

Village of New Denver

Kootenay Street Watermain

Contract No. 1479-042-002B

CONTRACT DOCUMENTS

SET NO. _____

Owner:



Village of New Denver
115 Slocan Avenue, PO Box 40
New Denver, BC V0G 1S0

Contract Administrator:



TRUE Consulting
#2 – 860 Eldorado Street
Trail, BC V1R 3V4

August 2023
TRUE Ref: 1479-042-002

Owner: **The Village of New Denver**

Contract: **Kootenay Street Watermain**

Reference No.: **1479-042-002B**

1.0 Introduction

1.1 These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:

- Install 74m of 200mm diameter DR25 C900 PVC watermain (owner supplied pipe).
- Supply and install fire hydrant assembly.
- Construct reconnection to existing 100mm diameter water service.
- Tie-ins to existing 150mm diameter watermain.
- Supply and install 31m of 150mm diameter DR18 C900 PVC watermain.
- Supply and install two 100mm diameter blowoff assemblies.
- Surface restorations.

1.2 Direct all inquiries regarding the *Contract*, to:

Scott Wallace, P.Eng.

TRUE Consulting

Address: #2 – 860 Eldorado Street, Trail, BC V1R 3V4

Phone: 250-368-8707

Fax: 250-368-8708

Email: swallace@true.bc.ca

2.0 Tender Documents

2.1 The Village of New Denver (hereby The Village) is inviting tenders for watermain construction. Contract documents pertaining to this tender are attached as follows:

- Tender Form - Schedule of Quantities
- Tender Appendices:
 - Construction Schedule
 - Experience of Superintendent
 - Comparable Work Experience
 - Subcontractors
 - Force Account Rate Schedule
- Contract Provisions
- Measurement for Payment
- Design Drawings

3.0 Submission of Tenders

- 3.1 Tenders and tender amendments may be submitted by email or as a hard copy in a sealed envelope.
- 3.2 To submit by email:
- Subject line noting *Contract Title* and Reference No.,
 - Attachments in PDF format (multiple PDFs are acceptable) including the Tender Form with Appendices,
 - Maximum email size – 10Mb. Larger files can be split into multiple emails
- Submissions by email are to be received by the Village of New Denver at:
- Email:** cao@newdenver.ca
- 3.3 To submit as a hard copy, submission must be received in a sealed envelope, marked on the outside with the above *Contract Title* and Reference No., at the office of:
- Village of New Denver (City Hall)
- Address:** 115 Slocan Avenue, PO Box 40
New Denver, BC V0G 1S0
- Fax:** 250-358-7251 (for tender amendments only)
- 3.4 Tenders and tender amendments are to be received on or before:
- Tender Closing Time: 2:00 pm** local time
- Tender Closing Date: Tuesday September 5, 2023**
- 3.5 Late tenders will not be accepted or considered, and will be returned unopened.
- 3.6 A public tender opening is not planned for this project. However, unofficial bid price results will be provided to the tenderers.

4.0 Additional Instructions to Tenderers

- 4.1 **Pre-Tender Meeting**
- An optional pre-tender meeting will be held on **Tuesday August 22, 2023 at 10:00 am** at the project site. Design team members and Village staff will be available to answer questions regarding the tender. Any new information that is requested or generated will be included in an Addendum that will be issued at least three days prior to the Tender Close.
- 4.2 **Construction Intent and Staging**
- This project will involve constructing a new 200mm diameter watermain on Kootenay Street. In the future, this watermain will function as a primary connection for the Village's water supply wells. There is an existing 150mm diameter watermain on Kootenay Street. Portions of the existing watermain will be capped and abandoned as a part of this project; however, the existing 100mm diameter service connected to the 150mm diameter watermain must be maintained during construction. It is expected that the existing watermain will conflict with the proposed watermain at the crossing / tie in near the corner of Kootenay Street and

Slocan Avenue; accordingly, temporary end caps are proposed to be installed on the existing watermain to the north and west of this location to enable the existing system to be maintained while the new watermain is installed.

4.3 Inspection of the Place of Work

All tenderers are responsible to examine the project site before submitting a tender. A tenderer has the full responsibility to be familiar with and make allowance in the tender for all conditions at the project site that might affect the tender, including the location of the work, local conditions, topographical soil conditions, weather and access. Unless otherwise specified in the Contract Provisions, a tenderer is not required to do subsurface investigations. By submitting a tender, a tenderer represents that the tenderer has examined the project site, or specifically elected not to. No additional payments or time extensions shall be claimable or due because of difficulties relating to conditions at the project site which were reasonably foreseeable by a Contractor qualified to undertake the work.

Owner: **Village of New Denver**
Contract: **Kootenay Street Watermain**
Reference No. **1479-042-002B**

To Owner:

WE, THE UNDERSIGNED: 1.1 have received and carefully reviewed all of the *Contract Documents*, including the following Addenda:

;

(ADDENDA, IF ANY)

1.2 have full knowledge of the *Place of the Work*, and the *Work* required; and

1.3 have complied with the Instructions to Tenderers; and

**ACCORDINGLY WE
HEREBY OFFER**

2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Contract Documents*, in strict compliance with the *Contract Documents*; and

2.2 to achieve the *Milestone Dates*, including the dates for *Substantial Performance* and *Total Performance* of the *Work* as listed in this Form of Tender; and

2.3 to do the *Work* for the price, which is the sum of the products of the actual quantities incorporated into the *Work* and the appropriate unit prices set out in Appendix 1, the "*Schedule of Quantities and Prices*", plus any lump sums or specific prices and adjustment amounts as provided by the *Contract Documents*. For the purposes of tender comparison, our offer is to complete the *Work* for the "*Tender Price*" as set out in Appendix 1 of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Quantities and Prices*, and excludes *GST*.

**OUR ADDRESS IS AS
FOLLOWS:**

Phone:

Fax:

Attention:

This Tender is executed this

_____ day of _____, 2023.

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)



Tender Form - Schedule of Quantities

APPENDIX 1

Owner: Village of New Denver
Contract Title: Kootenay Street Watermain
Reference Number: 1479-042-002B

The Village of New Denver is requesting pricing for the work shown on the attached drawings. A schedule of quantities is provided below for reference; additional quantity information is included in the attached Measurement for Payment section.

ITEM & DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
1.0 General requirements: mobilization, demobilization, traffic control, project safety, survey layout, project record documents.	LS	1		
2.0 Sawcut asphalt.	lm	70		
3.0 Asphalt road removal and reconstruction. Includes subexcavation, subgrade preparation, subbase and base gravels installation, and repaving.	m ²	190		
4.0 Gravel parking lot removal and reconstruction. Includes excavation, stockpiling, subgrade preparation, and resurfacing from stockpile.	m ²	300		
5.0 Install owner-supplied 200mm dia. DR25 C900 PVC watermain.	lm	74		
6.0 Construct fire hydrant assembly	LS	1		
7.0 Maintain existing 100mm diameter water service. Includes temporary end caps on 150mm diameter watermain.	LS	1		
8.0 Tie in to existing 150mm diameter watermain at Slocan Avenue. Includes tee, 200mm and 150mm gate valves, 200x150 reducer, and pipe coupler.	LS	1		
9.0 Tie in to existing 150mm diameter watermain on Kootenay Street. Includes two 200mm 45 deg. bends, 200x150 reducer, and pipe coupler.	LS	1		
10.0 Reconstruct connection to existing 100mm diameter water service. Includes 200x200x100 tee and re-use of existing 100mm gate valve.	LS	1		
11.0 Supply and install 200mm diameter end cap with precast concrete thrust block.	LS	1		
12.0 Supply and install 150mm dia. DR18 C900 PVC watermain. Includes watermain bends and end caps.	lm	31		
13.0 Supply and install 100mm dia. blowoffs. Includes tees, adapters, and thrust blocks.	each	2		
			Tender Price:	
			GST (5%):	
			Tender Price plus GST:	

Notes:

1. Works to be completed in accordance with attached Contract Provisions, Measurement for Payment, and the Contract Drawings.
2. This tender will be valid and open for acceptance by the Owner for 30 calendar days after the tender close.

Submitted by: Contractor

Date (DD / MM / YYYY)

Village of New Denver**Kootenay Street Watermain**

Indicate Schedule for Part 1 work with bar chart for major item descriptions and time.

MILESTONE COMPLETION DATES:

Anticipated Contract Award:	September 12, 2023
Milestone 1 (fire hydrant commissioned):	October 1, 2023
Milestone 2 (Substantial Performance):	October 31, 2023
Milestone 3 (Total Performance):	November 15, 2023

ACTIVITY Week Beginning:	CONSTRUCTION SCHEDULE								
	Sept 18	Sept 25	Oct 2	Oct 9	Oct 16	Oct 23	Oct 30	Nov 6	Nov 13
Mobilization									
Watermain installation									
Fire hydrant commissioning									
Surface restorations									

Note: In the case of a discrepancy between the Preliminary Construction Schedule prepared by the Tenderer and the Milestone Dates prescribed by the Owner above, the Milestone Dates will govern.

Tenderer's Initials

Village of New Denver

Kootenay Street Watermain

Name: _____

Experience: _____

Dates: _____

Project Name: _____

Responsibility: _____

_____References: _____

Dates: _____

Project Name: _____

Responsibility: _____

_____References: _____

Dates: _____

Project Name: _____

Responsibility: _____

_____References: _____

Tenderer's Initials _____

Village of New Denver

Kootenay Street Watermain

PROJECT	OWNER / CONTACT NAME PHONE and FAX	WORK DESCRIPTION	VALUE (\$)
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
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	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		
	Owner / Contract _____ Phone () _____ Fax () _____		

Tenderer's Initials

Village of New Denver

Kootenay Street Watermain

TENDER ITEM	TRADE	SUBCONTRACTOR NAME	PHONE NUMBER
	PIPE LAYING / TRENCHING		
	PAVING		

Tenderer's Initials

Village of New Denver**Kootenay Street Watermain**

The Contractor shall provide hourly rates for all Labour and Equipment intended to be used in completion of the works. These Hourly Rates are to be 'all-inclusive', or 'all-found'. Labour rates are to be inclusive of wages, insurance, holiday pay, benefits, small tools, overhead, and profit. Equipment rates are to be inclusive of operator, overhead, and profit.

LABOUR	
<i>CLASSIFICATION BY TRADE</i>	<i>ALL-INCLUSIVE HOURLY RATE</i>
Superintendent	
Foreman	
Labourer	

EQUIPMENT		
<i>TYPE</i>	<i>UNIT AND MODEL DESCRIPTION</i>	<i>ALL-INCLUSIVE HOURLY RATE</i>
Backhoe		
Excavator		
Loader		
Tandem Truck		
Truck and Pup		
Skid Steer		

Tenderer's Initials

**Village of New Denver
Kootenay Street Watermain**

CP-1 Scope of Work

The Contractor shall supply all labour, equipment and materials necessary to construct the works as described in the Tender or shown on the design drawings.

The work is intended to be a complete project; any items required to complete the work as described in the Tender or shown on the design drawings, but not specifically listed in the Schedule of Prices are to be considered incidental to the work.

CP-2 Contacts

1. Owner's Representative:

Lisa Scott
Village of New Denver

Phone: 250-358-2316
Email: cao@newdenver.ca

2. Contract Administrator:

Scott Wallace, P.Eng.
TRUE Consulting

Phone: 250-368-8707
Email: swallace@true.bc.ca

CP-3 Award

The Owner reserves the full right, in its sole discretion and according to its own judgement of its best interest to:

- Reject any or all tenders;
- Waive any defect of deficiency in a tender which does not materially affect the tender or the Tender Price relative to other tenders and accept that tender;
- Accept any tender.

In exercising its discretion, the Owner will have regard to the information provided in the Appendices to the Tender Form including the schedule to complete the work, the proven experience of the tenderer and any listed subcontractors to do the work. In no event shall the Owner be liable for a tenderer's costs of preparing a tender.

CP-4 Errors, Inconsistencies or Omissions in the Contract Documents

The Contractor shall, as a competent contractor, reasonably experienced in the work, review the Contract Documents and promptly report to the Contract Administrator any discovered error, inconsistency or omission. In making such review the Contractor does not assume any responsibility or liability to the Owner or the Contract Administrator to discover all errors, inconsistencies or omissions.

If the Contractor does discover any error, inconsistency or omission in the Contract Documents the Contractor shall not proceed with affected work without receiving directions or clarifications from the Contract Administrator. If the Contractor proceeds with work in the face of an error, inconsistency or omission that the Contractor discover, or that a competent contractor, reasonably experienced in the work, would have discovered, without additional instructions from the Contract Administrator, then the Contractor shall at the Contractor's cost remove or replace any incorrectly constructed work.

If the Contractor determines that additional instructions are required for the performance of the work the Contractor shall give the Contract Administrator timely notice of such requirement, and if it becomes apparent that a number of additional instructions will be required, the Contractor shall co-operate with the Contract Administrator to establish a schedule for the issuance of additional instructions.

CP-5 General Requirements

Work shall be performed in accordance with the Occupational Health and Safety Regulation of BC. All workers shall be covered under the WorkSafeBC compensation program. The Contractor must provide a clearance letter from WorkSafeBC showing their account is in good standing prior to the start of construction.

The construction zone and machinery must be sufficiently protected to ensure a safe working area, and to limit access by the public.

These Contract Provisions are created as a stand-alone document. If an issue arises which is not described by these Contract Provisions, then MMCD 2019 Edition General Conditions and Specifications may be referenced to assist in resolving such issues. However, where Contract Provisions or specifications are provided herein or on the Drawings, these take precedence over MMCD.

CP-6 Business Licence

The Contractor (and subcontractors) must hold a valid business licence for the Village of New Denver prior to the start of construction.

CP-7 Required Insurance

The Contractor shall, at the Contractor's expense, throughout the term of the Contract, maintain the following insurance:

Automotive Liability Insurance

Limits: Bodily Injury and Property Damage – inclusive each accident \$3,000,000

Maintain such insurance as required under the Insurance (Motor Vehicle) Act of British Columbia. The Contractor shall provide the Owner with a Certificate of Insurance, I.C.B.C. form No. APV 47, for owned or leased vehicles as evidence of third party motor vehicle insurance coverage.

Commercial General Bodily Injury and Property Damage Liability Insurance

Limits: Bodily Injury and Property Damage – inclusive \$5,000,000

The insurance shall include the Contractor's Contingent Liability, and Contractual Liability of sufficient scope to include the liability assumed by the Contractor under the terms of this Contract, and Completed Operations Liability. The policy shall include the Owner and Contract Administrator as additional insured with a cross liability clause. And property damage deductible shall be for the account of the Contractor and shall not exceed \$10,000 for any one occurrence.

Course of Construction Builders' Risk Insurance

Coverage on an 'All Risks' basis in the amount of not less than the amount of the Contract Price; subject to a deductible provision for the Contractor's account not exceeding \$10,000 each loss. Coverage to include the Owner as additional insured.

Insurance on Contractor supplied Equipment

Equipment rented or owned by the Contractor to its full insurable value.

CP-8 Indemnity

Notwithstanding the provision of any insurance coverage by the Owner, the Contractor shall indemnify and save harmless the Owner, its elected officials, officers, employees, agents, solicitors, successors, assigns or representatives from and against any losses, claims, damages, actions and causes of action, costs (including legal costs), expenses, judgments and proceedings arising out of or in connection with any error, or negligent or malicious act or omission, by the Contractor or any of its officers, agents, representatives, employees or sub-consultants, except to the proportionate extent of any contributorily negligent or wrongful act or omission of the Owner, or any of its elected officials, officers, employees, agents, solicitors, successors, assigns or representatives. The terms and conditions of this indemnity provision shall survive the completion of all Services and the termination of this Agreement for any reason.

In addition, the *Contractor* shall indemnify the *Owner* from third party liability with respect to health care costs recoverable under the *Health Care Costs Recovery Act* arising out of the *Contractor's* performance of the Contract Work.

CP-9 Prime Contractor

Prior to issuance of the Notice to Proceed, the *Contractor* shall sign and submit a Prime Contractor Agreement form (to be provided by *Contract Administrator*), acknowledging acceptance and understanding of the requirements and obligations of the Prime Contractor role. If at any time the *Contractor* believes he is no longer acting as the Prime Contractor, due to multiple contractors or other factors, written notification must be provided by the *Contractor* to the *Contract Administrator*.

An investigation will then be completed and the Prime Contractor status will be confirmed or amended as warranted.

CP-10 Notifications

The Village of New Denver will be responsible for providing general public notice of the project.

The Contractor shall be responsible for notifying, in writing, all residents and businesses directly affected by the proposed construction within the project limits and affected area. Each impacted parcel shall be contacted 7 days in advance of construction. The content and form of the written notification shall be reviewed by the Contract Administrator and the Contractor shall incorporate any modifications or comments made into notification prior to issuance.

The Contractor shall notify the Contract Administrator a minimum of 72 h in advance of any interruption in water service. The Contractor shall notify (in writing) affected residents and businesses a minimum of 24 h in advance of any interruption in water service.

CP-11 Schedule

The construction schedule shall be in accordance with the submitted Tender Appendix 1. Working hours will be restricted to 7 am to 7 pm Monday to Saturday, with no work on Sundays or Statutory Holidays unless otherwise approved by the Contract Administrator.

CP-12 Waterworks

Do not interrupt water service for more than 3 hours and confine this period to between 8am and 4pm. An exception to this prescribed maximum service interruption duration is to accommodate the two watermain tie-ins; an 8 hour shut-down will be allowed for each of those connections. Water service interruptions are only permitted Monday through Friday, not including statutory holidays.

200mm diameter DR25 C900 PVC watermain pipe will be supplied by the Village of New Denver for installation by the Contractor. The Contractor will be responsible for cleaning the pipe interiors by swabbing to remove dust and debris prior to installation. The pipe is available for pickup by the Contractor from the Village reservoir located at the south end of Denver Canyon Road, here: <https://goo.gl/maps/8Zd8pBKL9K2Hbdyx8>

The watermain is to be cleaned, pressure tested to 150psi, and disinfected with bacteriological sampling completed in accordance with AWWA C651-14. Quoting from AWWA C651-14, Section 5: Verification:

“Option A: Before approving a main for release, take an initial set of samples and then resample again after a minimum of 16 hr using the sampling site procedures outlined. Both sets of samples must pass for the main to be approved for release.

CP-13 Site Access and Site Security

The Contractor is responsible for site security. The Contractor shall make provision at all times for adequate separation between public and work area hazards, active and inactive, such as construction equipment, excavations and equipment by means of delineation, barricades and fencing

The Site Inspector is to approve any trenches left open overnight. These trenches shall be fenced with 1.8m high metal fencing, in conjunction with reflectorized signs, barricades and flashers. Any trenches left open overnight shall not disrupt access to or cause any other service inconvenience to any dwelling or business.

CP-14 Traffic Control

Emergency access and pedestrian access to all businesses and residences shall be maintained at all times.

Vehicle access to all properties on Kootenay Street (local traffic) shall be maintained at all times. Suitable vehicle access shall have a minimum lane width of 3.0m and be defined as a bladed and comfortable driving surface, free of potholes and other impediments, sufficient to accommodate a standard two-wheel drive passenger vehicles at a speed of 20 km/h.

The Kootenay Street roadway can be closed to the general public between Slocan Avenue and 6th Avenue (Highway 31A) for the duration of the project.

The Regional District of Central Kootenay's recycling depot is located adjacent to the project, on the southern side of the 600 Block of Slocan Avenue. Public vehicle access to the recycling depot must be maintained when the recycling depot is open (Tuesdays, Thursdays and Saturdays from 10am to 4pm).

All construction signage and traffic control must be in compliance with the Contract Documents, local bylaws, MOTI Manual and as directed by the Contract Administrator. All signage, barricades, delineators and garments must comply with MoTI Technical Circular T09-05 for Retro-Reflectivity.

The Contractor shall designate a Traffic Control Supervisor responsible for site safety (pedestrian, cyclist and vehicles) with specific training as identified in the MoTI Traffic Control Manual. The Traffic control Supervisor and the Site Inspector will review signage identified in the Contractor's Traffic Plan prior to construction on each stage and on a daily basis. The Traffic Control Supervisor shall maintain a Traffic Control Log Book as required by the MoTI Manual to facilitate a safe traffic control system for dynamic and static construction zone operation.

The Contractor shall provide additional written notice to residents and businesses one day prior to vehicle access closures or public access restrictions. The content and form of the written notifications shall be reviewed and approved by the Contract Administrator prior to delivery.

The Contractor shall provide daily/weekly notification and coordination with all emergency and public services, including but not limited to fire, police, ambulance, transit, garbage collection and Canada Post. If regular recycling or garbage collection is impeded due to construction activity, the Contractor shall ensure that recycling and garbage is removed from the curbside and disposed.

The Contractor shall make provision at all times for adequate separation between public and work area hazards, active and inactive, such as construction equipment, excavations and equipment by means of delineation, barricades and fencing. Applicable traffic control devices used for night time service must have ASTM9 equivalent or diamond grade equivalent reflectivity and flashing beacons. Where equipment enters or exists in the work area, Traffic Control Persons shall be used.

The Site Inspector is to approve any trenches left open overnight. These trenches shall be fenced with 1.8m high metal fencing, in conjunction with reflectorized signs, barricades and flashers. Any trenches left open overnight shall not disrupt access to or cause any other service inconvenience to any dwelling, business or pedestrian walkway.

The Contractor shall utilize H-20 traffic load steel plates for emergency crossings or other short term trench or excavation crossings required for access purposes.

All regulatory signs that are affected by the work must be removed and replaced by the road jurisdiction crews only (i.e. stop signs, speed zone signs, etc.). Contractor to provide 7 days written notice to Contract Administrator for sign removal.

CP-15 Quality Control

The Contractor is responsible for Quality Control. The Contractor shall conduct and pay for sufficient testing to demonstrate that specific materials, products and workmanship are in strict conformance with the Contract Documents. For this project, expected materials testing shall include but not be limited to the following:

- Sieve analysis and proctors for all imported granular materials.
- Density testing of placed gravels, pipe bedding and trenching backfill to confirm that the techniques and level of compaction effort is sufficient to meet the required specifications.

The Contractor shall provide the results of all Quality Control tests to the Owner.

The Owner and/or its appointed representative will have the right of access to the works for purposes of inspecting the Contractor's work to determine compliance with these Contract Documents.

The Owner may retain the services of an independent testing agency and pay for additional Quality Assurance testing. The cost of failed Quality Assurance tests because of non-compliance of the work with the minimum requirements of materials and workmanship shall be paid for by the Contractor. The costs of these extra tests will be calculated by the Contract Administrator, based on invoices for the testing, and will be subtracted from payment to the Contractor.

CP-16 Oral Agreements

No oral instruction, objection, claim, or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by agreed waiver or modification thereof in writing.

CP-17 Location of Existing Utilities

Existing utilities are present in the vicinity of the work. The design drawings show the approximate location of known existing utilities, however other services may exist and the Contractor shall use care and caution in their excavation operation so as not to break any existing services. The Contractor will be responsible for locating and protecting these utilities. This locating and protection will be at the Contractor's expense. The Contractor will be responsible for any damage that may arise, as a result of the Contractor's negligence in failing to locate and protect these utilities.

The Contractor is responsible for the co-ordination of their work with all utility companies as well as the Owner.

CP-18 Dust Control

The Contractor is responsible for dust control. The Contractor must maintain adequate dampness on all "disturbed" areas so as to prevent unacceptable dust levels. Dust levels will be deemed unacceptable if the Contract Administrator deems them unacceptable.

Water for dust control and materials compaction can be made available at no cost to the Contractor from a fire hydrant at the intersection of Slocan Avenue and Bellevue Street (adjacent to the Village fire hall). The Contractor is to supply a lockable double-check backflow preventer device with 65mm diameter isolation gate valve for connection to a Village of New Denver fire hydrant.

CP-19 Payment

Payment will be made in accordance with the Tender Form – Schedule of Quantities for completed work. The Owner will issue payment on approved invoices prepared by the Contractor. The invoices provided by the *Contractor* shall clearly state the 10% Builder's Lien holdback amount. Invoices will not be processed on a monthly basis. Payment in the amount of 100% of the completed work (less a 10% Builders' Lien holdback) will be made as follows: one payment within thirty days of Substantial Performance, and one payment with thirty days of Total Performance (including rectification of any deficiencies). The 10% Builder's Lien holdback payment shall be made once the requirements of the Builders' Lien Act have been met.

CP-20 Claims for Extra Work

If the Contractor claims that any instruction by drawings or otherwise involve extra cost under this Contract, they shall give notice to the Contract Administrator in writing immediately. All claims for extra work must be approved by the Owner. Once approved, the Contractor shall then follow the Contract Administrator's instructions for proceeding with the work in question. No Claim for Extra Work shall be valid unless so made.

CP-21 Substantial Performance

Substantial Performance will be achieved once all work except asphalt paving is complete and ready to be used by the Owner for the purposes intended. The Contractor may apply to the Contract Administrator for a certificate of substantial performance once that status is achieved.

Total performance of the contract will be deemed to have been achieved once 100% of the contract work is completed and all deficiencies remedied.

CP-22 Maintenance Period

The Contractor will be responsible to correct, at their own expense, any defects in the work due to faulty products or workmanship appearing within a one (1) year maintenance period, commencing on the date of substantial performance. Any works completed after the date of substantial performance will have their own one (1) year maintenance period, commencing on the date those works are completed. The Contractor will also be responsible for all costs, including the cost of Contract Administration, required for investigation of any repair of defects in their work.

**Village of New Denver
Kootenay Street Watermain**

This section provides "Measurement for Payment" details for each of the items listed in the Schedule of Prices.

Note that the work is intended to be a complete project; any minor items not listed in the Schedule of Prices but typical of this type of work, such as but not limited to utility locates, exploratory digging, protection of utilities, temporary construction fencing, disposal of waste trenching materials, adjustment of existing surface features or appurtenances, public relations, miscellaneous fittings, connections or removals shall be considered incidental to the work and no separate payment will be made.

All prices shall include supply, installation, overhead and profit. All materials supplied are to be in new condition.

1.0 General requirements.

This item includes the following scope of work:

- Payment for mobilization and demobilization of equipment, materials, and crew.
- Provision of traffic control, and construction site safety management.
- Provision of survey layout for the proposed waterworks.
- Preparation project record documentation including as-built drawing markups or surveyed points of completed works.

2.0 Sawcut asphalt.

This item includes sawcutting existing asphalt as shown on the drawings, prior to road repaving.

3.0 Asphalt road removal and reconstruction.

This item includes the following scope of work:

- Removal and disposal of existing asphalt up to 100mm thickness.
- Subexcavation and disposal to 365mm thickness.
- Subgrade preparation including grading, moisture adjustment, and compaction.
- Supply, place and compact 300mm thick of 75mm minus select granular subbase gravel.
- Supply, place and compact 100mm thick of 19mm minus granular base gravel.
- Supply, place and compact 65mm thick asphalt pavement.

4.0 Gravel parking lot removal and reconstruction.

This item includes the following scope of work:

- Removal and stockpile of existing gravels up to 150mm thickness.
- Subgrade preparation including grading, moisture adjustment, and compaction.

- Supply from stockpile, place and compact 150mm thick of base gravel surfacing.

5.0 Install owner-supplied 200mm diameter DR25 C900 PVC watermain.

This item includes the following scope of work:

- Initial sawcutting of asphalt surface as needed.
- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Retrieval of watermain from the Village reservoir site, cleaning the pipe interiors by swabbing to remove dust and debris prior to installation.
- Installation of watermain including supply and installation of all bolts, gaskets, and tie rods as needed.
- Pressure testing, flushing, disinfection, and bacteriological sampling.

6.0 Construct fire hydrant assembly.

This item includes the following scope of work:

- Initial sawcutting of asphalt surface as needed.
- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of the 200x200x150mm tee with thrust block, 150mm gate valve, 6m of 150mm dia. DR18 C900 PVC watermain, bolts and gaskets as needed, and fire hydrant with tie rods to the tee/valve assembly.
- Pressure testing, flushing, disinfection, and bacteriological sampling.

7.0 Maintain existing 100mm diameter water service.

This item includes the work as needed to maintain the water service to the housing development on the corner of Kootenay Street and Slocan Avenue. This is anticipated to include supply and installation of two temporary end caps with precast concrete thrust blocks on the existing 150mm diameter watermain.

8.0 Tie in to existing 150mm diameter watermain on Slocan Avenue.

This item includes the following scope of work:

- Initial sawcutting of asphalt surface as needed.
- Exposing the existing watermain to confirm the condition and location.

- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of the 200x200x150mm tee with thrust block, 200mm gate valve, 150mm gate valve, 2m of 150mm dia. DR18 C900 PVC watermain, bolts and gaskets as needed, and pipe coupler connection.

9.0 Tie in to existing 150mm diameter watermain on Kootenay Street.

This item includes the following scope of work:

- Initial sawcutting of asphalt surface as needed.
- Exposing the existing watermain to confirm the condition and location.
- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of two 200mm 45-degree bends with precast concrete thrust blocks, bolts and gaskets as needed, and pipe coupler connection.

10.0 Reconnection to existing 100mm diameter water service.

This item includes the following scope of work:

- Exposing the existing water service to confirm the condition and location.
- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of a 200x200x100mm tee with thrust block, 100mm diameter DR18 C900 watermain as needed, salvage and re-use existing 100mm gate valve, bolts and gaskets as needed, pipe coupler connection, and tie rods from valve to tee.

11.0 Supply and install 200mm end cap with precast concrete thrust block.

This item includes the following scope of work:

- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of a 220mm end cap with precast concrete thrust block.

12.0 Supply and install 150mm diameter DR18 C900 PVC watermain.

This item includes the following scope of work:

- Initial sawcutting of asphalt surface as needed.
- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of watermain including all bolts, gaskets, and tie rods as needed.
- Supply and installation of one 45 degree HxH bend complete with concrete thrust block, and one 5 degree PVC bend.
- Supply and installation of four 150mm diameter end caps including temporary restraint (restraint for testing purposes).
- Pressure testing, flushing, disinfection, and bacteriological sampling.

13.0 Supply and install 100mm blowoffs.

This item includes the following scope of work:

- Trench excavation, stockpiling, disposal of surplus excavated material, installation of native backfill and compaction.
- Supply, place and compact pipe bedding and surround material (granular pipe bedding, pitrun sand, or river sand).
- Supply and installation of the 150x150x100mm tee with thrust block, 100mm FxMJ adapter, bolts and gaskets as needed, and 100mm diameter blowoff assembly with thrust block.

