



Date: _____
 File: _____

CITY OF ROSSLAND
2018 CCTV INSPECTION
SANITARY SEWER MAINLINE /
LATERALS / SERVICES

LEGAL COMPANY NAME: _____
 ADDRESS: _____
 POSTAL CODE: _____ EMAIL: _____
 TEL No.: _____ FAX No.: _____
 NAME: _____ TITLE: _____

INTENT

To obtain Tenders from qualified contractors to complete the specified work, all as further detailed herein. The issue of these documents does not confer any license or grant for any other purpose.

DOCUMENT AVAILABILITY AND RESPONSIBILITY

This tender is being issued by the City. All addenda, amendments or further information will be posted on BCBID. It is the builder's responsibility to check for addenda updated on BCBID.ca.

SCOPE OF WORK

To provide all necessary labour, equipment, materials and tools for the CCTV inspection and cleaning of various sanitary sewer mains in accordance with the MMCD 33 01 30.1 and MMCD 33 01 30.2 attached terms, conditions and requirements, NASSCO PACP current standards, video files (MPEG2 or better), picture files JPEG format, Certificate of Insurance – Standard Form, Agreement for Services, City of Rossland Standard Supplemental Specifications and City of Rossland Sanitary Sewer Maps Location Plans.

JOB SITES:

Various sites, see sewer maps attached, as noted above.

Tenderer's Initials _____



Tender Terminology

“City” means the City of Rossland;

“Contract” means the written agreement or purchase order resulting from this Tender awarded to and/or executed by the City and the successful Tenderer;

“Contract Documents” means the tender documents, that part of the Tender which is accepted by the City, the purchase order and executed agreement, if any, and all applicable specifications and drawings including those issued by the City to the Tenderer and those submitted by the Contractor during the performance of the Work and accepted by the City, whether produced before or after the date of award of the Contract as the same may be modified, amended, substituted or replaced in accordance with the provisions of the Contract from time to time;

“Contractor” means the successful Tenderer to this tender who is awarded a purchase order or enters into a written Contract with the City;

“Drawings” mean the tender drawings forming part of the tender documents and all other drawings, plans, sketches, maps and revisions to them issued by the City’s representative (the “Contract Administrator”) to the Contractor during the performance of the Work and includes drawings submitted by the Contractor and accepted by the City’s representative;

“Must”, “Mandatory” or “Required” means a requirement that must be met in order for a Tender to receive consideration;

“Sub-Contractor” means a Sub-Contractor having a contract with the Contractor for the performance of any part of the Work;

“Tender” means the documents of the Tenderer delivered to the City offering to perform the Work as required under the tender documents;

“Tenderer” means an individual(s) and/or company that has obtained a copy of the tender documents or intends to submit a bid in response to this tender;

“Work” means all or any part of the services and/or materials required related to this tender and the obligations required from the Contractor under the Contract and include change orders.

INSTRUCTIONS TO TENDERERS

1. All Tenders must be received at the Rossland City Hall Office, as noted below, up to **4:00 p.m. local time. Thursday, February 22, 2018**. Late submissions will be returned unopened.

By hand or courier: City of Rossland, 1899 Columbia Avenue, Rossland, BC V0G 1Y0

2. All submissions should be in a closed envelope and clearly marked **"TENDER FOR 2018 CCTV INSPECTION – SANITARY SEWER MAINLINE / LATERALS / SERVICES"**, and must bear the name of the firm tendering.

Tenderer's Initials _____



3. Tenders on forms other than the attached will not be accepted.
4. Tenderers must carefully review the specifications, maps and plans attached.
5. Tenderers are encouraged to visit the sites of the Work and investigate all matters relating to the nature and extent of the Work, the means of access and egress, and any matters which are referred to in the Tender Documents or which are necessary for the full and proper completion of the Work and the conditions under which it will be performed.
6. The quantities stated in the Form of Tender are approximate only. The tendered unit prices applied to confirmed measurements of completed work will govern for billing purposes.
7. Tenders must be complete in every respect including signatures/initials of authorized persons where required and responses to all information requested. All items in the Form of Tender - Schedule of Quantities must be bid with a value greater than zero.
8. The City reserves the right to reject any or all Tenders received. The lowest or any Tender received will not necessarily be accepted.
9. The award of this tender, in whole or in part, is subject to funding approval.
10. The requirements noted within will be awarded to one Tenderer.
11. The Tenderer, by submitting a Tender, agrees that it will not claim damages for matters relating to the Contract or in respect of the competitive process, and the Tenderer, by submitting a Tender, waives any claim for loss of profits if no Contract is made with the Tenderer.
12. Tenders as first received will be considered final. No Tender will be altered, amended, or withdrawn by the Tenderer after the specified closing date.
13. If a Tenderer is in doubt as to the true meaning of any part of this tender document, or finds omissions, discrepancies or ambiguities, a request for interpretation or correction should be submitted as indicated below and, if deemed necessary by the City, an addendum will be issued on the BC Bid Website. This procedure also applies should the City, of its own accord, wish to expand or delete any part of this tender document.
14. Clarification requested by Tenderers must be submitted in writing and received not less than two working days prior to the tender closing date. Direct all inquiries related to the tender to Sean Annan, email Sannan@islengineering.com. The City will not be responsible for verbal interpretation or corrections. Only addenda issued in writing will be considered. All such addenda shall become part of the tender documents.
15. Submit sample of inspection report, digital video and corresponding digital report on a data memory stick with the Tender for the purpose of tender evaluation and review.
16. Tenderer must be aware they will be required to enter into the City of Rossland Agreement for Services if successful. See Appendix A for agreement.
17. See Appendix A – Pipe Details, attached, for diameter, material and length details for Zone 1-4

Tenderer's Initials _____



COMPLETION OF WORK

Work is to commence on April 2, 2018.

Contractor shall achieve substantial performance (97%) of all mainline/lateral, non-Optional work by May 31, 2018

Failure to complete (97%) of the mainline/lateral, non-Optional work by this date shall result in a 25% holdback penalty on all works completed to date.

GENERAL CONDITIONS

1. Time is of the Essence

Time is of the essence to this work. All Work must be started and completed on or before the dates determined under "Completion of Work", P 4 of 10.

2. Contractor's Liability Insurance

Prior to the commencement of the Work, the Contractor shall provide proof of general liability insurance as specified in the Certificate of Insurance – Standard Form (copy attached).

3. Payment for Labour and Materials

The Contractor shall pay any and all accounts for labour, (including Workers' Compensation, Employment Insurance assessments and wage and salary deductions required by law), services and materials used by them during the fulfillment of this Contract as and when such accounts become due and payable, and shall furnish the City with proof of payment of such accounts in such form and as often as the City may request. Should payment of such accounts not be made when and as the same become due, the City shall be at liberty to pay the same and all monies so paid by the City shall be charged to the Contractor.

4. Approval of the City

The whole of the Work and the manner of performing the same shall be done to the entire satisfaction and approval of the City's representative and he shall be the sole judge of the Work and materials in respect of both quantity and quality, and his decisions with regard to work and submission of reports shall be final and binding upon the Contractor.

5. Final Acceptance and Payment

The City will pay to the Contractor the total amount owing less any holdback penalties, deficiencies and less the 10% hold back provided in the Builders' Lien Act, upon completion and upon acceptance of the Work by the City.

The parties agree that if the place of Work is a road or highway or the Work involves a road or highway, the holdback provisions of the Builders Lien shall apply regardless of anything to the contrary in the Builders Lien Act. All accounts will be settled according to the Terms of Payment

Tenderer's Initials _____



stated on P 4 of 10. The City reserves the right to request from the Contractor a statutory declaration, verifying that all accounts owed by the Contractor in connection with the Work tendered herein, for labour, materials, hired equipment and so on, have been paid in full. Such a declaration may be required prior to the release of the above mentioned hold back, or at the release of a progress payment certificate.

6. Indemnity

The Contractor shall indemnify and save harmless the City and its elected officials, officers, servants, employees, volunteers and agents from and against all claims, demands, proceedings, suits, losses, damages, costs and expenses of whatsoever kind or nature (including but not limiting the generality of the foregoing, in respect of death, injury, loss or damage to any person or property) arising in any way out of or connected with the work by the Contractor under this agreement, except to the proportionate extent that such actions, claims, demands, proceedings, suits, losses, damages, costs and expenses were caused by the indemnified parties or any of them.

7. Termination of Contract

The City may by notice of default to the Contractor, terminate in whole or in part the Contract if the Contractor fails to make delivery of the item(s) or to perform satisfactory work at the sole discretion of the City, on any provision of the Contract, and within the time specified, or within a reasonable time if no time is specified.

On termination of the Contract, the City shall not be obliged to pay the Contractor for any amounts due under the Contract until the work is completed.

8. Prior Consent To Assign

This Contract, or any part of it, or any benefit or interest in it, shall not be assigned by the Contractor without the prior written consent of the City and shall be deemed not to be an asset of the Contractor in the event of bankruptcy.

9. Subcontractor's

- a) The Contractor shall employ only those subcontractors that are pre-approved by the City.
- b) The City may, for reasonable cause, object to use of a proposed subcontractor and require the Contractor to employ one of the other subcontract bidders.
- c) Nothing contained in the Contract Documents shall create a contractual relationship between a subcontractor and the City.

SPECIAL CONDITIONS

1. The Contractor must be in good standing with the Workers' Compensation Board of BC. All Tenderers must submit with their Tenders a Clearance Letter from the Workers' Compensation Board confirming that they are currently in good standing.
2. The job sites must be kept clean and safe during and at completion of the Work.



3. The Contractor will be responsible for the safety and security of all of their own equipment and materials on the sites.
4. All Work must be scheduled with ISL Engineering and Land Services (City Contract Administrator) at 250-362-2229.
5. The Contractor shall supply to the City a schedule of the proposed activities prior to commencing the Work. The schedule shall indicate the completion date(s) for all phases of the Work.
6. The Contractor shall, at its expense make good all areas affected by the work, and shall replace and repair any damage to facilities or grounds caused by its Sub-Contractors, workers or equipment.
7.
 - a. The Contractor shall be deemed to be the prime contractor within the meaning of the WORKSAFE BC Occupation Health and Safety Regulations for the Province of British Columbia. The Contractor shall have a safety program in place acceptable to the Worksafe BC.
 - b. The Contractor's attention is drawn to the current Occupational Health & Safety Regulations for construction published by the Worksafe BC (where applicable), prior to commencing construction work, the Contractor shall furnish the Worksafe BC with the written notice as required by the above-mentioned regulations.
 - c. The Contractor shall ensure that all Worksafe BC safety rules and regulations are observed in execution of work, not only the Contractor but also by all Sub-Contractors, workers, material, personnel and others engaged to execute the Work.
 - d. The Contractor is to complete a copy of the Form 30M33, where applicable, issued by Worksafe BC related to the operation of equipment of work being done in proximity to overhead power lines. Photocopies of the notice and the completed 30M33 form shall be delivered to the Contract Administrator.
 - e. The Contractor shall indemnify the City and hold the City harmless from all manner of claims, demands, costs, losses, penalties and proceedings arising out of or in any way related to unpaid performance of this Contract arising out of or in any way related to a failure to observe safety rules, regulations and practices of the Worksafe BC, including any penalties levies by the Worksafe BC.
8. The successful Tenderer must be fully licensed in Rossland for this Work. Proof of a valid Business Licence is to be supplied by the successful Tenderer prior to any work commencing.
9. The Work is located at various locations within the City.
10. The Master Municipal Civil Section Specifications, Platinum Edition shall form part of this tender. The Master Municipal Specifications must be purchased separately from:

Support Services Unlimited
 102 – 211 Columbia Street
 Vancouver, BC, V6A 2R5
 Attention: Ms Donna Denham, Phone: 604-681-0285

Tenderer's Initials _____



11. The contractor shall complete a maximum 400m of main and provide full reporting for review and approval before proceeding with the remainder of the work. The CCTV inspection and cleaning of various sanitary sewer mains shall be in accordance with:
 - a. the MMCD Platinum (2009) 33 01 30.1 and 33 01 30.2,
 - b. attached terms, conditions and requirements,
 - c. Pipe and manhole identifiers shall correspond to the City's GIS asset ID values (to be provided)
 - d. NASSCO PACP current standards,
 - e. video files (MPEG2 or better),
 - f. picture files JPEG format.
 - g. Inspection reports shall be provide in hard copy format and digital PDF format. Fi
 - h. All digital information shall be provided on portable hard drives in duplicate with minimum 1 TB capacity per drive.
12. Contractor shall be responsible for notifying homeowners of any anticipated interruptions to service laterals, prior to commencing of work.
13. The City reserves the right to limit and/or reduce the total quantities awarded, as specified in the Form of Tender (P. 9-11) due to budgetary constraints.
14. The Contractor shall neither permit any public ceremony, nor erect or permit the erection of any sign or advertising, in connection with the Work without the approval of the City.
15. The Tenderer is strongly urged to attend the Work sites and review conditions regarding access, traffic control and any other factors affecting completion of the Work, prior to submitting their Tender.
16. Bypass pumping to be incidental to the unit price for the CCTV/Cleaning work. Contrary to 1.6.6, no separate payment will be made for bypass pumping.
17. Single lane traffic control will be required in areas of high vehicle traffic. The majority of the City streets have low traffic volumes and may be temporarily closed to through traffic, but must remain open for residents of the street and pedestrians. These costs are incidental.
18. Upon completion of the Project, the Contractor shall provide the City with an excel spreadsheet with the following information: Column A – Pipe ID, Column B – Name of corresponding video file, Column C – Pipe Material, Column D – Pipe Diameter. All asset ID's for pipes and manholes to match City GIS ID information (complete list and corresponding 1:2,000 drawing set to be supplied to the Contactor a minimum of 10 days prior to Project Start date) Pipe ID's and video files names are not to contain spaces or special characters. Pipe material and diameter are only required to be recorded when they differ from the material/diameter information provided on the 1:2000 drawing set.



EVALUATION CRITERIA

The lowest or any Tender will not necessarily be accepted and the City reserves the right to reject any or all Tenders. In reviewing Tenders and awarding the Contract for this project, the City may consider not only the Tender prices but:

- The overall value that the Tender represents to the City, based on quality, service and price
- The Tenderer’s experience and qualifications considered essential by the City for the satisfactory completion of this type and size of project, including key site and office personnel to be assigned by the Tenderer to this project
- The Tenderer’s track record in this type of work
- Conformance to the specifications
- Time required for completion of the Work
- Total cost implications
- Sample inspection report, digital video and corresponding digital report
- References

The City is in no way obligated to accept this Tender and may reject this Tender or all Tenders.

TENDER

The Tender is irrevocable for a period of 30 calendar days from the tender closing date. In accordance with the terms, conditions, specifications and requirements contained herein, the undersigned offers and agrees, if this Tender is accepted within 30 calendar days from the closing date, to perform the Work of the tender, at the prices tendered and within the stated time required for completion of Work.

The Tenderer is an individual partnership or a company incorporated under the laws of _____ . Check where applicable.

Signature, name and title of person authorized to sign the Tender.

DATE OF TENDER: _____

The Tenderer acknowledges that it has received the following addenda and that this Tender has been prepared in accordance with them:

Addenda

Date Received

Tenderer's Initials _____



Tenderer's Initials _____

Form of Tender - Appendix 1

2018 CCTV INSPECTION - SANITARY SEWER MAINLINE / LATERALS / SERVICES

COR 2018-02

SCHEDULE OF QUANTITIES AND PRICES - TENDER

(All prices and *Quotations* including the *Contract Price* shall include all *Taxes* , but shall not include *GST*. *GST* shall be shown separately.)

ITEM	DESCRIPTION	AMOUNT
1.0	(OPTIONAL) Mobilization / Demobilization	
2.0	Zone 1	
3.0	Zone 2	
4.0	Zone 3	
5.0	Zone 4	
6.0	(OPTIONAL) Survey Points of interest	

TENDER PRICE _____

GST @ 5% _____

TENDER PRICE plus GST _____

ITEM NO.	MMCD REF.	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	AMOUNT
1.0	33 01 30.1	(OPTIONAL) Mobilization/Demobilization				
1.01	1.6.7S	Mobilization/Demobilization #2	LS	1		
1.0 SubTotal:						
2.0	33 01 30.1 1.6	Zone 1				
2.01	1.6.2	100mm Mainline - Sections less than 35m long Cleaning and CCTV Inspection	Lineal Metre	520		
2.02	1.6.2	100mm Mainline - Sections greater than 35m long Cleaning and CCTV Inspection	Lineal Metre	3,065		
2.03	1.6.2	150mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	3,747		
2.04	1.6.2	200mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	1,266		
2.05	1.6.2	300mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	49		
2.06	1.6.8S	100mm Laterals CCTV Inspection Only	Each	22		
2.07	1.6.8S	150mm Laterals CCTV Inspection Only	Each	3		
2.08	1.6.8S	200mm Laterals CCTV Inspection Only	Each	2		
2.09	1.6.8S	(OPTIONAL) - Various size Laterals Cleaning	Each	27		
2.10	1.6.10S	(OPTIONAL) - 100mm Services Cleaning and CCTV Inspection	Each	85		
2.11	1.6.10S	(OPTIONAL) - 150mm Services Cleaning and CCTV Inspection	Each	2		
2.12	1.6.10S	(OPTIONAL) - 200mm Services Cleaning and CCTV Inspection	Each	1		
2.13	1.6.4S	(OPTIONAL) - Root cutting - various diameter	Hours	50		
2.0 SubTotal:						

TENDERER'S INITIALS _____

ITEM NO.	MMCD REF.	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	AMOUNT
3.0	33 01 30.1 1.6	Zone 2				
3.01	1.6.2	100mm Mainline - Sections less than 35m long Cleaning and CCTV Inspection	Lineal Metre	804		
3.02	1.6.2	100mm Mainline - Sections greater than 35m long Cleaning and CCTV Inspection	Lineal Metre	3,000		
3.03	1.6.2	150mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	5,821		
3.04	1.6.2	200mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	1,135		
3.05	1.6.8S	100mm Laterals CCTV Inspection Only	Each	38		
3.06	1.6.8S	150mm Laterals CCTV Inspection Only	Each	16		
3.07	1.6.8S	200mm Laterals CCTV Inspection Only	Each	1		
3.08	1.6.8S	(OPTIONAL) - Various size Laterals Cleaning	Each	55		
3.09	1.6.10S	(OPTIONAL) - 100mm Services Cleaning and CCTV Inspection	Each	125		
3.10	1.6.10S	(OPTIONAL) - 150mm Services Cleaning and CCTV Inspection	Each	18		
3.11	1.6.4S	(OPTIONAL) - Root cutting - various diameter	Hours	75		
3.0 SubTotal:						

TENDERER'S INITIALS _____

ITEM NO.	MMCD REF.	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	AMOUNT
4.0	33 01 30.1 1.6	Zone 3				
4.01	1.6.2	100mm Mainline - Sections less than 35m long Cleaning and CCTV Inspection	Lineal Metre	165		
4.02	1.6.2	100mm Mainline - Sections greater than 35m long Cleaning and CCTV Inspection	Lineal Metre	728		
4.03	1.6.2	150mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	1,725		
4.04	1.6.2	200mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	1,573		
4.05	1.6.8S	100mm Laterals CCTV Inspection Only	Each	8		
4.06	1.6.8S	200mm Laterals CCTV Inspection Only	Each	1		
4.07	1.6.8S	(OPTIONAL) - Various size Laterals Cleaning	Each	9		
4.08	1.6.10S	(OPTIONAL) - 100mm Services Cleaning and CCTV Inspection	Each	32		
4.09	1.6.10S	(OPTIONAL) - 150mm Services Cleaning and CCTV Inspection	Each	1		
4.10	1.6.4S	(OPTIONAL) - Root cutting - various diameter	Hours	50		
					4.0 SubTotal:	

TENDERER'S INITIALS _____

ITEM NO.	MMCD REF.	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	AMOUNT
5.0	33 01 30.1 1.6	Zone 4				
5.01	1.6.2	100mm Mainline - Sections less than 35m long Cleaning and CCTV Inspection	Lineal Metre	310		
5.02	1.6.2	100mm Mainline - Sections greater than 35m long Cleaning and CCTV Inspection	Lineal Metre	2,332		
5.03	1.6.2	150mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	3,562		
5.04	1.6.2	200mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	1,640		
5.05	1.6.2	250mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	677		
5.06	1.6.2	300mm Mainline - Cleaning and CCTV Inspection	Lineal Metre	370		
5.07	1.6.8S	100mm Laterals CCTV Inspection Only	Each	10		
5.08	1.6.8S	150mm Laterals CCTV Inspection Only	Each	12		
5.09	1.6.8S	(OPTIONAL) - Various size Laterals Cleaning	Each	22		
5.10	1.6.10S	(OPTIONAL) - 100mm Services Cleaning and CCTV Inspection	Each	78		
5.11	1.6.10S	(OPTIONAL) - 150mm Services Cleaning and CCTV Inspection	Each	3		
5.12	1.6.4S	(OPTIONAL) - Root cutting - various diameter	Hours	50		
5.0 SubTotal:						
6.0	33 01 30.1 1.6	(OPTIONAL) Survey Points of Interest				
6.01	1.6.9S	Sanitary service location	Each	1,560		
6.02	1.6.9S	Sanitary lateral location	Each	113		
6.03	1.6.9S	Sanitary manhole location	Each	550		
6.04	1.6.9S	Observed infiltration	Each	250		
6.0 SubTotal:						

TENDER PRICE (to be carried forward to the summary sheet)

TENDERER'S INITIALS _____

CITY OF ROSSLAND

AGREEMENT FOR SERVICES

PARTIES

This Agreement For Services is made between:

CITY OF ROSSLAND

(the "City")

AND:

<LEGAL NAME OF CONTRACTOR>

<ADDRESS>

(the "Contractor")

WHEREAS, the City desires that the Contractor make available its services in those areas in which the Contractor has special professional and technical qualifications; and

WHEREAS, Contractor has represented that the Contractor is skilled in providing these services;

NOW, THEREFORE in consideration of the mutual premises and covenants contained herein, the parties agree as follows:

SERVICES

1. The Contractor shall provide professional services necessary on an "as and when requested" basis for the completion of the 2018 CCTV INSPECTION – SANITARY SEWER MAINLINE / LATERALS / SERVICES program on the terms and conditions set out in this Agreement (the "Services") in an efficient, competent, timely and professional manner to the full satisfaction of the City. This Agreement is not exclusive, nor does it warrant or guarantee any future business or any automatic renewal of Term.
2. The Contractor shall designate <IDENTIFY PERSON(S)> to perform the Services. Should the Contractor designate any other personnel to perform the Services, it shall do so only with the prior consent of the City. In the event that any of the Contractor's designated personnel do not perform the Services to the full satisfaction of the City, the City reserves the right to request the Contractor to make a change in personnel at the Contractor's expense.
3. The City reserves the right to amend or vary these Services upon notice in writing to the Contractor, or, as may be agreed between the City and the Contractor from time to time.
4. The Contractor shall determine the method by which the Services are performed, subject to such reasonable instructions as the City may provide from time to time. Liaison with the City respecting the Services shall be Darren Albo, Operations Manager (the "City Liaison").
5. The City may designate from time-to-time, in writing, one or more of its employees having on the City's behalf, authority to deal with the Contractor in connection with the Services and to make decisions binding on the City falling within the scope of this Agreement (the "Designate(s)").
6. The Contractor shall provide the City Liaison and/or Designate(s), upon request, with reports regarding the work done, and to be done, in connection with the performance of the Services.
7. The Contractor represents to the City that <NAME OF PERSON(S)> or any designated Contractor personnel approved by the City has the required skills, training and experience to perform the Services.
8. The Contractor agrees to assign a competent, adequate and skilled work force to perform the Services.

9. The Contractor agrees to remove and replace any person whom the City deems to be unfit in any way.
10. The Contractor is free to provide services to other clients during the Term of this Agreement, so long as such activities do not interfere with or conflict with the Contractor's obligations under this Agreement.
11. The Contractor agrees to perform the Services with that standard of care, skill and diligence normally provided by a highly regarded professional in the performance of similar services. It is understood that the Contractor must perform the Services based, in part, on information furnished by the City and the Contractor shall be entitled to rely on such information; however, the Contractor is given notice that the City will be relying on the accuracy, competence and completeness of the Services provided by the Contractor in utilizing the results of the Services.

TERM

13. This Agreement commences on <BEGINNING DATE OF TERM> and ends upon the completion of the Services to the full satisfaction of the City Liaison, which completion should be no later than <ENDING DATE OF TERM> (the "Term"). The Term of this Agreement may be extended either by mutual agreement in writing signed by both parties, or, by the City, with all other terms remaining the same.
14. The City does not warrant or guarantee any future business. There is no automatic renewal of Term for this Agreement.

PAYMENT

15. The City will pay the Contractor for the items listed in the Schedule of Quantities, once they are completed to the full satisfaction of the City.
16. The Contractor shall invoice the City on a monthly basis which details the Services performed, the person performing each of the Services, the time spent and the fee for each of the Services. Invoices should be submitted in duplicate to the City Liaison and/or Designate(s) for approval.
 - a. If the City approves of the Services which are the subject of the invoice, the City shall pay the Contractor the amount of the approved invoice or part thereof sixty (60) days following the date of the City's approval.
 - b. If the City does not approve of the Services or part of them which are the subject of the invoice, the City shall advise the Contractor in writing of the reasons for non-approval and the Contractor shall remedy the problem at no additional cost to the City before the City shall be obliged to pay the invoice or any part of it, as the case may be.
17. The City will not be liable for and will not pay any unapproved expenses or increases in fees. The Contractor is expressly agreeing to complete all the described Services for the consideration expressed herein.

WARRANTY OF WORK

19. The Contractor warrants that the Services are free of all defects, deficiencies, and problems arising from workmanship for a period of twelve (12) months from the date of approved final completion.
20. If, in the sole opinion of the City defects, deficiencies or problems appear during the warranty period, the Contractor shall immediately remedy, replace, re-perform or correct the Services at no cost to the City within a time fixed by the City.
21. If the Contractor fails to respond or remedy, replace, re-perform or correct the Services within the time fixed by the City, the City may remedy, replace, re-perform or correct the Services, and, any damage arising from it, by whatever means it chooses and the cost of same shall be paid by the Contractor.
22. The Contractor further warrants that any Services which have been repaired, replaced, re-performed, remedied or corrected shall be free of defects, deficiencies or problems arising from faulty workmanship for a further period of twelve (12) months from the date of completion of the required repair, re-performance, remedy or correction.
23. The Contractor warrants that all software and document files, not provided by the City and used in the performance of the Services, to be Virus free. Virus shall mean a code fragment with the ability to reproduce by modifying other programs, applications or documents to include a copy of itself. Later, it may expose itself by wiping out disk files or by causing other problems on the system. The Contractor also warrants that any file, be it an executable, data file or document produced by electronic means be scanned with adequate virus scanning software prior to its introduction to any City

computing system. This software must be kept current, being updated at least once a month or as needed. In the case that a City computing system is infected by a Virus, found to be traced back to the Contractors activities, the Contractor will be liable for the cost of clearing all City computing systems of the Virus.

SUSPENSION OF WORK

24. The City may at any time in its sole discretion suspend the Services for a specified or unspecified time by written notice to the Contractor.
25. Upon receiving notice of suspension, the Contractor shall immediately suspend all operations except those which in the City's opinion are necessary to preserve, care for and protect the Services.
26. The Contractor shall be entitled to be reimbursed for its reasonable, proper and actual expenses incurred in protecting, caring for and preserving the Services.

RIGHTS IN INTELLECTUAL PROPERTY

27. Any and all information, reports, documents, data, computer software, or other items of any nature whatsoever, in any form, prepared by the Contractor pursuant to this Agreement whether completed or not, together with all designs or materials capable of intellectual property protection, prepared, developed or created by the Contractor, its employees or agents during the performance of and/or pursuant to this Agreement shall automatically become the property of the City.

CONFIDENTIAL INFORMATION

28. The Contractor agrees that any information, knowledge (including but not necessarily limited to, City business practices, techniques, relationships, agreements, etc.), data, research, documents, photographs, negatives, computer programs (and related object and source codes) and any other information, knowledge, materials or products disclosed to the Contractor by the City or otherwise produced, developed or known by the Contractor in providing the Services (collectively the "Confidential Information") will not be:
 - a. published or disclosed to any third party not either during or after the Agreement except as otherwise authorized by the City to:
 - i) those of the Contractor's officers and employees who are directly concerned with the use, development or application of the Confidential Information in the provision of the Services; and
 - ii) third parties as to the extent necessary to provide the Services; nor
 - b. used, sold or otherwise disposed of for value by the Contractor other than in the provision of the Services under this Agreement.

This section shall survive the termination of this Agreement.

29. The Contractor shall:
 - a. comply with any rules or directions made or given by the City with respect to safeguarding or ensuring the confidentiality of the Confidential Information;
 - b. as authorized by the City advise the Contractor's officers, employees and contractors to whom the Contractor may disclose the Confidential Information of the confidentiality and ownership provisions of this Agreement;
 - c. do that which is necessary and reasonable to prevent unauthorized disclosures, use, or sale (or other disposition for value) of the Confidential Information.

This section shall survive the termination of this Agreement.

TERMINATION

30. The City reserves the right at its exclusive option to immediately and without further notice, cancel any Agreement, or part thereof, without further liability of any kind:
 - a. for failure by the Contractor to complete the Agreement in a timely fashion;
 - b. for failure by the Contractor to meet described milestone events as required by the Agreement;
 - c. for poor workmanship by the Contractor;
 - d. for repeated or persistent faulty work or performance by the Contractor;
 - e. for failure by the Contractor to remedy defects or deficiencies after being given notice to do so;

- f. if the Contractor is adjudged bankrupt or makes a general assignment for the benefit of creditors, or a receiver, trustee in bankruptcy or similar officer is appointed to take charge of all or part of its property; and such conditions are not cured within thirty (30) days of notice thereof from the City to the Contractor;
- g. for any breach of condition of the Agreement by the Contractor;
- h. for any Act of God event which lasts longer than thirty (30) days;
- i. for its convenience at any time without cause, penalty or damages.

In addition, the City expressly reserves all legal rights and remedies available under general laws of British Columbia, Canada in the event of termination including the right of set off.

- 31. Upon termination of this Agreement, the Contractor agrees that all files, information, data and documents pertaining to the City's business including any software developed in part or in whole during the performance of the Services, shall remain the property of the City, and shall promptly be delivered by the Contractor to the City's office, and no photostatic copy, duplication or reproduction of any kind whatsoever shall be made of such files, information, documents or software without the express written consent of the City.

FUNDING

- 31. Notwithstanding any other provisions of this Agreement, if funds anticipated for the continued fulfillment of this Agreement are at any time not forthcoming or insufficient, then the City shall have the unilateral right to terminate this Agreement without penalty by giving not less than thirty (30) days written notice documenting the lack of funding or program change.

RELATIONSHIP OF THE PARTIES

- 32. The Contractor and the City expressly acknowledge that they are independent contractors and neither an agency, partnership nor employer-employee relationship is intended or created by this Agreement.
- 33. The Contractor shall be solely responsible for all matters relating to statutory deduction of all taxes, employment insurance and Canada Pension and all licenses and permits which may be or become required to perform the Services.
- 34. The Contractor shall be solely responsible for all matters relating to leave, remuneration, Worker' Compensation, insurance premiums and discipline.

DISPUTES

- 35. In the case of any dispute arising between the City and the Contractor, as to their respective rights and obligations under the terms and conditions of this Agreement and subsequent documents, either party shall be entitled to give the other written notice, within ten (10) working days of that party's awareness of such a dispute.
- 36. In the event that a mutually agreeable resolution is not reached in a reasonable period of time, the parties agree to the following procedure:
 - a. Disputes will be referred to the City Liaison <NAME> and the Contractor's <CONTRACTORS REP> responsible for the relationship with the City who will meet and work to resolve the dispute. If a resolution cannot be reached within ten (10) days, or such time as agreed to by both parties, the dispute will be escalated to the second level.
 - b. The City's <EXECUTIVE TITLE> and the Contractor's senior executive for the region will work to resolve the dispute. If a resolution still cannot be reached the dispute will be escalated to the third level.
 - c. The matter in dispute will be referred to the British Columbia International Commercial Arbitration Centre ("BCICAC") for commercial mediation, pursuant to its rules. In the event the commercial mediation process is unsuccessful, the BCICAC will appoint an arbitrator. The decision of any arbitrator shall be final and binding upon the parties, including any decision of the arbitrator with respect to the costs of arbitration.

The place of arbitration shall be Vancouver, British Columbia.

WORKERS' COMPENSATION

- 38. The Contractor warrants and represents that it will comply with the relevant Workers' Compensation Board (WCB) requirements in the provision of the Services.
- 39. The Contractor is responsible for carrying and paying for WCB coverage for itself and all its employees, contractors and others engaged in providing the Services.

40. The Contractor agrees that it is the principal contractor for the purposes of the Workers' Compensation Board Industrial Health and Safety Regulations for the Province of British Columbia.
41. The Contractor must have a safety program acceptable to the WCB and must ensure that WCB safety rules and regulations are observed during performance of this Agreement.

INSURANCE

42. The Contractor warrants and represents that it has the following insurance coverage:
 - a. Commercial General Liability Insurance with a limit of not less than \$5,000,000 inclusive per occurrence and a General Aggregate of not less than \$10,000,000 for bodily injury, (including death) and damage to property including loss of use thereof. Such insurance shall include coverage for broad form property damage, contractual liability, completed operations and product liability. The City shall be named as an additional insured on the policy, but only with respect to the operations of the Contractor in the performance of this Agreement.
 - b. Automobile Liability Insurance for a limit of not less than \$2,000,000 for all owned, leased or rented licensed vehicles used in the performance of the contract.
 - c. Where applicable, Property Insurance for the value of Contractor's property, shall be maintained and shall include a waiver of subrogation in favour of the City.
 - d. Professional Liability in an amount not less than \$1,000,000 insuring the Contractor's liability resulting from errors and omission in the performance of professional services under this Agreement.
43. At the request of the City, the Contractor shall provide to the City, a Certificate of Insurance evidencing the required insurances are in force and effect and that all coverages shall provide for 30 days prior written notice to be given to the City in the event of cancellation or material changes. With the prior consent of the City, should any portion of the Services performed be sub-contracted, the Contractor will ensure that each sub-contractor also maintains during the course of this Agreement insurance coverages which are in like form and with limits as those to be carried by the Contractor.

INDEMNITY

44. The Contractor agrees to indemnify, defend and save harmless the City including without limitation, its employees, agents, and elected officials from any or all suits, claims, demands, liens, and/or, expenses or fees (including legal fees) arising out of the Services offered under this Agreement.
45. The Contractor further agrees to indemnify, defend and save harmless the City including without limitation, its employees, agents, and elected officials from all damages, losses, claims, costs, expenses, actions or proceedings arising out of or caused by the negligent or wrongful acts of the Contractor, its employees, servants, sub-contractors and/or agents.
46. The Contractor agrees to indemnify, defend and save harmless the City including without limitation, its employees, agents, and elected officials from and against all suits, claims, losses, damages, expenses and costs of any nature or kind whatsoever, including lawyers' fees, arising from the Contractor or Contractors' employees or agents negligence or breach of copyright, patent, or any other right of any person towards any person(s) or property in connection with the performance of this Agreement.
47. The provisions of this indemnity are paramount to any insurance requirements herein and shall survive the term of this Agreement.

CONFLICT OF INTEREST

48. The Contractor declares that the Contractor has no financial interest, directly or indirectly, in the business of any third party that would be or be seen to be a conflict of interest in carrying out the Services.

In the event an interest is acquired or the Contractor should be found to be in a potential conflict of interest during the performance of the Services, the Contractor shall be required to advise and cure the conflict forthwith to the City's satisfaction or shall be disentitled to any compensation under this Agreement.

The Contractor warrants and represents that neither it nor any person related to or affiliated with the Contractor has any relation to or affiliation with any faculty or staff of the City which may in any way be seen (in the City's sole and

unfettered discretion) to create a potential conflict between the loyalties owed by such faculty or staff to the City and loyalties owed directly or indirectly to the Contractor, except as disclosed by the Contractor to the City.

FORCE MAJEURE (ACT OF GOD)

- 49. Neither party shall be responsible for any delay or failure to perform its obligations under this Agreement where such delay or failure is due to fire, flood, explosion, war, embargo, governmental action, Act of Public Authority, Act of God, or to any other cause or similar force majeure event beyond its control, except labour disruption.
- 50. In the event force majeure occurs, the party who is delayed or fails to perform shall give prompt notice to the other party and shall take all reasonable steps to eliminate the cause.
- 51. Should the force majeure event last for longer than 30 days, the City may terminate this Agreement by notice to the Contractor without further liability, expense or cost of any kind.

ASSIGNMENT

- 52. The Contractor shall not assign (in any manner including by operation of law) or sub-contract any of its obligations under this Agreement without the prior written consent of the City.

GOVERNING LAW

- 53. This Agreement shall be governed by and construed in accordance with the laws and courts of the Province of British Columbia and shall in all respects be treated as a British Columbia contract.

MEDIA CONTACT

- 55. The prior written approval of the City is required for any news release, interview, other print/electronic media, or trade contacts that relate to this Agreement. Such written approval is generally not given.

SEVERABILITY

- 56. All paragraphs and covenants contained in this Agreement are severable, and in the event that any of them shall be held to be invalid, unenforceable or void by a court of a competent jurisdiction, such paragraphs or covenants shall be severed and the remainder of this Agreement shall remain in full force and effect.

WAIVER

- 57. The City may at any time insist upon strict compliance with this Agreement regardless of past conduct or practice with this or any other Contractor.

NOTICE

- 58. All notices under this Agreement shall be in writing and shall be deemed received, if properly sent to the following mailing address:

ISL Engineering and Land Services
Po Box 2185 Rossland BC, V0G1Y0

Or if sent by email to: sannan@islengineering.com

- a. By mail, on the fifth day following date of mailing; or
- b. By registered mail, on the seventh day following date of mailing; or

To the Contractor: <NAME OF INDIVIDUAL>
<COMPANY LEGAL NAME>
<FULL ADDRESS>

Facsimile Number: () <>

COMPLIANCE WITH LAWS

- 59. In carrying out its obligations hereunder, the Contractor shall familiarize itself and agrees to continuously conform to and to ensure its employees, agents and servants continuously conform to, all applicable laws, bylaws, regulations, ordinances,

codes, specifications and requirements of all regulatory authorities and conditions, and shall obtain all necessary licences, permits and registrations as may be required by law.

60. The Contractor shall pay and discharge all wages, fees, salaries, charges, costs and expenses due and accruing due to any of its employees, agents, suppliers and subcontractors and shall make and remit to the proper authorities all deductions therefrom required by law.

61. If the City requests, the Contractor shall furnish evidence of such compliance to the City forthwith.

USE OF TRADEMARKS

62. The Contractor acknowledges the proprietary interest of the City in all names, trademarks, crests, or logos owned by the City and shall not use any City name, trademark, crest or logo without the written consent of the City.

INTERPRETATION

63. Headings are included in this Agreement for convenience of reference only and do not form part of this Agreement.

COUNTERPARTS

64. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument; however, this Agreement will be of no force or effect until executed by both parties.

ENUREMENT

65. The provisions of this Agreement shall enure to the benefit of and be binding upon the Contractor, the Contractor’s heirs, executors, administrators and assigns, and the City, its successors and assigns.

NON-DISCLOSURE

66. This Agreement is considered Confidential Information.

ENTIRE AGREEMENT/MODIFICATION

67. This Agreement and any Addenda is comprises the whole agreement between the parties and may not be modified, changed, amended or waived except by signed written agreement of the parties.

Indicate your acceptance of this offer by signing and returning three copies of this Agreement.

AGREED AND ACCEPTED

_____ per City of Rossland

_____ per Contractor

_____ Name (print)

_____ Name (print)

_____ Title (print)

_____ Title (print)

_____ Date (print)

_____ Date (print)

NOTE: This Agreement is not valid unless signed by an authorized agent of Corporation of the City of Rossland.

Supplementary Specifications

These Supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents, Volume II, Platinum Edition 2009.

Reference No.

SUPPLEMENTARY SPECIFICATIONS INDEX

DIVISION 33 – UTILITIES

- 33 01 30.1S CCTV Inspection of Pipelines
- 33 01 30.2S Cleaning of Sewers

- 1.6 **Measurement for Payment**
- .4S *Add:*
- The Contractor is to notify the Contract Administrator immediately, when root cutting removal works are required and when they are completed. Root cutting removal works shall be tracked by both the Contractor and the Contract Administrator simultaneously. Only root cutting removal work reported in this manner will be eligible for payment.
- The Contractor is to notify the Contract Administrator immediately, when a CCTV inspection survey is to be abandoned on any section of pipe. Sections of pipe that are abandoned without notifying the Contract Administrator will not be eligible for payment.
- .6S Delete this clause and replace with:
- Bypass pumping, as well as any hydro vactor works shall be considered incidental to the work. No additional payment shall be made
- .7S Site mobilization and demobilization costs for all equipment and labor workforce required for the performance of the work shall be considered incidental to the work.
- If sections of pipe are discovered to have high infiltration rates and are at such a rate, or circumstance where the CCTV works cannot be completed, a second site mobilization may be required to perform the works when groundwater flows have rescinded, at a date no later than July 1, 2018. This mobilization line item is included in the Schedule of Quantities and identified as "Mobilization/Demobilization #2 Optional" and will be granted at the discretion of the Contract Administrator within 10 days of receiving a written request to do so by the Contractor.
- .8S All Items shown in Schedule of Quantities include CCTV inspection and cleaning of sewers, except for items pertaining to the CCTV inspection of Laterals. Laterals CCTV inspection do not include cleaning. A separate line item for cleaning of laterals is included for each zone in the Schedule of Quantities. Laterals are to be cleaned if an upstream access point (clean out or inspection chamber) can be located. For the purpose of this Tender, Laterals are defined as a mainline sewer pipe that ties into another mainline sewer pipe without an access point at the tie in location. See section 33 01 30.2 – Cleaning of Sewers in MMCD Platinum as well as section 33 01 30.2S – Cleaning of sewers Supplemental Specifications.

.9S Measurement and Payment for Survey points of interest shall be paid per service, lateral, manhole and observed infiltration location surveyed. Points are to be compiled into a single excel spreadsheet with columns organized in the following order – Point number, Northing coordinate, Easting coordinate, Elevation, Description. Points to be in UTM NAD 83 Zone 11 coordinate system. Point accuracy to be +- 2cm. A single GIS compatible file containing the same information will also be acceptable.

.10S For Services, only those pipes which are identified to be a source of infiltration shall be cleaned and CCTV inspected. Identification shall be confirmed during the mainline CCTV inspection of the pipe which the service connects to and shall be defined as the presence of clean, constantly flowing fluid, free from solids, detergents or visible contaminants. All service pipe inspection reports shall include an image showing the infiltration fluid as described in this section. Only service pipe inspection reports which show this identification will be eligible for payment.

It shall be assumed that all services have an access point (clean out or inspection chamber) located at the property line that is above ground, visible and easily detectable. If an access point (clean out or inspection chamber) cannot be easily located by the Contractor, the Contractor is to skip the service and immediately notify the Contract Administrator that the service access point could not be located. The City will be responsible for locating, unearthing or installing access points at all such locations.

.11S The Contractor will be required to provide either a backflow preventer or a water fill methodology that includes an air gap. City will allow water filling from a central hydrant within the City. The Contractor will be permitted to draw water from this location at no additional charge.

2.1.3 Equipment

.1S *Add:*

For 100mm dia. pipe only, a standard straight ahead camera may be used.

END OF SECTION

**1.5 Measurement for
Payment**

.1S *Add:*

Payment will include all equipment and labor workforce required for the performance of the work.

3.1 Sewer Cleaning

.1.3S *Delete 3.1.1.3 and replace with:*

Begin cleaning from the upstream sewer sections in the system and proceed downstream. Cleaning of upstream sewer sections shall take place prior to cleaning of downstream sewer sections; however, individual sections of sewer shall be cleaned from the downstream manhole to the upstream manhole to prevent surcharging downstream sewer services in the event of a blockage in a downstream sewer section.

.3S *Add:*

The City of Rossland shall provide an approved disposal site at a location within City limits.

END OF SECTION

APPENDIX A
PIPE DETAILS

TABLE 1.10 - ZONE 1 MAINLINE PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	23.7
100	PVC	54.6
100	PVC	101.3
100	PVC	88.9
100	PVC	38.4
100	PVC	130.2
100	PVC	65.4
100	PVC	58.6
100	PVC	39.3
100	PVC	50.6
100	PVC	73.6
100	PVC	32.1
100	PVC	52.5
100	PVC	55.5
100	PVC	52.9
100	PVC	96.5
100	PVC	10.3
100	PVC	26.4
100	PVC	43
100	PVC	103.4
100	PVC	56.9
100	PVC	139.8
100	PVC	49.2
100	PVC	71.1
100	PVC	73.6
100	PVC	38.6
100	PVC	64.5
100	PVC	33.3
100	PVC	32.6
100	PVC	71
100	PVC	70.9
100	PVC	58.2
100	PVC	205.4
100	PVC	76.6
100	PVC	55.6
100	PVC	26.8
100	PVC	81.2
100	PVC	35.4
100	PVC	26.7
100	PVC	69
100	PVC	32.7
100	PVC	36.5

TABLE 1.10 - ZONE 1 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	PVC	52.1
150	PVC	104.8
150	PVC	96.9
150	PVC	11.7
150	PVC	70.8
150	PVC	85.9
150	PVC	107.9
150	PVC	35.8
150	PVC	143.1
150	PVC	91.4
150	PVC	27.9
150	PVC	53.4
150	PVC	73.5
150	PVC	33.6
150	PVC	100.8
150	PVC	26.7
150	PVC	57.2
150	PVC	46.9
150	PVC	39.2
150	PVC	7
150	PVC	16.5
150	PVC	12
150	PVC	95.8
150	PVC	51.7
150	PVC	123
150	PVC	77.2
150	PVC	6.6
150	PVC	20.9
150	PVC	0.9
150	PVC	8.7
150	PVC	8.6
150	PVC	32
150	PVC	5.7
150	PVC	109.7
150	PVC	6
150	PVC	1.4
150	PVC	36.7
150	Tile	84.8
150	Tile	2.7
150	Tile	43.2
150	Tile	52.1
150	Tile	29.2
150	Tile	50.4
150	Tile	55.6
150	Tile	97

TABLE 1.10 - ZONE 1 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
100	PVC	57.2
100	PVC	17.7
100	PVC	8
100	PVC	29.6
100	PVC	7.8
100	PVC	2.4
100	PVC	3.6
100	PVC	63.9
100	PVC	42.6
100	PVC	19.4
100	PVC	40.6
100	PVC	1
100	Tile	32.4
100	Tile	49.5
100	Tile	37.2
100	Tile	32.3
100	Tile	9.4
100	Tile	33.9
100	Tile	47.2
100	Tile	48.5
100	Tile	72.2
100	Tile	45.2
100	Tile	39.5
100	Tile	34.6
100	Tile	51.5
100	Tile	58.4
100	Tile	18
100	Tile	8.3
100	Tile	1.6
100	Tile	10.4
100	Tile	52.5
100	Tile	3.2
150	AC	47.5
150	PVC	75.4
150	PVC	43.8
150	PVC	39.8
150	PVC	13.7
150	PVC	24.2
150	PVC	31.3
150	PVC	62.7
150	PVC	67
150	PVC	75.1
150	PVC	46.5
150	PVC	49
150	PVC	44.9

APPENDIX A
PIPE DETAILS

TABLE 1.1 - ZONE 1 LATERAL PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	79.5
100	PVC	143.5
100	PVC	6.6
100	PVC	51.7
100	PVC	40.1
100	PVC	84.4
100	PVC	18.9
100	PVC	45.9
100	PVC	131.3
100	PVC	2.9
100	Steel	34.2
100	Tile	37.9
100	Tile	61.9
100	Tile	85.5
100	Tile	7.1
100	Tile	37
100	Tile	79.5
100	Tile	77.4
100	Tile	88.8
100	Tile	43.2
100	Tile	25.1
100	Tile	63.5
150	Tile	23.1
150	Tile	28.4
150	Tile	21.5
200	PVC	2.2
200	PVC	24.2

APPENDIX A
PIPE DETAILS

TABLE 2.0 - ZONE 2 MAINLINE PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	9.4
100	PVC	126.2
100	PVC	100.8
100	PVC	53.7
100	PVC	60.4
100	PVC	55.6
100	PVC	32
100	PVC	83.8
100	PVC	8
100	PVC	34.9
100	PVC	25.3
100	PVC	35.2
100	PVC	77.6
100	PVC	45.5
100	PVC	60.1
100	PVC	38.6
100	PVC	30.8
100	PVC	81.3
100	PVC	38.7
100	PVC	31.8
100	PVC	27.6
100	PVC	49.5
100	PVC	87.8
100	PVC	85.5
100	PVC	88.9
100	PVC	16.3
100	PVC	38.9
100	PVC	26.9
100	PVC	63.4
100	PVC	35.6
100	PVC	25
100	PVC	50.4
100	PVC	109.8
100	PVC	25.8
100	PVC	45.2
100	PVC	65.4
100	PVC	26.9
100	PVC	24.9
100	PVC	27.1
100	PVC	38.2
100	PVC	7.9
100	PVC	41.8
100	PVC	52.9
100	PVC	17.2
100	PVC	160.5

TABLE 2.0 - ZONE 2 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
100	PVC	5.9
100	PVC	1.2
100	PVC	0.6
100	PVC	10.1
100	PVC	21.3
100	PVC	27.2
100	PVC	16.3
100	Tile	73.7
100	Tile	15
100	Tile	21.3
100	Tile	48.6
100	Tile	95.5
100	Tile	39.8
100	Tile	39
100	Tile	30.8
100	Tile	57.9
100	Tile	27.3
100	Tile	31.4
100	Tile	101.1
100	Tile	41
100	Tile	80.7
100	Tile	7.6
100	Tile	12
100	Tile	8.5
100	Tile	16.7
100	Tile	57.3
100	Tile	81.9
100	Tile	59.8
100	Tile	56.6
100	Tile	39.6
100	Tile	43
100	Tile	22.1
100	Tile	21.7
100	Tile	36.5
100	Tile	78.3
100	Tile	30.3
100	Tile	14.6
100	Tile	27.8
100	Tile	21.5
100	Tile	57.1
100	Tile	14.6
100	Tile	41.4
150	HDPE	84.1
150	PVC	9.6
150	PVC	77.1

TABLE 2.0 - ZONE 2 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	PVC	85.3
150	PVC	61
150	PVC	51.4
150	PVC	71.1
150	PVC	2
150	PVC	16.4
150	PVC	50.4
150	PVC	2.8
150	PVC	64.2
150	PVC	49.9
150	PVC	100.3
150	PVC	45.1
150	PVC	71.6
150	PVC	52.5
150	PVC	12.8
150	PVC	42.2
150	PVC	23.6
150	PVC	46.2
150	PVC	57.6
150	PVC	47.1
150	PVC	4.7
150	PVC	159.5
150	PVC	68.5
150	PVC	22.9
150	PVC	97.1
150	PVC	52.1
150	PVC	36.2
150	PVC	46.6
150	PVC	112.9
150	PVC	58.9
150	PVC	65.5
150	PVC	17.5
150	PVC	58.9
150	PVC	47.2
150	PVC	29.2
150	PVC	63.8
150	PVC	257.6
150	PVC	36.2
150	PVC	61.1
150	PVC	76.9
150	PVC	125.2
150	PVC	39
150	PVC	55.4
150	PVC	76.7
150	PVC	31.1

APPENDIX A
PIPE DETAILS

TABLE 2.0 - ZONE 2 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	PVC	60.2
150	PVC	68.3
150	PVC	54.6
150	PVC	22.3
150	PVC	117
150	PVC	137.9
150	PVC	91.1
150	PVC	36.3
150	PVC	71.6
150	PVC	34.9
150	PVC	6
150	PVC	27.6
150	PVC	2
150	PVC	25.3
150	PVC	62.1
150	PVC	3.6
150	PVC	47.4
150	PVC	0.9
150	PVC	26.2
150	Tile	60.2
150	Tile	57.2
150	Tile	41.9
150	Tile	42.8
150	Tile	27.3
150	Tile	98.4
150	Tile	32.1
150	Tile	20.3
150	Tile	4.2
150	Tile	38.9
150	Tile	9.4
150	Tile	29.3
150	Tile	36
150	Tile	9.8
150	Tile	116
150	Tile	178.3
150	Tile	32.7
150	Tile	63.2
150	Tile	25.3
150	Tile	76.8
150	Tile	97.3
150	Tile	18.7
150	Tile	18.2
150	Tile	64.3
150	Tile	234.8

TABLE 2.0 - ZONE 2 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	Tile	91.2
150	Tile	54.3
150	Tile	43.6
150	Tile	137.6
150	Tile	34.4
150	Tile	87.2
150	Tile	136.6
150	Tile	63.5
150	Tile	12.2
150	Tile	9.6
150	Tile	14.6
150	Tile	23.4
150	Tile	43.2
200	HDPE	31.6
200	PVC	29.3
200	PVC	78
200	PVC	25.8
200	PVC	45.5
200	PVC	49.4
200	PVC	54.6
200	PVC	73.5
200	PVC	9.2
200	PVC	269.9
200	PVC	88.4
200	PVC	29
200	PVC	4.9
200	PVC	20.7
200	PVC	1.8
200	PVC	1.9
200	PVC	48.4
200	Tile	39.1
200	Tile	63.8
200	Tile	127.5
200	Tile	122.3
200	Tile	21.2
200	Tile	104
200	Tile	64.1
200	Tile	14.6
200	Tile	34.4
200	Tile	25.6
200	Tile	18.9
200	Tile	30.4
200	Tile	17.3
200	Tile	45.9

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TABLE 2.1 - ZONE 2 LATERAL PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	30.8
100	PVC	59
100	PVC	83.7
100	PVC	16
100	PVC	61.1
100	PVC	47.7
100	PVC	50
100	PVC	23.4
100	PVC	27.6
100	PVC	53.5
100	PVC	31.5
100	Tile	47.2
100	Tile	35.4
100	Tile	30.8
100	Tile	69.6
100	Tile	30.9
100	Tile	53.5
100	Tile	18.6
100	Tile	33.4
100	Tile	12
100	Tile	3.6
100	Tile	11.8
100	Tile	90.5
100	Tile	30.4
100	Tile	30.6
100	Tile	45.1
100	Tile	74.5
100	Tile	34.4
100	Tile	41.8
100	Tile	35.1
100	Tile	67.2
100	Tile	40.7
100	Tile	40.4
100	Tile	64.3
100	Tile	118.3
100	Tile	34.8
100	Tile	20.3
100	Tile	42.8
150	PVC	67.1
150	PVC	16.5
150	PVC	49.6
150	PVC	23.1
150	PVC	6.4

TABLE 2.1 - ZONE 2 LATERAL PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	PVC	12.4
150	Tile	57.5
150	Tile	17.3
150	Tile	176.4
150	Tile	51.5
150	Tile	22.6
150	Tile	77.7
150	Tile	71.2
150	Tile	162
150	Tile	62.9
150	Tile	18.4
200	Tile	7.1

APPENDIX A
PIPE DETAILS

TABLE 3.0 - ZONE 3 MAINLINE PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	33
100	PVC	76.5
100	PVC	115.4
100	PVC	56.9
100	PVC	47
100	PVC	48.8
100	PVC	71.5
100	PVC	36.8
100	PVC	17
100	PVC	1.4
100	PVC	21.2
100	PVC	37.2
100	Steel	27.1
100	Tile	36.1
100	Tile	151.3
100	Tile	31.1
100	Tile	50.6
100	Tile	25.3
100	Tile	8.5
150	AC	337.4
150	PVC	16.3
150	PVC	42.1
150	PVC	32.6
150	PVC	9.3
150	PVC	53.1
150	PVC	74.1
150	PVC	9.7
150	PVC	358.8
150	PVC	77
150	PVC	10.8
150	PVC	41.1
150	PVC	48
150	PVC	23.7
150	PVC	4.2
150	PVC	12.8
150	PVC	40.4
150	PVC	10.1
150	Tile	102.7
150	Tile	44.5
150	Tile	100.4
150	Tile	72.2
150	Tile	182.6
150	Tile	19.7

TABLE 3.0 - ZONE 3 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
200	PVC	115.3
200	PVC	68.5
200	PVC	16.3
200	PVC	20.4
200	PVC	255.3
200	PVC	24.5
200	PVC	46.8
200	PVC	57
200	PVC	85.4
200	PVC	59.5
200	PVC	97.2
200	PVC	36.7
200	PVC	97.1
200	PVC	113.8
200	PVC	68.5
200	PVC	98.5
200	PVC	73.6
200	PVC	4.8
200	PVC	18.6
200	PVC	11.6
200	Tile	2
200	Tile	200.8

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TABLE 3.1 - ZONE 3 LATERAL PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	34.1
100	PVC	18.3
100	Steel	28.5
100	Steel	16
100	Tile	12.7
100	Tile	105.6
100	Tile	24
100	Tile	21.8
200	PVC	77

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TABLE 4.0 - ZONE 4 MAINLINE PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	24.9
100	PVC	79.3
100	PVC	60
100	PVC	89.5
100	PVC	63.9
100	PVC	72.9
100	PVC	72.2
100	PVC	45.9
100	PVC	241.2
100	PVC	61
100	PVC	60.2
100	PVC	106.4
100	PVC	27
100	PVC	139.5
100	PVC	27.7
100	PVC	74.9
100	PVC	102.8
100	PVC	31.9
100	PVC	60.9
100	PVC	9.9
100	PVC	16.8
100	PVC	46
100	PVC	49.1
100	PVC	14.3
100	PVC	42.9
100	PVC	33.6
100	PVC	35.8
100	PVC	123.9
100	PVC	41.4
100	PVC	10.1
100	PVC	15
100	PVC	7.8
100	PVC	1.2
100	PVC	40.3
100	Tile	102.7
100	Tile	144.9
100	Tile	154.2
100	Tile	8.9
100	Tile	61
100	Tile	51.6
100	Tile	54.9
100	Tile	51.5
100	Tile	20.9
100	Tile	20.5

TABLE 4.0 - ZONE 4 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
100	Tile	12.4
100	Tile	26.9
150	AC	79.4
150	PVC	19.4
150	PVC	64.9
150	PVC	79.8
150	PVC	40.2
150	PVC	85.8
150	PVC	117.7
150	PVC	39.4
150	PVC	57.2
150	PVC	32.4
150	PVC	54.4
150	PVC	72.5
150	PVC	70.1
150	PVC	125.4
150	PVC	31.7
150	PVC	19.6
150	PVC	10.1
150	PVC	51.8
150	PVC	76.6
150	PVC	81
150	PVC	95.6
150	PVC	33.3
150	PVC	61.7
150	PVC	29.7
150	PVC	63.8
150	PVC	82.5
150	PVC	181.1
150	PVC	54
150	PVC	20.4
150	PVC	58.9
150	PVC	127.7
150	PVC	14.9
150	PVC	11.5
150	PVC	57.2
150	PVC	88.2
150	PVC	50.9
150	PVC	1.1
150	PVC	3.5
150	PVC	28.2
150	PVC	1.7
150	PVC	11.9
150	PVC	7.2

TABLE 4.0 - ZONE 4 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	PVC	5.1
150	PVC	11.9
150	PVC	6.2
150	PVC	1.2
150	PVC	7.1
150	PVC	25.7
150	PVC	1.5
150	PVC	40.6
150	PVC	25.3
150	PVC	24.7
150	PVC	4.2
150	PVC	31
150	Tile	79.7
150	Tile	103
150	Tile	24.5
150	Tile	105.9
150	Tile	60.5
150	Tile	80.3
150	Tile	56.4
150	Tile	19.5
150	Tile	117.8
150	Tile	18.4
150	Tile	26.9
150	Tile	5.1
150	Tile	96.8
150	Tile	24.7
150	Tile	8.5
150	Tile	53.4
150	Tile	25.3
150	Tile	48.4
150	Tile	30.5
150	Tile	16.7
150	Tile	50.8
150	Tile	9.5
150	Tile	18.3
200	HDPE	34.1
200	PVC	32.7
200	PVC	4.1
200	PVC	3.5
200	PVC	27.7
200	PVC	30.9
200	PVC	36.9
200	PVC	177.7
200	PVC	36.1

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TABLE 4.0 - ZONE 4 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
200	PVC	33.6
200	PVC	125.4
200	PVC	173.6
200	PVC	97
200	PVC	8
200	PVC	40.8
200	PVC	14.1
200	PVC	12.8
200	PVC	1.2
200	PVC	10.5
200	PVC	103.7
200	PVC	48.7
200	PVC	1.2
200	Tile	217.4
200	Tile	4
200	Tile	120.3
200	Tile	19.2
200	Tile	57.7
200	Tile	17.7
200	Tile	7.2
200	Tile	116
200	Tile	13.1
200	Tile	7.9
200	Tile	4.4
250	PVC	13.2
250	PVC	138.5
250	PVC	75.3
250	PVC	39.5
250	PVC	129.6
250	PVC	14
250	PVC	66.7
250	PVC	28.4
250	PVC	54.9
250	PVC	28.6
250	PVC	48
250	Tile	38.8
300	PVC	46.8
300	Tile	43.4
300	Tile	129.9
300	Tile	74.1
300	Tile	75.2

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TABLE 4.1 - ZONE 4 LATERAL PIPE		
DIA (mm)	MATERIAL	LENGTH
100	PVC	114.9
100	PVC	78.5
100	Tile	5
100	Tile	21.2
100	Tile	73.8
100	Tile	58.2
100	Tile	63.9
100	Tile	22.5
100	Tile	89.7
100	Tile	77.9
150	PVC	2.3
150	PVC	3.8
150	PVC	20.4
150	PVC	18.1
150	Tile	58.4
150	Tile	29.1
150	Tile	96
150	Tile	77.7
150	Tile	16.8
150	Tile	46.3
150	Tile	24.6
150	Tile	2.8

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TABLE 1.10 - ZONE 1 MAINLINE PIPE CONTINUED		
DIA (mm)	MATERIAL	LENGTH
150	Tile	41.4
150	Tile	79.1
150	Tile	134.3
150	Tile	7
150	Tile	39.9
150	Tile	3.9
150	Tile	6.9
200	PVC	28.1
200	PVC	33.2
200	PVC	47.7
200	PVC	173.9
200	PVC	41.4
200	PVC	57.7
200	PVC	179.4
200	PVC	81.1
200	PVC	122.2
200	PVC	60.5
200	PVC	73.9
200	PVC	92.4
200	PVC	66.5
200	PVC	63.7
200	PVC	38.2
200	PVC	4
200	PVC	18.4
200	Tile	44.7
200	Tile	38.4
300	PVC	48.6