

Addendum # 4

1 Changes

1.1 Form of Tender – Appendix 1

Remove the Schedule of Quantities contained in Addendum 1 and replace with the Schedule of Quantities attached and noted as **“Form of Tender – Appendix 1 – Addendum 4”**

1.2 Revise 9.0 Supplementary Specifications, Sub Section 9.1 Measurement and Payment as follows:

Remove Section **2.11 Cathodic Protection**

2 Clarifications

- 2.1 Please provide specific locations and quantities of cathodic protection required. - **Cathodic Protection is deleted from the tender. Tenderers to use the revised Schedule of Quantities that is attached to this addendum**
- 2.2 Please confirm that Lap Joint is not required on asphalt paving due to 50 mm depth – **Existing asphalt on Northwest Bay Road is anticipated to be thicker than 50 mm. Tender to include the cost of milling the joint between the existing asphalt and the proposed asphalt.**
- 2.3 Please confirm communication line discovered during the site meeting is the same as that referenced on the drawings. Please confirm if buried line is live or not. – **We are unable to confirm that the existing line is the same line that is shown on the drawings. The contractor remains responsible to identify, and protect existing utilities.**
- 2.4 Please confirm award date – **Contract award is anticipated on July 25, 2018, but may vary, and is subject to the conditions identified in the tender documents.**
- 2.5 Please provide rim of 1050 mm manhole – **Manhole rim elevation is 29.4 m +/-**
- 2.6 Please confirm all material for off-site disposal is uncontaminated, and that if contamination is suspected, this change will be dealt with as per MMCD. – **No tests have been undertaken to assess site material with respect to contamination under the provincial Contaminated Sites Regulation. If contaminated soil is encountered the terms of the contract will apply.**

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- 2.7 What restoration is required to the existing ditch line? Are we just re-ditching, or will there be a requirement for seeding or lining with rock? – **Trench lines to be restored to original condition. The tender does not include provision for seeding or rock lining.**
- 2.8 What is the extend of the 50-mm communications conduit installation. This is only shown at the highway crossing. Are we to allow to stub this off at either side of the casing pipe? – **50 mm communication conduit to run the length of the road crossing only. This line should be capped at both ends.**
- 2.9 Please provide Section 26 05 34 – Conduits, Conduit Fastenings and Conduit Fittings. This has not been included in the tender package. – **Find attached**
- 2.10 Is the highway crossing open cut, or is it intended to be a trenchless installation? – **Tender documents anticipate installation of the highway crossing in an existing casing pipe. Refer to tender documents for details**

-----END-----

Form of Tender - Appendix 1 - Addendum 4

**Regional District of Nanaimo
Nanoose Bay Peninsula Pump Station**

SCHEDULE OF QUANTITIES AND PRICES

(See paragraph 5.3.1 of the Instructions to Tenderers - Part II)

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

Summary Sheet

1.0 SUBTOTAL GENERAL AND SITEWORK	_____
2.0 SUBTOTAL WATERWORKS	_____
3.0 SUBTOTAL BUILDING AND MECH EQUIP.	_____
4.0 SUBTOTAL ELECTRICAL	_____
TENDER PRICE	_____
GST	_____
TENDER PRICE	_____

Form of Tender - Appendix 1 - Addendum 4

Regional District of Nanaimo

ITEM	MMCD REF.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1.0 GENERAL AND SITE WORKS						
1.1		Mobilization / Demobilization	LS	1		
1.2	01 55 00	Traffic Management	LS	1		
1.3	01 57 01	Sediment and Erosion Control	LS	1		
1.4	31 11 01	Clearing and Grubbing	LS	1		
1.5	31 22 01/31 23 01	Cut to Off-site Disposal	m3	800		
1.6	31 22 01/31 23 01	Cut to On-site Fill	m3	800		
1.7.1	33 40 01	375 mm PVC Storm Sewer	m	116		
1.7.2	33 40 01	200 mm PVC Catch Basin Lead	m	9		
1.8	33 44 01	1050 mm Manhole	each	1		
1.9	33 44 01	Catch Basin	each	1		
1.10	03 40 01	Headwall	each	2		
1.12	31 05 17/32 12 16	Asphalt Pavement	m2	500		
1.11	31 05 17/31 24 13	Access Road	LS	1		
SUBTOTAL GENERAL AND SITEWORK						
2.0 WATERWORKS						
2.1	33 11 01	400 Dia PVC Watermain	m	415		
2.2.1	33 11 01	400 Dia Gate Valve	m	1		
2.2.2	33 11 01	350 Dia Gate Valve	each	2		
2.2.3	33 11 01	300 Dia Gate Valve	each	2		
2.3.1	33 11 01	350 x 350 x 400 Cast Tee Fitting	each	1		
2.3.2	33 11 01	400 x 400 x 300 Cast Tee Fitting	each	2		
2.3.3	33 11 01	450 x 400 Cast Reducer Fitting	each	1		
2.3.4	33 11 01	400 x 350 Cast Reducer Fitting	each	1		
2.3.5	33 11 01	400 x 400 Cast Bend Fitting	each	8		
2.4	33 11 01	Hydrant	each	1		
2.5	33 11 01	Hydrant Access Culvert	each	1		
2.6	33 11 01	Air Valve	each	1		
2.7	33 11 01	Highway Crossing	LS	1		
2.8	33 11 01	Tie-In at Industrial Park	LS	1		
2.9	33 11 01	Tie-in Existing at Pump Station	LS	1		
2.1	33 11 01	Tie-in at New Pump Station	LS	1		
SUBTOTAL WATERWORKS						

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Regional District of Nanaimo

3.0 BUILDING AND MECHANICAL EQUIPMENT						
3.1	03 20 01/03 30 53	Pump Station Structure	LS	1		
3.2	03 20 01/03 30 53	Retaining Walls	LS	1		
3.3	33 11 01	Welded Stainless-Steel Pipework	LS	1		
3.4	33 11 01	Pre-Selected Pumping Equipment	LS	1		
3.5.1	33 11 01	150 mm Gate Valve	each	1		
3.5.2	33 11 01	200 mm Gate Valve	each	2		
3.5.3	33 11 01	300 mm Gate Valve	each	2		
3.5.4	33 11 01	150 mm Butterfly Valve	each	1		
3.5.5	33 11 01	300 mm Butterfly Valve	each	2		
3.5.6	33 11 01	150 mm Surge Anticipation Valve	each	1		
3.5.7	33 11 01	300 mm Check Valve	each	1		
3.6	33 11 01	250 mm Flow Meter	each	1		
3.8	33 11 01	Pump (Owner Supplied)	each	1		
3.9	33 11 01	Pressure Reducing Valve (Owner Supplied)	LS	1		
SUBTOTAL BUILDING AND MECH EQUIP.						
4.0 ELECTRICAL						
4.1		BC Hydro and Telus Connections	LS	1		
4.2		Standby Generator and Load Bank	LS	1		
4.3		Motor Control Center	LS	1		
4.4		Controls and Instrumentation	LS	1		
4.5		Building Electrical	LS	1		
4.6		Underground Electrical	LS	1		
4.7		System Programming, Testing and Commissioning	LS	1		
SUBTOTAL ELECTRICAL						

1. GENERAL

1.1 DOCUMENTS

- .1 This Section of the Specification forms a part of the Contract Documents and is to be read, coordinated and implemented in conjunction with all other parts.

1.2 RELATED SECTIONS

- .1 Section 26 05 00 - Common Work Results – Electrical
- .2 Section 26 52 00 – Emergency Lighting

1.3 REFERENCES

- .1 Canadian Standards Association (CSA)
 - .1 CAN/CSA-C22.2 No.18.3-12, Conduit, Tubing, and Cable Fittings
 - .2 CAN/CSA-C22.2 No.18.4-04 (R2013), Hardware for the Support of Conduit, Tubing and Cable
 - .3 CSA C22.2 No. 56-13, Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit.
 - .4 CSA C22.2 No. 45.2-08 (R2013), Electrical Rigid Metal Conduit – Aluminum, Red Brass, and Stainless Steel.
 - .5 CSA C22.2 No. 83-M1985 (R2013) – Electrical Metallic Tubing
 - .6 CSA C22.2 No. 211.2-06 (R2011), Rigid PVC (Unplasticized) Conduit.
 - .7 CAN/CSA C22.2 No. 227.2.1-04 (R2013), Liquid Tight Flexible Nonmetallic Conduit.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 26 05 00 – Common Work Results - Electrical.
- .2 Product data: submit manufacturer's printed product literature, specifications and datasheets.
 - .1 Submit cable manufacturing data.
- .3 Quality assurance submittals:
 - .1 Test reports: submit certified test reports.
 - .2 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .4 Instructions: submit manufacturer's installation instructions.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 In accordance with Section 26 05 00 – Common Work Results – Electrical.

2. PRODUCTS

2.1 CONDUITS

- .1 Rigid aluminum conduit: to CSA C22.2 No. 45.2.
- .2 Rigid pvc conduit: to CSA C22.2 No. 211.2.
- .3 Flexible metal conduit: to CSA C22.2 No. 56, liquid-tight flexible metal.
- .4 EMT Conduit: Not Permitted.

2.2 CONDUIT FASTENINGS

- .1 One hole stainless steel straps to secure surface conduits 53 mm and smaller. Two hole stainless steel straps for conduits larger than 53 mm.
- .2 Beam clamps to secure conduits to exposed steel work.
- .3 Channel type supports for two or more conduits at 1500 mm oc.
- .4 Threaded rods, 6 mm diameter, to support suspended channels.

2.3 CONDUIT FITTINGS

- .1 Fittings: manufactured for use with conduit specified. Coating: same as conduit.
- .2 Factory "ells" where 90 degree bends are required for 27 mm and larger conduits.

2.4 EXPANSION FITTINGS FOR RIGID CONDUIT

- .1 Weatherproof expansion fittings with internal bonding assembly suitable for 100 mm linear expansion.
- .2 Watertight expansion fittings with integral bonding jumper suitable for linear expansion and 19 mm deflection.
- .3 Weatherproof expansion fittings for linear expansion at entry to panel.

2.5 FISH CORD

- .1 Polypropylene.

3. EXECUTION

3.1 INSTALLATION

- .1 Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass.
- .2 Conceal conduits below slab.

- .3 Surface mount conduits except where they are in a secure area designated as a wire chase already. Concealed conduit may be required in aesthetic locations. If in doubt, consult Owner and Consultant for direction.
- .4 Use rigid pvc conduit underground.
 - .1 For rigid pvc conduit stubs in the metering manhole install threaded RPVC adapter, reducers, metal liquidtight fitting and flex as required for complete installation.
- .5 Use rigid pvc conduit between slab and device or wall mounted junction box.
- .6 Use liquid tight flexible metal conduit for connection to devices as indicated.
- .7 Minimum conduit size for lighting and power circuits: 21mm
- .8 Bend conduit cold:
 - .1 Replace conduit if kinked or flattened more than 1/10th of its original diameter.
- .9 Mechanically bend steel conduit over 21 mm diameter.
- .10 Field threads on rigid conduit must be of sufficient length to draw conduits up tight.
- .11 Install fish cord in empty conduits.
- .12 Remove and replace blocked conduit sections.
 - .1 Do not use liquids to clean out conduits.
- .13 Dry conduits out before installing wire.

3.2 SURFACE CONDUITS

- .1 Run parallel or perpendicular to building lines.
- .2 Locate conduits behind infrared or gas fired heaters with 1.5 m clearance.
- .3 Run conduits in flanged portion of structural steel.
- .4 Group conduits wherever possible on suspended or surface channels.
- .5 Do not pass conduits through structural members except as indicated.

3.3 CONCEALED CONDUITS

- .1 Run parallel or perpendicular to building lines.
- .2 Do not install horizontal runs in masonry walls.
- .3 Do not install conduits in terrazzo or concrete toppings.

3.4 CONDUITS IN CAST-IN-PLACE CONCRETE

- .1 Locate to suit reinforcing steel. Install in centre one third of slab.

- .2 Protect conduits from damage where they stub out of concrete.
- .3 Install sleeves where conduits pass through slab or wall.
- .4 Provide oversized sleeve for conduits passing through waterproof membrane, before membrane is installed. Use cold mastic between sleeve and conduit.
- .5 Do not place conduits in slabs in which slab thickness is less than 4 times conduit diameter.
- .6 Encase conduits completely in concrete with minimum 25 mm concrete cover.
- .7 Organize conduits in slab to minimize cross-overs.

3.5 CONDUITS IN CAST-IN-PLACE SLABS ON GRADE

- .1 Run conduits 27 mm and larger below slab and encased in 75 mm concrete envelope. Provide 53 mm of sand over concrete envelope below floor slab.

3.6 CONDUITS UNDERGROUND

- .1 Slope conduits to provide drainage.
- .2 Waterproof joints (pvc excepted) with heavy coat of bituminous paint.

3.7 CLEANING

- .1 Clean all underground ducts with a mandrel prior to pulling cables.

END OF SECTION