

**2019  
MASTER  
DEVELOPMENT  
PLAN**

**SUMMIT  
SKI AREA**

Cover Illustration: Jim McGrane



# *Preface*

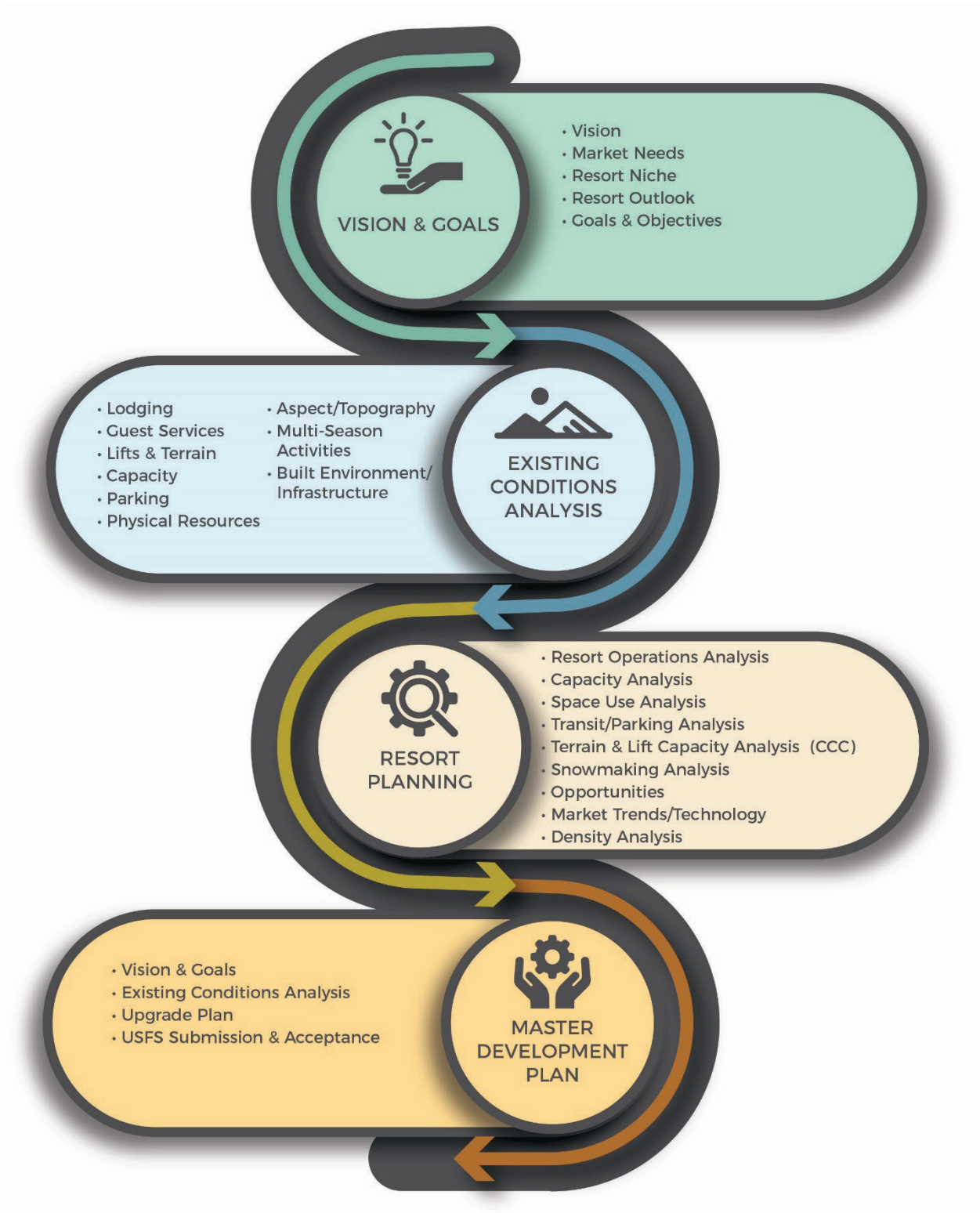
Summit Ski Area (hereafter referred to as Summit) is located on the south slopes of Mount Hood, at the east end of the Village of Government Camp, Oregon. The small ski area has a rich heritage in the ski industry dating back to 1927. For nearly a century, the ski area has been a family-friendly, affordable place for beginner skiers and riders to learn the sport of skiing and experience the outdoors.

In 2018, J.S.K. and Company, a subsidiary of R.L.K. and Company (operators of the historic Timberline Lodge and Ski Area), acquired 100% of the stock in Northwest Nordic Inc. (NNI). J.S.K. and Company's vision for Summit is to continue to operate the facility as a community ski hill, which is family-orientated, affordable, and friendly, while upgrading facilities to support the vision of connecting Government Camp with Timberline Lodge and Ski Area (hereafter referred to as Timberline). In addition, upgrades are also planned to create a year-round recreation hub for outdoor activities to foster outdoor experiences and education, with an interest in increasing engagement with youth and underserved communities so as to increase opportunities and diversity in the outdoors. Strategies for success will be built around improved infrastructure, transportation, access and delivering a quality customer experience that reduces the hassle factor and the current reliance on cars for circulation within the area. Our desired future condition will also be to develop Summit in a way that preserves its heritage and attribute as a community ski hill, which is family oriented and affordable for the average family budget.

The Master Development Plan (MDP) is divided into four chapters:

- ❖ Chapter 1—Introduction: provides an overview of the plan, summary of Summit's history and character, statement of the plan vision and goals, and an overall summary of the Master Development Plan.
- ❖ Chapter 2—Design Criteria: defines and describes key mountain planning concepts, assesses physical resources such as topography and slope gradients and discusses applicable U.S. Department of Agriculture Forest Service policy, direction and agreements.
- ❖ Chapter 3—Existing Conditions: describes existing resort facilities, and evaluates the current balance of resort operations, facilities, and infrastructure. This includes lifts, comfortable carrying capacity (CCC), persons-at-one-time (PAOT), terrain, guest services, food service seating capacity, and parking.
- ❖ Chapter 4—Upgrade Plan: describes the proposed upgrades and improvements to the experience at Summit and the relationship Summit will share with Timberline and Government Camp.

ILLUSTRATION 1. THE MDP PROCESS



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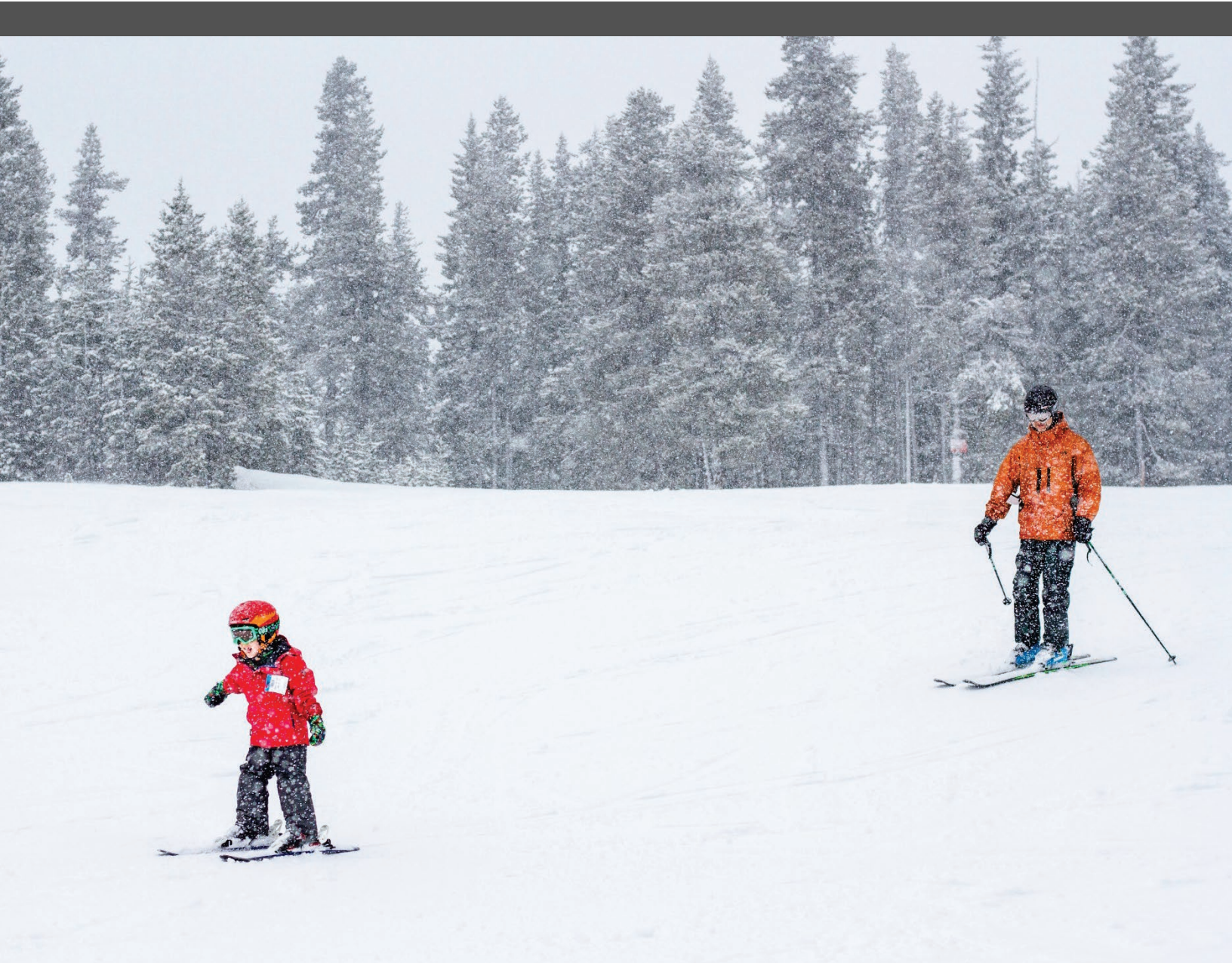
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*Chapter 1*  
**INTRODUCTION**

## A. PURPOSE OF A MOUNTAIN RESORT MASTER DEVELOPMENT PLAN

Many mountain resorts across the country are partially or completely located on public lands. Each mountain resort on National Forest System (NFS) lands must obtain a U.S. Department of Agriculture Forest Service (USDA Forest Service or Forest Service) special use permit (SUP) to operate on public lands. Forest Service SUPs require the preparation of a Master Development Plan (MDP) that identifies the existing and desired conditions for the resort and the proposed improvements on the NFS lands within the permit boundary.

This MDP fulfills this requirement and provides direction for the future development and improvement of Summit and Snow Bunny Snow Play Area (hereafter referred to as Snow Bunny), ensuring both a balance of facilities and a variety of amenities affording an exceptional recreational experience in a manner that is sustainable to the business, operations, and the surrounding environment. This MDP provides an assessment of existing operations and facilities at Summit and Snow Bunny and identifies a comprehensive plan for future improvements to the resort.

An MDP was completed for Summit in 1992 by the previous owner. However, this document was not accepted by the Forest Service. Forest Service acceptance of this current MDP document as a planning tool for Summit does not imply authorization to proceed with implementation of any of the projects that are identified herein. Therefore, all projects identified within this MDP will require site-specific environmental analysis and approval per the National Environmental Policy Act (NEPA) before they can be implemented. This MDP is intended to be a dynamic document, which may be amended periodically to reflect innovations in facilities and recreation and is intended as a “road map” for the improvements planned for the next ten to fifteen years.

This MDP was created using an iterative and collaborative process between Summit management, Forest Service personnel who administer the SUP, stakeholders, and ski area planning firm, SE Group.

### **PLANNING + DESIGN NOMENCLATURE**

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Throughout this document, text highlights (like this one) have been included to explain the various planning and design concepts that are utilized throughout the MDP process. Further descriptions and explanation of these concepts may be found in the Supplemental Information.

## B. STAKEHOLDER ENGAGEMENT AND FEEDBACK

J.S.K. and Company, a subsidiary of R.L.K. and Company, acquired 100% of the stock in NNI in June 2018. NNI holds the SUP for the operation at Summit and Snow Bunny. Both R.L.K. and Company and NNI place a strong emphasis on public involvement, partnerships, and building trust with stakeholders. Throughout the initial MDP process, a range of development concepts for Summit was assembled and a number of stakeholder engagements were held to solicit feedback about potential future improvements at Summit.

NNI hired Sustainable Northwest, a regional non-profit, to help re-engage with the community through two stakeholder outreach meetings held between March 1, 2019 and March 7, 2019. The meetings focused on the ski area's history and guiding tenets, while also vetting conceptual proposals for this new MDP's Upgrade Plan. A broad spectrum of the public was invited, especially from the Government Camp and greater mountain community, the Oregon outdoor recreation community, and local elected officials and representatives from the county, state and federal agency partners.

A full report by Sustainable Northwest was published and disseminated, and is available upon request. For the sake of this document, engagement highlights are provided here.

### Consistent Themes

- ❖ Enhancing the beginner experience and maintaining Summit's niche as a beginner focused ski area.
- ❖ Attracting and supporting a high-quality workforce by working to help develop opportunities for quality, affordable housing solutions and mass transportation.
- ❖ Collaborating on transportation and infrastructure initiatives that improve on-mountain connectivity, U.S. Route 26 (referred to hereafter as Highway 26) safety concerns, demand for parking, and traffic congestion solutions.
- ❖ Promoting environmental stewardship and reducing barriers to entry in such a way that promotes outdoor education with youth, and educates a diverse public about the natural environment, heritage, and recreation ethics.
- ❖ Strengthening local economic development and community engagement by promoting Government Camp businesses opportunities and developing community-orientated spaces and programs.

### Conclusion & Results of Stakeholder Outreach

Broad participant feedback expressed general support of the MDP vision for Summit. Generally speaking, common themes that were expressed were concentrating parking and amenity development in the Government Camp area, on-mountain connectivity to Timberline Lodge via a gondola, and improving transportation safety concerns. For the recently completed Timberline

Lodge and Ski Area Complex Master Development Plan, similar ideas were expressed during the public outreach process. NNI recognizes an opportunity to address additional feedback that was received in the Timberline outreach sessions. Future development at Summit provides opportunities to expand summer activities as well as introduce new winter snow-play activities. It provides opportunities for entry-level ski school offerings, and other more easily affordable and easy access programs to pro-actively reduce barriers to entry into the sport. NNI remains dedicated to a collaborative and solutions-oriented approach to problems through progressive “smart planning”.

## **C. LOCATION**

Summit is located entirely on NFS lands under the jurisdiction of the Zigzag Ranger District of the Mt. Hood National Forest in Clackamas County, Oregon. Summit encompasses approximately 52 acres while Snow Bunny features approximately 9 acres. Subject of a 20-year ski area term special use permit administered by the Zigzag Ranger District, the current permit is scheduled to expire on December 31, 2026.

The SUP area is contained within the following Public Lands Survey System areas: Sections 13 and 24, Township 3S, Range 8.5E., Willamette Meridian. Ski area infrastructure operates at elevations ranging from approximately 3,975 feet to 4,300 feet. Snow Bunny is located 2 miles east of Summit, immediately adjacent to Highway 26 at slightly lower elevations.

Summit is approximately 55 miles east of Portland, Oregon, a metropolitan area with a population of more than 2.7 million (refer to Figure 1). It is accessed by Highway 26. Summit is located at the summit of the pass through the Cascade Mountains near Government Camp, an unincorporated “ski town” in the heart of the Mt. Hood National Forest. Nearby highway access to the iconic Timberline Lodge and Ski Area provides a steady stream of visitors seeking to visit Timberline and Summit ski areas, as well as explore the forest and recreate on nearby public lands.

## **D. RESORT PROFILE AND HISTORY**

The Mount Hood area, including Summit and Snow Bunny, has a long, storied history and is considered by many to be the ‘cradle’ of Pacific Northwest skiing. The area has been a transportation corridor that dates back centuries when Native Americans used footpaths to access fishing, hunting, gathering, trading and stripping the bark of Western Red Cedar to create the well-known cedar baskets. In the 1840s the corridor was developed as part of the Oregon Trail, and Government Camp was first established in 1849. Between 1919 and 1925, the Mount Hood Loop Highway was constructed and in the later 1920s, the Oregon Highway Commission started snow plowing operations for the highway.

In 1926, the US Secretary of Agriculture designated over 83,000 acres of public forest land on the south/southwest slopes of Mount Hood for recreation with the Mt. Hood Land Classification Order. Summit is the oldest ski area in the Pacific Northwest (first permit was issued in 1927) and is the second oldest, continuously operating, ski area in the United States. Portland Advertising Club was the original permit holder and operated the warming hut and open glades with volunteers. In 1928 the nearby Multitorpor Jumping Hill was established attracting more people to the area. This recreational land designation was particularly successful along the Mt. Hood Highway corridor between Rhododendron and Government Camp, with the initial culmination being the building of Timberline Lodge in 1937.

Major historical milestones for the Summit Ski Area include:

- ❖ the 1959 installation of a T-bar
- ❖ construction of the present-day base area lodge in 1966
- ❖ construction of the existing chairlift in 1980
- ❖ Charlie Wessinger’s 1991 purchase of the ski and snow play area and introduction of the legal entity Northwest Nordic, Inc.
- ❖ J.S.K. and Company’s June 2018 purchase of 100% of NNI stock from Charlie Wessinger
- ❖ NNI elects in July 2018 to sublease the operation of Summit to R.L.K. and Company

## E. PLAN VISION AND GOALS

To this day, Summit continues to fulfill a critical niche in the skiing industry; that is, being a family-friendly, affordable place for first timers and beginner skiers and riders to explore the sport. Ski areas like Summit are key to engaging and attracting the next generation of skiers and riders.

NNI plans to position Summit in the same manner as it has been in the past for the foreseeable future. This MDP details a new base area design to provide additional guest services that are badly needed, more parking and a transportation hub, as well as improved access to higher elevations on Mount Hood via a scenic gondola ride to Timberline. Connectivity of the two ski areas will also be sought via a permit boundary connection that will embrace the opportunities for continuous skiing and riding from Timberline to Summit, take cars off OR Highway 173 (commonly referred to as the Timberline Road), and help support the Timberline arrival experience with the creation of additional base area amenities in Government Camp. Through this new design, NNI hopes Summit can be a critical part of a larger, world-class attraction, an important piece of a comprehensive regional transportation initiative, and help fulfill the vision for recreation on the south side of Mount Hood as prescribed by the big thinkers and government officials in the 1920s.

## F. SUMMARY OF THE UPGRADE PLAN

### 1. UPGRADE PLAN

#### Administrative

- SUP boundary consolidation to connect Summit and Timberline ski areas and set aside acreage for parking and other recreation in the lowest elevations of the SUP

#### Lifts

- Installation of the 10-passenger Timberline Gondola to provide lift interconnect between Summit and Timberline ski areas
- Removal of existing chairlift
- Installation of the four-passenger Summit Pass Chairlift
- Installation of a beginner surface lift

#### Terrain

- Multiple trails to connect (year-round) Timberline and Summit ski areas and enhanced skiable terrain options at Summit

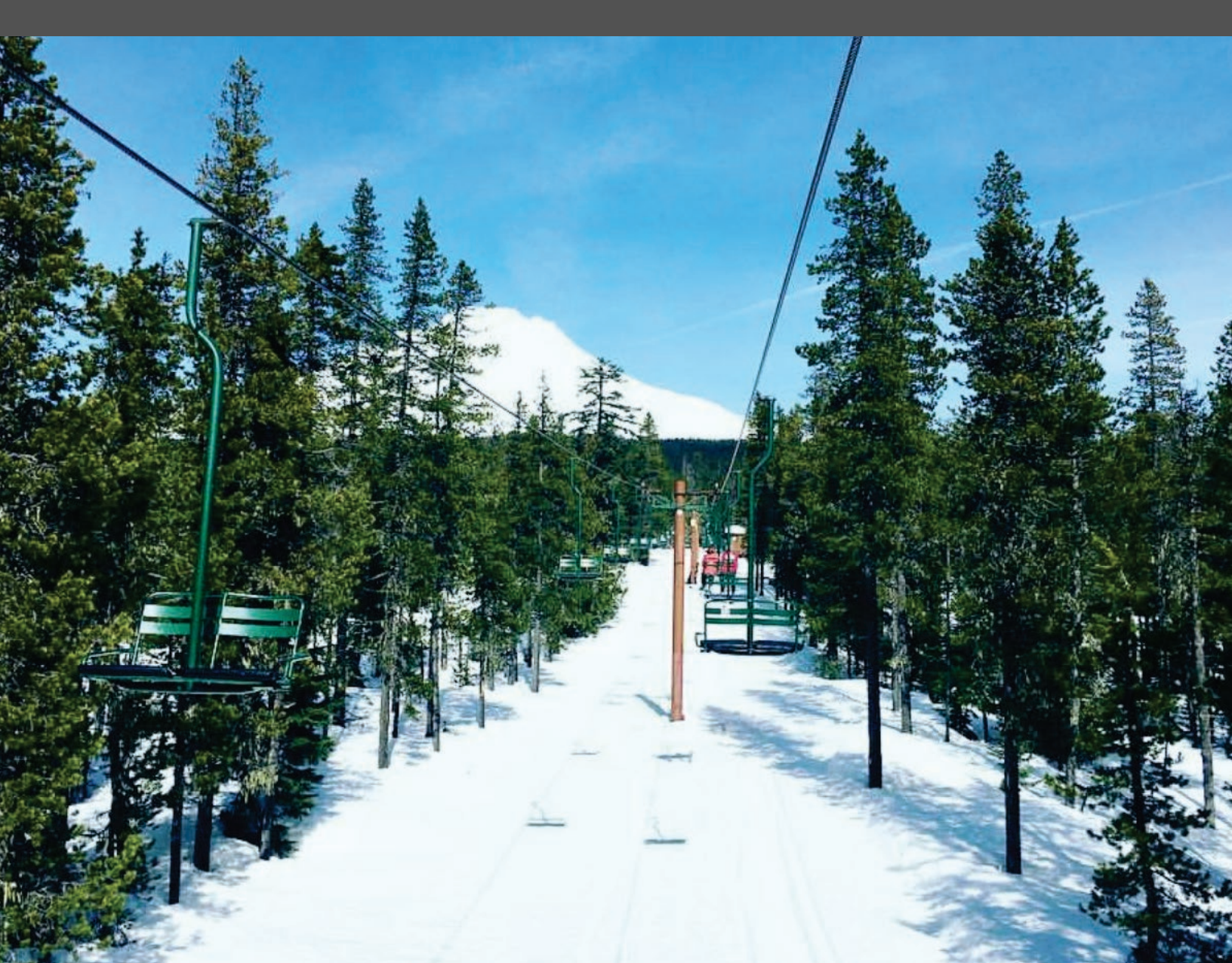
#### Operations

- Removal of existing Summit Base Lodge
- Construction of a new day lodge and shuttle/passenger drop off
- Improved parking area in base area
- Improvements to existing snowmaking infrastructure and creation of a water storage facility
- Enhancements to the tubing and/or sledding opportunities, and introduction of other sliding and snow play experiences
- Installation of a small maintenance and utility building

#### Summer

- Construction of bike trails to connect the Timberline Bike Park trail network with Summit and potential construction of a slopestyle bike park at Summit
- Installation of other summer activities that would be themed around outdoor experiences and education; the area's rich heritage and history; and affordable, family-oriented recreation





*Chapter 2*  
**DESIGN  
CRITERIA**

This chapter covers a range of design criteria that is the foundation of the mountain resort planning process, from the basic concepts and ideas behind trail and lift layout, to Forest Service policy and direction, to previous planning efforts and documents that help inform the master planning process.

## A. MOUNTAIN PLANNING AND RESORT CRITERIA

The following is an overview of the basic mountain design criteria and terms upon which this MDP is based.

### 1. BASE AREA DESIGN

The relationship between planning at a resort's base area developments and on-mountain lift and terrain network is critically important. This relationship affects the overall function and perception of a resort. Planners rely on resort layout as one tool to establish resort character. The manner in which resort elements are inter-organized, both inside the resort core and within the landscape setting, along with architectural style, help to create the desired character.

Design of the base lands at a mountain resort involves establishing appropriate sizes and locations for the various elements that make up the development program. The complexion and interrelationship of these elements varies considerably depending on the type of resort and its intended character. However, fundamental objectives of base area planning are to integrate the base area with the mountain for the creation of an attractive, cohesive, and functional recreational and social experience. This is essential to creating the feeling of a mountain community and can only be achieved by addressing base area components such as (but not limited to): guest service locations, skier/rider circulation, pedestrians, parking/access requirements, and mass-transit drop-offs.

Skier service facilities located at base areas have three main functions:

- Receiving arriving guests (from a parked car or a bus);
- Distributing arriving guests onto the mountain's lift and trail systems and other recreational facilities; and
- Providing the necessary guest services (e.g., tickets and rentals).

The base area configuration at Summit as well as the integration of the connection to Timberline will be discussed in greater detail throughout this document.

## 2. MOUNTAIN DESIGN

### Ski Trail Design

#### Slope Gradients and Terrain Breakdown

Terrain ability level designations are based on slope gradients and terrain features associated with the varying terrain unique to each mountain. Ability level designations are based on the maximum sustained gradient calculated for each trail, in combination with other factors present that may make a trail more difficult. While short sections of a trail can be more or less steep without affecting the overall run designation, a sustained steeper pitch may cause the trail to be classified with a higher difficulty rating. It is important to understand that slope gradient is not the only factor in assigning a trail ability designation to a specific trail. A variety of factors, such as trail width, terrain features, and the context of other trails on the mountain can cause a trail to be classified under a higher designation.

The following general gradients, reflective of industry norms, are used as the basis to classify the skier difficulty level of the mountain terrain. As previously mentioned, additional considerations can compound with slope gradient and cause a trail to be classified under a higher designation.

**Table 1. Terrain Gradients**

Skier Ability	Slope Gradient
Beginner	8 to 12%
Novice	to 25%
Low Intermediate	to 35%
Intermediate	to 45%
Advanced Intermediate	to 55%
Expert	over 55%

*Source:* SE Group, Mountain Planning Guidelines

The distribution of terrain by skier ability level and slope gradient is compared with the market demand for each ability level. It is desirable for the available ski terrain to be capable of accommodating the full range of ability levels reasonably consistent with market demand. The market breakdown for the Pacific Northwest skier market is shown in Table 2.

**Table 2. Skier Ability Breakdown**

Skier Ability	Percent of Skier Market
Beginner	5%
Novice	15%
Low Intermediate	25%
Intermediate	35%
Advanced Intermediate	15%
Expert	5%

Source: SE Group, Mountain Planning Guidelines

### Winter Trail System

A resort’s trail system should be designed to provide a wide variety of terrain to meet the needs of the entire spectrum of ability levels, as well as the resort’s particular market. In the case of Summit, the ski area fulfills a niche market for beginner skiers. The typical trail system standards to provide a wide variety of terrain do not necessarily apply.

### Lift Design

The goal for lift design is to serve the available terrain in an efficient manner (i.e., having the minimum number of lifts possible while fully accessing the terrain and providing sufficient uphill capacity to balance with the available downhill terrain capacity). In addition, the lift design has to take into consideration such factors as wind, round-trip utilization of the terrain pod, access needs, the ability to connect with other lift pods, the need for circulation space at the lower and upper terminal sites, access to residential development, and the presence of natural resources (e.g., visual impacts, wetlands, and riparian areas). The vertical rise, length, and ride time of lifts at a resort are important measures of overall attractiveness and marketability of any resort.

## **3. CAPACITY ANALYSIS AND DESIGN**

In ski area planning, a “design capacity” is established, which represents a daily, at-one-time guest population to which all ski resort functions are balanced. The design capacity is a planning parameter that is used to establish the acceptable size of the primary facilities of a ski resort: ski lifts, ski terrain, guest services, restaurant seats, building space, utilities, parking, etc.

Design capacity is commonly expressed as “comfortable carrying capacity,” “skier carrying capacity,” “skiers-at-one-time,” “persons-at-one-time,” and other ski industry-specific terms. These terms refer to a level of utilization that provides a pleasant recreational experience, without overburdening the resort infrastructure. Accordingly, the design capacity does not normally indicate a maximum level of visitation, but rather the number of visitors that can be “comfortably” accommodated on a daily basis. Design capacity is typically equated to a resort’s

5th or 10th busiest day, and peak-day visitation at most resorts is at least 10% higher than the design capacity.

This MDP will use the terms “comfortable carrying capacity” (CCC) and “persons-at-one-time” (PAOT) when referring to Summit’s design capacity. The accurate estimation of the CCC and PAOT of a mountain is a complex issue and CCC and PAOT are important planning criteria for the resort. Related skier service facilities, including base lodge seating, restaurant requirements, restrooms, parking, and other guest services are planned around the proper identification of the mountain’s true capacity.

CCC is derived from the resort’s supply of vertical transport (the vertical feet served combined with the uphill hourly capacities of the lifts) and demand for vertical transport (the aggregate number of runs desired multiplied by the vertical rise associated with those runs). The CCC is calculated by dividing vertical supply (VTF/day) by vertical demand, and factors in the total amount of time spent in the lift waiting line, on the lift itself, and in the descent. PAOT is a snapshot of the resort at a given point in time and includes all resort guests including skiing and non-skiing visitors.

#### **4. BALANCE OF FACILITIES**

The mountain master planning process emphasizes the importance of balancing recreational facility development. The sizes of the various guest service functions are designed to match the CCC and PAOT of the mountain. The future development of a resort should be designed and coordinated to maintain a balance between accommodating guest needs, resort capacity (lifts, trails, and other amenities such as tubing), and the supporting equipment and facilities (e.g., grooming machines, day lodge services and facilities, utility infrastructure, access, and parking). Note that it is also important to ensure that the resort’s CCC and PAOT balances with these other components, facilities, and services at the resort. Since CCC is primarily derived from the resort’s lift network, it is possible to have a CCC that is effectively lower or higher than the capacities of other resort components.

### **B. INVENTORY OF PHYSICAL RESOURCES**

#### **1. TOPOGRAPHY**

Topography is the arrangement of natural and artificial physical features of an area and includes the general surface shapes and features within the project area. Topography, along with slope gradient, is important to a ski area because it partly defines terrain variety, which is consistently ranked as the second most important criterion in skier choice of a ski destination in Ski Magazine’s Reader Resort Ratings, behind snow quality. Summit lies within the Cascade Range of the Pacific Northwest and is defined by gently sloping forests of the south facing flank of Mount Hood. It lies entirely on the slopes of Mount Hood and ranges in elevation from 3,975 to 4,300 feet above sea level (vertical rise of approximately 325 feet).

## 2. SLOPE GRADIENTS FOR SKI TRAILS

Slope gradient defines the angle of the trail, relative to a completely flat surface. As mentioned above, slope gradient helps define terrain variety. In addition, slope gradient defines the difficulty of terrain and therefore what types of skiers (novice, intermediate, etc.) are able to ski that terrain. Slope gradient also dictates trail and infrastructure development, as both completely flat trails and cliff faces are un-skiable and steep slopes are more difficult to build structures on.

Terrain ability level designations are based on slope gradients and terrain features associated with the varying terrain unique to each mountain. Regardless of the slope gradient for a particular trail, if it feeds into a trail that is rated higher in difficulty, its ability level must be rated accordingly. Conversely, if a trail is fed only by trails of a higher ability level than the maximum slope of the trail would dictate, it also must be rated accordingly.

General slope gradients are defined as:

- **0 to 8% (0 to 5 degrees):** too flat for alpine skiing and riding, but ideal for base area accommodations, and other support facility development.
- **8 to 25% (5 to 15 degrees):** ideal for beginners and novices, and typically can support some types of development.
- **25 to 45% (15 to 25 degrees):** ideal for intermediates, and typically are too steep for development.
- **45 to 70% (25 to 35 degrees):** ideal for advanced and expert skiers/riders and pose intermittent avalanche hazards.
- **>70% (>35 degrees):** too steep for all but the highest level of skiing/riding. These areas are typically allocated as expert only and are closely managed by the resort operator for avalanche control.

## 3. SOILS AND GEOLOGY

The soils and geology within and around a ski area are an important factor to take into consideration because they influence the erosion potential of the area, the drainage capabilities, the vegetation that grows in the area, and other factors that influence ski area management. A watershed-specific report for the Salmon River Watershed provides information on the soils and geology in the area.

Summit is located on Mount Hood, an andesitic volcano of Quaternary age that was built by a succession of lava-flow and lava-dome eruptions. While the volcano has been quiet for more than 200 years, the volcano is still classified as active and monitored by the U. S. Geological Survey (USGS). Mount Hood is located within the High Cascades geological province within the broader Cascade Mountain Range. This province consists of younger, glaciated hillslopes that are

generally moderately sloping deposits of basalts, andesites, and pyroclastic flows. The area is characterized by surface, glacial, and fluvial erosion, streambank failures, and peak flow deposits. The Summit Ski Area is located on the lower elevations and are not prone to landslides and mass wasting due to its more gradual slopes. These lower slopes have also allowed for soil development and various vegetative growth. Overall, the soils within Summit’s operational area are strongly influenced by alpine glaciation and are moderately deep, gravely soils forming in glaciated till and ash. The area around Summit also includes wet meadows and bottomlands, fresh sands and gravels, and perpetual snow and ice in the upper elevations of Mount Hood.

#### 4. HYDROLOGY

Hydrology influences the availability of water in the project area as well as the movement of snowmelt and groundwater. This can influence a ski area’s ability to make snow as well as how snowmelt travels through and impacts the project area. Where possible, this MDP takes into account known locations of streams and wetlands and strives to maintain “no development” zones within 150 feet of wetlands and streams. These zones would contribute to the protection of water quality and subsequently aquatic habitat for threatened and endangered Pacific salmon populations downstream.

Summit is located within the Sandy River Basin and specifically within the Salmon River Watershed. The watershed incorporates portions of two major physiographic zones (the Cascade Mountain Range and the Columbia Basin) and encompasses approximately 116 square miles. The hydrology is strongly influenced by Mount Hood, as the snow and rain that falls on this section of Mount Hood flows down from the headwaters of the Palmer Snowfield to the valley below. The headwaters of the river receive plentiful rainfall and snow, with approximately 130 inches of precipitation falling per year on its slopes. Summit is located downhill from the headwaters of the Palmer Snowfield but the Salmon River is fed by seven major tributaries and the watershed contains ten sub-watersheds. Greatest precipitation for the watershed occurs between November and January and the least amount occurs between July and August. Mount Hood sustains a snowpack year-round at its upper elevations, which moderates stream flows in the Salmon River by providing water storage over the winter and contributing water in the summer. Despite this, stream flow is significantly impacted by rates of snow accumulation and snowmelt within the watershed. Varying geology and topography in the Salmon River watershed produce hydraulic features such as waterfalls, wetland meadows, and oxbow river channels.

The river flows free of water impoundments for 33 miles from its headwaters to its confluence with the Sandy River at Brightwood. From there, the Sandy River flows to the Columbia River and on to the Pacific Ocean.

## 5. FISH AND WILDLIFE

Fish and wildlife, as being federally monitored (in the case of the Endangered Species Act) as well as generally being in the public eye, are also an important consideration for ski area development. There are 236 wildlife species that have potential habitat located within the watershed. Of these, 31 are listed as Threatened, Endangered and Protected (TEP), 12 are local species of concern, 46 are snag dependent species, and 8 are introduced species. Given the high variety of species potentially present, site-specific NEPA analyses will be conducted, as warranted, and will be based on current information provided by the Mt. Hood National Forest, U.S. Fish and Wildlife Service, and the state of Oregon.

## 6. VEGETATION

The vegetative composition of a ski area, beyond influencing the wildlife discussed above, also influences the erosion potential of the land and its ability to retain water. It is therefore important to analyze vegetation within a ski area boundary. Because Summit is located on the lower slopes of Mount Hood, the area is primarily within the Mountain Hemlock Zone. In this area, mountain hemlock is common in mid- and late successional stands. Other trees like western hemlock, true firs, western white pine, and Douglas-fir are also present. The cold, moist environment present, with deep winter snowpack and short summers, heavily influences the vegetation.

Vegetation at Summit is typical of the Mt. Hood National Forest and specifically the Salmon River Watershed at these elevations. The Summit permit area and surrounding area contains extensive blocks of continuous forest cover dominated by Pacific silver fir and mountain hemlock. The surrounding area contains Late Seral forests, which are those forests that include mature and old-growth tree age classes. Portions of Late Seral forests provide important habitat for the northern spotted owl, an endangered species listed under the Endangered Species Act. Late Seral forests also provide habitat for many other species of wildlife. This MDP seeks to maintain as much of the natural vegetation onsite as possible. While some tree removal would be necessary, this MDP seeks to maintain forest cover and subsequent wildlife habitat to the extent possible.



## C. APPLICABLE FOREST SERVICE POLICY, DIRECTION AND AGREEMENTS AND PREVIOUS PLANNING EFFORTS

The Forest Service nationally supports the recreational opportunities that private ski areas provide. The Forest Service, the Pacific Northwest Ski Areas Association, and National Ski Areas Association work in partnership to achieve common goals of managing and promoting active participation in alpine recreation and sports by all people.

Summit operates under a ski area term special use permit.<sup>1</sup> The permit authorizes the use of NFS lands, on the Mt. Hood National Forest, for the purposes of constructing, operating, and maintaining a winter sports resort including food service, retail sales, and other ancillary facilities.

The basis for determining the types of activities and facilities appropriate for permitted winter sports resorts operating on NFS lands is expressed in federal laws and Forest Service policy directives, such as the 1990 Mt. Hood National Forest Land and Resource Management Plan, as amended by the 1994 Northwest Forest Plan. This guiding document provides the Forest Service with authority and direction pertaining to ski area management on NFS lands.

Summit and the Forest Service are connected through a committed long-term partnership to provide quality recreational opportunities on NFS lands. By satisfying its current and future visitors, Summit will grow as a healthy and competitive ski resort within its market niche. This, in turn, would help fulfill Forest Service policy, objectives, and direction for ski area management on the Mt. Hood National Forest and the vitality of the local economy.

### 1. FOREST SERVICE LAWS AND POLICY DIRECTIVES

The following consists of the formative legal and policy mandates guiding the Forest Service administration of NFS lands and winter sports resorts:

- The Multiple-Use Sustained-Yield Act of 1960 mandates that the Forest Service manage NFS lands for “*outdoor recreation, range, timber, watershed, and wildlife and fish purposes.*” 16 U.S.C. § 528 (emphasis added).
- The National Forest Management Act (NFMA) requires the Forest Service to develop Forest Plans that provide for multiple uses of forests, including “*coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.*” 16 U.S.C. § 1604(e)(1) (emphasis added).
- The service-wide Memorandum of Understanding between the National Ski Areas Association and the Forest Service (FS Agreement No. 07-SU-11132424-246), recognizes “that ski areas can help meet increased demand for recreational opportunities in a

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<sup>1</sup> The permit is authorized under the National Forest Ski Area Permit Act of October 22, 1986.

managed setting.” The Forest Service stated its commitment to “evaluate four-season recreation at ski areas to improve economic stability and enhance outdoor recreation opportunities during policy formation, master development planning, and project plans.”

### **National Forest Ski Area Permit Act of 1986**

The 1986 National Forest Ski Area Permit Act established a ski area permit system on national forest lands and for other purposes. The purpose of the act was threefold: provide a unified and modern permitting process for Nordic and alpine ski areas on national forest lands; provide for ski area permits which more closely reflect the acreage and other physical requirements of modern ski area development; and provide a permit system that would be more commensurate with the long-term construction, financing and operating needs of ski areas on national forest lands.

### **2011 Ski Area Recreational Opportunity Enhancement Act (SAROE)**

The 2011 SAROE amended the National Forest Ski Area Permit Act of 1986. The 2011 SAROE enables snow sports (in addition to Nordic and alpine skiing) to be permitted on NFS lands subject to ski area permits issued by the Secretary of Agriculture. In addition, it clarifies the authority of the Secretary of Agriculture to permit appropriate additional seasonal or year-round recreational activities and facilities on NFS lands subject to ski area permits issued by the Secretary of Agriculture. Activities and facilities that may, in appropriate circumstances, be authorized under the Act include, but are not limited to, both zip lines and ropes courses, mountain biking trails, and disc golf.

In April 2014 the Forest Service provided a Final Directive for Additional Seasonal or Year-Round Recreation Activities at Ski Areas that includes guidance for implementing the 2011 SAROE. Forest Service Manual (FSM) 2343.14 states that the Forest Service will apply the following screening criteria during review of site-specific proposals prior to the initiation of a NEPA review process. During this master planning stage, projects are conceptual and do not, nor should they, include the level of design to complete all of the screening criteria. This site-specific detail would be provided during the project proposal stage to initiate the NEPA process. The screening criteria included in FSM 2343.14 guide the development of projects on NFS lands and the activities and associated facilities must:

1. Not change the primary purpose of the ski area to other than snow sports;
2. Encourage outdoor recreation and enjoyment of nature and provide natural resource-based recreation opportunities;
3. To the extent practicable, be located within the portions of the ski area that are developed or that will be developed pursuant to the MDP;
4. Not exceed the level of development for snow sports and be consistent with the zoning established in the applicable MDP;

5. To the extent practicable, harmonize with the natural environment of the site where they would be located by:
  - Being visually consistent with or subordinate to the ski area's existing facilities, vegetation, and landscape, and
  - Not requiring significant modifications to topography to facilitate construction or operations
6. Not compromise snow sports operations or functions; and
7. Increase utilization of snow sports facilities and not require extensive new support facilities, such as parking lots, restaurants, and lifts.

Again, the above screening criteria should be applied for the proposed activities in this MDP during the environmental review process. At this point, more detailed design plans would be available compared to the concepts generated during the master planning process.

FSM 2343.14(8) also provides guidance for elements to be included in the master planning process. The process should:

1. Establish zones to guide placement and design of additional seasonal or year-round recreation facilities, basing the zones on the existing natural setting and level of development to support snow sports;
2. Depict the general location of the facilities; and
3. Establish an estimated timeframe for their construction.

### **Mt. Hood National Forest Land and Resource Management Plan**

In 1990, the Mt. Hood National Forest completed their Land and Resource Management Plan, commonly referred to as the Forest Plan. This document guides all natural resource management activities and establishes management standards and guidelines for the National Forest. The Northwest Forest Plan of 1994 amended the Forest Plan and established new standards and guidelines for management of late successional and old growth forest. A full list of amendments to the Forest Plan can be found on the Mt. Hood National Forest website.

### **Scenery Resources**

The Forest Plan describes the scenery resources within the context of the older Visual Management System (VMS). This system was replaced by the Scenery Management System (SMS) in 1995 in the document Landscape Aesthetics: A Handbook for Scenery Management; however, the handbook notes the VMS remained in place until a Forest Plan is revised to fully implement the SMS.

## Visual Management System

The VMS helps establish Visual Quality Objectives (VQOs) for various landscapes and helps define how the landscapes would be managed, the level of acceptable modification in the area, and under what circumstances modifications are allowed. The VMS and VQOs are outlined in the USDA Handbook 462 – National Forest Landscape Management, Vol 2.

The Forest Plan prescribes VQOs for management areas throughout the forest as viewed from designated viewpoints including Highway 26 (Mt. Hood Scenic Byway), Timberline Road (OR Hwy 173), and FSR 2645 (West Leg Road). Summit is an A 11 Management Area – Winter Recreation Area and has a prescribed VQO of Partial Retention (for ski facilities) for Foreground (0 to 0.5 mile from viewpoint), Middleground (0.5 to 5 miles from viewpoint), and Background (over 5 miles from viewpoint) views.

Partial retention means that any activity must be visually subordinate to the natural characteristics of the landscape. Landscapes with this designation can be modified, but the resulting changes in patterns of vegetation, line, form, color and texture should not contrast strongly with the adjacent undisturbed landscape.

## Built Environment Image Guide

The Built Environment Image Guide (BEIG) has been designed to ensure thoughtful design and management of the built environment, which includes: administrative and recreation structures, landscape structures, site furnishing, structures on roads and trails, and signs installed or operated by the Forest Service, its cooperators, and its permittees.<sup>2</sup> It focuses on the image, appearance, and structural character of facilities. Three core contexts are stressed throughout the BEIG: (1) environmental; (2) cultural; and (3) economic.

The BEIG provides general guidance regarding the image, aesthetics, and overall quality of recreational and administrative structures on NFS lands, but it does not contain enforceable “standards” pertaining to aesthetic quality as would be found in a typical forest plan.

## Accessibility to Public Lands

In June 2005 the Forest Service released the *Accessibility Guidebook for Ski Areas Operating on Public Lands, 2005 Update*. This guidebook provides information for ski areas authorized under a SUP to work with the Forest Service in providing equal opportunities for all people, including those with disabilities. Summit will maintain consistency with this guidebook for future development projects occurring on public lands.

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<sup>2</sup> USDA Forest Service. 2001. The Built Environment Image Guide for the National Forests and Grasslands.

Ski areas operating under special-use authorization from the Forest Service are required to comply with both the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504). The ADA applies because Summit would operate as a “public accommodation;” moreover, Summit is a business open to the public. Section 504 applies because Summit would operate under a SUP authorized by the Forest Service. Through the SUP, the ski area agrees to abide by these and all other laws, regulations, and policies of the federal government.

Significant legislation that preceded the ADA includes the Architectural Barriers Act (ABA) of 1968 and the Rehabilitation Act of 1973, as amended. ABA was the first measure passed by Congress to ensure access to facilities. The ABA requires that all facilities built, bought, or leased by or for a federal agency be accessible. Section 504 of the Rehabilitation Act states: “No otherwise qualified individual with a disability in the United States shall, solely by reason of his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive Agency.”

Through future site-specific NEPA and design development reviews, Summit will work closely with the Forest Service to ensure accessibility measures are taken to provide equal opportunity to all users of public lands.

### Winter Sports Guidebook

In 1992 the Forest Service published the Winter Sports Guidebook to establish master planning guidelines for ski areas on NFS lands operating under a SUP. The Winter Sports Guidebook outlined details to include in the master planning process to inform the Forest Service and the public of potential changes that may result from development of public and private lands.

### Region 6 Sustainable Recreation Strategy Summary

The Region 6 Sustainable Recreation Strategy Summary documents the need to manage outdoor recreation in a sustainable way, that is, take a long-term view on decisions about Forest resources. The vision is to “nurture relationships to build strong connections to place; inspire passion, enhance sustainability and provide outdoor experiences that foster stewards who help nurture relationships...” With this vision in mind, the Forest is dedicated to approaching problems and finding solutions in a holistic approach that encourages outdoor recreation and preservation of resources.

## **2. MT. HOOD MULTIMODAL TRANSPORTATION PLAN**

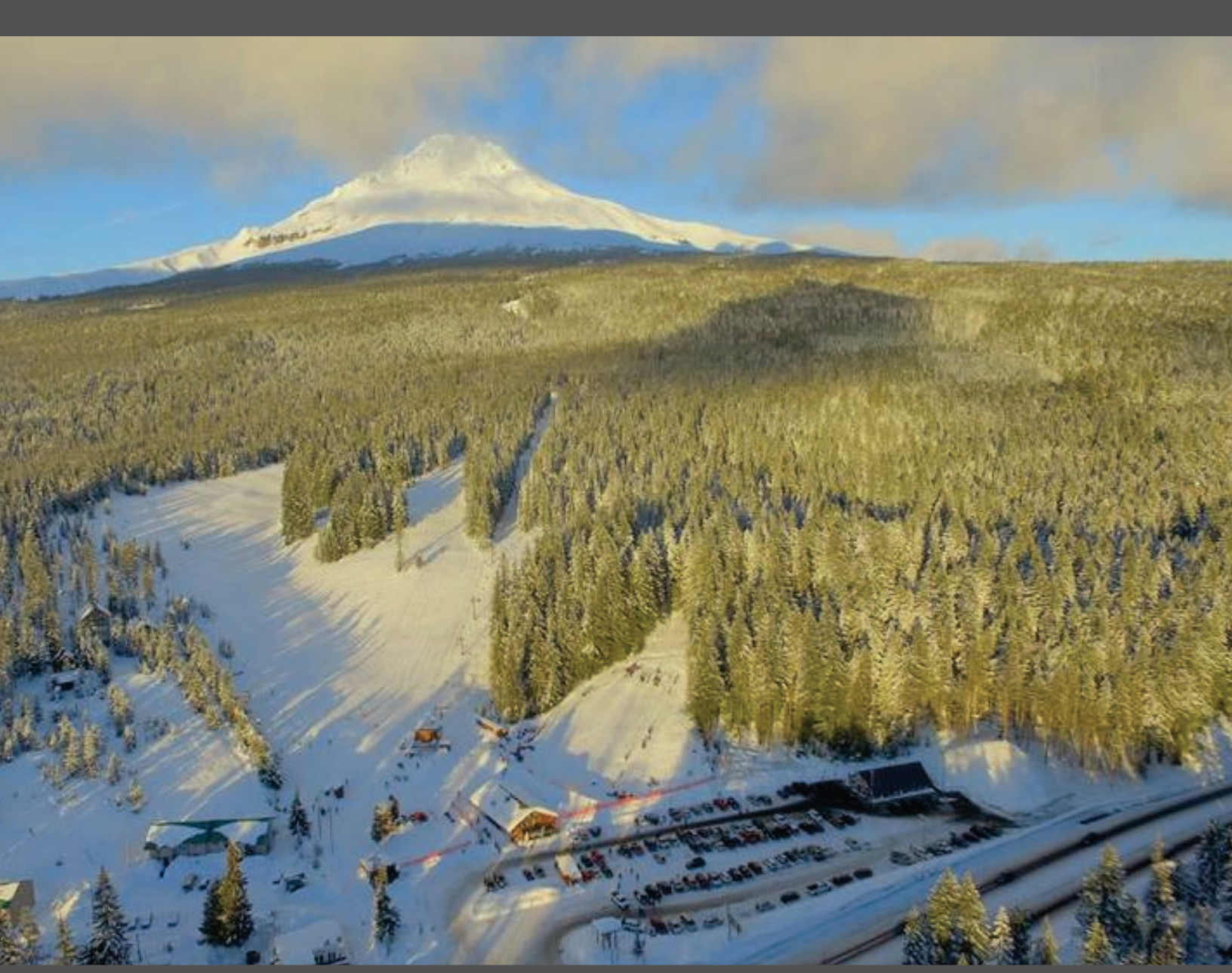
The Mt. Hood Multimodal Transportation Plan is a multimodal, multi-jurisdictional transportation plan created to improve safety for all highway users and expand travel options along the Mt. Hood Scenic Byway. The plan is a 15-year rolling plan published in 2014. The study area includes Highway 26 and OR Highway 35 from Sandy to Hood River. The plan includes a number of projects to improve intersections and congestion on Highway 26, as well as developing additional parking and transportation options in and around Government Camp. The plan also identifies an aerial transportation link between Government Camp and Timberline.

## **3. CLACKAMAS COUNTY COMPREHENSIVE PLAN**

In 2001, Clackamas County completed a comprehensive plan to guide future conservation and development in the County. Highway 26 is a major west-east corridor in Clackamas County from the Portland-Vancouver-Hillsboro Metropolitan Statistical Area to popular outdoor recreation sites around Mount Hood. The Village of Government Camp is an unincorporated community within Clackamas County. Although the Summit Ski Area is on federal land, and not directly subject to county planning, their plan contemplates what they view as appropriate and complimentary to the Comprehensive Plan. The Comprehensive Plan also identifies a land use plan for the Highway 26 Corridor and has developed a transportation plan identifying needs for future development.

## **4. FEASIBILITY ANALYSIS FOR AERIAL TRANSPORTATION BETWEEN GOVERNMENT CAMP AND TIMBERLINE**

A report was completed to identify the feasibility of an aerial transportation system from Government Camp to Timberline. The report, the *Preliminary Feasibility Study and Fatal Flaw Analysis for an Overhead Transportation System Serving the Government Camp/Mt. Hood Area* was completed in September 2001. The report details a number of pros and cons for four segments analyzed. The report found the gondola transportation system would serve as an economic catalyst to Government Camp Village and also help to address transportation issues related to Highway 26; however, significant capital investment would be required to construct the gondola.



*Chapter 3*  
**EXISTING  
CONDITIONS**

## A. SUMMARY OF THE EXISTING GUEST EXPERIENCE

Summit has a rich history in the ski industry. Due to its location on Highway 26 and close proximity to Government Camp, the area has been a constant source of outdoor recreation for the area. Summit was established in 1927 by the Portland Advertising Club. The area was essentially a warming hut and open glades. In 1928, a ski jump was constructed at Multitorpor. In 1980 the ski area's chairlift was installed.

Summit has always been grassroots and orientated toward a family-friendly, accessible experience for the beginner skier or rider, or guest who wants to play in the snow. It's ideal location off of Highway 26 makes the ski area convenient for people passing through or who live in the greater Government Camp area. With its rich heritage in the ski industry and beginner and alternative tubing experience, Summit continues to serve this essential part of the market with simple but quality experiences.

The Summit base area is comprised of the Summit Base Lodge, Ski Patrol A-Frame, maintenance/pumphouse building, the Summit Sno-Park, and the Government Camp Rest Area. The parking facility is approximately 1.6 acres, with approximately 20 parking spaces reserved for the rest area. The circulation space required of tractor/trailers, 55-passenger motor coaches, oversized RVs, etc. is substantive and negatively impacts overall parking capacity. The Summit Sno-Park is part of a statewide agreement between ODOT and the Forest Service, which covers snow removal in many high elevation parking lots throughout the state. A 0.6-acre area of the Summit Sno-Park is reserved for a special use permit authorization held by Oregon Travel Experience/Oregon Travel Information Council for the public rest area they manage.

Refer to Figures 2 through 4 for existing conditions at Summit.



## B. EXISTING LIFT NETWORK

Summit has one chairlift, which services approximately 19 acres of ski terrain. The chairlift is a fixed-grip double with an hourly capacity of 1,200 persons per hour (PPH). The lift was installed in 1980 by Riblet Tramway Company. In general, the lift is in good working condition and received substantial upgrades in June 2019. The lift does not operate during the summer months.

Table 3 provides detailed lift specifications for the existing chairlift.

**Table 3. Chairlift Specifications—Existing Conditions**

Summit Chairlift	
Lift Type	Fixed-grip double chairlift
Top Elevation	4,290 feet
Bottom Elevation	3,985 feet
Vertical Rise	305 feet
Slope Length	2,325 feet
Average Grade	13%
Actual Capacity	1,200 PPH
Rope Speed	400 feet per minute
Carrier Spacing	40 feet
Year Installed	1980
Manufacturer	Riblet

*Source:* SE Group

## C. EXISTING TERRAIN NETWORK

Evaluation of the existing terrain network requires consideration of factors such as terrain variety and the distribution of terrain by ability level; however, given Summit's accessibility and family-friendly, beginner terrain, the terrain network does not follow the same terrain network standards of larger, regional or destination resorts.

The developed trail network accommodates beginner to lower intermediate guests on 7 lift-served trails accounting for 19 acres of skiable terrain. The developed terrain is groomed on a regular basis. Table 4 provides details of the existing terrain specifications.

**Table 4. Terrain Specifications—Existing Conditions**

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Bumblebee	4,290	3,985	305	2,624	171	10.3	12	18	Novice
Bumblebee Alt 2	4,225	4,117	108	695	74	1.2	16	18	Novice
Bumblebee Alt 3	4,195	4,176	18	157	43	0.2	12	12	Low Intermediate
Yellowjacket	4,290	3,985	305	2,553	95	5.5	12	27	Low Intermediate
Yellowjacket Alt 2	4,170	4,143	27	428	37	0.4	6	9	Low Intermediate
Yellowjacket Alt 3	4,123	4,055	68	315	108	0.7	22	26	Low Intermediate
Yellowjacket Alt 4	4,080	4,021	58	248	121	0.7	24	27	Low Intermediate
<b>TOTAL</b>				<b>7,020</b>		<b>19.0</b>			

Source: SE Group

## 1. TERRAIN DISTRIBUTION BY ABILITY LEVEL

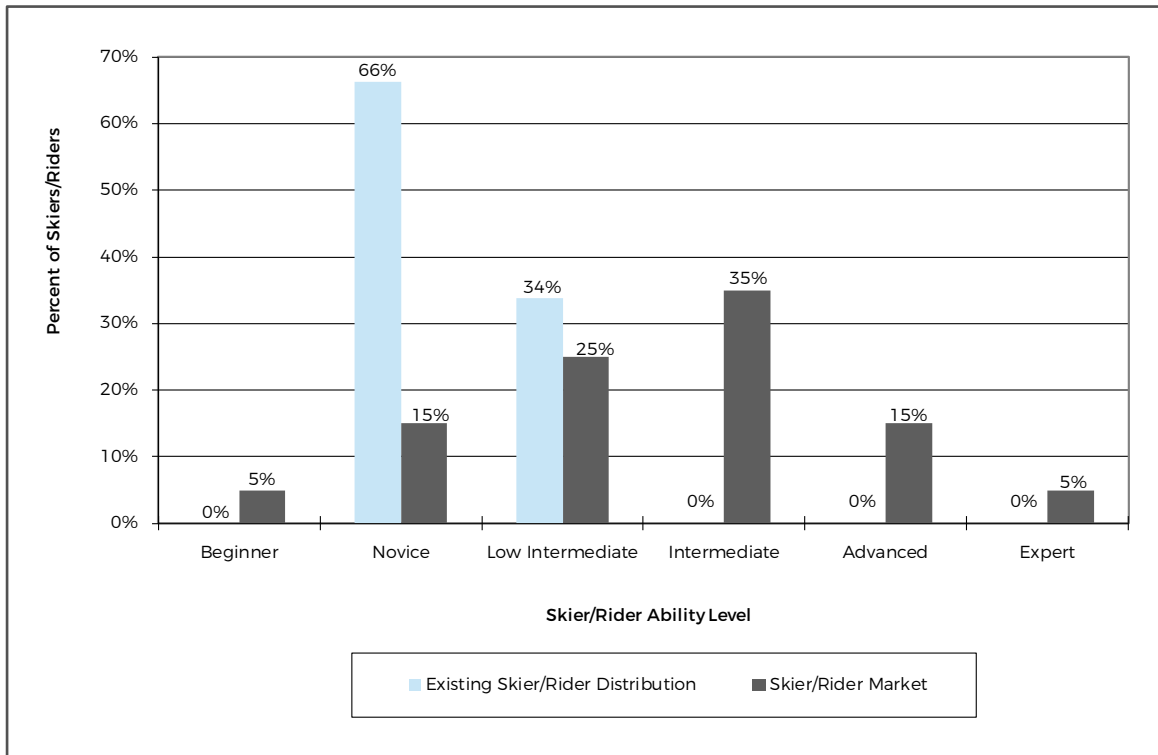
This terrain distribution analysis considers the 19 acres of ski terrain at Summit. The terrain distribution through the range of ability levels is not necessarily in line with regional market breakdown. However, this is simply a factor of the position of Summit in the marketplace as a family-friendly, beginner ski area, situated on 52 acres of gently sloped terrain.

Table 5. Terrain Distribution by Ability Level—Existing Conditions

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	0	0	0	5
Novice	11.5	207	66	15
Low Intermediate	7.5	105	34	25
Intermediate	0	0	0	35
Advanced	0	0	0	15
Expert	0	0	0	5
<b>TOTAL</b>	<b>19.0</b>	<b>312</b>	<b>100</b>	<b>100</b>

Source: SE Group

Chart 1. Terrain Distribution by Ability Level—Existing Conditions



## D. EXISTING CAPACITY ANALYSIS

The existing conditions capacity analysis evaluates two different capacities: CCC and PAOT. CCC is a ski area modeling tool that considers the utilization of the ski lift and terrain network and skier use of other facilities across the resort during a given day; it is a daily skier population. PAOT is a snapshot of the resort at a given point in time and includes all resort guests including skiing and non-skiing visitors.

It is important to differentiate that while the skier CCC component of PAOT accounts for skier visitation over the course of an entire day, PAOT also includes at-one-time populations for other non-ski activities. Many of these non-ski activities do not extend over an entire day, and therefore daily visitation for these non-ski activities can be many times greater than the at-one-time population.

These two analyses were completed for Summit in order to understand overall resort capacity and how volumes of snow tubers, Mount Hood hikers, Nordic skiers and tourists impact the ski area operations and parking limitations.

### 1. COMFORTABLE CARRYING CAPACITY

A calculation of the existing CCC was completed for this MDP, as shown in Table 6. The CCC of Summit is currently calculated at 410 guests. This number is supported by recent peak visitation days at approximately 450 guests.

**Table 6. Daily Chairlift Capacity—Existing Conditions**

Summit Chairlift	
Lift Type	Fixed-grip double chairlift
Slope Length	2,325 feet
Vertical Rise	305 feet
Actual Capacity	1,200 PPH
Operating Hours	7.0 hours
Up-Mountain Access Role	0%
Misloading/Lift Stoppages	15%
Adjusted Hourly Capacity	1,020 PPH
VTF/Day	2,177,700
Vertical Demand	5,303 ft/day
Daily Lift Capacity/CCC	410 guests
Slope Length	2,325 feet
Vertical Rise	305 feet

Source: SE Group

## COMFORTABLE CARRYING CAPACITY

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In ski area planning, a “comfortable carrying capacity” (CCC) is established, which represents an at-one-time guest population to which all ski resort functions are balanced. The design capacity is a planning parameter that is used to establish the acceptable size of the primary facilities of a ski resort: ski lifts, ski terrain, guest services, restaurant seats, building space, utilities, parking, etc.

Accordingly, the design capacity does not normally indicate a maximum level of visitation or a “cap” on visitation, but rather the number of visitors that can be “comfortably” accommodated on a daily basis. Design capacity is typically equated to a resort’s fifth or tenth busiest day, and peak-day visitation at most resorts is at least 10% higher than the design capacity.

The accurate estimation of the CCC of a mountain is a complex issue and is the single-most important planning criterion for the resort. Related skier service facilities, including base lodge seating, mountain restaurant requirements, restrooms, parking, and other guest services are planned around the proper identification of the mountain’s true capacity.

CCC is derived from the resort’s supply of vertical transport (the vertical feet served combined with the uphill hourly capacities of the lifts) and demand for vertical transport (the aggregate number of runs desired multiplied by the vertical rise associated with those runs). The CCC is calculated by dividing vertical supply (VTF/day) by vertical demand, and factors in the total amount of time spent in the lift waiting line, on the lift itself, and in the descent.

## 2. PERSONS-AT-ONE-TIME

PAOT, by definition, is the number of guests accommodated by a resort, at any one time, which affords a high-quality experience and helps ensure sound stewardship of the land. In essence, PAOT is a guest population which is serviceable by the resort (i.e., attendance level where operations remain functional and optimal).

In the case of Summit, the calculation of PAOT was identified to better understand the overall dynamics of Summit as a ski area and tourist attraction, not just the ski area operations alone. Specifically, the need to understand the constraining capacity of parking at Summit has highlighted the need for this analysis. Summit routinely attracts tourists and sightseers to the base area due to its proximity to Highway 26. This, in combination with other attractions (e.g., Nordic skiing and snowshoeing, hiking, snow tubing, dining at the Summit Café), routinely creates an at-capacity parking situation that causes Summit to turn away would-be guests and direct them back onto the crowded Highway 26.

For this analysis, PAOT was categorized into four subcategories: skiers/riders, snow tubers, tourists/general milling, and hikers/Nordic skiers. These calculations were completed for both summer-mode and winter-mode operating seasons.

For existing conditions during the winter months, the largest group of **at-one-time** guests are skiers and riders, with tourists being the second largest group, followed by tubers, and then Nordic skiers. Skier PAOT is based on the calculated CCC (410 skiers) and estimated average visitation on the 10th busiest days. This analysis shows that during the winter season, an additional 40% of guests need to be accounted for in guest services functions, such as restaurant seating and base area parking, to comfortably accommodate the resort PAOT (i.e., the PAOT [575 guests] is approximately 40% higher than the skiers-at-one-time [410 skiers]).

**Table 7. Persons-At-One-Time—Existing Conditions**

Type of Guest	Winter	Summer
Skiers/Riders	410	0
Snow Tubers	65	0
Tourists	70	30
Hikers/Nordic	30	30
<b>TOTAL</b>	<b>575</b>	<b>60</b>

Source: SE Group

Notes:

Skier PAOT is based on the calculated CCC; only one year of historical visitation records are available at Summit.

Snow tuber PAOT is based on tuber visits, which are 65% of skier/rider visits (about 265 daily capacity), and 4 turnovers per day.

Tourist PAOT is estimated at 20% of tourist PAOT at Timberline in winter (70) and 30 in the summer.

Hiker/Nordic PAOT is estimated at 10% of hikers/mountaineers PAOT at Timberline (30 in the summer and winter).

PAOT represents the resort population at a single point in time during the day. Many of the non-ski activities do not extend over an entire day, and therefore daily visitation for these non-ski activities can be many times greater than the at-one-time population. In order to estimate total **daily** visitation at Summit, each PAOT subcategory can be multiplied by an average turnover, which is based on the average duration of the stay. For example, if the average tourist visitor spends approximately 1.5 hours at Summit, there is an average of six tourist turnovers per day (9-hour day divided by 1.5 hours per visit equals 6 individual visits.) The following table presents an estimated **daily** visitation level based on PAOT and demonstrates that tourist and tuber traffic far outweigh skier/rider visitation.

**Table 8. Estimated Daily Visitation—Existing Conditions**

Type of Guest	Winter			Summer		
	PAOT	Average Turnover	Estimated Daily Visits	PAOT	Average Turnover	Estimated Daily Visits
Skiers/Riders	410	1	410	0	1	0
Snow Tubers	65	4	260	0	4	0
Tourists	70	6	420	30	6	180
Hikers/Nordic	30	2	60	30	2	60
<b>TOTAL</b>	<b>575</b>		<b>1,150</b>	<b>60</b>		<b>240</b>

Source: SE Group

## **E. EXISTING GUEST SERVICES FACILITIES, FOOD SERVICE SEATING & SPACE USE ANALYSIS**

### **1. EXISTING GUEST SERVICES FACILITIES**

Guest services are provided at the Summit Base Lodge, a ticket building, and the Ski Patrol A-Frame (winter months only). The Base Lodge was constructed in 1966 and is in fair to good condition but has space limitations and cannot service all the guests. It provides full ski area facilities including beginning of day services (i.e., ticketing, rentals, retail, ski school), food and beverage service/seating, and administrative functions in approximately 2,200 square feet. The restaurant, Summit Café, is open for summer and winter operations.

Prior to Summer 2018, Summit's base area didn't have a public restroom facility. Guests would use the Government Camp Rest Area facilities across the parking lot. Presently, the Summit Base Lodge has a single, ADA-certified restroom.

In Summer 2019, Summit received permission from the Forest Service to construct a 12 feet-by-36 feet prefabricated building located immediately west of the Summit Base Lodge to accommodate ticketing and rental equipment space. When these services are moved from the Summit Base Lodge to the temporary guest services building, it will be possible to construct more restroom facilities within the Summit Base Lodge.

The existing guest service space allocations at Summit are generally considered limited for current PAOT capacity and highlight the need for additional guest service, food service seating, and restroom space.



## 2. SPACE USE ANALYSIS

Based upon a winter PAOT of 575 guests, Table 9 presents a range of space use allocations for the Summit base area in accordance with industry standards for a resort of similar market orientation and regional context as Summit. Square foot figures contained in this table are based on industry averages; they should not be considered absolute requirements. Compared with existing available space use at Summit (approximately 3,100 square feet in the Summit Base Lodge, Ski Patrol A-Frame and ticket building), the ski area needs additional space to accommodate all its guests.

**Table 9. Space Use Analysis—Existing Conditions**

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	130	140
Public Lockers	390	430
Rentals/Repair	920	920
Retail Sales	260	290
Bar/Lounge	390	430
Adult Ski School	210	230
Kid’s Ski School	410	460
Restaurant Seating	2,590	2,880
Kitchen/Scramble	2,070	2,300
Restrooms	520	580
Ski Patrol	210	230
Administration	260	290
Employee Lockers/Lounge	100	120
Storage	380	510
Circulation/Waste	1,140	1,530
<b>TOTAL SQUARE FEET</b>	<b>9,980</b>	<b>11,340</b>

Source: SE Group

## SPACE USE PLANNING

To provide a balanced resort experience, sufficient guest service space should be provided to accommodate the existing resort CCC. The distribution of the CCC is utilized to determine guest service capacities and space requirements at base area and on-mountain facilities. The CCC should be distributed between each guest service facility location according to the number of guests that would be utilizing the lifts and terrain associated with each facility.

In addition to distributing the CCC amongst the base area and on-mountain facilities, guest service capacity needs and the resulting spatial recommendations are determined through a process of reviewing and analyzing the current operations to determine specific guest service requirements that are unique to the resort.

Service functions include:

- ◆ Restaurant Seating: All areas designated for food service seating, including: restaurants, cafeterias, and brown bag areas. Major circulation aisles through seating areas are designated as circulation/waste, not seating space.
- ◆ Kitchen/Scramble: Includes all food preparation, food service, and food storage.
- ◆ Bar/Lounge: All serving and seating areas designated as restricted use for the serving and consumption of alcoholic beverages. If used for food service, seats are included in seat counts.
- ◆ Restrooms: All space associated with restroom facilities (separate women, men, and employees).
- ◆ Guest Services: Services including resort information desks, kiosks, and lost and found.
- ◆ Adult Ski School: Includes ski school booking area and any indoor staging areas. Storage directly associated with ski school is included in this total.
- ◆ Kid's Ski School: Includes all daycare/nursery facilities, including booking areas and lunch rooms associated with ski school functions. Storage and employee lockers directly associated with ski school are included.
- ◆ Rentals/Repair: All rental shop, repair services, and associated storage areas.
- ◆ Retail Sales: All retail shops and associated storage areas.
- ◆ Ticket Sales: All ticketing and season pass sales areas and associated office space.
- ◆ Public Lockers: All public locker rooms. Any public lockers located along the walls of circulation space are included, as well as the 2 feet directly in front of the locker doors.
- ◆ Ski Patrol/First Aid: All first aid facilities, including clinic space. Storage and employee lockers directly associated with ski patrol are included in this total.
- ◆ Administration/Employee Lockers & Lounge/Storage: All administration/employee/storage space not included in any of the above functions.

### 3. FOOD SERVICE SEATING

The Summit Base Lodge houses the ski area’s only food service outlet, the Summit Café. The Café has 64 indoor seats and 12 outdoor patio seats. An outdoor seating area added in summer of 2019 (outside the back doors of the Base Lodge towards the bottom terminal of the chairlift) provides additional outdoor seating for 38 guests.

To accommodate the current winter PAOT capacity (including skiers and non-skiing guests), Summit should provide 144 seats to meet the lunchtime capacity. Based on Summit’s currently available 64 indoor seats and 50 outdoor seats, the resort would need an additional 30 seats during fair weather days. On inclement weather days, indoor seating capacity is insufficient. An additional 80 seats would be needed to comfortably accommodate lunchtime demand on these days.

**Table 10. Restaurant Seats—Existing Conditions**

	Base Area
Lunchtime Capacity (PAOT)	575
Average Seat Turnover	4
Existing Indoor Seats	64
Existing Outdoor Seats	50
Total Indoor/Outdoor Seats	114
Required Seats	144
Difference	-30

*Source:* SE Group

### F. EXISTING PARKING AND ACCESS

The Summit Sno-Park is adjacent to the Government Camp Rest Area. The Rest Area has roughly 20 parking spots on about 0.6 acre. Approximately 125 parking spaces are available in the Summit Sno-Park parking lot. An additional 100 parking spaces at the Snow Bunny Sno-Park parking lot may be used as overflow parking for the Summit operation. During the winter months, the parking lot can fill up on busy days with skiers and tubers accessing Summit. During the summer and winter months, the parking lot is used by multiple user groups including hikers accessing the trailheads for the Crosstown Trail and the Alpine Trail, bikers, multiple disciplines of skiers, snowshoers, etc. Recreationists also park on non-NFS land—the most significant example of this parking being the opportunities afforded by the Government Camp Loop Road.

Summit shares the Summit Sno-Park with the Government Camp Rest Area (the rest area has access to approximately 20 parking spaces situated on 0.6 acre). The Summit Sno-Park and rest

area currently fulfills several roles beyond parking for Summit guests, including highway travelers accessing the Government Camp Rest Area facilities; circulation, transfer of cargo, and turn around for tractor-trailer combinations; a de facto park-n-ride for Mt. Hood Express ridership; a shuttle stop for the Timberline Resort Express (shuttle bus); chain up areas for vehicles traveling on Highway 26; and trailhead parking. The rest area is situated on NFS lands and has been operated for more than 10 years under the guidance of Oregon Travel Experience/Oregon Travel Information Council.

Highway 26 provides direct access to three ski areas and is very congested during the busy summer and winter months. In addition, the tandem of highways 26 and 35 provide access to four additional ski centers. The majority of Highway 26 travelers pass by Summit to gain access to Timberline, Mt. Hood Meadows, Cooper Spur, Nordic centers at Teacup Lake and Mt. Hood Meadows, and ski areas situated in central Oregon. The east intersection of Highway 26 and Government Camp Loop Road is an area of concern that has been identified by local and state agencies as failing engineering design criteria and needing improvements. The majority of travelers seeking access to Summit and the rest area must navigate through this signaled intersection. While the intersection is outside the Summit SUP boundary, Summit understands the importance of continuing its work with local and state agencies to develop alternatives to this intersection's present configuration.

A guiding document for transportation in the region is the Mt. Hood Multimodal Transportation Plan.<sup>3</sup> The Plan identifies in Group C (i.e., third highest priority projects) a Government Camp Intermodal Hub for automobiles and alternative transportation connections and an aerial transportation link project between Mt. Hood Skibowl, Government Camp, and Timberline. These projects would help alleviate highway congestion and help mitigate parking shortages in the Summit Sno-Park, on Government Camp Loop Road, and in parking facilities at the Timberline complex. The Government Camp Intermodal Hub would not be a connected action to the Summit MDP and could occur on either NFS or private lands.

Public transportation is available and helps alleviate the regional transportation pressures. The Mt. Hood Express is a public bus service along Highway 26, running from Sandy east to Government Camp and Timberline. The eastern-most Government Camp bus stop is located on Government Camp Loop Road immediately adjacent the Summit Sno-Park. The Timberline Resort Express also provides shuttle service between Summit and Timberline ski areas.

Currently a separate planning process is underway to expand public transit on Highway 35 and connect the Mt. Hood Express services with those of the Gorge Express. This is being referred to as the "Around the Mountain Plan." This planning is also considering the development of a

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<sup>3</sup> David Evans and Associates, Inc. 2014. Mt. Hood Multimodal Transportation Plan: 2014-2029 15-Year Rolling Plan. <https://www.oregon.gov/ODOT/Projects/Project%20Documents/Final-Plan-MHMTP.pdf>

Transit Center as prescribed in ODOT’s Mt. Hood Multimodal Transportation Plan. The Summit plan contemplates and supports both of these initiatives.

**Table 11. Parking Analysis—Existing Conditions**

	Total
PAOT	575
Number of guests arriving by car (80% of PAOT)	460
Number of guests arriving by shuttle service (20% of PAOT)	115
Required car parking spaces (average 2.7 guests per car)	170
Parking spaces used by other highway travelers <sup>a</sup>	15
Required Summit employee car parking spaces <sup>b</sup>	15
Total required spaces	200
Existing parking spaces at Summit Sno-Park <sup>c</sup>	125
<b>Difference</b>	<b>-75</b>

Source: SE Group

Notes:

<sup>a</sup> Tractor-trailer combinations, 55-passenger motor coaches, oversized RVs, etc.

<sup>b</sup> Based on number of employees equals 5% of PAOT, and assuming 2 employees per car.

<sup>c</sup> 100 parking spaces at the Snow Bunny Sno-Park parking lot may be used as overflow parking for the Summit operation.

As shown in Table 11, on a design capacity day the existing parking capacity at Summit has a deficit of 75 parking spaces.

## G. EXISTING RESORT OPERATIONS

### 1. SKI PATROL/FIRST AID

Ski patrol and first aid operations are located in the A-frame building on the western boundary of the Summit SUP area.

### 2. MAINTENANCE FACILITIES

Summit currently has minimal maintenance and storage facilities. A collection of very small out buildings and storage units provides this nominal square footage, with the maintenance/pumphouse building being the largest of these facilities.

### 3. SNOWMAKING

Summit has minimal existing snowmaking coverage. The existing snowmaking operation consists of two snow guns and a small pumphouse located west of the Summit Base Lodge. The snowmaking pump draws water from the Government Camp Water Company (GCWC) 8-inch water main, which runs parallel and to the west of the western Summit SUP boundary, via a 6-inch snowmaking supply line. GCWC can supply up to 150,000 gallons per day at a rate of 150

gallons per minute (GPM). NNI can draw up to 150 GPM for snowmaking operations and is limited by the available water from GCWC. The existing snowmaking operations typically cover approximately 1 acre with approximately 1 foot of snow. Hoses and other snowmaking equipment are stored in the snowmaking storage building; fan guns are stored outside.

#### **4. NIGHT LIGHTING**

There are currently no “after dark” operations at Summit.

#### **5. MOUNTAIN ROADS**

A Summit-maintained mountain access road runs along the western edge of the existing permit area for approximately 0.5 mile. This road is used primarily to access the top terminal of the lift. The West Leg Road (FSR 2645) also serves as a mountain road and intercepts the existing Summit SUP on the eastern edge of the SUP area. The West Leg Road starts just east of Summit’s base lands and terminates at the OR Highway 173 corridor (below Timberline’s maintenance shop and equipment storage area). During the winter months, the West Leg Road is a snow route, which allows for snowcats and snowmobiles to commute between Summit and Timberline ski areas.

#### **6. INFRASTRUCTURE**

The utilities infrastructure at Summit is primarily located in or near the base lodge. Refer to Figure 8 for existing and planned utility locations.

Electrical lines run to the Summit Base Lodge, ticket building, Ski Patrol A-Frame, maintenance building, and bottom terminal of the chairlift. Portland General Electric (PGE) has two underground lines that run through the Summit base area—one that travels west to supply Government Camp, and one that travels east to Mt. Hood Meadows ski resort. PGE also has an overhead line that crosses the lower segments of the Summit ski runs and chairlift that supplies power to the Mazamas Lodge and ski lift, Cascadia Arts, the Boy Scouts camp, and other users (see Figure 8).

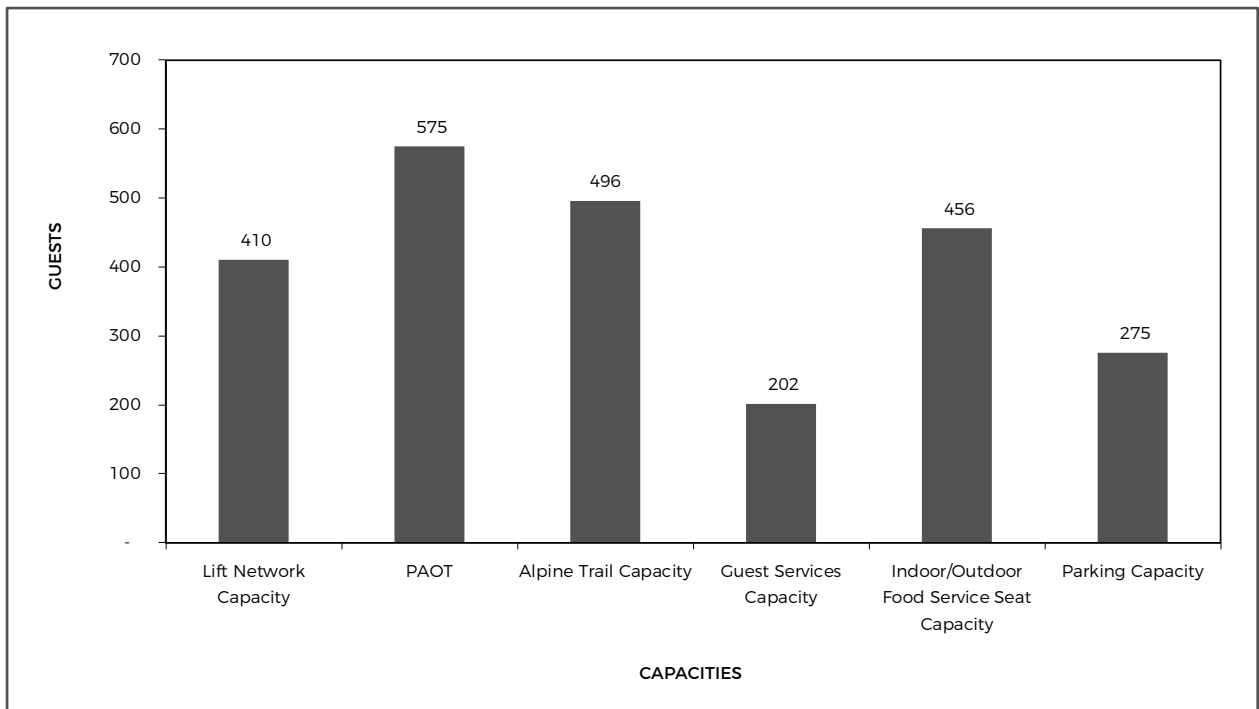
A domestic water well on the northwest corner of the Summit Base Lodge services domestic water needs for the base lodge. The well is 146 feet deep and can provide up to 15 GPM for domestic use. The Summit Base Lodge is the only facility at Summit that currently uses domestic/potable water, and a 1-inch supply line feeds the base lodge from the well pump. Domestic uses include food service, one restroom and a dishwasher. During the summer, Summit also uses the water for irrigation, as needed. The well is sufficient to meet the current demand for potable water and irrigation at Summit. As noted earlier, the GCWC serves as the source for snowmaking water.

The Summit Base Lodge is the only facility at Summit that currently discharges sanitary sewer. Sewer service for Summit is provided by the Government Camp municipal system.

## H. RESORT CAPACITY BALANCE AND LIMITING FACTORS

Summit currently operates near or over capacity under existing conditions. The lift and terrain network on a busy weekend day can typically accommodate guests. However, the guest service space in the base lodge, the indoor food service seating and parking capacity restrict Summit’s operations. This MDP outlines what would be required to bring the capacities of the other resort components up to meet the need for visitation levels that are in line with the resort’s CCC and PAOT. The following chart shows these relationships.

Chart 2. Resort Capacity Balance—Existing Conditions



*Notes:*

Lift Network Capacity is based on Daily Lift Capacity/CCC calculation from Table 6.

PAOT is based on PAOT calculation in Table 7.

Alpine Trail Capacity is based on on-slope capacity from Table 5 plus skiers on the lift, in lift line, and using support facilities.

Guest Services Capacity is based on total square feet of guest services building space divided by a commonly accepted, average required square feet per skier capacity (In the case of Summit, 17 sq. ft. per skier capacity)

Indoor/Outdoor Food Service Seat Capacity is based on total seats available times 4 uses per seat.

Parking Capacity is based on total parking spaces available to guests, times 2.7 guests per car, plus guests arriving by shuttle or bus.

## I. SUMMER AND ALTERNATIVE WINTER ACTIVITIES

### 1. YEAR-ROUND NFS TRAILS OPPORTUNITIES

Summit is the starting point for a number of hiking, mountain biking and winter-use trails within the Mt. Hood National Forest. These trails include Alpine, Alpine Loop (NFS Trail #660B), Crosstown (NFS Trail #755), Camp Creek Loop (NFS Trail #754), Timberline to Town (NFS Trail #756), and West Leg Bypass (NFS Trail #660C) trails (see Figure 4). In addition to serving as an over-the-snow route for NNI/RLK operations, the West Leg Road is also a popular winter trail that serves the Nordic and alpine touring communities. Nordic and alpine touring skiers use the West Leg Road for uphill and downhill travel, and for access to dispersed areas on Mount Hood. Summit Café offers lunch and dinner options for trailhead users, as well as passing motorists and Government Camp locals. The Café has become a popular dining destination and visitation is robust. Use of the Summit Café has grown with the opening of Timberline Bike Park.

The Alpine Trail is a multi-directional, 2.1-mile trail that originates at Timberline Lodge and descends approximately 1,500 vertical feet before terminating at Government Camp's Crosstown Trail. This trail is a popular ski and snowshoe trail in the wintertime, and is open year-round to hikers. While it passes through the Timberline Bike Park, mountain bikes are not allowed on this trail. *Note:* The Alpine Trail serves as a downhill trail for employees who: work at the Timberline complex; take public transportation to work; and elect to commute home via the Alpine Trail.

The Crosstown Trail is a popular, multi-directional 3-mile trail that skirts the northern edge of Government Camp. Summit Sno-Park provides parking for one of its trailheads. This trail is used by hikers, mountain bikers, skiers, and snowshoers and receives its highest use in the summer and winter months.

The Camp Creek Loop Trail is designated as a "more difficult" loop trail and is an extension of the popular Crosstown Trail. Located just north of the most eastern portion of Crosstown Trail and just west of the Alpine Trail, the Camp Creek Loop Trail rolls along for 1.5 miles and 200 feet of vertical gain (easiest for hikers, more challenging for bikers, Nordic skiers, and snowshoeing enthusiasts). For skiing and biking, this year-round trail is typically traveled in the west-to-east direction.

The Alpine Loop Trail is a 0.5-mile, winter only (seasonal) trail appropriate for all skiing and snowshoeing abilities. This short trail serves as a connector for the Alpine and West Leg trails. Combined with the West Leg Trail, the Alpine Loop Trail creates a scenic trek for those accessing the forest from the Village of Government Camp. Accessed by skiing up the lower mile of the West Leg Trail, skiers and snowshoers turn left (or west) and head out onto the Alpine Loop Trail. After approximately 0.5 mile, the Alpine Loop Trail rejoins the West Leg Trail for a return ski/snowshoe to the ODOT Government Camp Maintenance Station Sno-Park.



The West Leg Bypass Trail is a 1.4-mile, winter only, non-motorized, multi-directional trail. This trail was built as mitigation to offset the loss of a segment of winter route on the West Leg Road (lost due to construction of the Jeff Flood Chairlift and associated alpine ski trails). The grade of the trail averages 8% to 10%—making a challenging route for intermediate cross-country skiers. On the south end, the Bypass route ties in with West Leg Road approximately 300 yards below the road gate near the Jeff Flood Chairlift’s lower terminal. On the north end, it crosses the Alpine Trail and Kruser Trail before it ties in just below the West Leg Road’s hairpin turn near the bottom of the Stormin’ Norman Chairlift. From there, the bypass joins the West Leg Road alpine ski trail. While largely the domain of Nordic skiers, AT enthusiasts and snowshoers have discovered the route in recent years.

Timberline to Town Trail connects Government Camp to Timberline (5.5 miles). The trail is popular for mountain bikers and hikers, many of whom use the Mt. Hood Express Shuttle to access the highest elevation of the trail near Timberline’s Magic Mile Chairlift. This trail intersects with Timberline Bike Park Trails and it is multi-directional. In the summer, the strenuous hike/bike ride (from Government Camp) has an ascent of approximately 1,800 feet. The trails that originate at Summit also connect to a variety of other, longer trails, including the the Mountaineer Trail (NFS Trail #798) and the 39-mile Timberline Trail (NFS Trail #600).

The Mountaineer Trail is a clockwise loop that starts at Timberline Lodge and connects with the Pacific Crest Trail (NFS Trail #2000) before heading north towards the top terminal of Magic Mile Chairlift. From there, it crosses over to Silcox Hut and then descends and terminates near Timberline’s flagpole near the bottom of the Chute. The trail is only open to hikers.

The Pacific Crest Trail crosses through the Timberline SUP area above Timberline Lodge. Only hiking and horseback riding are allowed on this multi-directional trail.

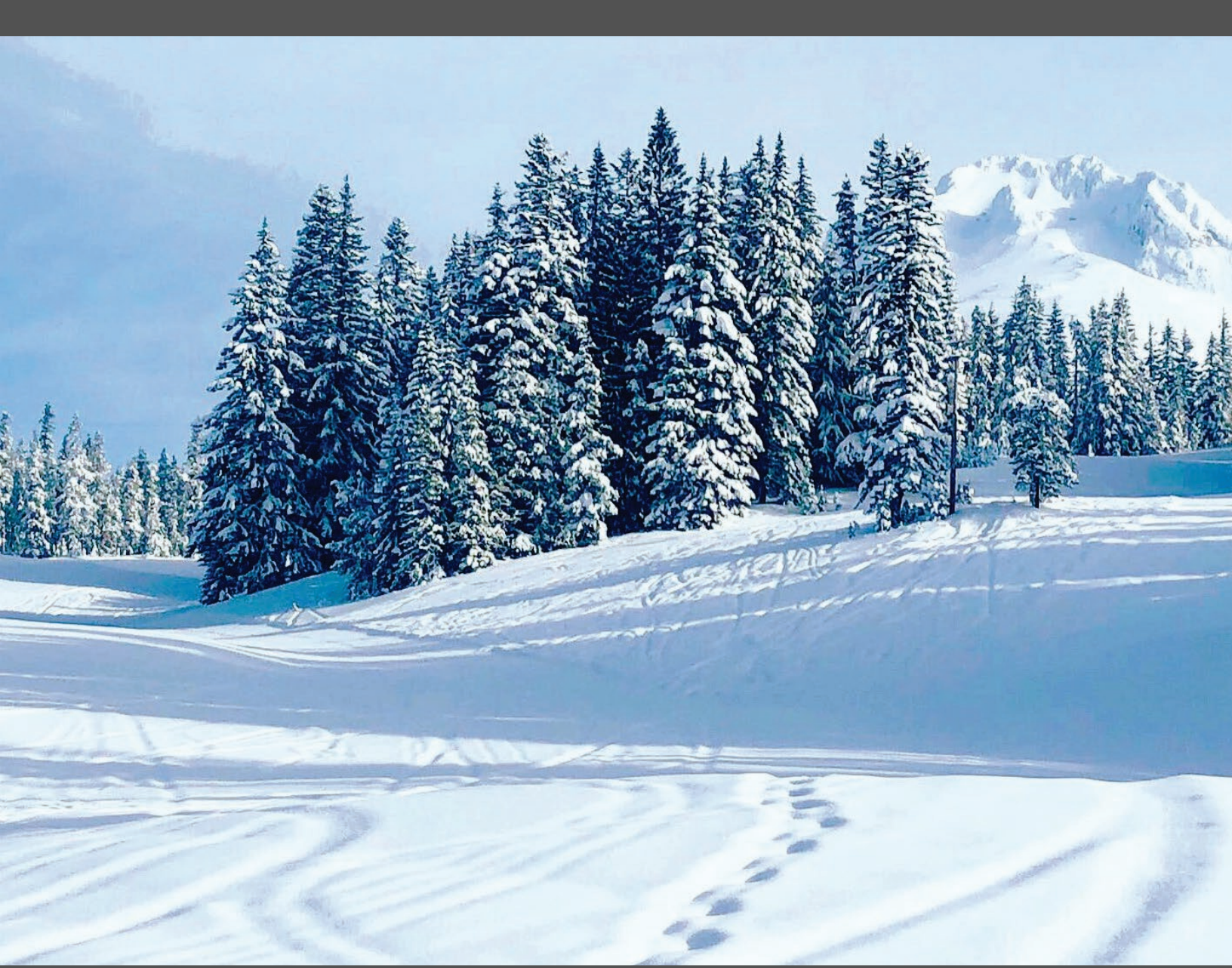
The Timberline Trail is a classic, Pacific Northwest trail that circumnavigates Mount Hood. The segment of trail between Timberline Lodge and Yocum Ridge overlaps the Pacific Crest Trail. Many people start the Timberline Trail from Timberline’s parking lot. Hiking and horseback riding are allowed on this multi-directional trail.

## 2. ALTERNATIVE WINTER ACTIVITIES

Summit currently has a 1-acre snow tubing area to the northeast of the Summit Base Lodge. The tubing area is comprised of three parallel lanes equipped with two fan snowmaking guns to ensure a high-quality snow surface. The lanes do not have lighting for after dark operations, and there is no lift service, which is somewhat uncommon for commercial tubing operations. Tickets and tubing rentals are available in the Summit Base Lodge. Tubing related visitation can be a significant part of the Summit Ski Area visitation, as shown in Table 7 and Table 8. During the 2018/19 season, tubing accounted for 40% of all ticket sales at Summit Ski Area.

Unmanaged tubing takes place on the permit acreage at Snow Bunny. There is great demand along the Highway 26 corridor for tubing and the Snow Bunny facility serves a very diverse population of National Forest users.

In addition, the Alpine, Alpine Loop, Camp Creek Loop, Crosstown, West Leg, West Leg Bypass, and Glade trails are utilized by the public for various pursuits.



*Chapter 4*  
**UPGRADE PLAN**

## A. SUMMARY OF THE UPGRADED GUEST EXPERIENCE

The proposed Summit Upgrade Plan builds upon previous planning and outreach efforts completed at both Summit and Timberline ski areas. The Summit Upgrade Plan is multi-faceted including: upgrading existing facilities at Summit Ski Area while preserving the history and character of this unique ski area; developing a long-term and sustainable transportation solution to transport guests and employees to high elevations on Mount Hood; and improving the overall visitor experience to the National Forest by providing an affordable, seamless transition to NFS lands.

This plan recognizes and builds upon other transportation and parking initiatives currently being developed and promoted in the vicinity of Government Camp by state, federal, and county governmental entities, which are geared towards improving mobility and safety on the area's roads, enhancing parking, and expanding public transportation. NNI has become an active member of the Mt. Hood Transportation Alliance and views these projects as allied interests that should work in concert with the parking plans and additional modes of transportation that are envisioned at Summit. In addition to providing the infrastructure necessary to address current parking and transportation deficiencies, the desired outcome is to provide a more car-free, pedestrian experience for visitors to Government Camp.

The central components of the Summit Upgrade Plan include construction of the Timberline Gondola to connect Summit to Timberline, which would necessitate a SUP boundary consolidation and construction of interconnect trails; expanded Summit operations during the winter and summer; and improved functionality of Summit's base lands. Implementation of the Upgrade Plan would reprioritize the need for Timberline to construct an additional portal higher on the mountain (i.e., Molly's Portal as discussed in the Timberline Lodge and Ski Area Complex 2019 Master Development Plan). The projects in the Upgrade Plan are anticipated to be completed over the next ten to fifteen years, depending on the environmental analysis timeframe for certain projects.

The proposed SUP boundary consolidation would involve 228 acres connecting Summit with Timberline, plus an additional 12.5 acres capturing the lower section of West Leg Road and some gentle lands to the east of West Leg Road that could be used for additional parking, transit facilities, and potential other summer and winter activities. To accommodate the additional occupancy and use of NFS lands (not presently contemplated in the existing SUP) a SUP amendment would be pursued. In approving or denying the proposed amendment, the authorized officer shall consider, among other things, the findings /recommendations of other involved agencies and whether the terms and conditions of the existing authorization may be continued, or revised, or whether a new authorization issuance is required.

The existing Summit SUP includes a 9-acre tubing venue commonly referred to as Snow Bunny. This permit acreage is located 2 miles east on Highway 26. NNI proposes to continue its current operations within the Snow Bunny portion of the permit by maintaining the site for unmanaged snow play, something for which there is great demand along the Highway 26 corridor. Therefore, no substantive improvements are proposed for Snow Bunny.

Refer to Figures 5 through 10 for planned upgrades at Summit.

## **B. UPGRADED LIFT NETWORK**

The Upgrade Plan proposes a gondola connecting Summit and Timberline ski areas, a new beginner surface lift, removal of the existing Summit Chairlift, and installation of the four-person Summit Pass Chairlift.

### **1. TIMBERLINE GONDOLA INSTALLATION**

The Timberline Gondola is the cornerstone of Summit's Upgrade Plan. The gondola would not only provide direct, aerial access to Timberline from the Summit's base area, for both guests and employees, it would also alleviate the congestion on OR Highway 173 (the Timberline Road) and reprioritize the need for additional parking at the bottom of Timberline's Molly's Chairlift. The proposed gondola would originate just uphill from the existing Summit Chairlift bottom terminal and would have a top terminal proposed between the bottom of Timberline's Magic Mile and top of Pucci chairlifts. The gondola is designed to be a top-drive gondola and have an hourly capacity of 2,400 PPH. This hourly capacity would accommodate the morning staging period (transport up the mountain) and the late afternoon egress from Timberline (downloading the gondola at the conclusion of Timberline lift operations).

### **2. BEGINNER CARPET INSTALLATION**

Summit is an ideal location for children and adults to learn to ski and ride on easily accessible, gently sloped terrain. A beginner carpet is planned for the western edge of the existing Summit SUP boundary and would have an hourly capacity of 1,800 PPH. This conveyor lift would be designed for beginner skiers and riders.

### **3. SUMMIT CHAIRLIFT UPGRADE**

The existing Summit Chairlift, a fixed-grip double chairlift with a 1,200 PPH capacity, would be removed and the proposed Summit Pass Chairlift would be installed to complement the new design for Summit's base lands. The existing lift was originally installed in 1980. The upgrade chairlift is planned to be a fixed-grip quad chairlift with a 2,000 PPH capacity. The chairlift bottom terminal would be moved uphill and further to the west to better service the terrain and circulation in the base area and accommodate the proposed gondola and base lodge layout. By upgrading the existing chairlift conveyance, the overall guest experience would improve by having updated lift technology, allowing ski school and parties of four or less to ride the chairlift

together. The increased hourly capacity would reduce the wait time in the queue at the chairlift's lower terminal.

The following table provides detailed lift specifications for the upgrade plan at Summit Ski Area.

**Table 12. Lift Specifications—Upgrade Plan**

	Summit Pass Chairlift	Timberline Gondola	Beginner
Lift Type	Fixed-grip 4-person chairlift	10-passenger gondola	Surface Lift
Top Elevation	4,290 feet	5,908 feet	4,075 feet
Bottom Elevation	4,030 feet	4,018 feet	4,019 feet
Vertical Rise	260 feet	1,890 feet	56 feet
Slope Length	1,933 feet	12,952 feet	481 feet
Average Grade	14%	15%	12%
Actual Capacity	2,000 PPH	2,400 PPH	1,800 PPH
Rope Speed	350 feet per minute	1,200 feet per minute	160 feet per minute
Carrier Spacing	42 feet	240 feet	5 feet

Source: SE Group

### C. UPGRADED TERRAIN NETWORK

The terrain network under the Upgrade Plan is the same as the existing conditions terrain network, with the exception of new trails connecting the Timberline and Summit ski areas and the shortening of some existing trails for the base area Upgrade Plan design. The terrain network increases from 19 acres to 41 acres under the Upgrade Plan. Part of the new terrain includes improving existing trails, such as the Alpine Trail, and incorporating the West Leg Road as a novice egress route. With the gondola and terrain connection to Timberline, this provides Summit guests with a more interesting and challenging experience for a range of ability levels. This would give groups and families the flexibility to experience different terrain options while skiing and riding at the interconnected ski areas.

The Upgrade Plan terrain specification details are provided in Table 13.

**Table 13. Terrain Specifications—Upgrade Plan**

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Bumblebee	4,290	4,012	278	2,299	132	7.0	12	18	Novice
Bumblebee Alt 2	4,225	4,117	108	695	74	1.2	16	18	Novice
Bumblebee Alt 3	4,195	4,176	18	157	43	0.2	12	12	Low Intermediate
Yellowjacket	4,290	4,021	268	2,205	73	3.7	12	27	Low Intermediate
Yellowjacket Alt 2	4,170	4,143	27	428	37	0.4	6	9	Low Intermediate
Yellowjacket Alt 3	4,123	4,055	68	315	108	0.8	22	26	Low Intermediate
Beginner Carpet	4,069	4,012	56	512	134	1.6	11	12	Beginner
B_01	5,229	4,470	759	4,358	95	9.5	18	33	Low Intermediate
B_02	5,104	5,018	85	657	75	1.1	13	18	Intermediate
B_03	5,016	4,982	35	380	71	0.6	9	11	Intermediate
B_04	5,016	4,247	769	5,507	81	10.3	14	42	Intermediate
West Leg Road	4,859	4,207	652	8,922	25	5.1	7	10	Novice
<b>TOTAL</b>				<b>26,434</b>		<b>41.4</b>			

Source: SE Group

## D. UPGRADED CAPACITY ANALYSIS

### 1. COMFORTABLE CARRYING CAPACITY

The calculation of Summit’s CCC under the Upgrade Plan is an important measure by which the resort’s guest service facilities can be evaluated and planned. Summit’s existing CCC of 410 guests per day is planned to increase to 1,120 guests per day. This increase is attributed to the increased capacity of the chairlift (upgraded from a double to a quad), the installation of the surface lift/carpet, as well as the installation of the gondola. Because some guests might choose to repeat ski the gondola, some carrying capacity (5%) can be attributed to the gondola (as shown in Table 14). However, for the most part, the gondola would act as an aerial interconnect between Summit and Timberline for guests and employees. To account for this use, an estimated 450 additional guests per day were assumed to access Timberline via the gondola from Summit. Some guest service capacities for beginning of day services have been increased in the Upgrade Plan to accommodate for the demand during the morning staging and afternoon egress. Additional details can be found in the following section about how existing facilities would need to be improved to accommodate the additional use at the Summit Ski Area.

Table 14 provides detailed daily lift capacity calculations for the Upgrade Plan.

Table 14. Daily Lift Capacity—Upgrade Plan

	Summit Pass Chairlift	Timberline Gondola	Beginner	TOTAL
Lift Type	fixed-grip 4-passenger chairlift	10-passenger gondola	Surface Lift	
Slope Length	1,933 feet	12,952 feet	481 feet	15,365 feet
Vertical Rise	260 feet	1,890 feet	56 feet	
Actual Capacity	2,000 PPH	2,400 PPH	1,800 PPH	6,200 PPH
Operating Hours	7 hours	9 hours	7 hours	
Up-mountain Access Role	0%	95%	0%	
Misload/stoppage	15%	0%	10%	
Adjusted Capacity	1,700 PPH	120 PPH	1,620 PPH	3,440 PPH
VTF/day (000)	3,098	1,587	632	5,317
Vertical Demand	4,941 ft./day	12,556 ft./day	1,736 ft./day	
Daily Lift Capacity	630 guests	130 guests	360 guests	1,120 guests

Source: SE Group

## 2. PERSONS-AT-ONE-TIME

As discussed in Chapter 3, PAOT is a snapshot of the resort visitation at a given point in time and accounts for both skiing and non-skiing guests.

For this upgrade analysis, PAOT was categorized into six subcategories: skiers/riders, snow sliders (tubers and/or sledgers), tourists/general milling, snow players/summer activities, Summit mountain bikers (skills park only), and hikers/Nordic skiers. The tourist/general milling category includes gondola site-seeing rides. In addition to the PAOT attributed to visitation within the Summit SUP, there would also be guests parking or being transported to the Summit base area for the purpose of riding the gondola to Timberline for skiing, hiking, mountain biking, dining, overnight lodging, conferences and meetings, and other activities. These “through-guests” are also accounted for in the PAOT calculations. It is important to note that in addition to the through-guests riding the gondola, it will also be an effective mode of workforce transport, and up to 200 employees, and possibly more, would use the gondola for daily transport to their place of work.

For the Upgrade Plan during the winter months, the largest group of **at-one-time** guests are skiers and riders, with snow sliders being the second largest group, followed by tourists, then gondola riders to Timberline (through-guests), then snow players and then Nordic skiers. This analysis shows that during the winter season, an additional 60% of guests need to be accounted



for in guest services functions, such as restaurant seating and base area parking, to comfortably accommodate the resort PAOT (i.e., the overall PAOT [1,800 guests] is approximately 60% higher than the skiers-at-one-time [1,120 skiers]).

During the summer months, the largest **at-one-time** user group is tourists, with the second largest group being summer activities pursuers, then gondola ridership, then mountain bikers, and finally hikers.

**Table 15. Persons-At-One-Time—Upgrade Plan**

Type of Guest	Winter	Summer
Skiers/Riders	1,120	0
Snow Sliders	350	0
Snow Players/Summer Activities	50	150
Mountain Bikers	0	70
Tourists	150	350
Hikers/Nordic	30	30
Gondola Riders to Timberline	100	100
<b>TOTAL</b>	<b>1,800</b>	<b>700</b>

Source: SE Group

Notes:

Skier/rider PAOT is based on the calculated upgrade CCC.

Snow slider PAOT is based on one surface lift and 3-4 lanes of a variety of snow-sliding lanes.

Snow player PAOT is estimated to be 50 and accounts for users of the snow play and park area for general snow related recreation, and potential sledding or tobogganing.

Summer activities PAOT is estimated to be 150 and accounts for the various activities that may be offered in the summer.

Mountain biker PAOT is based on Skills Park users only (i.e., does not include bikers egressing from the Timberline Bike Park trail system or repeat-use of the gondola).

Tourist PAOT is estimated at 150 in the winter and 350 in the summer.

Hiker/Nordic PAOT is expected to be the same during the summer and winter months (30 PAOT).

Gondola rider PAOT accounts for the “through-guests” to Timberline as described above and is based on gondola capacity of 2,400 PPH and average 2.5-minute waiting time.

PAOT represents the resort population at a single point in time during the day. Many of the non-ski activities do not extend over an entire day, and therefore daily visitation for these non-ski activities can be many times greater than the at-one-time population. In order to estimate total daily visitation at Summit, each PAOT subcategory can be multiplied by an average turnover, which is based on the average duration of the stay. The highest to lowest **daily** winter visitation to Summit is snow sliders, skiers, tourists, gondola riders to Timberline, snow players and Nordic skiers. The highest to lowest **daily** summer visitation to Summit is tourists, gondola riders to Timberline, summer activities users, mountain bikers, and hikers. The following table presents an estimated **daily** visitation level based on PAOT.

Table 16. Estimated Daily Visitation—Upgrade Plan

Type of Guest	Winter			Summer		
	PAOT	Average Turnover	Estimated Daily Visits	PAOT	Average Turnover	Estimated Daily Visits
Skiers/Riders	1,120	1	1,120	0	1	0
Snow Sliders	350	4	1,400	0	4	0
Snow Players/ Summer Activities	50	4	200	150	4	600
Mountain Bikers	0	3	0	70	3	210
Tourists	150	6	900	350	6	2,100
Hikers/Nordic	30	1	30	30	1	30
Gondola Riders to Timberline	100	9	900	100	9	900
<b>TOTAL</b>	<b>1,800</b>		<b>4,550</b>	<b>700</b>		<b>3,840</b>

Source: SE Group

## E. UPGRADED GUEST SERVICES FACILITIES, SPACE USE ANALYSIS & FOOD SERVICE SEATING

### 1. UPGRADED GUEST SERVICE FACILITIES

To accommodate the increase in guests at Summit, a number of improvements are planned for Summit’s guest service facilities and base area, including constructing a new base lodge and expanding and reconfiguring parking and drop off zones. The base area would retain its family-friendly feel, but also upgrade the facilities for more space and needed facilities such as restrooms and food service seating. The guest service facilities upgrade took into account the additional skiers and other guests who would need certain beginning of day services and accommodations but who are ultimately accessing Timberline via Summit.

A base lodge is proposed to be constructed to house ticketing sales, food and beverage services, ski school facilities, first aid and ski patrol facilities, rental and retail space, administrative offices, restrooms and lockers and dressing rooms. The building is planned to be two stories with an approximate 16,000-square-foot footprint. As shown on Figure 7, the building would be located approximately 400 feet north of the existing base lodge. This would allow for additional parking and transit infrastructure to be constructed. The building would adhere to county and Forest Service guidelines and standards, including county building codes and the Forest Service’s Build Environment Image Guide for the North Pacific Province.

## 2. SPACE USE ANALYSIS

The Upgrade Plan winter PAOT of 1,800 guests is 1,225 higher than the existing PAOT of 575. The proposed base lodge would be designed to accommodate the planned increase in visitation by skiers, snow-sliders, and other guests using Summit to access Timberline. Table 17 presents the recommended space use allocations of the proposed base lodge in accordance with industry standards for a resort of similar market orientation and regional context as Summit. Square foot figures contained in this table are based on industry averages; they should not be considered absolute requirements.

Table 17. Space Use Analysis—Upgrade Plan

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	410	500
Public Lockers	1,220	1,490
Rentals/Repair	2,880	3,240
Retail Sales	810	990
Bar/Lounge	1,220	1,490
Adult Ski School	650	790
Kid’s Ski School	1,300	1,580
Restaurant Seating	5,290	6,470
Kitchen/Scramble	4,230	5,170
Restrooms	1,060	1,290
Ski Patrol	420	520
Administration	810	990
Employee Lockers/Lounge	320	400
Storage	930	1,370
Circulation/Waste	3,710	5,480
<b>TOTAL SQUARE FEET</b>	<b>25,260</b>	<b>31,770</b>

Source: SE Group

### 3. FOOD SERVICE SEATING

The Upgrade Plan adds more restaurant seats to address the current demand for food service seating and the additional guests visiting Summit and using Summit for beginning of day gondola access to Timberline and end of day egress from Timberline. Based on a PAOT of 1,800 guests, 450 seats would be need in the base lodge. The new base lodge would create a significant enhancement to the dining experience at Summit. Table 18 summarizes the seating requirements for Summit under the Upgrade Plan.

Table 18. Restaurant Seats–Upgrade Plan

	Total
Lunchtime Capacity (PAOT)	1,800
Average Seat Turnover	4
Required Seats	450

Source: SE Group

### F. UPGRADED PARKING AND ACCESS

A central component of the Upgrade Plan is to address parking, transportation associated with present day operations at Summit and Timberline, access to Summit, as well as mitigate some of the access and parking constraints at Timberline. The installation of the Timberline Gondola would help alleviate the parking and access constraints discussed in the Timberline Lodge and Ski Area Complex 2019 Master Development Plan.

The connection from Summit to Timberline would reprioritize the need for the Molly’s Portal. As detailed in the Timberline Lodge and Ski Area Complex 2019 Master Development Plan, the portal was planned for 800 new parking spaces (120 of which were employee parking), as well as potential snow play guests. Employees could use the Summit Sno-Park or public transportation options to access the gondola or Timberline (as they do presently), instead of driving OR Highway 173. This would ensure adequate guest parking at Timberline. Some of these parking spaces were designed for in the Summit base area parking reconfiguration.

Table 19 shows distribution of guests and assumptions for parking and transit for Summit’s Upgrade Plan.

**Table 19. Recommended Parking at Staging Portals–Upgrade Plan**

	Total
PAOT	1,800
Number of guests arriving by car (65% of PAOT)	1,170
Number of guests arriving by public transit or shuttle service (25% of PAOT)	450
Number of guests within walking distance of base area (~0.25 mile) or dropped off (10% of PAOT)	180
Required car parking spaces (average 2.7 guests per car)	433
Required employee car parking spaces <sup>a</sup>	45
Total required spaces	478
Planned parking spaces in Upgrade Plan	450
Difference	-28

Source: SE Group

<sup>a</sup> Based on number of employees equals 5% of PAOT and 2 employees per car.

The Upgrade Plan parking design is planned to increase available parking from 125 spaces to 450 spaces and include a designated area for public transportation and shuttle buses to drop off guests. As shown in Table 19, even with these enhancements, Summit would still have parking constraints due to the number of guests and employees anticipated to use the gondola to access Timberline. Summit plans to work with local and state agencies on initiatives to improve regional transportation such as satellite parking lots, shuttle services, and the use of public transportation. An employee busing program could be implemented to reduce the need for on-site employee parking spaces. The proposed SUP boundary consolidation includes 12.5 acres to the east of the Summit base area that could be used for satellite parking lots.

On-going planning and implementation of transportation initiatives are dynamic and complex issues typically involving multiple state and federal agencies. One plan, the Mt. Hood Multimodal Transportation Plan (March 2014), includes a number of projects to improve intersections and congestion on Highway 26, as well as developing additional parking and transportation options in and around Government Camp. The plan also identifies an aerial transportation link between Government Camp and Timberline. Although some planning has been completed, additional planning and coordination would need to occur to develop mitigation measures to improve the intersections on Highway 26 and overall parking and transportation needs in the area.

## **G. UPGRADED RESORT OPERATIONS**

### **1. SKI PATROL/FIRST AID**

An additional patrol station and space is planned in the proposed base lodge. This would provide first aid to the Summit Ski Area portion of the mountain, as well as anyone needing first aid in the consolidated SUP area.

## 2. MAINTENANCE FACILITIES

Summit would construct a maintenance building adjacent to the West Leg Road (refer to Figure 7). The facility would be a small building (estimated at approximately 2,500 sq. ft.) with one vehicle maintenance bay and storage for miscellaneous equipment. The majority of Summit maintenance operations, and Timberline Gondola maintenance, would be completed at the Timberline maintenance shop (the Timberline Lodge and Ski Area Complex 2019 Master Development Plan calls for an upgraded and expanded maintenance facility).

## 3. SNOWMAKING

Summit plans to expand snowmaking operations on the existing trail network and add snowmaking on proposed “snow-sliding” facilities (e.g., tubing, sledding, and/or tobogganing) to protect against climate variability and low snow years. Summit’s potential for snowmaking operations and coverage area is limited by water availability. Summit’s existing snowmaking water source is the GCWC system; however, Summit would explore developing a new water well and potentially treatment to ensure a reliable water source into the future. Additionally, the Summit snowmaking program would include developing a water storage facility—either a 500,000-gallon above-ground tank or a 1-million-gallon pond. Further, it is estimated that the snowmaking system would have a water recharge capacity of 150 gallons per minute (either from the GCWC system or from developed wells or both) and the ability to draw water from the optional sources for between 50 to 100 hours over the course of the snowmaking season. GCWC can supply up to 150,000 gallons per day of snowmaking water to Summit at a rate of 150 gallons per minute. Based upon these parameters, Summit would have between one million and 1.4 million gallons of water for annual snowmaking operations with a 500,000-gallon tank, or between 1.5 and 1.9 million gallons of water for annual snowmaking operations with a 1-million-gallon storage pond. For master planning purposes, it will be assumed that Summit would have the ability to use 1.4 million gallons of water for snowmaking operations each winter. This volume of water would allow full snowmaking coverage on one ski trail (i.e., Bumble Bee Trail) and the proposed snow-sliding facility.

In addition to development of the water sources, pumps and storage facilities, the proposed snowmaking system would require the installation of water pipe, electrical service, and/or compressed air pipe to supply the snowmaking gun locations. Snowmaking guns would need to be installed. Snowmaking water pipe, power lines and compressed air would require trenches from the proposed water storage facility to the proposed snowmaking coverage areas. See Figure 8 for Summit’s proposed snowmaking infrastructure.

## 4. NIGHT LIGHTING

With the exception of Timberline Gondola operations, no “after dark” operations are planned for Summit, and no night lighting infrastructure would be added to the ski area. Flood lights for the gondola load/unload platform would be added as required.

## 5. MOUNTAIN ROADS

No new major mountain roads would be constructed. Small temporary construction access routes may be needed for construction of the gondola, chairlift, and portions of the proposed snowmaking infrastructure. A short access lane from West Leg Road would be required for the proposed maintenance facility. Also, a construction access and long-term maintenance route would be required for the proposed snowmaking water storage tank or pond. The West Leg Road will continue to serve an important role for year-round maintenance, and resort operations within the extended SUP area and at Timberline and Summit ski areas. Although the West Leg Road is an Forest Service Road (FSR), Summit would provide maintenance of the road to ensure any necessary access to the SUP extension area and two ski areas.

## 6. INFRASTRUCTURE

Utilities infrastructure at Summit would continue to primarily be located in or near the base lodge. Refer to Figure 8 for existing and planned utility locations.

Electrical lines would be needed to the new base lodge, parking area, gondola, maintenance building, snowmaking storage facility and pumphouse, snow-sliding and snow play areas, and bottom terminals of the chairlift and beginner carpet.

The existing domestic water well on the northwest corner of the Summit Base Lodge is 146 feet deep and can provide up to 15 GPM for domestic use. The well would continue to be used for domestic water service for the upgraded resort operations. A water storage tank for domestic water and fire suppression in new base area buildings may be required to support the well service, and if so, the location and size of the water storage tank would be engineered at such time as the project is officially presented to the Forest Service as a proposed action. Water distribution lines would be installed from the well and/or storage tank to the new base lodge and maintenance building.

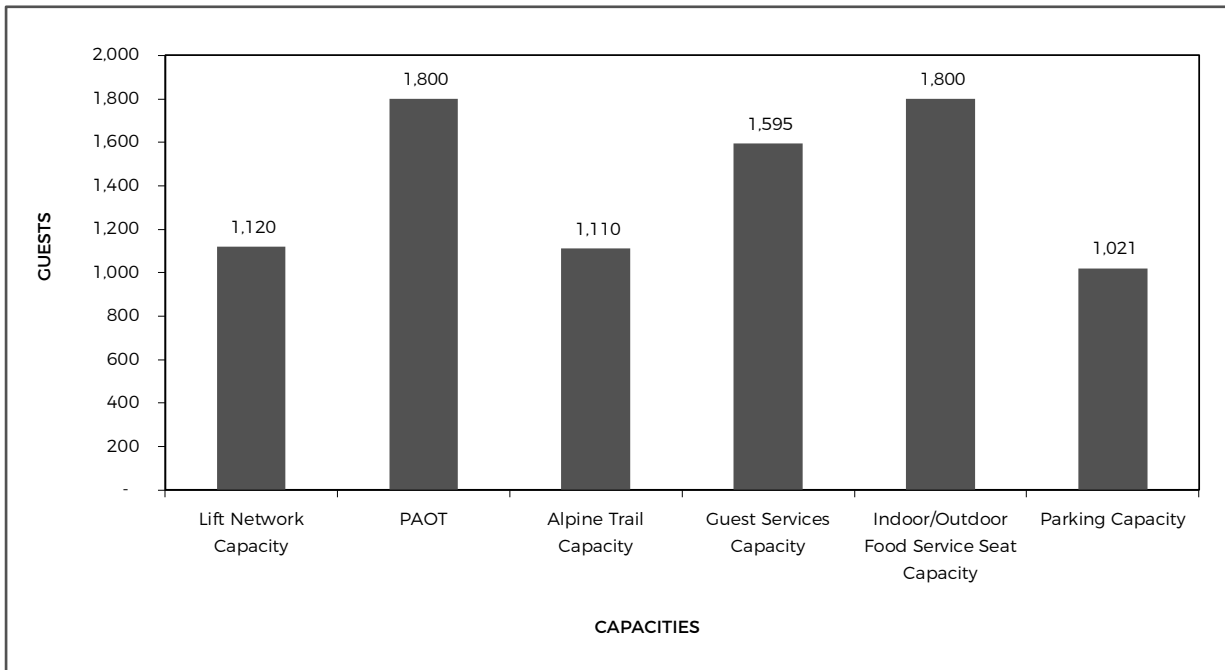
Sanitary sewer service for Summit would continue to be provided by the Government Camp municipal system. Sewer collection lines would be installed from the new base lodge and maintenance building and tie into the existing Government Camp system.

Snowmaking pipe, electrical service, and compressed air lines would be installed to support Summit's snowmaking coverage objectives (e.g., ski/snowboard terrain and in the snow-sliding area).

## H. UPGRADED RESORT CAPACITY BALANCE AND LIMITING FACTORS

The overall balance of the Upgrade Plan is evaluated by calculating the capacities of the resort's various facilities and comparing those facilities to the resort's CCC and PAOT. The gondola connection between the Summit and Timberline ski areas, as well as the trail connections between the Summit and Timberline ski areas, were fundamental in determining guest service seating, parking, transportation needs, etc. The base area lodge construction and overall base area reconfiguration would accommodate the additional guests accessing Timberline via Summit, while also continuing to serve the beginner and family-oriented guests who wish to recreate at Summit. The Upgrade Plan would enhance the overall guest experience with updated facilities in the summer and winter and build on Summit's character and heritage.

Chart 3. Resort Capacity Balance—Upgrade Plan



*Notes:*

Lift Network Capacity is based on Daily Lift Capacity/CCC calculation from Table 14.

PAOT is based on PAOT calculation in Table 15.

Alpine Trail Capacity is based on on-slope capacity plus skiers on the lifts, in lift lines, and using support facilities.

Guest Services Capacity is based on total square feet of guest services building space divided by a commonly accepted, average required square feet per skier capacity (In the case of Summit, 17 sq. ft. per skier capacity).

Indoor/Outdoor Food Service Seat Capacity is based on total seats available times 4 uses per seat.

Parking Capacity is based on total parking spaces available to guests, times 2.7 guests per car, plus guests arriving by shuttle or bus.



## **I. UPGRADED ALTERNATIVE WINTER AND SUMMER ACTIVITIES**

Summit plans to transform the base area into an outdoor recreation activities hub during the winter and summer months. The base area is ideally situated near the major transportation corridors of Highway 26 and OR Highway 173. This makes the base area easily accessible to visitors and Government Camp residents alike. Summer and winter activities would be themed around outdoor experiences and education; the area's rich heritage and history; and affordable, family-oriented recreation.

### **1. UPGRADED ALTERNATIVE WINTER ACTIVITIES**

Under the Upgrade Plan, Summit plans to develop other winter play activities to attract the whole family to recreate on NFS lands. Winter plans include relocating the tubing area and/or creating new sledding or tobogganing facilities and developing a snow play area for general wintertime outdoor recreation.

The tubing hill would potentially be relocated to an area adjacent to the proposed base lodge, parking, and snow play area. The tubing zone would have two to three tubing lanes and a short carpet to carry tubers to the top of the slope. Summit is also investigating other potential unique sledding activities that would either replace tubing or be offered in addition to tubing. The concept is to use dedicated lanes or bobsled-like courses for toboggans, sleds, or sledges serviced by the proposed Summit Pass chairlift. The proposed conceptual alignment of the sledding course is shown in Figure 7, and the conceptual alignment is for illustrative purposes only and is not a detailed design.

A 2-acre snow play park is also planned adjacent to the base lodge. To continue to serve Summit's existing family-oriented guest, Summit envisions this area to be an outdoor winter playground in a semi-treed, park-like area with interpretive signage, wooden outdoor play features for kids (such as slides, forts, swings, etc.), fire pits, picnic tables, benches, and/or picnic shelters for families to gather.

Unmanaged tubing takes place on the permit acreage at Snow Bunny. The Snow Bunny facility serves a very diverse population of National Forest users. NNI proposes to continue its current operations within the Snow Bunny portion of the permit by maintaining the site for unmanaged snow play, something for which there is great demand along the Highway 26 corridor. Therefore, no substantive improvements are proposed for Snow Bunny.

## 2. UPGRADED SUMMER ACTIVITIES

As discussed in Chapter 3, a number of NFS trails are accessible from the base area and gondola connection. The routing of the Crosstown Trail (Trail #755), and positioning of its trailhead, would need to be amended to interface more appropriately with the reconfigured Summit parking facility. Additionally, it would be advantageous, if feasible, to create a connector trail from the Mazamas Lodge vicinity to the Crosstown Trail. This work would be a collaborative effort between Summit management and the Zigzag Ranger District's Recreation Program. Summit would continue to promote and improve this trailhead, as well as the trail networks immediately adjacent to the greater Government Camp area and Timberline complex. Approximately 6 miles of multi-use, multi-directional trails are planned to connect the existing Timberline trail network to the Summit base area. In addition, the 2-acre snow play park would be transformed in the summer months to become a more traditional forest park and playground in a semi-treed, park-like area with interpretive signage, wooden outdoor play features for kids (such as slides, forts, swings, etc.), picnic tables, benches, and/or picnic shelters for families to gather.

Other potential summer activities include special events at the proposed base lodge, canopy tours, team building activities, adventure gravity rides, gravity propelled carts on the winter sledding course, summer tubing on the beginner carpet, disc golf, climbing wall, and other summer activities. A portion of the 12.5-acre SUP extension area could be used for a slopestyle bike park for kids and adults to develop skills before venturing out on nearby mountain bike trails. As the base area develops, site specific plans for activities would be finalized.

### Summer Activities Approach and Zones

Following the guidance provided in Forest Service Manual 2343.14 - Additional Seasonal and Year-Round Recreation at Ski Areas, this MDP has established "zones to guide placement and design of additional seasonal or year-round recreation facilities, basing the zones on the existing natural setting and level of development to support snow sports."

The activities described in this MDP are designed to utilize existing ski area infrastructure (e.g., ski lifts, guest services facilities, parking, and transit-related infrastructure) to the extent possible in order to enhance existing snow sports activities through integration with multi-season activities. In doing so, the projects included in this MDP would improve utilization of ski area infrastructure and help ensure the long-term, year-round viability of Summit and the local economy, most evident in the summer months. Snow sports are, and will continue to be, the primary use of NFS lands within the Summit SUP area and are the primary economic driver for the greater region.

## Summer “Activity Zones” Description

At a site-specific level, this MDP takes the existing setting, combined with the anticipated use of the area, to establish value-oriented and strategic prescriptions. The summer activity zones are based on the existing setting and level of development.

Summer “Activity Zones” consider several characteristics similar to the Recreation Opportunity Spectrum (ROS), including:

- *Access* - the number and function of roads within the area
- *Remoteness* - how far removed an individual feels from human activity
- *Naturalness* - the extent and intensity of development and disturbance within the area
- *Infrastructure* - the amount of and proximity to the built environment

Each of these characteristics is to be considered within the context of Summit as a developed ski area immediately adjacent to the urbanized environment of the Village of Government Camp, the gondola interconnect between Timberline and Summit ski areas, and the bustling Highway 26 corridor.

## Summer "Activity Zones" at Summit

Summer activities would take place within Summit’s existing and expanded SUP and corresponding zones, as shown on figures 9 and 10 and as follows:

### *Zone 1*

- ◆ lodges and guest service facilities
- ◆ special event/gathering sites
- ◆ hiking and mountain biking trails
- ◆ scenic lift rides
- ◆ aerial adventure/team building courses
- ◆ climbing wall
- ◆ summer tubing
- ◆ canopy/zip tour
- ◆ interpretive/educational center
- ◆ dryland training infrastructure for visiting athletes/summer camps
- ◆ gravity propelled carts (on winter sledding course)

### *Zone 2*

- ◆ hiking and mountain biking trails
- ◆ scenic lift rides
- ◆ summer tubing
- ◆ canopy/zip tour
- ◆ aerial adventure/team building courses
- ◆ dryland training infrastructure for visiting athletes/summer camps
- ◆ gravity propelled carts (on winter sledding course)

### *Zone 3*

- ◆ hiking and mountain biking trails
- ◆ canopy/zip tour
- ◆ scenic lift rides
- ◆ dryland training infrastructure for visiting athletes/summer camps



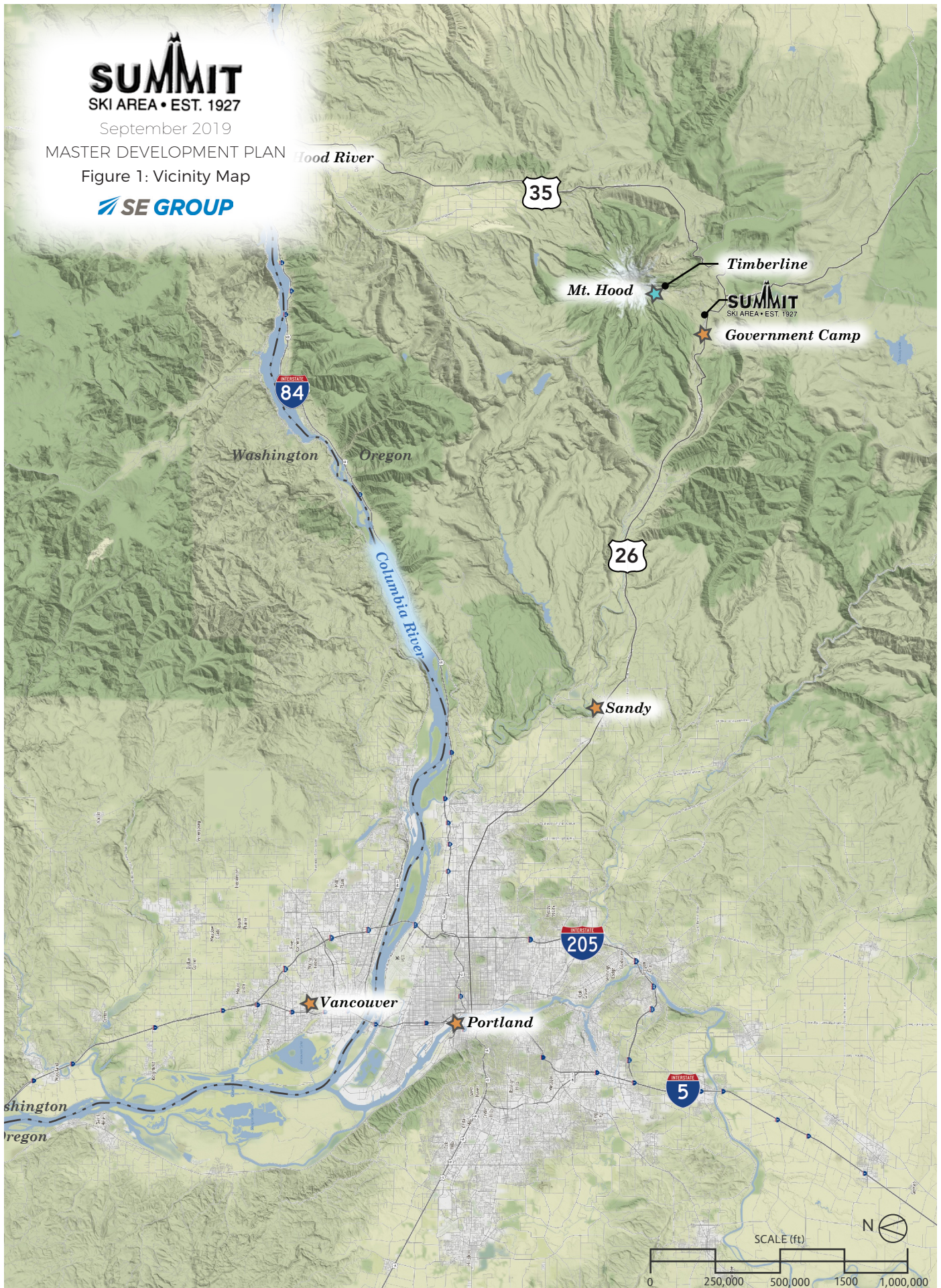
*Figures*

# SUMMIT

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Figure 1: Vicinity Map



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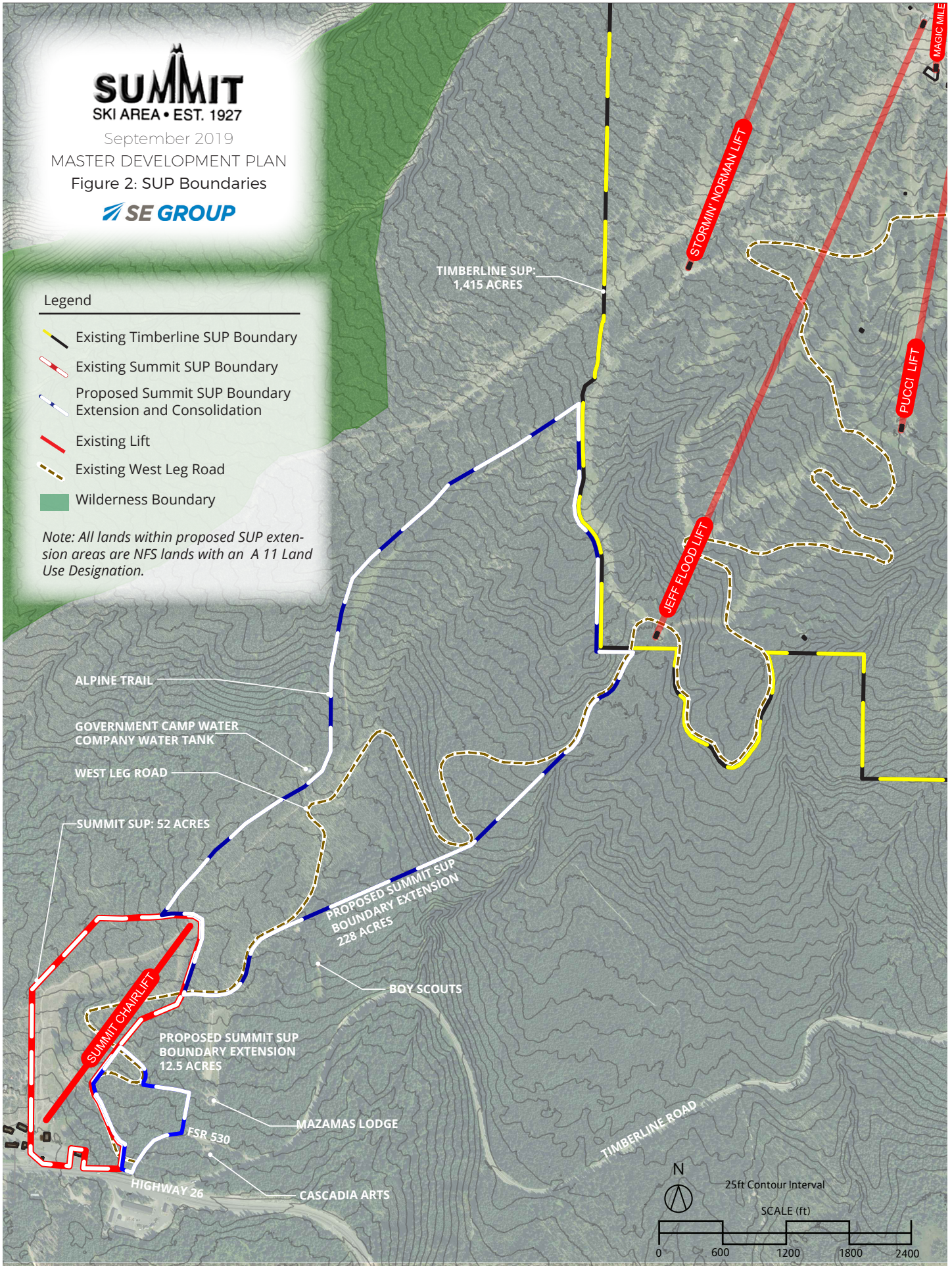
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 Figure 2: SUP Boundaries



### Legend

- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Existing Lift
- Existing West Leg Road
- Wilderness Boundary

*Note: All lands within proposed SUP extension areas are NFS lands with an A 11 Land Use Designation.*

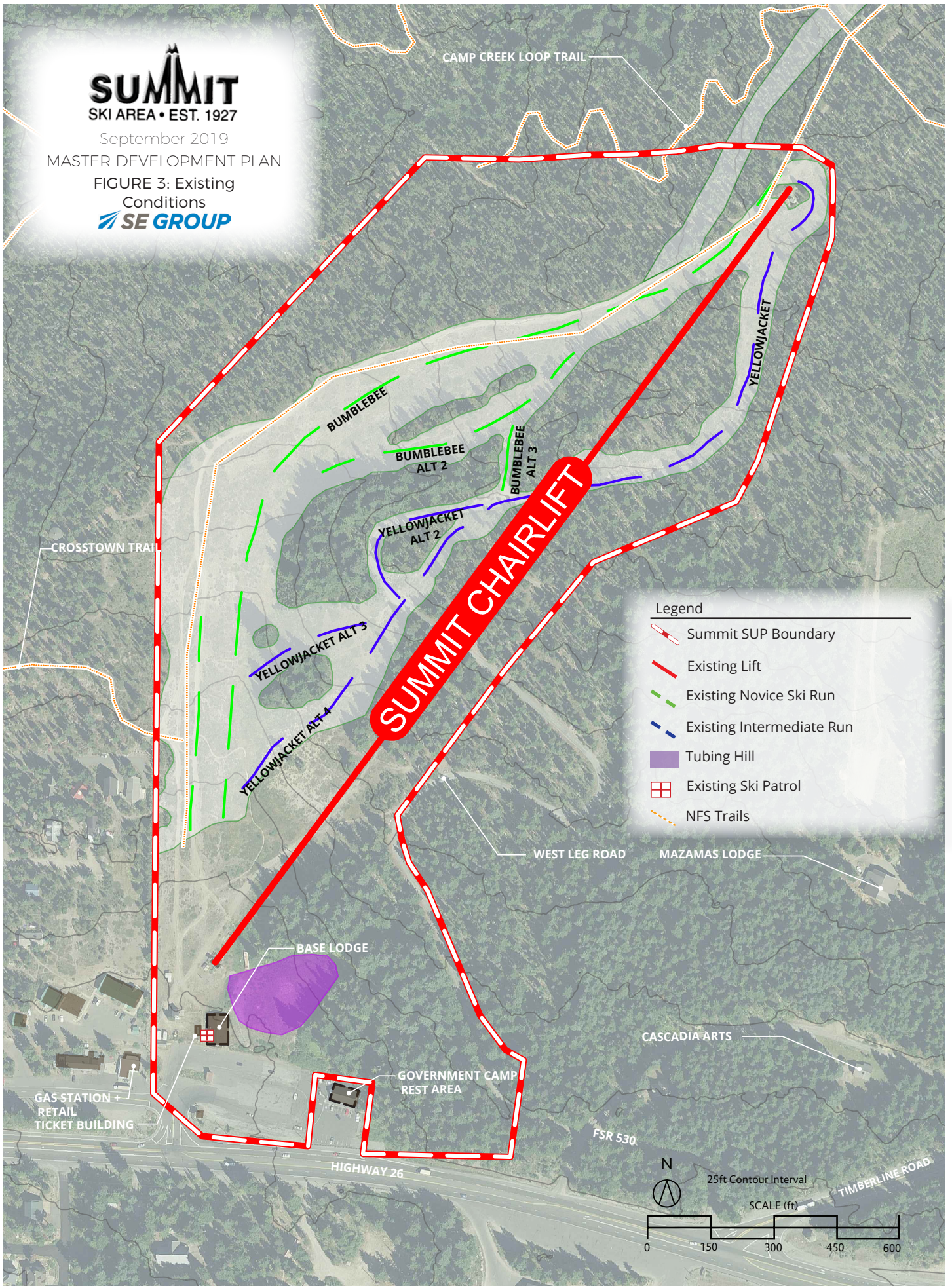


# SUMMIT








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FIGURE 3: Existing  
 Conditions



### Legend

-  Summit SUP Boundary
-  Existing Lift
-  Existing Novice Ski Run
-  Existing Intermediate Run
-  Tubing Hill
-  Existing Ski Patrol
-  NFS Trails

WEST LEG ROAD      MAZAMAS LODGE

BASE LODGE

CASCADIA ARTS

GAS STATION +  
 RETAIL  
 TICKET BUILDING

GOVERNMENT CAMP  
 REST AREA

FSR 530

HIGHWAY 26

TIMBERLINE ROAD

N

25ft Contour Interval

SCALE (ft)

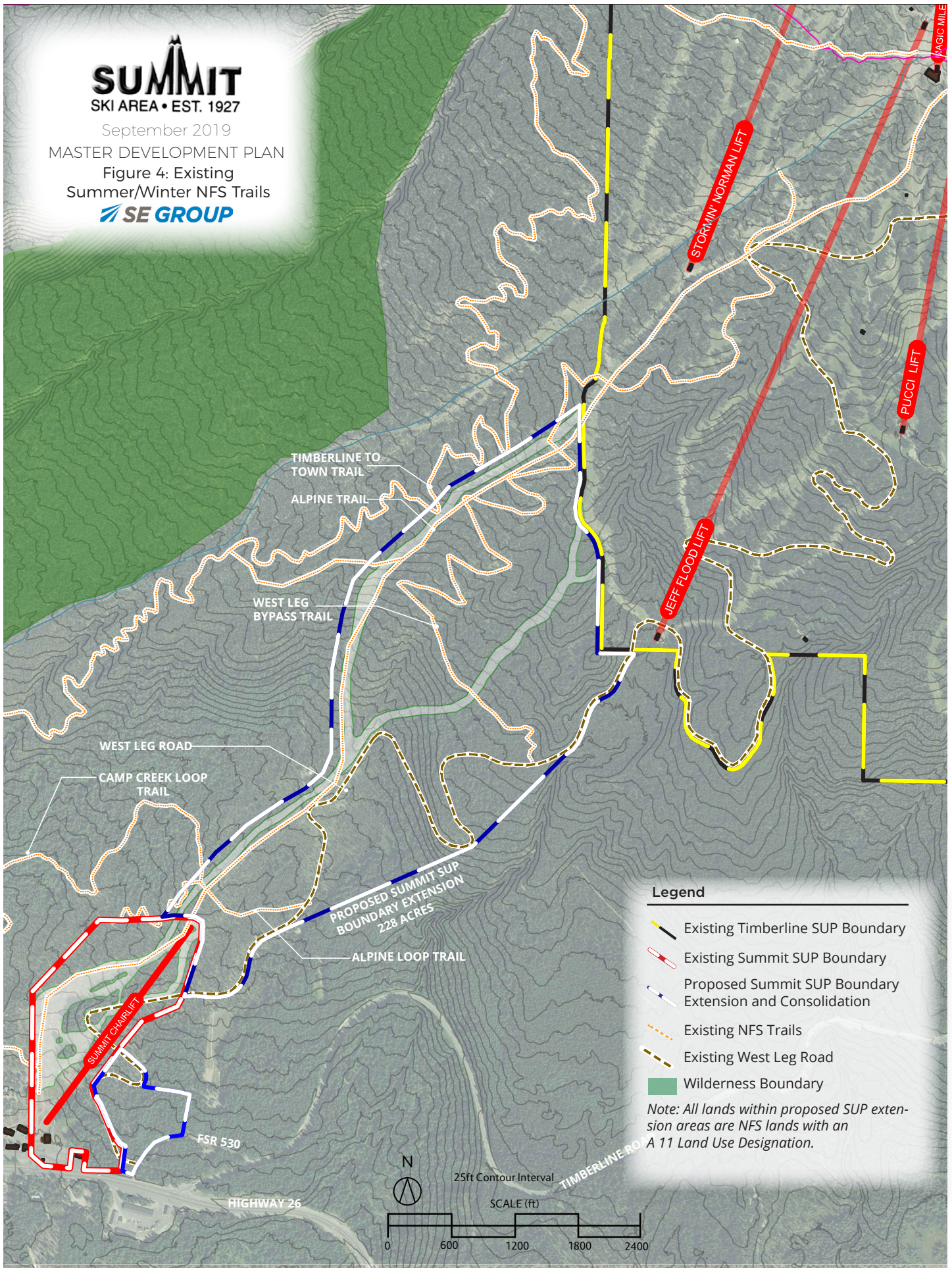
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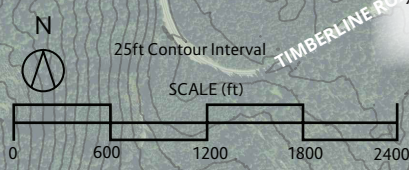
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 Figure 4: Existing  
 Summer/Winter NFS Trails



### Legend

- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Existing NFS Trails
- Existing West Leg Road
- Wilderness Boundary

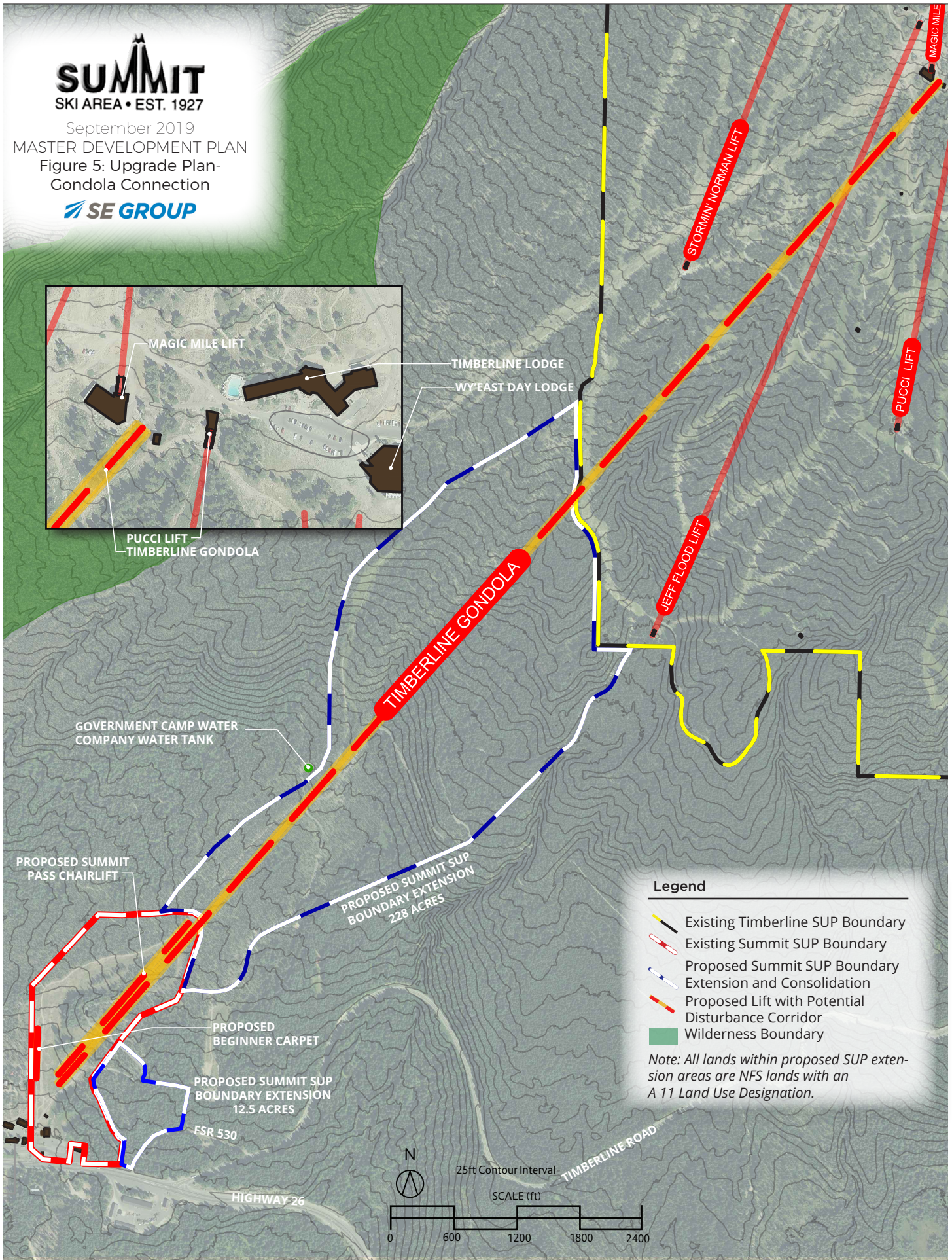
*Note: All lands within proposed SUP extension areas are NFS lands with an A 11 Land Use Designation.*



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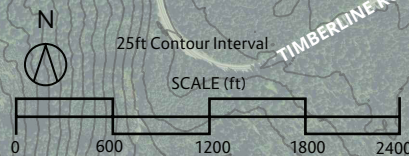
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 Figure 5: Upgrade Plan-  
 Gondola Connection



### Legend

- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Proposed Lift with Potential Disturbance Corridor
- Wilderness Boundary

*Note: All lands within proposed SUP extension areas are NFS lands with an A 11 Land Use Designation.*



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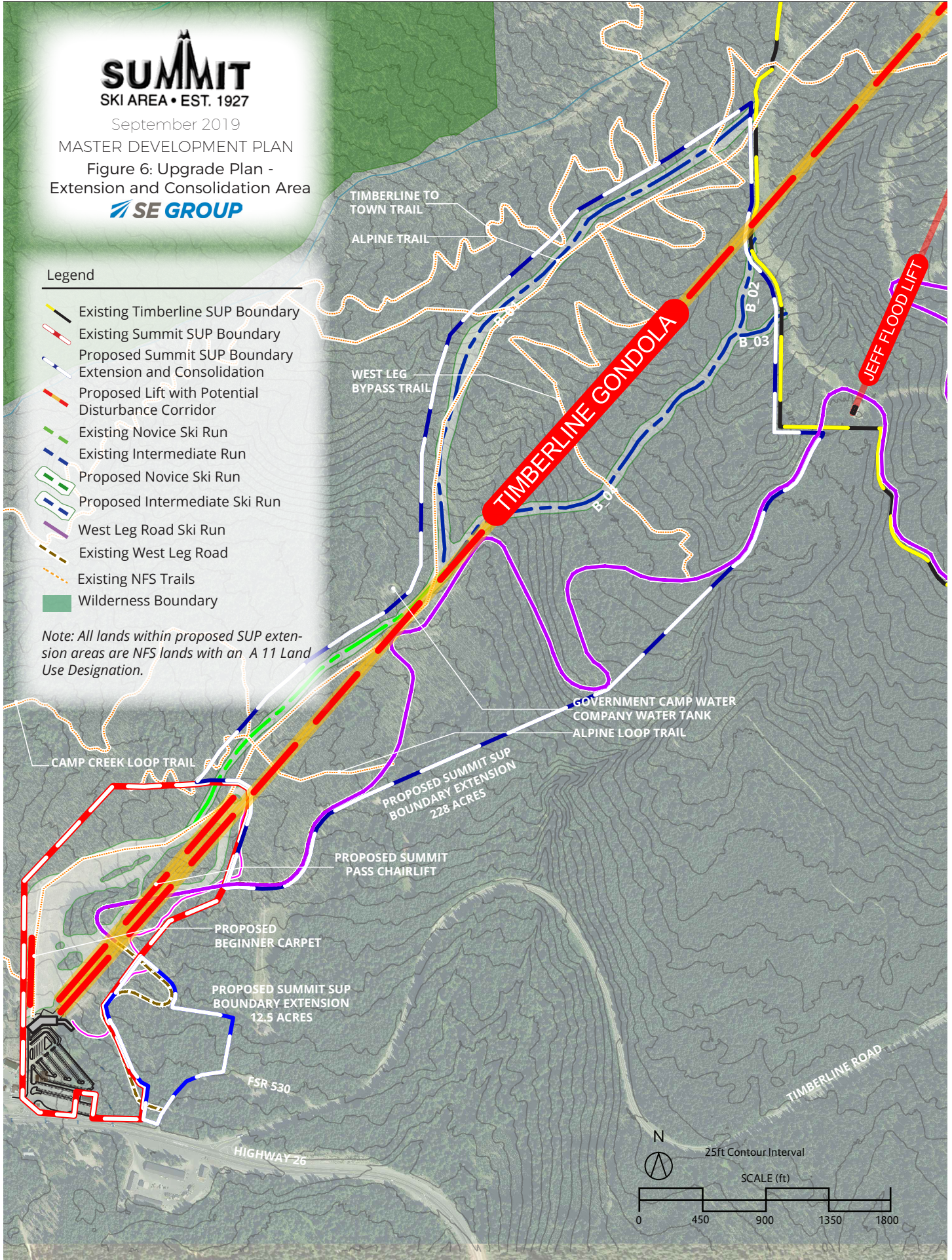
Figure 6: Upgrade Plan -  
Extension and Consolidation Area



### Legend

- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Proposed Lift with Potential Disturbance Corridor
- Existing Novice Ski Run
- Existing Intermediate Run
- Proposed Novice Ski Run
- Proposed Intermediate Ski Run
- West Leg Road Ski Run
- Existing West Leg Road
- Existing NFS Trails
- Wilderness Boundary

Note: All lands within proposed SUP extension areas are NFS lands with an A 11 Land Use Designation.

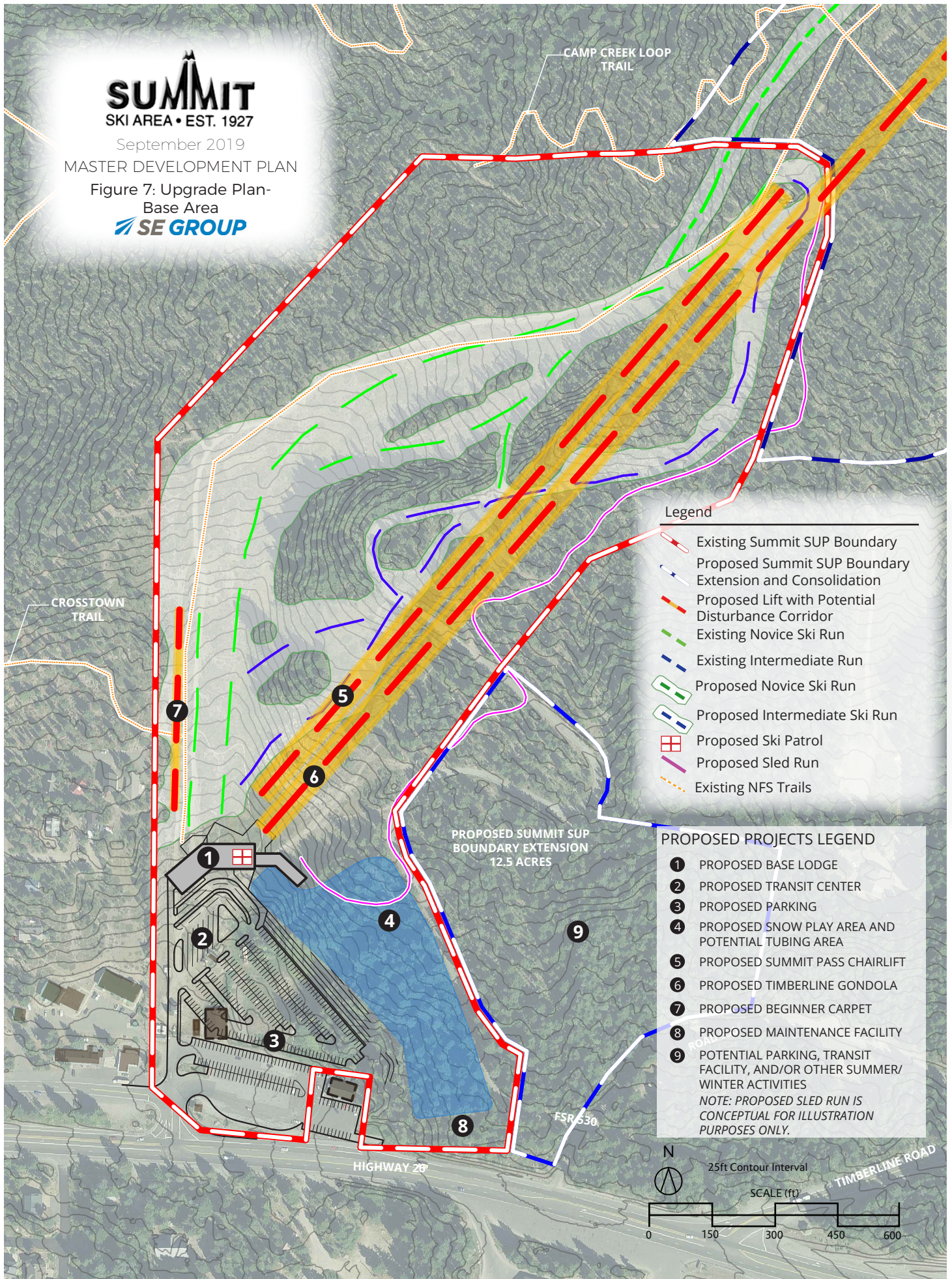


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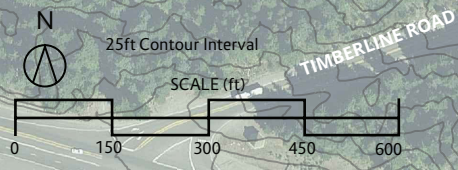
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Figure 7: Upgrade Plan-  
Base Area



- Legend**
- Existing Summit SUP Boundary
  - Proposed Summit SUP Boundary Extension and Consolidation
  - Proposed Lift with Potential Disturbance Corridor
  - Existing Novice Ski Run
  - Existing Intermediate Run
  - Proposed Novice Ski Run
  - Proposed Intermediate Ski Run
  - Proposed Ski Patrol
  - Proposed Sled Run
  - Existing NFS Trails

- PROPOSED PROJECTS LEGEND**
- 1** PROPOSED BASE LODGE
  - 2** PROPOSED TRANSIT CENTER
  - 3** PROPOSED PARKING
  - 4** PROPOSED SNOW PLAY AREA AND POTENTIAL TUBING AREA
  - 5** PROPOSED SUMMIT PASS CHAIRLIFT
  - 6** PROPOSED TIMBERLINE GONDOLA
  - 7** PROPOSED BEGINNER CARPET
  - 8** PROPOSED MAINTENANCE FACILITY
  - 9** POTENTIAL PARKING, TRANSIT FACILITY, AND/OR OTHER SUMMER/WINTER ACTIVITIES
- NOTE: PROPOSED SLED RUN IS CONCEPTUAL FOR ILLUSTRATION PURPOSES ONLY.*

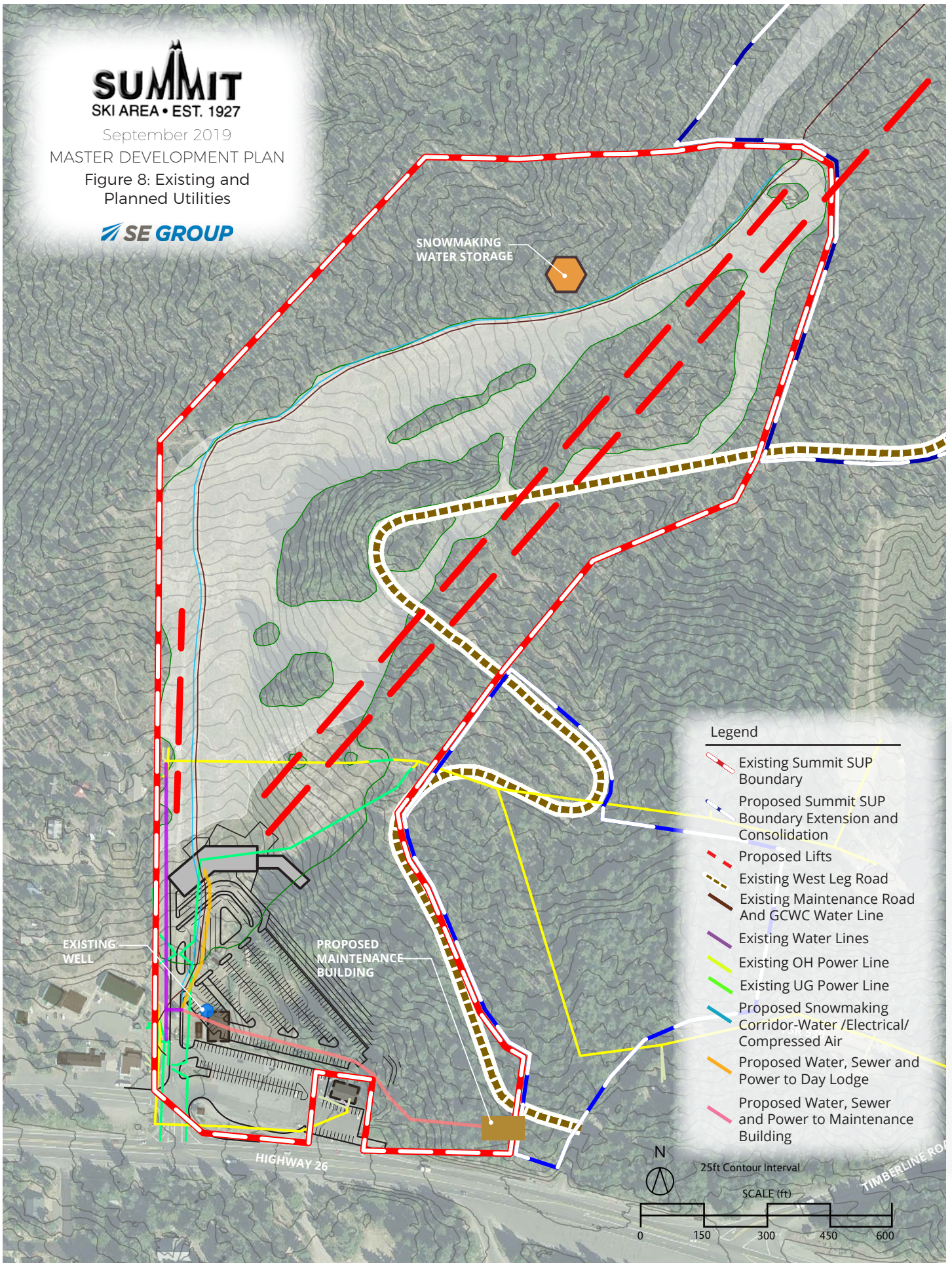


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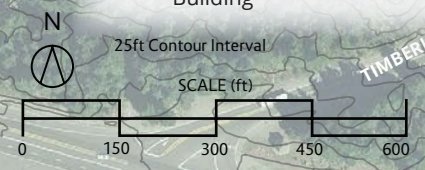
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Figure 8: Existing and Planned Utilities



### Legend

- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Proposed Lifts
- Existing West Leg Road
- Existing Maintenance Road And GCWC Water Line
- Existing Water Lines
- Existing OH Power Line
- Existing UG Power Line
- Proposed Snowmaking Corridor-Water /Electrical/ Compressed Air
- Proposed Water, Sewer and Power to Day Lodge
- Proposed Water, Sewer and Power to Maintenance Building



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 Figure 9: Summer Upgrade  
 Plan- Extension Areas

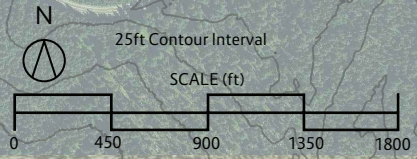
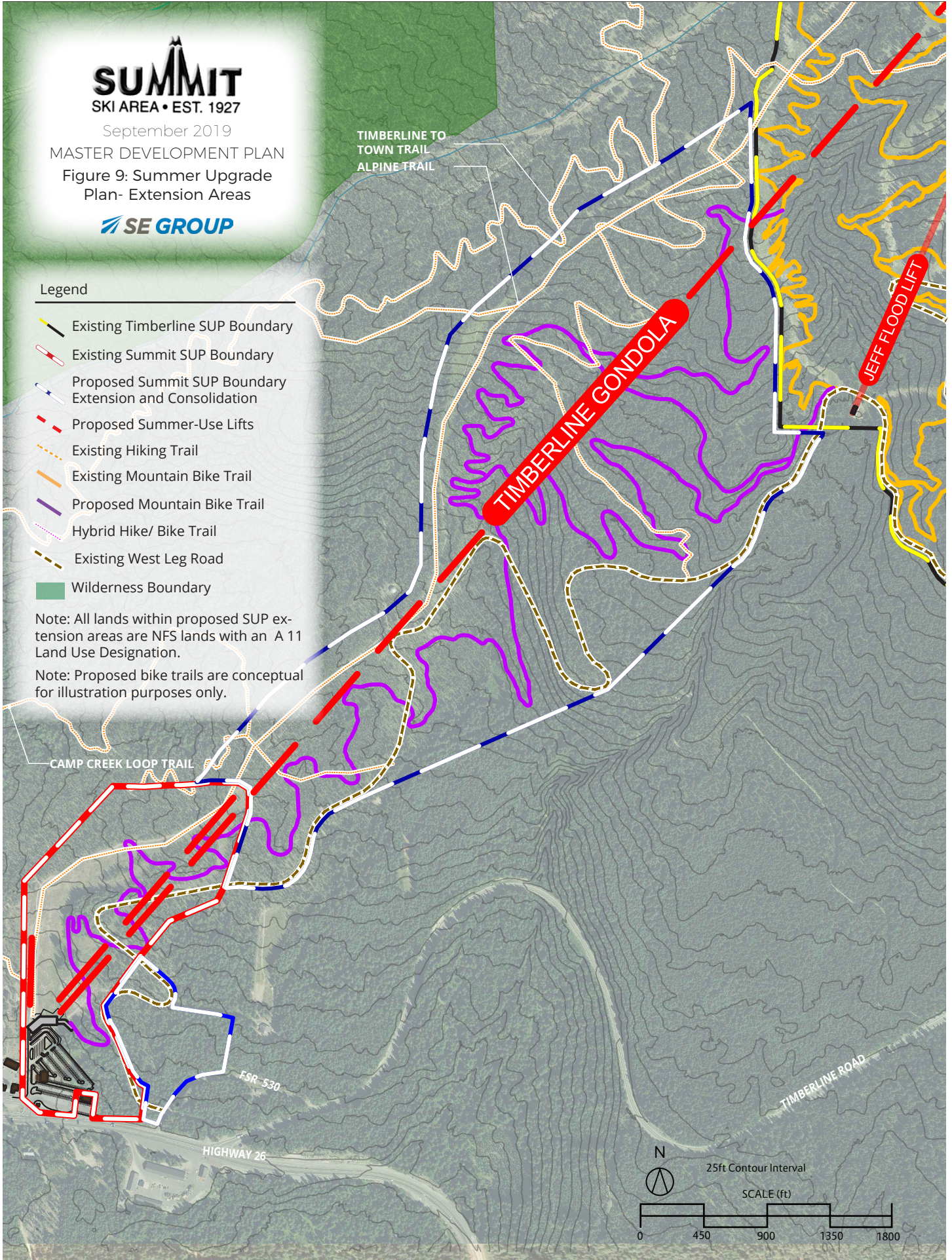


### Legend

- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension and Consolidation
- Proposed Summer-Use Lifts
- Existing Hiking Trail
- Existing Mountain Bike Trail
- Proposed Mountain Bike Trail
- Hybrid Hike/ Bike Trail
- Existing West Leg Road
- Wilderness Boundary

Note: All lands within proposed SUP extension areas are NFS lands with an A 11 Land Use Designation.

Note: Proposed bike trails are conceptual for illustration purposes only.



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Figure 10: Summer Zones Upgrade Plan



### Legend

- Zone 1
- Zone 2
- Zone 3
- Existing Timberline SUP Boundary
- Existing Summit SUP Boundary
- Proposed Summit SUP Boundary Extension
- Existing West Leg Road
- Existing Hiking Trail
- Existing Mountain Bike Trail
- Hybrid Hike/ Bike Trail
- Proposed Mountain Bike Trail
- Proposed Summer-Use Lifts
- Wilderness Boundary

