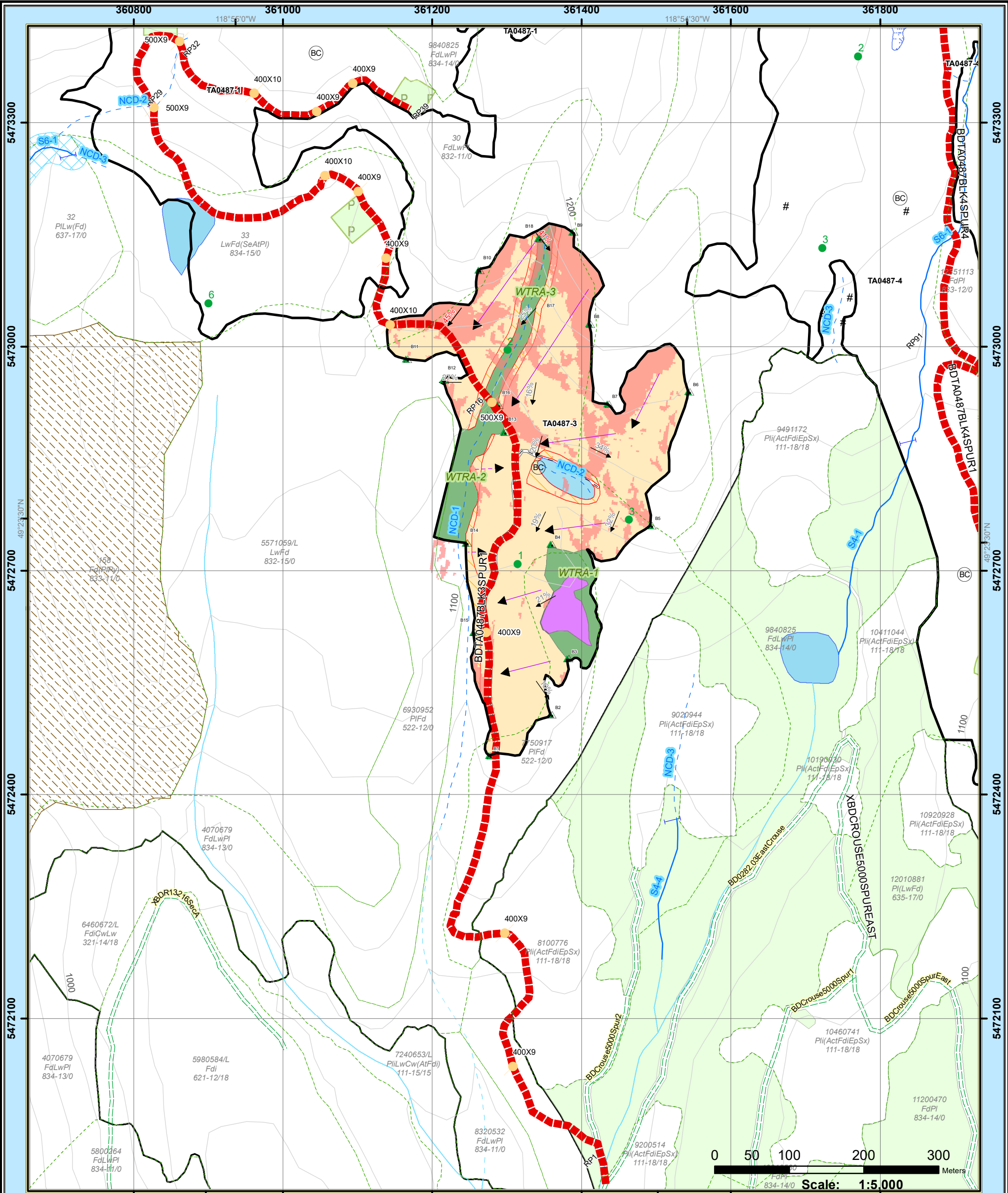




BC Timber Sales - Kootenay Business Area

**HARVEST PLAN MAP**

**TSL: TA0487**  
**BLOCK: 3**  
Generated On: 9/20/2021

**Pre Number: Kettle\_24**  
**UBI: BF6CJ**  
Generated By: LBULMER

**Location:** Lost Horse / Crouse Creek  
**Mapsheet:** 082E036  
**Latitude:** 49° 23' 32.79"  
**Longitude:** 118° 54' 39.01"

**Maximun Elevation:** 1200  
**Minimun Elevation:** 1080

Projection: UTM  
Datum: NAD 83

Blk\_Contractor

Reserve

WTRA

Non Productive

NP Wet/ Water

Recreation Sites and Reserves

OGMA

Wetlands

**Harvest Strategies**

Special Management Area

Machine Free Zone

Riparian Reserve Zone

Riparian Management Zone

LiDAR > 35% Steep Slope

Proposed Temporary Landing

Existing Permanent Landing

Proposed Permanent Landing

Proposed Permanent Roads

Proposed Temporary Roads

Existing Roads

Electrical Substation

Mines; Pit; Abandoned Pit or Mine

Campsite

Golf Course

Park or Field

Cemetery

Dump/Sewage;

Fence

Transmission Lines

Pipeline

**Harvest Method**

GROUND

CABLE

CABLE/ GROUND

Stream

Intermittent Stream

Contours

Cruise Slope

Existing Trails

Fence Line

Gully, Draw

Seepage

Potential Skid Direction, Fav

Potential Skid Direction, Ad

Existing Skid Trails

Proposed Skid Trails

Falling Corner

Proposed Culvert

Existing Culvert

Common Junction

CRS

Designated Skid Crossing

Ecology Plot

Gravel Pit

Leave Tree

Mine Shaft

Survey Pin

Reach Break

Rock

Seepage

Slide

Cabin

Wildlife Feature

**Harvest Plan Area Summary (ha)**

| Harvest Unit    | Method                  | Area | Strategy                |
|-----------------|-------------------------|------|-------------------------|
| 1<br>MFZ<br>SMA | Ground                  | 10.4 | Standard Practice       |
|                 | Machine Free Zone       | 0.0  | Machine Free Zone       |
|                 | Special Management Area | 1.0  | Special Management Area |
|                 |                         |      | 11.4                    |

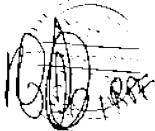
| Table 1. - Layer 1 Reserved Timber <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                    |           |               |                   |         |         |                           |   |   |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------|-----------|---------------|-------------------|---------|---------|---------------------------|---|---|---|
| Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TU / HU | Selection Priority | Species   | Size          | Stems per Hectare |         |         | Distribution <sup>2</sup> |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                    |           |               | Target            | Minimum | Maximum | S                         | G | I | R |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     |                    | Fdi       | >= 47.5cm dbh | 10                | 5       | 13      | X                         | X | X | X |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     |                    | Deciduous | All           | 95%               | N/A     | N/A     | X                         | X | X | X |
| Additional Requirements:<br>1. Reserve trees may be felled for construction of roads, landings, trails or for worker safety.<br>2. Reserve trees that need to be felled harvested for safety, access or silviculture will be left on site for CWD.<br>3. The distribution of the retention is not expected to be even throughout the block as there are > 1ha areas that may not have any of the species prescribed for retention.<br>4. Reserve trees will be focused on trees that are of poor form (wolfy), have broken tops and/or trees that would otherwise be left on site as CWD and or put in the debris pile |         |                    |           |               |                   |         |         |                           |   |   |   |
| <sup>1</sup> Refer to <i>Appendix I for Table of Reserve Timber Abbreviations and Definitions</i><br><sup>2</sup> Distribution Types: S: Single Trees, G: Groups of Trees, I: Irregularly Distributed, R: Regularly Distributed                                                                                                                                                                                                                                                                                                                                                                                        |         |                    |           |               |                   |         |         |                           |   |   |   |
| <b>Note:</b> Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule “A”, Section 2.00 regarding Dangerous Trees                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |                    |           |               |                   |         |         |                           |   |   |   |

| Table2. - Other Reserved Timber <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------|------------------------------|---------------------|-----------------------|---------------------------|---------|---------------------------|---|---|---|
| Non-Merchantable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TU / HU | Location(s)          | Species                      | Size                | SPH or BAPH (m2)      |                           |         |                           |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                      |                              |                     | Target                | Minimum                   |         |                           |   |   |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     | SMA of NCD-1,2       | All except for Pli           | Non-PI >=17.5cm dbh | >= 293 SPH            | >= 293 SPH                |         |                           |   |   |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     | SMA of NCD-1,2       | All except for Pli           | Non-PI <=17.5cm dbh | All where practicable | NA                        |         |                           |   |   |   |
| Dead Trees to be Stubbed (where Mechanical Falling is utilized)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TU / HU | Species              | Size                         | Stubbing Height     | Stems per Hectare     |                           |         | Distribution <sup>2</sup> |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                      |                              |                     | Target                | Minimum                   | Maximum | S                         | G | I | R |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     | N/A                  | N/A                          | N/A                 | N/A                   | N/A                       | N/A     | X                         | X | X | X |
| Additional Requirements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| Coarse Woody Debris                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TU / HU | Species              | Size                         | Number per Hectare  |                       | Distribution <sup>2</sup> |         |                           |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                      |                              | Target              | Minimum               | S                         | G       | I                         | R |   |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     | All except Fd and Sx | 2 m long and 7.5 cm diameter | 4                   | 4                     | X                         | X       | X                         | X |   |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TU1     | All except Fd and Sx | 2-5m long and 20cm diameter  | 4                   | 4 = 1.24m3/ha         | X                         | X       | X                         | X |   |   |
| <sup>1</sup> Refer to <i>Appendix I for Table of Reserve Timber Abbreviations and Definitions</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| <sup>2</sup> Distribution Types: S: Single Stems/Logs, G: Groups of Stems/Logs, I: Irregularly Distributed, R: Regularly Distributed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| As per FPPR Section 68, a minimum of 4 logs per hectare, each being a minimum of 2 m in length and 7.5 cm in diameter at one end must be retained in the block. As this block is located in the IDF, a minimum of 1.24m3/ha of CWD from a minimum of 4 logs per hectare, each being a minimum of 2 meters in length, but not greater than 5m in length with a minimum of 20 cm in diameter at one end in addition to the minimum 4 logs required for FPPR Section 68. To reduce Douglas-fir and spruce bark beetle susceptibility and spread, CWD is to be selected from dead/dry material and from species other than Douglas-fir or spruce, and stumps must be cut as low to the ground as possible. |         |                      |                              |                     |                       |                           |         |                           |   |   |   |
| <b>Note:</b> Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule “A”, Section 2.00 regarding Dangerous Trees.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |                      |                              |                     |                       |                           |         |                           |   |   |   |

| RIPARIAN ASSESSMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |     |    |           |                    |                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----|----|-----------|--------------------|---------------------------------------------------------|
| Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Riparian I.D. and Class | RMA | SU | Width (m) | BA or SPH Retained | Comments (Indicate if in a Community Watershed)         |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NCD-1,2                 | SMA | 1  | 8         | >= 293 SPH         | This block is not located within a Community Watershed. |
| Management Strategies:<br>There are two NCDs (NCD-1 and NCD-2) associated with this block. The NCDs have a 10m buffer with an additional 8m Special Management Area (SMA). A 50% retention has been prescribed in the SMA. The SMA is flagged with yellow “Special Management Area” ribbon and identified on the SP and HP maps for these features. The SMA is a machine free zone. The management objectives in this Site Plan will comply with the practice requirements for riparian classes as listed in Section 5.3.1.5 of the FSP and RMZ Retention requirements specified in the associated table. |                         |     |    |           |                    |                                                         |

| Safety Highlights:                                                                                          |
|-------------------------------------------------------------------------------------------------------------|
| Steep slopes (35-50% exist in places), some boulders and exposed surface rock exists throughout this block. |
| Overhead hazards exist from snags and newly dead and dying beetle damaged lodgepole pine.                   |

| Harvest / Operational Constraints:                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| It is recommended that this block be scheduled for Summer/Fall/Winter Harvest on dry and/or frozen ground or on deep snowpack in order to minimize damage to the integrity of the soils in this block.                                                                                     |
| Steep slopes (35-50% exist in places), some boulders and exposed surface rock exists throughout this block. Bladed/excavated trails and/or hoe chucking may be required to harvest the steeper (> 35%) slopes.                                                                             |
| In order to minimize the risk of Lodgepole Pine Dwarf Mistletoe infection to the new regenerating Lodgepole pine within this block post harvest, the Licensee must cut all standing Lodgepole pine trees that are over 50 cm in height, during the harvest and/or post harvest operations. |

| Kootenay Business Area Field Marking Standards |  |  |  |  | I certify that the work described herein fulfills standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work. | RPF'S SIGNATURE and SEAL                                                              |
|------------------------------------------------|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                |  |  |  |  |                                                                                                                                                                                             |                                                                                       |
|                                                |  |  |  |  | Michael E. Jobke, R.P.F.                                                                                                                                                                    |  |
|                                                |  |  |  |  |                                                                                                                                                                                             |                                                                                       |
|                                                |  |  |  |  | RPF PRINTED NAME                                                                                                                                                                            |                                                                                       |
|                                                |  |  |  |  | September 20th, 2021                                                                                                                                                                        |                                                                                       |
|                                                |  |  |  |  |                                                                                                                                                                                             |                                                                                       |

|                          | Ribbon                     | Paint      |
|--------------------------|----------------------------|------------|
| Harvest Boundary         | BCTS Block Boundary        |            |
| Falling Corners          |                            | FC#        |
| WTRA Boundary            | Reserve                    |            |
| Reserve Boundary         | Reserve                    |            |
| Riparian Reserve Zone    | Reserve                    |            |
| Riparian Management Zone | Riparian Mgmt. Zone        |            |
| Management Zone          | Management Zone            |            |
| Treatment Unit Boundary  | Treatment Unit Boundary    |            |
| Reserve Trees            |                            |            |
| Machine Free Zone        | //// Machine Free Zone /// |            |
| Cruising                 | Cruise Line                | Plot Trees |
| Traverse Stations        |                            |            |
| SP Plot Location         |                            |            |

|                                                 | Ribbon            | Paint |
|-------------------------------------------------|-------------------|-------|
| NCD & Stream Centers                            | Water Course      |       |
| Road P-Line                                     |                   |       |
| Road Center Line                                | Road Centerline   |       |
| Landings                                        | Landing           |       |
| Road Right of Way                               | R/W Boundary      |       |
| Road RP                                         |                   |       |
| Culverts                                        | Culvert           |       |
| Designated Crossing                             | Crossing          |       |
| Culvert RP Outside Right of Way                 |                   |       |
| Tail Holds / Guyline / Intermediate Supports    |                   |       |
| Skid Trail / Back Spar Trail / Forwarding Trail | ///// Trail ///// |       |
| Recce Ribbon / D-Line / Skyline Roads           | //////////        |       |