



# Regional District of Central Kootenay

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Nelson, BC V1L 5R4  
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R.D.C.K. File #4420-20-E29040.030  
MoT File 02-010-19740

July 23, 2007

Mark Scott  
Development Approvals Technician  
Ministry of Transportation  
310 Ward Street,  
NELSON BC V1L 5S4

**Re: Proposed Subdivision of Phase 1 – Parcel A, Lot 52, DK 309, KD, Plan 1858 and  
Phase 2 - L 873, KD, exc. Part in RW Plan 1760  
Owners: Kootenay Lake Estates Development Corporation**

Please be advised that the Regional District of Central Kootenay has received applicable documentation addressing all outstanding requirements of RDCK Subdivision Bylaw No. 1321.

As per Part 6.02 of Subdivision Bylaw 1321, *where a community water system is proposed to serve a subdivision, it shall be designed in accordance with the requirements of any authority having jurisdiction over the system pursuant to the Condominium Act, Health Act, Water Act, Water Utilities Act and Utilities Commission Act.* In this regard, proof of water has been provided for a total of 19 lots as indicated in the July 11, 2007, letter from the Ministry of Environment.

Additionally, proof of water in the form of water licenses have been provided for 3 lots.

In total, proof of water confirmation has been received for 22 lots of the proposed 31 lot subdivision.

Please note that in all cases where surface or groundwater is to be used as a domestic water source, a restrictive covenant, advising the property owner that no building shall take place until the owner of the property has received Interior Health Authority information regarding potability of ground and/or surface water sources, shall be registered on the property.

The Regional District has no additional conditions associated with this subdivision.

Sincerely,

Mark Crowe,  
Planning Technician

cc: Kootenay Lake Estates Development Corporation

*W:\Departments\Plandept\SUBDIVSN\APPROVALS\Approval\_E29040030.DOC*



File: 0321866  
Ref: 6407 C

July 11, 2007

Daniel Kryski  
Procter Water Utility Limited  
PO Box 1053  
Nelson BC V1L 6H3

FAX: (250) 505-5534

Dear Mr. Kryski:

**Re: Procter Water Utility Limited**  
**Application for Certificate of Public Convenience and Necessity (CPCN)**  
**Application Date: May 17, 2006**  
**Increased Well Capacity**

Enclosed please find a copy of supplementary groundwater evaluation report dated July 4, 2007 by Mr. Mike Wei, P. Eng., Head, Groundwater & Aquifer Science, pertinent to your CPCN application for Procter Water Utility Limited.

Mr. Wei indicates that, based on the additional available drawdown in the well due to the shut-in artesian pressure of 22.5 psi, the long term safe well yield for Well #WIN17109 is now upgraded to **0.908 l/s (14.4 USgpm or 12.0 lgpm)**. This would provide for a Maximum Day Demand (MDD) of 17,257 lgpd, adequate for a total of 19 lots.

In view of this additional source capacity, as discussed by telephone on July 10, 2007, please provide written confirmation regarding the specific lot numbers which will be now be added to the proposed service area for Phase 1 developmental. To date, the scope of your application has been limited to 17 lots comprising Lot #'s 1 to 5, 8, 9, and 11 to 20.

Yours truly,

A. Aderichin, P. Eng.  
Head, Utility Engineering  
Water Utility Regulation

Enclosure

Ministry of  
Environment

Water Stewardship Division  
Water Management Branch  
Utility Regulation Section

[www.env.gov.bc.ca/wsd/](http://www.env.gov.bc.ca/wsd/)

Mailing Address:  
PO Box 9340 Stn Prov Govt  
Victoria BC V8W 9M1  
Telephone: (250) 387-6355  
Facsimile: (250) 953-5124

Location:  
3rd Floor  
1175 Douglas Street  
Victoria BC V8W 2E1





**Pc's:** Mr Jim R Brown, AScT  
Pennco Engineering Ltd  
Suite 301 – 625 Front Street  
Nelson BC V1L 4B6

**By FAX: (250) 354-0113**

Ms Marianne Crowe, P. Eng.  
Public Health Engineer  
Interior Health Authority  
Kutenai Place  
#2 - 333 Victoria Street  
Nelson BC V1L 4K3

**By FAX: (250) 505-7211**

To: Al Aderichin, P. Eng  
Head, Utility Engineering  
Management and Standards Branch

Date: July 4, 2007  
File: 3 8050-20/Procter

Re: Procter Water Utility Limited – Provision of Additional Information

Further to your email request dated July 4, 2007, a review of the June 28, 2007 letter from Kala Groundwater Consulting Ltd. to Kootenay Estates Development entitled: Procter Water Utility Ltd. Your File: 0.321866, Ref: 6407C & 38050/20/Procter "Water Act and Ground Water Protection Regulation Requirements" (referred to as the Kala, 2007 letter) has been completed. The Kala, 2007 letter provides additional information in response to our previous review comments on the "Kootenay Lake Village, Proposed Residential Subdivision – Water Well Evaluation WIN 17109 Second Yield Test Findings Procter, BC" dated May 18, 2007, and subsequent phone conversation between the developer and myself. This memorandum provides a revised assessment on the well capacity, as well as comments on controlling artesian flow and responsibility for well pump installation works.

The Kala, 2007 letter indicates the most recent measurement of shut-in artesian pressure of 22.5 psi; this equates to 15.77 m of additional available drawdown in the well. The total available drawdown in the well, based on this information, would be 244.8 m (from 229 m). Using the revised total available drawdown (244.8 m) and multiplying it by the 100-day specific capacity of 0.0053 L/s/m (estimated from the pumping test) and 0.7 (safety factor), the revised estimated well capacity is 0.908 L/s (14.4 USgpm).

The consultant also ensures that the artesian flow will be stopped or controlled. This should be verified by the consultant at final well completion. We are satisfied that Blaine Matuga (WPI 06020601) from Central Interior Pump is taking responsibility for the well pump installation.

Finally, information on the well protection plan being developed by Kala for the subject well should be made known to the Interior Health Authority (IHA); this would allow the IHA to consider implementation of the well protection plan in regulating the operation of the subject well.

If you require anything further, please let me know.



Mike Wei, P. Eng.  
Head, Groundwater and Aquifer Science

cc: Des Anderson, Section Head, Regional Operations, Penticton

<b>RECEIVED</b>	
UTILITY REGULATION SECTION	
JUL 11 2007	
REF. _____	Page 4 of 37 TRA-2023-33464
ACK. _____	

## **KALA GROUNDWATER CONSULTING LTD.**



1314 McGill Road  
Kamloops, B.C.  
V2C 6N6

Tel (250) 372-9194  
Fax (250) 372-9398  
info@kalagroundwater.com

Date: May 25, 2007  
Our Ref.: R06775-100

Kootenay Lake Estates Development  
PO Box 1053  
Nelson, BC  
V1L 6H3

Attn: Daniel Kryski, P. Eng.

Re: **KOOTENAY LAKE VILLAGE, PROPOSED RESIDENTIAL SUBDIVISION  
WATER WELL EVALUATION WIN 17109  
SECOND YIELD TEST FINDINGS  
PROCTER, BC**

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### **1.0 INTRODUCTION**

A second pumping test has been completed on the above water well under the supervision of Kala Groundwater Consulting Ltd. (Kala) at the request of Kootenay Lake Estates (KLE). The second test had a duration of 8,470 minutes at a constant flowrate of 0.95 L/s which was established via the installation of a cycle stop valve and flow restrictor.

The primary regulatory compliance documents for this project are shown in Table 1. Explanatory tables and figures append the text.

The primary compliance criterion for this report is the document "*Establishing Long-Term Well capacity for a CPCN, BC MOE 1999, ISBN 0-7726-4019-X*". Proposed development details are provided at the client's website: <http://www.kootenaylakevillage.com>.

The legal property description is District Lot 873 Kootenay District except part included in R/W Plan 1760. The Kootenay Lake Village (KLV) site is located approximately 30 km east of Nelson BC along the south shore of Kootenay Lake (west arm) and is accessed via the Harrop-Proctor ferry and East Proctor Road. Site location and layout diagrams are shown in Figures 1 and 2 respectively.

There is one water well listed on the BC MOE groundwater resource atlas; a deep bedrock well located approximately 407 m north west of water well WIN 17109 and the well head is approximately 60 m lower in elevation as shown in Figure 3. This well was not monitored during the test results presented herein due to access conditions.

The subject water well (WIN17109) is a 152 mm diameter by 243.84 m deep bedrock well completed in fractured crystalline bedrock. The well exhibits flowing artesian conditions. Table 2 summarizes soil stratigraphy encountered during drilling. The well was drilled and completed by BC certified water well drilling firm Owens' Drilling Ltd. (ODL – Stan Woodford, WD05052907) in October 2006. The water well was not lined by the drilling contractor as ODL felt the crystalline bedrock would not slough and they did not desire to unduly restrict radial flow to the well bore. The well was rated by the driller at 15-20 USgpm. The water well is located within the northwestern portion of the proposed development with hand held GPS coordinates of N49° 37' 16.5"/W116° 56' 05.6" and an elevation of approximately 601 m above mean sea level (AMSL). Kootenay Lake is located approximately 500 m north of the well site at an approximate elevation of 539 m AMSL.

ODL installed approximately of surface casing 4.8 m casing before drilling open hole. Bedrock exposures surround the well location. The client reports that proposed onsite sewage treatment will occur via a filtration plant approximately 262 m from the well and a deep surface water lake outfall permitted through the BC MOE Municipal Sewage Regulations. There will be no onsite subsurface disposal of effluent. For background information pertaining to the well the reader is referred to Kala report "R06775 – Kootenay Lake Village, Proposed Residential Subdivision, Community Water Well Evaluation" dated March 23, 2007.

## **2.0 FIELDWORK**

Central Interior Pumps (CIP) installed a permanent 10 hp submersible pump in the well at a depth of 234.7 m btoc. The pump was completed with 38 mm diameter drop pipe to surface. A Baker weld-on pitless adapter was installed at the time of pump installation. A well construction diagram is shown in Figure 5.

Between April 25 and May 1, 2007 the second yield test was undertaken. The second test had a pumping duration of 8,476 minutes at a constant flowrate of 0.95 L/s which was established via the installation of a cycle stop valve and flow restrictor. Flowrates were measured using an orifice plate with manometer tube. Well water level recovery was monitored after test pumping cessation.

## **3.0 YIELD TEST FINDINGS**

A constant rate discharge test was conducted on the water well according to the BC Ministry of Environment (MoE) Guideline– "Evaluating Long-Term Well Capacity for a Certificate of Public Convenience and Necessity" (CPCN). During the 8,476 minute test, the discharge rate was constant at 0.95 L/s. The water level was drawn down from flowing condition to 169.69 m below top of casing (mbtoc) over the 8,476-minute test representing 74% of the total available drawdown (TAD). TAD was measured as the vertical water column between the top of the installed submersible pump and the static water level (assumed to be 0.00 m).

The greatest measured drawdown occurred at t=4610 minutes at 171.45 m btoc, after which the well level recovered slightly then stabilized. Overall the well level appeared stabilized from t=2,988 to t=8,476 minutes. A bit of water level oscillation was noted, not atypically for lowing bedrock wells.

A summary of the yield test is provided in Table 3. The CPCN criteria suggest the total available drawdown (TAD) within a fractured bedrock well is measured as the static water level to the uppermost major groundwater bearing fracture. Based on ODL discussions, the camera inspection and yield testing, Kala felt the only major fracture was the lower fracture near the very bottom of the well.

Water level recovery was monitored after pumping cessation. Approximately 100% of well recovery occurred within 238 minutes of pumping cessation at the subject well (The well was fully flowing). Yield test data, raw data and interpretative plots are attached.

#### **4.0 CONCLUSIONS**

Based on the office, field and laboratory program undertaken by Kala, the following conclusions and recommendations are provided for client, owner and regulatory consideration:

- a) The Kootenay Lake Village Well (WIN17109) is a 152 mm by 243.84 m deep bedrock well completed within a flowing artesian aquifer system.
- b) A 10 hp submersible pump was installed in the well to the depth of 234.70 m below the top of casing by Central Interior Pumps.
- c) An 8,476 -minute yield test was conducted on the subject well between April 25 and May 1, 2007. The test was a constant rate discharge test undertaken at 0.95 L/s.
- d) A total drawdown of approximately 169.69 m was observed at the end of the test. The well level recovered to flowing conditions within 238 minutes of test pumping cessation.
- e) Water samples were not collected.

## 5.0 RECOMMENDATIONS

Based on the conclusions above the following recommendations are provided:

- a) Kala recommends a maximum pumping rate of 1.10 L/s. Long term monitoring and analysis of operational pumping data is considered mandatory.
- b) The operational pump has been installed as shown in Figure 4. The well has an external casing bentonite grout seal to a depth of 4.57 m below ground surface. However, the well does not have a surface seal yet. We recommend that the client construct a surface seal (poured concrete slab with casing cold joint). Final construction drawings must be provided to the Ministry of Environment and the local Health Unit for provision of the water system operating permit.
- c) It is understood that a pumphouse shall be constructed in close proximity to the well head. The pump house and wellhead should be surrounded with a 1.8 m high chain link fence having minimum side lengths of 10 m square. Kala recommends the client undertake a wellhead protection program to address well stewardship in accordance with the auspices of the BC MOE Wellhead Protection Toolkit, July 1999.
- d) CIP installed two 25 mm diameter PVC educator pipes within the well. Kala recommends that a data logging pressure transducer be installed during well head completion (Solinst M100 or equivalent) for the purposes of collecting water level information over time and adjudicating the aquifer response to groundwater withdrawal under operational conditions. Kala should review the information once every six months for the first 36 months of build out to verify the conclusions of this report.
- e) The Nelson BC IHA office and BC Ministry of Environment should be provided with a copy of this report as warranted. This is a deep artesian bedrock groundwater source, which yields high quality groundwater.
- f) The groundwater source described herein will not satisfy the proposed development. The client should construct a second groundwater supply well at an alternate location or apply for a surface water intake.
- g) The client should undertake caution in land use planning proximate to the wellhead location. The client should undertake a wellhead protection assessment in accordance with the auspices of the BC MOE Wellhead Protection Toolkit.
- h) Regular raw water quality sampling and analysis should be conducted in accordance with published IHA specifications.

## **6.0 CLOSURE**

Find attached a detailed description of the terms, limitations and constraints applicable to Kala involvement within this project and the uses of this report.

If there are any questions regarding this document please contact our Kamloops office at your convenience.

Report Prepared by:  
**Kala Groundwater Consulting Ltd.**

Per:  
Paul J Blackett, AScT.  
Senior Project Manager

Reviewed by:

Per:  
Larry C. Topp, P.Geo.  
Hydrogeologist

Distribution: 5 copies – Kootenay Lake Estates Development  
2 copies – Kala Groundwater

## **LIMITATIONS AND CONSTRAINTS**

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### **Standard of Care**

This report has been prepared in accordance with generally accepted hydrogeological and environmental practices. Where possible and applicable Kala has referenced and undertaken authorized commissions in accordance with governing regulatory guidelines. No other warranty, expressed or implied, is made.

### **Reporting**

This report has been prepared for the specific site, design objective, development and purpose that was described to Kala Groundwater Consulting Ltd. (Kala) by the client and summarized in this document. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the report are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Kala, unless Kala was specifically requested by the Client to review and revise the report in light of such alteration or variation.

### **Preliminary Site Investigations**

This report authorizes the use of this Kala Groundwater Consulting Ltd. (Kala) report by the client as named here within, its solicitors, lenders, engineers and consultants to the same extent as the client, and confirms that the client can rely on this report for financial purposes. This report may be relied upon by supporting financial institutions and related solicitors, lenders, engineers and consultants to the same extent as the original client. Reporting is confidential intended to provide the client with a baseline assessment of environmental conditions within and adjacent to the subject property. Reporting is based on data, information and materials collected during the performance of a PSI. A PSI is based solely on site conditions of the subject property during the time of the site visits as described in this report. In evaluating a site Kala relies in good faith on historical information provided by individuals and agencies noted within the report. Kala does not warranty any property, explicitly or implicitly. Although every effort is made to verify the authenticity of pertinent information, Kala assumes no responsibility for any deficiency, mis-statement or inaccuracy contained within a report as a result of omissions, misrepresentation or fraudulent acts of the individuals or parties interviewed.

### **Groundwater Potential Evaluations and Proof of Sufficient Water Investigations**

Groundwater potential evaluations are based on a thorough review of maps, databases and published documents available at the time of the assessment, and a site reconnaissance. The conclusions provided by Kala do not preclude the existence of other aquifers from those identified. A groundwater supply investigation involving testwells and evaluation techniques is required to verify the presence or absence of suspected aquifers. If additional information or assessment findings arise which may alter the conclusions and/or recommendations of this report Kala would be pleased to review and append our report where required.

Proof of water assessments are based on pumping test information provided by others and interpreted by Kala unless otherwise noted. Groundwater sourced from fractured bedrock aquifers is dependant on the density and aperture of randomly and structurally oriented fractures and joints. Kala can not warranty the long term viability of domestic water wells completed within fractured bedrock. Water well maintenance is required on a regular basis to ensure long term yields.



## **LIMITATIONS AND CONSTRAINTS**

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Kala proof of water evaluations are valid for the time of year and site conditions as noted. The impacts of neighboring water wells on the pumping well or the later alteration of site conditions to include additional water wells has not been determined. While every effort is made to establish a recommended pumping rate for a subject water well based on the data provided, the client or well owner is responsible for monitoring long term well water to verify an aquifers response to pumping and maintain the well such that well bore deterioration does not impact well performance.

Kala recommends the construction, development and use of drilled wells over and above excavated wells where ever possible. Dug wells generally comprise shallow culvert style excavations which are directly under the influence of surface water owing to depth and proximity to surface water recharge. Dug wells unlike deeper drilled wells are more sensitive to fluctuations in total available drawdown which impacts the quantity of water available. Seasonal fluctuations in water level especially during drought periods can have pronounced impact on dug wells. Dug wells are not developed to a silt and sand free condition as deeper drilled wells completed in unconsolidated formations are; rather dug wells rely on the filtering capacity of the surrounding envelope of drain rock to improve water quality. Both the quality and quantity of water sourced from dug wells is more sensitive to surface and local watershed changes.

### **Report Use**

Kala will consent to any reasonable request by the client to approve the use of this report by other parties as approved users. This report may be relied upon by financial institutions, solicitors, lenders, engineers and consultants to the same extent as the original client. Kala authorizes only the client and those client identified agents to make copies of the report, and only in such quantities as are reasonably necessary for the use of the report by those parties. The client and approved users or agents may not give, lend, sell or otherwise make available the report or any portion thereof, or any copy of the report or portion thereof, to any other party without the permission of Kala.

### **Third Party Report Use**

The information provided within this report is for the exclusive use of the client/owner and their authorized users and agents. Third party use of this report or any reliance or decisions made on the subject information herein, is at the sole risk of the third party. Kala has no obligation, contractual or otherwise to any third persons or parties, using or relying on this information for any reason and therefore accepts no responsibility for damages incurred by a third party as a result of actions taken or decisions made on the basis of the subject information.

### **Complete Report**

The report is not intended to stand alone without reference to the instructions given to Kala by the Client, communications between Kala and the Client, and to any other reports prepared by Kala for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations, and opinions expressed in the report, reference must be made to the whole of the report. Kala cannot be responsible for use by any party of portions of the report without reference to the whole report.

## **LIMITATIONS AND CONSTRAINTS**

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### **Interpretation of the Report**

(a) *Nature and Exactness of Soil Description:* Classification and identification of soils, rocks and geologic units have been based upon commonly accepted methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from these systems have been used they are specifically mentioned. Classification and identification of the type and condition of soils, rocks and geologic units are judgmental in nature. Accordingly, Kala cannot warrant or guarantee the exactness of the description of insitu ground conditions set forth in the Report.

(b) *Logs of Test Holes, Pits, Trenches etc.:* The test hole logs are a record of information obtained from field observations and laboratory testing of selected samples as well as an interpretation of the likely subsurface stratigraphy at the test hole sites. In some instances normal sampling procedures do not recover a complete sample. Soil, rock or geologic zones have been interpreted from the available data. The change from one zone to another, indicated on the logs as a distinct line, may be transitional. The same limitations apply to test pit and other logs.

(c) *Stratigraphic and Geologic Sections:* The stratigraphic and geologic sections indicated on drawings contained in this report are interpreted from logs of test holes, test pits or other available information. Stratigraphy is inferred only at the locations of the test holes or pits to the extent indicated by items (a) and (b) above. The actual geology and stratigraphy, particularly between these locations, may vary considerably from that shown on the drawings. Since natural variations in geologic conditions are inherent and a function of the historic site environment, Kala does not represent or warrant that the conditions illustrated are exact and the user of the report should recognize that variations may exist.

(d) *Groundwater Conditions:* Groundwater conditions shown on logs of test holes and test pits, and/or given within the text of this report, record the observed conditions at the time of their measurement. Groundwater conditions may vary between test hole and test pit locations and can be affected by annual, seasonal and special meteorological conditions, or by tidal conditions for sites near the seas. Groundwater conditions can also be altered by construction activity. These types of variations need to be considered in design and construction.

### **Samples**

Kala normally disposes of all unused soil, rock, and sediment or water samples after 90 days of completing the testing program for which the samples were obtained. Further storage or transfer of samples can be made at the owner's expense upon written request.

## TABLES

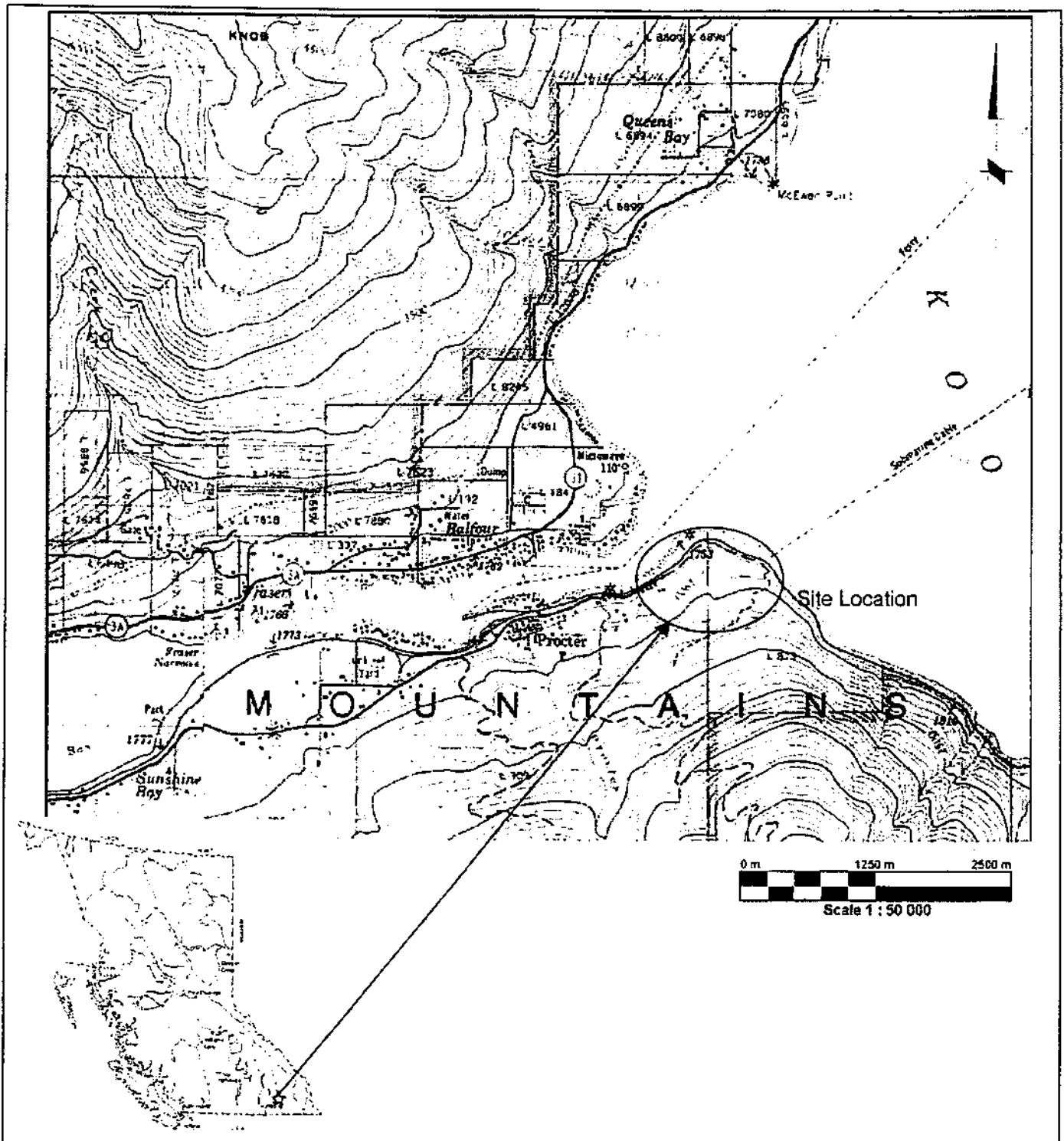
## TABLES


Table 1 – Regulatory Compliance Documents	
Activity	Document
Yield Testing	Evaluating Long Term Well Capacity for a Certificate of Public Convenience and Necessity, MoWLAP, July 1999.
Water Quality	Summary of Guidelines for Canadian Drinking Water Quality, Health and Welfare Canada 2006

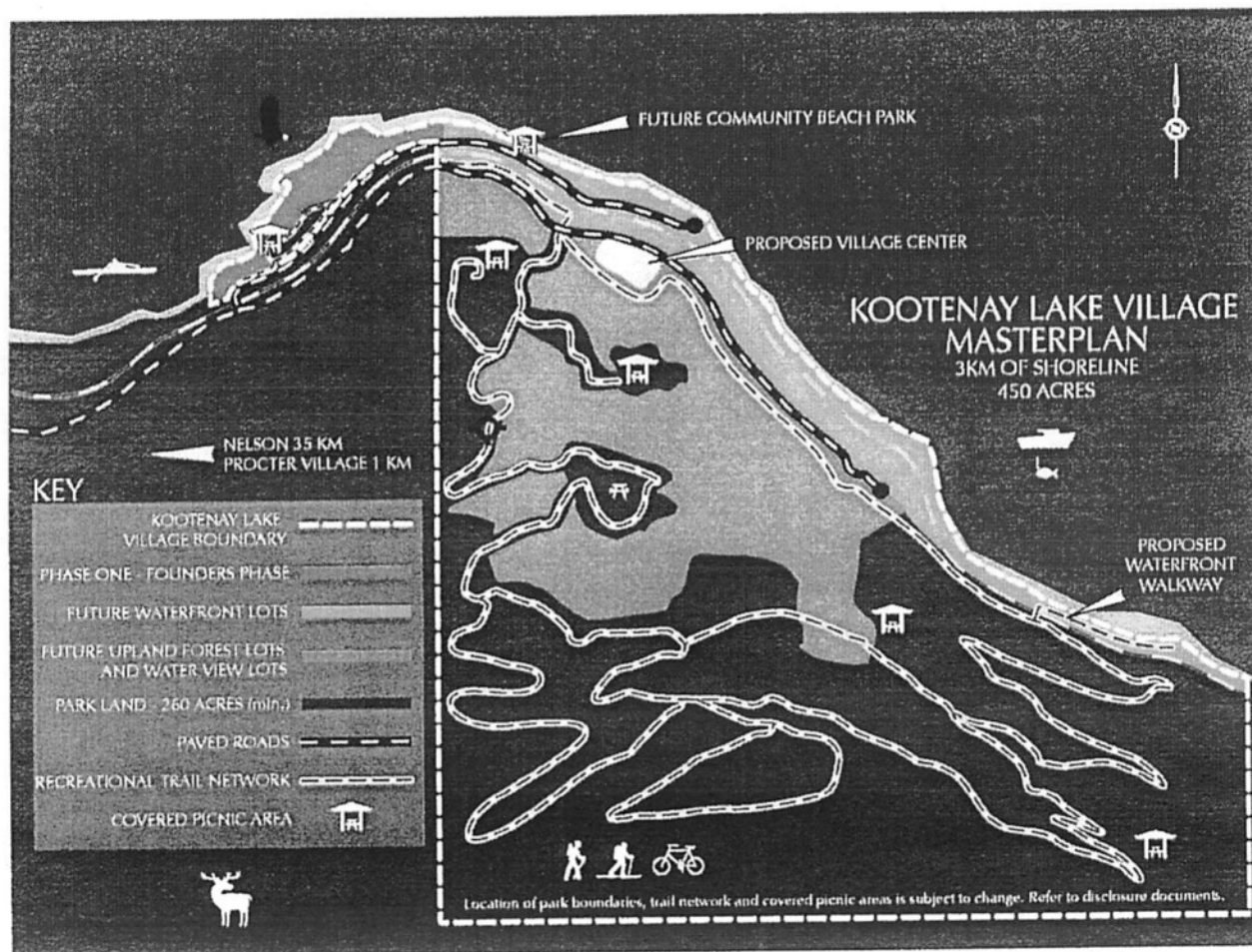
Table 2 – Drilling Stratigraphy	
Depth (m)	Formation Description
0 – 0.3	Brown clay gravel
0.3 – 42.7	Bedrock (1/2 gpm)
42.7 – 201.2	Bedrock (12 gpm)
201.2 – 243.8	White layers (18-20 gpm)

Table 3 – Yield Test Summary		
	Test #1	Test #2
Date of test	December 19-22, 2006	April 25-May 18, 2007
Duration of test (min.)	4,330	8,476
Static water level (m)	Flowing	Flowing
Step tests (L/s)	n/a	n/a
Constant flow rate (L/s)	0.945 (average)	0.95
Well recovery duration (min.)	150	238
Parameter	Finding	
Maximum Drawdown (m)	191.82	169.69
Water level stabilization	Yes	Yes
Total Available Drawdown (m)	234.70	229.0
Percent Available Drawdown (%)	81.7	74
100 Day Specific Capacity (L/s/m)	0.006	0.006
Estimated Transmissivity (m <sup>2</sup> /d)	n/a	n/a



## FIGURES

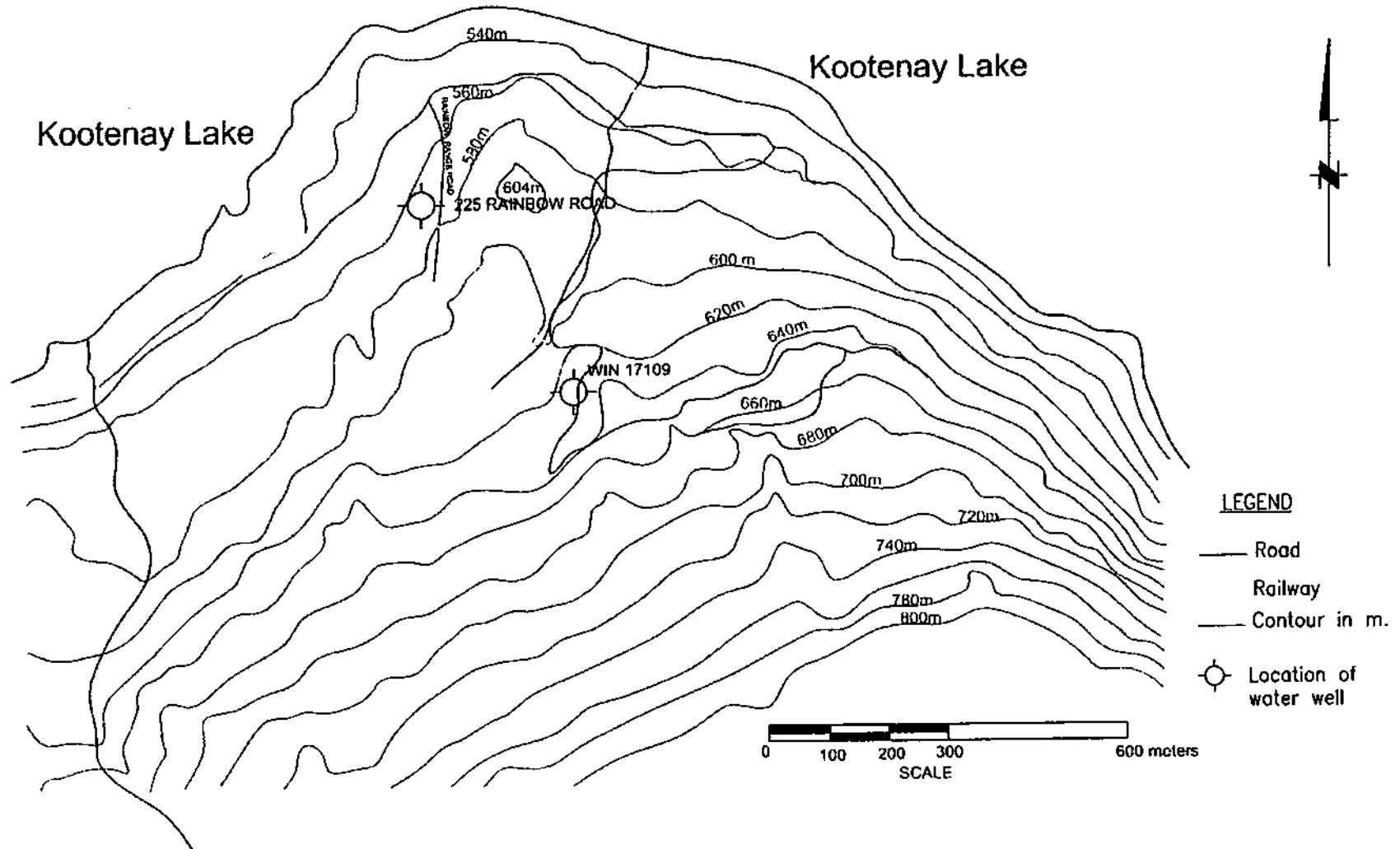



 <b>KALA GROUNDWATER CONSULTING LTD.</b> VERNON KAMLOOPS		Legend:			
1314 MCGILL ROAD TEL. (250) 372-9194		Client: Kootenay Lake Estates Development			
KAMLOOPS, BC, V2C 6N6 FAX (250) 372-9398		Project Description: Water Well Evaluation – Second Yield Test Proctor, B.C.			
Notes: This diagram is for conceptual purposes only. Locations and configurations are approximate only.  Ref: Soft Map	Drawn by: MR	Diagram: Location Diagram			
	Date May 2007				
	Approved by:	Scale: 1:50000	Ref: 06775-100	File Ref: 06775-100Fig1.ppt	Fig: 1



Property Legal Description: District Lot 873 Kootenay Land District except part included in R/W Plan 1760

 <p><b>KALA GROUNDWATER CONSULTING LTD.</b> VERNON KAMLOOPS</p> <p>1314 McGill Road Kamloops, BC V2C 6N6 Tel. (250) 372-9194 FAX (250) 372-9398</p>		<p>Legend:  Approximate location of WIN17109</p>			
		<p>Client: Kootenay Lake Estates Development</p>			
<p>Notes: This diagram is for conceptual purposes only. Locations and configurations are approximate only.</p>		<p>Project Description: Water Well Evaluation – Second Yield Test Proctor, B.C.</p>			
		<p>Diagram: Site Layout Diagram</p>			
Ref:	<p>Drawn by: MR</p> <p>Date: May 200</p> <p>Approved by:</p>	Scale: N.T.S.	Ref: 06775-100	File Ref: 06775-100Fig2 .ppt	Fig: 2



 <b>KALA GROUNDWATER CONSULTING LTD.</b> VERNON KAMLOOPS		<b>Legend:</b>	
1314 MCGILL ROAD TEL. (250) 372-9194		KAMLOOPS, BC, V2C 6N6 FAX (250) 372-9398	
Notes: This diagram is for conceptual purposes only. locations and configurations are approximate only.		Client: Kootenay Lake Estates Development	
		Project Description: Water Well Evaluation – Second Yield Test Proctor, B.C.	
		Diagram: Well Layout Diagram	
Drawn by: MR Date: May 2007 Approved by:		Scale: 1:10,000	Ref: 06775-100   File Ref: 06775-100Fig3.dwg   Fig: 3



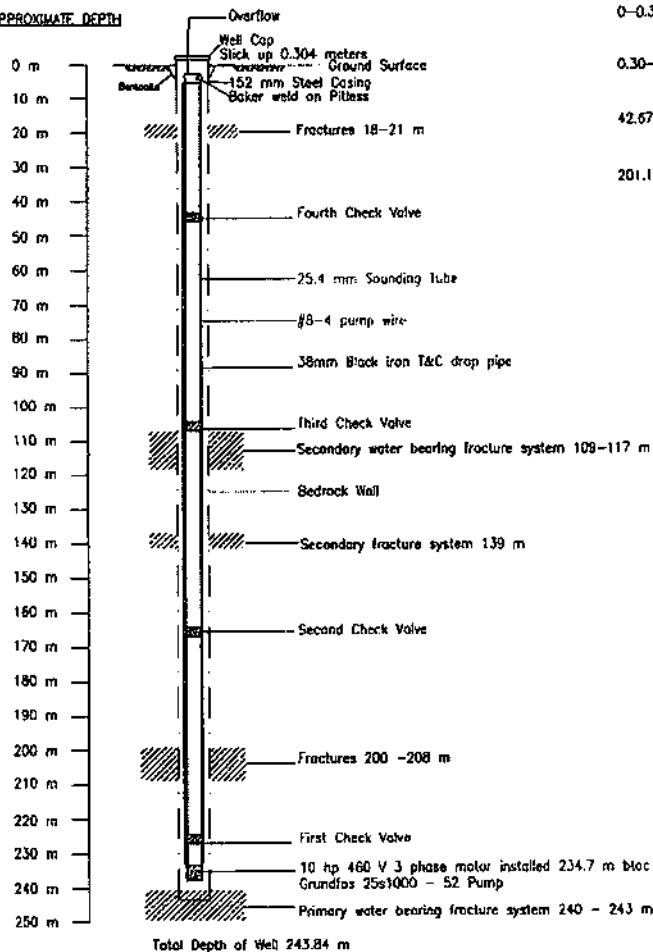
## CONSTRUCTION

## LITHOLOGY

### Well Location:

Latitude 49 deg 37 min 18.8 sec N  
Longitude 116 deg 56 min 07.2 sec W  
GPS elev.: 601 m asl

### APPROXIMATE DEPTH



0-0.30m	Clay and Gravel, brown
0.30-42.67	Grey Bedrock (0.04 L/s)
42.67-201.17	Grey Green Bedrock (0.91 L/s)
201.17-243.84	Grey with White Layers (1.36 - 1.51 L/s)



KALA GROUNDWATER CONSULTING LTD.  
VERNON KAMLOOPS

1314 MCGILL ROAD  
TEL. (250) 372-9194

KAMLOOPS, BC, V2C 6N6  
FAX (250) 372-9398

### Legend:

Client: Kootenay Lake Estates Development

Project Description: Water Well Evaluation - Second Yield Test  
Proctor, BC

Notes: This diagram is for conceptual purposes only,  
locations and configurations are approximate only.

Drawn by: MR

Date: May 2007

Approved by:

Diagram: Well Construction Diagram

Scale: As Shown

Ref: 06775-100

File Ref: 06775-100Fig4.dwg

Fig: 4



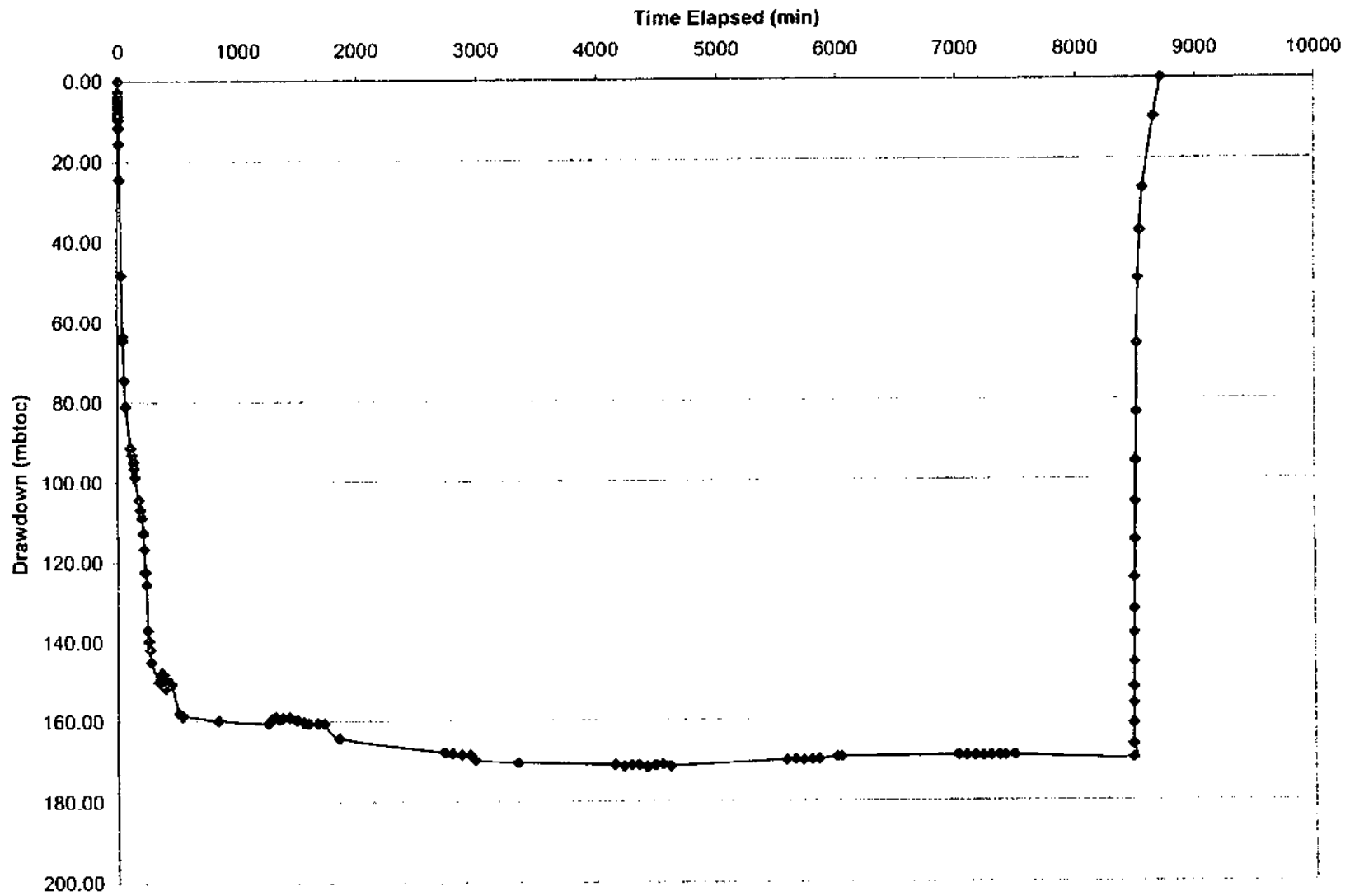
☐ Confirmation/evaluation specs. attached

See reverse for rules & definitions of abbreviations.

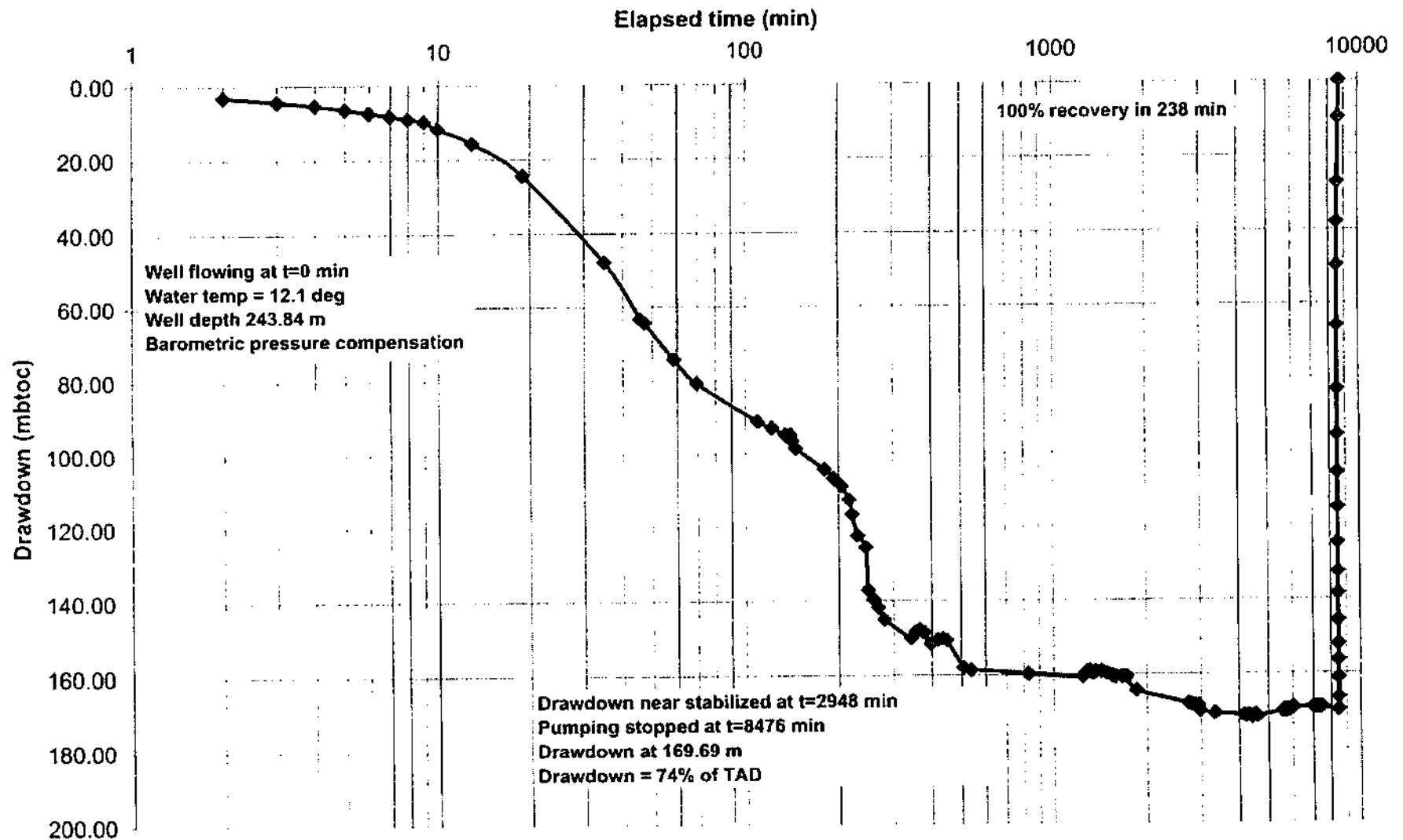
These supply water; indicate intended water use: ☐ private domestic ☒ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

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KOOTENAY LAKE ESTATES  
WIN17101 Yield Test No. 2  
April 25-May 1, 2007  
Constant rate 0.95 L/s



**KOOTENAY LAKE ESTATES**  
**WIN17109 Yield Test No. 2**  
**April 25-May 1, 2007**  
**Constant Flowrate 0.95 L/s**



Kala Groundwater - Yield Test Data  
Kootenay Lake Estates - WIN17109  
Yield Test No. 2  
Constant flowrate 0.95 L/s (flow restrictor and cycle stop)  
Flowing at start of test

Date	Elapsed Time (min)	Drawdown (m)
4/25/07	0	0.00
	2	2.86
	3	4.05
	4	5.10
	5	6.15
	6	7.06
	7	7.97
	8	8.75
	9	9.49
	10	11.50
	13	15.50
	19	24.30
	35	48.00
	46	63.40
	47	64.40
	59	74.30
	70	80.90
	110	91.20
	122	93.00
	135	94.80
	140	94.80
	142	96.40
	146	98.50
	181	104.30
	193	106.70
	205	108.75
	217	112.55
	222	116.50
	231	122.25
	245	125.40
	250	136.96
	260	139.56
	269	141.77
	281	144.97
	343	149.96
	355	148.35
	366	147.74
	377	148.39
	397	151.60
	419	150.34
	436	150.21
	449	150.56
	510	157.94
	539	158.54

	831	159.70
	1250	160.50
4/26/07	1285	159.23
	1310	158.91
	1340	159.41
	1370	159.12
	1430	158.94
	1490	159.64
	1550	160.22
	1590	160.53
	1670	160.50
	1725	160.56
	1854	164.26
4/27/07	2730	167.80
	2795	168.00
	2876	168.41
	2948	168.41
	2988	169.80
	3345	170.51
4/28/07	4149	171.06
	4225	171.38
	4289	171.13
	4346	171.13
	4417	171.71
	4486	171.21
	4549	171.00
	4610	171.45
4/29/07	5582	169.95
	5656	169.75
	5724	169.97
	5795	169.81
	5854	169.75
	6010	169.15
	6047	169.09
4/30/07	7023	168.87
	7090	168.91
	7164	168.97
	7226	169.02
	7292	168.95
	7360	168.89
	7409	168.96
	7486	168.85
5/1/07	8476	169.69
	8477	166.31
	8478	161.11
	8479	156.26
	8480	152.07
	8482	145.76
	8484	138.47
	8486	132.59
	8489	124.65
	8492	115.25

	8496	105.86
	8501	95.61
	8508	83.39
	8516	66.14
	8526	49.83
	8540	38.06
	8564	27.29
	8654	9.76
5/1/07	8714	0.00



# **PENNCO ENGINEERING LTD.**

Suite 204-625 Front Street; Nelson, BC V1L 4B6  
Phone: (250) 354-0112; Fax: (250) 354-0113; e-mail: jim@pennco.ca

Wednesday, July 18, 2007

Pennco File: 04-387

Ministry of Environment  
Water Stewardship Division  
Water Utility Regulation  
PO Box 9340 Stn Prov Govt  
Victoria, BC V8W 9M1

**MoE File: 38050/20 Procter**

Attention: Al Aderichin, P.Eng.  
Senior Waterworks Engineer

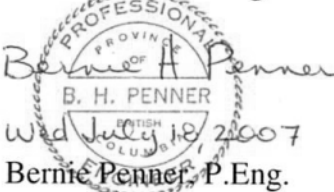
Dear Mr. Aderichin:

**Re: Procter Water Utility Limited**  
**Application for Certificate of Public Convenience and Necessity (CPCN)**  
**Application Date: May 17, 2006**

We certify that we have supervised installation of the Kootenay Lake Village Phase 1 (19 lots) water system which is now substantially complete. Sealed Civil Engineering as built drawings will be submitted when finalized together with an engineers estimate for any final items that may require bonding.

If you have any questions or require further information please do not hesitate to call at 250-354-0112.

Yours truly,  
Pennco Engineering Ltd.

  
Bernie Penner, P.Eng.



MEMO:

To: Approving Officer

Date: December 05, 2008

With respect to PLA Condition 1, Community Water System:

1. Please see attached written confirmation from RDCK on bylaws



# Regional District of Central Kootenay

Box 590, 202 Lakeside Drive  
Nelson, BC V1L 5R4  
web: [www.rdck.bc.ca](http://www.rdck.bc.ca)

Telephone (250) 352-6665 Fax (250) 352-9300  
BC Toll Free 1-800-268-7325  
e-mail: [info@rdck.bc.ca](mailto:info@rdck.bc.ca)

R.D.C.K. File #4420-20-E29040.030  
MoT File 02-010-19740

December 12, 2008

Michelle Ihas  
Development Approvals Technician  
Ministry of Transportation  
310 Ward Street,  
NELSON BC V1L 5S4

**Re: Phase 2 of NES3286 which is the proposed 12 lot subdivision of Lot A, Plan NEP84603, District Lot 309, Except Phase 1 of Plan NES3286 (Formerly referred to as Phase 2 of L873, KD, exc. Part in RW Plan 1760) Owners: Kootenay Lake Estates Development Corporation**

Please be advised that the Regional District of Central Kootenay has received applicable documentation addressing all outstanding requirements of RDCK Subdivision Bylaw No. 1321.

As per Part 6.02 of Subdivision Bylaw 1321, *where a community water system is proposed to serve a subdivision, it shall be designed in accordance with the requirements of any authority having jurisdiction over the system pursuant to the Condominium Act, Health Act, Water Act, Water Utilities Act and Utilities Commission Act.* In this regard, Certificate of Public Convenience and Necessity Certificate No. 1349 has been provided as proof of water.

Section 941 requirements for the provision of parkland will be required at a later phase in the development.

The Regional District has no additional conditions associated with this subdivision.

Sincerely,

Mark Crowe,  
Planning Technician

cc: Kootenay Lake Estates Development Corporation  
*W:\Departments\Plandept\SUBDIVSN\APPROVALS\Archived\Approval\_E29040030\_Phase2.DOC*

19830

# KOOTENAY LAKE

ESTATES DEVELOPMENT CORP

418 HOOVER STREET, NELSON, BC, CANADA V1L 4W7  
t: 250 354 0526 f: 250 354 3520

Peter Muirhead  
Ministry of Transportation  
West Kootenay District  
310 Ward Street  
Nelson, BC  
V1L 5S4

August 5, 2005

Dear Peter

Please find included for your consideration our Preliminary Layout Application with respect to the adjacent 10 acres.

The acreage is a beautiful waterfront piece which is currently being marketed out of Calgary as developable acreage. We are concerned that a unsympathetic subdivision would conflict with our plans for a sustainable model next door so we have optioned the piece until October to carry out the necessary due diligence to purchase the land. Central to that decision is the ability to subdivide. Please find included a copy of our purchase contract addendum with the seller providing their authority for our application in this regard.

The acreage would be consolidated into our Master Plan and the individual strata lots would benefit from the common infrastructure established on the parent piece, including access to the protected green spaces and trails. The parent piece will benefit from a second crossing and create a traffic loop and our main trail would be extended 1800ft through a spectacular densely forested piece. Septic and water would be consolidated into our approved central systems and the additional lots can share in the inevitable costs in upgrading Proctor East Road. The same stringent design and setback requirements of our Statutory Building Scheme will apply and the natural beauty of the shoreline and forest maintained.

It is our intention to show this proposal as part of our Master Plan at the requested Proctor Meeting and we will record and address any additional concerns raised.

The PLA is almost exactly the same as our parent application on DL873. The proposed paved road is outside of the CPR lands and will meet strata road standards. The rail crossing exists but will have to be widened to meet MoT guidelines. The communal pathway system will be extended by way of an easement across the back of the lots and because of the depth of individual lots we will likely create partially shared driveways to building sites so that there is the least interruption to the natural forest.

The public access to waterfront remains an issue. We will work on this over the weekend and make a formal proposal after our site meeting on Monday which can then be presented to the Proctor Community at the meeting for consideration.

Should you require any further information please do not hesitate to contact us.

s.22

## **PRELIMINARY SUBDIVISION APPLICATION**

### **D. FURTHER INFORMATION AND COMMENTS**

We wish to incorporate this parcel of land with the 450 acre adjacent property which was purchased in December 2004 by Kootenay Lake Estates Ltd. and is being developed by Kootenay Lake Estates Development Corporation Ltd. (KLEDC). KLEDC plans to build a sustainable community development that protects, preserves and enhances the natural beauty of this beautiful piece of property on Kootenay Lake. Our plan is to do a strata subdivision in which the vast majority (at least 300 acres) of the adjacent 450 acre property is designated as "common" property, in which no building development will occur such that the community can share in a large piece of land that will be preserved in perpetuity. Much of this "common" property is mature 100+ year old forest. The development goal is also to create a lifestyle community that is pedestrian friendly and provides common and easy access to a series of hiking and biking trails. Pathways are being designed such that there will be little, if any, need to walk on or to cross roads to access the pathway network. A building scheme will also be designed to control building sizes, building materials and building placement such that there is minimal impact to the land. Roads will be designed so mature trees are preserved, especially along the waterfront, where the oldest trees exist on the entire property (many are 100 year+).

Treated community septic and water systems will be provided to all lots. Water and septic treatment systems will be situated on the adjacent 425 acre parcel through easement agreements and shared service agreements. All strata lot owners will share in the costs of maintaining these systems as well as other common infrastructure such as pathways.

Hydro and telus will also most likely be provided to each lot by underground service in order to make the least obstruction to views and property aesthetics.

This PLA is for 16 strata lots.

We are working with leading architectural, planning and design firms to ensure the development is aesthetic, well planned and environmentally sensitive.

### **Other Considerations**

**Access Road** – the developer is aware of deficiencies in Procter East road and has agreed to provide a traffic study and propose options to address any problems.

**Strata Road** – a 10 meter strata road allowance with a 7 meter paved surface will access each lot as shown on the plan. (This road will connect to the easement driveway on the adjacent property, allowing for better traffic flow and emergency vehicle access for the adjacent property)

**Access to water** – The total waterfront of this property and the adjacent property is about 2800 meters. The developer proposes to give over to crown 800 meters (over 28%) as public dedication to waterfront. This waterfront includes the best beach on the entire property. The developer would also develop a forest pathway from the end of the constructed public road to a pedestrian CP crossing. This pathway would be constructed within the crown road allocation. The pathway will be maintained by the strata development.

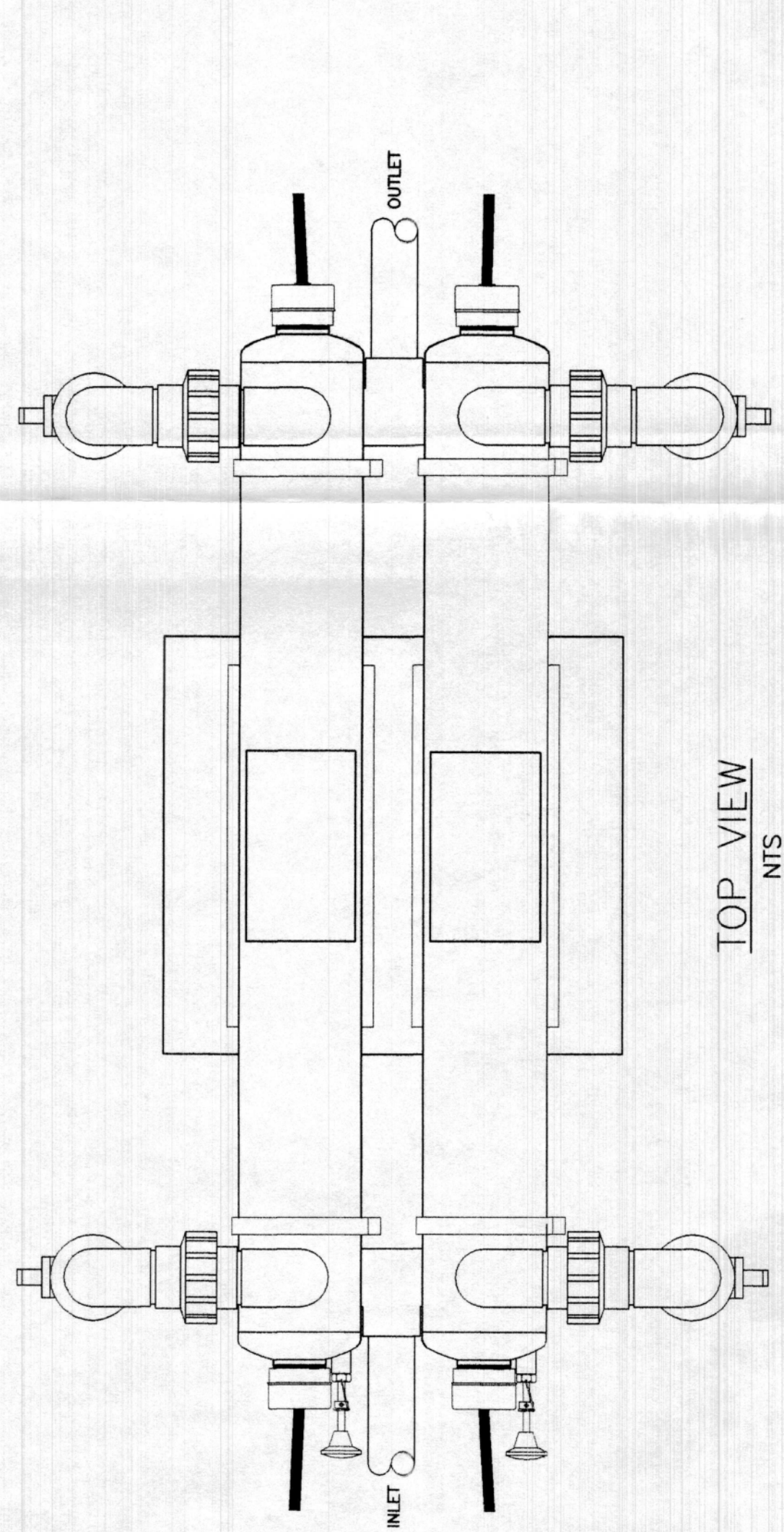
**Water Licenses** – no water licenses exist on the lots that are being subdivided.

**Natural Hazards** - The proposed development is not subject to flooding, snow avalanche, rock fall, erosion, land slip or tidal action (see RDCK letter attached).

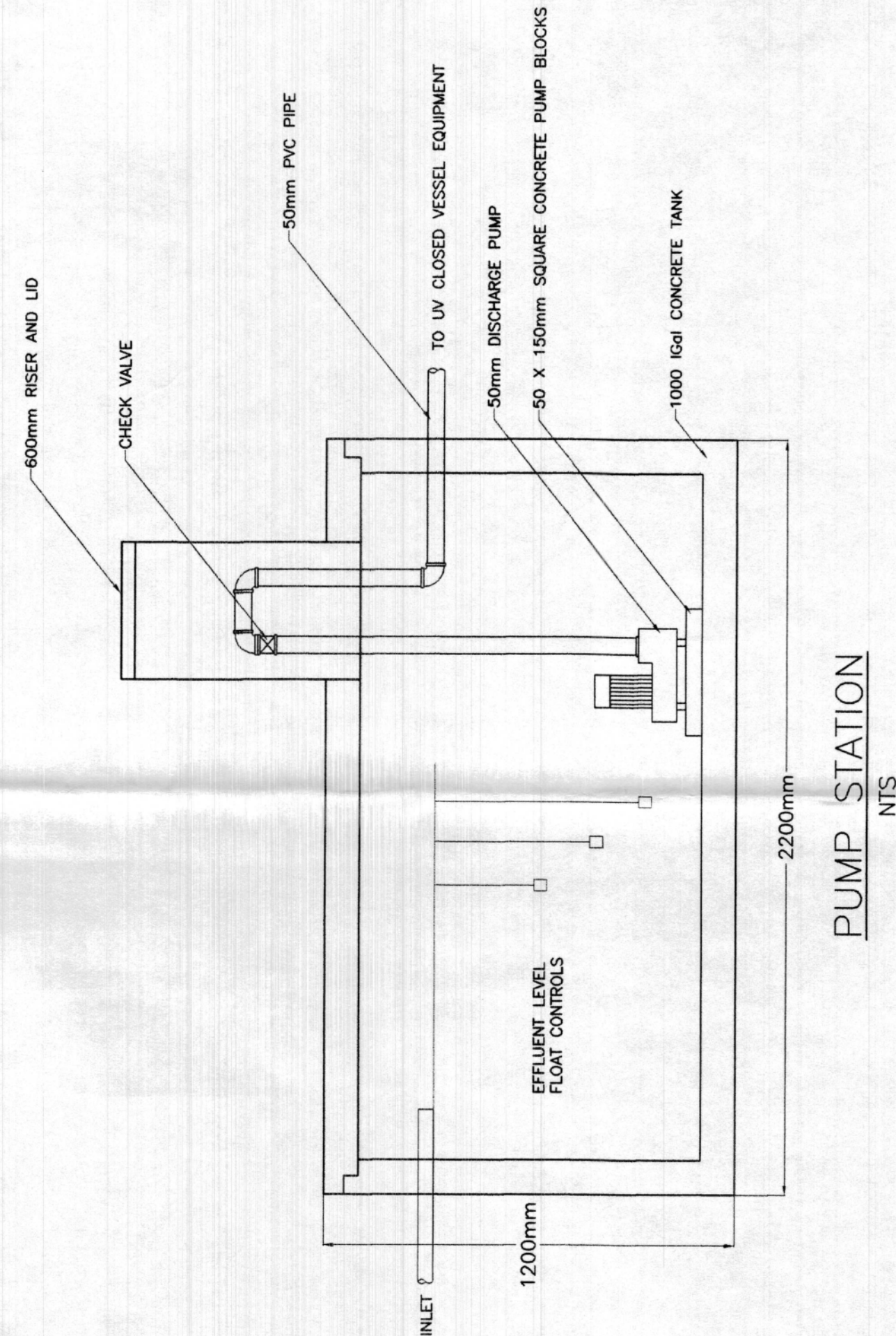
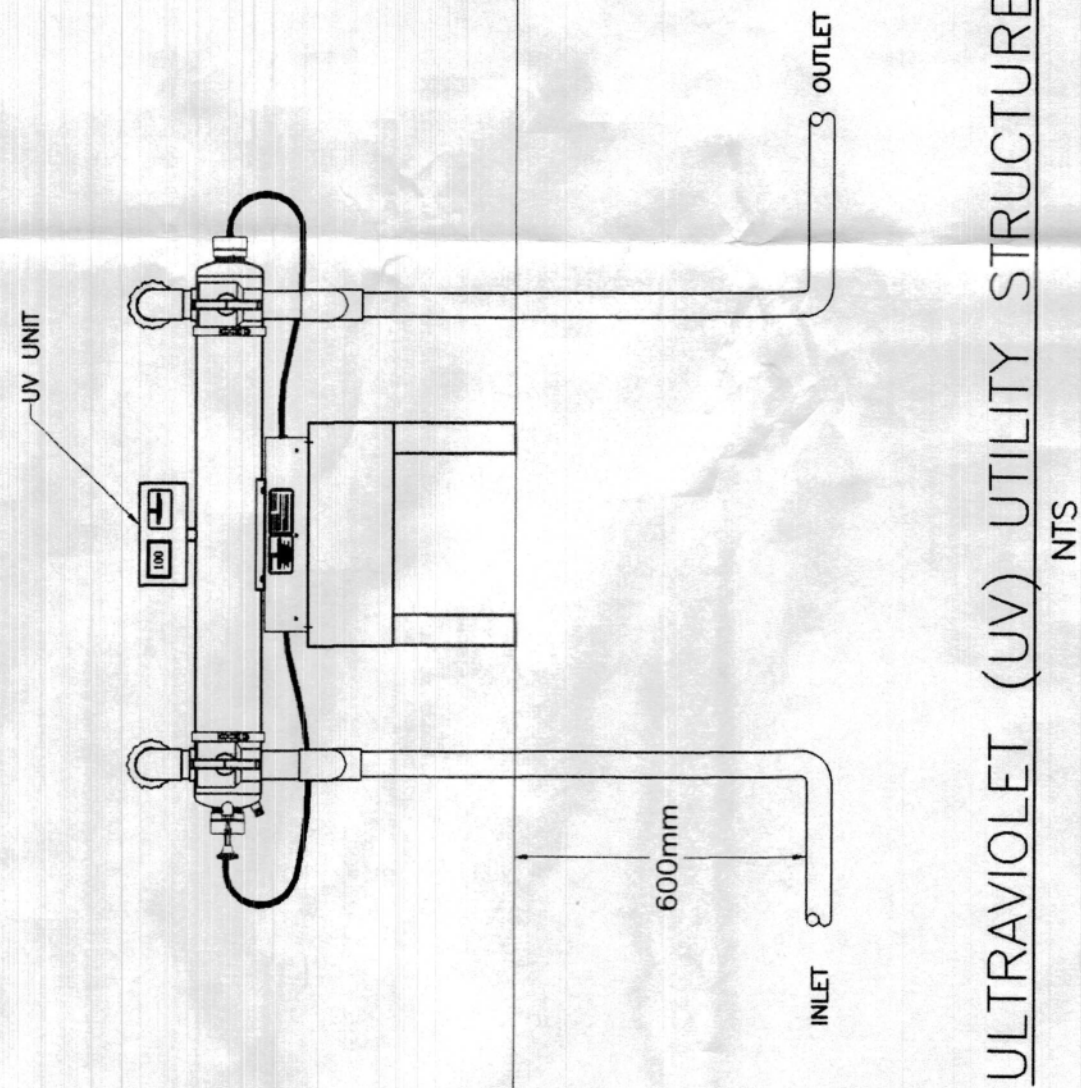
**CP Crossing** – A CP crossing already exists to access the property, however, a new agreement will be necessary to access a strata subdivision and the crossing will need to be upgraded to Ministry of Transport standards.

**Septic and Water** - to be delivered service from common strata in accordance with Interior Health requirements and Municipal Sewage Regulations.





SECURE INSULATED UTILITY STRUCTURE



SANITRON ULTRA VIOLET PURIFIER  
NTS

END VIEW  
NTS

- General Notes
- 1 ULTRAVIOLET COMPONENTS TO BE SUPPLIED BY SANITRON UV SYSTEMS
  - 2 ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED

No.	Revision/Issue	Date
DESIGNED	PK	DATE MARCH 2006
CHECKED	BR	DATE SEPT. 2006
DRAWN	MT	DATE MARCH 2006

KOOTENAY LAKE  
VILLAGE

DESIGN CONSULTANT  
**dp** PENNICO ENGINEERING LTD.  
CONSULTING ENGINEERS  
Suite 301-625 Front Street  
Nelson, B.C. V1L 4B6  
(250) 354-0112  
Fax: (250) 354-0113  
Email: bernie@pennico.ca

SANITARY DESIGN  
PUMP STATION UV TREATMENT

Project No.	04-387	Drawing No.	04-387-S05
Scale	NTS	Sheet	1 - 1
Date	SEPT 26, 2006	REV.	A

Approved  
B. H. PENNER  
Professional Engineer  
Tues Sept 26, 2006



General Notes

RECIRCULATING SAND FILTER  
DESIGN CRITERIA

- ESTIMATED AVERAGE DAILY FLOW:  
35 UNITS @ 300 lgal = 10,500 lgal  
(47.7m<sup>3</sup>)
- HYDRAULIC LOADING IS 4.16  
lgal/sqft.
- MINIMUM SAND FILTER AREA  
REQUIRED 2,525 sq ft. (234.6m<sup>2</sup>)
- RECIRCULATION TANK VOLUME  
WORKING VOLUME 10,500 lgal  
(47.7m<sup>3</sup>)
- EXPECTED FLOWS:  
Q<sub>max</sub> < 5,100 lgal/day  
Q<sub>avg</sub> < 10,500 lgal/day
- TYPICAL EFFLUENT QUALITY:  
BOD < 10 mg/L  
TSS < 10 mg/L

No.	Revision/Issue	Date

DESIGNED BY	PK	DATE	AUGUST 2006
CHECKED BY	BHE	DATE	SEPT 2006
DRAWN BY	MT	DATE	AUGUST 2006

KOOTENAY LAKE  
VILLAGE

DESIGN CONSULTANT

PENINCO ENGINEERING LTD.  
CONSULTING ENGINEERS

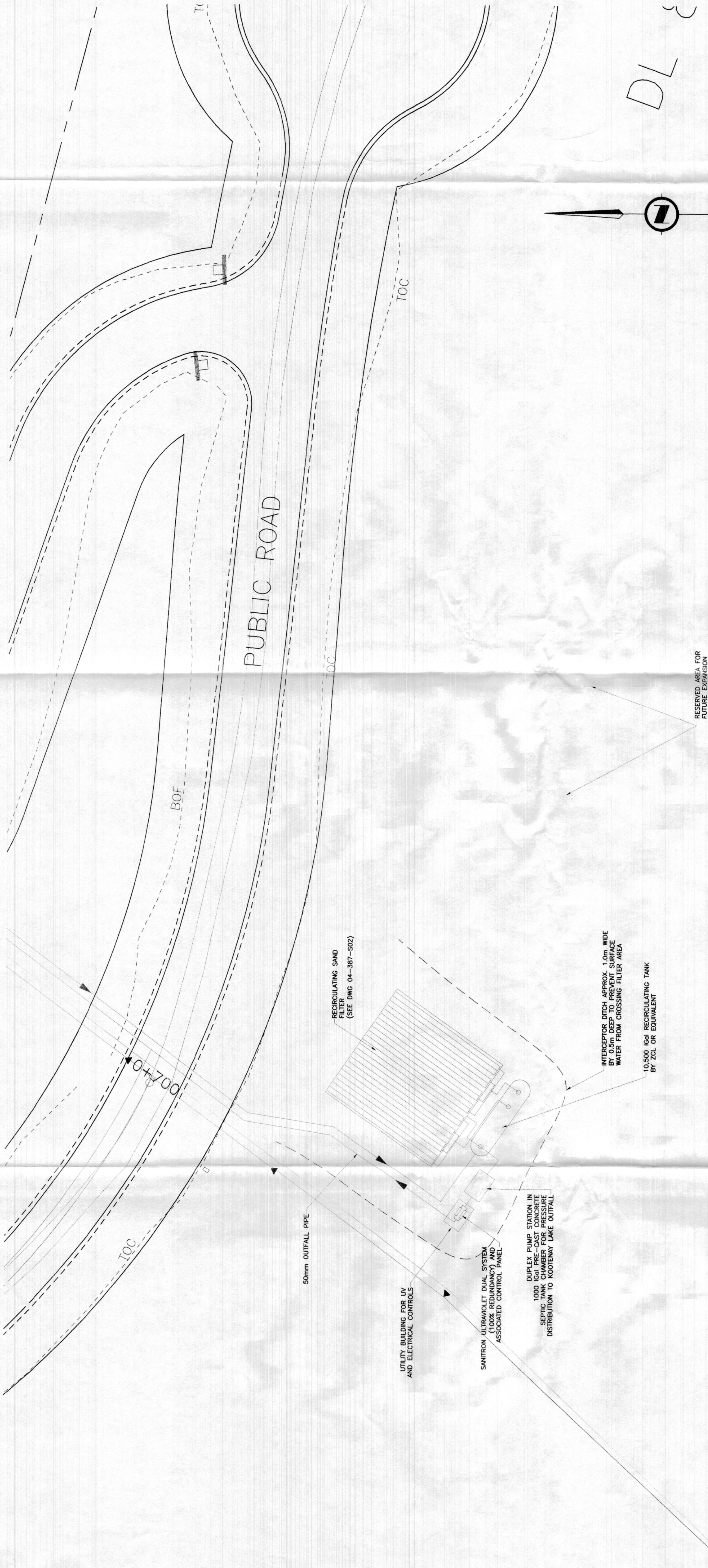
Suite 301 - 625 Front Street  
Kelowna, B.C. V1Y 1A6  
Tel: (250) 354-0112  
Fax: (250) 354-0113  
Email: [ben@peninco.ca](mailto:ben@peninco.ca)

SANITARY DESIGN  
GENERAL ARRANGEMENT

Project No.	04-387	Drawing No.	04-387-S01
Scale	1:250	Sheet	
Date	SEP 2 9 2006	REV.	



B. H. Penner  
Tues Sept 26, 2006





General Notes

SCOPE OF WORKS

- ① - WASTE WATER TREATMENT PLANT & ASSOCIATED WORKS
- ② - OUTFALL
- ③ - PIPE NETWORK

0 1:2000 100

No.	Revision/Issue	Date
DESIGNED	PK	DATE FEBRUARY 2006
CHECKED	BRP	DATE SEPT 2006
DRAWN	MH	DATE FEBRUARY 2006

KOOTENAY LAKE VILLAGE

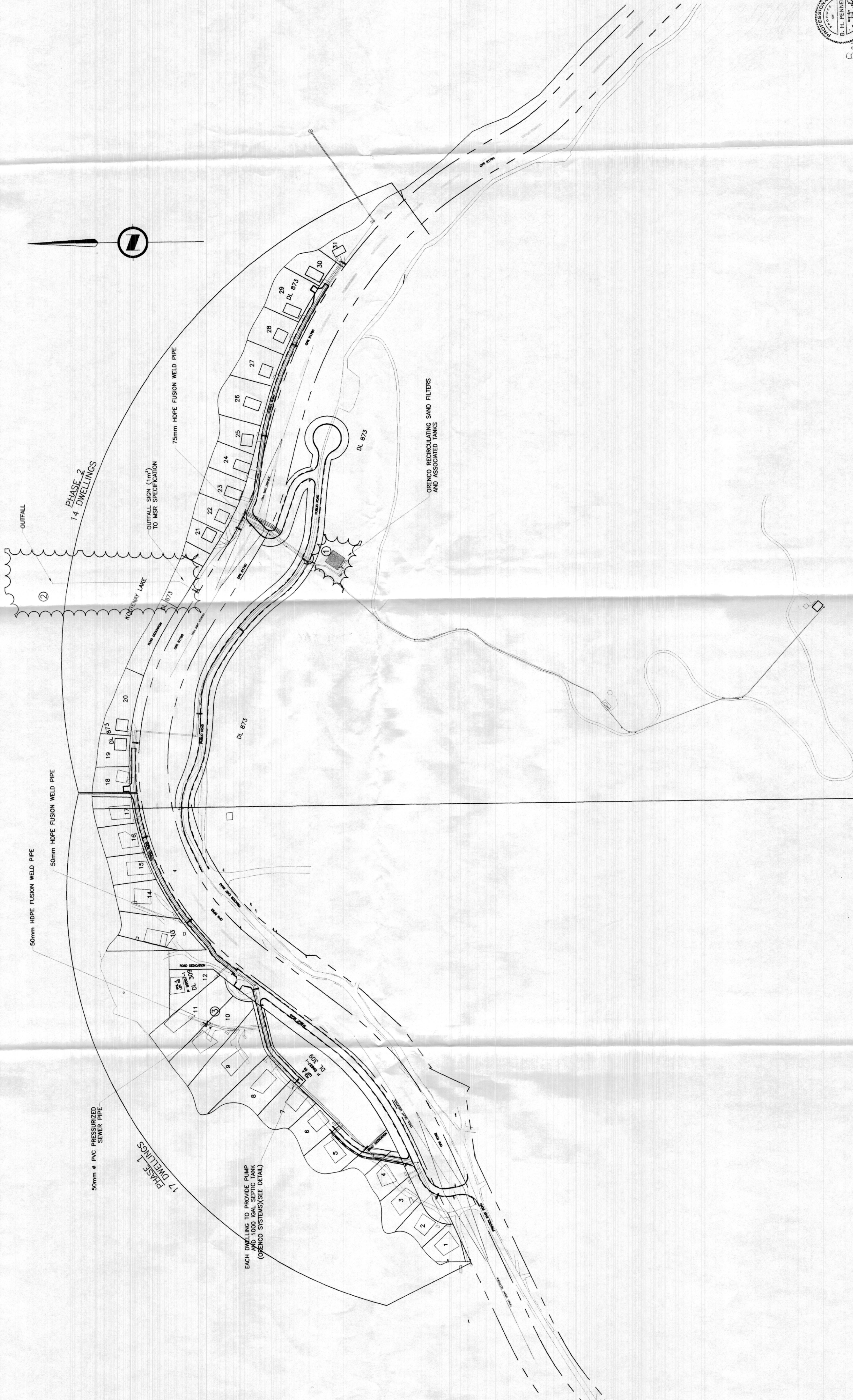
DESIGN CONSULTANT

PENNCO ENGINEERING LTD.  
CONSULTING ENGINEERS

Suite 301-625 Front Street  
Nelson, B.C. V1L 6G6  
(250) 354-0112  
Fax: (250) 354-0113  
Email: bernie@pennco.ca

SCOPE OF WORKS  
SANITARY

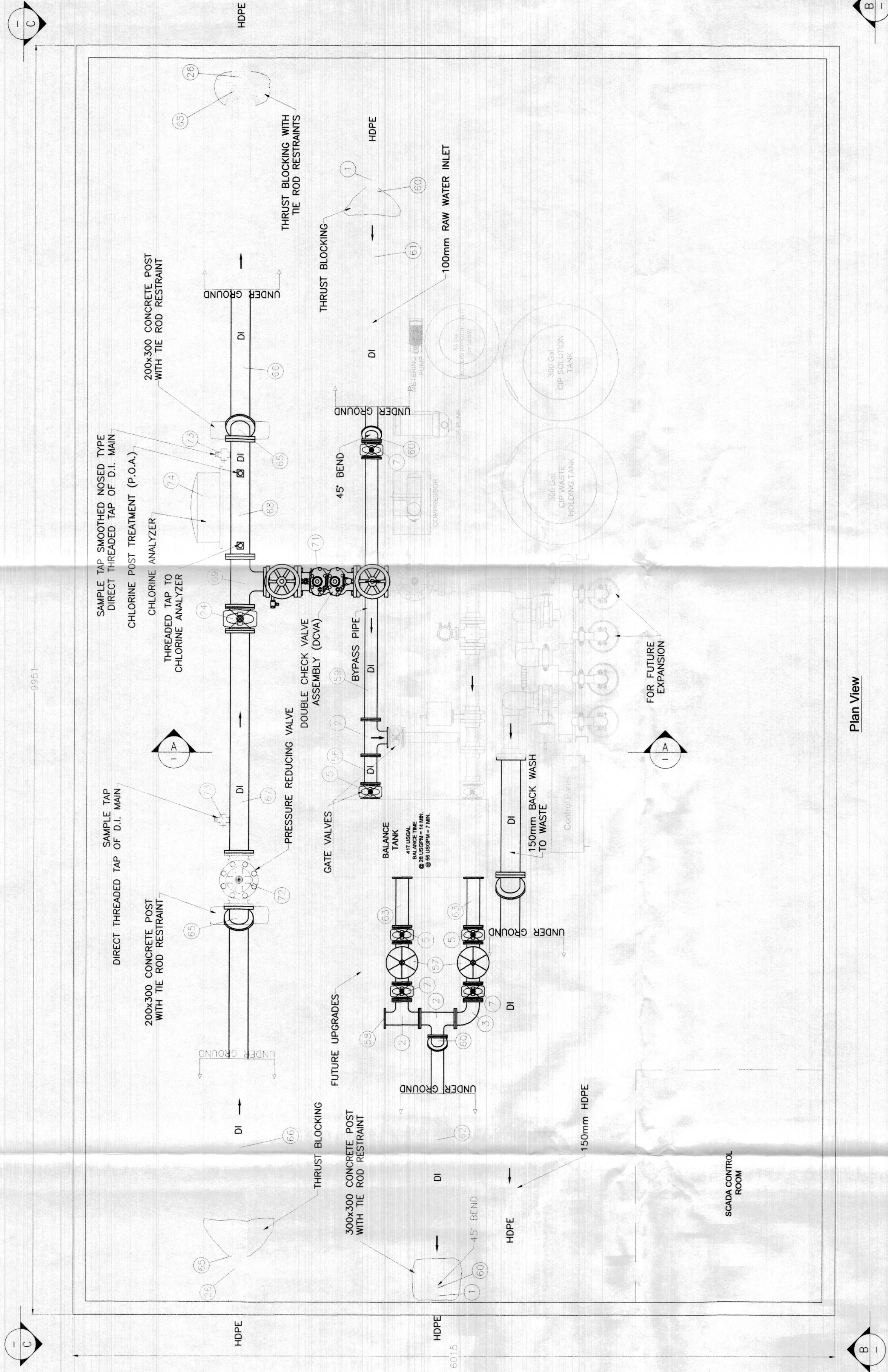
Project No.	04-387	Drawing No.	04-387-SW02
Scale	AS SHOWN	Sheet	
Date	SEP 2 9 2006	REV	A



Sealed  
B. H. PENNER  
Professional Engineer  
No. 12345  
BC

Tues Sept 26, 2006

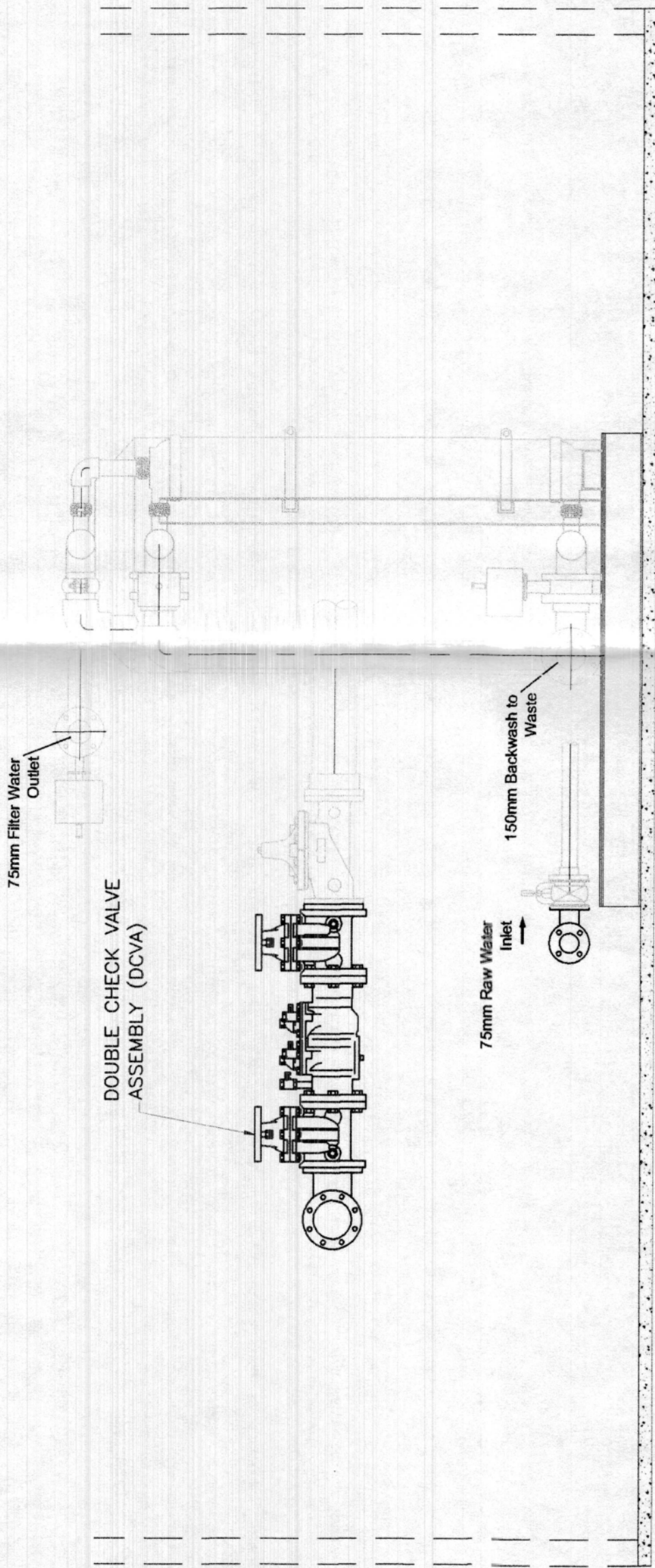




Plan View

Item	Dia	Material	Description	Qty
1	100	HDPE	Flange Adaptor	2
2	100	D.I.	Flanged Tee	4
3	100	D.I.	Flanged 90 Bend	5
5	100	D.I.	Gate Valve	4
7	100	D.I.	Check Valve	3
56	100	D.I.	Flange/Flange Pipe, Length 225mm	1
57	---	---	MVA-80 Multi Stage Pump	2
58	100	D.I.	Flange Cap	1
59	100	D.I.	Flange/Flange Pipe, Length 2056mm	1
60	100	D.I.	45 Bend Flange/Flange	4
61	100	D.I.	Flange/Flange Pipe, Length 2444mm	1
62	100	D.I.	Flange/Flange Pipe, Length 2431mm	1
63	100	D.I.	Flange/Flange Pipe, Length 391mm	2
65	150	D.I.	45 Bend Flange/Flange	4
66	150	D.I.	Flange/Flange Pipe, Length 3692mm	2
67	150	D.I.	Flange/Flange Pipe with tapping, Length 1743mm	1
68	150	D.I.	Flange/Flange Pipe with 2 tapping, Length 921mm	1
69	150	D.I.	Flanged Tee	1
24	150	D.I.	Gate Valve	1
71	150	D.I.	Double Check Valve Assembly	1
72	150	D.I.	Pressure Reducing Valve	1
73	---	---	Sampling tap (direct threaded tap to main)	2
74	---	---	Chlorine Analyzer	1

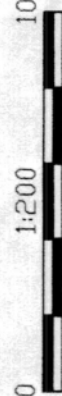
26	150	HDPE	Flange Adaptor	2
----	-----	------	----------------	---



VIEW A-A

General Notes

- REFERENCE DRAWINGS  
04-387-W22  
04-387-W09
- REFERENCE DOCUMENTS  
04-387-SCH03
- ALL DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE SPECIFIED  
LEVELS ARE IN METERS RELATIVE TO  
ORDINANCE SURVEY BY PENNCO ENG.
- NO VARIATION TO THIS DRAWING  
SHALL BE PERMITTED UNLESS  
AUTHORIZED IN WRITING BY ENGINEER.
- ALL PIPES AND FITTINGS TO BE  
FUSION WELDED TO AWWA C906  
STANDARDS.
- PRESSURE AND LEAKAGE TESTING IN  
ACCORDANCE WITH AWWA.
- DISINFECTION IN ACCORDANCE TO  
C651 AWWA.
- CORIX (PREVIOUSLY TERASEN) TO  
PROVIDE ULTRA FILTRATION UNIT,  
BALANCE TANK AND ASSOCIATED  
PIPING.
- UTILITY BUILDING TO BE PROVIDED BY  
OTHERS
- ON SITE VALIDATION OF WATER  
TREATMENT FOR RAW WATER TO BE  
ASSESSED ONCE OPERATIONAL.
- PHASE 1-2 PUMPS TO OPERATE,  
1 DUTY/1 STANDBY, PHASE 3,  
ONE PUMP ADDED TO OPERATE  
2 DUTY/1 STANDBY.
- TREATMENT PLANT OPERATES AT 20  
PSI - 43 PSI MAX. AT INLET
- PIPE COLORS  
AS SUPPLIED BY MANUFACTURER



C	RE-SUBMISSION FOR CONSTRUCTION PERMIT	22/09/2006
B	SUBMISSION TO CLIENT FOR REVIEW	23/06/2006
A	SUBMISSION FOR CONSTRUCTION PERMIT	23/03/2006
No.	Revision/Issue	Date
DESIGNED	PK	DATE JUNE 2006
CHECKED	BHP	DATE SEPT 2006
DRAWN	MT	DATE JUNE 2006

KOOTENAY LAKE  
VILLAGE

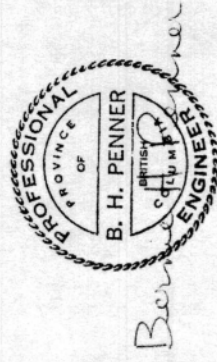
DESIGN CONSULTANT

**PENNCO ENGINEERING LTD.**  
CONSULTING ENGINEERS

Suite 301-625 Front Street  
Nelson, B.C. V1L 4B6  
Tel: (250) 354-0112  
Fax: (250) 354-0113  
Email: [Bernie@pennco.ca](mailto:Bernie@pennco.ca)

WATER DESIGN  
WATER TREATMENT PLANT AND  
ASSOCIATED WORKS

Project No.	04-387	Drawing No.	04-387-W12
Scale	AS SHOWN	Sheet	
Date	SEPT 22, 2006	REV.	C



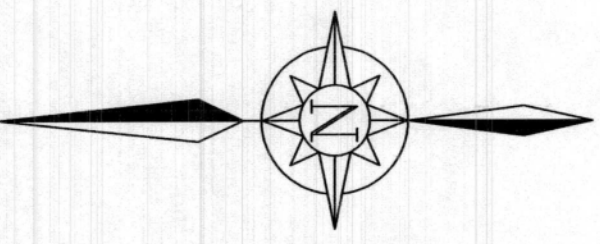


KOOTENAY LAKE VILLAGE  
101 LOT UPLAND PHASED STRATA

LEGAL DESCRIPTION:  
DISTRICT LOT 873 KOOTENAY DISTRICT,  
EXCEPT PART INCLUDED IN R/W PLAN 1760  
AND PART INCLUDED IN PLAN NO. NEP83574

REFER TO 14 LOT 84  
NOT FILED 025-010-26484  
DATED AUG.10, 2007

REFER TO 11 REMAINING LOTS P/LA  
NOT FILED 030-510-5100  
DATED OCT. 19, 2008



KOOTENAY  
LAKE



PHASE 2 BOUNDARY

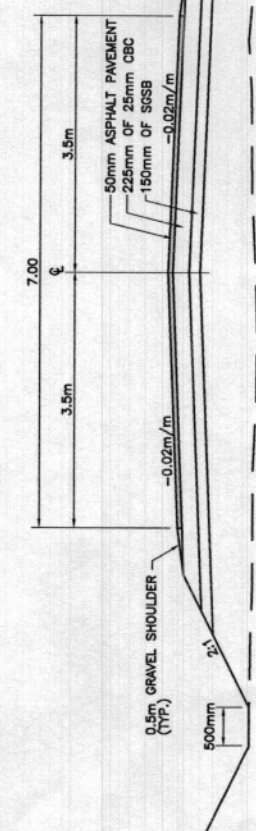


AREA PLAN

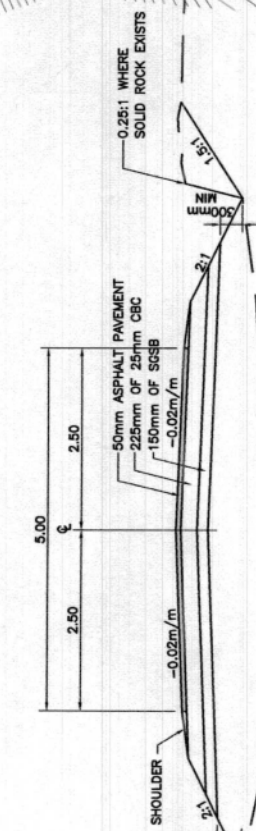
PHASE 3 BOUNDARY

PHASE 4 BOUNDARY

LOCATION PLAN



TYPICAL LOCAL PUBLIC ROAD CROSSING SECTION - 20m. RIGHT-OF-WAY N.T.S.



TYPICAL STRATA ROAD CROSSING SECTION - 10m. RIGHT-OF-WAY N.T.S.

PROJECT CONTACTS

DESCRIPTION	COMPANY	CONTACT
DRY UTILITY - ELEC.	NELSON HYDRO	CARL OLSEN @ 250-352-8214
DRY UTILITY - TEL.	TELUS	AL WILSON @ 250-417-6924
DRY UTILITY - CABLE	SHAW	KAREN GRIBBS @ 250-417-3898
DRY UTILITY - GAS	TERASEN GAS (N/A)	NORM MCKINNON @ 250-366-4009
ENG.-CIVIL	WSA ENGINEERING LTD.	DAN SAHLSTROM @ 250-365-3696
ENG.-ELECTRICAL	EMCO ENGINEERING	KEN GUIDO @ 250-470-9896
ENG.-SEWER	OS/EAGLE ENGINEERING	STEVE BRYDGES @ 250-748-8500
REG.-WATER UTILITY	WATERWORKS TECHNOLOGIES	LEN SUKOWIEFF @ 403-289-3198
REG. - WATER QUALITY	B.C. MOE WATER USE	AL ADERICHIN @ 250-387-3421
REG. - WATER LICENCE	B.C. MOE INTERIOR HEALTH AUTHORITY	MARLENE GROHE @ 250-505-7200
REG. - WATER SEWER	B.C. MOE WATER STANDARDS	JOHN BOCHARD @ 250-354-5349
REG. - SUBDIVISION	B.C. MOE ENV. MGMT.	CHRIS STROICH @ 250-354-6333
REG. - ROADS	B.C. MOT TRANSPORTATION	PETER MUIRHEAD @ 250-354-8495
SURVEY - LEGAL	HINTERLAND SURVEYING & GEOMETRICS INC.	PHIL BEST @ 250-354-6520
SURVEY - CONSTRUCTION	SEL SURVEY & DESIGN	MILS HINTERBERGER @ 250-364-1444
OWNER	KOOTENAY LAKE ESTATES	BILL SPURLE @ 250-353-7900 OLIVER BERKELEY @ 250-505-5558

NOTES:  
BASE CONTOUR MAP, CADASTRE AND EXISTING INFRASTRUCTURE ADJACENT TO DEVELOPMENT AREA SUPPLIED BY  
SEL SURVEY & DESIGN, UTM ZONE 11 (117° CENTRAL MERIDIAN), NAD 83 DATUM.

STRATA PHASE	LOTS	NUMBER OF LOTS	TOTAL AREA INCL. ROADS/UTIL	LAND USE
①	1-30	30	36.57 ac.	RESIDENTIAL - SF
②	31-58	28	28.41 ac.	RESIDENTIAL - SF
③	59-82	24	24.06 ac.	RESIDENTIAL - SF
④	83-103	21	40.97 ac.	RESIDENTIAL - SF
REMAINDER	1	1	TBD	TBD
TOTAL	1-103	103		VARIES

WSA ENGINEERING LIMITED  
WOODS SAHLSTROM ASSOCIATES  
Geotechnical • Civil • Structural • Materials Testing

2248 Columbia Ave. Castlegar, B.C. V1N 2X1 Ph. (250) 365-5696

DSGN:	GM	KOOTENAY LAKE VILLAGE	SCALE: 1:2000
DWN:	GM	UPLAND PHASED STRATA	DWG FILE: C07219-00162
CHK:	GM	PROCTER, B.C.	JOB: C07219-001
DATE DWN:	31/03/08	SKETCH PLAN	SHEET: 2 C