

## Whitewater Ski Resort Master Plan

### Aug 2019 Addendum



The purpose of this update is to summarize the current on mountain infrastructure and physical changes that have occurred at the resort since the Whitewater Ski Resort Master Plan (“MP”) was revised and approved in 2010. It also reviews Whitewater’s Vision, Goals and Objectives to confirm their validity and applicability to the current environmental, economic and mountain conditions.

This document will also update the resort’s overall conceptual vision for improvement to the on mountain experience and infrastructure for the next 10 years.

Today, Whitewater Ski Resort operates within a Controlled Recreation Area (CRA) of 3,212 acres or 1300 hectares. Internal to this area, there are three fixed grip chairlifts, 1 double, 1 triple, 1 quad and one handle tow, servicing 82 developed ski trails and naturally gladdened terrain.

## **HISTORIC TIMELINE AND CAPITAL SPENDING REVIEW**

### **2010**

**1. Glory Ridge Chair** - Whitewater purchased a refurbished triple chair, combined and realigned the backside 1 and 2 MP lift expansion into one lift, followed an approved harvest plan and associated ski run development plan, then installed and opened the new Glory Ridge Chair in December 2010.

This was a major undertaking for Whitewater and allowed for the increase of the resorts vertical to 2044 feet, nearly doubling the skiable terrain and added 25 new runs on 670 acres of fantastic mixed intermediate to expert terrain. At the time, this enabled Whitewater to offer a total of 1,184 acres of lift accessible in-bounds patrolled skiing and riding. This was Whitewater's first major terrain expansion in 34 years. A new Glory base area parking lot was concurrently developed following an independent avalanche risk assessment, due to potential risk exposure from MOTI avalanche paths across the valley. The parking area was developed to enable guests to park (apx 100) cars adjacent to the access road near the Glory base area and just a short glide away from the new Glory Ridge Chair. Underground power to service the top drive Doppelmeier chair was buried a distance of 1.6 km starting from a new disconnect pole that Fortis BC installed adjacent to the base of the Summit chair. This High Voltage power right of way runs up Bonanza ski run and along the ridge to the top of Glory Ridge Chair. A 15 KV switch building was also constructed to accommodate future lift expansion on the ridge and a 15KV transformer was purchased and situated behind a new Glory Top Patrol hut to service the new Glory Ridge Chair.

**2. Upgraded Day Lodge** – 2010 also started a 3 year main lodge redevelopment and expansion plan. The existing main floor of the Day Lodge was gutted to add all new electrical, insulation and in a drywall ceiling ready for the winter season. The resort also relocated ‘Coal Oil Johnny’s

Pub' across the upper floor adjacent to the outside patio deck. This bar relocation enabled the resort to improve the available natural light, inside to outside views and increase the total size and occupancy from 80 to 125 guests including the attached patio deck. A new specialty coffee bar was built in the former location of the pub which also added to our "new" offerings for the season.

## **2012**

**3. New Glory Lodge (phase 1).** - Whitewater engaged Highland consulting who assisted in the development of the new Glory Lodge septic system and IHA approved water treatment with associated water license for the gravity fed spring. Studio 9 architecture assisted in the design of the Glory Lodge food truck shelter which enabled us to park our Fresh Tracks Café Express food truck, which was used primarily in the summer months for marketing purposes, inside half of the 900 sq. /ft. structure. The opposite fully enclosed and heated half included a 200 sq./ft warming room, first aid room with 2 beds, along with a men's and women's washroom facility.

**4. New Parking** - Whitewater amended their harvest plan license in 2012 for the purpose of developing additional parking areas together with a one way loop road to improve traffic flow and parking efficiencies. Mass Environmental consultants were hired to develop an Environmental Construction Management Plan for harvest operations and the parking lot expansion project. Phase 1 of the project was completed in fall 2012 which added apx 350 parking stalls and the one way loop road.

These additional parking areas were further expanded in the summer of 2013, 2014 and 2015 with associated culvert extensions adding 150 more parking stalls. Currently, Whitewater has the capacity for apx 1000 cars and 6 buses within 5 parking lots.

**5. New Sewer Line** – The replacement of 600 m of the original main lodge sewer line was completed with a continuous 4" thick walled HDPE in conjunction with the 2012 parking lot expansion.

## **2013**

**6. New Maintenance Shop** – The construction of a new 6300 sq. /ft. (70'x90') maintenance facility was started in spring of 2013 following harvest operations and clearing/leveling of the associated land. The main shop floor was completed and operational for the winter season with the 2<sup>nd</sup> floor mezzanine and interior finishing touches completed in Jan 2014. This also included the design and installation of an onsite septic system to support the shop structure. A water license for Dynamite spring was applied for and issued but due to many freeze up issues in winter of 2014 a deep water well was developed in summer 2014 to better service this facility.

**7. Day Lodge Septic Field Replacement** – The original septic field for the main lodge was reengineered by Highland consulting and completely rebuilt by a certified installer, tested and has operated problem free since the rebuild. In addition, two new septic pumps were also

installed in the holding tanks adjacent to the main lodge as well as a new electronic control panel for monitoring flow rates etc.

**8. Communications Tower** – A new standalone solar powered communications radio tower with battery back-up was installed at the top of White Queen Mountain (elevation 2179 m). The entire communications system was operational for the winter season, giving the resort the ability to have telephones connected to the public network directly, high speed internet and WIFI for whitewater's mountain operations. In addition, public telephones were available to the resort's guests as well as an ATM.

**9. Day Lodge Ski School Expansion** – A small 400sq/ft ground floor addition was completed under the main lodge bar filling in the south east roof overhang. This created a new Snow School department meeting and locker area.

## **2014**

**10. Day Lodge First Aid Expansion** – A 1500 sq. /ft. ground floor expansion was built on the north east side of the main lodge to create a new First Aid room, dispatch office and patrol room to support and prepare for the increase in skier visits.

**11. Day Lodge Kitchen Renovation** – This renovation, upstairs in the main lodge, included a complete demolition of the existing kitchen, framing of a new expanded kitchen layout with new electrical, plumbing, drywall, paint and flooring. This was the last interior area needing renovation and upgrading on the second floor of the main lodge which helped in the kitchen staff flow and to handle the increased demand for our Food & Beverage services.

**12. New Bulk Fuel Tanks** - Whitewater upgraded their 2 bulk fuel storage tanks to new Enviro – Safe Double Wall above ground steel tanks. 1 – 25,000 L Diesel tank and 1 - 2,200 L gas tank both situated adjacent to the new maintenance shop site.

## **2015**

**13. New Yurt** – Due to an increase in skier visits and a growing Whitewater Ski Team, the resort decided to construct a Yurt structure on existing privately owned land adjacent to the day lodge. This 30' yurt (700 sq. /ft.) was constructed on an engineered concrete foundation.

Further improvements were completed the following summer by closing in the basement and finishing it complete with flooring, lighting, heaters and lockers for our lift operators and outdoor guest service staff.

## **2016**

**14. Main Lodge Renovation Bathroom Expansion** – Continuing with the 3 year lodge renovation and a BC building code requirement, additional women's washrooms were constructed on the south end of the main lodge on the ground floor. This new addition of 480 sq./ft., added 5 women's washroom stalls. An upgrade to the men's washrooms occurred at

the same time replacing all toilets in the main lodge to low flow or dual flush to further reduce our water consumption.

**15. New 400 amp Base Area Service** – Fortis BC installed a new service pole and a 400 amp single phase service to provide power to the yurt and the anticipated new Skier Services Lodge planned for 2017.

## **2017**

**16. Main Lodge Ground Floor Renovation** – This ground floor renovation/expansion was the final step in the 3 year main lodge improvement plan which was overseen by Studio 9 Architecture. The changes included removing the Rental /Repair Shop, Ski Patrol office and locker room, Snow School office and staff locker room from the main lodge and move those services into a newly constructed skier services building. The renovation started in April, immediately after the resort closed, and consisted of a full gutting of apx 2600 sq./ft. All new electrical, insulation, lighting, drywall, paint, rubber flooring, and a new fire barrier ceiling were added. A new food services area which consists of a Snack Bar with attached dry storage totalling 330 sq./ft. was added to further alleviate upstairs food services. This ground floor renovation includes 2400 sq./ft. of “brown bag” area that can accommodate seating for apx 120 people. All electric hot water was removed and 2 new commercial propane fired hot water tanks were installed to lower our electrical demand and provide a more consistent hot water feed throughout the main lodge.

**17, New Skier Service Lodge** – This two story commercial/residential building is a 90’ x 35’, 3000 sq./ft structure built apx 50’ away from the current main lodge. The ground floor of the building houses the Rental and Repair shop, Snow School desk and office, and a U/A unisex washroom. The second floor includes administrative offices, a board room, snow school locker room, a staff lunch room, two staff washrooms, a communication room and a 1000 sq. /ft. owners suite. Other features include ICF construction with propane fired boiler with in-floor radiant heat on the ground floor and radiant wall heaters on the second floor. In addition, two energy saving double door vestibule entrances were added on the ground floor level.

**18. Glory Lodge Renovation (phase 2)** – During this summer, Whitewater sold the food truck and fully closed in the other half of the building that previously just covered the truck. A floor, insulation, windows and a wood stove along with constructing a new IHA approved food premises kitchen inside the previous warming room was added to form the new Glory Lodge. An attached 25’x 10’ exterior deck was also built and the resort was successful in acquiring a food primary liquor license from LCLB with a total occupancy of 50 guests combined inside and out.

**19. New Guest Services & Lift Ticket Building** – This 21’x14’ or 300 sq. /ft. standalone structure was built on two large timber skids and temporary concrete footing pads, enabling the entire building to be moved to a new location if needed. The inside of the building is separated into



two halves with three ticket windows, one of which doubles as the Indoor Guest Services Supervisor's office. The other half is the main Guest Services desk with room for apx 8-10 guests inside.

**20. New Summit Chair Replacement** – Whitewater purchased a new Alpha fixed grip quad chairlift from Lietner Poma in Jan 2017 and planned for Poma to install the lift in summer/fall 2017. This new top drive lift follows the exact same alignment as the old Summit chair with similar load and unload points. The lift was designed with an initial capacity of 1500 ppl and 84 carriers, but can be increased to a final design capacity of 2000 pph with 112 carriers and a travel time of apx 6.6 minutes at a speed of 2.3 m/sec. A new 500 KVA transformer and 15 kV disconnect was also purchased and installed in conjunction for the new lift situated adjacent to the top operators hut.

## Vision, Goals and Objectives

Knee Deep Development Corp and Whitewater have continued to invest in the resort and make improvements year over year, always with the mindset to ensure a positive guest experience while keeping the same Whitewater vibe that the resort is known for.

With the word spreading slowly in the ski community about the resort's great terrain, abundant snow, and world renown food, the \$4M 2017 expansion created a little bit more space for everyone to enjoy the Whitewater experience and it also improved Whitewater's recognition industry wide in North America. Whitewater's vision statement remains unchanged.

Management will continue to promote the culture and passion of a unique mountain experience.

Whitewater's goals and objectives have been refined over the years since the current owners purchased the resort, but will stay true to respecting the natural environment, keeping the setting intact and to ensure that any development on the mountain is designed to provide a low density, powder skiing experience. The following three initiatives have been added to our vision goals:

- Accommodate backcountry skiing and mountain education as a key element of our culture of mountain safety.
- Embrace freeskiing and riding
- Create formalized lift and trail systems on the Backside and Sherpa Ridge to expand into needed terrain for our intermediate skier base

## Immediate Development and Improvement Plans

### 2019 Plans Underway

**Lodge emergency generator** - Whitewater has made plans to purchase and install a new Cummins 150 KVA back-up generator to keep all day lodge services operational in the event of a power outage. A transfer switch and the civil ground work has already been installed and completed to prepare for the arrival of this unit during summer 2019. The generator will be located apx 30 m west of the main lodge.

**Water line replacement** - Planning has begun with Highland Consulting our civil engineering contractor, for the replacement of our original water main that services the village core area. Construction drawings were submitted to IHA this spring in order to receive a construction permit. The upgrading of this water line will consist of removing the existing aging 4" PVC line and installing two 4" continuous HDPE poly pipes during the summer/fall of 2019. One line would service the main lodge and skier services building and the second line would service a future commercial/residential building in the main village core. Whitewater currently has two water licenses for Apex creek with a maximum daily allowable draw of 5,000 gal available on each license.

### Future Phased Development Improvement Plans – 10 Year Timeframe

**Sewer main and septic field** – A Statutory Right of Way for a new septic line and field was applied for in fall 2018. This new septic line and field would service future development in the village core as well as some future residential development noted in the 2010 MP. The field location is proposed above Hummingbird Gravel Pit area. An Environmental Impact Assessment will be completed by Mass Environmental in June once the area is snow free. Construction for this project is planned to begin in summer/fall 2020 in preparation for a new commercial residential structure in the village core.

**Commercial Lodge/Condo Hotel** – A 5000 apx sq. /ft. 2 story commercial building is proposed within the village core on the existing Knee Deep lot that was part of the original land swap exchange with the main lodge lot. The structure would consist of partial walk out basement containing utility rooms and a public locker room, the ground floor would contain a restaurant and lounge/bar with a total occupancy load of apx 250 ppl. The second floor would have 5-6 condo-hotel suites that could be rented out as accommodation or sold. Construction could begin in summer of 2020 ready for winter operations in 2020-2021. Whitewater would allocate 5-10% of the bed units in this structure towards staff housing in the form of a small rental suite.

**Yurt Relocation** – The Yurt (Youth Mountain Education Center, YMEC) will need to be relocated from the current Knee Deep DL 17167 because this is the location of the above mentioned proposed commercial lodge. The Yurt will be moved within the lease area already on file 4405175 just off the current parking lot. This location was selected as it is close to the village core and adjacent to our Beacon Training Park where we teach much of our youth avalanche skills

training courses. Furthermore, the proposed Yurt relocation site will not displace any parking spots as it is just off the current elevated parking area.

**3-4 year Harvest Plan** – Whitewater is currently working with Timberland Forest Consultants to develop a comprehensive 3-4 year Harvest Plan. This plan would include some tree clearing above the backside ski way and the Fortis BC power line that extends from the resort maintenance shop down below the Glory lift base towards the lower SW corner of our CRA. A fire mitigation subscription in the base area would be proposed to protect increasing values in the village core. Further run development during the summer/fall 2020-2021 is planned on the backside of the resort expanding the ski area boundary by apx 200 acres adding 5- 6 gladdened intermediate to expert treed runs ready to open for winter 2021-2022. Further terrain and run development in the Trash Chutes and Sherpa Ridge area is proposed for the 2023-2024 summer in conjunction with treatment of dead pine infested areas on the south aspect of the Sherpa Ridge terrain within the CRA.

**Additional Parking** – Future parking is proposed above our existing parking lot # 2 which lies below the Summit chair ski way. We estimate the area could add apx 150 stalls. Development of additional parking would be planned as demand dictates or prior to the Sherpa Ridge chair and terrain expansion tentatively set for 2024-2025 TBC. At buildout, the day use parking lots will be able to hold a total of 1150 cars and 7 buses. This equates to a Balanced Resort Capacity (BRC) of about 3500 visitors per day. *See **Map 1 – Updated Base Concept***

**Cabins** – The location of proposed for sale or rental cabins would be on the Summit side of the mountain, just below the Summit Ski way and the bottom of Diamond drill ski run, which is just above our existing parking lot # 2 (See map highlighting proposed location). There will be apx 10 cabins spaced apx 20-30 m apart from each other to allow a tree buffer between cabins for some privacy. These 2 story cabins would be apx 500-750 sq./ft per floor with drive in/walk out private parking under each cabin. *See **Map 1 – Updated Base Concept***

**Ski Lift – Backside 2 Chair** Install date 2025-2026 (to be confirmed). When referencing the 2010 MP, utilizing and realigning the Backside 2 ski lift configuration would make the most sense, keeping the bottom load terminal in the same location, but re-position the top unload terminal onto the high point on Sherpa Ridge. This realignment of BS-2 lift would access 200 Ha of new terrain and would also access similar terrain to the 2010 alignment. This realigned BS-2 triple or quad lift would provide access to more SW facing intermediate terrain offering 5 groomed runs and 6 gladdened tree runs. On the N aspect of Sherpa Ridge, the lift would open up access to a variety of advanced and expert open and treed terrain that would maintain great snow quality and increase the resorts overall vertical drop by apx 300 ft./80 m, from the current 2044 ft./623 m to a new total vertical of 2300 ft./700m. In order to gain the most direct access to the top of the Sherpa Ridge, Whitewater Ski Resort submitted an Ungulate Winter Range (UWR) boundary amendment request to remove apx 2.0 Ha from U-4-012 for the Sherpa Ridge Chair. The above mentioned exemption expansion request was reviewed and granted by the ministry habitat biologist on May 7, 2019.



**Ski Lift - Silver King Chair**, potential Install date 2027-2029 (to be confirmed). This lift is eventually scheduled to be upgraded to a fixed grip quad chair. When considering this lift upgrade, it would be a practical time to extend the lift up to the ridge top. The new chair would include a mid-unload station to accommodate beginners while the top unload would extend to the ridge near our CRA boundary and adjacent to West Arm Provincial park. See **Map 2 – Updated Mountain Concept**

Initial discussions have taken place with BC Parks and Whitewater intends minimize the potential for impacts and reduce risks by:

- Ensuring the top lift station placement & any other associated infrastructure would remain outside of the park.
- Minimize safety concerns for skiers accessing the park who may be unprepared, ill-equipped and possibly unfamiliar with ski touring in a wilderness setting since access would be directly from a chair lift. The ski area boundary will be roped and well signed with public information about the risks of traveling in the backcountry. Similar risk mitigation efforts would apply if the White Queen Chair was to go ahead in the future as well.
- Minimize potential impact of increased skier use to wildlife and watershed values in the 5 Mile Creek drainage through education and communication by means of a press release, updated information signage and awareness on our website.

**Backcountry Adventure Lodge** – This structure is noted in our 2010 MP, referred to as the ‘Silver Lodge’ this building would be re-located down near the base area adjacent to our current Nordic Kiosk in parking lot #3. This Backcountry Adventure Lodge would truly be a lodge style concept, 2 story building with private rooms each with a bathroom, utilizing a common dining and lounge area with a separate meeting room for education/instruction. This structure would include the resorts main backcountry centre providing up to date weather and backcountry avalanche information, offer a variety of avalanche and mountain safety courses facilitated out of this lodge prior to guests heading out into the mountains. This centre has the potential for year round use offering apx 15-20 RV sites with water and power hookups in the winter as well as 10-15 tent pad available during the summer months. 2027-2029 (to be confirmed). See **Map 1 – Updated Base Concept**

**Mountain Biking & Hiking** – Whitewater is open to developing cross country mountain bike trails within our Nordic skiing trail network. This would entail minimal work brushing and adding a number of small foot/bike bridge crossings over creeks to bring these current 6 m wide trails up to a standard accessible and enjoyable as adaptive bike trails, mountain bikes, hiking and a trail running network. Whitewater would not charge for the trail use however RV and tent camping along with the Backcountry Adventure Lodge would likely enhance and increase interest in the hiking and biking offerings. The current License of occupation for the

Nordic area is strictly for winter use however the license expires in 2021. With this in mind Whitewater plans to apply for a new year round license of occupation to enable 4 season use for Future Mountain biking and hiking. See **Map 3 – 3D Terrain Model showing Backcountry Lodge & Nordic/Mountain Bike Trails**

| <b>Proposed Development Units:</b>    |                   |                       |
|---------------------------------------|-------------------|-----------------------|
| <b>Unit Type</b>                      | <b># of Units</b> | <b># of Bed Units</b> |
| Single Family                         | 39                | 234                   |
| Duplex                                | 38                | 152                   |
| Multi-Family                          | 54                | 216                   |
| Hostel / Multi Family                 | 12                | 48                    |
| Hotel-Condo                           | 6                 | 24                    |
| Remote Lodge                          | 10                | 20                    |
| Totals:                               | 159               | 694                   |
| RV sites                              | 18                |                       |
| Tent camping sites                    | 10                |                       |
| Total Parking stalls: +/- 1150 stalls |                   |                       |

#### **Whitewater Space Use Requirements**

| <b>Building type</b>                     | Day Lodge | Commercial Building | Condo / Hotel | Hostel | Kiosk    | Backcountry Adventure Lodge | Maintenance Facility | Totals |
|--|-----------|---------------------|---------------|--------|----------|-----------------------------|----------------------|--------|
|  | existing  | existing            | future        | future | existing | future                      | existing             |        |
| <b>Proposed size of building (sq/ft)</b> | 15,723    | 8,000               | 6,000         | 4,455  | 300      | 1,420                       | 6,300                | 42,198 |

In summary, the slight changes within the base area facilities including the village core and proposed development units will not affect the comfortable carrying capacity (CCC), base resort capacity (BRC), bed unit calculation or space use requirements. The proposed changes consist of adding 8 single family units between the two primary parking lots which will increase the # of

single family beds by 24. To offset this increase in single family units and beds, the total # of bed units in the Hotel-Condo will be reduced leaving us with the same overall total # of bed units of 694. In addition to these changes, we propose to add 18 RV sites and 10-15 walk in camp sites adjacent to the future backcountry adventure centre in our current Nordic parking lot # 3.

In total, the future development plans incorporate an additional \$10M investment in Whitewater Ski Resort over the next 10 year time horizon.

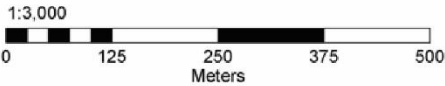
Map 1 - Updated Base Concept



2019  
Base Concept

- Legend**
- Proposed CRA Boundary
  - License of Occupation-Nordic Skiing
  - Buildings
  - Legal Lines
  - Parking
  - Road
  - Existing Ski Lifts
  - Proposed Ski Lifts
  - West Arm Park
  - Nordic Trails

- Proposed Development Units**
- Single Family
  - Duplex
  - Multi-family
  - Core Buildings
  - Remote Lodge
  - Maintenance Building



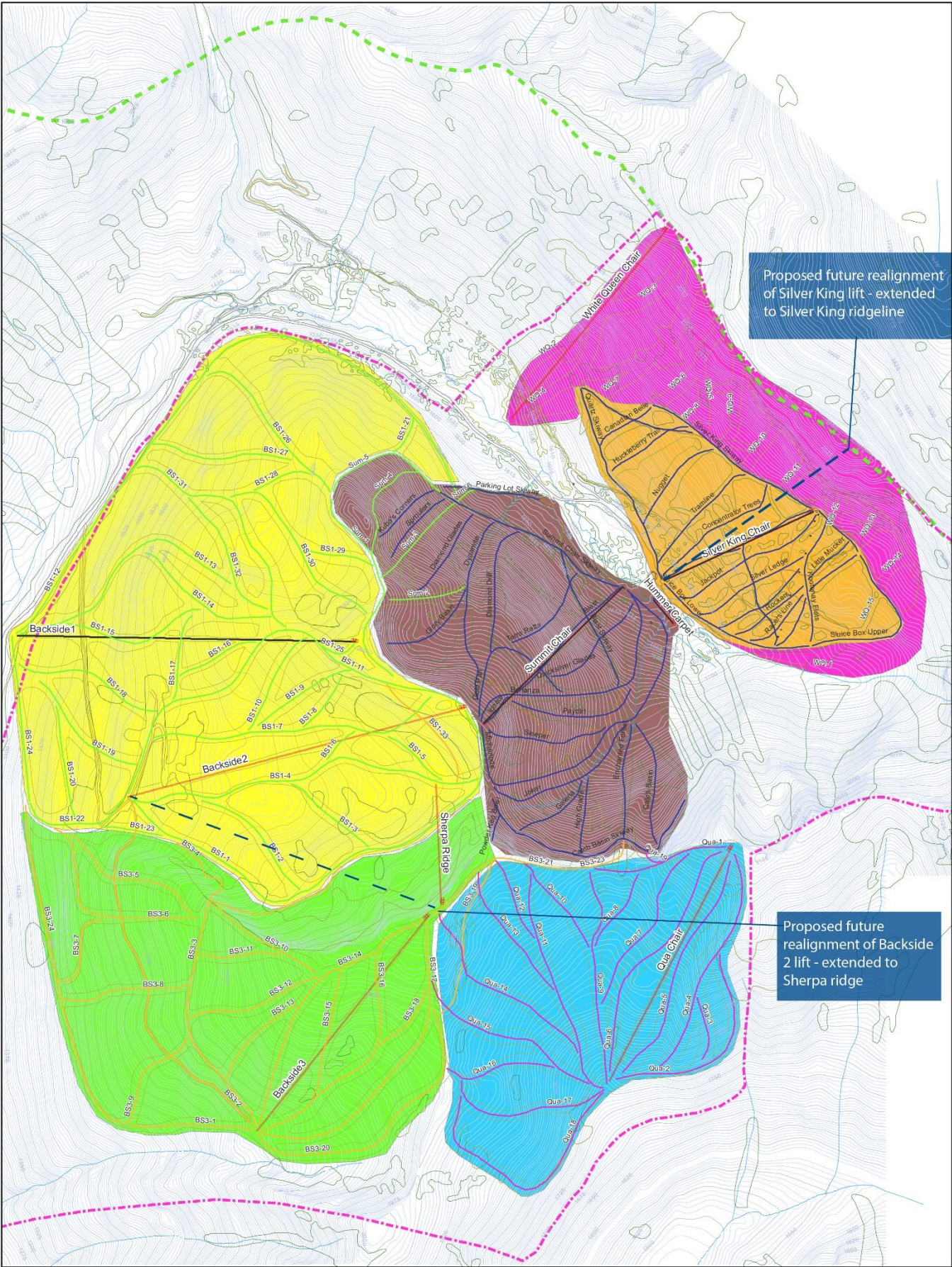
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Map 2 - Updated Mountain Concept



2019  
Mountain Concept with  
Ski Pods

- Legend**
- Existing Lifts
  - Existing Ski Runs
  - Pods' Ski Runs**
  - Backside 1
  - Backside 3
  - Qua
  - Silver King
  - Summit
  - Proposed Ski Lifts
  - Proposed Vegetation
  - Existing Vegetation
  - West Arm Park
  - CRA Boundary

- Proposed Ski Pods(for legend)**
- Ski Pods**
- Backside 1 (303.7 Ha)
  - Backside 3 (199.6 Ha)
  - Qua (136.3 Ha)
  - Silver King - Addition (90.5 Ha)
  - Silver King - Existing (77.4 Ha)
  - Summit (152 Ha)

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Map 3 - 3D Terrain Model showing Backcountry Lodge & Nordic/Mountain Bike Trails

