



Peace River Regional District

PEACE VALLEY LOOKOUT

Planning Feasibility Study

**Prepared By:**

Focus Corporation
10716-100th Avenue
Fort St. John, BC V1J 1Z3
Phone: (250) 787-0300
Fax: (250) 787-1611
Email: fortstjohn@focus.ca

Prepared For:

Peace River Regional District
Attention: Ron Storie
Manager of Community Services
Box 810, 1981 Alaska Avenue
Dawson Creek, BC V1G 4H8



TABLE OF CONTENTS

1.0	INTRODUCTION / BACKGROUND	1
2.0	GEOTECHNICAL.....	3
3.0	ENVIRONMENTAL.....	4
3.1	INTRODUCTION	4
3.2	REMEDIAL OPTIONS REPORT.....	5
4.0	CONCEPTUAL DESIGN	7
4.1	BACKGROUND	7
4.2	DEVELOPMENT AREA	7
4.3	TOPOGRAPHY	9
4.4	ACCESS ROADS AND DRAINAGE.....	9
4.5	UNDERGROUND UTILITIES.....	9
4.6	CONCEPT PLAN.....	9
5.0	MARKETING ANALYSIS.....	12
6.0	MAINTENANCE / PRESERVATION.....	13
7.0	LIMITATIONS.....	14
8.0	NEXT STEPS / RECOMMENDATIONS	14

Appendix 1 - Community Check-In (November 30, 2009)

Appendix 2 - Geotechnical Quote

Appendix 3 - Stakeholder Consultation

Appendix 4 - Community Check-In (February 17, 2010)

Appendix 5 - Peace Valley Lookout – Concept Plan

Appendix 6 - Cost Estimates And Phasing

1.0 INTRODUCTION / BACKGROUND

The Peace Valley Lookout is located on Crown Land approximately 3 km south on 100th Street from the intersection of 100th Street and Highway 97 in Fort St. John. The site provides a panoramic view of the Peace River which winds through a valley and beside a community called The Old Fort.

The Peace River Regional District (PRRD) is investigating the feasibility of converting the Peace Valley Lookout into a Regional Park. The North Peace Fringe Area Official Community Plan supports the development of this area through the following policies:

Section 10
PARK, OPEN SPACE AND NATURAL ENVIRONMENT

10.3 Policies

Policy 6 To work with the general public, committees, societies, organizations, First Nations and provincial agencies in identifying and protecting sites of scenic, heritage, cultural, historical, paleontological or archaeological significance within the Plan area.

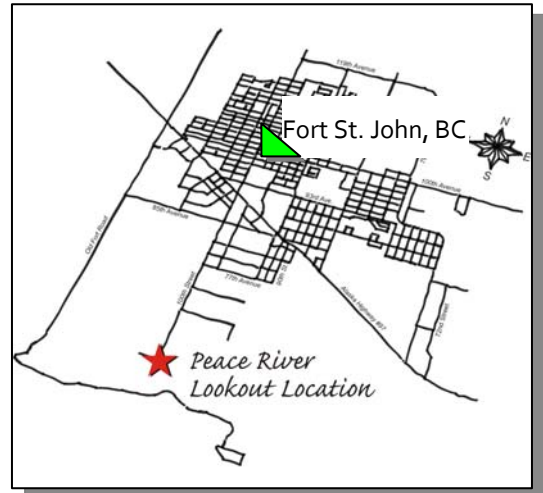
Policy 9 To work collaboratively with the stakeholders and agencies having jurisdiction to discourage damage caused by all terrain vehicles.

Policy 15 To recognize that the Peace River is one of 20 rivers in BC proclaimed as a BC Heritage River in order to provide greater emphasis on river related values during land use planning processes, to raise awareness of the importance of a healthy river system, to help protect the special values of the river and to build a stronger public support for and involvement in stewardship of the river.

The Lookout Site is already established as a locally known viewing point for rural and Fort St. John residents. The site has potential as a Park which, when reclaimed and redesigned, would draw local visitors and tourists due to its location overlooking a beautiful valley with the Peace River running through it.

This Planning Feasibility Study is intended to guide the PRRD in their decision pertaining to acquisition of park land, development of park facilities and a lookout, and projections for potential capital and costs related to on-going maintenance. This Study will outline steps and fees associated with creating a Regional Park and Lookout including:

- Geotechnical Information;
- Environmental Information;
- Conceptual Design of the Lookout;
- Marketing Analysis;
- Maintenance / Preservation; and



➤ Next Steps / Recommendations.

This Planning Feasibility Study incorporates input from PRRD staff as well as community organizations, associations, societies and businesses in the Peace River Regional District. Two public Community Check-In sessions were held. The goal of the first Community Check-In session was to set priorities and gauge the public's interest in the project. At the second Community Check-In session, a proposed concept plan and related budget and phasing options were presented for the public to comment on. Results from the two Community Check-In sessions can be found in Appendices 1 and 4.



Photos from Community Check-In #1 held at the North Peace Leisure Pool in Fort St. John on November 30, 2009.



2.0 GEOTECHNICAL

Northern Geo Testing & Engineering Ltd. (Northern Geo) was contacted by Focus to provide a quote for a Geotechnical Investigation and Slope Stability Assessment. The following is an overview of their recommendations and fees.

Based on the conceptual drawing provided to Northern Geo, it is understood that the Peace River Regional District proposes to develop a site at the south end of 100th Street. The lookout area would include a paved parking area, staging and picnic areas, a viewing platform, parks, trails, monuments and educational features. The site overlooks the Peace River Valley, with a long slope extending approximately 160m vertically to Old Fort Road over steep and undulating slopes, and an additional 60m over flatter, hummocky slopes down to the Peace River channel.

There are significant surface erosion features (water carved channels with debris), soil slumps and scarps, indicating both surface and subsurface soil instability potential on and below the site. It is also understood that there have been geotechnical assessments undertaken by others in the Old Fort area below the proposed development, and these assessments have indicated both shallow and moderately deep to deep-seated instability. The anticipated soil stratigraphy below the outlook area will likely consist of clay, clay tills and clay shale with possible sand and gravel layers.

Northern Geo proposes a threefold investigation process to accomplish the following objectives:

- ♦ Desktop Study - initially review existing landslide and slope inclinometer information in the area
- ♦ Slope Stability Assessment - assess overall global slope stability conditions at the site with deep test hole drilling and slope data
- ♦ Foundation Assessment - evaluate the near surface conditions at the site for foundation design of the proposed development with shallow test hole drilling

The proposed investigation may be carried out as one project simultaneously or as three separate but related studies. Detailed descriptions of these objectives can be found in Appendix 2.

Task	Timeline	Fees
Desktop Study	1 week	\$2,575
Slope Stability Assessment	1 Year (monitored)	\$53,045
Foundation Assessment	1 day	\$7,931
TOTAL (with disbursements and GST)		\$63,551

3.0 ENVIRONMENTAL

3.1 *Introduction*

During the preparation of this pre-feasibility cost estimate, environmental site assessments reports were not available for review. Focus understands that the subject property has been used for a long time by the public for recreational purposes. However, illegal dumping of household and commercial solid waste is evident on the slopes. In addition, based on anecdotal information provided by local residents, there could be debris disposed and buried at the flat portion of the subject property.

3.1.1 **Scope of Work**

The following scope of work is suggested for the property prior to re-development:

1. Conduct an Environmental Site Assessment (ESA) and limited soil sampling;
2. Develop Conceptual Site Remedial Options; and
3. Provide rough site clean up cost estimate.

3.1.2 **Phase I Environmental Site Assessment (ESA)**

The objective of the Phase I ESA would be to comment on whether past or present site use, either on-site or off-site, may have a potential to cause environmental impairment of the subject property. The Phase I ESA will be conducted in general accordance with the Canadian Standards Association (CSA) document "Z768-01 Phase I Environmental Site Assessment", dated November 2001 and reaffirmed in 2006.

The scope of work for the Phase I ESA will include the following:

- Review available historical information for the subject site and the immediate surrounding areas, including air photos and property listing and street directories;
- Review relevant environmental information from the BC Online Site Registry, the BC Ministry of Environment online Water Resources Atlas and the City of Fort St. John;
- Obtain and review historical and current land titles of the subject site;
- Review available public information such as geological and hydrogeological reports and maps;
- Conduct a site visit and personal interviews to evaluate the historic site activities and determine if there is a presence of materials which could cause harm to humans and ecological systems; and
- Prepare the Phase I ESA report suitable for submission to the Peace River Regional District in support of the property re-development application.

Focus is proposing to conduct the Phase I ESA site visit at the time of geotechnical soil investigation which will allow for environmental soil logging and sampling. Limited quantities of soil samples (4 to 6) will be collected during the geotechnical investigation to assess the soil quality at the site.

The Phase I will identify areas of potential environmental concern (APEC) and areas where additional environmental assessment is warranted.

Based on the Phase I ESA recommendation and soil quality assessment results conceptual site remediation – restoration options will be developed and presented to the Peace River Regional District for review and comments.

3.2 Remedial Options Report

Based on the information gathered during this pre-feasibility proposal preparation, the following media have been identified that could be potentially impacted by historic activities at the site: soil, surface water and groundwater. It is expected that shallow soils and surface water bodies (creek) at the site or near the site could be potentially impacted by illegal dumping, import of fill material from unknown sources and unreported releases of contaminants. Since the water table at the site is expected to be located several meters below the local grade, the impacts to the local groundwater are estimated to be at the lesser rate. Therefore, a contingency for the groundwater quality assessment is not included in this proposal.

The remedial objectives (RO) developed for the site should be based on BC Ministry of Environment (MoE) Contaminated Site Regulations¹ (CSR). Under the CSR, based on the proposed land use, the site specific APEC and the primary contaminants of concern (CoC) will be identified. Furthermore, mandatory and site specific exposure pathways and potential receptors will be identified and numerical standards applied to assess the soil quality and likelihood of contaminants from soil leaching into surface and groundwater. In addition a pre-screening risk assessment could be conducted.

Remedial options implementation and performance monitoring would require implementation of a sampling and analytical testing rationale for soil, groundwater and, potentially, surface water and air. These media samples should be collected before, during and after the remedial activities.

3.2.1 Remedial Methods

Impacted media, such as soil, surface water, sediment and groundwater at the site should be remediated to the environmental objectives developed following the completion of assessment activities. At this point in time, only a conceptual remediation action plan (RAP) is presented. The following conceptual remedial options have been considered for the proposed Lookout.

- Shallow Soils in Source Areas - excavate, treat, segregate, reuse and/or dispose of soils and debris from 'hot spots' at the flat portion of the site;
- Deep Soil – In-situ bioremediation (soil vapour extraction – bio venting);
- Collect, segregate and dispose of soils and debris from the slopes of the property, if required;
- Groundwater - In-situ bioremediation, Monitored Natural Attenuation (MNA), if required; and
- Surface water – creek channel restoration.

The methods selected are based on the brief review of a Google Map[®] image of the site, some anecdotal information, and common industry practices.

¹ Contaminated Sites Regulation (CSR), B.C. Reg. 375/96, including amendments up to B.C. Reg. 239/2007.

Flat Area

An excavation area based on the environmental site assessment should be reviewed by the geotechnical engineer to determine if all impacted soils could be safely removed and replaced with non-impacted fill material without compromising the site slope stability and bearing capacity. If soils can not be excavated in certain areas, impacted soils should be contained by applying a low-permeability barrier (clay or synthetic liner) and if necessary, capped. In areas where asphalt pavement will be applied, the capping material thickness should be adjusted accordingly. The impacted soils containment and capping should be completed in accordance with CSR and local municipality requirements. Generally, within the parking area, soils should be compacted to 95% of Standard Proctor and hydraulic conductivity of 10^{-7} m/s would be sufficient to prevent surface water intrusion. In addition, surface water runoff should be diverted from the site to minimize surface water intrusion into contaminated soils.

For cost estimate purposes, 0.5 m thick layer of surface soil distributed across the site was used in the remedial cost estimate.

Slopes

On the slopes of the site, large areas of distressed vegetation are visible. In addition, large pieces of abandoned equipment, cars, household appliances and other solid waste debris are noted. In order to restore the slopes, the debris should be removed and the slopes re-vegetated with native species and existing vegetation growth promoted.

Prior to commencing debris collection and disposal, special attention should be paid to the project safety procedures development. The site-specific hazards assessment, administration, hazard control and mitigation procedures should be developed. In addition, a site-specific health and safety plan should be prepared and available at the site during the remedial activities. The debris at the slopes should be collected manually wherever possible to minimize further damage to vegetation on the slopes. The hand-collected debris should be stored in large waste bins (totes) and prepared for removal. Larger pieces (appliances, cars, etc.) should be secured in place to prevent mobilization (tumbling) before commencing their removal. Once secured, larger pieces of debris and waste bins will be airlifted by helicopter and brought to the flat part of the property for further processing, separation and disposal to a landfill.

Task	Timeline	Fees
Environmental Site Assessment	1 week	\$10,045
Remedial Options Report	1 week	\$6,320
Remediation and Reporting	6 weeks	\$270,625
TOTAL (with disbursements and GST)		\$286,990

4.0 CONCEPTUAL DESIGN

4.1 *Background*

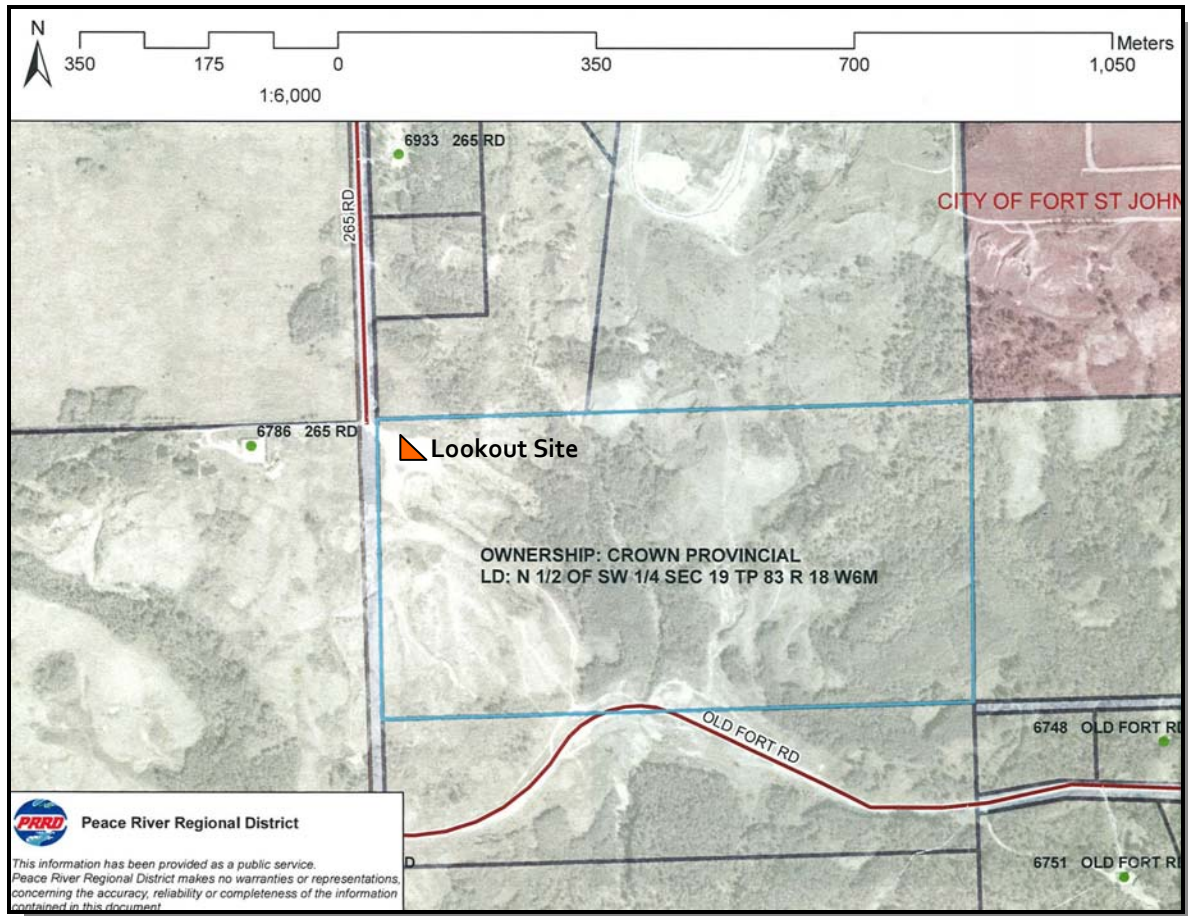
The conceptual design of the Peace Valley Lookout is a direct result of public input that was gathered at a Community Check-In session held on November 30th, 2009 at the Peace River Regional District office in Fort St. John (refer Appendix 1 for Community Check-In results). A few of the main themes that were expressed at the Community Check-In as well as through an online survey and individual conversations include:

- Safety - create a safe environment for visitors to walk around and enjoy the view – create a vehicle buffer to keep cars away from the edges and prevent dumping
- Security – issues surrounding youth parties and vandalism at the site and surrounding properties
- Retaining the site's integrity – site is currently used as a passive space for picnicking and site-seeing – residents in surrounding areas bring visitors to the site for the view, which is its greatest draw
- Tell the history – many historical sites can be seen from the Lookout, as well as the Peace River, which is an important asset to the area
- Keep it simple – current users enjoy the site and all it has to offer just as it is but expressed their desire to make it safe and functional without detracting from its natural beauty

Based on this feedback, a concept plan was created in consultation with the Peace River Regional District. The following information explains the rationale and preliminary findings.

4.2 *Development Area*

The current site of the Peace Valley Lookout is located on Provincial Crown Land described as the N ½ of SW ¼, Sec. 19, TP. 83, R18, W6M (refer Map 1). A right-of-way belonging to Ministry of Highways runs along the west side of the Lookout site and the site is not within the current Agricultural Land Reserve boundary. Historically, this site has been used as an informal land fill. For this planning feasibility study, only the Study Area as identified in Map 2 is being considered. In the future, it is recommended that a broader study area be considered to incorporate a trail system linking the existing graveyard and “Old Fort” community to the Lookout site.



Map 1 – Parcel Information



Map 2 – Study Area

4.3 Topography

For this planning feasibility study, a topographical survey of the area was not provided or conducted. All topography has been gauged based on photos and site visits only. The site, while generally flat at the immediate Lookout site, slopes to the south. It is estimated that there is a 1 to 2m difference in elevation from the north side of the site to the south side. The southern edge of the site drops down vertically approximately 160m to the Old Fort Road below and an additional 60m (approx.) to the Peace River channel. The topography not only makes the site unique but also poses a challenge in terms of safety.

4.4 Access Roads and Drainage

The site has one access which is located approximately 3 km south on 100th Street from the intersection of 100th Street and Highway 97 in Fort St. John. Pavement on this access road ends approximately at the City of Fort St. John municipal boundary. Beyond the municipal boundary, this access road also services 3 residents on the way to the Lookout site. This existing access road adequately provides access to the Lookout site. The proposed concept plan (refer Appendix 5) illustrates a large parking island at the entrance to the site. This would direct through traffic into the site and creates a right turn out of the site. It is recommended that in the future, if any upgrades are made to the road (e.g. widening or paving) that consideration be made for a roadside walking trail, making pedestrian access to the Lookout site safer.

From preliminary review of the site, it appears that some of the bank instability may be due to spring run-off being directed over the southern side of the bank. A provision for drainage has been included in Appendix 6 – Cost Estimates and Phasing. It is recommended that rain water and run-off be collected either on-site and piped to other areas or alternatively, a ditch be constructed that directs the water around the site. Further investigation and study by an engineer is needed to address drainage for the Lookout site.

4.5 Underground Utilities

To the best of our knowledge and with all the information presented to date, Focus believes that there are currently no underground utilities at this site.

4.6 Concept Plan

4.6.1 Theme

The concept theme of the proposed park is both functional and historical, with a focus on using local materials whenever possible. The name “Peace Valley Lookout” speaks to the function of the site - a place to take visitors for a panorama of the Peace River flowing through the valley and a resting site for passing travelers. While visitors gather at the Lookout site, the interpretive components spell out the history of the area from both the Settlers and the First Nation perspective.

Suggested materials include items such as:

- Boulders, possibly donated from the surrounding farmland;
- pipe (e.g. surplus from pipeline projects) used for post and chain barriers;

- concrete benches and picnic tables;
- timber frame constructed washroom facilities, gazebo and entrance sign; and
- wood decking, possibly sourced from pine beetle infested trees.

4.6.2 Parking

The Concept Plan provides for a number of parking options including:

- 2 dedicated bus parking stalls;
- 6 recreation vehicle (RV) stalls; and
- 15 regular 3.0m wide parking stalls and 1 designated accessible stall.

Parking will not be designated until Phase III (refer Appendix 6) of the project when it is intended that the parking area will be paved with asphalt. At that time, lines will be painted and the designated accessible stall will be identified with a vertically mounted sign and the International Symbol of Access painted on the pavement.

4.6.3 Landscape Items

Landscaping in terms of plant material has been kept to a minimum and will be chosen from a palette of species that are hardy and native to the area. No provisions have been made for an irrigation system and plants will need to be hand watered for the first year or until established. Grass areas will be seeded with native grass species and hand watered until established. A windrow will be provided along the west side of the site to screen the Lookout site from the neighbouring property.

4.6.4 Site Amenities

The concept plan intends that overhead lighting be provided to improve safety and security for users during early morning or evening use. However, the site is not intended to be used for overnight camping.

No potable water source and no community sewer service are available at the site.

The concept plan has sited 2 washroom (outhouse type) facilities that will have buried holding tanks and will require maintenance on a regular basis.

4.6.5 Interpretive Components

The interpretive components of the Lookout will be on-site and potentially off-site. Kiosks placed at the staging area (southeast corner of parking lot) will contain relevant information about the park, including hours of operation (if required), safety information, relevant public notices, sponsor advertising, etc. Interpretive panels will be placed on the large viewing deck located on the southern point of the park. These interpretive panels will tell the history of the valley below from the Settlers and First Nations perspective. A map of all the historic Forts will be made available, and will refer to sites along the river bank below. In future phases, these sites could be tied into the mapping by placing physical markers at the actual sites large enough to be seen from the Lookout and colour coded to correspond to the mapping. There are also opportunities to inform visitors about the local area and its history, current uses, local legends, First Nations or information about the night skies and the mighty Peace River.

4.6.6 Phasing

The Park could be developed in five phases (refer Appendix 6) . The priority of the phasing is to first improve the safety of the current site and subsequently layer in the aesthetic, and lastly, the interpretive components.

4.6.7 Crime Prevention Through Environmental Design (CPTED)

Lighting:

Lighting should be low-level, downward facing, vandal-resistant, and sufficient to illuminate walkways and washroom buildings. Lighting will be directed away from the deck so as not to interrupt star-gazing activity etc.

Sightlines:

In terms of CPTED, sightlines, both into and within the Lookout site have been maintained and opportunities for hiding places have been minimized.

Signage:

Good signage is important. The design allows for entry signage, information kiosks, and interpretive panels. Signs should state hours of operation, rules of conduct, contact numbers, and wayfinding if necessary.

Safety:

Oftentimes, a real test is to ask yourself “would I feel comfortable here?” The intent of the design is to clearly see the site and what it offers - viewing deck, washrooms, picnic sites and information boards. People can get out and stretch their legs, have some lunch, walk around a bit, “ooh” and “aaah” at the stunning views and the great park space, and then be on their way.

A key to the success of this development is not only the natural surveillance on the site, but diligent maintenance and upkeep. While no one element is entirely vandal-proof, there is also responsibility on the part of the District to look after the site. If it looks rundown and abandoned, the message will be that it is an unloved and uncared for site, and the resultant behavior will reflect that. Broken bulbs or glass, graffiti, and litter should be cleared promptly. Also having community groups involved with clean-up and maintenance would bring a sense of ownership to the site.

Sponsorship for the site could come from a variety of sources such as the Kinsmen, Rotary, Lions, or other service groups, or the First Nations Treaty 8 group. They could sponsor or fund elements such as the deck, the interpretive panels, the gazebo, the benches and picnic tables, working in partnership with the regional district. There tends to be a greater sense of ownership and pride when organizations fundraise for project components.

4.6.8 Universal Accessibility

One accessible parking stall will be provided and the parking lot access, walking path, gazebo and wood viewing decks will be made wheelchair accessible. There will be an effort as well to incorporate Braille into the interpretive panels.

5.0 MARKETING ANALYSIS

The site should be promoted in several different ways to gain the most exposure and draw the most visitors.

Signage: Signage along Highway 97 (the Alaska Highway) will be a key component to marketing the Lookout. Binocular symbols much like the ones that designate “wildlife viewing” could be incorporated into the City of Fort St. John attraction signs. At the corner of 100th Street and Highway 97, another sign should be posted for the turn off, and lastly, the entrance sign to the Lookout site will announce arrival to the site.

Print: The following are opportunities for print advertising:

- Peace Valley Lookout brochures could be developed and made available at all surrounding visitor information centres including Dawson Creek, Taylor, Pouce Coupe, Fort St. John, Chetwynd, and as far away as Nelson and Prince George.
- Ads and information could be provided to the following print magazines: British Columbia Vacation Planner, BC Outdoor Adventure Guide and the BC Insiders Guide.

Internet and Digital Marketing Opportunities:

- HelloBC.com
- fortstjohn.ca
- prrd.bc.ca
- poucecoupe.ca
- districtoftaylor.com
- gochetwynd.com
- dawsoncreek.ca
- northernbritishcolumbia.com
- bctravelguide.ca
- camping.bc.ca

Word of Mouth / Programming: The Lookout site is already a place where local residents take visitors to enjoy the view. The site has potential to host small celebrations and events. A good way to animate the space, thus getting people to use it, is to program it. Programming opportunities could include star gazing, painting, nature appreciation, crafting, plant walks and historical talks. The Lookout site could also become part of school curriculum.

6.0 MAINTENANCE / PRESERVATION

The concept for the Lookout site caters to low maintenance and preservation costs. Most of the site furnishings will be concrete and wood. More specific and appropriate materials will be researched in subsequent phases once this project moves forward.

Weekly maintenance could include:

- Watering trees and grass until establishment
- Emptying garbage cans
- Picking up litter from site
- Ensuring the washroom facilities are cleaned and stocked, repairing any vandalism and monitoring holding tank levels
- Maintaining the kiosk information
- Winter snow removal and sanding as needed
- Sweeping / shoveling walkways

Monthly maintenance could include:

- Mowing the grass once established
- Pumping outhouse holding tanks
- Painting over any graffiti
- Grading gravel parking lot

Yearly maintenance could include:

- Painting
- Repairing potholes
- Adding gravel to parking lot as needed until it is paved

Task	Approx. hrs	Fees
Maintenance Contractor Wages	800hrs/yr	\$20,000
Equipment and Supplies		\$30,000
TOTAL		\$50,000

7.0 LIMITATIONS

This report is limited in nature and should not be relied upon either as a confirmation of regulatory compliance or of conditions on site, either above or below grade.

The evaluations presented in this report are based on information provided by individuals, available site records, readily available historical documents and observations made during limited site reconnaissance. Focus has accepted as true the information obtained from these sources but makes no representation or warranty regarding the accuracy or reliability of the information.

The services provided by Focus and the sub-consultants retained for this project have been provided in accordance with the standard of care applicable to similar services provided at the place and time of these services.

This report and the information contained in it is intended solely for the use of The Peace River Regional District for that project described as the Peace Valley Lookout Planning Feasibility Study and should not be relied upon or used by any other person whatsoever for any other purpose. Any such use is at the sole risk of the unauthorized user and without any responsibility on the part of Focus.

8.0 NEXT STEPS / RECOMMENDATIONS

The Peace Valley Lookout presents a unique opportunity to expand upon something that is currently unique and special to the residents in the Fort St. John and surrounding areas. The view of the valley from the Lookout site is meaningful both historically and aesthetically.

Given the remoteness of the site, problems have surfaced including vandalism, improper use and safety concerns. Through proper site planning, monitoring and maintenance, these problems can be minimized. Some next steps and recommendations that this report summarizes include:

1. Gather geotechnical data to gauge the stability of the slope with possible on-going monitoring.
2. Gain knowledge of the environmental history and possible solutions in terms of impact to surrounding water courses and habitat.
3. Retain an engineer to design the proper handling of drainage and run-off.
4. Obtain a detailed survey of the site for grading and drainage purposes.
5. Phase the development of the site to first address public safety.
6. Seek opportunities for partnerships / sponsors to aid in cost-sharing, monitoring and maintenance.
7. Partner with the local RCMP in a strategy to monitor the site at night.
8. Seek locally-made materials, products and services where appropriate during construction.
9. Set up a maintenance and preservation schedule to ensure vandalism is kept to a minimum and public safety is maintained.

10. Consult local First Nation communities and local historians for content in interpretive components.
11. Market the Lookout site in a variety of methods including signage, print and online sources to gain the most exposure.
12. In the future, consider linking the Lookout site with the historic graveyard below by means of a trail or stair system.
13. In the future, provide vehicle baffles at the bottom of the bank to prevent vehicular and off-road equipment access.
14. When the opportunity arises, approach the Ministry of Transportation and Infrastructure to consider upgrading the access road (100th Street) to include asphalt paving and a dedicated pedestrian lane.

A skilled team of professionals were called upon to consider the development potential of this site. Should the project move forward, all consultants and sub-consultants involved in this initial investigation would consider it a privilege to continue to work on the development of the Peace Valley Lookout site.

Appendix 1

Community Check-In (November 30, 2009)

Advertising for the event as follows:

Energeticcity.ca

Thursday, Nov. 19th thru to Monday, Nov. 30th

Alaska Highway News

Wednesday, Nov 25th and Friday, Nov 27th

CBC

Emailed to the CBC North website for their community events section

Moose FM

Press Release sent out

The PRRD website posted the day and time and posters were put up around FSJ announcing the event.

PRRD emailed electronic invites to various stakeholders for distribution to membership

Welcome to the Peace River Regional District

Peace River Lookout Community Check-In

The Peace River Regional District (PRRD) is undertaking a feasibility study to guide their decision regarding acquisition of park land, development of park facilities and a lookout and projections for potential capital and costs related to construction and on-going maintenance for the Peace River Lookout site.

Community Check-In Purpose...

- Inform rural and Fort St. John residents as well as surrounding area stakeholders about projects happening in their area
- Gain local knowledge of the Lookout area
- Gather input on significant themes / concepts for the Lookout
- Gather input on marketing opportunities and benefits of creating a Regional Park

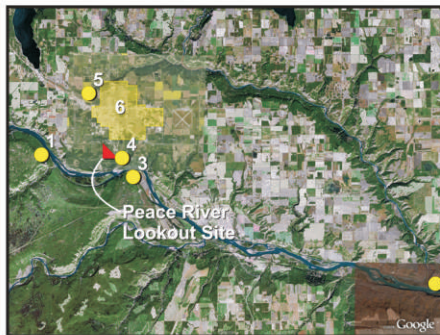
We Need your Input...

- Please provide comments on spaces defined on project boards
- Please vote for your favourite theme with red and green dots
- Please talk to PRRD staff and Focus representatives about your concerns, experience and vision for the Lookout site



You Could Win!

Please fill out an exit survey and have your name entered into a draw for a Winter Vehicle Emergency Kit!



Trading Post Locations in the Fort St. John Area (courtesy of the Fort St. John Museum and Archives)

- 1 ROCKY MOUNTAIN FORT 1794-1805
 - earliest European settlement on mainland British Columbia
- 2 FORT J'EPINETTE 1806-1823
 - established by the Northwest Company called St. John name changed in 1821 when Hudson's Bay company took over the management of the fort
- 3 FORT ST. JOHN 1860's-1872
 - fort re-opened after a lapse of 40 years
- 4 FORT ST. JOHN 1872-1925
 - Hudson's Bay Company factor Frank Beaton moved post to a new location across the river
- 5 FORT ST. JOHN 1925
 - Frank Beaton again moved the post to be closer to the new settlers
- 6 FORT ST. JOHN PRESENT (approximate boundary)



Parks / Attractions in the area

- Scenic Highway from FSJ to Hudson's Hope
- W.A.C. Bennett Dam
- Williston Lake
- Beaton Provincial Park
- Charlie Lake Provincial Park
- The Alaska Highway
- The Exemplar
- North Peace Museum
- Taylor Gold Panning Days

Glaciation, tectonic forces (movement of the earth's plates) and climate have created the soils, vegetation, forest ecosystems and subsurface formations that exist today. The vast **flat plateau** that dominates the eastern regions of the planning area was formed by retreating glaciers. **Soils are generally fine textured** with deeply incised streams. The north eastern area tends towards saturated soils and **muskeg** while south eastern soils are drier. Moving westward, the topography rises to the rolling and hilly landscapes of the foothills and ends in the Rocky Mountains. River systems originating in the mountains cut deeply through **bedrock** and can be straight, **meandering or braided**. Rivers are the dominant hydrological feature in the planning area. The major river systems include the **Halfway, Graham, Beaton, Sikanni-Chief, Fontas and Peace River** systems. Where **lakes** exist, they tend to be **small and shallow** with low to moderate productivity. Significant lakes include **Charlie Lake and Redfern Lake**. Over **40 fish species**, including mountain whitefish, bull trout, Arctic grayling, rainbow trout, lake white fish and walleye are found, mostly in the large rivers and streams. The area has a fairly typical northern continental climate. Cold winters, short growing seasons and low precipitation limit the vegetation, agricultural crops and forest ecosystems that can thrive here. Mean **daily temperatures** range from -30.4°C to +21.50°C. Most of the moisture carried by the **prevailing westerly winds** falls on the west side of the Rocky Mountains, outside of the planning area. Average annual precipitation is 295.9 mm of rainfall and about 198.2 mm in equivalent **snow cover**. Some areas can suffer a water deficit, especially during summer. The **short growing season** is somewhat offset by the long sunny northern days during spring and summer. Substantial populations of large mammals such as **deer, elk, sheep, goat and moose** inhabit the LRMP area. Both **black and grizzly bear** are found across the planning area. Other significant wildlife include fur bearers such as marten and a variety of birds, including **waterfowl and warblers**. **White spruce, lodge pole pine and trembling aspen** are the main commercial tree species, accounting for most of the timber harvested in the planning area.
(courtesy of Integrated Land Management Bureau - Fort St. John Land and Resource Management Plan)

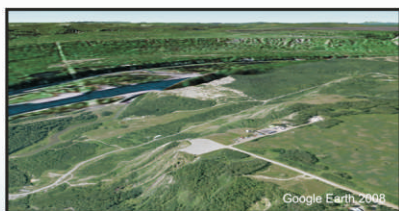
Participant Input

Please list any other relevant information that makes this site unique.





Fort St. John, BC



Google Earth 2008



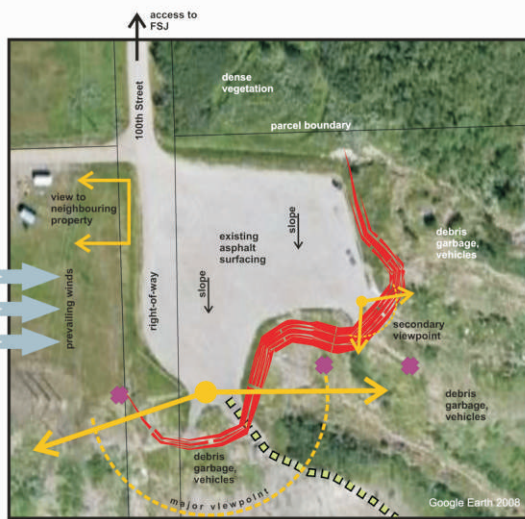
Study Area

Google Earth 2008



Peace River Lookout

Context



Legend

- steep slopes
- memorial markers
- existing trail



November 10, 2009

On-site Observations:

used for camping
lack of "dead end" sign
debris thrown over the bank
asphalt area slopes south towards edge
while on site: 1 person camping
1 person took dog for a walk
1 vehicle, people eating lunch

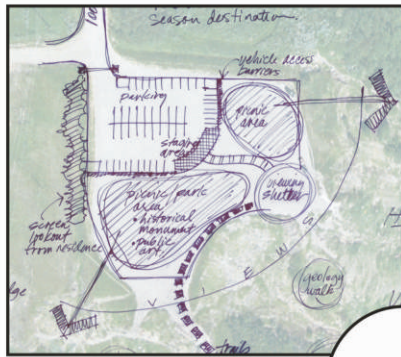
Participant Input

Please list what you perceive as attributes and detractors of the Lookout site (what's good, what's bad)

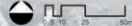
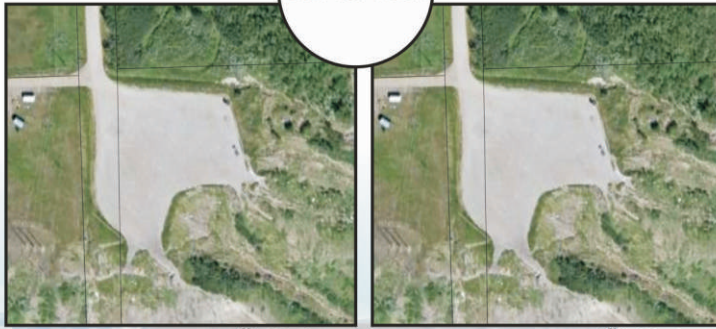
Peace River Lookout

Site Analysis





Draw Your Vision!



Participant Input

General Comments

Peace River Lookout

Preliminary
Concept



Theme One

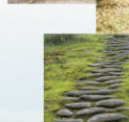
The Peace in all Seasons

A place to go to experience nature in the north, see the amazing landscape change with all the seasons, website link to show when best times are to view northern lights or shooting stars, storm watching, sun rise / sun set watching, star gazing, "big sky" experience, wedding photo opportunities, wildlife viewing

Theme Two

A Historical "Viewpoint"

Interpretive kiosk showing locations of all Fort locations that can be seen from Lookout, fossil hunting, geology walk, man-made markers insert across the valley that are visible from the Lookout showing rock formations, markers showing historical river levels, history and significance of the Alaska Highway,



Peace River Lookout

Themes



November 30th Peace River Lookout Survey Results

Questions	Results
1. Check where you currently live: <ul style="list-style-type: none"> • Electoral B • Electoral C • In Fort St. John • Other 	0 9 7 1
2. Do you currently use the Lookout site? <ul style="list-style-type: none"> • Yes • No If so, what for?	15 2 <ul style="list-style-type: none"> ▪ Sight seeing ▪ Walking ▪ Eating lunch ▪ Just visiting ▪ Walking ▪ Bring family and friends to see the beautiful scenery ▪ I work on 100th street and occasionally walk to the point at lunch and after work ▪ Eating lunch on occasion ▪ Viewing the fall leaves changing colours ▪ Watch the valley in early morning full of fog ▪ Scenic viewing ▪ Show visitors a wonderful vista ▪ Viewing scenery ▪ Moderate hiking ▪ Lunch site ▪ Showing visitors and new to town people ▪ See the river in all 4 seasons ▪ To show every person who visits FSJ or is new to the area the outstanding view of the Peace River, where the approx. Site C Dam might be located and where FSJ was located on the river etc. ▪ Walking ▪ I've gone there but don't use it regularly ▪ Visitors ▪ Lunch or supper site while RV-ing ▪ I have used the site over 200 times - I am a retired educator turned counselor – have counseled countless men while eating lunch there ▪ To show off area history to visitors ▪ To enjoy the view ▪ Relaxing ▪ Taking the visitors to see the Peace ▪ Sometimes but it is presently a bit

	<p>embarrassing because of litter and old cars etc.. Fun to run to on a nice day</p> <ul style="list-style-type: none"> ▪ Eat lunch
<p>3. Do you see any benefits to developing the lookout site? If so, what are they?</p>	<ul style="list-style-type: none"> ▪ Very much, clean area up and make it a welcome spot for tourists ▪ Yes, it is already advertised as a tourist attraction ▪ Yes, tourists, more local usage, Less garbage ▪ I believe the lookout would be a wonderful place to attract tourism to the City and area ▪ Yes, if the site was developed, with a walkway from FSJ, many more people would utilize it, the view is beautiful ▪ Reduction of garbage – it spoils the view, great place for photos etc. ▪ Enhance visitor appreciation, greater constructive use by community members ▪ Recreational / picnic / walks ▪ Yes, get rid of garbage & develop it as a lookout point ▪ TREMENDOUS, FSJ needs a tourism site to promote the area & it's the area that can cater to all the historic aspects as well as the environment ▪ Absolutely, and it is long overdue. ▪ Provide a much cleaner / neater image of the region if all the garbage is removed ▪ Provide a safer area for vehicles and visitors ▪ Provide a tourism attraction for visitors ▪ Yes, clean it up, mark the heritage, create a safe site to visit ▪ Absolutely. One of the only places to view the Peace. I've seen many tourists there. Many folks go for an evening drive. Fabulous sunsets or moon rises ▪ Safety – improved barriers since it is already used ▪ Visitor information, historical site viewing ▪ Clean up garbage over the edge ▪ Yes tourism – lots of history ▪ Tourism or local people want to look out on one of the most impressive rivers in Canada ▪ Yes, NEBC does not have enough Parks
<p>4. Are there any amenities that you could envision being located at the Lookout site?</p>	<ul style="list-style-type: none"> ▪ Playground ▪ Picnic area ▪ Walking trails ▪ <u>No</u> playground ▪ Lookout shelter, picnic area with garbage and recycling ▪ I see a tourism centre with a lookout porch along with trails attached as being the best option

	<ul style="list-style-type: none"> ▪ Walkway from FSJ on the other side of the ditch so walking is safe ▪ Xeriscaping ▪ Picnic site ▪ Garbage cans ▪ Water fountain ▪ Dog water fountain ▪ Lookout area ▪ Pave site – wind blows continually ▪ Road needs to be paved to lookout ▪ SPCA is up the road and it would be really nice to have a walking trail for dogs & walkers ▪ Benches ▪ Grassy area ▪ Retaining wall to stop vehicles from accessing the edge ▪ Interpretive signs ▪ Trails ▪ Benches ▪ Washroom ▪ Periodic security tours ▪ Facility inspection ▪ Only minimal or it becomes so complicated & the point of developing becomes lost in the bureaucracy ▪ Paving, barricades, picnic tables & garbage receptacles would be all that's needed in my opinion ▪ RV & bus parking ▪ Picnic area with small amphitheatre for music & busking ▪ Many kiosks scattered throughout the site with a variety of historic & environmental (geology/geography) information ▪ Hiking information ▪ Wildlife sighting plaques ▪ Picnic tables ▪ Sani-dump & toilets ▪ Garbage cans ▪ Historic info kiosk ▪ Safety trails ▪ Parking places outlined ▪ Bicycle parking ▪ Decent boardwalk site ▪ Garbage receptacles ▪ Picnic tables required on the periphery ▪ Eliminate the huge flat area for vehicle antics ▪ Kiosk with attendant needed ▪ Paved road to site ▪ Paved parking ▪ Info kiosk
--	--

	<ul style="list-style-type: none"> ▪ Decorative railing ▪ Safety barriers ▪ Boardwalk ▪ Outhouses ▪ Sani-dump ▪ Cement curbs well back from edge will slow up / stop people from dumping and stop vehicles from going over (average 1-2 a year) ▪ Lower speed limit – dust control – safety – lots of deer – hikers ▪ Walkway from town – safety – summer time has lots of foot traffic ▪ Steel bench screw piled in – longevity – low maintenance ▪ Overlooking heritage site – plaque – selling point for tourism ▪ Washrooms like the one on the Attachie Hill on Hudson Hope road. Pave, curb, clean-up and landscape. Vandals will mess it up but keep on it and keep it clean ▪ Playground and tables
--	---

5. Other comments

Shannon's List of Issues Discussed

- This project should be, and maybe is, part of a larger program of historic preservation and research. The Peace River (north and south) has no authority in charge of historic site research, archive collection, important political document preservation. The Regional District hopefully is developing such a program with this one project being one of many adding to a longer term goal.
- Site was a garbage dump until approx. 1967
- 1942 – army trucks dumped over the edge
- Be prepared for a lot of garbage – may affect budget
- Hill has slid in the past and may slide more in the future
- Drainage a big concern
- Need to take into consideration bottom of slope – need fencing at the bottom to prohibit ATV & motorbikes from going up the hill
- Historically connect the graveyard down below with the lookout
- McRae concerns (adjacent property owners) kids partying at night, fires in the summer, noise, garbage in the area, safety, maintenance, on-going monitoring, drainage
- Needs something to draw people off the highway – Regional Tourism Centre and possibly a partnership with oil and gas companies
- View to Site C – could have BC Hydro as a partner
- Build a restaurant
- Accidents happen on part of road just after pavement ends – fishtailing
- Lots of large trucks get lost and have to turn around at the lookout
- There have been people camping in the bush next just before the lookout and down the bank
- One resident thinks that the kids partying place has re-located so situation may be getting better for the immediate area
- Historically, pow wows were held at the bottom of the bank and the first nations

camped at the top of the bank

Ron's List of Issues Discussed

- quads and the problem on and around the lower area (mainly)
- security issues pertaining to improvements might be problematic (5-6 folks)
- opportunity to show tourists a wonderful viewscape
- upper pad -- great place to eat lunch by the locals ... 3 folks
- history – opportunity to provide an interpretive centre in a kiosk (area was a dumping site for US army vehicles, and dump site)
- put a fence on the lower road to impede quads
- put a picnic spot north off of Old Fort Rd
- consider site for stargazing 2-3 folks
- improve the road 2x
- consider using binoculars –vandalism was mentioned
- consider upgrading the trail
- consider a garbage cleanup of the site 2-3 folks (vehicles, fridges, stoves, microwaves, glass)
- look at providing just a minimal amount of money to upgrade the viewpoint
- from 12. eluding to not gating the parking area on the upper level
- from 12. eluding to perhaps just adding 60 tryons around the circumference of the upper parking area
- maintaining a Keep It Simple Concept approach

Trish's List of Issues Discussed

Issues:

- Speed limit needs to be reduced and/or enforced
- There needs to be a bigger stop sign at the entrance to the site
- Garbage left onsite and over the edge
- Location is used to shoot off fireworks
- After hours noise and parties
- Ditching on side needs to be replaced or upgrades
- Need signage that tells users there is a steep drop off
- Squatters
- Difficult to walk along the road to the site because there is no sidewalk or safe path
- Too much gravel, site needs paving to reduce dust and mud

Ideas:

- Despite the slope the area is good for hiking
- Make the lookout structure out of metal so it can't be burned
- Make a full circle walking trail that is off the road and safe
- Make it day use only
- The site could be made into a rest stop with a restaurant
- Add decking and guard rails
- Purchase adjacent parcel and make into a larger park
- Partner with the Energy Interpretive Centre to develop an attraction
- Make designated trails for hiking & ATVs
- Move the FSJ Tourism Centre to the site
- Add items that draw people there like monuments, proper signage and stationary binoculars
- Add picnic area with concrete tables

Concerns for future:

- Site needs have someone to maintain it and be a presence there to reduce vandalism and crime (possibly 24 hours)
- Ability to ticket for after hours use

History:

- The property may have at one time been owned by the Beattons

Email Response:

A resident from North Pine

- 1) the garbage needs to be cleaned up
- 2) she is concerned about safety and that barriers and reflectors should be installed to increase safety
- 3) there is an old sign that warns people about the drop off, but it has been grown over by trees or shrubs
- 4) they often take friends and family there when they come to visit and although they enjoy the scenery the safety issue always comes up
- 5) in 1985 when they moved to Canada there used to be very large trees at the site which she thinks stopped people from driving over the edge

Email Response:

The lookout is my favourite place to have lunch in the summer. Unfortunately I have a meeting during this community check in so I can't attend although I think that if the PRRD installed concrete picnic benches, garbage cans and cleaned up the bottom of the hill (all of the old vehicles) it would only enhance this area. Maybe a barrier or small fence should be installed at the end of the road (where you drive up to it) so that vehicles can't go over the end of the bank. There were a couple of concrete barriers there before but I can't remember if they are still there.

Email Response:

In regards to the proposed development of the lookout area, I have included a few points;

1. If we are to encourage people to take 100th to the lookout area then upgrades to the road will be a 'must' not only for the safety and comfort but also to the existing property owners who will see an increase in traffic.
2. Proper safety factors must take precedence to the view as history in this area has indicated safety needs a bit more attention. This not only should include barriers and safe parking/turning areas but also proper lighting.
3. If we are encouraging people to the area then we must also encourage proper maintenance; garbage, snow removal, security measures, etc.

Taking just these few points into consideration we can all see that a 'staged' upgrade is going to be more than a few dollars upfront to make the area look good.

In addition to the above concerns what about;

- The cost for the clean up needed just to get started,
- the upkeep and costs associated with the long term care for the area,
- costs for the marketing and promotion of the point to create interest,

- realistically how many people will visit this area (beyond the teenagers and existing users) and will it really offset the TOTAL investment being considered, and
- where will the money come from?

If additional traffic is created in this area resulting from the look out development, then does this mean that the district is willing to encourage tourist related development leading up to the lookout point – remembering that this is in ALR territory?

Faxed Comment

I like new parks, but my concern is the PRRD going to take care of it? Last year PRRD decided to close the Beaton Park on the way to Cecil Lake. This park was still well used even though no maintenance was done for years. On a hot day you could count 100 cars at this location. I question the use of our tax dollars after just abandoning the Beaton Park which would have been used more if maintained.

Appendix 2

Geotechnical Quote



Consulting
Engineering

Inspection
& Testing

Materials
Technology

9211 – 100 Ave.
Fort St John, BC
V1J 1X6

Tel. (250) 261-6615
Fax (250) 261-6614

Branch Offices:

- Abbotsford
(888) 855-9753
- Surrey
(604) 543-8871
- Whistler
(604) 938-2812
- Kelowna
(250) 860-9955
- Squamish
(604) 898-1420
- Salmon Arm
(250) 803-0248
- Burnaby
(604) 436-9111
- Williams Lake
(250) 296-4118
- Dawson Creek
(250) 782-8557

November 23, 2009
Our Proposal No.: FSJ204

Focus
10716 – 100th Avenue
Fort St. John, BC
V1J 1Z3

Attention: Mr. Rick Franzen, g.s.c.

**RE: Geotechnical Investigation and Slope Stability Assessment
Proposed Peace River Lookout Development
South End of 100th Street
Fort St. John, BC**

Northern Geo Testing & Engineering Ltd. (Northern Geo) is pleased to provide Focus (Client) with this cost estimate for Geotechnical Engineering services. Northern Geo is a full service, geotechnical engineering and materials testing company, fully qualified to carry out this assignment. We offer the services of over 150 engineers and technicians as well as CSA certified materials testing laboratories from four (4) locations throughout B.C. Our Fort St. John office is conveniently located to service your project on short notice.

GEOTECHNICAL INVESTIGATION

Based on the conceptual drawing provided to Northern Geo, it is understood that the Peace River Regional District (PRRD) proposes to develop the south end of 100th Street with an upgraded and restored lookout area, including a paved parking area, staging and picnic areas, a viewing shelter, parks, trails, monuments and educational features. The site overlooks the Peace River Valley with a long slope extending approximately 160 m vertically to Old Fort Road over steep and undulating slopes, and an additional 60 m over flatter hummocky slopes down to the Peace River channel.

There are significant surface erosion features (water-carved channels with debris), soil slumps and scarps, indicating both surface and below surface soil instability potential on and below the site. It is also understood that there have been geotechnical assessments undertaken by others in the Old Fort area below the proposed developments, and that these assessments have indicated both shallow and moderately deep to deep-seated instability. The anticipated soil stratigraphy below the outlook area will likely consist of clay, clay tills and clay shale with possible sand and gravel layers.

We propose a threefold investigation process – A) to initially review existing landslide and slope inclinometer information (desktop study) in the area; B) to assess the overall global slope stability conditions at the site with deep test hole drilling and slope data and C) to evaluate the near surface conditions at the site for foundation design of the proposed development with shallow test hole drilling.

The proposed investigations may be carried out as one project simultaneously, or possibly as three separate, but related studies.

A) Desktop Study

Northern Geo would carry out research in order to review existing mapping, test holes, slope failures, slides and any slope inclinometer information, where available in the area. A report of the findings would be provided summarizing the existing available information and potential future slope failure risk assessment, based on these.

B) Slope Stability Assessment

Northern Geo proposes to advance one deep borehole at the site to a minimum depth of 180 m. The test hole would be drilled, logged and sampled using an air rotary drilling rig. A slope inclinometer would be installed, and then monitored periodically over several months to a year or more, in order to measure the magnitude and depth of possible deep seated slope movements and advise on overall slope stability potential. The installed Slope Indicator could also determine that there is little to no deep seated movement at the actual location of the proposed development; however, this data would also provide valuable historical information in the event of future ground movements.

C) Foundation Assessment

Northern Geo proposes to advance six shallow test boreholes; four to 3 m depth and two to approximately 8 m with geotechnical testing for this phase of the work.

A local drilling rig from Fort St. John would be used to drill the bore holes. Depending on soil conditions encountered, the estimated depth of the bore holes may vary. Northern Geo expects the field work would be completed in approximately one day (6 to 8 hours).

BC One Call would be notified and other underground utilities prior to undertaking the drilling.

Due diligent care would be exercised to avoid damaging any existing utilities, however, we would still depend upon the accuracy of the utility locates and other information provided to us.

The boreholes will be logged and sampled by a representative of Northern Geo. All soil samples including Standard Penetration testing (SPT's) and undisturbed Shelby Tube samples and other representative soil samples would be returned to our laboratory for moisture content, soil classification tests, grain-size analyses, unconfined strength tests and water soluble sulphates and other tests, as required.

Upon completion of the field work, Northern Geo will prepare geotechnical reports summarizing the findings of the field and laboratory work, soil stratigraphy, groundwater conditions and slope inclinometer information, and provide geotechnical recommendations for the proposed site development including foundation recommendations, slope stability and setback recommendations, site preparation, comments and recommendations on site drainage, trenching of utilities, backfill and compaction specifications, as required. Northern Geo will prepare three separate reports for each phase of the work or one report encompassing all phases of the work. If a Slope Indicator is installed at the site as described above, it would be necessary to set up a monitoring schedule so that Northern Geo staff could monitor the installation and return the data to the Client. Along with a plot of the data, interpretation of the data and recommendations on further reading frequency would also be provided.

Testing or assessment of soils with respect to environmental considerations is outside the scope of this proposed geotechnical assessment.

COMPANY OVERVIEW AND QUALIFICATIONS

Northern Geo's operations offer full-service solutions to clients throughout British Columbia and Northern Alberta. We are dedicated to the consistent achievement of industry-leading standards of excellence in consulting, including:

- Geotechnical engineering
- Materials engineering
- Testing and inspection
- Infrastructure and civil projects

With ten (10) locations in British Columbia, the company can draw on its experienced local managers and geographical reach to support the needs of clients, regardless of project size and complexity. Northern

Geo's depth of resources allows us to provide you with innovative solutions engineered to fit perfectly with your business challenges.

Our ability to attract and retain highly educated, trained and dedicated professionals enables Northern Geo to meet the diverse needs of clients. The company supports the development of its staff through training opportunities, the latest technological tools and interoffice exchange of information.

ESTIMATE OF FEES

Northern Geo's estimate of fees is provided in three parts as Table One. The estimate of fees is based on the information available to Northern Geo at the time of preparation of this proposal. If extremely poor ground conditions are encountered and deeper boreholes are required, Northern Geo will contact the Client for authorization prior to deepening the test boreholes. The estimate of fees also assumes all hours at regular time rates. Overtime rates may apply to hours outside of 8:00 to 17:00 Monday to Friday.

RESUMES OF KEY SENIOR PERSONNEL

Mike Robinson Operations Manager

Mr. Robinson has been involved as a civil engineering technician in various projects through north-eastern British Columbia, Vancouver Island and the Lower Mainland for 16 years. These projects have included performing proctor tests and compaction testing on various types of fill, from plastic clay to well graded crushed aggregate, in an assortment of residential subdivisions and roads, commercial and industrial construction sites, and oil field plant sites. Other work has included concrete testing and quality control and assurance from residential to industrial sites, high-rise office towers, airports and rapid transit sky trains, asphalt testing and design, emulsion and cutback testing, laboratory and field soil testing. In addition, Mr. Robinson's experience extends to construction monitoring and quality control/assurance services for a wide variety of projects, including excavation and backfill supervision, landslide repair, aggregate crusher product at rock and gravel quarries, installation of driven steel piles and cast-in-place concrete piles and septic envelope design. Mr. Robinson has also been involved extensively with Municipal and Ministry road investigation/design, construction supervision and construction materials testing in North-eastern British Columbia for the past 8 years.

David Neitsch, P.Eng. Senior Geotechnical Engineer

Mr. Neitsch has extensive geotechnical engineering, field construction monitoring, soils and materials testing experience working in Alberta and British Columbia over the last 22 years. Since 2000, he has worked out of Edmonton, AB and Kelowna, BC involved in many field projects from on-site inspection, testing and reporting on several highway slide repair jobs to quality control and quality assurance testing and management of landfill construction to extensive test drilling programs. He has worked up in the developing oilsands mining area at Fort McMurray managing a materials testing office. Prior to working out of Northern Geo's Fort St. John office in 2009, Mr. Neitsch has carried out geotechnical engineering consulting work in the Kelowna and Okanagan Valley area since 2007. He was the geotechnical consultant for the construction of the Turtle Lake Dam, earth filled reservoir, southeast of Kelowna in 2007 and 2008.

David Neitsch has experience with numerous geotechnical engineering investigations and reports on both residential and commercial developments in the interior of British Columbia providing foundation design for both shallow and deep foundations, slope stability issues and remediation work, soft soils and swelling clay sites. Mr. Neitsch is a specialist in geotechnical construction inspection, contract supervision, field engineering including quality assurance and control (QA/QC) and field construction trouble-shooting. He has worked successfully with many clients and contractors on a variety of projects. He has also supervised all types of geotechnical drilling, including the installation of slope inclinometers.

TABLE ONE
ESTIMATE OF FEES

PART A) DESKTOP STUDY

RESEARCH – allow about 1 day	\$1500
REPORT PREPARATION	\$1000
TELEPHONE, FAXING, COMPUTER - 3% of fees	\$75
ESTIMATED TOTAL + GST	\$2575.00

PART B) SLOPE STABILITY ASSESSMENT

LOCATES (includes BC One Call, private or public locators, if necessary)	\$500
DRILLING SUBCONTRACTOR(S) – see attached quote	*\$30,000
FIELD WORK (includes logging and sampling test holes, slope inclinometer installation and initial measurements)	\$5000
SLOPE INCLINOMETER CASING & PROTECTIVE HOUSING	\$9000
LABORATORY TESTING, includes moisture contents, Atterberg Limits (~4), Hydrometers (~4), Unconfined compressive strength tests (~4) Other – sulphates, chlorides, pH, Resistivity, as required	\$3000
REPORT PREPARATION (includes soil logs, plan & recommendations)	\$4000
TELEPHONE, FAXING, COMPUTER - 3% of fees	\$1545
ESTIMATED TOTAL + GST	\$53,045.00

*If the Client does not request that the subcontractors bill the Client directly, a 15% surcharge will be applied. The above quote does not include future slope inclinometer monitoring costs.

AT THE TIME OF WRITING THIS PROPOSAL, NO FIRM DRILLING QUOTES HAVE BEEN RECEIVED BY NORTHERN GEO, THEREFORE, PART B OF THIS ESTIMATE SHOULD ONLY BE USED FOR DISCUSSION PURPOSES AT THIS POINT.

PART C) FOUNDATION ASSESSMENT

	\$500, contingent on timing of the work with part B
LOCATES (includes BC One Call, private locates, if necessary)	
DRILLING SUBCONTRACTOR(S)	*\$2000
FIELD WORK (includes logging and sampling test holes, travel, etc.)	\$1200
LABORATORY TESTING, includes moisture contents, Atterberg Limits (~3), Hydrometers (~2), Unconfined compressive strength tests (~2) Other – sulphates, chlorides, pH, Resistivity, as required	\$1500
REPORT PREPARATION (includes soil logs, plan & foundation recommendations)	\$2500
TELEPHONE, FAXING, COMPUTER - 3% of fees	\$231
ESTIMATED TOTAL + GST	\$7931.00

*If the Client does not request that the subcontractors bill the Client directly, a 15% surcharge will be applied.

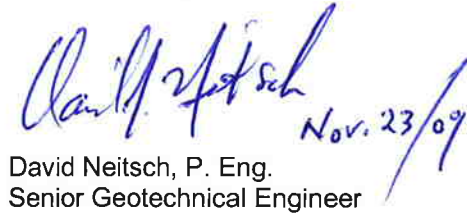
The above estimate of fees assumes mobilization (travel), field drilling and sampling work only. Any delays due to site access, work permits, etc. would be at hourly rates. It is recommended that a contingency amount of approximately 15% of the estimated total cost be provided in the event of construction delays due to adverse weather conditions, overtime work, problematic conditions and unforeseen circumstances beyond Northern Geo's control.

On-going monitoring of the Slope Inclinator and reporting results would be invoiced to the Client on an as required, hourly basis. Discussions, attendance at meetings and other Client requests would also be charged at current hourly rates.

Northern Geo would like to thank you for the opportunity to submit this cost estimate. If you have any questions regarding this cost estimate, or if we can provide any additional information, please contact one of the undersigned below at the Fort St. John office directly at (250) 261-6615.

Yours truly,

Northern Geo Testing & Engineering Ltd.
A Metro Testing Laboratories Ltd. Company

 Nov. 23/09
David Neitsch, P. Eng.
Senior Geotechnical Engineer


for Mike Robinson
Operations Manager

Appendix 3

Stakeholder Consultation

Ministry of Environment – Steve McIvor

The Lookout site is in hunting area – basically anything outside of municipal boundaries is hunting area.

The Lookout is located in Management Unit 734

Deer-Nov 1

Moose-Aug 15

Elk-Sept 1

Black bear-Aug 15-Nov 15, Apr 1-June 15

The Regional District can apply for a “No-Shooting” zone to be applied to the area however; Steve did not think that there was a danger issue because of the close proximity to the City limits.

Ministry of Environment – Steve Fraser

Ministry has no concerns about the project

First Nation Consultation – Erma Stanonik 250-785-0612 ext 224

Trish Morgan met with the Treaty 8 Dane-zaa Beaver Language Authority. The elders were in support of the project and the design. They indicated that if the project goes ahead they would likely be interested in working with the Regional District in the future by providing First Nations cultural and historical information as part of the interpretive information incorporated into the project.

Northeast Invasive Plant Committee

Dalmation Toadflax – NEIPC Plan says all sites will be managed – there is an issue with the large site found this year at the Fort St. John Lookout. Bio control agents were released in the centre of this large infestation on very difficult terrain while strategies to eliminate the site are investigated. Note the bio control has been very successful in other parts of the province.

Carignan, Gaetane D ILMB:EX - Gaetane.Carignan@gov.bc.ca

This is probably a side issue, but I know that the lookout has a yellow-toadflax problem (one of the 12 most unwanted weeds in the Peace). Steph and I treated it with bio-control last year (we released special, expensive bugs on it). This was due to the steep slopes being too hazardous to allow for spraying herbicides. Developments in this area should take measures to control further spread. Also, we'd hate to lose our population of expensive bugs for no good reason, so hopefully nobody will go spray a bunch of chemical without first consulting us and giving us a chance to get our bugs back.

Fort St. John Visitor's Information Centre – Deanna Hill, Visitor Services Coordinator

From the Visitor Centre's perspective - I think it would be fabulous to have a park at the Lookout! We send visitors out there quite often in the winter and summer to see the awesome view. However, we always have to warn them about the sometimes rough road and to take care around the edge. Any upgrades or safety developments would be welcome.

Appendix 4

Community Check-In (February 17, 2010)

Advertising for the event as follows:

Energeticcity.ca
Feb. 13th to Feb. 17th, 2010

CBC
Emailed to the CBC North website for their community events section

Alaska Highway News
Thursday, Feb. 16th

Northeast News
Thursday, Feb. 11th

The PRRD website posted the day and time

Moose FM
Press Release sent out

PRRD emailed electronic invites to various stakeholders for distribution to membership

Welcome to the
Peace River Regional District

Peace Valley Lookout Community Check-In

The Peace River Regional District (PRRD) is undertaking a feasibility study to guide their decision regarding acquisition of park land, development of park facilities and a lookout and projections for potential capital and costs related to construction and on-going maintenance for the Peace Valley Lookout site.

Community Check-In Purpose...

- Inform rural and Fort St. John residents as well as surrounding area stakeholders about projects happening in their area
- Gain local knowledge of the Lookout area
- Gather input on significant themes / concepts for the Lookout
- Gather input on marketing opportunities and benefits of creating a Regional Park

We Need your Input...

- Please provide comments on spaces defined on project boards
- Please vote for your favourite theme with red and green dots
- Please talk to PRRD staff and Focus representatives about your concerns, experience and vision for the Lookout site

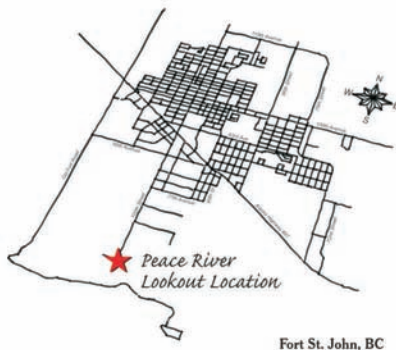


You Could Win!

Please fill out an exit survey and have your name entered into a draw for a Winter Vehicle Emergency Kit!

Peace Valley Lookout

Welcome



Fort St. John, BC



Google Earth 2008



Study Area

Google Earth 2008



Peace Valley Lookout

Context





COMMENTS - write them here

Peace Valley Lookout

Furnishing
Palette



PHASE ONE

Preliminary Site Assessments	\$2,575.00
Geotechnical Desktop Study	\$10,045.00
Environmental Site Assessment	
TOTAL	\$12,620.00

Based on the Preliminary Geotechnical and Environmental results, the following costs could include:

Geotechnical Slope Stability	\$53,045.00
Geotechnical Foundation Assessment	\$7,931.00
Environmental Remedial Options Report	\$6,320.00
Environmental Remediation & Reporting	\$270,625.00
TOTAL	\$337,921.00

TOTAL POTENTIAL COSTS FOR PHASE ONE - \$350,541.00



PHASE TWO \$212,908.00

- Includes:
- Engineering Design Fees
 - Drainage
 - Site Furnishings including:
 - trees (windrow to screen neighbours)
 - waste receptacle (bear proof)
 - guard rail
 - boulders
 - entrance sign
 - concrete pad for picnic tables
 - picnic tables
 - washroom facilities
 - lighting



PHASE THREE \$194,978.00

- Development of Parking Lot Including:
- grading
 - subbase preparation
 - base gravels



PHASE FOUR \$153,352.00

- Includes:
- Finish Grading (grass area)
 - Topsoil Placement
 - Grass Seed
 - Parking Lot Asphalt Surfacing
 - Paving Stone Staging Area
 - Site Furnishings including:
 - pipe and chain fence



PHASE FIVE \$114,027.00

- Includes:
- Shale Pathway
 - Trees
 - Shrub
 - Wood Deck (2)
 - Site Furnishings including:
 - interpretive signs
 - gazebo
 - benches
 - bollards
 - kiosks

COMMENTS - write them here

Peace Valley Lookout

Phasing and
Cost Estimates



February 17th Peace River Lookout Survey Results

Questions	Results
1. Check where you currently live: <ul style="list-style-type: none"> • Electoral B • Electoral C • In Fort St. John • Other 	0 4 8 3
2. Do you think the proposed concept for the Peace Valley Lookout accommodates all the current uses? <ul style="list-style-type: none"> • Yes • No What uses do you believe need to be accommodated?	9 7 <ul style="list-style-type: none"> ▪ Closed gazebo with heating and stargazing. Keep it simple. The current plan is too expensive and complex. Less will do. ▪ Cement barracades at crest of hill. Gravel ▪ Aesthetic view immediately below site ▪ Indoor heated lookout – like we do sitting in our vehicle ▪ I think the parking lot should still overlook a portion of the ridge. It is cold here and barriers can be built closer to the edge ▪ Historical photos and info of the srea, extension to the FSJ walking trails ▪ I would like to sit in my vehicle and see the river in winter (FSJ climate) ▪ Pictures of the old Fort ▪ A biking / walking trail from the city to the point ▪ Walking path to bottom of hill to Old Fort Road ▪ Advances in the new walking area, history of the area when and how it all come to be ▪ Sight-seeing and hiking access ▪ Just basic uses – anything too elaborate will be destroyed by vandals and anything wooden will be burned, vandalized or otherwise destroyed ▪ Not a good concept – viewpoint only ▪ Stargazing, sunrise / sunset vantage point, lunch stop, washroom, trash receptacle

<p>3. How would you like the potential park to be funded?</p> <ul style="list-style-type: none"> • A minimal tax increase across the entire region • Corporate donations • Provincial / federal funding • A combination of the options above • other 	<p>1</p> <p>2</p> <p>4</p> <p>8</p> <p>1</p>
<p>4. Other comments</p> <ul style="list-style-type: none"> ▪ The area looks more natural without the park. It would encourage a bad type of tourism that may pollute and change animal habitat due to people population scaring them away ▪ No tax money, get volunteers and contractors, fix a road or street ▪ The visible garbage in at least three to five ravines must be covered over and re-seeded and re-shrubbed (i.e. low bush juniper) to look good all the time, not just in winter ▪ Power to viewing area, less parking, more park ▪ We like to sit in our heated vehicle and watch the sun rise and set on the river in the winter which is 6 months out of the year. We are there 30 min to 1 hour several days per month ▪ Build the parking lot along one half for parking right to the edge and of a path is needed, build it on the other half ▪ I believe this is a great use for this site. It would be nice to have it cleaned up ▪ This is not a popular site, make it safe and available. Please do not go overboard ▪ Fence bottom of hill to stop vehicles from driving up hill, clean garbage ▪ Xeriscaping instead of lawn ▪ Who and how will the maintenance be funded? Make all permanent structures wide enough for truckers to turn around easily ▪ It will be an asset to the Fort. St. John area to have a place that will be put to use for the right reasons ▪ It is about time ▪ Keep it simple and basic. Barricades that cannot be removed around the outside, pave the area and not much more ▪ Remove and extend to viewpoint. Compare revenues taken out of this country to what is put back. Heavy vehicles have pounded 100th street south into the ground. Highways, ICBC and provincial government could get themselves good press ▪ The current state of the lookout is almost perfect for the majority of current and potential users. Most of these people use it as a place to watch the sunrise, eat lunch, pick some wild Saskatoon berries in the midsummer or unwind before going home after work. The ideal upgrade for the area, in my opinion and my wife's is a basic cleanup, grade or pave the parking area and ring the edge with concrete barriers as those used along curves on a highway. For environmental and aesthetic reasons, toilets would be nice as well as some sort of garbage receptacle. Other than that, I feel that the area should be left much in its current layout, primarily because in the winter it is unlikely that many people will be keen to park away from the edge and walk the loop. The Fish Creek College trails serve that purpose very well and it is unlikely that active people that frequent the College trails will desert 	

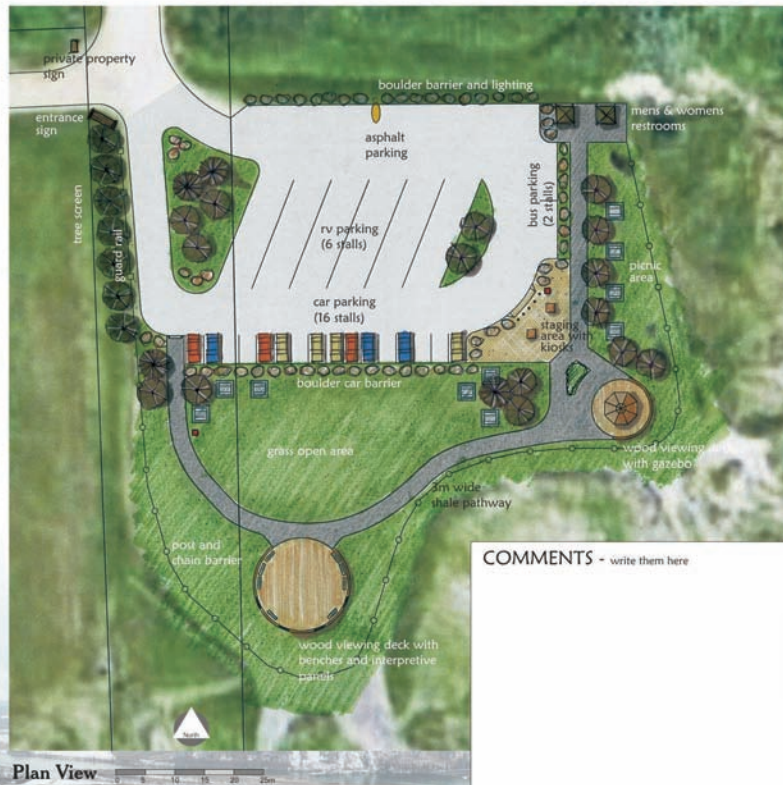
then for a 100m loop at the lookout and are likely to appreciate turning it into a carbon copy of the College trails trailhead. I generally support the KISS principle in regards to this development

Shannon's List of Issues Discussed

- Residents of Old Fort concerned about dumping
- Worries about vandalism
- Need to keep vehicles from the edge
- Concrete outhouses good – less vandalism
- Can't see the view from the parking lot – perhaps move the parking closer to the edge so people don't have to get out of their cars in the winter
- A walking trail from the bottom to the top – water access
- A walking trail along 100th street
- ICBC / Highways involvement – paving of site and paving of 100th street
- Vandalism issues – perhaps should just be a simple lookout without interpretive panels
- Signs about garbage dumping fines – 1-800 number for reporting
- Tai-chi programming – club is interested in the area – less parking, more green space – make lots of green space because once it is developed, the natural space is gone for ever
- Possibly use fill from surrounding areas
- Possibly put power to viewing deck so there can be music and concerts
- Need bicycle racks

Appendix 5

Peace Valley Lookout – Concept Plan



Concept Rationale

Background

The conceptual design of the Pease Valley Lookout is a direct result of public input that was gathered at a Community Check-In session held on November 30th, 2009. A few of the main themes that were expressed at the Community Check-In as well as through an online survey and individual conversations include:

- **Safety** – create a safe environment for visitors to walk around and enjoy the view – create a vehicle buffer – create a safe exit from the edge and prevent stranding
- **Security** – secure surrounding youth parties and vandalism at the site and surrounding properties
- **Retaining the site's integrity** – site is currently used as a passive green for planning and tree setting – residents in surrounding areas bring visitors to the site for the view which is degraded due to the use
- **Tell the history** – many historical sites can be seen from the landscape as well as the Peace River which is an important asset to the area
- **Keep it simple** – current users enjoy the site and all it has to offer just as it is but expressed their desire to make it safe and functional without detracting from its natural beauty

Based on this feedback, a concept plan was created in consultation with the Peace River Regional District. The following information explains the rationale.

Theme

The concept theme of the proposed park is both functional and historical with a focus on using local materials whenever possible. The name "Peace Valley Lookout" speaks to the function of the site which is a place to take visitors for a panorama of the Peace River flowing through the valley and a resting site for passing travelers. While visitors gather at the Lookout site, the interpretive components quell out the history of the area from both the Settler and the First Nation perspective.

- Suggested materials include items such as:
 - boulders possibly donated from the surrounding farmland
 - pipe (e.g. surplus from pipeline projects) and log pole and chain barriers
 - concrete borders and point markers
 - timber frame constructed washroom facilities, gazebos and entrance sign
 - wood decking possibly sourced from pine beetle infested trees

Parking

- 2 dedicated bus parking stalls;
- 6 recreation vehicle (RV) stalls; and
- 13 regular 3.0m-wide parking stalls and 1 dedicated handicap stall.

Landscape Item

Landscaping in terms of choice of material have been kept to a minimum and will be chosen from a palette of species that are hardy and native to the area. Grass areas will be seeded with native grass species and hand watered until established. A windrow will be provided along the west side of the site to screen the Lookal site from the neighbouring property.

Site Amenities

The concept plan intends that overhead lighting be provided to improve safety and security for users during early morning or evening use. However the site is not intended to be used for overnight camping. No potable water source and no community sewer service is available at the site. The concept plan has cited 2 restroom (Charmex type) facilities that will have buried holding tanks and will require maintenance on a regular basis.

Interpretive Components

The interpretive components of the Lookout will be secure and potentially off site. Kiosk panels at the staging area (lookout car) (if parking lot) will contain relevant information about the park including hours of operation (if required), safety information, relevant public notices, sponsor advertising etc. Interpretive panels will be placed along the trail and at the Lookout. The design of the Lookout and the kiosk panels will tell the history of the valley below from the Settlers and First Nations perspective. A map of all the historic Parks will be made available to visitors along the river below. In future phases, these sites could be tied into the mapping by placing physical markers at the actual site (large enough to be seen from the Lookout) and colour coded to correspond to the mapping. There are also opportunities to inform visitors about the local area and its history: current uses, local legends, First Nations or information about the river

Crime Prevention Through Environmental Design (CPTED)

Lighting:
Lighting should be low-level, downward facing, vandal resistant, and sufficient to illuminate walkways and workroom buildings, but ideally away from the deck or at least to interrupt stargazing activity.

Signatures:

Good signage is important; the design allows for entry signage, information kiosks, and interpretive panels. Signs should state hours of operation, rules of conduct, emergency contact numbers, and wayfinding if necessary.

Safety: Obviously, a real test is to ask yourself "would I feel comfortable here?" The intent of the design is to clearly see the site and what it offers...crisscross deck, washrooms, picnic sites, information boards. People can get out and stretch their legs, have some lunch, walk around a bit, "ooh" and "aah" at the views and the amazing

Peace Valley Lookout

Preliminary Concept



Aerial View

COMMENTS - write them here



View From Viewing Deck



View From Viewing Deck To Gazebo



View At Entrance

Peace Valley Lookout

Preliminary Concept Images





COMMENTS - write them here



Peace Valley Lookout

Furnishing
Palette



Appendix 6

Cost Estimates and Phasing

PEACE RIVER LOOKOUT PLANNING FEASIBILITY STUDY					
Concept Plan					
PRELIMINARY CLASS 'C' COST ESTIMATE					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
1	Geotechnical				
	Desktop Study	ea	1	\$2,575.00	\$2,575.00
	Slope Stability Assessment	ea	1	\$53,045.00	\$53,045.00
	Foundation Assessment	ea	1	\$7,931.00	\$7,931.00
2	Environmental				
	Environmental Site Assessment	ea	1	\$10,045.00	\$10,045.00
	Remedial Options Report	ea	1	\$6,320.00	\$6,320.00
	Remediation (debris removal and disposal)	ea	1	\$264,855.00	\$264,855.00
	Environmental Reporting	ea	1	\$5,770.00	\$5,770.00
3	finish grading (grass areas)	m ²	3,210	\$1.60	\$5,136.00
4	drainage	ls	1	\$20,000.00	\$20,000.00
5	topsoil	m ²	3,210	\$2.50	\$8,025.00
6	seed grass	m ²	3,210	\$2.15	\$6,901.50
7	parking lot - gravel surfacing includes grading, subbase prep & base gravel	ls	1	\$150,000.00	\$150,000.00
8	parking lot asphalt surfacing	m ²	3,073	\$20.00	\$61,460.00
9	shale pathway	m ²	461	\$8.00	\$3,688.00
10	trees	ea	26	\$450.00	\$11,700.00
11	shrubs	ea	20	\$30.00	\$600.00
12	paving stone	m ²	190	\$88.00	\$16,720.00
13	wood deck (2)	ls	1	\$50,000.00	\$50,000.00
14	interpretive signs	ea	4	\$1,000.00	\$4,000.00
15	gazebo	ea	1	\$10,000.00	\$10,000.00
16	waste receptacle (bear proof)	ea	2	\$1,150.00	\$2,300.00
17	benches	ea	7	\$1,000.00	\$7,000.00
18	bollards	ea	7	\$250.00	\$1,750.00
19	guard rail	lm	34	\$140.00	\$4,760.00
20	pipe and chain fence	lm	196	\$100.00	\$19,600.00
21	boulders	ea	35	\$300.00	\$10,500.00
22	kiosks	ea	2	\$1,200.00	\$2,400.00
23	entrance sign	ea	1	\$5,000.00	\$5,000.00
24	concrete pad for picnic tables	ea	10	\$500.00	\$5,000.00
25	picnic tables	ea	10	\$1,200.00	\$12,000.00
26	washroom facilities	ea	2	\$7,000.00	\$14,000.00
27	lighting	ea	1	\$6,000.00	\$6,000.00
	Subtotal				\$789,081.50
	20% Contingency				\$157,816.30
	Engineering Design and Inspection Fees				\$78,908.15
	TOTAL				\$1,025,805.95
Notes:					
<p>1. This cost estimate has been prepared from a Conceptual Design using Unit Prices known to the Consultant for current projects of a similar nature. Whereas the actual construction prices at the time of tendering may change due to factors beyond our control, we do not accept liability for the completeness or accuracy of this estimate. Land costs and financing have not been included.</p> <p>2. The cost of exploration and development of water sources, treatment, and distribution have not been included in this estimate.</p> <p>3. Legal survey and construction services have not been included in this estimate.</p>					
Maintenance Costs					
	744hrs/yr plus equipment and supplies				\$50,000/yr

PEACE RIVER LOOKOUT PLANNING FEASIBILITY STUDY					
PHASING OPTIONS					
Phase One					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
1	Geotechnical	ea	1	\$63,551.00	\$63,551.00
2	Environmental	ea	1	\$286,990.00	\$286,990.00
					\$350,541.00
Phase Two					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
43	Engineering Design	ea	1	\$78,908.15	\$78,908.15
4	drainage	ls	1	\$20,000.00	\$20,000.00
10	trees (windrow to screen neighbours)	ea	7	\$450.00	\$3,150.00
16	waste receptable (bear proof)	ea	2	\$1,150.00	\$2,300.00
19	guard rail	lm	34	\$140.00	\$4,760.00
21	boulders	ea	35	\$300.00	\$10,500.00
23	entrance sign	ea	1	\$5,000.00	\$5,000.00
24	concrete pad for picnic tables	ea	10	\$500.00	\$5,000.00
25	picnic tables	ea	10	\$1,200.00	\$12,000.00
26	washroom facilities	ea	2	\$7,000.00	\$14,000.00
27	lighting	ea	1	\$6,000.00	\$6,000.00
					\$161,618.15
Phase Three					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
7	parking lot - gravel surfacing includes grading, subbase	ls	1	\$150,000.00	\$150,000.00
					\$150,000.00
Phase Four					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
3	finish grading (grass areas)	m ²	3,210	\$1.60	\$5,136.00
5	topsoil	m ²	3,210	\$2.50	\$8,025.00
6	seed grass	m ²	3,210	\$2.15	\$6,901.50
8	parking lot asphalt surfacing	m ²	3,073	\$20.00	\$61,460.00
12	paving stone	m ²	190	\$88.00	\$16,720.00
20	pipe and chain fence	lm	196	\$100.00	\$19,600.00
					\$117,842.50
Phase Five					
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
9	shale pathway	m ²	461	\$8.00	\$3,688.00
10	trees	ea	19	\$450.00	\$8,550.00
11	shrubs	ea	20	\$30.00	\$600.00
13	wood deck (2)	ls	1	\$50,000.00	\$50,000.00
14	interpretive signs	ea	4	\$1,000.00	\$4,000.00
15	gazebo	ea	1	\$10,000.00	\$10,000.00
17	benches	ea	7	\$1,000.00	\$7,000.00
18	bollards	ea	7	\$250.00	\$1,750.00
22	kiosks	ea	2	\$1,200.00	\$2,400.00
					\$87,988.00