that compaction standards are achieved.

It is anticipated that control of and temporary excavation dewatering can be accommodated at this site by conventional methods. Conventional methods for dewatering include using shallow swales, positive drainage (slope excavated surface), sumps, and pumps. Collected water from excavation pumping should be discharged a sufficient distance away from the excavation to minimize the potential for water to return to the excavated area. Water pumped from the trench will likely contain silt-sized particles. Direct discharge into natural drainage courses will likely be unacceptable. A sediment control plan should be considered where dewatering is required near these drainage features.

6.5 Engineered Fill & Backfill

Engineered fill is defined as material designed to be placed directly beneath any load bearing area. All engineered fill material should be free of any organic and other deleterious material and consist of a non-expansive/non-sensitive soil (< 8% silt-sized particles). Imported engineered fill for structures should consist of non-organic, clean, well-graded, 75 mm minus pit run sand and gravel or a low plastic clay with a liquid and plastic limit of < 40% and < 20% respectively. Granular engineered fill should contain < 5% fines passing the No. 200 sieve. Engineered fill should be tested and approved by a qualified professional prior to use in any load bearing areas. Engineered fill should be compacted within 2% of the material's OMC and a minimum of 100% SPMDD.

Engineered fill should extend beyond the building and pavement sections to a distance equal to or greater than the depth of the engineered fill below structural elements. Granular and cohesive engineered fill should be placed in maximum 300 mm and 150 mm lifts, respectively.

The native soil encountered is not considered suitable as engineered fill or backfill around foundations due to frost susceptibility unless there is a frost break between the soil and foundation/foundation wall



(i.e. insulation, non-frost susceptible material, etc.); however, the native soil may be used for non-structural backfill purposes such as site grading or landscaping.

6.6 Foundation Design

6.6.1 General

In accordance with the NBCC, the foundation recommendations included in this report are based on limit state design (LSD) methodology. The factored ultimate limit states (ULS_f) resistances and unfactored ultimate limit states (ULS) resistances for the relevant geotechnical parameters have been determined and are provided in Table 4 for use by the structural engineer.

TABLE 4: LSD GEOTECHNICAL RESISTANCE FACTORS FOR FOUNDATIONS

Shallow Foundations	*Resistance Factors, ϕ
From semi-empirical analysis using laboratory and in-situ test data	0.5
Deep Foundations	*Resistance Factors, ϕ
Semi-empirical analysis using laboratory and in-situ test data	0.4
Uplift resistance using semi-empirical analysis	0.3
Horizontal load resistance	0.5

*2010 NBCC, User's Guide - Structural Commentaries (Part 4 of Division B).

6.6.2 Conventional Strip/Spread Footings

Shallow spread and/or strip and footing foundations are considered suitable for support of the proposed building. For continuously heated structures, shallow foundation should be placed a minimum of 2.0 m below the final site grade for frost protection. For unheated structures, or for periodically heated facilities such as building overhangs, storage sheds, and/or other auxiliary buildings, shallow foundations should be founded at a minimum depth of 2.9 m below the final site grade. Reduction in depth of soil cover can be considered with the use of rigid frost insulation; Northern Geo can provide frost insulation details upon request. Northern Geo should be provided the opportunity to review the structural drawings to confirm the design is in accordance with our recommendations.

Shallow spread and/or strip footings placed at a depth of 2.0 m below the existing ground surface for continuously heated structures (or 2.9 m for unheated structures) may be designed for an unfactored ultimate bearing capacity (ULS) of 600 kPa and a factored ultimate bearing capacity of 300 kPa. An allowable bearing capacity (SLS) of 200 kPa may be used when founded on the native soil. Engineered fill materials should be selected and placed for backfill around footings and foundations per the recommendations presented in Section 6.5.

Footings should be stepped at no steeper than 2H:1V (adjacent footings placed at different elevations). The sloped subgrade between these footings should be undisturbed native soil. If this is not achievable, the lower footing should be designed to carry the load of the higher footing. Where buried services are below the building foundations, the footing edge should be below 2H:1V line projected up from the invert level of the service line to reduce the risk of undermining such footings. Footing subgrades should be thoroughly cleaned of any disturbed, loose, or water softened material prior to pouring concrete. Footing excavations should be reviewed by qualified geotechnical personnel to confirm bearing capacity.

Pad footings should be properly spaced such that the distance (edge to edge) between adjacent footings is at least equal to twice the width of the footing. Footings should be designed for equal contact pressure and of nearly equal sizes to minimize potential total and differential settlements.



Footings founded on frozen soil will settle after thawing. Therefore, any footing subgrades must not be allowed to freeze prior to and/or after casting the footings. Any frozen soil should be removed and replaced with concrete. Alternatively, footings can be extended down to a suitable unfrozen layer. If construction activities are scheduled during cold weather, cold weather construction practices should be followed. The time span between the start of excavation and backfilling should be kept to a minimum to reduce freezing and the interior of the building should be heated as soon as the walls have been poured/constructed.

6.7 Perimeter Drainage

We recommend that a perimeter drainage system be installed to minimize the potential for water infiltration into the soil surrounding the building foundations. Perimeter drainage should comprise a perforated rigid wall 100 mm diameter PVC pipe and the top of the drainage pipe should be placed around all external sides of the buildings.

The perimeter drainage pipes must be provided with permanent cleanouts. The drainage pipe must be surrounded by a minimum of 150 mm of 20 mm clear crushed gravel or drain rock. A layer of non-woven geotextile must be wrapped around the gravel drainage layer to act as a filter against piping of fines from the general backfill and surrounding native soil. The perimeter drainage system must be designed to direct water by gravity flow into a storm sewer or permanent drain.

The roof and surface runoff should be collected and directed to a storm sewer or permanent drain in solid wall pipes separate from the perimeter drainage. Northern Geo should be given the opportunity to review the final structural plans to confirm the requirement for subsurface drains and to revise our recommendations if necessary.

6.8 Corrosion Potential

Selected samples of the native soil were submitted to an analytical laboratory to determine the resistivity/salinity of the soils encountered during the test pitting investigation. The results of the resistivity/salinity testing are included in Appendix C and discussed below.

6.8.1 Corrosivity

The United States National Bureau of Standards (NBS) and the Federal Highway Administration (FHA) have performed extensive studies of underground corrosion and offer the industry standard for corrosion protection in steel products. A single selected sample of the native soil was submitted for pH and resistivity testing. The pH of the native soil was determined to be 7.78. The resistivity of the soil was determined to be 2970 ohm-cm.

After comparison with the USBS and USFHA standards, it is expected that the soil has a suitable pH but an unsuitable resistivity. Based on these results, we recommend that buried steel materials in contact with the native site soils be protected against severe corrosion potential.

6.8.2 Sulphate Attack Potential

Sulphates have a detrimental effect on concrete can adversely affect the performance and/or service life of these materials. A single selected sample of the native soil was submitted to an analytical laboratory for water soluble sulphate content determination. The results of the analyses determined that the water soluble sulphate content of the soil was 0.000510% which indicates a negligible sulphate attack potential in the native soils. We recommend that concrete in contact with the native soil be designed for a general use classification, as per CSA A23.1-09; Table 3. Should winter construction take place, heating and hoarding may be required, as per CSA A23.1-09.



6.9 Non-Structural Slab-on-Grade

Non-structural slab-on-grade configurations should be underlain with a minimum of 150 mm layer of free-draining (< 5% passing the No. 200) sieve minus sand and gravel, compacted to a minimum of 100% of SPMDD or 20 mm clear crushed gravel. A vapour barrier consisting of a minimum of 0.15 mm polyethylene sheeting, or approved equivalent, should be installed below the floor slab as per building code requirements. Consideration should be given to the effect of any vapour barrier on concrete slab curling. Northern Geo can provide recommendations for slab considerations for non-heated structures upon request.

For slabs-on-grade, a 150 mm layer of compacted 19 mm clear crushed gravel, or an approved equivalent (< 5% passing No. 200 sieve), should be placed as bedding and hydraulically connected to the perimeter drain system around the building foundation. A vapor barrier consisting of minimum 0.15 mm polyethylene sheeting should be placed between the bedding and the underside of the slab-on-grade.

6.10 Pavement Structure Design

The proposed development will include aggregate-surfaced above-ground parking and yard areas. The soil and groundwater conditions encountered are considered generally suitable for construction of the proposed parking and yard development. Earthwork construction issues can be addressed using standard BC MoTI (British Columbia Ministry of Transportation and Infrastructure) highway construction practices with the implementation of the geotechnical guidelines discussed in this report.

The recommendations provided within this report are based on the soil and groundwater conditions encountered during the drilling investigation. The actual subgrade conditions should be confirmed by Northern Geo during construction of the road to verify that the design assumptions included herein are valid.

6.10.1 Aggregate-Surfaced Pavement Design

The proposed aggregate-surfaced pavement construction for the new shop should be designed in accordance with general industry standards. The BC MoTI Supplement to TAC Geometric Design, 2007, and BC MoTI Pavement Structure Design Guidelines, Technical Circular T-01/15, 2015, have been utilized in the design process. The pavement design allows for criteria such as analysis period, traffic loading (in Equivalent Single Axis Loadings – ESALs), reliability and serviceability factors. In addition the roadbed resilient modulus (M_r) is also considered.

The traffic loading anticipated for the new shop will be primarily from light and heavy vehicles (at least 1 heavy truck and up to 5 passenger vehicles per day).

The design procedure utilized in the AASHTO Guide for Design of Pavement Structures, 1993, is commonly used throughout North America. In order to develop an appropriate design for the proposed pavement structure, the design methodology outlined in this manual is considered appropriate and has been utilized for the proposed development. The principle of the design requires the determination of base thickness of the pavement structure, based on serviceability and rutting losses, roadbed strength, and estimated ESALs over the design life.



Applying the design procedure of the AASHTO Guide for Design of Pavement Structures to the aggregate-surfaced parking lot and yard and utilizing the following design parameters,

- Design life – 20 years
- ESALS – 3.7×10^4
- E_{SG} – fair (based on visual assessment during the site investigation)
- E_{SB} – 103 MPa
- E_{BS} – 207 MPa,

A minimum pavement structure has been determined for the new shop, as shown in Table 5.

TABLE 5: MINIMUM AGGREGATE-SURFACED PAVEMENT STRUCTURE DESIGN

Material	Thickness (mm)
Granular Base (25mm crush as per BC MoTI)	125
Granular Sub-base (75 mm - minus screened or crush as per BC MoTI)	250
Subgrade, as approved by the geotechnical engineer	

We recommend that the subgrade be proof-rolled under the supervision of a qualified geotechnical professional prior to placement of geogrid or granular fill. Recommendations for mitigation of any soft and/or wet areas during the proofroll will be provided upon review of the conditions.

It is also important to iterate that the design life of parking areas, yard areas, driveways, and accesses may be shorted if frost-susceptible backfill is used within the frost-penetration depth for this site. The pavement structure recommended in Table 5 assumes that the base and sub-base materials consist of an approved granular material as specified by BC MoTI.

6.9.2 Geotextile and Geogrid

Northern Geo recommends the use of a layer of geogrid between the subgrade and sub base layers, particularly where weak subgrades are encountered. Geogrid provides reinforcement and load distribution over soft subgrades. Geogrid placement should be reviewed by Northern Geo personnel during subgrade inspection.

6.11 Frost Consideration

The US Corps of Engineers Frost Design Soil Classification breaks soil in to four groups, F1 to F4, in approximate increasing order of frost susceptibility and increasing loss of strength during thaw (Canadian Foundation Engineering Manual, 2006, Table 13.1). Sands are classified as an F2 soil and sandy soils are classified as an F3 soil. Based on Atterberg limit, sieves, and hydrometer test results for the proposed site investigated, the top layer of soil tested can be classified as F3 and the bottom layer of soil tested can be classified as F2.

Any load bearing trench surface, including areas beneath parking or docking areas, driveways, or accesses, should be considered for a deeper than expected frost depth – approximately 2.9 m below existing ground surface.

The AASHTO Guide for the Design of Pavement Structures indicates that the most accepted practice to minimize the effect of frost heave on pavement structures is to replace frost susceptible material with non-frost susceptible material to a depth of at least one-half of the total anticipated frost depth. The MMCD Design Guideline Manual recommends that the granular pavement structure extend to a minimum of 20% of the frost depth for local roads. Based on the MMCD standard and the local anticipated frost



penetration depth, the pavement structure should extend a minimum of 580 mm below the finished paved surface irrespective of subgrade quality. The minimum pavement structure design (Table 5) does not satisfy the condition stated in the MMCD standard, therefore, consideration should be given to thickening the pavement structure.

If construction activity is scheduled during cold weather, cold weather construction practices should be followed. The time span between start of excavation and backfilling should be kept to a minimum to reduce freezing.

7.0 FIELD REVIEW

It is recommended that a geotechnical field review is carried out to assess the actual soil conditions encountered. Should the conditions differ significantly from those assumed for design, Northern Geo should be provided with the opportunity to review the design assumptions and modify the design, as appropriate. In order to provide the Schedule CB (Assurance of professional field review and compliance), field reviews should include, but not be limited to:

- Footing subgrade reviews (for shallow foundations);
- Perimeter drainage as installed;
- Subgrade conditions for the slab on-grade prior to and following backfill activities;
- Backfilling and preparation activities for utilities trench construction (trench review and density testing);
- Proof-roll inspection of the subgrade for the pavement structure;
- Backfilling and preparation activities for pavement structure construction (density testing, concrete testing for sidewalks) and the placement and testing of asphalt products; and,
- Temporary excavation stability (if excavations do not meet Worksafe BC standard).



8.0 CLOSURE

Recommendations presented herein are based on the geotechnical evaluation of the findings of the test pits completed on September 4, 2015. The materials in this report reflects Northern Geo's best judgment based on the information available to Northern Geo at the time of preparation of this report. If conditions other than those are noted during subsequent phases of development, Northern Geo should be notified and given the opportunity to review and revise the recommendations included in this report, as necessary.

The report has been prepared for the exclusive use of the District of Hudson's Hope, their consultants and representatives for the specific application of the development described within this report. Any use of this report by third parties, or any reliance on or decisions made based on it are the responsibility of such third parties. Northern Geo accepts no responsibility, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

We appreciate the opportunity to be of service to you. If you have any questions regarding the contents of this report, or if we can be of further assistance to you on this project, please contact our office.

Sincerely,
Northern Geo Testing & Engineering Ltd.
A subsidiary of the CCMET Group of Companies

Prepared By

Beverly Rodowski, EIT
Field Engineer I Project Manager

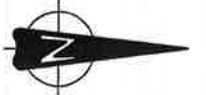
Reviewed By

Rhonda Mellafont, P. Geo
Engineering Geologist



Appendix A

Test Pit Location Plan



Client:

District of Hudson's Hope
9904 Dudley Drive
Hudson's Hope, BC
VOC 1V0

Site Location Plan
Block C, NE $\frac{1}{4}$, Section 19, Township 81, Range 25, W6M
Hudson's Hope, BC

Project : NG1774

Design: BMR

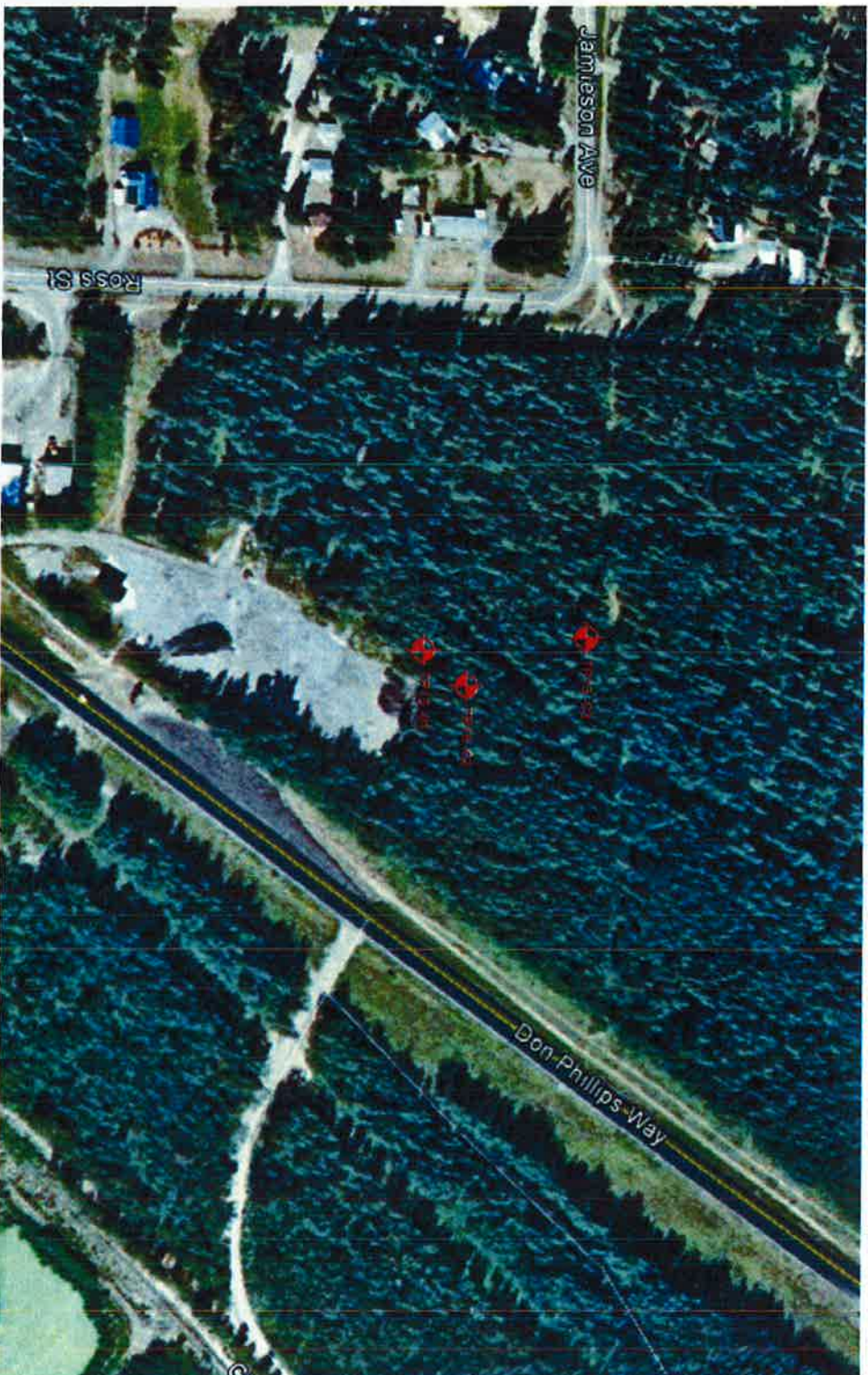
Approved: BAS

Revision No: -

Date: September 29, 2015

FIGURE 1





Test pit	Location	
	North (m)	East (m)
TP15-01	6210936	568557
TP15-02	6210935	568889
TP15-03	6210931	568574

LEGEND:  TP Location

Test pit locations are approximate
All coordinates obtained using handheld GPS.



Client:

District of Hudson's Hope
9904 Dudley Drive
Hudson's Hope, BC
V0C 1V0

Test pit Location Plan
Block C, NE 1/4, Section 19, Township 81, Range 25, W6M
Hudson's Hope, BC

Project : NG1774

Design: BMR

Approved: BAS

Revision No: -

Date: September 29, 2015

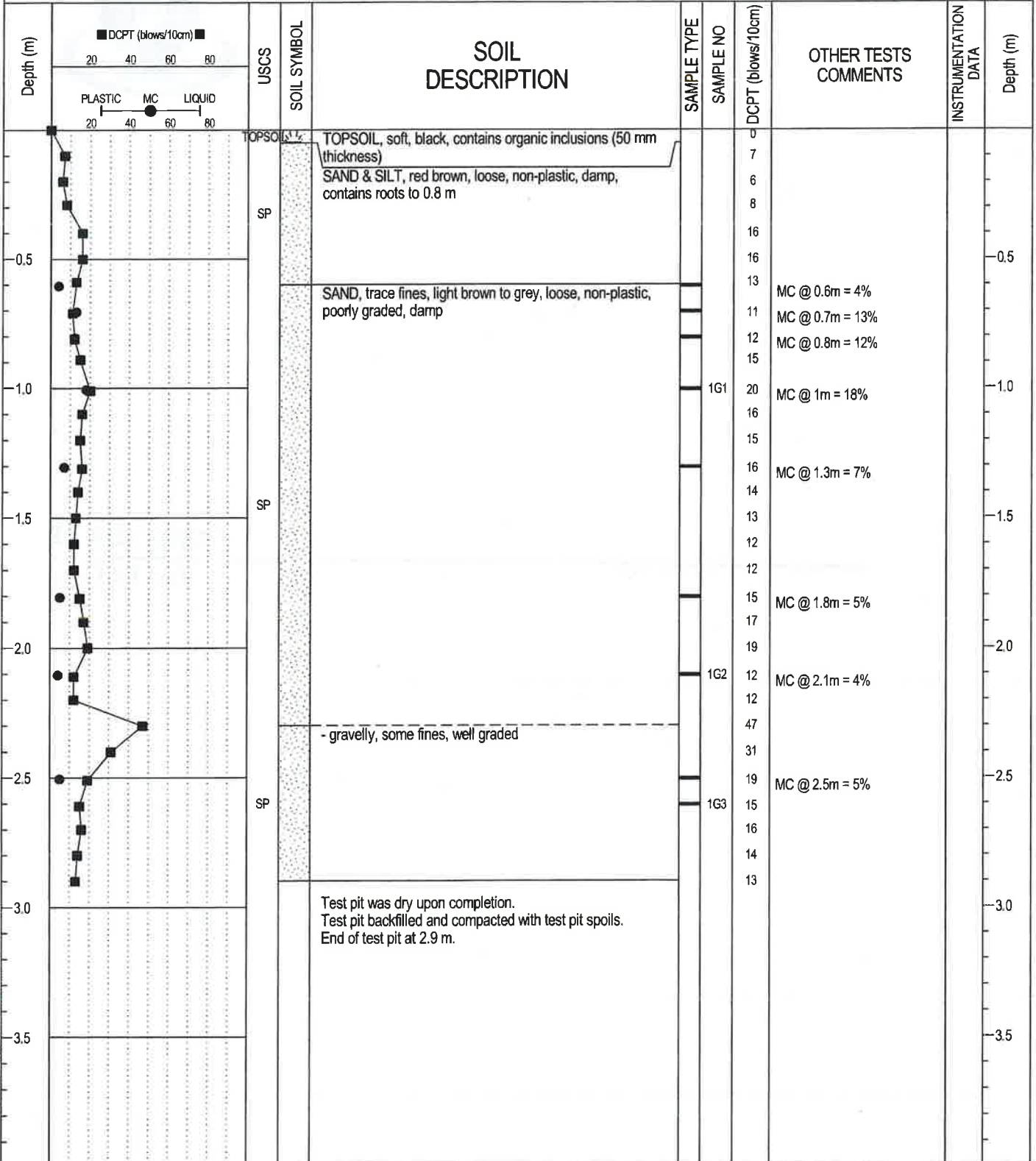
FIGURE 2



Appendix B

Test Pit Logs

District of Hudson's Hope	New Shop	Testpit No.: TP15-01
	11603 Ross Street, Hudson's Hope, BC	Project No: NG1774
Excavator	6210926m N, 0568557m E	Elevation*: Frost Depth:
SAMPLE TYPE	<input checked="" type="checkbox"/> SHELBY TUBE <input type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> SPT <input type="checkbox"/> DISTURBED	<input type="checkbox"/> A-CASING <input type="checkbox"/> CONTINUOUS
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input checked="" type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND



BOREHOLE LOG NG1774 GINT 20150808 BMR.GPJ TEST.GDT 9/30/15



Northern Geo Testing & Engineering Ltd.
9211 - 100th Avenue
Fort St John BC V1J 1X6
250-261-6615, 250-261-6614

AT TIME OF DRILLING: dry

LOGGED BY: BMR

REVIEWED BY: RLM

COMPLETION DEPTH: 2.9m

COMPLETION DATE: 9/4/15

Page 1 of 1

* Note: Elevations obtained from current Google Earth data.

District of Hudson's Hope		New Shop		Testpit No.: TP15-02			
		11603 Ross Street, Hudson's Hope, BC		Project No: NG1774			
Excavator		6210955m N, 0568589m E		Elevation*: Frost Depth:			
SAMPLE TYPE	<input checked="" type="checkbox"/> SHELBY TUBE	<input type="checkbox"/> NO RECOVERY	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> DISTURBED	<input type="checkbox"/> A-CASING		
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input checked="" type="checkbox"/> DRILL CUTTINGS		
<div style="display: flex; justify-content: space-between;"> <div> <p>DCPT (blows/10cm)</p> <p>20 40 60 80</p> <p>PLASTIC MC LIQUID</p> <p>20 40 60 80</p> </div> <div> <p>USCS</p> <p>SOIL SYMBOL</p> </div> <div> <p>SOIL DESCRIPTION</p> </div> <div> <p>SAMPLE TYPE</p> <p>SAMPLE NO</p> </div> <div> <p>DCPT (blows/10cm)</p> </div> <div> <p>OTHER TESTS COMMENTS</p> </div> <div> <p>INSTRUMENTATION DATA</p> </div> <div> <p>Depth (m)</p> </div> </div>							
<p>TOPSOIL</p> <p>SP</p> <p>SP</p>		<p>TOPSOIL, soft, black, contains organic inclusions (50 mm thickness)</p> <p>SAND & SILT, some clay, red brown, loose, non-plastic, damp, contains roots to 0.8 m</p> <p>SAND, trace fines, light brown to grey, loose, non-plastic, poorly graded, damp</p> <p>- coarse sand from 2.7 m</p>		<p>2G1</p> <p>2G2</p> <p>2G3</p>		<p>MC @ 0.6m = 4%</p> <p>Fines = 46%</p> <p>MC @ 1.1m = 3%</p> <p>MC @ 1.6m = 3%</p> <p>MC @ 1.7m = 4%</p> <p>MC @ 2.4m = 4%</p> <p>MC @ 2.7m = 3%</p> <p>Fines = 13%</p>	<p>0.5</p> <p>1.0</p> <p>1.5</p> <p>2.0</p> <p>2.5</p> <p>3.0</p> <p>3.5</p>
<p>Test pit was dry upon completion.</p> <p>Test pit backfilled and compacted with test pit spoils.</p> <p>End of test pit at 2.7 m.</p> <p>Testpit started sloughing in when excavating below 2.7 m.</p>							



Northern Geo Testing & Engineering Ltd.
9211 - 100th Avenue
Fort St John BC V1J 1X6
250-261-6615, 250-261-6614

AT TIME OF DRILLING: dry

LOGGED BY: BMR

REVIEWED BY: RLM

COMPLETION DEPTH: 2.7m

COMPLETION DATE: 9/4/15

Page 1 of 1

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* Note: Elevations obtained from current Google Earth data.

District of Hudson's Hope		New Shop		Testpit No.: TP15-03	
		11603 Ross Street, Hudson's Hope, BC		Project No: NG1774	
Excavator		6210993m N, 0568574m E		Elevation*: Frost Depth:	
SAMPLE TYPE		<input checked="" type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> SPT <input type="checkbox"/> DISTURBED <input type="checkbox"/> A-CASING <input type="checkbox"/> CONTINUOUS			
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)	■ DCPT (blows/10cm) ■ 20 40 60 80 PLASTIC MC LIQUID 20 40 60 80	USCS	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	DCPT (blows/10cm)	OTHER TESTS COMMENTS	INSTRUMENTATION DATA	Depth (m)
0.0				TOPSOIL, soft, black, contains organic inclusions (50 mm thickness)			0			0.0
0.4							4			
0.3							3			
0.3							3			
0.5							5			
0.9							9			0.5
0.8							8			
0.6				SAND, trace fines, light brown to grey, loose, poorly graded, non-plastic, damp			6	MC @ 0.7m = 3%		
0.6							6			
0.9							9			
1.2						3G1	12			1.0
1.5							15	MC @ 1.1m = 2% Fines = 7%		
1.5							15			
1.8							18			1.5
2.0							20	MC @ 1.7m = 3%		
2.0							20			
2.1							21			
2.1						3G2	13	MC @ 2.1m = 3%		2.0
2.1							11	MC @ 2.2m = 3%		
2.4							10			
2.4							12	MC @ 2.4m = 2%		2.5
2.4							10			
2.5							12			
2.5							17			
2.5							20			3.0
2.5							14			
3.1								MC @ 3.1m = 6%		
3.6								MC @ 3.6m = 5%		3.5
3.7				Test pit was dry upon completion. Test pit backfilled and compacted with test pit spoils. End of test pit at 3.7 m.						

BOREHOLE LOG NG1774 GINT_20150908 BMR.GPJ TEST.GDT 9/30/15



Northern Geo Testing & Engineering Ltd.
9211 - 100th Avenue
Fort St John BC V1J 1X6
250-261-6615, 250-261-6614

AT TIME OF DRILLING: dry

LOGGED BY: BMR

REVIEWED BY: RLM

COMPLETION DEPTH: 3.7m

COMPLETION DATE: 9/4/15

Page 1 of 1

92/176

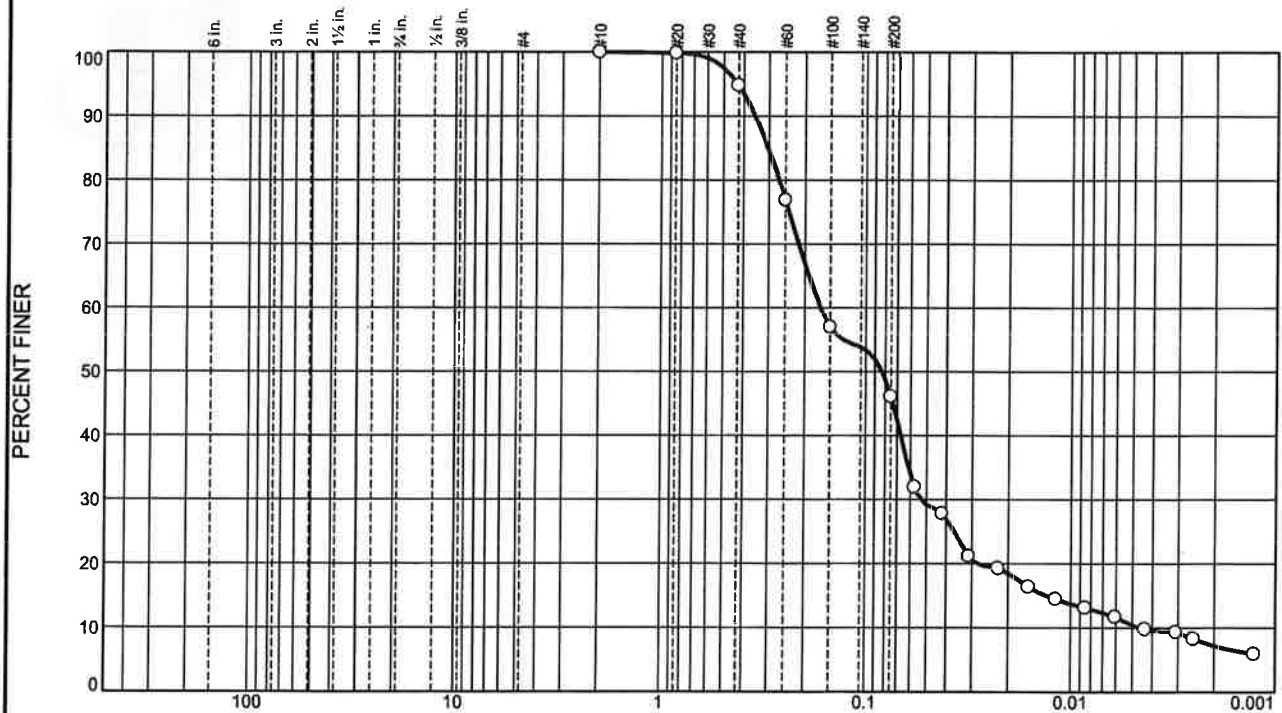
Note: Elevations obtained from current Google Earth data.



Appendix C

Laboratory Results

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	5.2	48.7	35.7	10.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.8		
#40	94.8		
#60	76.9		
#100	57.0		
#200	48.1		
0.0572 mm.	31.9		
0.0421 mm.	27.8		
0.0313 mm.	21.2		
0.0224 mm.	19.3		
0.0161 mm.	16.4		
0.0119 mm.	14.5		
0.0085 mm.	13.1		
0.0061 mm.	11.7		
0.0043 mm.	9.8		
0.0031 mm.	9.3		
0.0025 mm.	8.3		
0.0013 mm.	6.0		

(no specification provided)

<u>Soil Description</u>		
SAND and SILT, some clay, non plastic		
<u>Atterberg Limits</u>		
PL=	LL=	PI=
<u>Coefficients</u>		
D ₉₀ = 0.3530	D ₈₅ = 0.3048	D ₆₀ = 0.1677
D ₅₀ = 0.0831	D ₃₀ = 0.0532	D ₁₅ = 0.0131
D ₁₀ = 0.0046	C _u = 36.36	C _c = 3.66
<u>Classification</u>		
USCS= SP	AASHTO=	
<u>Remarks</u>		

Location: TP15-02
Sample Number: 2G1

Depth: 0.6 m

Date: Sep 4, 2015

Northern Geo Testing & Engineering, Ltd.

Client: District of Hudson's Hope
Project: New Shop

Fort St. John, BC

Project No: NG1774

Figure

Tested By: RS

Checked By: BMR



Northern Geo Testing & Engineering Ltd.

9211 100 Ave
Fort St. John, BC V1J 1X9

SIEVE ANALYSIS REPORT 8 16 30 50 SERIES

TO
NORTHERN GEO TESTING & ENGINEERING
LTD.

FSJ,

ATTN: BEVERLY RODOWSKI

PROJECT NO. NG1774

CLIENT DISTRICT OF HUDSON'S HOPE

C.C. DISTRICT OF HUDSON'S HOPE
NORTHERN GEO TESTING &

PROJECT DPW SHOP SITE DEVELOPMENT

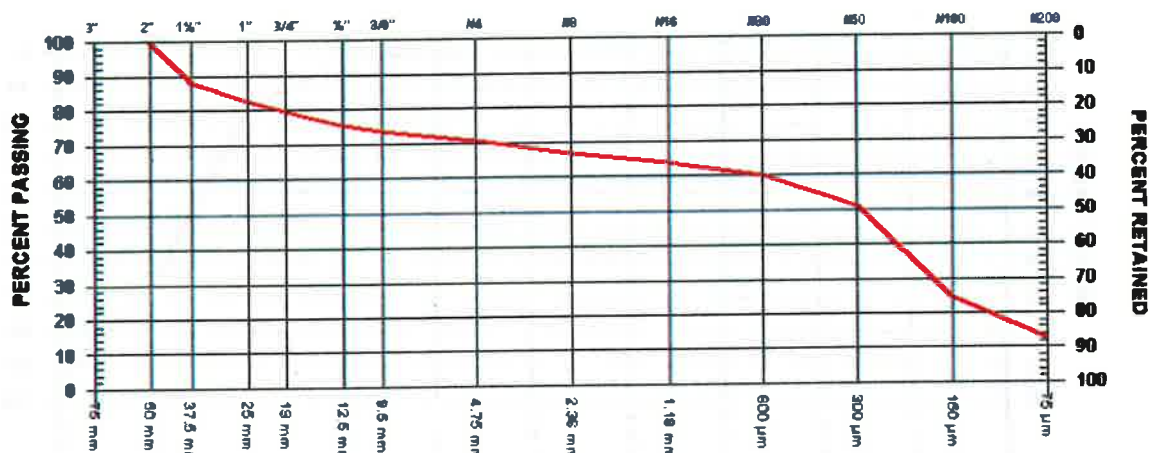
11603 ROSS ST
HUDSON'S HOPE

CONTRACTOR

SIEVE TEST NO. 1 DATE RECEIVED Sep 04, 2015 DATE TESTED Sep 09, 2015 DATE SAMPLED Sep 04, 2015

SUPPLIER IN-SITU
SOURCE SAMPLE 1G3 @ 2.6M
SPECIFICATION
MATERIAL TYPE GRAVELY SAND

SAMPLED BY BR
TESTED BY JK
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm	100.0	
2"	50	mm	88.3	
1 1/2"	37.5	mm	82.8	
1"	25	mm	79.6	
3/4"	19	mm	75.3	
1/2"	12.5	mm	73.7	
3/8"	9.5	mm		

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	70.5	
No. 8	2.36 mm	67.0	
No. 16	1.18 mm	63.7	
No. 30	600 µm	59.9	
No. 50	300 µm	51.3	
No. 100	150 µm	24.8	
No. 200	75 µm	12.7	

MOISTURE CONTENT 9.2%

COMMENTS



Northern Geo Testing & Engineering Ltd.

9211 100 Ave
Fort St. John, BC V1J 1X9

SIEVE ANALYSIS REPORT 8 16 30 50 SERIES

TO
NORTHERN GEO TESTING & ENGINEERING
LTD.
FSJ,
ATTN: BEVERLY RODOWSKI

PROJECT NO. NG1774
CLIENT DISTRICT OF HUDSON'S HOPE
C.C. DISTRICT OF HUDSON'S HOPE
NORTHERN GEO TESTING &

PROJECT DPW SHOP SITE DEVELOPMENT

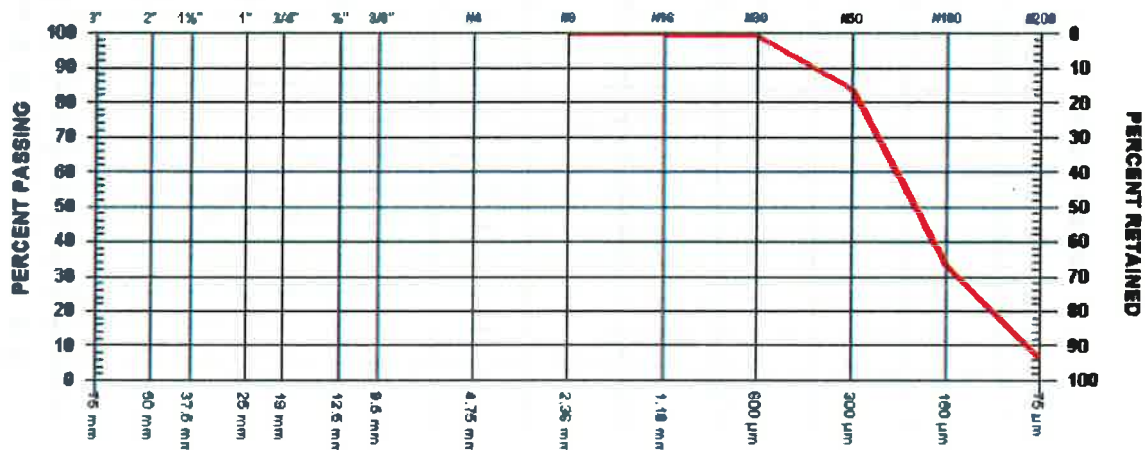
11603 ROSS ST
HUDSON'S HOPE

CONTRACTOR

SIEVE TEST NO. 2 DATE RECEIVED Sep 04, 2015 DATE TESTED Sep 09, 2015 DATE SAMPLED Sep 04, 2015

SUPPLIER IN-SITU
SOURCE SAMPLE: 3G1 @ 1.1M
SPECIFICATION
MATERIAL TYPE SAND

SAMPLED BY BR
TESTED BY JK
TEST METHOD WASHED



GRAVEL SIZES		PERCENT PASSING	GRADATION LIMITS
3"	75 mm		
2"	50 mm		
1 1/2"	37.5 mm		
1"	25 mm		
3/4"	19 mm		
1/2"	12.5 mm		
3/8"	9.5 mm		

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	100.0	
No. 8	2.36 mm	100.0	
No. 16	1.18 mm	99.8	
No. 30	600 µm	99.2	
No. 50	300 µm	84.0	
No. 100	150 µm	33.5	
No. 200	75 µm	6.7	

MOISTURE CONTENT 3.5%

COMMENTS

Project No.: NG1774
 Client: District of HH
 Date: 9/5/15
 Technician: AP/RS

Northern Geo Testing & Engineering Ltd.
 9211 100 Avenue
 Fort St. John, BC V1J 1X6
 Tel: 250-261-6615 Fax: 250-261-6614



MOISTURE CONTENT

Hole No.	TP15-01	TP15-01	TP15-01	TP15-01	TP15-01	TP15-01	TP15-01	TP15-01
Depth (meters)	0.6	0.7	0.8	1	1.3	1.8	2.1	2.5
Wt. Spl Wet	375.9	212.3	261.4	240.8	227.4	272.7	334.1	413
Wt. Spl Dry	360.9	188	233	203.6	212.8	258.7	320.5	393
Wt. Water	15	24.3	28.4	37.2	14.6	14	13.6	20
Wt. Tare								
Wt. Dry Sample	360.9	188	233	203.6	212.8	258.7	320.5	393
Moist. Cont. %	4.2	12.9	12.2	18.3	6.9	5.4	4.2	5.1
Hole No.	TP15-02	TP15-02	TP15-02	TP15-02	TP15-02	TP15-02		
Depth (meters)	0.6	1.1	1.6	1.7	2.4	2.7		
Wt. Spl Wet	343.7	304.5	367.6	281.4	373.8	390.6		
Wt. Spl Dry	330.7	295.7	358.8	273.6	361.1	380.4		
Wt. Water	13	8.8	8.8	7.8	12.7	10.2		
Wt. Tare								
Wt. Dry Sample	330.7	295.7	358.8	273.6	361.1	380.4		
Moist. Cont. %	3.9	3.0	2.5	2.9	3.5	2.7		
Hole No.	TP15-03	TP15-03	TP15-03	TP15-03	TP15-03	TP15-03	TP15-03	TP15-03
Depth (meters)	0.7	1.1	1.7	2.1	2.2	2.4	3.1	3.6
Wt. Spl Wet	334.5	298.5	370.3	360.1	337.6	297.4	323.8	356.8
Wt. Spl Dry	325.8	293	359.6	349.4	327	290.9	305.1	339
Wt. Water	8.7	5.5	10.7	10.7	10.6	6.5	18.7	17.8
Wt. Tare								
Wt. Dry Sample	325.8	293	359.6	349.4	327	290.9	305.1	339
Moist. Cont. %	2.7	1.9	3.0	3.1	3.2	2.2	6.1	5.3



Certificate of Analysis

AGAT WORK ORDER: 15F017534

PROJECT: NG1774

2910 12TH STREET NE
CALGARY, ALBERTA
CANADA T2E 7P7
TEL (403)735-2005
FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: NORTHERN GEO TESTING & ENGINEERING

SAMPLING SITE:

ATTENTION TO: BEVERLY RODOWSKI

SAMPLED BY:

Northern Geo Salinity Package - FSJ

DATE RECEIVED: 2015-09-10

DATE REPORTED: 2015-09-17

		SAMPLE DESCRIPTION:		2G3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		9/14/2015
Parameter	Unit	G / S	RDL	6953688
pH (Saturated Paste)	pH Units		N/A	7.78
Chloride, Soluble %	% (wt/wt)			0.000420
Resistivity	ohm.cm	1		2970
Sulfur (as Sulfate), Soluble %	% (wt/wt)			0.000510

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

District of Hudson's Hope

Dinosaur Lake, July 14 - July 27 2015

Date	Amount	Payment Type	Payment Customer	Info
07/27/15 06:04 PM	60.00	POS - Cash	McLeod	
07/27/15 06:02 PM	90.00	POS - Cash	Wheeler	
07/27/15 06:00 PM	90.00	POS - Cash	Seely	
07/27/15 05:58 PM	15.00	POS - Cash	Hart	
07/26/15 07:49 PM	15.00	POS - Cash	V. D. Gaag	
07/26/15 07:48 PM	15.00	POS - Cash	Brad Herrin	
07/24/15 05:24 PM	30.00	POS - Cash	Brad Herron	
07/24/15 05:22 PM	45.00	POS - Cash	Rory Chapple	
07/24/15 05:20 PM	15.00	POS - Cash	Jammie Lawson	
07/24/15 10:01 AM	45.00	POS - Cash	Kevin soucy	
07/18/15 07:26 PM	15.00	POS - Cash	Dale suderman	
07/18/15 07:24 PM	15.00	POS - Cash	Rickey Johson	
07/18/15 07:18 PM	15.00	POS - Cash	Gottler	
07/17/15 05:09 PM	30.00	POS - Cash	Travis mccue	
07/17/15 05:08 PM	30.00	POS - Cash	Erika lillico	
07/15/15 07:21 PM	15.00	POS - Cash	Whalen	
07/15/15 07:20 PM	60.00	POS - Cash	Mosher	
07/14/15 07:25 PM	30.00	POS - Cash	Short	
07/14/15 05:20 PM	15.00	POS - Cash	Whalen	
07/14/15 10:06 AM	45.00	POS - Cash	Brits, wade / Paucek	

Local Government Program Services

...programs to address provincial-local government shared priorities



FIRST NATIONS'
Emergency Services
BRITISH COLUMBIA



The Strategic Wildfire Prevention Initiative is managed by the Provincial Fuel Management Working Group. For program information, visit the Funding Program section at:

www.ubcm.ca

LGPS Secretariat

Local Government House
525 Government Street
Victoria, BC, V8V 0A8

E-mail: lgps@ubcm.ca
Phone: (250) 356-2947
Fax: (250) 356-5119

September 29, 2015

Mayor Johansson and Council
District of Hudson's Hope
Box 330
Hudson's Hope, BC, V0C 1V0



RE: Strategic Wildfire Prevention Initiative - Approval of Operational Fuel Treatment (SWPI-512: Beryl Prairie Operational Treatment, 2015)

Dear Mayor and Council,

Thank you for submitting an application for an operational fuel treatment grant for the above noted project. The Provincial Fuel Management Working Group has reviewed your submission and the application requirements have been met.

The application form indicates a total project cost of \$197,911.32. As the applicant is required to contribute 10% of the total project cost, the working group has approved a grant in the amount of \$178,120.19, or 90% of the actual eligible project costs, whichever is less. The balance of the project cost (10%) is required to be funded through community contributions.

The conditions of approval are outlined in the Program & Application Guide and the general Terms & Conditions are attached. In addition, please note the approved grant is also subject to the following requirements:

- (1) The funding is to be used solely for the purpose of the above named funding program and project and for the expenses itemized in the budget that was approved as part of your application;
- (2) Funds are not transferable to other projects;
- (3) Grant approval is based on the treatment of 20.3 hectares at \$9,749.32 per hectare. Approval from Provincial Fuel Management Working Group is required for any significant variation from the approved project.
- (4) A post-approval meeting with the local Fuel Management Specialist is required to be completed. Please contact Harry Offizier at the Prince George Fire Centre to schedule this meeting.
- (5) All project activities must be completed within 24 months and no later than September 29, 2017;

(6) The final report is required to be submitted within 30 days of project completion and no later than October 31, 2017. The report must include:

- Completed and signed copy of the final report form
- Maps and spatial data, as outlined in the relevant appendix in the Program & Application Guide
- For CWPP funding, an electronic copy and two hard copies of the completed CWPP(s)
- For prescription funding, an electronic copy of the signed/sealed prescription(s)
- For demonstration projects and operational treatments, photos of fuel conditions before and after the fuel treatment

Additional information regarding financial reporting and the disclosure of project revenues and other grant contributions (and how these may impact the eligible grant) are available in the Program & Application Guide. Please forward this information on final report deadlines and requirements to staff or contractors responsible for implementing the project.

Also, please note that the *Community Charter* and *Local Government Act* provide the requirements for municipalities or regional districts that are providing services outside of their own jurisdiction. For more information, please refer to:

- For municipalities – s. 13, *Community Charter*
- For regional districts – s. 796 and s. 796.1, *Local Government Act*

As outlined in the Program & Application Guide, grants will be awarded upon completion of your project and satisfactory receipt of the final report. For information on changes to the approved project or progress payments, please refer to the program guide or contact Local Government Program Services at (250) 356-2947 or lgps@ubcm.ca.

We wish you every success with your project and look forward to working with you on future community safety initiatives.

Sincerely,



Peter Ronald
Programs Officer

cc: Robert Norton, Director of Protective Services, District of Hudson's Hope
Harry Offizier, Fuels Management Specialist, Prince George Fire Centre

Enclosure

Clerk

From: MCF Correspondence Management MCF:EX
<MCF.CorrespondenceManagement@gov.bc.ca>
Sent: Thursday, October 01, 2015 3:25 PM
To: Clerk
Subject: Letter from the Honourable Stephanie Cadieux

Ref: 224236

Her Worship Mayor Gwen Johansson and Council
District of Hudson's Hope
E-mail: district@hudsonshope.ca

Dear Mayor Johansson and Council:

As Minister of Children and Family Development, it is my great pleasure to proclaim October as Foster Family Month. For 25 years, the Government of British Columbia has taken this opportunity to recognize and celebrate the commitment and dedication of foster families to the children- and youth-in-care who have been welcomed into their homes and into your community.

British Columbia has approximately 7,200 children- and youth-in-care with a diverse range of needs. Each child is unique, and they deserve to be surrounded by caring adults in a supportive environment. I am truly grateful that there are special people in communities across the province who are committed to helping children, youth and their families when they need it most.

The Ministry of Children and Family Development (MCFD) has created an information kit, including printable posters and fact sheets, to help raise awareness of fostering in your community. To access this information, please open the following link on the MCFD Web site: <http://www.mcf.gov.bc.ca/foster/ffm.htm>.

It is without question that fostering can be challenging work. I therefore encourage you to recognize Foster Family Month wherever possible. Even the simple posting of a message in your municipal hall and community and recreation centres goes a long way towards showing these remarkable families that their efforts are valued, appreciated and much needed.

On behalf of the Government of British Columbia and its citizens, thank you for your recognition and continued support of foster families in your community.

Sincerely,

ORIGINAL SIGNED BY

Stephanie Cadieux
Minister of Children and Family Development

cl