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1 CENTRAL KOOTENAY

1.01 Definitions

In these Local Area Specifications, capitalized terms will have the corresponding meanings as set out in Article 1 of this Agreement and Section 1 of this Schedule 1 (“Specifications”), and as set forth below:

“Dragnet Vehicle Arresting Barrier” means a manufactured product, including all its components that is comprised of a series of nets installed along an escape route, designed to stop vehicles.

“Invasive Plants” means any invasive alien plant species that has the potential to pose undesirable or detrimental impacts on humans, animals or ecosystems.

“Salt Containment Infrastructure” means a storage facility, including all of its components that is used for the storage and loading/unloading salt for winter maintenance operations including, but not limited to the salt shed, fabric/steel roofing, pit floor, evapotranspiration liner, containment pad, and skirt.

1.02 Arrestor Bed Maintenance – Galena Bay

1.02.1 Outcome

To provide a safe, functional and available resistance lane for runaway vehicles.

1.02.2 Routine Maintenance Services

PM1.02.2-1 Respond to an arrestor bed incident as follows:

Performance Criteria	Response
a) Remove vehicles and items that are not part of the infrastructure	immediately
b) Repair and replace damaged infrastructure	immediately
c) Loosen affected bed aggregate to 60 centimetres for a 100 centimetre depth arrestor bed and to 40 centimetres for a 50 centimetre depth arrestor bed and return to original cross section	immediately

PM1.02.2-2 Maintain arrestor bed aggregate as follows:

Performance Criteria	Response
a) Loosen bed aggregate to 60 centimetres for a 100 centimetre depth arrestor bed and to 40 centimetres for a 50 centimetre depth arrestor bed.	annually
b) Wash bed aggregate to eliminate fines impeding free drainage	annually

PM1.02.2-3 Monitor the arrestor bed for frozen crusts during periods of freezing rain or extreme freeze thaw cycles as required.

PM1.02.2-4 Eradicate frozen crusts immediately and restore functionality of the arrestor bed.

1.02.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- When replacing aggregates, materials must be consistent with the size and type of existing aggregates; and
- Remain at the site(s) until the functionality of the arrestor bed has been restored and the site(s) are safe and available for Highway Users.

1.03 Arrestor Bed Maintenance - Needles

1.03.1 Outcome

To provide a safe, functional and available resistance lane for runaway vehicles.

1.03.2 Routine Maintenance Services

PM1.03.2-1 Respond to an arrestor bed incident as follows:

Performance Criteria	Response
d) Remove vehicles and items that are not part of the infrastructure	immediately
e) Repair and replace damaged infrastructure	immediately
f) Loosen affected bed aggregate to 60 centimetres for a 100 centimetre depth arrestor bed and to 40 centimetres for a 50 centimetre depth arrestor bed and return to original cross section	immediately

PM1.03.2-2 Maintain arrestor bed aggregate as follows:

Performance Criteria	Response
c) Loosen bed aggregate to 60 centimetres for a 100 centimetre depth arrestor bed and to 40 centimetres for a 50 centimetre depth arrestor bed.	annually
d) Wash bed aggregate to eliminate fines impeding free drainage	annually

PM1.03.2-3 Monitor the arrestor bed for frozen crusts during periods of freezing rain or extreme freeze thaw cycles as required.

PM1.03.2-4 Eradicate frozen crusts immediately and restore functionality of the arrestor bed.

1.03.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) When replacing aggregates, materials must be consistent with the size and type of existing aggregates; and
- b) Remain at the site(s) until the functionality of the arrestor bed has been restored and the site(s) are safe and available for Highway Users.

1.04 Barrier Removal – Kootenay Pass

1.04.1 Outcome

To remove and re-establish barrier due to potential snow avalanches.

1.04.2 Routine Maintenance Services

PM1.04.2-1 Remove and store barrier within 2 weeks upon being notified by the Province and install transition barriers and bullnoses on the ends of the remaining barrier.

PM1.04.2-2 Re-establish barrier within 2 weeks upon being notified by the Province.

Notes:

- 1) There are approximately 320 pieces of barrier beginning at RFI landmark 20823 at offset 2.703 kilometre and terminating at offset 3.863 kilometre.

1.04.3 Materials and/or Procedures

- a) Establish a snow berm in place of the removed barrier at a height of 1.5 metres when Winter Accumulations on site permit; and
- b) Sign the barrier removal area when there is no snow berm or barrier in place.

1.05 Dragnet Vehicle Arresting Barrier Maintenance – Crawford Bay

1.05.1 Outcome

To provide a safe, functional and available Dragnet Vehicle Arresting Barrier.

1.05.2 Routine Maintenance Services

PM1.05.2-1 Respond to Dragnet Vehicle Arresting Barrier incidents as follows:

Performance Criteria	Response
a) Remove vehicles and items that are not part of the infrastructure	immediately
b) Repair or replace damaged infrastructure	immediately

PM1.05.2-2 Respond to Dragnet Vehicle Arresting Barriers as follows:

Performance Criteria	Response
a) Inspect, and repair or replace any damaged or deteriorated components that prevent the Dragnet Vehicle Arresting Barrier from functioning as designed due to conditions including, but not limited to misalignment, loose fasteners, cable damage, corrosion and vandalism.	3 months
b) Inspect and adjust the Dragnet Vehicle Arresting Barrier net tension and height if the Dragnet Vehicle Arresting Barrier net is greater than 5 degrees perpendicular to the structure or the sag in the cable exceeds 40 millimetres	3 months

PM1.05.2-3 Inspect energy absorber housings annually for metal fatigue, corrosion or deterioration and replace tape if a white substance exists or if rust exceeds 5 square centimetres in an area.

PM1.05.2-4 Maintain and lubricate annually, all connections.

PM1.05.2-5 Remove Winter Accumulations from the approach and entrance of the first barrier net in accordance with the response of the adjacent Highway.

PM1.05.2-6 Remove Winter Accumulations from multi-net Dragnet Vehicle Arresting Barriers that exceed 25 centimetres between barrier nets 1 and 2.

PM1.05.2-7 Remove Winter Accumulations from multi-net Dragnet Vehicle Arresting Barriers that exceed 60 centimetres between barrier nets 2 and 5.

1.05.3 Materials and/or Procedures

Refer to Section 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Maintain, repair and replace Dragnet Vehicle Arresting Barriers in accordance with the manufacturer's specifications and recommendations;
- b) Replace Dragnet Vehicle Arresting Barriers with the same products; and

- c) Provide traffic management during these maintenance activities, until the functionality of the Dragnet Vehicle Arresting Barrier has been restored and the site(s) are safe and available for Highway Users.

1.06 Ferry Terminal Maintenance – Balfour and Kootenay Bay

1.06.1 Outcome

To provide maintenance and respond to conditions at the terminal.

1.06.2 Routine Maintenance Services

PM1.06.2-1 Maintain the ferry terminal in accordance with the General Specifications 1.01, 1.02, 1.06, 1.07, 1.08, 1.10, 2.01, 2.02, 3.01, 3.02, 3.03, 4.01, 4.02, 4.03, 5.01, 5.02, 5.03, 7.01, 7.02, 7.03, 7.04 and 7.05 of this Schedule 1 (“Specifications”).

PM1.06.2-2 Remove snow piles that impede the flow of traffic in Travelled Lanes, queue lanes and parking areas to a location outside the ferry terminal boundary, as directed by the Province

Specific Requirements:

- a) Maintain the ferry terminal in accordance with the response of Highway Classification 3A;
- b) Remove Winter Accumulations from all ferry terminal Travelled Lanes, queue lanes and parking areas in accordance with PM3.01.2-1 (a) of the General Specifications of this Schedule 1 (“Specifications”); and
- c) Respond to incidents, working in cooperation with marine staff, regulatory agencies, emergency services and the Province.

Notes:

- 1) The Balfour and Kootenay Bay ferry terminals include all Travelled Lanes, queue lanes and parking areas as shown in Appendix A; and
- 2) PM1.01.2-1 includes possible Quantified Maintenance Services.

1.06.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 (“Specifications”).

1.07 Highway Crossing Infrastructure

1.07.1 Outcome

To provide safe passage of pedestrians and animals underneath or beside a Highway.

1.07.2 Routine Maintenance Services

- PM1.07.2-1** Respond immediately to restrict all access to Highway Crossing Infrastructure, as directed by the Province.
- PM1.07.2-2** Repair or replace immediately, as directed by the Province, any damaged or deteriorated Highway Crossing Infrastructure that has been structurally compromised, as determined by the Province.
- PM1.07.2-3** Repair or replace within 3 months, any damaged or deteriorated Highway Crossing Infrastructure that has not been structurally compromised, as determined by the Province.
- PM1.07.2-4** Remove Debris immediately from the surfaces of floors, pedestrian paths or stairways.
- PM1.07.2-5** Remove Accumulations, surface contaminants and chemicals by June 30th of each calendar year from all surfaces.
- PM1.07.2-6** Remove Debris within 1 month that impedes the passage of animals in animal accessed Highway Crossing Infrastructure.

1.07.3 Quantified Maintenance Services

- PM1.07.3-1** Repair within 24 hours damaged or deteriorated surfaces on underpass floors, pedestrian paths or stairways.
- PM1.07.3-2** Repair within 6 months other damaged or deteriorated surfaces.

Specific Requirements:

- a) Maintain Highway Crossing Infrastructure within Rest Areas in accordance with the response of the adjacent Highway Classification.

1.07.4 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional material and/or procedures requirements are as follows:

- a) Use materials in accordance with the same type and quality on the existing Highway Crossing Infrastructure.

1.07.5 Routine Maintenance Services Cap

\$50,000 – for each occurrence, the cost to repair or replace Highway Crossing Infrastructure.

1.07.6 Warranty

Refer to Section 3 of this Schedule 1 (“Specifications”).

1.08 Hiking Trail Maintenance – Nelson Salmo Great Northern Trail

1.08.1 Outcome

To provide safe and structurally sound Bridges and unobstructed drainage for the Nelson Salmo Great Northern Trail recreational trail.

1.08.2 Routine Maintenance Services

PM1.08.2-1 Conduct safety patrols in accordance with General Specification 7.04 of this Schedule 1 ("Specifications") at the continuous frequencies as follows:

Performance Criteria	Response
a) At all times	1 m
b) During periods of Heavy Rainfall, High Water Flow or Rapid Snowmelt	7 d

PM1.08.2-2 Maintain Bridges, Ditches and Drainage Appliances and conduct inspections in accordance with General Specifications 2.01, 2.02, 2.03, 6.01, 6.10, 6.12, 6.13, 6.14 and 7.03 of this Schedule 1 ("Specifications").

PM1.08.2-3 Respond to Major Events and provide communications in accordance General Specifications 7.02 and 7.05 of this Schedule 1 ("Specifications").

Specific Requirements:

- a) Maintain Bridges, Ditches and Drainage Appliances and conduct inspections in accordance with the response of a Class 7 Highway.

Notes:

- 1) The Nelson Salmo Great Northern Trail extends 48 kilometres from the Village of Salmo municipal boundary (km 266.4) to the intersection of the Canadian Pacific Railway line at Troup Junction (km 311.2) and has limited access / egress;
- 2) There are 13 trestle or timber Bridges located along the recreational trail that are not directly accessible from a Highway or local road;
- 3) The Regional District of Central Kootenay has a lease agreement with the Province that describes their obligations and responsibilities; and
- 4) PM1.08.2-2 and PM1.08.2-3 includes possible Quantified Maintenance Services and Routine Maintenance Services Caps.

1.08.3 Materials and/or Procedures

Refer to Section 1.6 of this Schedule 1 ("Specifications").

1.09 Horizontal Drain System Maintenance

1.09.1 Outcome

To provide fully functional Highway horizontal drain systems.

1.09.2 Routine Maintenance Services

- PM1.09.2-1** Repair or replace within 1 month damaged or deteriorated collector systems and drains.
- PM1.09.2-2** Cut vegetation that exceeds 20 centimetres in height at horizontal drain outlets and collector system cleanouts to ensure they function as designed.
- PM1.09.2-3** Inspect all horizontal drain systems annually.
- PM1.09.2-4** Flush and clean all horizontal drain systems once in the First Contract Year.
- PM1.09.2-5** Flush and clean all horizontal drain systems after the First Contract Year, as directed by the Province.

Notes:

- 1) The horizontal drain systems are identified in Appendix A.

1.09.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Maintain access to horizontal drain system sites for cleaning;
- b) Flush the drain casings of sediment and clean the slots / perforations of obstructions and caking; and
- c) Test, collect and record flow rates, drain conditions, and length of insertion by the cleaning tools immediately before and after each flushing/cleaning.

Appendix A

Name	Type	Construction Year	Location Details	Fan Number	No. of Drains
3 Mile Slide	Metal	1968	5.8 km north of the north end of the Nelson Bridge on Hwy 3A	1	1
				2	1
				3	3
				4	3
				5	3
				6	2
				7	1
				6	1
Alliance Slide	Perforated/Solid PVC	1992	4.4 km west of Jct 23 & 6 in Nakusp	1	3
				2	3
				3	3
Bayonne Creek Slide	Unknown	1992	0.9 km east of Bayonne Creek along Hwy 3	1	4
Blaylock Slide	Plastic	1981	4.7 km north of the north end of the Nelson Bridge on Hwy 3A	1	1
				2	2
				3	1
Bosun Slide	Metal	1992	2.4 km south of Carpenter Creek Bridge on Hwy 6	1	3
				2	3
				3	4
				4	1
				5	1
				6	1
Destiney Bay	Perforated/Solid PVC	1997	46 km north of Creston on Hwy 3A	1	2
				2	4
				3	1
				4	1
				5	1
				6	1
				7	3
Eastgate Fill Failure	Unknown	1992	1.0 km east of the east avalanche control gate on the Salmo-Creston Skyway	1	3
				2	3
Goat River	Perforated/Solid PVC	1999	8.0 km east of Creston	1	7
Halcyon Slide	Plastic	1992	10.2 km south of the Galena Bay Ferry Landing along Hwy 23 - drains located at the south end of the slide	1	6
				2	6
				3	5
				4	5
				5	5
				6	5
Hazel Creek Slide	Perforated Plastic/Steel	1992	7.0 km east of Kitchener on Hwy 3 across the highway from Hahn Road	7	7
Summit Creek Overhang Rock	Perforated/Solid PVC	1999	5.0 km west of summit creek; Creston; lower site	1	7
				2	6
				3	4
Winlaw Slide	Perforated/Solid PVC	1983	To the east of Fan #1 near telephone pole	0	4
		1983	3 km north of the Winlaw service station on Hwy 6	1	16
				2	10
				3	14

Name	Type	Construction Year	Location Details	Fan Number	No. of Drains
				4	7
				5	13
				6	12
				7	7
				8	7
				9	5
		1983	On the upper bank	10	6
		2017	Located near Fans 5 and 6, put after recent slide and old drain failure	11	3
				12	3
				13	3
Wynndel Slide	Perforated/Solid PVC	1997	1.0 km west of Wynndel south road on Hwy 3	1	1
				2	1
				3	1
				4	1
				5	1
				6	1
				7	1
				8	2
				9	3
				10	3

1.10 Invasive Plants Management

1.10.1 Outcome

To minimize the introduction and spread of Invasive Plants on Highways and Gravel Pits.

1.10.2 Routine Maintenance Services

PM1.10.2-1 Meet annually, with the agency conducting Invasive Plant management for the Province, during development of the Quantified Maintenance Services to coordinate planned activities.

PM1.10.2-2 Inspect all Gravel Pits and material sources annually to ensure they are free of Invasive Plants.

PM1.10.2-3 Report Invasive Plant conditions to the agency conducting Invasive Plant management for the Province, as follows:

Performance Criteria	Response
a) Prior to the disturbance of knotweed species that restricts Sight Distance or creates a condition that is unsafe or has the potential to become unsafe	immediately
b) Any Invasive Plant infestations on Highways and Gravel Pits	2 d

Notes:

- 1) Only the exposed, active areas of the Gravel Pits are to be considered.

1.10.3 Quantified Maintenance Services

PM1.10.3-1 Seed specific areas of exposed soils exceeding 1 metre up the Shoulder sideslope and the backslope due to ditch maintenance.

Notes:

- 1) The Standard Specifications for Highway Construction describes the revegetation requirements including, but not limited to blending, seed analysis and application timing.

1.10.4 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Comply with the Best Practices for Managing Invasive Plants on Roadsides;
- b) Incorporate Invasive Plant management when planning and performing Quantified Maintenance Services;

- c) Seed side-cast ditch materials;
- d) Seek approval from the Province if disturbance of knotweed species is required;
- e) The Contractor may submit a plan for approval by the Province for the use of herbicides, as a control measure for knotweed or other Invasive Plants;
- f) Herbicides are to be applied by a certified pesticide applicator;
- g) Do not use gravel materials contaminated with Invasive Plants, unless a rectification process is submitted and approved by the Province; and
- h) Report Invasive Plants to the agency conducting Invasive Plant management for the Province online or using the Province's smartphone application or the provincial toll-free service.

1.10.5 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications").

1.11 Salt Containment Infrastructure Maintenance

1.11.1 Outcome

To provide for the safe handling and storage of salt and Winter Abrasives on provincial land and monitor, maintain, repair and replace provincially owned Salt Containment Infrastructure.

1.11.2 Routine Maintenance Services

- PM1.11.2-1** Off-load salt onto an evapotranspiration liner or containment pad, if available and/or store immediately within the salt shed.
- PM1.11.2-2** Retrieve and return to the salt shed immediately, any salt spillage over the top of skirt that lines the inside of the salt shed.
- PM1.11.2-3** Remove immediately, any salt or salt contaminated material on the pit floor to a depth of 40 centimetres for use with Winter Abrasives when processing.
- PM1.11.2-4** Notify the Province immediately of any damage to the containment pond, including but not limited to the liner, berm or fencing.
- PM1.11.2-5** Temporarily repair damaged or deteriorated salt shed components immediately, that permits water infiltration.
- PM1.11.2-6** Permanently repair within 8 weeks, any temporarily repaired steel/fabric salt shed components that permits water infiltration.
- PM1.11.2-7** Permanently repair within 2 weeks, any temporarily repaired wooden salt shed components that permits water infiltration.
- PM1.11.2-8** Inspect and document the condition of Salt Containment Infrastructure as follows:

Performance Criteria	Response
a) Evapotranspiration water/brine levels	daily or more often when required
b) Water in the containment pond to prevent over-flowing	daily or more often when required
c) Steel/fabric salt sheds including, but not limited to, the steel structural components including base plates, wire cross-bracing, fabric roof, fabric lashing, winches and vents, lock-blocks and protective skirt	bi-annually in the spring and fall or in accordance with the manufacturer's specifications and recommendations, whichever is more frequent
d) Wooden salt shed including but not limited to structural condition and weatherproof exterior	annually
e) Salt shed apron and containment pad surfaces	annually
f) Evapotranspiration liner surface absorption	daily or more often when required

PM1.11.2-9 Maintain the superstructure of steel/fabric salt sheds as follows:

Performance Criteria	Response
a) Remove grime and encrusted salt off the salt shed's steel interior	annually
b) Lubricate winches	annually
c) Re-tension-web and fabric roof lashing	annually
d) Re-tighten fastening bolts	annually
e) Remove surface rust	annually

PM1.11.2-10 Repair or replace Salt Containment Infrastructure as follows:

Performance Criteria	Response
a) Damaged or deteriorated containment pond components, including but not limited to the liner, berm or fencing	immediately
b) Loss of absorption for a compact surface where water is ponding on the evapotranspiration liner	immediately
c) Saturation or overflow of evapotranspiration water/brine	when required
d) Damaged or deteriorated wooden salt shed components	within 2 weeks of the bi-annual inspection or as noted in PM1.11.2-8
e) Damaged or deteriorated steel/fabric salt shed components	within 8 weeks of the bi-annual inspection or as noted in PM 1.11.2-8 if salt and/or Winter Abrasive with salt is present or prior to when the salt and/or Winter Abrasive with salt is scheduled to be stored
f) Cracked, chipped edges, pot holes, settling/ponding, or base failure of surfaces	General Specifications 1.01, 1.06 and 1.10 of this Schedule 1 ("Specifications") for a Class 4 Highway

PM1.05.2-11 Replace annually, the top 10 centimetres of salt contaminated material on the evapotranspiration surface with free draining material and use the removed salt contaminated material for Winter Abrasives processing.**Notes:**

- 1) The Province inspection H-form is to be used for inspections of steel/fabric salt sheds;
- 2) PM1.11.2-10 (f) includes possible Quantified Maintenance Services; and
- 3) Salt shed locations are provided in Appendix A of Schedule 13 ("Gravel Licence").

1.11.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Load salt and/or Winter Abrasive containing salt on a containment pad or the evapotranspiration liner surface;
- b) Store salt and/or Winter Abrasive containing salt at a height below the top 30 centimetres of the skirt within a steel/fabric salt shed and ensure the top of the lock block wall remains free of salt accumulation;
- c) Park heavy equipment used for loading salt or Winter Abrasive containing salt, on the containment pad, evapotranspiration liner or within the salt shed;
- d) Prevent spillage onto the pit floor when transporting salt;
- e) Store Winter Abrasive containing salt under cover or on a containment pad or on an evapotranspiration liner, if supplied;
- f) Use a spill proof apron for salt hoppers to contain salt and facilitate retrieval;
- g) Store salt contaminated material for future use with Winter Abrasives on a containment pad or evapotranspiration liner or in a salt shed;
- h) Prevent salt contaminated materials from being tracked from the containment pad or evapotranspiration liner and use a containment pond for disposal, if one exists on site;
- i) Maintain an open catchment area adjacent to the salt shed exterior walls to accommodate unobstructed snow shedding off the structure;
- j) Remove snow from the roof of steel/fabric salt shed and adjust the roof tension after the snow accumulation has been removed in accordance with the manufacturer's specifications and recommendations;
- k) Reseal exposed surfaces following the removal of surface rust with zinc-rich primer/paint;
- l) Maintain and repair damaged or deteriorated salt shed components in accordance with the manufacturer's specifications and recommendations;
- m) Use engineered designs for all repairs, modifications or replacement to steel/fabric salt shed structural components including, but not limited to the fabric roof, prepared by a Professional Engineer, retained by the Contractor; and
- n) Securely lock gates and post signage to prevent unauthorized access to fenced containment ponds.

1.11.4 Routine Maintenance Services Cap

\$50,000 – for each occurrence, the cost to repair or replace a salt shed.

1.12 Slide Mitigation Drainage System Maintenance – Passmore

1.12.1 Outcome

To provide a fully functional slide mitigation drainage system that protects Highway Users and Highway infrastructure.

1.12.2 Routine Maintenance Services

PM1.12.2-1 Inspect and document the condition of the slide mitigation drainage system prior to the spring freshet and by September 1st of each calendar year.

PM1.12.2-2 Report to the Province by September 30th of each calendar year, the results of the annual inspections, repairs or replacements, brushing and removal of materials.

1.12.3 Quantified Maintenance Services

PM1.12.3-1 Repair or replace within 1 month, damaged or deteriorated collection system, catchment area or berm components.

PM1.12.3-2 Partially or completely remove brush/trees annually, within a 5 metre perimeter of the slide mitigation drainage system that exceed 3 metres height.

PM1.12.3-3 Remove within 1 month, any accumulated rock, unconsolidated sediment or organic debris from the catchment area.

Specific Requirements:

- a) Maintain Drainage Appliances in accordance with General Specification 2.02 of this Schedule 1 (“Specifications”) and with the response of the adjacent Highway Classification.

Notes:

- 1) The slide mitigation drainage system is located along the east side of Highway 6, approximately 530 metres south of the Old Passmore Road. It is comprised of a collection system at the inlet, Drainage Appliances, catchment area and a berm as shown in Appendix A; and
- 2) The specific requirements (a) includes possible Quantified Maintenance Services.

1.12.4 Materials and/or Procedures

Refer to Section 1.6 of this Schedule 1 (“Specifications”).

Additional materials and/or procedures requirements are as follows:

- a) Maintain access to the slide mitigation drainage system; and
- b) Include the condition of the collection system concrete bags, culvert alignment, leakage areas, slope failures/movements, ground deformations, anchor systems and other appurtenances and measured flow rates entering / exiting the culverts with the inspection records.

Appendix A



1.13 Snow Avalanche Response – 39100 Kootenay Pass

1.13.1 Outcome

To provide an enhanced snow avalanche response exceeding the performance measures in General Specification 3.04 of this Schedule 1 (“Specifications”) to minimize Highway closures and facilitate the safe and orderly flow of traffic.

1.13.2 Routine Maintenance Services

PM1.13.2-1 Commence removal of snow avalanche deposits immediately upon being notified by the Province from the Highway at a minimum removal rate of 1800 m³ per hour within a designated avalanche area, with uninterrupted service until the deposits are removed.

PM1.13.2-2 Commence the removal of snow deposits within 12 hours upon being notified by the Province from catchment areas, static defence structures and safety structures at a minimum removal rate of 1200 m³ per hour within a designated avalanche area, with uninterrupted service until the deposits are removed.

PM1.13.2-3 Remove Winter Accumulations exceeding 20 cm at the heli-pad, infrastructure and in the yard facilities.

PM1.13.2-4 Provide one personnel continuously 24 hours per day, to patrol and provide avalanche occurrence observations to the Province, when the avalanche hazard forecast level is moderate or higher.

Notes:

- 1) The heli-pad, infrastructure and yard facilities encompass an area of approximately 2.5 hectares at the summit of Kootenay Pass.

1.13.3 Materials and/or Procedures

- a) Comply with the Kootenay Pass Traffic Management Plan.

1.14 Traffic Management – Balfour Ferry Terminal

1.14.1 Outcome

To provide enhanced traffic management exceeding the performance measures in General Specification 5.03 of this Schedule 1 (“Specifications”) related to traffic flow at the Balfour Ferry terminal and Highway 31/3A.

1.14.2 Routine Maintenance Services

PM1.14.2-1 Commence traffic management immediately upon notification from the Province, in accordance with the West Kootenay District Balfour Ferry Terminal Overflow Traffic Management Plan.

1.14.3 Materials and/or Procedures

- a) Comply with the West Kootenay District Balfour Ferry Terminal Overflow Traffic Management Plan.

1.15 Yard Maintenance – Kootenay Pass

1.15.1 Outcome

To provide a safe and well maintained yard.

1.15.2 Routine Maintenance Services

- PM1.15.2-1** Remove Winter Accumulations immediately from yard building facilities that may cause conditions to be unsafe or have the potential to become unsafe.
- PM1.15.2-2** Remove Winter Accumulations from the helicopter landing area that exceed 25 centimetres in height.
- PM1.15.2-3** Remove Winter Accumulations that exceed 15 centimetres in height from all cleared areas as shown in Appendix A.
- PM1.15.2-4** Remove Winter Accumulations from the backcountry use parking lot entrance and parking area that exceed 25 centimetres in height.
- PM4.15.3-5** Cut vegetation that exceeds 25 centimetres in height from all cleared areas as shown in Appendix A.
- PM4.15.3-6** Store materials including, but not limited to culverts, wood, concrete and metal neat and orderly, as directed by the Province.

Notes:

- 1) The yard building facilities, helicopter landing area, backcountry use parking lot entrance and parking area are shown in Appendix A.

1.15.3 Materials and/or Procedures

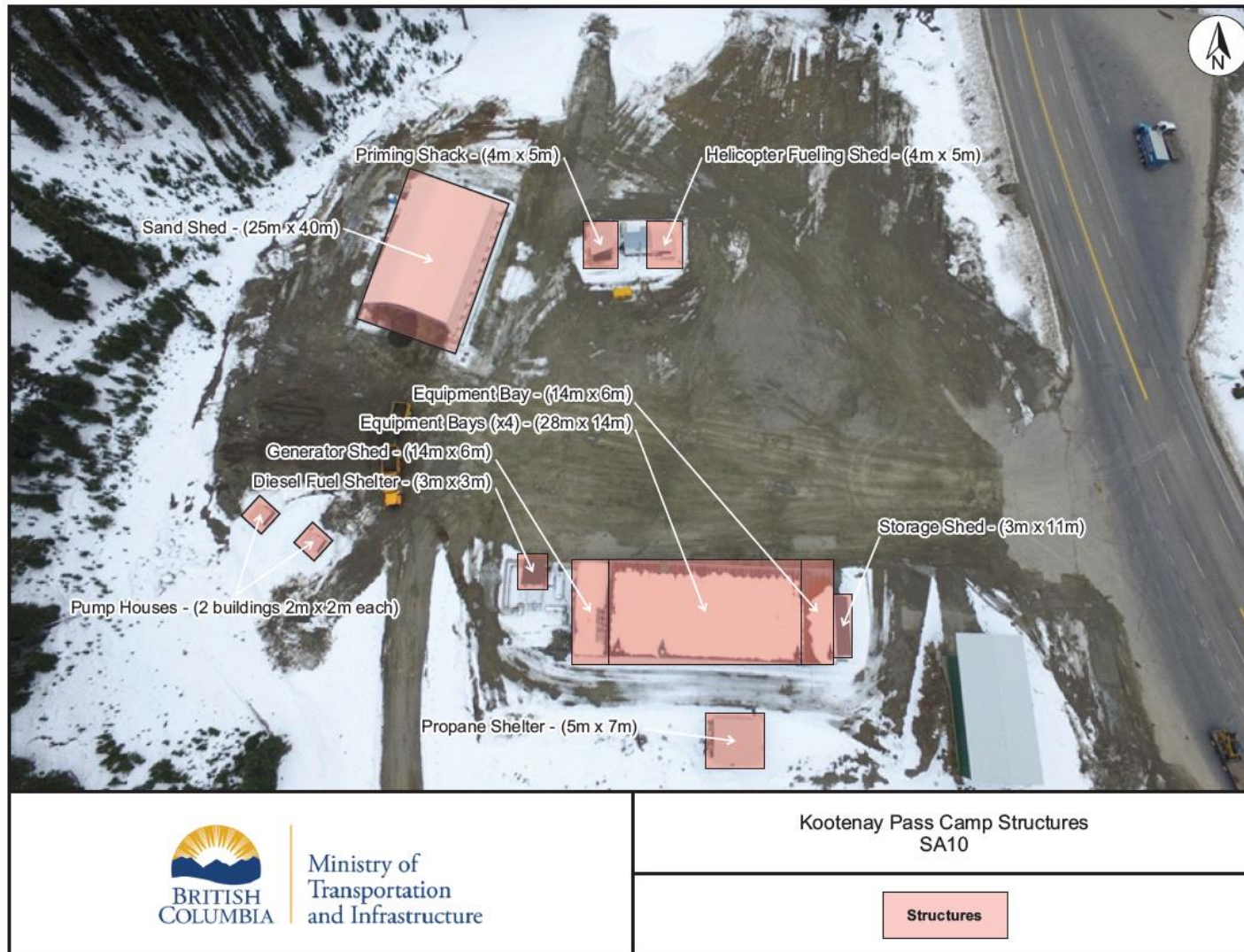
Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

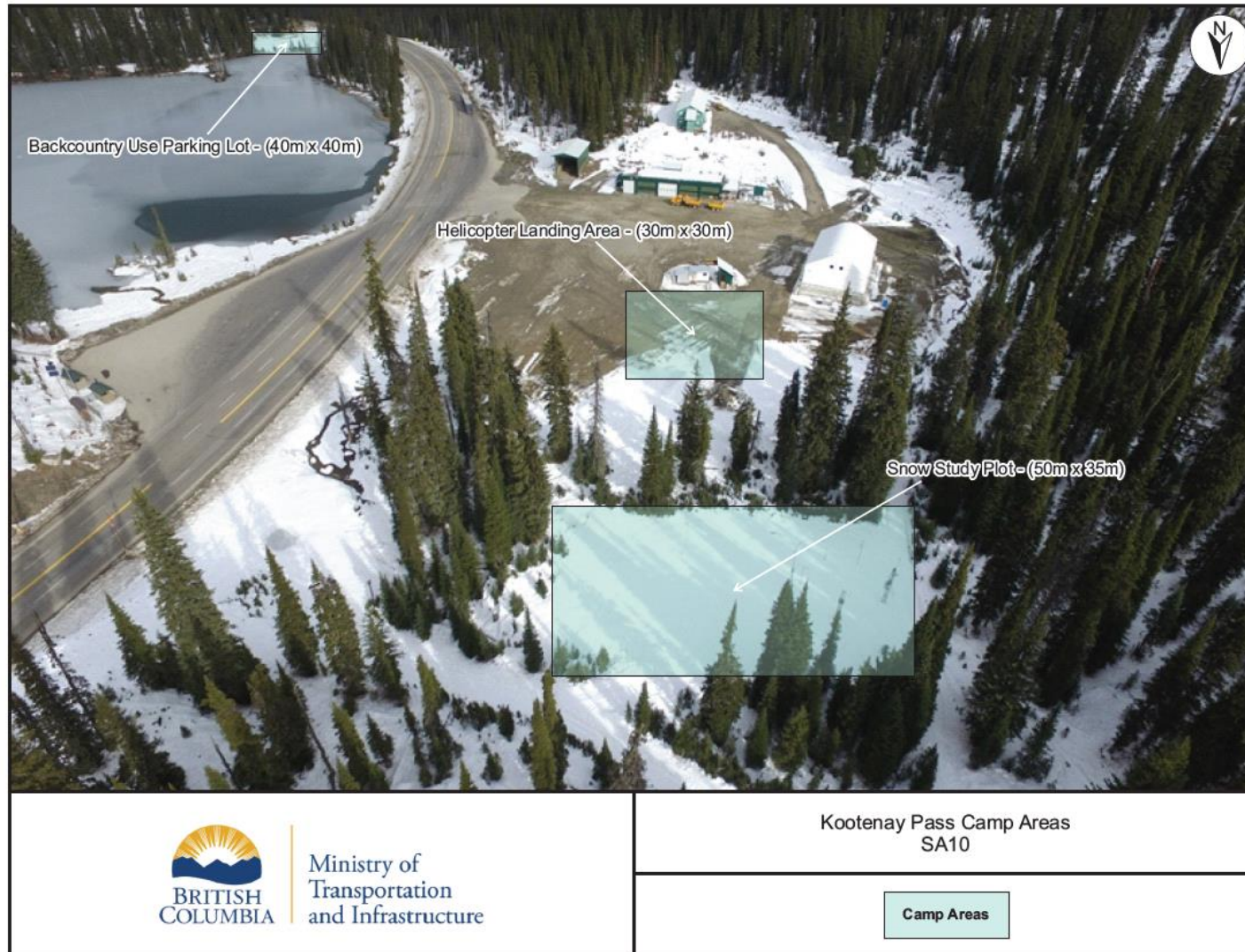
Additional materials and/or procedures requirements are as follows:

- a) Supply, install, and operate 2 generators, each with a minimum 72 kilovolt-ampere (kVA) output rating;
- b) Supply, deliver and store all generator fuel;
- c) Maintain and repair the generators in accordance with the manufacturer's specifications and recommendations; and
- d) Cut vegetation to the lowest possible height considering uneven terrain, ensuring that no soil is exposed and vegetation roots remain intact.

Appendix A – Kootenay Pass Maintenance Yard







1.16 Reclaimed Asphalt Pavement (RAP) for Side Road Paving

1.16.1 Outcome

To provide a smooth, durable, impermeable surface for side roads.

1.16.2 Routine Maintenance Services

There are no Routine Maintenance Services

1.16.3 Quantified Maintenance Services

PM1.16.3-1 Provide Services in accordance with the Province's written approval and the Materials and/or Procedures, below.

1.16.4 Materials and/or Procedures

Use Section 505 of the Standard Specifications for Highway Construction including SS 505 Appendix 1 RAP Management Best Practices.

Additional materials and/or procedures requirements are as follows:

Materials

- a) Supply a tack coat or penetrating primer in accordance with the Ministry's Recognized Products List.
- b) All materials are to be minus 25 mm using a conventional crushing operation using at least one cone. The use of a RAP breaker and/or screening plant is not permitted.
- c) Construct a 150-mm base for stockpiling the blended material using clean 25 mm sandy or crushed aggregate that extends beyond the perimeter of the stockpile. The stockpile base will be removed following construction as directed by the Province.
- d) Blend RAP materials with diluted emulsion 3 days prior to construction in a pug mill with approximately 35 litres per tonne of diluted emulsion and dilute the emulsion at one-part emulsion to three parts water (1:3) in accordance with the following equipment requirements:
 - i) Positive feed and shut off for the additive.
 - ii) Control of the quantity of additive to ± 0.05 l/m².
 - iii) Measurement of the additive applied using a metering device that can record accumulated litres within an accuracy of ± 2 percent, and is clearly visible to both the operator and the Provincial representative.

- iv) Mechanically or electronically controlled application of the additive relative to and variable with the processing rate of the equipment.
 - v) Mechanical or electronic metering device capable of supplying an accurate measurement of the quantity of additive being applied.
 - vi) Mechanical, electronic or manual method of measuring the quantity of additive in the tank.
- e) Prepare a sufficient quantity of blended material to allow a minimum of 3 days of curing time in stockpile prior to construction.
- f) Ensure that any material temporarily stockpiled for later use does not consolidate and height of the stockpile does not exceed the maximum height of the loader bucket.
- g) Seek approval from the Province should any of the materials not be achievable.

Construction

Professional standards in accordance with construction industry best practices are a core requirement of the Work. Any construction practice or activity that results in an obvious defect must be corrected by the Contractor. Construction practices shall include but are not limited to the following:

- h) The road surface must be clean of dirt, winter abrasives, organics or other foreign material and minimum of 10 degrees Celsius.
- i) Tack coats are only to be applied to road surfaces that are planned for RAP placement on the same day and traffic is not permitted on tacked surfaces.
- j) Apply prime coat / tack coat when the road surface and weather conditions are favourable and meet the manufacturers requirements.
- k) Spray bars for prime coat / tack coat are to produce a double coverage with one, uniform pass and within 25 percent of the specified application rate. The application rate for hard surfaces is 0.2 litres per square metre and 1.5 litres per square metre for existing gravel surfaces
- l) Place RAP materials by machine paving at a design compacted average thickness of 75 millimetre, with localized tolerance limits of a minimum 65 mm or maximum of 90 millimetre, as directed by the Province.
- m) Compact the entire width of the initial RAP lifts using a double drum vibratory roller with a minimum of 8 passes. Pneumatic tire rollers can be used only after the initial vibratory roller. Double drum vibratory steel rollers must have a minimum mass of 10 tonnes and rubber-tired rollers must have a minimum mass of 15 tonnes.
- n) Recompact the entire width of the RAP surfaces within 7 to 21 days after the initial compaction.

- o) Use vibrating tampers, hand rollers or other methods around curbs, manholes, headers and similar structures that are located within the paving profile to achieve the desired compaction as directed by the Province.
- p) Place gravel on Shoulder if required, using approved shouldering equipment at a consistent finished width of 0.3 metres, without impeding the drainage course.
- q) Construct road access tie-ins, paved driveway let-downs and transitions that cannot be placed with machine paving by handwork as directed by the Province.
- r) Ensure gravel accesses / driveways are satisfactorily available for use the same day following paving of the adjacent road.
- s) Seek approval from the Province should any of the construction parameters not be achievable.

1.16.5 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications").