

Dawson Trail Management Plan: 2016-2025



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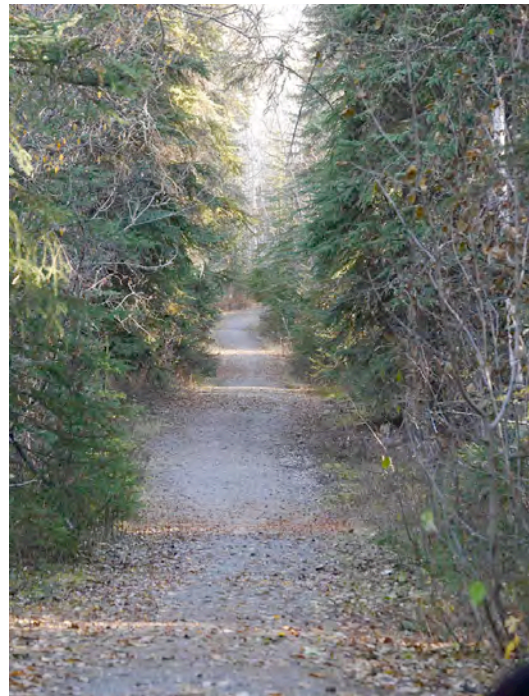
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1.0 INTRODUCTION

Trails are among the most highly valued assets in a community, but unlike most other assets, trails are often developed and used in an ad hoc, unplanned manner. Municipalities are increasingly recognizing trails as recreational infrastructure and applying a management framework to them in an effort to maximize community benefits and minimize user conflict and risk.

The Dawson Trail Management Plan marks a shift towards active and ongoing management of trail infrastructure in Dawson. While the term “management” may imply a top-down, operational focus, the Plan takes a more holistic approach by establishing a vision for an optimum Dawson trail network and then prescribing its effective management.

1.1 Purpose and Scope

In undertaking the Plan, the City had several objectives in mind, including:

- To inventory and assess the current trail and trail network conditions;
- To assess the levels of service provided by the network to trail users of various types and abilities;
- To develop recommendations for improving the network; and,
- To provide a framework for the ongoing management, maintenance and development of trails.

The Dawson Trail Management Plan focuses on Crown and City lands located within the municipal boundary. Excluded from the Plan are trails located on Tr'öndek Hwëch'in (TH) lands within the boundary, particularly the trail network at Tr'öchek. While regional trails located outside of the municipality are not envisioned for management by the City, consideration was given to their linkages from trails located within Dawson proper.

Benefits of Trails: A Brief Overview

Health and wellness – Regular physical activity reduces the risk of many chronic illnesses and is associated with longer lifespans. Trails provide an accessible and inexpensive way to stay active.

Environmental protection – While unmanaged, ad hoc trails can negatively impact the environment, properly planned and managed trails can help decrease pressure on sensitive habitats and wildlife.

Climate change mitigation – Trails that support active transportation are a key tool in climate change mitigation.

Social cohesion – Trails provide an informal meeting place for the community. Trail interactions foster relationships and shared responsibility. Trail stewardship helps build community pride and partnerships.

Education – Trails function as an outdoor classroom for learning about nature, culture and history and foster strengthened connections to the environment in an increasingly urbanized world.

Economic Development – Trail-based tourism is a proven economic driver, particularly in small, rural communities. Trails are also highly valued by so-called “amenity migrants” who are highly mobile and choose their places of residence on the basis of lifestyle, versus solely economic considerations.

1.2 How the Plan was Developed

The Dawson Trail Management Plan was intended to come *from*, and *represent*, the residents of Dawson City. In early September of 2015, the City of Dawson invited a cross-section of community stakeholders and government partners with trail-related interests to form a Planning Committee to work with the consultant team to create the Plan. The following organizations were represented on the Committee, in addition to two “at large” community representatives:

- *City of Dawson*
- *Dawson Sled Dawgs*
- *Klondike Active Transportation and Trails Society (KATTS)*
- *Run Dawson*
- *Tr’ondek Hwech’in First Nation*

The Plan was developed over three phases, with Committee meetings and a workshop convened to guide the process at every key step.



The consultant Planning Team engaged with the community throughout the planning process to ensure that the final outcome would reflect the perspectives and aspirations of Dawson residents. These engagement opportunities and their outcomes are briefly summarized below:

	Timeline	Focus	Method of Input	Response
Round #1	October 2015	Trail Use, Issues and Opportunities	Web/paper survey Two walkabouts	108 surveys received 14 participants in walkabouts
Round #2	November 2015	Draft Vision, Principles, Goals, Objectives, Etc.	Web/paper survey	64 surveys received
Round #3	March 2016	Draft Trail Plan	Open House Web/paper survey	6 attendees at Open House 204 surveys received

Highlights of the input and feedback received from Dawson residents are presented throughout the Plan; comprehensive results are also compiled in separate reports available on request from the City of Dawson.

2.0 MANAGEMENT CONTEXT

Understanding the broader context for trails and how it impacts the City of Dawson is an important first step in assuming an active and strategic leadership role for trails in the Dawson area. The following section provides an overview of current roles and responsibilities, as well as legislative and policy considerations.

2.1 Current Management and Stewardship Activities

2.1.1 City of Dawson

The City of Dawson has a very brief history of trail management. The City has played a supporting role on several third party initiated projects, such as the Millennium and Ninth Avenue trails. Recently, the City assumed responsibility for the Crocus Bluff parking area and viewing deck from the Government of Yukon. It has also assumed maintenance responsibility for the Ninth Avenue Trail and earmarks about \$5000 annually for its upkeep.

2.1.2 Tr'öndek Hwëch'in

As the original inhabitants of the Dawson region, the Han people have a unique relationship with trails in the area. Traditionally the Tr'öndek Hwëch'in (TH) resided over a vast network of trails utilized for subsistence hunting, gathering, trapping and trading. Today, trails remain a key point of connection between Tr'öndek Hwëch'in people and the land.

TH has been very active on the trails front in recent years, clearing, upgrading and signing trails in the Tr'öchek area. It has also spearheaded the "Dome Dive" project, which has engaged TH youth in the design and construction of three advanced downhill mountain bike trails on the Midnight Dome since 2012.

One trail of particular (and current) management interest to TH is the Moosehide Trail. Currently there is a sign located at the start of the trail requesting that visitors intending to hike to Moosehide obtain permission from TH. A plan was being developed for Moosehide concurrently with the Trail Management Plan; the City was informed that TH's direction in the plan was to not promote or advertise the connection to Moosehide and proactively manage risk.

Links to the Official Community Plan

3.4 Transportation Systems

- a) *Maintain a walkable community and encourage use of non-motorized transportation.*
- b) *Maintain and develop trail linkages between rural neighbourhoods and the Historic Townsite.*

3.5 Parks & Recreation

- b) *Maintain and develop quality recreational infrastructure and facilities.*
- d) *Consider partnering with Tr'öndek Hwëch'in, Yukon Government, industry and non-government organizations to maintain and enhance the quality of parks and trails in the area.*
- e) *Consider the feasibility and location of new parks, trails and recreation facilities.*

2.1.3 Government of Yukon

The Government of Yukon's Department of Environment maintains a limited inventory of trails in the territory, virtually all of which are located within and/or adjacent to territorial campgrounds, parks, and/or other managed visitor-oriented sites. Outside of these areas, there is little to no planning and/or management oversight of recreational trails. There is one notable exception: the Yukon government does have an indirect but highly influential role in trail development as the administrator of various programs – including the Community Development Fund, Crime Prevention Fund, and Recreational Projects Program of Lotteries Yukon – that fund trail development by third parties, typically on Crown land.

The majority of Dawson trails are situated on Crown Land administered by the Yukon Department of Energy, Mines and Resources (EMR). Staff at EMR confirmed that they do not have a trail approval process in place for third party initiated projects. They also acknowledged that there is little to no communication between Yukon government funders and municipalities about prospective trail projects within municipal boundaries.

2.1.4 Community Groups

Canadian Rangers

The Dawson Canadian Ranger Patrol participates in a variety of area patrols, ground search and rescue, and leadership exercises. The Patrol is responsible for building and maintaining the Yukon Quest trail through the Dawson area.

Dawson Sled Dawgs

The Dawson Sled Dawgs is a non-profit group that organizes various snowmobiling events, including local poker runs and the annual Trek over the Top event on the Top of the World and Taylor highways. The Sled Dawgs also assist with trail maintenance initiatives in the community, including the winter trail network along the Yukon River, the winter road across the river, and grooming and track setting of the Moose Mountain cross-country ski trails.

Klondike Active Transport and Trails Society

The Klondike Active Transport and Trails Society (KATTS) has a mandate to *“lead the development and promotion of a network of non-motorized recreational trails in the Klondike region in order to promote healthy, safe and spiritually rewarding outdoor activities and showcase our region’s rich cultural and natural resources.”*

Since forming in 2006, KATTS has undertaken several major trail-related initiatives in Dawson. The first was the restoration of the Ninth Avenue Trail between 2007 and 2009. The next was an extensive GPS-based inventory of trail assets in the Dawson area in 2010. Since 2012, KATTS has actively groomed and trackset the Moose Mountain network of cross-country ski trails.

Klondike Search and Rescue Association

The Klondike Search and Rescue Association (KSARA) is a non-profit organization working in partnership with the Emergency Measures Organization of Government of Yukon and the Royal Canadian Mounted Police to provide ground and inland water search and rescue in the Klondike region. KSARA assisted with a recent rescue operation of a skier who became disoriented on the Moose Mountain ski trails at night and fell onto the Klondike River below.

Run Dawson

Run Dawson is a non-profit group that organizes a full calendar of recreational and competitive running and walking training, workshops and events in the Dawson area. The club's famous Midnight Dome Race has traditionally been routed along the old Dome Road and other doubletrack offshoots of the main Dome Road.

2.2 Regulatory and Land Use Issues

2.2.1 Legislative Authority to Manage Trails

The legislative authority for trail development and/or management in the Yukon has long been a source of confusion for non-profit trail groups and communities.

Most of the trails located within municipal boundaries in Yukon are on Crown land. Under Section 277 of the *Municipal Act*, municipalities are provided "a means whereby official community plans and related matters may be prepared and adopted to:

- a) achieve the safe, healthy and orderly development and use of land and patterns of human activities in municipalities;*
- b) maintain and improve the quality and use of the physical and natural environment in which the patterns of human activities are situated in municipalities; and*
- c) consider the use and development of land and other resources in adjacent areas.*

The Act also requires the municipality to adopt a zoning bylaw to regulate and control the use and development of land and buildings inside the municipality. The City of Dawson Zoning Bylaw typically determines the allowed uses of land in set districts, areas or zones, and provides for a system of development and use permits that may prescribe terms and conditions for any development. Section 265 of the *Municipal Act* additionally provides jurisdiction to pass bylaws respecting both:

- a) the safety, health and welfare of people; and*
- f) activities, including recreation and cultural activities, in, on, or near a public place or a place that is open to the public, including parks and roads.*

Another key legislative reference to trails is contained in the *Yukon Motor Vehicles Act*, which defines highways to include trails. Chapter 19 of the *Municipal Act* grants authority to municipalities to pass bylaws regulating the use, management and control of municipal highways. Consistent with the *Municipal Act*, the City of Dawson's Traffic Bylaw does include "trails" under the definition of "highway" and prohibits excavation and/or destruction without City permission.

While the *Municipal Act* would appear to confer authority to manage and develop trails on Crown land within municipal boundaries, EMR staff has requested a more formalized arrangement - specifically, a Memorandum of Understanding (MOU) outlining roles and responsibilities. EMR staff believe that the Traffic Bylaw gives the City the authority to prohibit third parties from developing trails without permission, but that it falls short of the envisioned designation of authority from YG to the City.

52.2.2 Mineral Claims

In Yukon, mining claims are issued under the authority of the **Quartz Mining Act** and the **Placer Mining Act**. The Government of Yukon Mineral Resources Branch issues all rights, permits and licenses relating to any interest in minerals.

New placer claims cannot be staked within incorporated municipalities under the **Placer Mining Act**. A community specific Order-in-Council issued in December 2015 prohibits the staking of new quartz claims within the City of Dawson boundary for a period of 8 years. However, there are significant existing claims within the City of Dawson that were staked prior to either the creation of the municipality, successive boundary expansions, or the aforementioned Order. Of primary interest to the existing trail network is a dense cluster of placer claims located in the Moose Mountain area bench north of the Klondike River and to the south and east of the Dome Road. As long as the claims are in good standing, they can remain in effect with all the rights. If the claims lapse, they cannot be re-staked or granted.

The **Quartz Mining Act**, **Placer Mining Act** and the **Municipal Act** are all Yukon law. Any obligations and rights issued through any of these pieces of legislation must respect the jurisdiction of other Yukon legislation. All land use activities, including mining, are subject to municipal zoning regulations, development regulations and land use planning through the Official Community Plan (OCP). The municipality reviews projects and issues development permits, and terms and conditions may be applied based on the current planning and zoning and to mitigate negative impacts.

There are limitations, however. The municipality may not prohibit mining of existing claims, as it constitutes a “grandfathered” non-conforming use. Even if trails are re-established post-mining, the area may lack the aesthetic values it previously held and the quality of the tread surface may be compromised. As such, trail planning should give due consideration to the possibility that existing claims could potentially be developed.

2.2.3 Trail Use Legislation

Regulations governing trail use in Canadian municipalities are generally limited to the operation of motorized recreational vehicles. The City of Dawson does not currently have any bylaws governing the use of snowmobiles, ATVs, dirt bikes, or “side-by-sides” (UTVs); as such, users are bound by territorial legislation instead.

The Yukon is one of the few jurisdictions in Canada that does not have overarching legislation governing the use of off-road recreational vehicles. The **Motor Vehicles Act**, amended in 2014, requires that any off-road vehicle that is operated on, or crosses over, the roadway part of any maintained highway must have a valid driver’s license, liability insurance, and registration. Any users under the age of 16 must wear a helmet, whether or not they are riding on the roadway itself. Off-road vehicles that are not operated on, or do not cross over, any maintained roadway and are operated exclusively on trails or in the backcountry do not require registration, insurance or licensed operators.

Municipalities with motorized vehicle bylaws typically use them to designate trails for motorized and non-motorized purposes. In the absence of a bylaw, any trail designations made by the City

of Dawson will not be legally enforceable and public education and peer regulation will be critical to compliance.

2.2.3 Permitting and Environmental Assessment

Government of Yukon currently has no formal approval process in place for trail development on Crown Land; however, the construction of new trails does have the potential to trigger a land use permit and accompanying screening under the *Yukon Environmental and Socioeconomic Assessment Act*. Under Schedule 1 Parts 9 and 13 of the *Assessable Activities, Exceptions and Executive Committee Projects Regulations*, the following common trail-related activities are subject to permitting and assessment:



- On Crown or settlement land, moving earth or clearing land using a self-propelled power-driven machine;
- On Crown or settlement land, the levelling, grading, clearing, cutting or snow ploughing of a trail in excess of 1.5 metres wide; and,
- Watercourse training and/or crossings for any waterbody in excess of 5 metres wide at the point of crossing.

Singletrack trail construction, if completed by hand methods, is almost always exempt from regulatory approval. However, the use of mini-excavators to build singletrack requires the additional administrative time and effort to undergo the permitting and assessment process.

The City of Dawson Zoning Bylaw requires a development permit for any development, change of existing use or intensity of use. This includes any trail development, singletrack or otherwise. Such development must therefore be in accordance with the OCP and Zoning Bylaw. Scenic outdoor trails and bike paths are a permitted use in the P1 Zone (Parks and Natural Space). The municipality may apply terms and conditions to the permit as required to ensure the goals and objectives of the OCP and the requirements of the Zoning Bylaw are met.

3.0 TRAILS IN DAWSON

3.1 Current Trail Inventory

There are an estimated 50-60 kilometres of trails located within the Dawson municipal limits. The following section provides a brief overview of key trails by area. Please refer to Appendix A for the complete inventory.

3.1.1 Historic Townsite

There are approximately six (6) kilometres of trail located in and around the historic townsite of Dawson, including the following:

Dyke Trail – this gravel surfaced doubletrack trail is situated on the top of the dyke surrounding the historic townsite. A lower road parallels the trail from Duke Street to the Millennium Trail sign across from 7th Avenue.

Ninth Avenue Trail – this 2.5 kilometre long singletrack trail meanders through a former Gold Rush era neighbourhood that skirts the base of the Dome. The trail features a variety of constructed features such as benches, stairs, retaining walls, and boardwalks. There are information kiosks located at both north, south and Duke Street trailheads, as well as numerous interpretive panels enroute.

3.1.2 Crocus Bluff

The Crocus Bluff area is home to about 3.5 kilometres of trails, ranging from wider, surfaced trails to narrow, overgrown singletrack trails and including the following:

Crocus Bluff Trail – this wide, gently graded, compacted gravel doubletrack trail connects the Crocus Bluff parking lot with the viewing deck.

Crocus Bluff Connector – this singletrack trail was constructed by KATTS to connect the Ninth Avenue Trail to the Crocus Bluff Trail. The trail takes a moderately steep and narrow alignment up the hillside, after which it flattens out before connecting to Crocus Bluff Trail.

3.1.3 Midnight Dome

The Midnight Dome has a dense network of old roads and trails, estimated to be in the 25 kilometre range, that connect both to the historic townsite and outlying areas. Some of the key trails in this area include:

Dome Ridge – this steep singletrack trail starts at the Dome summit and traverses the ridgeline northwest (with sections of exposure above the Moosehide Slide) before connecting to the Moosehide Trail.

“Dome Dive” trails – youth with TH have constructed these three mountain bike-oriented trails on the Dome as part of the “Dome Dive” project. The first trail extends from the Dome summit

and closely parallels (and occasionally intersects with) the Nature Trail. The second is referred to as the “Face Trail” and extends from the Acklen Ditch to historic townsite, crossing the Moosehide Trail enroute. The most recent trail departs from the north-facing aspect of the Dome summit and winds around to the Dome’s west-facing slope. The first Dome Dive trail is moderately steep, while sections of the other trails are very steep.

Moosehide Trail – this moderately graded singletrack trail traverses the western toe of the Midnight Dome, ascending through forest before emerging on a scree slope and contouring along to the informal route across the Moosehide Slide to “Suicide Point”. After the point, it intersects with the Dome Ridge trail and continues on to the community of Moosehide.

Moose Mountain Cross-Country Trails – this network of approximately 6 kilometres of old roads has now been repurposed for cross-country skiing in the winter by KATTS. Most are gently graded trails with occasional off-camber (side sloping) and steeper sections.

Nature Trail – this moderate to very steep trail traverses the southwest ridgeline from lower radio tower area to summit. The trail has been widened considerably in the past decade and ranges from a narrow singletrack to doubletrack.

Roads and Utility Corridors – sections of the original (or old) Dome Road traverse the south-facing slope of the Dome. Access roads to the lower and upper radio tower and the powerline are well used by local residents.

3.1.4 Other

Klondyke Millennium Trail – the 4.5 kilometre long Millennium Trail extends from the Dyke Trail to the Callison subdivision. The trail is surfaced with white channel gravel.

Roads– both Mary McLeod and the Dome Road are frequently used for recreational and active commuting purposes.

Yukon River – the Dawson Sled Dawgs use a grooming machine to pack down approximately 5 foot-wide trails on the Yukon River during the winter. These trails begin in front of town and continue upriver for 3-5 kilometres (varying somewhat year to year), connecting up to the old farm road trail and circling around islands in the vicinity. These trails are used by cross-country skiers, skijorers, dog-sledders, snowmobilers and walkers.

Additional river trails are also developed downriver towards Moosehide and up the Klondike River as conditions permit. Typically these trails are developed and maintained primarily by snowmobile traffic, and by activities such as the Yukon Quest (for which the Dawson Patrol

Trail Recreation in Dawson: What we Heard

Most Frequently Used Trails/Areas

1. Dyke Trail
2. 9th Avenue Trail
3. Crocus Bluff trails
4. “Other” Dome trails
5. Moose Mountain XC trails
6. Powerline Trail
7. Millennium/Trans Canada Trail
8. Nature Trail
9. Dome Dive trails
10. Moosehide Trail

Most Widely Participated in Activities on Dawson Trails

1. Walking
2. Running
3. Skiing
4. Biking
5. Snowmobiling

Group of the Canadian Rangers builds the trail). Grooming may happen in one or both directions, depending on the year and activities of the Sled Dawgs.

3.2 Trail Use

Trail User Preferences

Trail users are highly diverse in their recreational needs and preferences, but there are general “rules of thumb” about trail user preferences that trail and recreation planners use to help evaluate how well a specific trail or broader network is meeting the needs of users:

All Trail Users - scenery, viewpoints, destinations, unique natural or other features, loop routes, proximity to nature

Active Commuters - hard surfaced trails, direct routes, gentler grades, separation from busy/fast traffic

ATVers - doubletrack trails or roads of longer distance, variety of grades but generally moderate

Hikers - singletrack trails, elevation gain and loss, shorter to medium distance, challenge

Mountain Bikers - singletrack trails with elevation gain and loss, medium to longer distances, technical challenges

Dirt Bikers - singletrack trails with technical challenges, longer distances, elevation gain and loss

Walkers/Runners - shorter to medium distance, variety of trail surfaces, widths and grades

Skiers- shorter to medium distances, groomed tracks or untracked areas

Snowshoers - singletrack (or no) trails, shorter to medium distances, packed or unpacked snow, varying grades

Trail use in the Dawson area encompasses a wide spectrum of activities and trails, from short dog walks close to home to extended backcountry excursions. The following section presents a picture of Dawson trail use, drawing from the results of the October 2015 resident survey.

Walking and running are the trail-based activities most widely participated in by Dawson residents, followed by cross-country skiing and biking. Snowmobiling is a fairly common activity in the community, with ATV and dirt bike use less so.

The Dyke, Ninth Avenue, and Crocus Bluff trails receive the highest levels of use by Dawson residents (with many frequenting them on a daily and/or weekly basis), followed by the many unnamed trails around the Dome. Many Dawson trails are used by a broad range of users, while other trails - particularly the Dome Dive trails - are not used at all by a sizeable segment of the community and heavily used by a small segment.

Many motorized users leave municipal boundaries to recreate, using such areas as the Ridge Road, Klondike valley mining roads, and Millennium Trail. The most popular areas for snowmobilers are the river and Dome/Fire Dome areas, while ATVers and dirt bikers use the Dome/Fire Dome and Ridge Road areas most.

The Dome and Mary McLeod roads are used frequently for recreational and/or active commuting purposes. 75% of Dawson residents indicated using Mary McLeod Road, while 42% use the new Dome Road. Their primary reasons for doing so were to create a continuous loop, desire for a hard surface, clearing in winter and concerns about bears “off road”.

3.3 Levels of Service

Trail managers sometimes make the mistake of viewing quantity as a key indicator of whether or not a trail network is successful. Arguably, quality is equally important. Trails that cater to the preferred experiences of its target users will function more successfully and help curb demand for new trails. As such, it's useful to understand how well the Dawson trail network is servicing its users before formulating a management plan. The Planning Team assigned three categories to describe the levels of service currently provided in Dawson: good, adequate, and poor.

3.3.1 Good

Groups: Walkers, Runners, Snowmobilers, ATVers, Dirt Bikers

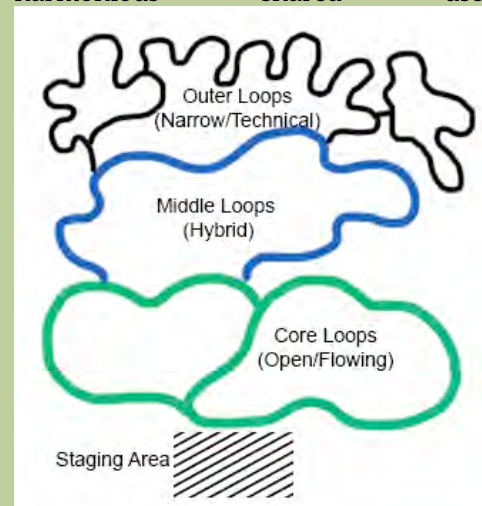
The density and variety of trails in close proximity to the townsite - particularly the core loop (Dyke/Ninth Avenue) and Crocus Bluff trails cater very well to walkers and runners. The majority of walkers rated their recreation opportunities as “pretty good” to “excellent”, while most runners rated their experience as “adequate” to “pretty good”.

Given the relatively limited municipal area and the long distances that motorized users recreate across, it is difficult to fulfill their needs within Dawson City proper. However, outlying areas such as the Klondike Valley and Fire Dome offer an array of roads and trails to recreate on and are well connected to the townsite via the Millennium Trail and old (and new) Dome roads.

Snowmobilers are at a particular advantage with the addition of the river-based trail network in winter. Dirt bikers are at a disadvantage with the relative scarcity of singletrack outside of the busy Crocus Bluff and townsite areas; however, the steep grades of most Dome trails would certainly appear to satisfy their preferences. The majority of snowmobilers rated their recreation opportunities as “adequate” to “pretty good”. The majority of ATVers rated their recreation as “adequate”, while dirt bikers were more divided, with a majority providing an “adequate” rating and others saying “excellent”.

Trail Network Design 101

Good trail networks don't happen by accident, but rather as the result of careful design and planning. The stacked loop concept is a cornerstone of multi-use trail network design. It can assume a range of configurations but the basic components are the same: a wider, open core loop in close proximity to a staging point and a series of connecting loops of progressively narrower and more challenging trails “stacked” on top of the core loop. Stacked loops provide a diversity of experiences, disperse trail users throughout the network, and promote harmonious shared use.



Trail Issues and Opportunities: What we Heard

Dawson residents were asked to share their thoughts about current successes and issues, and hopes for the future. The following is a summary of their feedback:

What is Working Well?

1. Accessibility from/proximity to town
2. Ninth Avenue Trail
3. Diversity and quantity of trails
4. Situated in nature/undeveloped
5. Maintenance effort
6. Opportunity to recreate off of urban roads
7. Community/grassroots spirit
7. Interpretive signage

What Isn't Working Well?

1. User conflict*
2. Insufficient and/or unsuitable trails
3. Lack of wayfinding signage
4. Lack of maintenance
5. Risks to user safety
6. Private property and trail conflicts
6. Insufficient clean up of dog waste

What Do You Want in the Future?

1. Expansion of the trail network**
 1. Signage
 2. Maintenance
 3. Reduction in user conflict
 4. No change!
 5. Pedestrian alternative to new Dome Road

* Mostly motorized use of the Dyke Trail and mtn biker/hiker conflicts

**Included overall expansion, use-specific expansion, and expansion of regional trail network (i.e., Yukon Ditch, huts, etc.)

There are some challenges in servicing these groups. Runners and/or walkers favouring a flat surface are limited to “out and back” excursions along the Dyke, Millennium, and/or main Crocus Bluff trails. Similarly, those seeking out a hard surface and/or accessible loops out of the main townsite are limited to using Mary McLeod and new Dome roads, both of which have safety issues. Lastly, motorized users lack an off-road access between the Dome Road residential area and Millennium Trail. Snowmobilers are particularly challenged in this regard as winter maintenance activities on the Dome Road subject their machines to the wear and tear of gravel, sand, and asphalt.

3.3.2 Adequate

Groups: Hikers, Cross-Country Skiers, Advanced Mountain Bikers

Hikers in the Dawson area are well served by the Ninth Avenue Trail and Crocus Bluff network. Beyond that, there are a myriad of loops that can be created on the Dome incorporating various doubletrack trails and old roads. However, with a few exceptions, specifically the Moosehide Trail and Nature Trail, there is relatively little singletrack within walking distance to experience and it is difficult to create loop routes on this preferred hiker trail type.

Cross-country skiers, who rated their recreation as “adequate to pretty good”, are serviced reasonably well by the Moose Mountain trail network. Groomed trail options and distances are relatively limited, however, and there is no allowance for skate skiing.

The Dome Dive trails cater to the advanced to expert end of the mountain biker spectrum with their very steep grades and technical features. A sizeable group of bikers rated their recreational opportunities as “pretty good”.

3.3.3 Poor

Groups: Users with Accessibility Challenges, Beginner-Intermediate Level Singletrack Users

The Dawson trail network provides a poor level of service to users for whom accessibility, technical skill level, or ability to negotiate steep grades are limiting factors.

Accessibility cuts across a wide spectrum of ages and circumstances, including parents toting child trailers, disabled persons in wheelchairs, and young and/or aging recreationists. Wheeled users are particularly disadvantaged by the lack of off-road hard surfaces and loop routes in Dawson. The uneven surface of the Dyke and Millennium trails hinders the experience for some, while the heavy use of constructed features and steeper grades on the Ninth Avenue Trail restrict all but pedestrian uses and compels these users either to choose an “out and back” excursion on the Millennium Trail or venture onto the roads.

Accessibility also relates to users who are able to venture further afield. The scarcity of moderately graded singletrack outside of the townsite/Crocus Bluff areas disadvantages singletrack users seeking out medium to longer distance excursions. This would apply to runners and hikers who have (or may wish) to avoid prolonged steep grades, and in particular beginner to intermediate level mountain bikers. The lack of beginner/intermediate level mountain biking was mentioned by numerous survey respondents and is likely reflected in a substantial portion of this user group rating their recreational opportunity as “poor”.

3.4 Trail Issues

3.4.1 Network Configuration, Accessibility, and Topography

A well-designed multi-use trail network has a well functioning core loop that is wide, open, and gently graded. The townsite is surrounded by a loop, but it’s a disjointed one: the Dyke portion is open and accessible to virtually all, the Ninth Avenue Trail is relatively narrow, inaccessible to virtually all but pedestrian users, and has steeper grades on its north end.

In many respects, the Mary McLeod and new Dome roads, combined with the Dyke Trail, function as a core loop in Dawson. Ideally, some of that recreational traffic would be diverted off-road and through the Crocus Bluff area; however, similar issues apply there. The relatively steep and narrow Crocus Bluff Connector accommodates only pedestrian uses, forcing other users on to the road network to accomplish their desired trail loop.

Grade

Trail grade (or steepness) is a key determinant of trail sustainability. Many informal or ad hoc trails form on the “fall line” of hillsides and ridges, as this is the easiest path for both feet and wheels to take. A properly designed and constructed trail will follow the contours of a hillside instead of assuming the fall line. A general “rule of thumb” for trail builders is for the grade of a trail to not exceed an average of 10% if it is to be sustainable. Many of the trails in the Dome area have grades of 30% and more. The inevitable result: erosion and trail widening as users travel on the vegetated margin of the original trail tread in an effort to avoid skidding or slipping. The other byproduct: conflict and increased risk of collisions.

Dawson's geography pose a unique challenge in that, outside of the townsite proper, the only opportunities to create more stacked loops involves siting trails on moderate to steep hillsides. Much of the gentler, south-facing ground on the Dome is already occupied by roads, leaving the steeper but less developed western slopes for future development. A modified version of the traditional stacked loop network is the best available option, and given the inherent terrain challenges, sustainable trail design and construction expertise critical to a quality end result.

3.4.2 High Maintenance Design Choices

The Ninth Avenue Trail is well loved by Dawson residents and is a showcase of craftsmanship and quality. However, the generous use of wooden features in the southern portion of the trail (particularly south of Mary McLeod Road) creates high maintenance costs. Similarly, the gravel surface of the Dyke Trail may match the rustic Dawson aesthetic, but the ongoing maintenance of gravels along this highly traveled route may not be the most effective use of fiscal resources over the long-term as compared to a hard surfacing treatment like pavement. Long-term operations and maintenance costs, weighed against the relative benefits of specific design choices, should be incorporated into all trail design decisions.

3.4.3 Un-designed and/or Underperforming Trail Assets

Quantity isn't the sole determinant of a successful network; arguably, quality is more important. Trails need to offer the user the desired experience, and failure to do so will result in underutilization, and corresponding overutilization of (and crowding and conflict on) other trails.

A recent example of how lack of user-oriented design created marginal results is the constructed trail in the Hillside Crescent residential subdivision. A very wide corridor was cleared, with debris left across the entire width. The result is a route that local residents find unappealing and has indirectly contributed to the continued use of the adjacent (and more enjoyable) pre-existing trails now located on private property. The cost of constructing enjoyable, well-functioning trails is more or less on par with the cost of constructing marginal ones. It makes sense to incorporate proper design upfront to ensure financial resources are put to best use.

In some cases, trail assets are underperforming because they weren't designed for the recreational purpose they are now serving. The best example is the Moose Mountain ski trail network, which utilizes former mining roads and has several sections of excessive side slope that create skill level "bottlenecks" and safety issues at some corners. In other cases, trails aren't realizing their full use potential because of lack of maintenance. Several good trails in the Dawson area have simply overgrown from lack of use. The Moose Mountain network has the potential to provide summertime recreation, but requires ongoing brushing effort and groundwork in order to make this option appealing.

3.4.4 User Risk on Trails

A certain degree of risk is inherent to outdoor recreation. The natural environment and its many elements can be unpredictable, particularly weather and animals. Other risks are intrinsic to the activity itself and are best managed by its participants exercising reasonable caution and good judgement. Trail managers have an important role to play in educating users about risk and

directly intervening where levels of risk appear to be unnecessarily high for users. In the Dawson area, there are numerous site-specific instances in which intervention should be considered. These include the following:

1. Hiker exposure to rockfall on the Moosehide Trail;
2. Dangerous right-angle intersections between “high speed” Dome Dive trails and trails typically utilized by hikers/walkers; and,
3. Use of non-dimensional materials and inadequate design for technical trail features (TTFs); and,
4. Intersection of trails with roads at blind corners.

The first issue is partially addressed at present by TH’s request that visitors intending to hike to Moosehide via the Moosehide Trail obtain permission. Nonetheless, the lure of the Slide and desire to create a loop route using the Dome Ridge draws some into the hazard zone.

The second issue can be addressed through signage alone and/or a combination of trail redesign and signage. The third issue must be approached with sensitivity, as the structures in question were built relatively recently. The last is best addressed through signage and/or physical barriers.

3.4.5 User Risk on Roads

The desire for hard surfaces and loop routes makes recreational use of the road network appealing to many Dawson residents. While there is an inherent level of risk in vehicles and other users sharing roadways, there are three specific issues for which intervention should be considered. These are:

1. High speeds of vehicle travel on Mary McLeod Road both observed and reported by Dawson residents;
2. The poor suitability of the new Dome Road for pedestrian and/or bicycle traffic with its lack of an adequate shoulder; and,
3. The heavy use of an informal route on

Risk Management 101

The Yukon has no legislation addressing rights and responsibilities of land owners and is considered a “common law” jurisdiction. In the event of a legal action being filed against a trail manager, the courts would look to prior judicial rulings and precedents for guidance.

A negligence lawsuit generally succeeds only if all four of the following elements can be proven:

1. Duty of care: The land owner/manager owed a duty of care to act in a reasonable manner, i.e. keep people safe.
2. Breach of that duty: The land owner/manager failed to perform a required task - the Standard of Care - to ensure the plaintiff’s safety.
3. Injury or loss: The incident resulted in loss or damages.
4. Proximate cause: The breach of duty of care was the direct cause for the injury or loss and the plaintiff did not contribute to his or her own loss.

A managed trail network automatically implies duty of care, so most managers focus on ensuring they are meeting a Standard of Care. According to the International Mountain Bike Association, a trail manager’s Standard of Care is to:

- Design and construct the trail appropriately
- Inspect and maintain the trail appropriately
- Address unreasonable hazards and post warnings
- Anticipate foreseeable activities and take reasonable steps to protect users

In practice, liability for public trail systems is typically managed in four ways: 1) insurance; 2) signage; 3) maintenance; and 4) transfer of management or liability.

the north side of the Klondike Highway that is exposed to both rockfall and vehicles.

Resolving these issues will require a mix of approaches. Low-cost and low-intervention traffic separation and calming measures such as bollards and/or speed limit enforcement could improve safety on Mary McLeod Road, as could higher intervention options such as closing the road to one-way traffic and creating a non-vehicle lane. The alignment and cross-section of the new Dome Road pose significant design challenges to a separated pedestrian route in and/or adjacent to the road right-of-way; an off-road route is likely the only option. The highway issue will require coordination and cooperation with Yukon Highways and Public Works. Again, bollards and/or other vehicle/trail user separation measures are recommended, with consideration given to the constraints posed by snow clearing.

3.4.6 User Conflict

Dawson residents reported conflict as their main issue of concern, citing the mixing of motorized and non-motorized uses on the Dyke Trail and pedestrians and downhill mountain bikers, particularly on the Nature Trail and in the Crocus Bluff and Dome Road residential areas. The Planning Team witnessed first-hand potentially dangerous sabotage on one of the “Dome Dive” trails immediately preceding an intersection with the Moosehide Trail.

Understanding and Resolving User Conflict

It's important to understand the roots of conflict when attempting to address it. Conflict is defined in the literature as “goal interference attributed to another's behaviour” and is generally categorized as:

1. *Trail use type conflicts* - occur where one group perceives another to be incompatible with their own activity. Unsafe behaviour, trail damage, collisions or near misses, congestion, noise and fumes are common examples.
2. *Trail norm or values conflict* - occur where groups do not share the same norms or social values, irregardless of actual contact between them.

Both conflict types are inter-related. For example, an isolated experience of trail use conflict has the potential to create values conflict. To complicate matters, conflict can be “one-sided”, where one group feels negatively towards another without the reverse being true. Both types of conflict are common between motorized and non-motorized users, but can also occur between different non-motorized users.

Multi-use trail network managers apply a range of tools to address user conflict, including:

- *Trail designation* - for appropriate uses and directions of travel
- *User etiquette* - guidelines around proper and responsible use, yield hierarchies, etc.
- *User education* - signage, brochures, user group meetings, awareness campaigns
- *Trail design* - plan to provide adequate trail mileage and preferred experiences for all user types
- *Trail modification* - resolution of site-specific conflicts through such measures as traffic calming, improved sightlines, etc.

Regardless of the tool(s) applied, conflict is a highly complex trail management issue that requires an ongoing effort to educate and work with user groups, monitor results, and make modifications as necessary.

The Nature Trail poses an interesting example of conflict. While the conflict originates primarily from concerns about potential collisions and trail widening at that specific location, the situation is exacerbated by broader network challenges. The trail is virtually the only singletrack trail of moderate difficulty on the Dome area that doesn't require "out and back" travel. Beginner and intermediate mountain bikers have few other options to utilize. Competition for scarce resources, coupled with poor communication and site-specific design, have created the ingredients for conflict.

The general trend in trail management, particularly in the context of limited financial resources and land base – both of which apply to Dawson – is to separate motorized and non-motorized uses where possible and designate non-motorized trails as shared-use, except where specific circumstances warrant single-use designations. Examples where single-use trails may be appropriate are trails through sensitive wildlife habitat or competitive tracks designed for high speeds. It's not unusual for walking/hiking trails to restrict mountain biking; however, mountain bike trails rarely restrict pedestrian uses. There is growing precedent for the standard yield/right-of-way rules on such trails to be modified to place the onus on pedestrians versus cyclists.



3.4.7 Sustainability

With the exception of the town site proper and western portion of the Klondike River valley, most of the land within the municipality is situated on sloping ground. As a result, many of its ad hoc trails feature steep grades, evidenced by erosion, braiding, and trail widening. Even recently built trails have grade issues. The well-constructed Crocus Bluff Connector is steeper than would be ideal for a key thru-route. On other recently built trails, considerable erosion and trenching can be observed and are a cause for concern. Conditions on steeper trails don't generally "stay the same", but progressively worsen with time and use.

The environmental dimension of sustainability is closely inter-related with the financial one. Steeper trails cost more to maintain in good condition, as do trails utilized by motorized vehicles. While it may be tempting to simply close off such trails for use, another dimension must be factored in – social sustainability. The likelihood of user compliance is low if there is a perception that trails have been "taken away" without just cause and the provision of alternate options. Trail managers can spend thousands of dollars reclaiming damaged areas and closing off trails, only to

see those efforts undone by one or two errant users. Social license and acceptance is critical: only users that “buy in” are going to comply and help peer regulate trail management measures.

3.4.8 Trail/Land Development Conflicts

Occasional conflicts between trails and other forms of land development are to be expected in a growing community, particularly one with a long history of mining. In some cases, the conflict could be avoided and/or mitigated. The recent development of the four-lot residential area off of Mary McLeod Road is an example of “what *not* to do.” Longstanding and heavily used trails in the area, including sections of the original Dome Road, were subsumed by the new lots, theoretically eliminating these recreational corridors but in practice facilitating public recreation on private property. It will take a combination of approaches to reset these patterns of use and compensate for the loss of these important corridors.

During plan development, an owner of the placer claims in the Moose Mountain ski trail network area submitted an application for a 10-year permit to mine. As of February 2016, the claims are for sale to the highest bidder. The outcome is uncertain, and mining may or may not happen in the short or long-term; nonetheless, the situation highlights the relative risk of investing significant resources in the trail network. It also indirectly suggests that a strategic approach may be to develop trail infrastructure in steeper terrain that would pose constraints for mining.

3.4.9 Municipal Capacity and Experience

The City of Dawson is a small municipality with limited experience and financial and human resources capacity in regards to trails. In making the transition towards active and ongoing management, City administration will need to be strategic, and selective, in their efforts. The City can't realistically adopt and manage all the trails; instead, it will need to focus its efforts on trails that provide the highest quality experiences to the broadest range of users, require a minimum of maintenance, and pose a minimum of liability. It will also want to ensure that most (if not all) trail interests are accommodated in the suite of trails that are formally managed.

3.4.10 Balancing Local Values with Management Best Practices

During the latter phases of public consultation, some residents expressed the viewpoint that trails don't require rules or management and trail users can resolve conflict on their own. This perspective was shared specifically in response to the concept of designating motorized versus non-motorized trails, and contrasted with the perspectives of other residents who communicated concerns about trail conflict and supported management intervention.

To some degree, a decision to manage trails is inseparable from a decision to manage trail uses (and users). The City will want to follow trail management best practices - of which trail use designation is one part - as a matter of due diligence (see “Risk Management 101”). However, the “anti-management” sentiment should serve as a reminder that the transition towards a formalized, managed trail network should be accompanied by public outreach and education, change should be gradual, and minimum-intervention approaches should be prioritized.

3.5 Trail Opportunities

3.5.1 Historic Trails, Tracks, and Corridors

It seems fitting that one of the greatest opportunities for the future trail network of Dawson can be found in the past. The community and surrounding area is full of relics of the Gold Rush era and subsequent mining efforts, and trails and trail-like corridors are among them.

The most significant of these historic trail assets in the Dawson area is the former Acklen Ditch. Approximately 3.25 kilometres of the historic ditch is situated within municipal boundaries and approximately 1.7 kilometres of that lies between the Dome Road residential area and Moosehide Slide, the point at which the ditch transitioned to a wooden flume. This section of the ditch could be repurposed as a linear recreational corridor and its fascinating history interpreted in a “only in the Klondike” take on the rails-to-trails movement popular outside the territory.

The Acklen Ditch corridor could potentially accommodate a 5-6 foot wide trail suitable for a wide range of recreational uses. Furthermore, the terminus of this section at a viewpoint of the Moosehide Slide could provide an excellent interpretive focal point. A longer-term objective could be the ditch’s restoration on the north side of the Dome and connection to other trails to create a long-distance “epic”. There are some challenges, however. As a historic resource, the ditch would require investigation by a qualified heritage resource professional and permission from the Yukon government. Initial discussions with the Yukon Historic Sites Branch confirmed that such permission would likely be granted but there would be restrictions on the extent to which the ditch could be altered. Due to the varying cross-section and depth of the ditch, thoughtful design would be paramount to the success of this restoration initiative.

Acklen Ditch

Joseph Acklen arrived in the Klondike in 1898 and acquired a piece of land on high ground near the mouth of Bonanza Creek. Discovering gold on his property, he set out to find a way to make his high ground pay: hydraulic mining. He came up with a grand vision to divert water from the Twelve Mile River and Moosehide Creek and convey it a reservoir 250 feet above the Klondike. After securing the water rights from the Canadian government, he brokered a deal with the Guggenheims and sold his water rights, titles and privileges for \$400,000. The Acklen Ditch was completed with Guggenheim capital.



In addition to the Acklen Ditch, there are vestiges of other historic survey lines and wagon roads still evident on the Dome. Two such assets are located in the Crocus Bluff area, one likely the original town site boundary and the other an offshoot of the Alaska Commercial Trail, the precursor to Mary McLeod Road.

More recent mechanized mining exploration activity has left behind a legacy of its own: bulldozer tracks and trails across the west facing steep slopes of the Dome. While some sections of dozer track can be quite steep, others are gently to moderately graded.

Restoring old trails not only creates an opportunity for immersive interpretation, it has a practical component as well. Former trails and tracks typically require less clearing and groundwork than newly constructed ones, providing a cost savings.

3.5.2 Community Spirit and Volunteerism

While a municipality can assume leadership for the management and maintenance of local trail networks, the community has a significant supporting role to play. Many municipalities rely on partnerships with recreation and other non-profit groups to maintain trails, provide volunteer safety patrols and user education, act as trail ambassadors, and initiate and manage capital projects that are subsequently transferred for maintenance by government.

All of the ingredients for successful community partnerships are alive and well in Dawson, as evidenced by the leadership and initiative demonstrated by organizations such as KATTS and the Dawson Sled Dawgs in building and maintaining trails. Equally encouraging is the volunteer emphasis placed on the trail recreation programming side by both of the aforementioned groups and other community counterparts such as Run Dawson. Ideally, these and other community partners can coalesce around the City of Dawson in its trail management efforts.

3.5.3 Local Knowledge & Enthusiasm

Numerous trail construction, upgrading and maintenance initiatives in the Klondike region – including the Ninth Avenue Trail, Dome Dive trails, and trails in Tr’öchek and Tombstone Territorial Park – have laid a foundation of knowledge and capacity that can be leveraged in support of continued development of the Dawson trail network. The passion of the TH youth behind the Dome Dive project is one of the greatest resources to draw from moving forward. Dawson can also benefit from the growing community of trail designers and builders based in the Whitehorse area who have experience building sustainable trails, technical trail features, and upgrading old trails. This knowledge base extends to the City of Whitehorse, which has been actively managing and developing a comprehensive trail network for almost a decade and has significant management experience and resources that could assist Dawson. The Yukon trail community is relatively small but highly supportive, and Dawson can only benefit by connecting to it.

3.5.4 Tourism

Tourism is a primary economic driver in Dawson, but trails aren’t typically associated with the community’s visitor offer. The Yukon visitor market is dominated by two psychographic

categories¹ of visitors: Authentic Experiencers and Cultural Explorers. Authentic Experiencers, who account for about 29% of the summer visitor market, indicate Dawson as their favourite Yukon community. This visitor group seeks out vast natural settings and sights and likes to keep physically active during vacations, with 36% of them indicating participation in hiking or camping during their Yukon stay. Cultural Explorers have comparatively less interest in outdoor activities, with the exception of walking and hiking.

Linkages between trails and Dawson tourism opportunity can also be found in national-level data. The Canadian Tourism Commission's (CTC) research into Heritage Tourism Enthusiasts – a key market for Dawson – found that hiking and backpacking in wilderness settings are the most popular outdoor activities they seek out while on holiday. The CTC also found that about 25% of adult Canadians participated in a “soft” outdoor adventure while on an out-of-town, overnight trip, with day hiking being the most common activity.

Not only does the research make a strong case for trails as a tourism investment for Dawson, this is further borne out by previous Yukon-specific tourism studies. A 2009 Yukon Tourism Nodal Development Plan highlighted the need for more scenery-oriented activities to “round out” the visitor experience in Dawson. A 2007 Business and Strategic Plan for the Yukon tourism industry identified a number of key product and experience gaps, including front country trail systems, land-based interpretation of Aboriginal and Gold Rush culture, and the combination of wilderness and cultural product in close proximity.

The pending launch of outdoor adventure tours by local business Husky Bus for 2016 is a sign of growing market demand for nature-based experiences from visitors to Dawson. Looking at territory-wide trends, the growing international reputation of Whitehorse and Carcross for mountain biking is another opportunity for Dawson to leverage. To be ready for trail-oriented tourism, certain pre-requisites apply: a diverse network of trails (with an emphasis on beginner to intermediate difficulty level options), scenic viewpoints, signage, maps, and promotion (preferably including high quality imagery). Dawson is well positioned to be the third Yukon community to satisfy these criteria, and reap the rewards of market expansion, return visits and enthusiastic social media promotion.

¹ The Canadian Tourism Commission has developed an Explorer Quotient (EQ) psychographic tool to glean insight into the values and motivations of visitors; the Yukon Department of Tourism and Culture now utilizes the tool for their visitor research and marketing purposes.

4.0 VISION AND GUIDING PRINCIPLES

The Dawson Trail Management Plan vision describes the future desired state of trails in Dawson. Its guiding principles describe the culture and attitude that the municipality will adopt while it works to achieve the vision. Both the vision and guiding principles were developed jointly by the Planning Committee and Dawson residents.

Vision for 2026

Our trails will be a vital contributor to the health and wellness of residents, facilitate access to and enjoyment of the outdoors, provide options for active transportation, foster appreciation of our heritage and build community spirit and stewardship.



Guiding Principles

Sustainability

The environmental, economic, and social dimensions of trails and the broader community will be considered to ensure balanced decisions.

Inclusiveness and Fairness

A wide range of trail user and community perspectives will be sought out, listened to, and considered with an open mind.

Individual and Community Benefits

Maximizing benefits both to individuals and the community will be a key consideration in allocating resources.

Local Capacity and Knowledge

Residents will be a valued source of knowledge, and local capacity utilized and strengthened.

Partnerships and Collaboration

Trails will be viewed as an opportunity to partner and collaborate with others.

5.0 GOALS, OBJECTIVES AND STRATEGIES

The goals, objectives and strategies of the Dawson Trail Management Plan were developed by the Planning Committee and Planning Team, with input from Dawson residents. The trail development concepts are further detailed in Appendices B-D.

Goal #1 Ensure a diversity of quality recreational experiences for all trail users.

Dawson Trail Network: Overall Development Concept

The Plan recommends new construction to create a stacked loop network of diverse, multi-use trails in Dawson. The network concept is anchored around a 1.7 kilometre trail averaging about 4-6 feet wide - the historic Acklen Ditch - that will serve as the top or bottom of numerous loop options or as an easy “out and back” to an interpretive viewpoint. The connecting trails are envisioned as being 3 foot wide, bench-cut trails with an average 8% grade. Sightlines will be open and the trails carefully designed to promote user safety and harmony.

1.1 Develop moderately graded singletrack loop routes for non-motorized users to/from key destinations.

- a) Restore the Acklen Ditch as a mid-mountain trail “anchor” for multiple loops.
- b) Construct/restore a trail to connect from Crocus Bluff parking lot to the Acklen Ditch².
- c) Construct/restore a loop trail between the Moosehide Trail and Acklen Ditch.
- d) Construct/restore a trail to connect from the Acklen Ditch to Dome summit.
- e) Construct a trail to connect the Dome summit to upper radio tower.
- f) Upgrade the Moose Mountain network and connecting trail to Fire Dome road to facilitate increased winter and summer use³.

1.2 Ensure connections to regional trails for motorized users.

- a) Upgrade the lower dyke road as a motorized connector to the Millennium Trail.
- b) Upgrade and/or construct sections of motorized trails in the Dome residential area to facilitate connections between the Dome and townsite.
- c) Construct/restore a trail from the bottom of the new Dome Road to Mary McLeod Road⁴.

Goal #2 Promote user safety and minimize conflict.

2.1 Ensure users can navigate successfully throughout the network and be rescued in the event of an emergency.

- a) Develop and install a trail signage system including maps and a locator system.

² The design of this trail will need to be sensitive to the privacy of an adjacent property owner.

³ This strategy will be contingent on whether or not mining activity proceeds in this area.

⁴ This strategy will be contingent on economic and technical feasibility, to be explored/confirmed in Year 1.

2.2 Facilitate informed trail user decision-making.

- a) Designate trails by difficulty level and appropriate uses.
- b) Install special risk management signage for high-risk features (i.e., technical trail features Moosehide Slide, etc.)

2.3 Manage high-conflict trails in an adaptive manner.

- a) Reroute summer motorized traffic off the busiest sections of the Dyke Trail onto the lower dyke road⁵.
- b) Create additional separation between downhill bike travel and hikers on the Nature Trail where possible.
- c) Construct an alternate top to the Nature Trail to bypass steep, widened sections and designate for pedestrian use only.
- d) Upgrade an old trail in Crocus Bluff and direct downhill mountain bike use to it.
- e) Develop one or two “flow” trails for downhill mountain biking in the old Dome Road/powerline area.

2.4 Eliminate and/or mitigate risk associated with high-risk trail features.

- a) Separate vehicle and non-vehicle traffic on the north side of the Klondike Highway by Crocus Bluff (while managing rockfall hazard).
- b) Divert traffic from the Moosehide Slide by creating a safe viewpoint destination and connecting to it from the Moosehide Trail.
- c) Decommission the trail access at Fargie’s cabin on Mary McLeod Road.
- d) Upgrade technical trail features (TTFs) in accordance with best practices⁶.

2.5 Educate trail users about proper trail etiquette.

- a) Incorporate user etiquette information into signage program.
- b) Work with local groups to educate their user communities.

Goal #3 Facilitate safe, convenient non-vehicle commuting between the historic townsite and other neighbourhoods.

3.1 Provide safe and user-friendly active transportation options.

- a) Construct/restore a trail from the bottom of the new Dome Road to Mary McLeod Road.
- b) Explore/pilot options to improve safety on Mary McLeod Road hill for active transportation.
- c) Renovate the lower portion of Crocus Bluff Connector and construct new spur trail to improve accessibility through the Crocus Bluff area.⁷

⁵ The lower dyke road is prone to flooding in spring, so, the Dyke Trail will need to be open to motorized traffic during this part of the year. Conditions can be monitored and the lower dyke road officially opened/Dyke Trail closed.

⁶ This recommendation is specific to the Dome Dive #1 trail and will be done in consultation with TH; other TTFs located on non-City trails will be left in place.

⁷ This strategy is recommended particularly if Mary McLeod Road traffic calming and/or other safety-oriented measures do not satisfactorily resolve safety concerns for pedestrians/cyclists using this route.

Goal #4 Resolve existing and prevent future development/trail conflicts.

4.1 *Work with involved stakeholders to ensure continued access to Tr'ondëk Hwëch'in parcel S-94B1 at Thomas Gulch.*

4.2 *Close off trails located on private property to the public in cooperation with owners.*

4.3 *Develop and/or enhance routes to redirect trail users from private property.*

4.4 *Consider impacts to existing and incorporation of new trails in land development.*

Goal #5 Enhance community engagement, collaboration and benefits.

5.1 *Promote trails to residents and visitors.*

- a) Create a trail map/guide (or web-based application) and update as the trail network is developed.
- b) Work with partners to promote the trail network via various channels.

5.2 *Build community capacity, knowledge and employment opportunities.*

- a) Pursue opportunities for local training and apprenticeship.
- b) Employ local residents, particularly youth, in trail construction and maintenance.
- c) Develop a community trail stewardship program.

5.3 *Cultivate strategic partnerships to implement the Plan.*

City of Dawson Trail Network

The Plan envisions the City adopting and maintaining an official network of trails. The City is focusing its limited resources on a network that can provide quality recreation to the broadest range of users with a minimum of risk and conflict. Trails not formally adopted by the City will remain available for use; however, the City will not be allocating maintenance dollars towards them.

Goal #6 Maintain and develop trails in a manner that ensures a quality, sustainable trail network.

6.1 *Develop a Memorandum of Understanding with Government of Yukon.*

6.2 *Maintain key trails, structures and signage.*

6.3 *Address sustainability issues on key existing trails.*

- a) Restore a loop trail around the Dome summit and connect to key trails to avoid further braiding and erosion in the area.
- b) Address sustainability issues on Crocus Bluff Connector.
- c) Consider lower-cost design approaches for the Ninth Avenue Trail as structures come due for replacement.

6.4 *Create a trail development approval process and review committee to ensure a planned, compatible network.*

6.0 IMPLEMENTATION

The implementation of the Dawson Trail Management Plan is envisioned as a steady and strategic transition from the status quo to a designed, maintained, signed, promoted and well-functioning trail network by 2025 with an estimated \$295,000 in capital spending, \$155,000 in operations and maintenance costs, and 1066 hours of City staff administrative time. Please refer to Appendix E for the detailed work plans and accompanying budgets for each year of the Plan.

The initial phase of implementation will take place over the first three years. Year 1 will focus on addressing high priority items such as private property conflicts and design for the new trail between the Crocus Bluff ball diamond and Mary McLeod Road. Year 2 will involve both the construction of the Dome Road alternate trail and the detailed design work that will precede significant trail construction, including signage, on the Dome in Year 3. Years 4 and 5 will be focused on medium priority capital upgrades on the Dome that will build on the efforts undertaken in Years 1 and 2. Year 4 will be a lower activity year and involve the final round of detailed design in preparation for the final season of new trail development in Year 5.

Throughout the capital phase, City staff will provide administrative support such as securing funding, administering contracts, obtaining permits, undergoing YESAA screenings, and working to maximize local benefits and training. Trail construction is “bundled” and scheduled for Years 2, 3, and 5 to optimize City staff time and effort and allow for an “easing in” during Year 1 and relief in Year 4. This approach should also meet the general practice of larger third party funders such as the Community Development Fund and Lotteries Yukon to award multiple allocations to the same overarching initiatives so long as it is broken out into distinct phases. It is assumed that Years 2 and 4 would be funded internally or from alternate sources.

PHASE	YEAR	Capital Costs ¹	O&M Costs	Staff Time (hrs)
1	1	\$26K	\$5K	144
	2	\$79.5K	\$7.5K	120
	3	\$150K	\$7.5K	132
2	4	\$12K	\$20K	122
	5	\$47K	\$15K	120
3	6		\$20K	92
	7		\$20K	84
	8		\$20K	84
	9		\$20K	84
	10		\$20K	84
	TOTAL	\$315K	\$155K	1066

While maintenance effort incrementally expands within the first five years of implementation, Year 6 marks a pronounced shift from construction to ongoing trail maintenance, as well as the accompanying promotion of the network. The proposed network would be designed to require a minimum of maintenance, but a \$20,000 annual maintenance budget is allocated to ensure that the trails and signage are functioning to best effect and there are resources for stewardship, education and promotion.

Mini-excavator construction, supplemented by hand labour, is recommended for most

of the proposed construction in the interests of creating a quality end product on a limited budget. Once the development phase is complete, a City-employed trail crew and/or contractor (or combination) could be dispatched each summer season to maintain the network by hand, supplemented by a volunteer stewardship program that undertakes lower skill tasks such as signage replacement, etc.

7.0 MONITORING, EVALUATION & REPORTING

The Dawson Trail Management Plan was developed by integrating trail planning and management knowledge with the knowledge and perspectives of local residents. Moving forward, both types of knowledge will continue to be cornerstones of an adaptive management approach that focuses on continual improvement via monitoring, evaluation, and reporting.

7.1 Adaptive Management

No Plan can envision every future scenario. It is important that the City adopt an adaptive management approach throughout the life of the Plan to allow itself to respond to changing circumstances and emerging issues. Adaptive management embodies a commitment to continual improvement via planning, monitoring, and reporting on results. In this context, “planning” is not necessarily comprehensive (such as this report), but rather focused on specific issues and/or challenges that emerge during the course of implementing the broader Plan.

Adaptive management allows the City to identify trends and issues, both positive and negative, that are impacting either implementation itself or the achievement of the Plan’s goals and objectives.

7.2 Performance Indicators

The City will measure its achievement of Trail Management Plan goals and objectives by focusing on tangible, easily obtained indicators. The community survey conducted to inform the Plan provides a useful baseline of data to build upon. The City’s performance indicators could include the following:



Goal #1 Ensure a diversity of quality recreational experiences for all users.

- *Levels of resident participation in trail recreation modes*
- *Recreation opportunity ratings by trail use mode (i.e., excellent, good, adequate, poor)*
- *Frequency and patterns of trail use (what trails, how often, recreation modes)*
- *Direct feedback from recreation groups*

Goal #2 Promote user safety and minimize conflict.

- *Reported incidences of trail conflict to City*
- *Feedback from recreation groups*
- *Accident reports from local emergency responders*

Goal #3 Facilitate safe, convenient non-vehicle commuting between the historic townsite and other neighbourhoods.

- *Levels of resident participation in active transportation*
- *Trail user ratings for safety and commuting experience*

Goal #4 Resolve existing and prevent future development/trail conflicts.

- *Levels of property owner satisfaction*
- *Resident input on appeal/use of alternate routes*

Goal #5 Enhance community engagement, collaboration and benefits.

- *Visitor satisfaction with the trail network*
- *Number of visitors who visited the trail network*
- *Number of social, web, and print media mentions or searches*
- *Number of person hours of training and employment per year*
- *Number of partnerships*
- *Levels of participation in community stewardship activities*

Goal #6 Maintain and develop trails in a manner that ensures a quality, sustainable trail network.

- *On-the-ground trail inspections and maintenance reports*
- *Annual budgets for operations and maintenance*
- *Levels of resident satisfaction with trail network conditions*

Resident feedback could be sought via a simple online survey launched at the end of Years 2, 4, 6, and 8 – most timed to follow up one year after significant new trail development initiatives. Theoretically, the next survey to follow would coincide with the beginning of an update to this Plan.

7.3 Evaluation and Reporting

Monitoring key performance indicators will allow the City to systematically evaluate its success towards the achievement of Trail Management Plan goals and objectives and identify areas requiring management support and/or intervention. A bi-annual Council briefing should be scheduled to highlight implementation progress, results of monitoring, progress towards achievement of goals and objectives, and areas for improvement. The briefing could be supported by a short written report that is distributed to recreation groups and posted on the City's website.

In the event that results of monitoring and evaluation indicate a significant shift in baseline conditions or trail use issues, the City should undertake a brief review of the Plan at the 5-year mark, update the issues, re-examine the appropriateness and relevance of management goals and objectives, and identify new policies as needed.

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GLOSSARY

Bi-directional – a trail that facilitates two-way travel for a given user

Doubletrack – a trail of sufficient width to allow users to travel side-by-side. Doubletrack trails are often old mining and/or other access roads.

Duty of care – the legal duty a landowner or manager owes a member of the public to keep them safe from unreasonable danger

Fall line – the path water takes when flowing down a slope

Grade – the amount of elevation change between two points over a given distance, typically expressed as a percentage based on the calculation: $\text{rise/run} \times 100\%$

Shared-use trail – a trail that accommodates more than one user group at a time

Singletrack – a trail sufficiently narrow that users generally travel in single file

Single-use trail – a trail that is only open to one user group

APPENDIX A

Inventory of Current Dawson Trails

CITY OF DAWSON 2016 TRAILS INVENTORY

Trail Name or #	KATTS ID	Width	Tread Surface	Gradient	Infrastructure	Maintenance Issues	Level of Use	Risk/Other Issues	Priority for action	Other Notes
9th Avenue Trail	S0059/61/63/80	single	dirt	gentle/moderate	wayfinding/interpretive signs stairs, boardwalks, benches, retaining walls, interp/wayfinding signage	wet areas, drainage, stairs	very high		low	built by KATTS, maintained by City
Blood on the Tracks	S0148	single/double	gravel/veg	gentle		overgrown	low		low	old road
Crocus Bluff Connector	S0001	single	dirt	moderate/flat	W signage, dirt fill stairs	drainage, trail braiding	high		high	built by KATTS
Crocus Bluff Trail	S0003	double	packed gravel	gentle	interpretive signage	signage	high		low	
Crocus Bluff Ridge	S003/04	single	packed dirt	gentle			high		low	
Dome Dive 1	n/a	single	dirt	moderate/steep	technical trail features (TTFs)	TTFs, erosion	low/MTB*	TTF construction, crossings with Nature Trail	high	built by TH
Dome Dive 2	n/a	single	dirt	very steep	technical trail features (TTFs)	poor drainage, erosion	low/MTB*	TTF construction, Moosehide Trail crossing	high	built by TH
Dome Dive 3	n/a	single	dirt	moderate/steep	technical trail features (TTFs)	erosion	low/MTB*	TTF construction	moderate	built by TH; still under construction
Dome Ridge	S0046	single	dirt/rock	steep/very steep		erosion	low	cliff exposure	moderate	
Dyke Trail		double	packed gravel	flat		gravel displacement	very high		moderate	
Dyke Trail (Lower)		double/road	dirt/gravel	flat			low		low	
Millennium Trail		double	packed gravel	flat	kiosk	gravel displacement	moderate		low	
Moosehide Trail	S0037/40/42/86	single	dirt	moderate/steep	interp/TH signage, rope handrail	wet sections with detours	low/moderate	rockfall exposure, cliff edge	very high	
Moose Mtn XC Trails	S0129/30, SKI TRAILS	double	dirt/moss	moderate	kiosk, wayfinding signs	some overgrown trails/minor rutting	moderate	dead end, side hills	low	maintained by KATTS
Nature Trail	S0047/49/94	single/double	dirt	moderate/steep	handmade signs	slippery loose rock	low/medium	crossings with Dome Dive	high	moderate ST at bottom/top; steep DT in upper middle; steep ST at top
Old Dome Road	S0056/57/102	old road	dirt/rock	moderate/steep		overgrown, some rutting	low/medium		low	
Powerline Trail	S0052	double	dirt	very steep		erosion	low		low	
Radio Tower Road	S0054	road	dirt	moderate	wayfinding signage		low/medium		low	
Riverside Connector		single/double	dirt	steep/flat	stairs	stairs	low/medium		low	
Typhoid Trail	S0033	single	dirt	very steep	stairs?	rotting or dirt stairs, erosion	low/medium		low	
DT1	S0025/27	double	dirt/gravel	moderate/steep	TCT trail markers at top	erosion	low/medium		low	dozer track
DT2	S0102	double	dirt	gentle/moderate			moderate		very low	
DT3	S0025	double	dirt/gravel	very steep	TCT marker	erosion/braiding	low/moderate		low	
DT4	S0103	double	dirt	moderate/steep	technical trail features (TTFs)	decrepit TTFs	medium		moderate	
DT5	S0098	double	dirt	moderate			medium	blind corner @ road, crosses 3 properties	very high	
DT6	n/a	double	dirt	moderate			low	private property	very high	
DT7	S0005/06	single/double	dirt	gentle/flat			high		low	former ACC Trail?
PULD1	n/a	double	dirt	moderate			low	no tread established	high	
PULD2	n/a	double	dirt	moderate			medium	steep/braided start	moderate	
ST1		single	dirt	steep/moderate			low		low	
ST2		single	dirt/moss	flat		overgrown	low	dead end	low	
ST3		single	dirt/moss	gentle/moderate		overgrown	low	goes to private property	low	
ST4	n/a	single	dirt	gentle/moderate			medium		low	
ST5	n/a	single	dirt/moss	gentle/moderate		overgrown, wet sections	low		low	

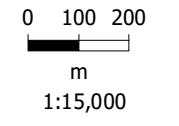
APPENDIX B

Implementation Maps



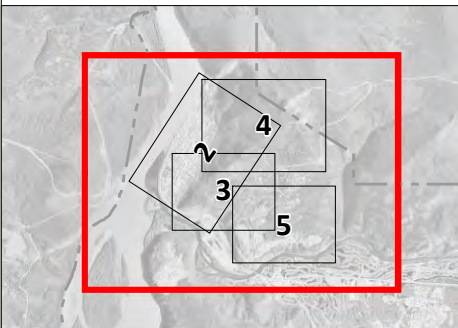
Trail Development Concepts - Implementation

Overview Map
Page 1 of 5



Legend

- Implementation concepts**
- Trail restoration
 - New construction (singletrack)
 - New construction (doubletrack)
 - Upgrades to existing trail
 - Trail closure
- Existing trails, by type**
- Road
 - Surfaced doubletrack
 - Doubletrack
 - Singletrack
 - Powerline
 - Dawson municipal boundary



Data sources:
 Trails: KATTS, Mammoth Mapping, Jane of All Trades
 Roads: National Roads Network
 Municipal boundary: OIC 1998/218, Municipal Act

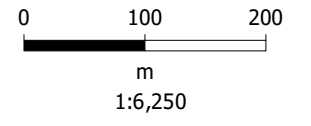
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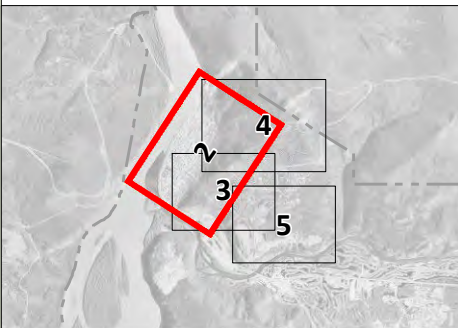
Trail Development Concepts - Implementation

Downtown and Dyke
Page 2 of 5



Legend

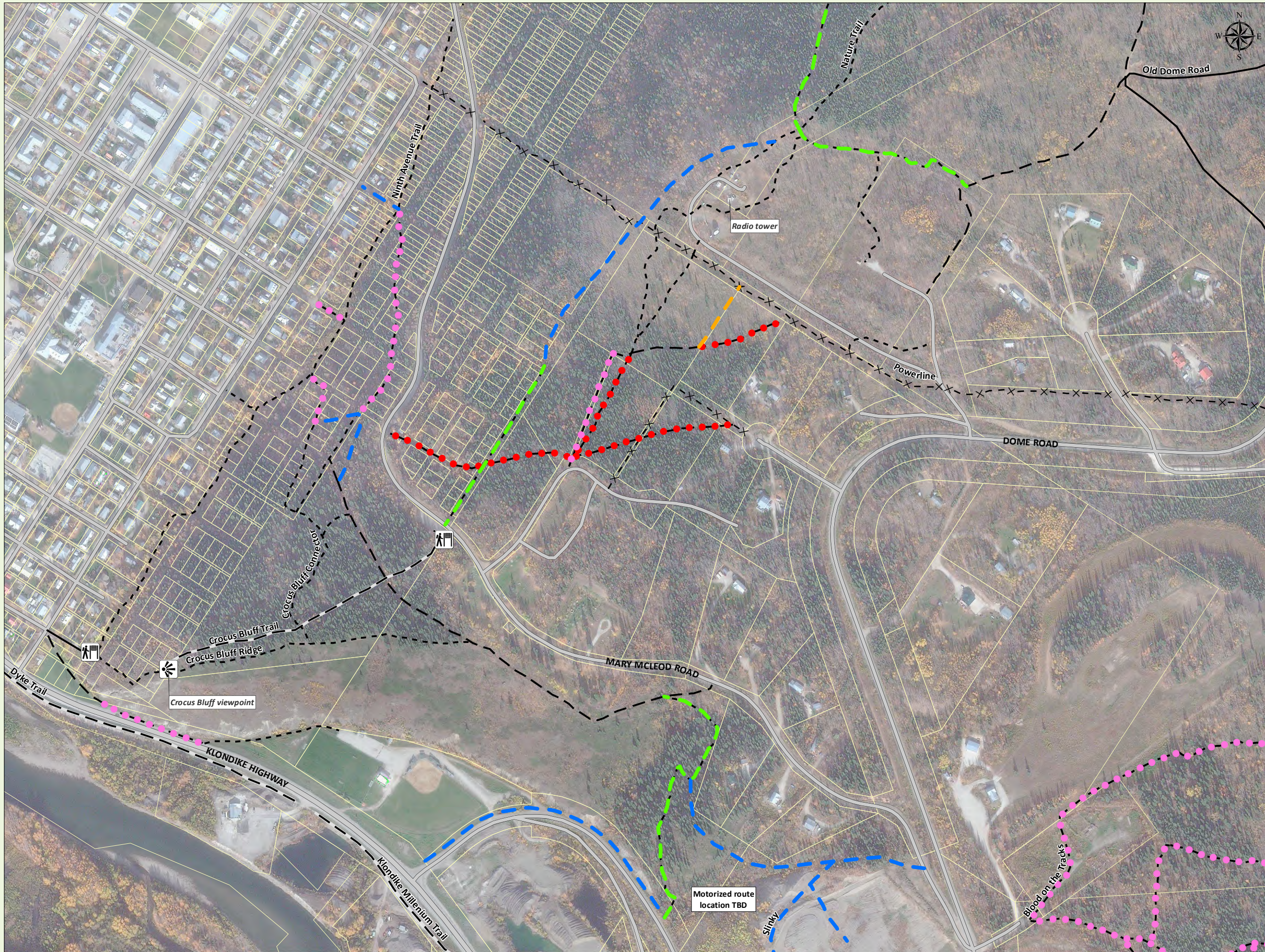
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-  Viewpoint
- Implementation concepts**
-  Trail restoration
-  New construction (singletrack)
-  New construction (doubletrack)
-  Upgrades to existing trail
-  Trail closure
- Existing trails, by type**
-  Road
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-  Doubletrack
-  Singletrack
-  Powerline
-  Dawson municipal boundary
-  Lot boundary



Data sources:
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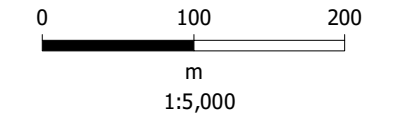
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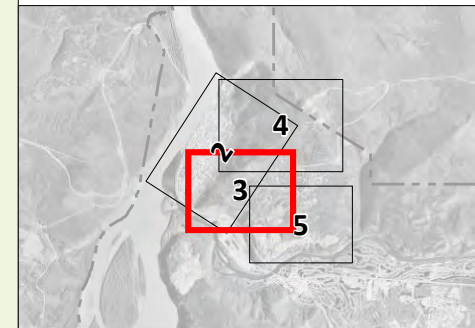
Trail Development Concepts - Implementation

Crocus Bluff/Lower Dome Road
Page 3 of 5



Legend

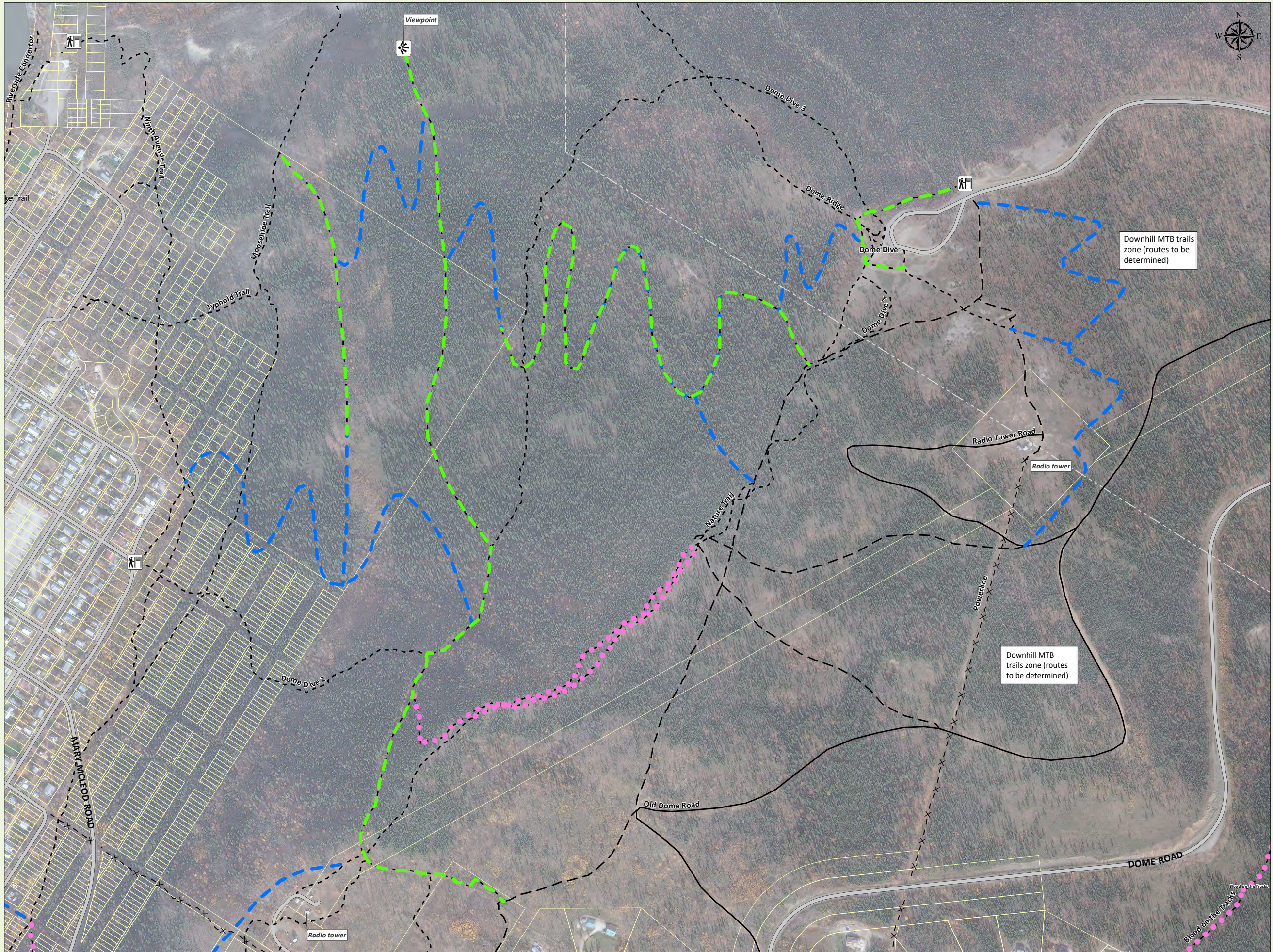
- Kiosk
- Viewpoint
- Implementation concepts**
- Trail restoration
- New construction (singletrack)
- New construction (doubletrack)
- Upgrades to existing trail
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- Existing trails, by type**
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- Surfaced doubletrack
- Doubletrack
- Singletrack
- Powerline
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Data sources:
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 Roads: National Roads Network
 Municipal boundary: OIC 1998/218, Municipal Act

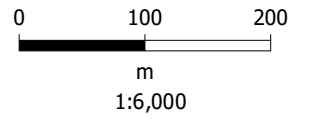
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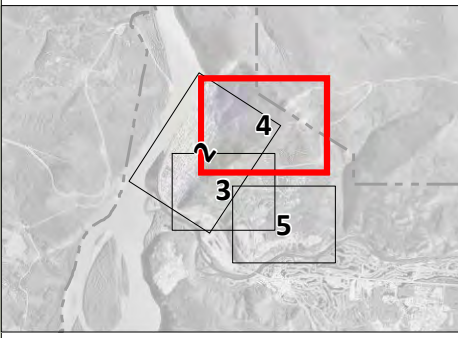
Trail Development Concepts - Implementation

Midnight Dome
Page 4 of 5



Legend

- Kiosk
- Viewpoint
- Implementation concepts**
- Trail restoration
- New construction (singletrack)
- New construction (doubletrack)
- Upgrades to existing trail
- Trail closure
- Existing trails, by type**
- Road
- Surfaced doubletrack
- Doubletrack
- Singletrack
- Powerline
- Dawson municipal boundary
- Lot boundary



Data sources:
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 Jane of All Trades
 Roads: National Roads Network
 Municipal boundary: OIC 1998/218,
 Municipal Act

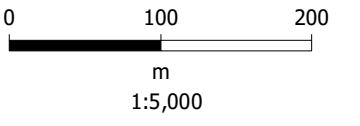
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Trail Development Concepts - Implementation

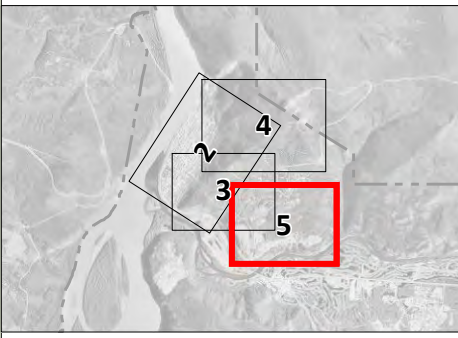
Moose Mountain, Ski Trails, Slinky
Page 5 of 5



Legend

- Kiosk
- Viewpoint
- Implementation concepts**
- Trail restoration
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- New construction (doubletrack)
- Upgrades to existing trail
- Trail closure
- Existing trails, by type**
- Road
- Surfaced doubletrack
- Doubletrack
- Singletrack
- Powerline
- Dawson municipal boundary
- Lot boundary

Ensure access to TH parcel at Thomas Gulch



Data sources:
Trails: KATTS, Mammoth Mapping, Jane of All Trades
Roads: National Roads Network
Municipal boundary: OIC 1998/218, Municipal Act

Map produced 2016-05-06



APPENDIX C

Explanatory Notes to Trail Concepts



The Acklen Ditch is a historic gem dating from the early 20th century that could be repurposed as a wider singletrack shared-use trail. The portion of the ditch located between the Dome residential area and the Moosehide Slide features a range of conditions. The ditch is highly prominent in some sections, while barely detectable in others. Similarly, some sections have revegetated considerably while others are open. There is no visual evidence of the wooden flume portion; however, the distinct line across the slide is proof of its former presence. The high vantage point of the slide could be promoted as an interpretive viewpoint for visitors and connected to via a lower trail. Restoring this historic resource will require a Heritage Resource Impact Assessment and permission from the Government of Yukon. Due to the likely restrictions around alteration of the ditch, a thoughtful design approach will be required to ensure that the resulting trail provides the most seamless and enjoyable experience possible.





The Crocus Bluff area is a focal point of proposed trail upgrades and restoration in the Plan. Overgrown assets such as the (suspected) town site boundary cut line (at left) could be restored as part of a new direct connector to the lower radio tower (and ultimately Dome summit) from Crocus Bluff parking lot.



Limited accessibility in the Crocus Bluff area is a contributing factor to the heavy use of the road network to create loop routes from the townsite. The Crocus Bluff Connector is the best thru-route, but is too steep and narrow to provide an accessible option for most cyclists, child trailers, and skiers. One option is to renovate the lower portion of the trail by widening it approximately 18-24" and create two new switchbacks to connect to a wide, flat trail up on the bench that intersects with the Crocus Bluff Trail. The new margin of the existing trail and first switchback and corner are depicted at left. The connecting trail into Crocus Bluff from Harper Street would also need to be rerouted from its currently steeper alignment. This option is generally recommended, but highly so if safety issues on Mary McLeod Road are not adequately resolved.

Regardless of whether or not this trail is renovated, its bottom-most section requires upgrading to address sub-surface drainage problems being exacerbated by a set of stairs (top right).



The new Dome Road was constructed with little to no shoulder and relatively wide and steep backslopes, severely limiting the potential for an adjacent trail in the right-of-way. The road continues to be used by pedestrians and cyclists despite its poor suitability, largely due to limited options to create a loop route from the townsite and some residents' preference for a hard surface.

Finding an alternate route to the new Dome Road poses a significant terrain challenge. Luckily, an old route was discovered adjacent to a shallow drainage located almost 400 metres up the Dome Road. The trail has a distinctive bench cut typical of early 20th century era wagon roads found and restored elsewhere in the territory. It is likely that the trail was a spur off of the Gold Rush era Alaska Commercial Trail, the precursor to Mary McLeod Road.



The obvious challenge with the route is the almost 200 metre-long section of road that lies between the ball diamond turn-off and drainage. For the majority of the segment, there is a raised bench at the toe of the adjoining slope that the trail can occupy, currently vegetated with young spruce (bottom photo). However, there will be some excavation required over a 10-15 metre-long section to maintain the raised bench where the toe meets the road steeply (indicated in middle photo). The lowest 15-20 metre-long section poses the greatest challenge as there isn't sufficient room in the right-of-way for an adjacent and slope excavation isn't feasible. The best option here is to create physical separation between trail users and traffic via bollards and build the tread in the narrow, shallow ditch (middle photo). Alternately, the road could be widened to the south and the trail sited on the asphalt, again with bollards. Snow removal will be a key consideration.



Ideally, this trail would serve as an active transportation connector and recreational corridor. Accordingly, it should be restored to about 4.5-5 feet in width and potentially surfaced with white channel gravels or other good compacting material to create as hard and smooth a surface as possible.

Unsafe conditions on the new Dome Road is only one part of the problem facing pedestrians and cyclists; the other is a hazard encountered along the heavily used route that connects to Crocus Bluff ball diamond from the townsite.

After taking a short cut across the spacious lawn located at the entrance to town, pedestrians and cyclists are faced with two choices: traveling towards oncoming traffic along the shoulder, or taking an alternate path on the Crocus Bluff side of the concrete barriers and exposing themselves to potential rockfall. Neither option is acceptable from a basic risk management standpoint.

One option to improve the situation would be to undertake rock scaling and possibly install a protective net at Crocus Bluff to significantly reduce the risk of rockfall and then formalize a trail on the bluff side of the concrete barrier. Alternately, the concrete barriers could be left in place to contain rockfall and a second row of barrier installed between the vehicle traveling lane and concrete barrier (roughly along the white lane line). Bollards or a similar traffic barrier could potentially work. Again, snow removal needs must be incorporated into the design choice.

While most users will approach the new ball diamond-Mary McLeod trail via the informal route along the highway, others may be going to and/or originating from the Millennium Trail. A final section of trail could be constructed parallel to the road and connected to the Millennium Trail with a crosswalk at the highway for better safety





The future City of Dawson trail network will feature trailheads at which residents and visitors can access a full range of information about the network, including maps, route descriptions, difficulty ratings, distances, and etiquette. Six locations are proposed: the three existing kiosks at either end of the Ninth Avenue Trail and Duke Street trailhead, Waterfront Park, Crocus Bluff parking lot, and the Dome summit. Ideally, the new kiosks would be built in a similar style to existing to create a unified aesthetic. The design features Lexan doors that can be opened/closed to install and/or replace materials. This will be an advantage as the network is developed: paper maps can be updated on a regular basis and re-installed.

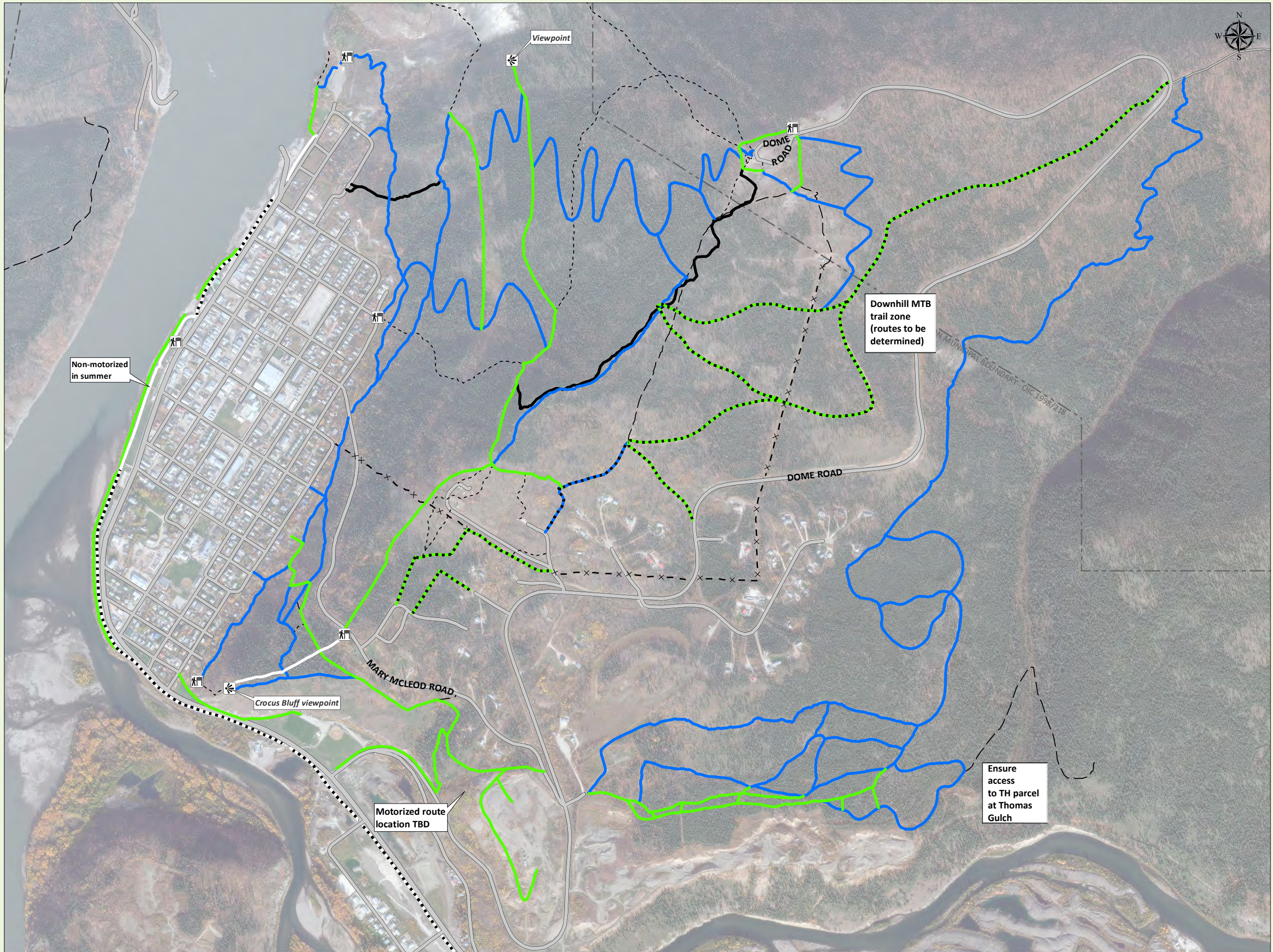


The Dome summit is a highly impacted area, with considerable braiding and erosion between the parking lot and trails below due to the steep grades. One strategy to minimize this erosion and service trail users during the summer season is to create a new trailhead about 175 metres south of the Dome lookout parking lot. There is an existing informal pullout that could be expanded to create 6-8 parking spaces (bottom left photo). The proposed trailhead is located at the junction of a key route "out and away" route used by off-road vehicles. It is also the gateway to an overgrown dozer track that contours around the mountain about 30 feet below the summit elevation (bottom right photo). Encouraging use of this gently graded route will provide a more sustainable entry point into the numerous trails (Dome Ridge, Dome Dive, proposed new trail, etc.) starting in this area and separate recreational and tourist traffic on busy summer days.



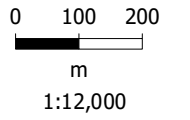
APPENDIX D

2020 Trail Network Concept





Proposed City of Dawson Trail Network









Overview
Page 1 of 2

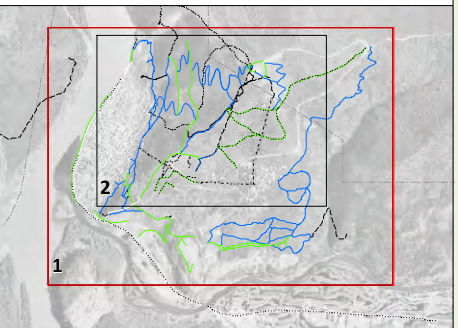


Legend

-  Kiosk
-  Viewpoint

City of Dawson Trails

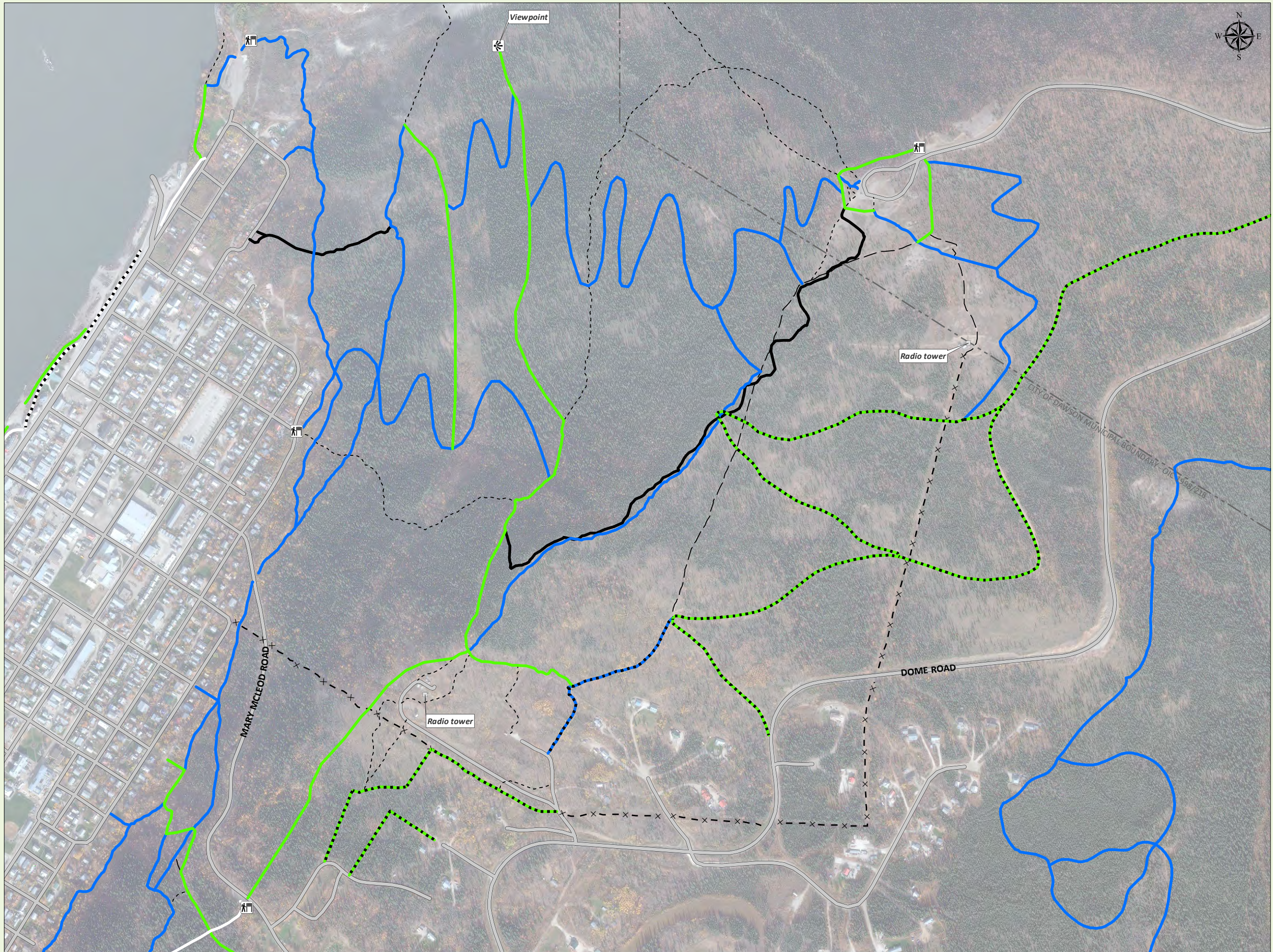
- Trail designation**
-  Motorized trails
- Trail difficulty**
-  Easiest
 -  Easy
 -  More difficult
 -  Most difficult
- Other trails**
-  Singletrack
 -  Doubletrack
 -  Powerline



Data sources:
 Trails: KATTS, Mammoth Mapping, Jane of All Trades
 Roads: National Roads Network
 Municipal boundary: OIC 1998/218, Municipal Act

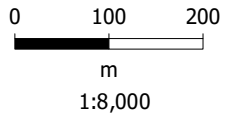
Map produced 2016-05-06







Proposed City of Dawson Trail Network









Midnight Dome/Crocus Bluff
Page 2 of 2

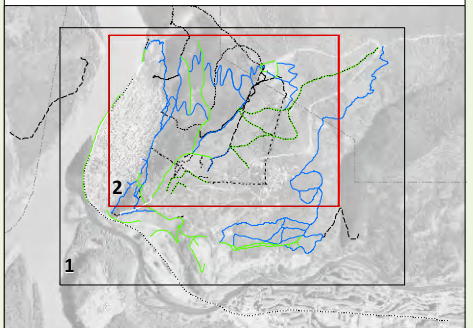


Legend

-  Kiosk
-  Viewpoint

City of Dawson Trails

- Trail designation**
-  Motorized trails
- Trail difficulty**
-  Easiest
-  Easy
-  More difficult
-  Most difficult
- Other trails**
-  Singletrack
-  Doubletrack
-  Powerline



Data sources:
 Trails: KATTS, Mammoth Mapping,
 Jane of All Trades
 Roads: National Roads Network
 Municipal boundary: OIC 1998/218,
 Municipal Act

Map produced 2016-05-06



APPENDIX E

Detailed Work Plans & Budget

TRAIL NETWORK DEVELOPMENT WORKPLAN YEARS 1-5

Objective	Strategy	Year	Detailed Actions	Cost	Responsibility	Special Notes
HIGH PRIORITY – PHASE 1 (YEARS 1-3)						
1.2/2.3	Upgrade lower dyke road and reroute summer traffic off busy Dyke Trail	1	<ul style="list-style-type: none"> Clear trail corridor Install signage 	\$3K \$3K	Contractor	
	Upgrade and construct motorized connectors around Dome residential area	1	<ul style="list-style-type: none"> Develop detailed trail design Clear debris Construct new trail section 	\$0.5K \$3K \$3K	Contractor	Land use permit and YESAA screening (machinery)
2.4	Separate vehicle and non-vehicle traffic on highway at Crocus Bluff	1	<ul style="list-style-type: none"> Work with YG Highways 		City	Bollards or other
	Decommission trail access at Fergie's cabin	1	<ul style="list-style-type: none"> Block off access with dirt berm and tree planting 	\$3.5K	Contractor	
1.2/3.1	Construct/restore trail(s) from new Dome Road to Mary McLeod Road	1	<ul style="list-style-type: none"> Work with YG re road issues Develop detailed trail design 	\$5K	City Contractor	
4.1	Ensure access to Thomas Gulch	1	<ul style="list-style-type: none"> Work with TH/KATTS/others 		City	
4.2	Close off trails on private property to the public	1	<ul style="list-style-type: none"> Work with property owners Fabricate and install signage/other 	\$5K	City Contractor(s)	
4.3	Develop/enhance routes to redirect users from private property	1	See 2.4 above			
YEAR 1 TOTAL COST				\$26K		
1.1	Restore the Acklen Ditch	2	<ul style="list-style-type: none"> Conduct Heritage Assessment Develop design and obtain approval 	\$15K \$3K	Contractor Contractor /City	Heritage funding potential
	Construct trail from Crocus Bluff to Acklen Ditch	2	<ul style="list-style-type: none"> Develop detailed trail design 	\$1K	Contractor	Year 2 design work could be bundled for cost savings. Potential partnership with TH in regards to Dome Dive trail.
	Construct trail from Acklen Ditch to Dome summit	2	<ul style="list-style-type: none"> Develop detailed trail design for upper section 	\$2K		
	Construct trail from Dome summit to upper radio tower	2	<ul style="list-style-type: none"> Develop detailed trail design 	\$2K		
2.3	Separate Dome Dive and Nature Trail uses where possible	2	<ul style="list-style-type: none"> Develop detailed site prescriptions 	\$2K		
	Construct an alternate top section to Nature Trail. Develop trails for downhill MTB in old Dome Rd area.	2	<ul style="list-style-type: none"> Develop detailed trail design 	\$1.5K		
3.1	Construct/restore trail from new Dome Road to Mary McLeod Road	2	<ul style="list-style-type: none"> Construct trail 	\$50K	Contractor	Land use permit and YESAA screening
6.3	Address drainage problems on Crocus Bluff Connector	2	<ul style="list-style-type: none"> Upgrade trail 	\$3K	Contractor	Hand labour
YEAR 2 TOTAL COST				\$79.5K		

Note: Consultant/contractor estimates do not include travel/accommodation expenses; Moose Mountain and Crocus Bluff Connector upgrades are not included due to contingencies but can be incorporated into Year 3 and/or 5 activities. Construction costs assume a combination of machine and hand building is used.

TRAIL NETWORK DEVELOPMENT WORKPLAN YEARS 1-5 CONT'D

Objective	Strategy	Year	Detailed Actions	Cost	Responsibility	Special Notes	
HIGH PRIORITY - PHASE 1 (YEARS 1-3)							
1.1	Restore the Acklen Ditch	3	• Clear corridor and do tread work	\$40K	Contractor	Land use permit and YESAA screening required if machinery used; hand labour only on Acklen Ditch a likely restriction	
	Construct trail from Crocus Bluff to Acklen Ditch	3	• Construct trail	\$12K			
	Construct trail from Acklen Ditch to Dome summit	3	• Construct uppermost trail section	\$12K			
2.3	Separate Dome Dive and Nature Trail uses where possible	3	• Construct trail sections or other measures as needed	\$7K			
	Construct an alternate top section to Nature Trail	3	• Construct trail	\$12K			
	Upgrade trail for MTB use in Crocus Bluff area	3	• Upgrade trail	\$10K			Hand labour
	Develop 1-2 MTB "flow" trails	3	• Construct trail	\$20K			
	Upgrade technical trail features	3	• Dome Dive #1 only	\$6K	Partner with TH?		
6.3	Restore loop trail around Dome summit/establish parking	3	• Construct trail • Construct parking area/install kiosk	\$6K	Machine for pull-out; hand labour for trail		
2.1/2.2	Develop/install maps & signage	3	• Design, fabricate and install	\$15K	Contractor/City		
3.1	Explore/pilot options to improve safety on Mary McLeod Road hill	3	• Undertake feasibility study/pilot project	\$10K	City/ Contractor		
YEAR 3 TOTAL COST				\$130K			
MEDIUM PRIORITY - PHASE 2 (YEARS 4-5)							
1.1	Construct loop between Moosehide Tr and Acklen Ditch	4	• Develop detailed trail design	\$2K	Contractor	Bundle projects together for cost savings.	
	Construct trail from Acklen Ditch to Dome summit	4	• Develop detailed trail design for remaining section	\$2K			
	General	4	• Complete any outstanding items	\$8K			Contractor/City
YEAR 4 TOTAL COST				\$12K			
1.1	Construct trail from Dome summit to upper radio tower	4	• Construct trail	\$15K	Contractor	Land use permit and YESAA screening required if machinery used	
	Construct trail from Moosehide Trail to Acklen Ditch	5	• Construct trail	\$12K			
	Construct trail from Acklen Ditch to Dome summit	5	• Construct remaining section	\$15K			
2.1/2.2	Develop/install maps & signage	5	• Design, fabricate and install	\$5K	Contractor/City		
YEAR 5 TOTAL COST				\$47K			

Note: Consultant/contractor estimates do not include travel/accommodation expenses; Moose Mountain and Crocus Bluff Connector upgrades are not included due to contingencies but can be incorporated into Year 3 and/or 5 activities. Construction costs assume a combination of machine and hand building is used.

OTHER IMPLEMENTATION TASKS: ADMINISTRATION

Objective	Strategy and/or Detailed Actions	Year	Administrative Tasks	Hours/ Cost	Responsibility
1.2, 2.3, 2.4, 3.1, 4.2, 4.3	<ul style="list-style-type: none"> • Upgrade lower dyke road and reroute/install signage • Upgrade/connect motorized connectors • Separate users from vehicles at Crocus Bluff • Decommission access at Fargie's cabin • Detailed design for trail(s) from new Dome Road to Mary McLeod Road • Close off trails on private property to the public • Develop/enhance routes to reroute off private property 	1	<ul style="list-style-type: none"> • Funding applications & administration • Administer contracts • Liaise with Government of Yukon • Obtain permit/YESAA screening • Work with property owners 	56	Recreation Manager <i>Support from</i> Development Officer
6.1	Develop a MOU with Government of Yukon	1	• Work with YG partners	12	
6.4	Create a trail development approval process and review committee	1	<ul style="list-style-type: none"> • Recruit committee, design process, create application • Promote awareness 	12	
6.2	Maintain key trails and associated structures and signage	1-3	• Administer work with focus on Ninth Avenue Trail, new Dome Road trail, Dyke and Millennium Trails	24/yr \$10K	Recreation Manager
2.5	<ul style="list-style-type: none"> • Incorporate user etiquette info into signage • Work with groups to educate user communities 	1-10	<ul style="list-style-type: none"> • Work with signage designer • Liaise with groups 	8/yr	
4.4	Consider trails in land development decisions	1-10	<ul style="list-style-type: none"> • Monitor potential conflicts • Work with Government of Yukon 	4/yr	Rec Manager Development Officer
5.2	<ul style="list-style-type: none"> • Pursue opportunities for training/apprenticeship • Employ local residents in trail construction and maintenance 	1-10	• Liaise with community, Yukon and other partners/resources	12/yr	Recreation Manager
5.3	Cultivate strategic partnerships	1-10	• Liaise with community partners	12/yr	
6.3	Consider lower-cost design approaches for Ninth Avenue Trail	1-10	• As appropriate	4/yr	
1.1, 2.4, 3.1, 6.3	<p>Detailed design and study for:</p> <ul style="list-style-type: none"> • Acklen Ditch • Various Dome area trails • Separation of Dome Dive and Nature Trail • Alternate top section to Nature Trail • Traffic calming/separation options for Mary McLeod <p>Fieldwork/construction for:</p> <ul style="list-style-type: none"> • New/restored trail(s) from new Dome Road to Mary McLeod • Address drainage problems on Crocus Bluff Connector 	2	<ul style="list-style-type: none"> • Administer contracts • Funding applications & administration (if not funded internally) 	48	

OTHER IMPLEMENTATION TASKS: ADMINISTRATION CONT'D

Objective	Strategy and/or Detailed Actions	Year	Administrative Tasks	Hours/ Cost	Responsibility
6.2	Maintain key trails and associated structures and signage	2	• Update maintenance plan	4	Recreation Mgr
6.4	Create a trail development approval process and review committee	2-10	• Meet as required	4/yr	Recreation Manager
1.1, 2.1, 2.4, 3.1, 6.3	Construction/completion phase for: <ul style="list-style-type: none"> • Acklen Ditch • Various Dome area trails • Separation of Dome Dive and Nature Trail • Alternate top section to Nature Trail Upgrade trail for MTB use in Crocus Bluff • Upgrade technical trail features • Loop around Dome summit and parking area • Develop/install maps and signage 	3	<ul style="list-style-type: none"> • Funding applications & administration • Administer contracts • Obtain permit/YESAA screening 	64	Support from Development Officer
1.1	Detailed design for: <ul style="list-style-type: none"> • Trail from Dome summit to upper radio tower • Trail loop between Moosehide Trail and Acklen Ditch • Trail from Acklen Ditch to Dome summit 	4	<ul style="list-style-type: none"> • Administer contracts • Funding applications & administration (if not funded internally) 	24	Recreation Manager
5.1	<ul style="list-style-type: none"> • Create a trail guide • Work with partners to promote trail network 	4	<ul style="list-style-type: none"> • Administer contract • Liaise with KVA, Yukon Tourism, etc. 	24 \$5K	
6.2	Maintain key trails and associated structures and signage	4	• Update maintenance plan	6	
		4-5	• Administer work with expanded focus to include Year 3 trails	24/yr \$15K	
1.1	Construction/completion phase for: <ul style="list-style-type: none"> • Trail from Dome summit to upper radio tower • Trail loop between Moosehide Trail and Acklen Ditch • Trail from Acklen Ditch to Dome summit 	5	<ul style="list-style-type: none"> • Funding applications & administration • Administer contracts • Obtain permit/YESAA screening 	48	
5.1	<ul style="list-style-type: none"> • Create a trail guide • Work with partners to promote trail network 	5-10	• Update guide and info as necessary	4 \$1K/yr	
6.2	Maintain key trails and associated structures and signage	6	• Update maintenance plan	8	
		6-10	• Administer work with expanded focus to include Year 5 trails	24/yr \$18K	
5.2	Develop a trail stewardship program	6-10		16/yr \$1K/yr	