

Appendix D - Supplementary Contract Specifications

These Supplementary Contract Specifications must be read in conjunction with the Specifications contained in the Master Municipal Construction Documents, Volume II, Printed 2009 and the City of Coquitlam Supplementary Specifications and Detailed Drawings

Supplementary Contract Specifications

to the
MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

REMOVAL OF PRELOAD FROM CEDAR DRIVE
RFP NO. 25 - 077

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The following Supplementary Specifications are to be considered part of the Specifications. These Supplementary Specifications take precedence over the Master Municipal Specifications.

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1.0 GENERAL

- 1.1 **Coordination of Work** Add 1.1.1 The Contractor shall be responsible to consult with all affected businesses, residents and transportation companies regarding delays, detours, and any other works affecting any transit service in the area, and will be responsible to coordinate the works with City crews and other contractors working in the area. If working area is to become a multiple-employer workplace as defined by WorkSafe BC, the Contractor shall remain the Prime Contractor.
- The construction work site is located near a residential cul-de-sac. Access to all properties must be maintained at all times. If access needs to be blocked for certain times, the residents must be informed at least 24 hours in advance. Contract Administrator should also be notified accordingly.
- 1.2 **Outside Agency Approval** Add 1.2.1 In accordance with the Contract Documents, the Contractor is responsible to consult with and obtain any approval required to meet and comply with all the conditions required from outside agency such as, but not limited to, BC One Call, Metro Vancouver, BC Hydro, TELUS, Kinder Morgan, and Fortis BC in the area of the place of Work.
- 1.3 **Waste Collection Coordination** Add 1.3.1
1. Contractor is responsible to accommodate all waste collection vehicles and cart pick up schedules throughout construction. Collection schedule can be found in <https://www.coquitlam.ca/157/Collection-Calendar-Guidelines>.
 2. If waste collection will be impacted the Contractor is responsible to:
 - a. Provide advanced notification to:
 - i. The City's Solid Waste staff at 604-927-3500 or wastereduction@coquitlam.ca; and
 - ii. The City's Contract Administrator.
 - b. Provide access for collection trucks to closed streets due to road work; or
 - c. Move waste carts for collection. The Contractor is required to ensure each cart is labelled with the property address and returned to the correct address after collection (each cart has its own individual cart identification code and is specifically assigned to each property). **Contractors will be responsible for the costs to replace missing carts.**
 3. Contractor's Request for Change in Collection Time (e.g. PM to AM):
 - a. The Contractor must provide residents with as much notice as possible – minimum 5 working days.
 - b. The contractor must follow all conditions of Clause 1.04 and is responsible to deal with any missed collections. For example, taking garbage to the United Boulevard Recycling and Waste Centre or covering the cost associated for any missed collection to be rescheduled.
- Questions: wastereduction@coquitlam.ca
- 1.4 **Cooperation with Emergency and Maintenance Activities** Add 1.4.1 The Contractor will be responsible to cooperate with regular maintenance or emergency vehicles and staff for access to the site when required including:
- Fire, Police, and Ambulance
 - Collection (garbage/recycling pick-up)
 - City Utilities Maintenance (or representatives)
 - Other Contractors
- 1.5 **Site Safety** Add 1.5.1 The Contractor is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working

hours, the Contractor must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public. Supply and use of this equipment is considered incidental to the contract.

Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.

Manhole lids left raised in preparation for paving must have a rubberized protector ring painted with bright colour for traffic safety. Supply and use of this equipment is considered incidental to the contract.

1.6 Lane Closure Restrictions Add 1.6.1

The Contractor shall refer to Contract Supplementary Specifications Section 01 55 00S.

The Contractor must take the above information into account in the preparation and submission of the Tender.

1.7 Location of Existing Utilities Add 1.7.1

The Contractor is responsible to verify the depth and location of all utilities (watermains, storm mains, sanitary mains etc.), including outside agency utilities (i.e. Fortis BC Gas Mains etc.) and service connections (water, storm and sanitary services at the mains, and property lines) by hand digging or by Hydro-Vac in the presence of the Site Inspector.

Pre-locates must be completed as soon as possible after award of the Contract so changes can be completed by the Engineer prior to site construction. Contact Metro Vancouver for location of their utilities and BC One for location of other outside agency utilities. The Contractor will not receive any compensation or allowance for delays if work is halted due to utility and service connections not located prior to commencing construction.

City of Coquitlam does not guarantee water, storm or sanitary services connections are perpendicular to the mains or property lines, the Contractor will not receive any compensation for the time to locate these connections or for exposing hidden services at the property lines.

Payment for this work will be treated as incidental to payment for work described in other Sections.

1.8 Manholes and Valves Add 1.8.1

Access to manholes and valves must be maintained at all times for City utilities crews and external utility companies. In case of an emergency the cost for exposing any buried manhole or valve covers during construction will be paid by the Contractor.

1.9 Verification of Dimensions and Quantities Add 1.9.1

Before proceeding with work, the Contractor shall visit the site and check and verify dimensions and quantities. Report variations between Contract Drawings and site conditions to the Contract Administrator before proceeding with work. Payment for this work will be treated as incidental to payment for work described in other Sections.

1.10 Precautions Add 1.10.1

Protect areas under construction from damage caused by excessive erosion, flooding, heavy rains, etc. Repair or replace unprotected damaged areas as directed by the Contract Administrator at no cost to the Owner.

CONTRACT SPECIFIC NOTATIONS

1.11	FORTIS BC Emergency Protocol	Add 1.11.1	In an emergency, gas pipeline rupture or leak, Contact Fortis BC 24 Hour Emergency Line (1-800-663-9911) & Fire Department (911) immediately and then City of Coquitlam's Utility Control Centre (604-927-6287)
1.12	Temporary Asphalt Pavement Restoration	Add 1.12.1	The Contractor will be required to backfill all trenches (in paved areas) and place a temporary patch (50mm of hot mix asphalt), as per Coquitlam Standard Drawing COQ-G4, the same day excavation is made, unless otherwise approved by the Contract Administrator. Temporary asphalt patch on driveways is not required, but access must be maintained for property owners.
		Add 1.12.2	Payment for this work will be treated as incidental to payment for work described in other Sections.
2.0 CONSTRUCTION ACTIVITY			
2.1	Construction Materials in Sewer Manholes and Pipe	Add 2.1.1	The Contractor is responsible to ensure that construction activities do not deposit construction materials (e.g. gravels) into the storm sewer or sanitary sewer manholes or pipe. The City has a video record of the pipe before construction. Prior to Substantial Performance, the City may video inspect the lines to ensure no problems exist due to construction activities under this contract. If problems are encountered, the Contractor will be responsible for the cost of the video and all costs associated with the cleaning of the pipe.
2.2	Site Clean-up During Construction and End of Construction	Add 2.2.1	The Contractor will be responsible for the complete clean-up of the work site during construction, at the end of construction, and prior to the Substantial Performance review. The work will include cleaning of all catch basins periodically or as directed by the Contract Administrator within the Work area, or nearby location as affected by the Work, to the same condition of the catch basins prior to starting the Work. All cleaning is to be performed by vacuum truck to the satisfaction of the Contract Administrator and will include off-site disposal of waste material.
		Add 2.2.2	Payment for this work will be treated as incidental to payment for work described in other Sections.
3.0 MANDATORY MEETINGS, CONTRACTOR REPRESENTATIVES AND SUBCONTRACTORS			
3.1	Pre-Construction Meeting Requirements	Add 3.1.1	After the Award of the Contract, the Contractor (Project Manager and Superintendent) will be required to attend a Pre-Construction Meeting with the Contract Administrator and provide all necessary information required by the Contract Administrator prior to provision of a Notice to Proceed. Items required to be provided at the meeting include: <ul style="list-style-type: none"> 1. A Detailed Construction Schedule showing the start date, completion date, and durations of major work components showing how all work will be completed within the Contract Duration. 2. Proof of Insurance 3. Performance Bond and Labour and Materials Payment Bond 4. WCB Clearance Letter and Copy of Notice of Project 5. City of Coquitlam Business License 6. A copy of portions of your Health and Safety Plan including the Title Page, Table of Contents, and portion showing latest revision date.

CONTRACT SPECIFIC NOTATIONS

- 3.2 Contract Schedule, Contract Duration, and Charges** Add 3.2.1 A detailed, realistic construction schedule for this project will be required to be presented at the pre-construction meeting. The schedule must show major components and durations.
- All work under this project is to be completed within the designated Contract Duration as contained in the signed Contract Agreement, or as formally amended.
- 3.3 Contract Superintendent and Subcontractors** Add 3.3.1 In compliance with the MMCD General Conditions, Section 4.7, Superintendent, the Contractor shall have a competent senior representative, (the "Superintendent") in FULL TIME attendance at the Place of Work while work is being performed for the duration of the contract.
- This FULL-TIME attendance is also required when work is being performed by Subcontractors.
- Work done by Subcontractors is to be directed by the Superintendent and monitored on site ensuring conformance to the Contract Documents and other particular direction to the Superintendent by the Contract Administrator.
- The Owner and Contract Administrator are not responsible for the direction of Subcontractors.
- 3.4 Changes of Contractor Representatives & Subcontractors** Add 3.4.1 The Superintendent and Subcontractors indicated in the Form of Tender shall not be changed unless:
1. The Owner requests a replacement.
 2. The Contractor submits an application for a change, in writing, to the Contract Administrator with the change being approved in writing.
- 3.5 Mobilization and Demobilization** Payment for mobilization and demobilization of all equipment, labour and materials (both from the Contractor and all sub-contractors) shall be incidental.

END OF SECTION

1.0 GENERAL

1.3 Submission

Delete 1.3.2
and replace
with the
following

Submit one copy of an accurate project record document in final form prior to applying for Substantial Performance including any video report, test reports and Operation & Maintenance manual. Record documents to include changes in the Issued for Construction Drawings, new elevation, offsets & location of all utilities, manhole rim, catch basin rim, vaults, valve boxes, inverts walkways/sidewalks, and any unknown/new utilities found on site. Legal holdbacks will not be released until complete record documents, including reports and manuals, have been submitted and accepted by the Contract Administrator.

Contractor to get sign off letter signed by the property owners when private side is affected by the work. Properties to get the sign off letters will be at the sole discretion of the Contract Administrator.

Payment for all work performed under this section will be incidental to work in other Sections, unless otherwise described in Schedule of Quantities and Prices

END OF SECTION

QUALITY CONTROL

- 1.0 QUALITY**
- The Contractor shall provide a final product conforming to the Contract Documents and the intent of the work.
- The work is to be accurate to the dimensional and tolerance requirements of the contract.
- Payment will be subject to adjustments based on quality assurance tests performed by the Contract Administrator.
- 1.01 Quality Control (QC) by Contractor**
- The MMCD (2009) definition of "Quality Control" is the process by which the Contractor checks specific materials, products, and workmanship to ensure strict conformance with the Contract Documents.**
- The Contractor is fully responsible for quality control of the materials, production, and construction processes.
- Quality control tests shall be performed by the Contractor, at their own expense, to ensure that products meet the contract specifications.
- Failure by the Contractor to conduct adequate quality control testing during production and construction will negate the Contractor's ability to appeal the quality assurance tests used for acceptance/rejection of the work.
- Under no circumstances will QC test results produced after completion of the Quality Assurance (QA) results be considered for appeal purposes.
- Any changes in the Work with respect to the location, grade, or line shall be approved in advance by the Contract Administrator. Failure to notify the Contract Administrator of changes in writing may result in rejection of Work.
- 1.02 Inspection of Work, Quality Assurance, and Material Testing, by the Owner**
- The MMCD (2009) definition of "Quality Assurance" means the process by which the Owner evaluates if the work is being constructed in accordance with the Contract Documents. This definition will be used for this contract.**
- The *Contract Administrator* will provide construction review through spot inspections and spot materials testing for Quality Assurance.
- Any materials testing results indicating a non-conformance to the Contract Documents will require construction corrective action by the Contractor.**
- All subsequent testing to corrective action to verify conformance to the Contract Documents will be the full responsibility of the Contractor.**
- Inspection review by the Owner will not relieve the Contractor from providing a product that meets or exceeds the requirements of the Contract Documents.
- 1.1 Inspection**
- Materials testing shall be as described in MMCD General Conditions, Section 4.12 with the following change:
- Delete Section 4.12.2(a) and insert the following:
- Where the MMCD specification clauses for Inspection and Testing indicate the Contract Administrator will arrange for all testing for work described in this section will be amended to read The Contractor will arrange for and pay for all testing for work described in this section. The testing shall take place at the following prescribed rates and as directed by the contract administrator. The contract administrator has the authority to call for testing, up to the rates and frequencies specified, at the Contractors cost.

QUALITY CONTROL

All testing covered under this item shall be performed by a CSA certified laboratory and technicians with copies of all test results to be sent directly to the Contract Administrator. Re-testing resulting from failed first tests shall be at the Contractors expense.

1.2 Survey Layout

All Survey Layout will be completed by the City in accordance with the Contract Drawings and Coordinate System set out within them. The Contractor will be provided digital AutoCAD files but shall be responsible to confirm elevations and tie in locations and report any discrepancies prior to construction.

1.3 Testing

Contractor shall carry out inspection and testing (QC) to ensure compliance with Contract Documents. Contractor shall submit test results within one week of testing to the Contract Administrator.

The Contractor shall provide test results prior to the preparation of the payment certificate.

1.4 Contractors Responsibilities

Furnish labour and facilities to:

1. Provide access to work to be inspected
2. Facilitate inspections and tests
3. Make good work disturbed by inspection and tests

1.5 Access to Work

Allow inspection testing agencies access to Work.

1.6 Tests

Test rates and frequencies (excluding failed tests), when not defined in the MMCD or Detail Specifications Sections shall be at the following frequencies:

1. Trench Backfilling and Compaction

1.1 Compaction: 1 test / 25 lm / 300mm lift

1.2 Sieve: 1 test / placed material / 50 m³

2. Granular Base

2.1 Compaction: 1 test / 500m² / 100mm depth of granular base

2.2 Sieve: 1 test / placed material / 250 TONNES

3. Granular Subbase

3.1 Compaction: 1 test/500m² / 300mm depth of granular subbase

3.2 Sieve: 1 test / placed material / 250 TONNES

4. Embankment (Subgrade)

4.1 Compaction: 1 test/ 50m² / 300mm depth of fill

4.2 Sieve: 1 test / placed material / 100 TONNES

5. Asphalt

5.1 Marshall test: test per 250 TONNES placed, per mix specified, min. 1 / day
ASTM D1559, D3203, C117, C136

5.2 Superpave: test per 250 TONNES placed, per mix specified, min. 1 / day
CAI-SP2, ASTM D3203, C117, C136

5.3 Cores: 1 per 500 m²/lift

5.4 Continuous asphalt density testing during paving.

6. Subgrade Preparation

6.1 Compaction & Moisture: 1 test / 500 m²

7. Concrete Tests

7.1 Air, Slump & 1 Set Cylinders: 1 test / 10 m³, min. 1 set / day

1.7 Measurement for Payment

Payment for all work performed under this section will be incidental to payment for work described in other Sections

END OF SECTION

TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING

1.0 GENERAL	Add 1.0.6	<p>The Contractor is responsible for all temporary traffic control on the streets required for completion of the work. The Contractor will be responsible to provide a Traffic Management Plan (TMP) for approval (5) five working days prior to any lane closures taking place. TMP is to be prepared by a professional certified by the American Traffic Safety Services Association.</p> <p>The TMP shall outline the approach to traffic management, show recognition and minimization of risks indicates signing locations, identify Traffic Control Persons (TCP) stations, show lane shifting and proposed closures.</p>
	Add 1.0.7	<p>A Road and Sidewalk Closure Permit is required from Coquitlam for all work affecting pedestrian and traffic flow related to construction. A permit is required for each specific construction interference with pedestrian and traffic flow. The road and sidewalk closure permit form can be obtained for use from the City's website at http://www.coquitlam.ca. The Contractor must follow the approved TMP. Any changes to this TMP must be submitted to City's Traffic Operations for approval</p>
1.4 Traffic Control	Delete 1.4.1 and replace with the following	<p>The Contractor shall conduct their operations so as to cause the minimum obstruction and inconvenience to traffic and to places of business and residences adjacent to the Place of Work. No greater quantity of work shall be undertaken at any one time than can be properly conducted with due regard to the rights and interests of the public as may be determined by the Contract Administrator.</p> <p>The Contractor is to provide at all times safe and convenient means of approach and entrance to adjoining lanes, driveways, buildings and property both for vehicles and pedestrians to the satisfaction of the Contract Administrator. For this purpose, they shall construct and maintain suitable and safe platforms, approaches, structures, bridges, diversions or other works.</p> <p>Where traffic must cross open trenches, the Contractor shall provide suitable bridges. Where trenches have been backfilled or where road improvements are incomplete the Contractor shall take any steps necessary to prevent potholes or other traffic hazards. Where the Contract Administrator so instructs or where Contract Specifications so require, the Contractor shall provide temporary asphalt patching of such hazards.</p>
	Add 1.4.9.3.1	<p>The Contractor, as required by the Contract Administrator and the City, is to supply Construction Zone information signs (stationary), refer to MMCD 01 58 01 for the required identification signage.</p> <p>The Contractor is responsible for the removal of the signs at the completion of the work.</p>
	Delete 1.4.10.1.3 and replace with the following	<p>When workmen or equipment are employed over travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.</p>

1.5 Measurement and Payment

Delete 1.5.1 and replace with the following

Payment for all work performed under this section shall be treated as incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices and shall include, but is not limited to:

- Preparation and submission of the Traffic Management Plan (TMP).
- Provision of Traffic Control Persons (TCPs).
- Supply, installation, maintenance, and removal of all temporary traffic control signs and devices necessary to ensure traffic and pedestrian safety.
- All labour, materials, equipment, and activities required to implement and maintain traffic control measures as described in the Traffic Regulation Section.

END OF SECTION

ENVIRONMENTAL PROTECTION

1.0	GENERAL	Add 1.0.3	<p>The project will require work above the natural boundary of watercourses that meets the definition of a 'stream' pursuant to the Water Sustainability Act.</p> <p>While the Contractor is not responsible for environmental notifications or approvals, the Contractor is required to adhere to all terms and conditions of the WSA S.11 Notification, the EMP and review and understand provincial best management practices for working in and about water contained within:</p> <ol style="list-style-type: none"> 1. <i>Standards and Best Practices for Instream Works:</i> www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf 2. <i>A Users Guide for Working Around Water:</i> A USER'S GUIDE (gov.bc.ca) <p>This section of the supplemental specifications shall be read in conjunction with and does not supersede MMCD GC Clause 20.4 (Environmental Laws).</p>
1.2	Temporary Erosion and Sediment Controls	Delete 1.2.1.1 and replace with the following	<p>Properly drain all portions of the site. Protect the site and the watercourses to which it drains, directly or indirectly, against erosion and siltation in accordance with the City of Coquitlam Stream and Drainage System Protection Bylaw No. 4403, 2013 during construction and until the Place of Work has been restored to the satisfaction of the Contract Administrator. Ensure no silt, gravel, debris or other deleterious substance resulting from construction activity discharges into existing drainage systems or watercourses or onto highways or adjacent property. The Contractor is responsible for all damage that may be caused by water backing up or flowing over, through, from or along any part of the work or otherwise resulting from his operations.</p> <p>Keep existing culverts, drains, ditches and watercourses affected by the work clear of excavated material at all times. When it is necessary to remove or alter any existing drainage structure, provide suitable alternative measures for handling the drainage. Adequately support culverts and drainpipes across trenches to prevent displacement and interference with the proper flow of water due to trench settlement.</p> <p>Sweep streets, and clean catch basins, manhole sumps, detention tanks, and maintain siltation controls as often as the Contract Administrator and the City deems necessary.</p>
		Delete 1.2.2.2 and replace with the following	<p>Do not operate construction equipment in watercourses. All machinery must be operated from above the top-of-bank</p>
		Add 1.2.2.9	<p>All work must be carried out during favourable and low water conditions.</p>
		Add 1.2.2.10	<p>Any fill used on this project shall be certified inert and from a source which is confirmed to be free of contaminants.</p>
		Add 1.2.2.11	<p>All work within a watercourse must be undertaken and completed in isolation of all flowing water to maintain downstream water quality and unrestricted flows.</p>

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	Add 1.2.6	Complete construction in a manner that will prevent the release of sediment or sediment laden waters to the watercourses, ditches, and swales draining to fish habitat.
	Add 1.2.7	Avoid stockpiling material within 30 m of the top of bank of the channel, or install containment around any stockpiles within 30 m
1.4 Environmental Protection	Add 1.4.3.5	Immediately contain and clean up any leaks and spills of prohibited materials at the Place of Work.
	Add 1.4.3.6	Ensure that a well-stocked spill kit is on-site at all times and that the Contractor's employees are familiar with appropriate spill response techniques. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program's 24-hour phone line at 1-800-663-3456.
	Add 1.4.3.7	Immediately notify the Contract Administrator and the City of any leaks or spills of prohibited materials that occur at the Place of Work.
	Add 1.4.3.8	Ensure that any fuel stored on-site is located at least 30 metres from the nearest stream, and is placed within a bermed off and lined area, in order to prevent leaks or spills into the environment.
	Add 1.4.3.9	All equipment and machinery must be in good working condition (power washed), free of leaks or excess oil and grease. No equipment refuelling or servicing shall be undertaken within a minimum of 30 metres of any water course or surface water drainage.
	Add 1.4.3.10	During all phases of the operation, take precautions to abate nuisance caused by mud or dust by clean up, sweeping, sprinkling with water or dust control, or other means as necessary to accomplish results satisfactory to the Contract Administrator.
1.6 Measurement and Payment	Delete 1.6.1 and replace with the following	<p>Payment for all work performed under this section, unless shown otherwise in the Schedule of Quantities and Prices will be incidental to payment for work described in other Sections.</p> <p>All works for Erosion and Sediment Control (ESC) shall include silt fencing, interceptor channel/swale/ditch construction, interceptor drainpipe, check dams, catch basin, socks, and all materials to complete the as directed by the Contract Administrator.</p>
	Add 1.6.2	Payment for the poly cover or temporary tarps over stockpile materials or exposed road subgrades shall be treated as incidental work.
1.9 Archaeological / Historical Resources	Add 1.9 .1	<p>Immediately cease work and inform the Contract Administrator and the City, if any archaeological or historical resources are encountered during construction. Leave these resources in place and do not disturb them in any way.</p> <p>The Contractor must allow the Archaeological and Historical Resources group to perform duties around the site during construction. The Contract Administrator shall coordinate all other work being performed at the site with the Contractor</p>

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1.10 Contractor's Hydrocarbon Wastes and Fuel Spill Mitigation Measures

Add 1.10.1

The Contractor will prepare a Spill Response Plan prior to Construction. Costs of the preparation of the spill response plan are incidental to the Contract.

The Contractor will develop and identify waste receptacles for the safe disposal of hydrocarbons and lubricant fouled waste material, and use those receptacles.

There will be no machine refuelling within 30 m of a watercourse.

The Contractor must keep emergency spill kit at each bridge repair site. The Environmental Monitor will inspect and confirm that a spill kit is on site prior to commencement of bridge repair work. Each spill kit will at a minimum have the following:

- 2 - 5 m long absorbent spill booms
- 50 - 16" x 20" Sorbent Pads (Oil, Gas & Diesel)
- 6 - 48" x 3" Sorbent Socks (Oil, Gas & Diesel)
- 4 - 120" x 3" Sorbent Socks (Oil, Gas & Diesel)
- 4 - 8" x 18" Sorbent Pillows (Oil, Gas & Diesel)
- Nitrile Gloves
- Hand Wipes
- 2 - Disposable Respirators N958 HD
- Hazmat Disposal Bags

Spills of any substance toxic to aquatic life of reportable quantities will be immediately reported to the Provincial Emergency Program 24-hour phone line at 1-800-663-3456.

Contractor shall immediately notify the Contract Administrator of any leaks or spills of prohibited materials that occur on the job site. The Contractor is wholly responsible for costs associated with clean-up of spills originating from their equipment or work practices.

1.11 Non-Hazardous Waste Handling Requirements

Add 1.11.1

There will be no disposal of solid wastes into sumps, ditches, streams, culverts, road edges or private property.

The Contractor's will supply trash cans for the disposal of crew generated wastes.

Littering is prohibited and monitoring for this activity will be ongoing throughout the project.

1.12 Control of Cement and Cement Grouts

Add 1.12.1

The Contractor shall undertake all concrete/grouting work with caution and comply with, at a minimum, the following procedures:

1. The Work shall be isolated from watercourses through the use of berms, pits or tarpaulins.
2. There shall be no direct contact between work activity and any watercourse through spillage, hosing off surfaces, rain or cleaning of tools.
3. Complete isolation of all grouting from any watercourse for a minimum of 72 hours.
4. Exposed concrete will be covered if there are forecast rains.
5. No wash water shall be allowed to discharge to any watercourse.
6. The Contractor must follow BC Environmental Management Act – Spill reporting regulation procedures relating to emergency mitigation and clean up measures for managing the cleanup and recovery of concrete materials.

ENVIRONMENTAL PROTECTION

7. All wash water from concrete works shall be contained and removed from site.
8. If required, concrete wash water may be disposed in a temporary disposal location that has been reviewed and accepted by the Owner. This location may be a rock pit or grassy area, provided the wash water will be contained in an upland location at least 30m away from the high-water mark, and at least 30m away from the top of bank of watercourses and there is landowner approval.
9. All accepted temporary disposal area locations must be cleaned up and re-seeded prior to demobilization.
10. Concrete dust from saw cutting and drilling shall be prevented from entering any watercourse.

END OF SECTION

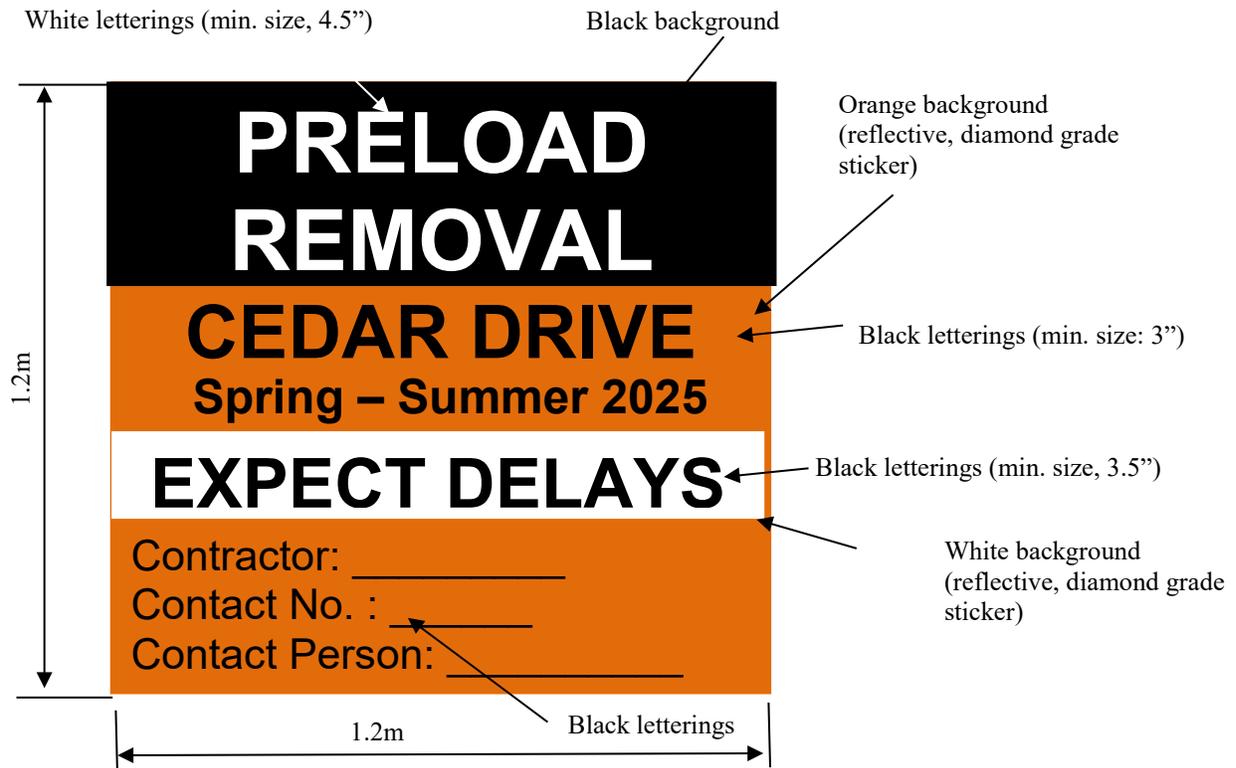
1.3 Measurement and Payment

Delete 1.3.1 and replace with the following

Payment for the installation of 1.2m x 1.2m static construction Information signs as shown and includes supply, placement & removal and will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.

Exact locations to be determined on site by Contract Administrator. Ensure that signs and locations are addressed in the Traffic Management Plan. All signs are to be removed at the end of the construction period.

Construction Zone Information Signs to follow specifications below:



END OF SECTION

AGGREGATES AND GRANULAR MATERIALS

2.0 PRODUCTS

2.3 Pit Run Gravel

Add to 2.3.2

The use of recycled concrete shall be approved by the Contract Administrator and the City prior to use.

Add 2.3.3

Asphalt millings free from contamination and other extraneous material, conforming to the specified gradations may be used as pit run gravel. The use of asphalt millings shall be approved by the Contract Administrator and the City prior to use.

2.7 Granular Pipe Bedding and Surround Material

Add to 2.7.1

All recycled or other extraneous materials shall be approved by Contract Administrator and the City prior to use.

2.10 Granular Base

Delete 2.10.2 and replace with the following

All 25 mm minus granular base is to conform to the following gradation specifications:

Sieve Designation (mm)	Percent Passing (%)
25	100
19	80-100
12.5	75-90
9.5	50-85
4.75	35-70
2.36	25-50
1.18	15-35
0.30	5-20
0.075	0-5

Add 2.10.4

The intention of the Gradation Chart is to identify the desired mix of size of aggregate in the granular base. The Target Percentage Passing is the middle of the shown Range.

Tests that show sieve values of Percent Passing that are consistently low or consistently high in two (2) or more consecutive tests will be considered to be non-conforming.

2.11 Recycled Aggregate Material

Delete 2.11.1 and replace with the following

Recycled aggregates may be used with approval from the Contract Administrator and the City, provided they meet all specification requirements and do not compromise construction quality. Only clean aggregates, crushed concrete, or asphalt free of impurities are permitted.

END OF SECTION

CLEARING AND GRUBBING

1.4 **Measurement and
Payment** Delete 1.4.1 and
replace with the
following

Payment for all clearing and grubbing will be incidental and include removal and disposal of all branches, stumps, trees, timbers, logs, planter box/wall, grass and vegetation including stripping of 150mm of native top soil to complete the work as shown on the Contract Drawings or as directed by the Contract Administrator.

Payment includes trimming of small branches from trees or hedges as required, branch cutting/pruning to have a clean cut flush to branch collar and use of an approved tree paint to repair damage to surviving vegetation where branches have been removed.

END OF SECTION

SHRUB AND TREE PRESERVATION

1.3	Measurement and Payment	Delete 1.3.1 and replace with the following	Payment for all work, unless included in the Schedule of Quantities and Prices, performed under this section will be incidental to payment for work described in other Sections.
2.0 PRODUCTS			
2.1	Materials	Add 2.1.10	Protective Fencing: Posts - Pressure treated wood 100 mm dia.; Post to be 1.8 m to 2.0m in height at 2.0 m O.C. Snow fence as per Coquitlam Approved Products List; Flagging Tape - 4" Orange glow - 'Tree Retention Area'.
3.0 EXECUTION			
3.1	Existing Trees	Add 3.1.7	The <i>Contractor</i> is responsible to minimize damage to all trees which are to remain.
		Add 3.1.8	The <i>Contractor</i> will be responsible for all claims and costs including the cost of examination by an Arborist, repair, removal and replacement of trees, as required by the Arborist, the <i>Contract Administrator</i> and the City for tree damage where proper notification was not received from the <i>Contractor</i> . Damage will be assessed based on the International Society of Arboriculture Guidelines. The term shall be for a period of one year following the date of Substantial Performance of the <i>Work</i> .
		Add 3.1.9	Place protective fencing/barricades as detailed on Coquitlam Standard Detail Drawings COQ-R26 and as shown on the Contract Drawings. <i>Contractor</i> shall maintain fence in good condition during construction.
		Add 3.1.10	When work is to be performed inside fenced areas, <i>Contractor</i> shall take care to avoid damage to existing vegetation. Work to be done inside areas of existing vegetation to be retained includes: <ul style="list-style-type: none"> .1 Removal of isolated trees as directed by the <i>Contract Administrator</i> and the City. .2 Selective pruning and tree removal at edges to create tidy and well-shaped forest edge. .3 Placing planting soil and planting of trees.
		Add 3.1.11	Do not park, service or fuel vehicles within the vegetation retention areas.
3.4	Pruning	Add 3.4.2	Do not cut roots or branches of retained trees without approval of the <i>Contract Administrator</i> and the City.

END OF SECTION

ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION

1.8 Measurement and Payment

Delete 1.8.4 and replace with the following

Payment under this item will only apply to removal of the components included in this item under a separate operation as shown on the Contract Drawings or as directed by the Contractor Administrator. No payment will be made under this item for removal of these components as part of the operation for common excavation, and such removal will be treated as common excavation.

Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal. It is the responsibility of the contractor to locate and verify all utilities.

Delete 1.8.5 and replace with the following

Payment for Common Excavation includes:

1. Unless noted in the Schedule of Quantities and Prices as removal in square meters, common excavation will be measured in cubic meters calculated from measurements taken by the Contract Administrator in the areas of excavation for road widening areas.
2. Cross-sections will be taken after clearing and grubbing and after stripping of existing topsoil immediately prior to excavation of material to be incorporated into work.
3. Where determined by the Contract Administrator that truck box volume will be used to determine excavation quantities the volume per load shall be determined using 75% of the truck load quantity. The following is to be used for payment:

Truck Type	Material Type	Volume (cu.m)
Tandem	ordinary material	7
Tandem	asphalt/concrete/pipe	4
Triaxle	ordinary material	8
Triaxle	asphalt/concrete/pipe	5
Tandem and Pony	ordinary material	11
Tandem and Pony	asphalt/concrete/pipe	7.5
Triaxle and Pony	ordinary material	13
Triaxle and Pony	asphalt/concrete/pipe	9
Tandem and Transfer	ordinary material	19
Tandem and Transfer	asphalt/concrete/pipe	13

4. Contractor to provide truck slips detailing location type of common excavation, time loaded and location of dump site. The slips are to be given to Contract Administrator by the end of shift or Contract Administrator can deny quantities subsequently submitted.
5. Payment for on site re-use includes excavation, transport, temporary stockpiling, placement, compaction, boning, adjustment of moisture content, spreading and grading of material anywhere on site or within the work zone, as needed, to establish the roadway & pathway cross-section.

Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal. It is the responsibility of the contractor to locate and verify all utilities.

2.0 PRODUCTS

- 2.2 Specified Materials
- Delete 2.2.1.3 Pit Run Sand
 - Delete 2.2.1.4 River Sand
 - Delete 2.2.2

END OF SECTION

GRANULAR BASE

1.0 GENERAL

1.4 Measurement and
Payment

Delete 1.4.1
and replace
with the
following

Measurement for granular base of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator as loads are delivered.

Delete 1.4.2
and replace
with the
following

Measurement for granular base of specified thickness will be for the actual area placed.

Delete 1.4.3
and replace
with the
following

Payment for Subsection 1.4.1 & 1.4.2 above includes supply, placement and compaction of granular base material, adjustment of moisture content, road reshaping, and boning to establish the road cross-section, shall be included in the unit price bid in the Schedule of Quantities and Prices.

Delete 1.4.4
and replace
with the
following

Payment for removal of unsuitable subgrade including disposal off-site prior to direct placement of granular base will be made under Section 31 24 13S – 1.8.10.

2.0 PRODUCTS

2.1 Granular Base

Add 2.1.1.3

25 mm minus crushed gravel conforming to the gradation specifications under Section 31 05 17S – 2.10.3.

EXECUTION

3.5 Proof Rolling

Delete 3.5.1
and replace
with the
following

For proof rolling, use fully loaded single axle, to 80 kN (18, 000 lb.) minimum, dump truck.

Add 3.5.7

Prior to asphalt concrete paving, the base surface shall be checked by the Contract Administrator and the City, for deflections utilizing a Benkelman Beam, in order to ensure that the final rebound requirements can be obtained with the asphalt pavement. In the event that such deflection is in excess of those required to produce the final standards, then the base shall be adequately strengthened by additional gravel or asphalt concrete to ensure that final deflections as follows are not exceeded.

The Benkelman spring rebound value of the completed pavement surface shall not at any point exceed 0.75 mm for arterial industrial roads and lanes, 1.15 mm for collector roads, and 1.5 mm for local roads and lanes as determined in the procedures outlined in the Transportation Association of Canada publication "Pavement Management Guide."

END OF SECTION