



Schedule C – Other Conditions
For Spring 2021 Chelalsie North FCI
Tree Planting in the Nadina Forest
District
CONTRACT # 2021-Silvicon-PL-FCI-4

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THIS AGREEMENT DATED FOR REFERENCE
THE _____ DAY OF _____, 20____.

Attachment to the Agreement with _____

ARTICLE 1: General Conditions

General Requirements

- 1.1 The Contractor must have workable equipment (e.g. radiotelephone, satellite phone, cell phone) on site, capable of communication at all times between the planting site and the Silvicon Office.
- 1.2 The Contractor may be required to work "early shift" due to fire hazard regulations. At the discretion of Silvicon, an "early shift" or suspension of planting may also be imposed because of sustained warm weather conditions (e.g. 30 °C) and the inherent risk to seedlings.
- 1.3 In reference to Article 9.0 (Compliance with the Law) of the Operational Services Contract, the Contractor will ensure that all bylaws in the Omineca Regional District are complied with.
- 1.4 The Contractor will be responsible for the marking of treatment areas with flagging tape, in accordance with the planting maps provided by Silvicon. While Silvicon will provide georeferenced maps of the planting area, it is the Contractor's responsibility to ensure that the location of the flagging is correct, and that it is visible to planters.

Project Supervision

- 1.4 The Contractor must provide an experienced full-time, non-planting Project Supervisor who must be on-site during the Work under this Agreement. The Project Supervisor must have at least three Planting Seasons of planting project supervision experience.
- 1.5 The Project Supervisor will be responsible for the overall management and administration of the Work under this Agreement, including reporting and communications with Silvicon.
- 1.6 The Project Supervisor must conduct an Opening review with all other Contractor personnel prior to the commencement of planting the Planting Units within that Opening.

Contractor Provision of Personnel

- 1.7 The Contractor must provide a sufficient number of full-time, non-planting Forepersons. Each Foreperson must have at least two Planting Seasons of foreperson experience and/or two Planting Seasons of tree planting industry experience.
- 1.8 Each Foreperson must perform and record a minimum of two quality plots on each tree planter daily, provide a copy of these plot cards to Silvicon and deal with any substandard tree storage, tree handling and planting quality issues.
- 1.9 The Contractor must provide a minimum of one experienced full-time, non-planting, Quality Checker. Each Quality Checker must have at least one Planting Season of quality checking and/or one Planting Season of planting experience.

- 1.10 The Quality Checker must perform and record a minimum of two quality plots on each tree planter daily, provide a copy of these plot cards to Silvicon and deal with any substandard planting quality issues.

Helicopter Use

- 1.14 When required the cost and organization of transporting seedlings, planters, boxes and garbage from planting operations to and from the planting site by helicopter will be the responsibility of the Contractor.

Access

- 1.15 The Contractor will be responsible to include in the bid all costs associated with access issues. This includes any access identified and NOT identified by Silvicon in the Schedule B. Silvicon will only be addressing any Substantial Access Changes that may arise. (*Substantial Access Changes include things such as bridge removals and road washouts that did not exist prior to the contract tender closing date*). **The contractor is not responsible for the cost of the barge.**
- 1.16 The Contractor will provide all terrain vehicles capable of transporting seedlings, personnel equipment and supplies to and within the planting sites.
- 1.17 An additive may be applied to the unit rate as a result of a Substantial Access Change, if the change occurs after the tender closing date and prior to the planting start date. Additives are subject to the approval by Silvicon and are as follows:
- (a) \$0.01/seedling for every 500m away from the Planting Unit boundary to a maximum additive of \$0.04/seedling.

Wildlife Danger Tree Assessments

- 1.18 The Contractor will perform Wildlife Danger Tree Assessments on each cutblock and will carry out follow-up work such as snag falling and no work zone ribboning prior to planting. All work is to comply with established Wildlife Danger Tree Assessment practices and Work Safe BC regulations.

Project Plan

- 1.19 The Contractor will provide Silvicon with a Project Plan, which must be approved by Silvicon one (1) month prior to the commencement of work. The Project plan must:
- (a) Estimate the production per week including the number of planters, crews, and camps;
- (b) Include the names of key personnel that will be conducting works as specified in this schedule, (e.g. Qualified Registered Professional(s), forepersons, supervisors, non-planting quality checkers, surveyors, etc.) and documentation of experience and references upon request;
- (c) Identify project commencement date and estimated project completion date;
- (d) Organize the planting project to ensure that high priority planting units (e.g. fill plants) are completed well in advance of the project deadline;
- (e) Organize the planting project to minimize the potential for partially planted Payment Areas;
- (f) Identify the initial sequence of blocks to be planted;
- (g) Schedule nursery/cold storage seedling lift/thaw and pick up; and,
- (h) Address and abide by any identified deadlines or special instructions as listed in the Schedule B or discussed throughout the duration of the contract.

- 1.20 The Contractor will modify the Project Plan as required and update Silvicon weekly on the progress of the project and resultant changes. Changes may be subject to the approval of Silvicon.
- 1.21 All trees planted must be reconciled with cold storage and/or nursery records of seedlings delivered and submitted to Silvicon within one (1) week of project completion.
- 1.22 All trees must be planted no later than **June 30, 2021** for Spring Planting. The project commencement date must ensure appropriate seedling specifications have been met in the nursery as per Nursery Services guidelines.
- 1.23 All fill planting units must be given first (1st) priority over all planting units. When completing the Project Plan, fill planting units must be recognized as priorities.
- 1.24 At the end of the project, the Contractor is required to reproduce a final schedule B containing all changes to the planting units that occurred during this planting project.
- 1.25 On any blocks not completed due to a shortage of trees, the unplanted area will be ribboned out with prominent flagging tape and its location mapped on the Seedlot Map. The Contractor shall organize planting so as to leave a single condensed and contiguous unplanted area. The unplanted area shall be left at the front (entry) end of the unit, not at the back.
- 1.26 If contractor works past June 30, 2021 a penalty of \$1,000.00 per day will apply.

Contractor Reporting

- 1.27 The Contractor must track all seedling movements from the nursery, as well as moving seedlings to and between Planting Units, and ensure that planting locations of all stock are accurately mapped and reported. The Contractor must submit to Silvicon the final planting information within 72 hours of completing all work within a Payment Area in the following format:

Seedlot Map showing the following information by Planting Unit:

- i. The area of the Planting Unit;
 - ii. The location of Seedlots planted;
 - iii. The total number of seedlings planted by species, seedlot, request key, and stock type;
 - iv. The planting start and completion dates;
- 1.28 The location and quantity of seedlings that have suffered from a Risk Event and a description of the type of Risk Event; *Risk Event means any event or site condition that places the planted trees at risk of mortality.*
 - 1.29 If the Contractor has not fulfilled the reporting obligations in Section 1.24 within 72 hours, Silvicon may reduce the Basic Payment by one hundred dollars (\$100) for every 24 hour period the information is late.

ARTICLE 2: SEEDLINGS

Delivery of Seedlings

- 2.1 The Contractor is solely responsible for making all arrangements and paying for the delivery of all seedlings to the Payment Areas as well as managing their seedling orders. This includes apprising Silvicon of their orders and submitting orders to the supply site (e.g. nursery or cold storage facility). The majority of Spring Plant stock will be available at a local nursery facility (i.e Woodmere Nursery – Telkwa BC).
- 2.2 The Contractor must provide the cold storage facility/nursery at least 10 working days notice of their delivery schedule.

Responsibility for Seedlings

- 2.3 Upon pick up of the seedlings from the nursery or cold storage facility location, the Contractor shall sign a receipt for the number of seedlings received and their condition. The Contractor must provide Silvicon with these receipts upon request.
- 2.4 Further to Schedule A, section 2.6, the contractor will be responsible for any reefer rental costs including any expenses associated with maintaining the reefer unit.

Handling of Seedlings During Planting

- 2.5 Further to Schedule A, section 3.14, planter's bags shall contain inserts with an aluminized inner surface or equivalent so as to provide temperature and moisture control for the seedlings. When the bag contains seedlings but is not being planted from, the insert shall be closed.

ARTICLE 3: PLANTING INSPECTION SPECIFICATIONS

Note: The following information (article 3.1 – 3.13) is provided for information purposes only. The contractor is not required to do planting payment plot inspections and regeneration delay milestones – they will be done by an independent party.

Planting Payment Plot Inspections and Regeneration Delay Milestone

- 3.1 The Contractor shall commence within 72 hours of completing all work within a Payment Area the establishment of planting quality inspection plots (pay plots), along with the collection of other information outlined under section 3.12 of this schedule required to meet regeneration delay as per the standards defined in the Ministry of Forests' Planting Quality Inspection System (located online at <http://www.for.gov.bc.ca/isb/forms/lib/FS704A.PDF>), and this schedule. The contractor hereby acknowledges to have read and understood these documents, and is aware of the additional fields required for payment certificate submission.
- 3.2 Planting quality inspection plots will be used for the regeneration delay milestone declaration. At a minimum, the information under section 3.12 of this schedule will be submitted in support of this declaration. This information will be submitted in a format approved by the contract coordinator prior to contract start up.
- 3.3 Planting quality data will be compiled and summarized by Payment Area. (Planting Unit Level)

Plot Establishment and Field Marking

- 3.4 The following is the plot intensity required to complete the work for planting quality inspection plots:
Target 1 plot per hectare with minimum of 5 plots per Standard Unit up to 40 hectares.
For Standard Units greater than 40 hectares reduce the intensity as per the following:
40-80 hectares: 1 plot/2hectares
80+ hectares: 1 plot/3 hectares
- 3.5 The Contractor shall establish all plots on a predetermined grid or vector sampling system. Plots must be established in a manner that will ensure complete and uniform coverage of all Planting Units/Standards Units/Strata identified.
- 3.6 For fill plant areas, the contractor will ensure that silviculture and inventory labels are representative of the ages and species throughout the payment area, taking into account natural and previously planted trees, as well as planted trees.
- 3.7 Plots landing entirely on roads, landings, or naturally non-productive sites shall be moved at 10 meter increments until a productive plot is encountered.
- 3.8 The following formula can be used to determine the distance between plots in the field when reducing the intensity after 40 hectares: (# of hectares X 10,000/# of plots, then take the square root).

$$\sqrt{\# \text{ hectares} * 10,000 / \# \text{ of plots}}$$

Example: $\sqrt{84.3 \text{ hectares} * 10,000 / 28 \text{ plots}} = 173.5 \text{ m plot spacing}$

Plots are to be 1/200 hectare circular plots with a plot radius of 3.99 m.

- 3.9 The Contractor will ensure that the inspection lines have a prominent point of commencement (P.O.C.) close to a road or trail and marked clearly with double flagging of different colours. The flagging must have the date, and distance and azimuth to first plot marked on it with waterproof marker.
- 3.10 All plots must be marked in two places with flagging:
- At a height of approximately 1.3 m above each plot centre - the Contractor shall write the plot number and strip line (if applicable), surveyors initials, date of survey, bearing and distance to next plot, in waterproof ink.
 - At the exact location of the plot centre on the ground.
- 3.11 At the Contractor's discretion, GPS may be used to locate plot centres. If the Contractor chooses to use GPS to locate the plot centres, a list of plot coordinates must accompany the map submission.

Contractor's Request for Inspection

- 3.12 Upon completion of the planting quality inspection plots, the Contractor shall request, no greater than 72 hours upon completion of this work, that Silvicon inspect and determine the acceptability of the work. The request must be in writing and include the following:
- A planting **Payment Certificate** for each Planting Unit, including:
 - GPS coordinate marking plot locations (if applicable);
 - The number of plantable spots;

- The number of seedlings planted;
- Excess trees and percentage;
- The number of seedlings satisfactorily planted;
- The number of planting faults with a coded reason for each;
- The quality percentage;
- Planted species composition;
- Planting confidence interval;
- Any applicable payment reductions;
- The signature and seal of a Qualified Registered Professional.

b) Additional information in support of regen delay milestone

- Silviculture and Inventory labels

The sample inventory label below describes a stratum with the following characteristics:

Sx40Fdi30Ac20BI10 – 13/12 - 1.7/1.6 – 18/E – 19 - 12520(08)

- species composition of the total trees is spruce 40 percent, Douglas-fir 30 percent, cottonwood 20 percent and subalpine fir 10 percent.
- average age of dominant and co-dominant spruce is 13 years and the Douglas-fir is 12 years
- average height of dominant and co-dominants spruce is 1.7 meters and the Douglas-fir is 1.6 m
- site index of the leading species, spruce, is 18 meters at 50 years
- site index E is SIBEC
- crown closure of all the commercial tree species is 19 percent
- total trees per hectare is 12520
- year of the survey is 2008

The sample silviculture label below describes a stratum with the following characteristics:

SR-Fd56Sx22BI13Cw9 - 12 -2.4- 21/E - 920(08)

- this prefix identifies the stocking status of the stratum, NSR, SR or FG. Subsequently the data that follows NSR and SR represent well spaced trees and following FG represents free growing trees. (Note: This prefix data is for information purposes only and there is no legal reporting requirement into RESULTS).
- species composition of the well spaced trees is Douglas-fir 56 percent, spruce 22 percent, subalpine fir 13 percent and western red cedar 9 percent
- average age of all species of well spaced trees is 12 years
- average height of all species of well spaced tree is 2.4 meters
- site index of the leading species, Douglas-fir, is 21 meters at 50 years

- site index, E is SIBEC
 - well spaced trees per hectare is 920
 - year of survey is 2008
 - Inventory and silviculture details and calculations (species, total well spaced to M value, preferred well spaced, total trees, total conifers)
- c) A legible field map that includes the following information:
- location of P.O.C., striplines and plots;
 - Strata, Planting Unit and Standards Unit boundaries;
 - The location of unplanted and low density/low quality areas;
- d) Information from the plots in a format that can be used to review the planting quality inspection by Planting Unit.

3.13 The planting contractor will accurately delineate and GPS traverse the following:

- (a) Unplanted areas;
- (b) Low density/low quality areas.

FINAL PROJECT REPORT

- 3.14 At the completion of the project under this Agreement and within ten Work Days after planting has been completed on the last Work Unit, the Contractor must submit to Silvicon a report in both hardcopy and electronic format containing previously mentioned information in this agreement, along with the following additional information if requested:
- a) Daily contract notes
 - b) Planting stocking shipping order forms
 - c) Daily production summary