



Devonian Gardens Trail Concept Plan







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introduction

Trail development continues to be a focus of investment by Canadian communities, in acknowledgment of the many recreational, public health, social, and environmental benefits that trails can provide. Trails, as a primary component of an active transportation network, encourage better connection within a community, and provide a place for people to walk, bike, and enjoy the natural environment. All people, to some extent, engage in active transportation daily, and there are many strategies and approaches to integrate it into every day life. Trails have many benefits for both individuals and the broader community, and are valuable public facilities that support an overall quality of life.

A trails conceptual plan is a vision; one that provides the basis for a Community to support, encourage, and expand trails use from within. In order to be successful, the trails plan must not only outline the physical route and trail facility desired, but also the necessary operational and programming initiatives required to support the trail over the future. Planning for and constructing a new trail connection is an investment in both time and money, and therefore it is essential that the plan respond to the short and long term needs of the Community.

The Devonian Gardens Trail project is an opportunity to plan for a high quality active transportation link that fulfills an important function on a neighbourhood, community, and regional scale. The implementation of this trail not only connects two important, regional open space destinations, but enhances the overall quality of life for Parkland County through the provision of a desirable recreation facility. Beyond the County, this trail forms an important piece of a broader vision for Regional open space, as key element of the River Valley Alliance Plan of Action. The long term implementation of this trail will support Parkland County's vision as an innovative and progressive rural community, and an important contributor to the Capital Region.





Study Purpose and Objectives

Parkland County commissioned this study to develop a conceptual plan for a trail connection between the Devonian Botanical Gardens and Prospectors Point Day Use site. This trail link was originally identified as a phase one component project of the River Valley Alliance's Plan of Action, one of three such initiatives within Parkland County.

The overarching goals of this study is to provide guidance for the future development of this trail. This guidance should achieve the objectives of the project steering committee, be fiscally responsible to the County, and respectful of the input received from the Community.

The core objectives of this project as specified in the request for proposal (RFP) included the following:

- Complete a trail corridor assessment, including ownership, land use, biophysical assessment, and built form, for the purposes of determining potential trail alignments and routing options.
- Engage the Parkland Community to gather feedback and input on the trail, including potential alignment options, types of non-motorized uses it should accommodate, and other concerns or issues.
- Develop a conceptual plan and report, detailing project methodology, assessment findings, public engagement results, concept description, estimated costing, potential phasing, priorities, and implementation recommendations.
- Prepare an Alberta Cultural Historical Resources Act Clearance Application package in support of the trail development.
- Present the final report to Council and Senior Administration.

Study Commission and Process

This report was prepared by DIALOG, and is the culmination of a four-month public engagement and trails design process commissioned by Parkland County.

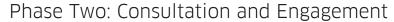
The resulting conceptual trails plan is reflective of the ideas and community dialogue heard throughout this project. The vision for the plan came into focus through a series of stakeholder and community consultations where key issues, ideas, and concerns were raised. The need for the County to work with the local neighbourhood, while considering the broader regional perspectives became apparent, and is the best approach to successfully address key concerns and move the project forward.

This project was organized into four phases that were framed by an extensive public engagement process, and was designed to solicit input, ideas, and feedback on the long term community vision for this trail connection.

Phase One: Project Inception

Phase One began with a project initiation meeting in December 2013, where the consulting team met with County staff to review the time line, deliverables, and protocol for the study. A steering committee comprised of key County staff was struck. Spatial data for the study area, existing County policy, and relevant background information were thoroughly reviewed to guide the study process. A list of internal and external stakeholders was provided to further establish the unique context, opportunities and issues surrounding this project. The consulting team completed an inventory and review of the study area in early January 2014.





The intention of phase two is to build upon the previous phase, and work with the community to learn more about the issues and ideas surrounding this project. Working closely with the client team, a series of community consultations, stakeholder workshops, direct interviews, and on-line engagements were completed to develop a broad understanding about the realities of this trail connection.

Public Workshops

A public visioning workshop was held on Wednesday, January 15, 2014 at the Parkland County Centre. The workshop was designed based on the Public Engagement Spectrum outlined by the International Association of Public Participation, and sought to first inform and then solicit input from participants regarding the trails project. The workshop brought to light the strong and divergent opinions of the community with respect to this project, while also highlighting a number of critical common themes. Through lively discussion, as a collective audience and in smaller breakout groups, key feedback focused on the question over the appropriateness of this connection (as opposed to alternative routes), the need to respect private landowners and their estate residential quality of life, and the concern regarding unregulated off-highway vehicle use within the study area. In response to the comments and input received at this session, a second public workshop was scheduled for Tuesday, February 4, 2014.

Given the concerns raised at the first public workshop, the second workshop was designed to focus on the history and origins of the trail link and the issues surrounding its implementation. Leslee Laing, the program coordinator for the River Valley Alliance, attended and provided an overview of the RVA plan of action and the history of the proposed connection. Following Leslee's presentation, a brief power point presentation on the project specifics, process to date, and next steps was given. Workshop participants were invited to circulate and add comments and ideas to a series of issue posters, and then a group discussion encouraged more dialogue on the project issues. Questions and ideas centered around whether or not a trail should be developed at all, the impact and benefits of such a trail, alternative routes, and ongoing trail operational issues in the study area.

The issues and ideas raised from the public process are summarized in Table 1.1.

Stakeholder Workshops

Three stakeholder workshops were held as part of the engagement phase of the study. Internal Parkland County staff and external stakeholder visioning workshops were held on Wednesday, January 15, 2014 to review opportunities and constraints for the project. A list of invited stakeholders was provided by Parkland County staff, and this list was expanded during the study process. Stakeholders were encouraged to share their specific expertise and ideas on the project during the visioning stage. On February 13, 2014 the stakeholder groups were convened together to participate in a route selection workshop. During this session, the study process and public input outcomes to date were reviewed, and stakeholders were invited to identify recommended alignments for the trail.



Online Survey

In order to further solicit public input, an on-line survey was launched to gather broad feedback on the trail project. Over a six week period, the survey yielded 98 respondents who commented on their trail preferences and use patterns. The full survey results may be found in Appendix A.

The majority of the respondents to the on-line survey were between the ages of 35 - 64 (75.3%), with a majority (51.7%) of men. Parkland County residents were the vast majority of respondents (85.7%), with West 35 Estates having the largest percentage of responses from those who identified their neighbourhood or subdivision. While the single largest answer (42%) indicated a household size of two individuals, the majority (47.6%) have a household of three individuals or more, which suggests a range of families with and without dependents living at home.

In terms of usage patterns, survey respondents indicated high participation in walking, hiking, and bird watching. Most respondents indicated they never participate in in-line skating, running, cross country skiing, skateboarding, equestrian, and snowshoeing. 67.4% respondents identified as being a current user of Parkland County Trails. With respect to the importance placed on trail services and amenities, most individuals emphasized trail use (single and multi-use trails), trail surface material, winter maintenance and associated trail amenities.

The majority of responses (70.9%) were familiar with the objectives of the River Valley Alliance, and the majority (79.8%) would support the development of a trail connection from the Devonian Botanical Gardens to Prospectors Point.



Parkland County Devonian Gardens Trail Conceptual Plan

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Table 1.1: Public Engagement Thematic Summary and Outcomes

Connectivity	Safety	Environmental	Experiential	Operational
Prospectors Point, the Imrie Property, Westridge Golf Course, and Devonian Gardens are all potential trail destinations / nodes.	Proximity of proposed trail to	Potential of trail to negatively impact the natural environment.	Non-motorized user experience.	Perception and history of ongoing, prohibited trail uses (i.e. OHV) within the study area.
Is the Devonian Gardens the best destination from the River Valley trail system?	Potential for conflict between users, specifically between	Low-lying and wetland areas and stream crossings are present (especially along Tucker's Field) and these need to be addressed.	Trails are a desirable facility with community suport	Need for clear County support for ongoing trail maintenance and operation.
Trail user experience should not be compromised for connectivity.	OHV usage is a significant safety concern.	Opportunity for restoration and environmental education.	lannronriate (rural nature of the	Very low support for any motorized uses on the trail.
Broader connectivty to Devon, Westridge, and along the River Valley are important.	Will the trail increase crime and undesirable uses in the area?			Concern over the ability to enforce trail regulations.

Phase Three: Technical Review and Analysis

Phase three of the study consisted of the technical review and route selection. Based on the input received from the community, three consolidated candidate routes were identified. These route options included an alternative connection raised by a community member, which would connect to another site along the River Valley, outside of the primary study area.

The routes were reviewed with stakeholders in terms of the uses that were both desirable and feasible, and some of the technical considerations associated with each. Based on this input, a list of opportunities and constraints was developed in order to better assess and review the potential of each candidate linkage. Throughout phase three of the study, recommendations were cross referenced with trail design literature and existing County policy, to ensure consistency with County objectives and established trail standards.

To complement the route options, specific trail design guidelines were developed to detail the proposed trail connections. Each cross section is based upon accepted trail design standards, and applied at a conceptual scale across the study area.

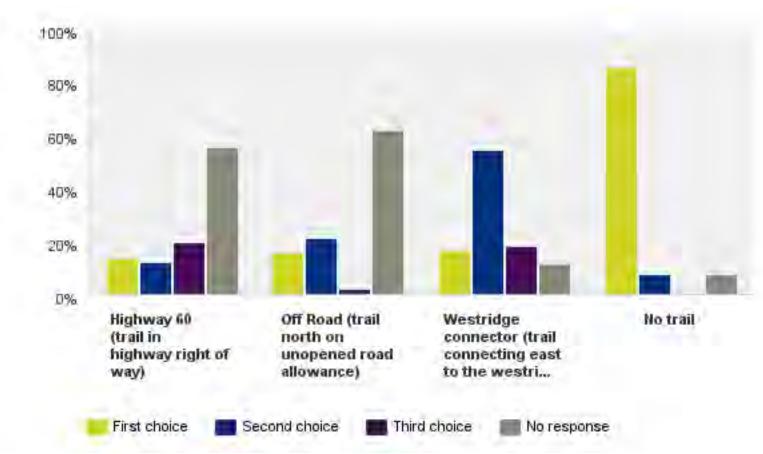
Phase Four: Reporting

Based on the preceding three phases, a draft trails plan was completed. This draft was presented to the steering committee, staff, stakeholders, and the community on Tuesday, March 4, 2014. Following the presentation, the draft report was made available for further review by staff, stakeholders, and the public. The report was posted on the County's website on March 5th, and an online survey requesting feedback on the route option was launched to capture feedback on the document. The online survey was open until April 11, 2014.

The online survey collected general data on the residency of respondents, to determine if they are a County resident, and live in the immediate study area. Respondents were then asked to rank the three trail options presented in the draft plan, the Highway 60 route, the off-road route, and the Westridge connector route. At the end of the survey, an opportunity for general comments was provided.



Figure 1.2: Draft Plan Survey Question #4, Trail Route Preference Ranking



There were 75 respondents to the draft plan survey, primarily from Parkland County. For those who indicated which subdivision they reside in, West 35 was the majority. In response to the route preference, the majority indicated no trail as their first choice. For those who selected one of the three route options as their first choice, the breakdown between routes was fairly even. The response summary to the route options is provided in figure 1.2

Open comments received to the draft plan survey are indicative of the range of opinions on the trail concept. Many people indicated support for the trail, while there were also those who do not wish to see any trail development in this area. The full survey results are included in the appendix of this report.

In addition to the survey responses, feedback was provided directly to the study team. A number of stakeholders, landowners, and residents provided feedback and commentary on the study process and proposed route alignments. The study team received significant input on the Westridge Connector option through direct correspondence, indicating concern over this alignment. Given the nature of the private lands in the Westridge area, any reference to a specific alignment has been removed in this final version of the report. The general idea for a trail connector to Westridge continues to have merit, especially in a long term time-frame and the public support expressed for this connection. Given these considerations, further study of the Westridge Connector and extensive consultation with landowners is required, to properly assess the feasibility of this option. Further detail on the Westridge Connector is provided in chapter three of this report.









study context & best practices

This chapter provides a summary of the existing physical, socio-economic, and environmental attributes of the study area, with specific reference to the relevance to the conceptual trails plan. In order to develop appropriate and rational recommendations for this trails link, it is essential to have a thorough understanding of not only the physical conditions of the study area, but the overall context as well.

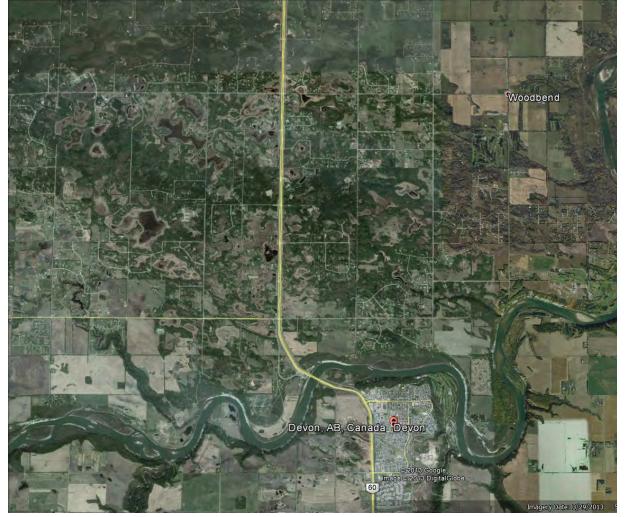


Photo courtesy Google Earth







Community Demographic Profile

Parkland County is a rural community east of the City of Edmonton, and is one of seven stake-holding members of the River Valley Alliance. Unlike other rural communities across Canada, Parkland County is experiencing population growth, likely due to the proximity to the City of Edmonton and the attractive quality of life it offers residents. Census figures from 2011 indicate a population of 30,569, which represents a 4.6% increase over the 2006 population. Parkland County is a relatively large community with a geographic land area of 2,387.68 square kilometers. The median age of the population is 42.2, which is older than the provincial median age of 36.5. The largest age cohort is 50 - 54 years of old and the majority of households are two person families, which is consistent with a slightly older population base.

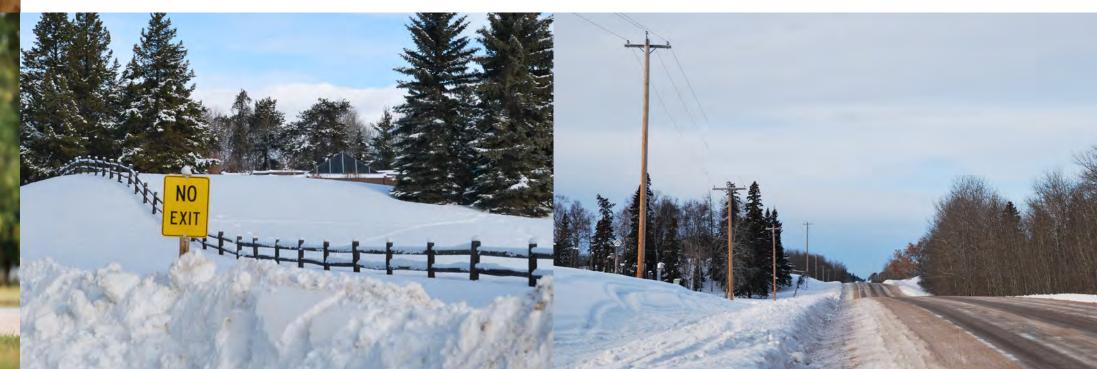
These demographic data are indicative of a growing and aging population. If this trend continues, Parkland will continue to experience residential growth and with it the associated demands for services such as low-impact recreational experiences, parks, and open space.

Study Area Context

The trail link under consideration for this study is located in the south east corner of Parkland County, immediately across the North Saskatchewan River from the Town of Devon. Highway 60, a primary arterial connection travels north, and east of the highway is the Devonian Botanical Gardens, some large rural lots, and several estate residential subdivisions. The terrain rises quite steeply from the River Valley and Prospectors Point, and then slopes more gently heading north towards the Devonian Gardens. While there are large contiguous blocks of vegetation, the study area is primarily cleared land, with residential areas having more traditional landscaping.

The Devonian Botanical Gardens are located towards the northern extent of the study area. Owned by the University of Alberta, this 190 acre site consists of cultivated gardens, greenhouses, plant collections, and an extensive trail system. As a regional tourism destination, the Devonian Gardens play host to visitors from across Alberta and the world, in addition to their role as a research and educational site.

Prospectors Point Day Use Area is one of the only locations along the entire River Valley where the water is more easily accessed. Popular for gold panning, fishing, beach combing, and launching canoes, this park is a primary node at the western gateway to the River Valley Park system. Presently the site has primitive services, including a small parking and picnicking area, and informal trail connections to the north and along the River Valley.



The River Valley Alliance

The River Valley Alliance (RVA) is a non-for-profit organization formed in 1996 by seven municipalities that border the North Saskatchewan River in the Capital Region. Comprised of the Town of Devon, Parkland County, Leduc County, the City of Edmonton, Strathcona County, Sturgeon County, and the City of Fort Saskatchewan, the RVA is committed to the bold vision of creating a continuous, integrated park system within the Alberta Capital Region. The RVA goal is to develop and connect the many parks, trails and open spaces that span the River Valley to create one of the largest and longest metropolitan parks in North America. Specifically, the RVA's stated vision is:

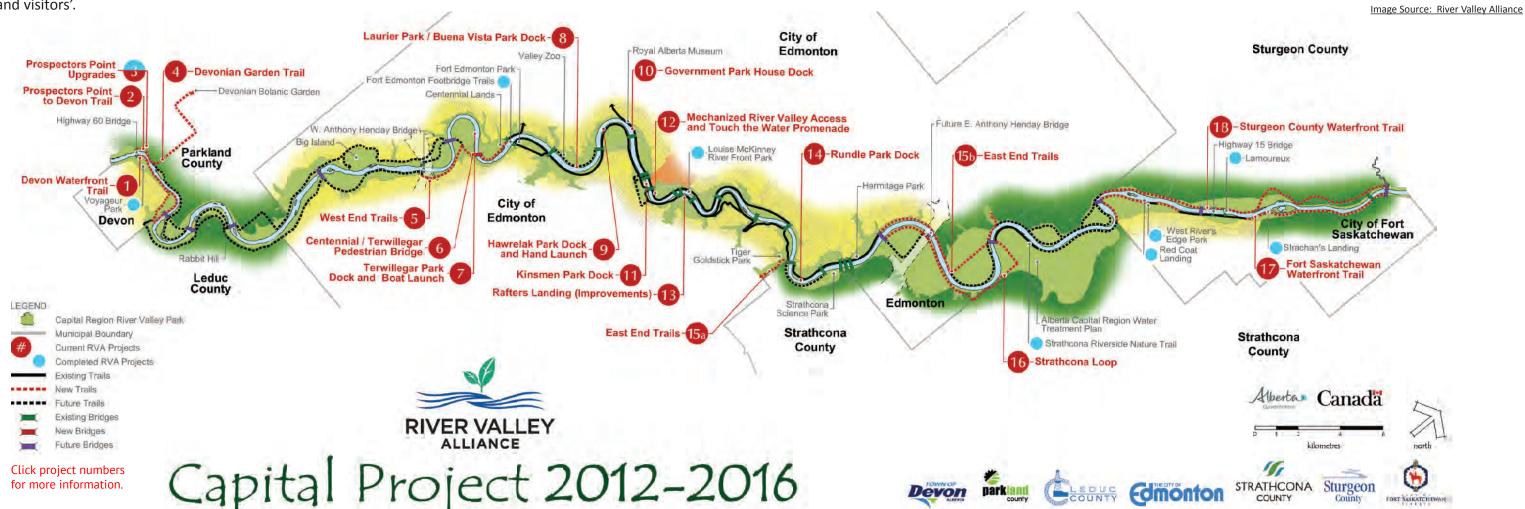
'To create a continuous world class metropolitan river valley park system from Devon through Parkland County, Leduc County, Edmonton, Strathcona County, and Sturgeon County to Fort Saskatchewan, and to preserve, protect, and enhance the river valley to create one of the largest river valley parks systems in the world for year-round accessibility and enjoyment of its citizens and visitors'.

To achieve this vision, the RVA released its plan of action in 2008, after an extensive public engagement program. Key outcomes from that engagement process included the acknowledgment of stakeholder expectations, which included:

- Protect and preserve natural areas.
- Maintain and enhance access
- Manage potential conflicting uses through planning, design, regulations, and enforcement.
- Keep the river valley safe and enjoyable.
- Promote partnerships for service delivery and facility development.
- Recognize the rights of private landowners.
- Recognize the unique people, communities, and culture that are part of the river valley.

As the primary goal of the RVA is a land and water based trail system, much emphasis is placed on trails projects. The overall trail network imagines an integrated system of trails, trail heads, rest stops and viewing points that connect regional nodes and destinations, and encourage users to be connected to the water. Visual identity standards, interpretive opportunities and outdoor education are all important elements of the overall trail vision.

To move phase one of the plan forward, the RVA has created a funding program where local municipal investments are matched with federal and provincial funds earmarked for RVA phase one projects. Identified projects must move forward at the municipal scale, with matching funds allotted in support of implementation. The funding program is time-sensitive, and monies must be spent before 2016. Funds that are not spent by an individual municipality go back into the pot for access by other RVA stakeholder.





Planning & Policy Context

Numerous existing planning documents and policy have informed this study process, and the topical issues are summarized below.

Municipal Development Plan (Parkland County 37-2007)

Parkland County's Municipal Development Plan (MDP) is the County's overarching planning policy document and outlines direction on how land within the community will be uses. The MDP has a number of specific goals that are related to the provision of recreation and open space for County residents. Within the MDP, it is acknowledged that the recreation and open space needs of residents are diverse, and the goal is to plan for and manage recreation facilities and open spaces for the advantage of all County residents.

Key objectives of the municipal development plan, as they relate to trails, recreation, and open space include:

- The County will develop a strategic open space master plan, which will include guidelines for the locations, types of uses, and required improvements for parks and open spaces.
- The appropriate locations for trail systems, a trail sharing protocol and trail ownership and management strategies shall be considered by the strategic open space master plan.
- The County will support low impact low maintenance parks.
- Existing recreation agreements with urban neighbours are supported and may be renewed.
- County will continue to cooperate with the River Valley Alliance in promoting and development that portion of the North Saskatchewan River Valley and adjacent lands, as a component of the Capital Region River Valley Park.

Off-Highway Vehicle Bylaw (Parkland County 04-2011)

Parkland County's Off Highway Vehicle Bylaw outlines many specific regulations related to the operation of OHVs within County boundaries. Policies and provisions relevant to the Devonian Gardens Trail include:

- No person shall operate an OHV on a highway or in a park unless specifically provided for by the bylaw.
- OHV is permitted to travel on the extreme right hand side of the roadway or ditch and shall travel single file at all times. Travel shall be in the same direction as traffic.
- The CAO or Council may designate parks, hamlets, or multi-parcel subdivisions as "No - OHV zones"

Traffic Bylaw (Parkland County 46-2006)

The Parkland County Traffic Bylaw defines the use and regulation of all County roads. A number of provisions are relevant to future trails use along road right-of-ways or within unopened road allowances, and include:

- County sidewalks are specific to pedestrian use.
- The County commissioner is authorized to designate crosswalks.
- Council may grant a license or permit for the use of a road allowance, public highway, or portion of road when it is not required for public use.
- No person shall ride a cycle on any sidewalk, with the exception of children's bicycles having a wheel diameter of less than 50cm.
- No person shall ski, roller skate, or skateboard upon a roadway or highway.
- The definition of highway includes the width of the entire ROW.

Parks Bylaw (Parkland County 44-2002)

With respect to trails uses, the Parkland County Parks Bylaw only restricts equestrian usage in areas that are specifically prohibited.



Recreation, Parks, and Open Spaces Master Plan (RC Strategies, 2008)

In 2008, Parkland County commissioned RC Strategies to undertake a recreation, parks, and open space master plan. The plan focused on four administrative planning principles relevant to the River Valley, including diversity, balance, linkage, and access & protection.

Diversity emphasized the benefits of the River Valley begin available to a broad cross section of County residents, and through community consultation desirable uses should be identified. Balance identified that the proposed recreational activities be compatible with the conservation and preservation of existing natural areas, where public accessibility does not compromise natural protection. The principle of linkage relates to the broader regional recreation potential, outlining that the continuous nature of the River Valley must be considered and enhanced, with reasonable access provided to both land and water. Access and protection highlight the legacy importance of the River Valley, and that the needs of future generations should be considered. Wherever possible, the integration of educational opportunities should be explored, to showcase this legacy.

The recreation, parks, and open spaces master plan also makes recommendations on the County trails network, and specifically to the Prospector's Point Day Use Area.

Prospector's Point Day Use Area

Under the master plan, the vision for Prospectors Point is outlined, which includes the short term upgrade and improvement of the existing site infrastructure. Over the long term, Parkland County will continue to invest in Prospectors Point as a low impact, passive destination for river access, gold panning, picnicking, and trails uses. Existing trails should be maintained and the trail surface upgraded. Site furnishings should be installed and maintained at the recommended rate of 1 bench and 1 picnic table for every 10 parking spaces provided. The installation of interpretive signage is also seen as a benefit to this popular day use area.

County Wide Trails

The recreation master plan identifies that the trails network is fairly consistent across the County. Investment as it relates to existing trails should focus on resurfacing to reduce rutting and improve trail accessibility. A holistic, County-wide approach to trails development and management is sought through the completion of a County-Wide Trails master plan. Future development of trails needs to consider the demographics of the County and be consistent with both an aging population and a trend towards 'rurban' county estate residential living. Under this framework, non-motorized trails continue to be a priority for recreational development.







Parkland County Devonian Gardens Trail Conceptual Plan

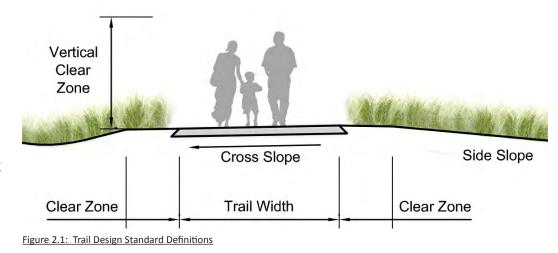
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Table 2.1: Trail Facility Spatial Standards

Trail User	Experience	Trail Surface	Gradient	Trail Width
	Primititive	Wood Chip	up to 45%	0.5 - 1.0m
Pedestrian	Semi-Developed	Granular	up tp 20%	1.0 - 2.0m
	Developed	Paved	up to 5%	2.5m +
	Primititive	Un-surfaced	up tp 30%	0.2 - 1.0m
Cyclist	Semi-Developed	Granular	up to 15%	1.0 - 2.0m
	Developed	Paved	up to 10%	2.5m +
	Primititive	N/A	N/A	N/A
Small Wheeled	Semi-Developed	Paved	up to 10%	1.0 - 2.0m
	Developed	Paved	up to 5%	2.0m+
	Primititive	Un-surfaced	30% +	0.5 - 2.0m
Equestrian	Semi-Developed	Semi-packed	up to 15%	1.0 - 3.0m
	Developed	Packed	up to 10%	3.0m +
Cross Country Skiing	Primititive	Ungroomed	up to 30%	1.0 - 2.0m
	Semi-Developed	Occasionally Groomed	up tp 20%	2.0 - 4.0m
	Developed	Track Set	up to 10%	4.0m+
Snowshoeing	Primititive	Ungroomed	up to 30%	0.75 - 1.5m
	Semi-Developed	Groomed	up to 20%	1.5 - 2.5m
	Developed	Groomed	up to 10%	2.5m +
Multi-use	Primititive	N/A	N/A	N/A
	Semi-Developed	Granular	up to 10%	2.5m +
	Developed	Paved	up to 5%	3.0m +

Trail Design and Development Best Practices

A trail is a piece of physical infrastructure that is comprised of a series of basic physical components. The design and organization of these components is what determines functional uses of the trail, overall user experience, and impacts the design of the overall trail corridor. Design components of the trail include the trail width and surface type, clearing width and height, and drainage.



Spatial Standards & Surfacing

In terms of the spatial standards for an off-road multi-use trail, a review of the major trail design guidelines and references applicable to the Parkland County context vary depending on anticipated use, and surrounding landscape. In generally, the minimum recommended width for the trail surface is typically 3.0m which facilitates traffic in both directions. Beyond the width of the trail itself a clear zone should be provided both horizontally and vertically. A recommended minimum clear zone of 1.0m on either side of the trail provides a respite area for users, as well as accommodating runoff and drainage from the trail surface. A minimum vertical clearance of 3.0m is desirable, especially when equestrians may be using the trail.

The most common trail surfacing materials are asphalt and stone (crusher) dust, each with its own benefits and constraints. Asphalt trails facilitate wheeled uses, accessibility, and longevity; although at a higher capital cost. Stone dust trails are less expensive to implement, but require increased maintenance to provide an accessible surface for mobility restricted users. Stone dust trails provide more utility for non-wheeled activities such as cross country skiing and equestrian users.

Grade

The longitudinal slope of the trail is an important design consideration because non-motorized users are self-propelled and hence feel the impacts of grade acutely. Acceptable grades vary, depending on the trail typology and usage, and whether or not the trail meets the definition of accessibility under the Alberta Building Code. Generally, the grade of a multi-use trail should not exceed 5% in order to be considered accessible under code. However, this is often difficult to achieve, based on the terrain and context of the trail location. Within this study, the trail has to ascend from the River Valley, quite a steep elevation gain. Construction strategies for reducing slope include switchbacks, respite zones, and stairs or ramps. Each approach has both benefits and constraints, including cost, impact to the surrounding landscape and required space. Detailed design of the trail should consider the overall best approach to transition up from the River Valley.

Cross Slope

An off-road multi-use trail should be designed with a cross slope to ensure positive drainage and reduce ponding on the surface. For a stone dust or asphalt trail, the typical cross slope is a minimum of 2%, usually crowned to drain evenly to both sides of the trail. Depending on the trail location and adjacent slopes, a drainage swale or ditch may be required, to ensure water and debris do not run across or become deposited on the trail.

Crime Prevention Through Environmental Design & Trail Safety

The safety of trail users is an essential component of the comprehensive design of a trail. Personal safety, both actual and as perceived by the trail user, directly influences the experience and utility of the trail. The principles of Crime Prevention Through Environmental Design (CPTED) can provide strategies for addressing security concerns along the proposed trail, especially given the rural context of the study area.

The four primarily CPTED principles are:

- Natural access control: deter access to a target and create a perception of risk to an offender.
- Natural surveillance: the placement of physical features and / or activities and people that maximize natural visibility and observation.
- Territorial reinforcement: define clear borders of controlled space from public to semi-private to private, so that users of an area develop a sense of ownership over the trail corridor.
- Maintenance: allow for the continued use of space for its intended purpose.

Detailed design of the trail should apply the CPTED principles, as a well designed trail benefits both users and adjacent landowners. Through strategic and well considered visibility, the trail can actually improve safety and reduces the potential for crime which is a common concern from neighbours during the trail planning process. Regulatory and way finding signage, regular enforcement, and frequent maintenance are all strategies that provide visible cues that indicate care, and provide natural deterrent for undesirable uses.

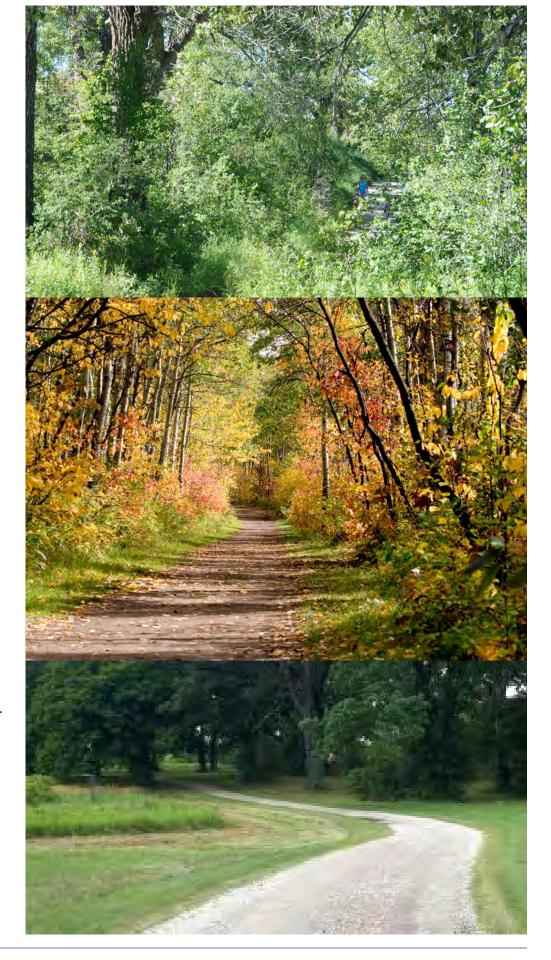
Ecology & Wildlife

The potential impact a trail may have on the surrounding landscape is an important consideration during both the conceptual planning and detailed design phases of the project. Generally, a trail's impact may be classified as either physical damage or increased disturbance. Depending on the typology, alignment, and design, the trail can result in soil compaction and erosion, plant loss, and wildlife interruption.

There are ecological benefits to a trail, including the preservation of green corridors and the connection of green spaces within a broader area. Trails development can provide areas for wildlife to travel through the landscape, facilitate infiltration of stormwater, and can focus public access away from sensitive habitat and ecosystems. The potential impacts and benefits of trails to the natural environment have been well documented, and several key principles are relevant when exploring conceptual and detailed trails planning and design:

Trails planning should:

- Consider alternative design treatments for surfacing and alignment.
- Use previously disturbed areas or zones of existing footpaths and development.
- Educate trail users on environmental stewardship and best practices, such as staying on the trail and not picking flowers.
- Monitor impacts after trails implementation.
- Direct users away from key habitat by providing formalized trail connections in less sensitive areas.
- Involve the public in restoration, mitigation, and educational initiatives.









conceptual plan

This chapter describes the vision for the trail linkage, as well as the physical route options. The vision and route options arose from a combination of factors; the public engagement program, the technical review, field investigations, and other environmental, economic, and aesthetic considerations.

The intent of the plan is to balance connectivity with public safety and acceptance, regional aspirations with local interests and input, and public investment with public benefit. The plan is presented in terms of its overall vision and guiding principles, and then specific route options and typologies.



DEVONIAN GARDENS TRAIL
CONCEPTUAL DESIGN

scale 1:300



Crown Land
County Land
February 5, 2014

Figure 3.1: Study Area Map





Project Vision

The overarching vision for this project is as follows:

To achieve a well conceived and high quality conceptual trail alignment between the Prospectors Point Day Use Area and the University of Alberta's Devonian Botanical Gardens that protects, preserves, and enhances the surrounding landscape and quality of life for Parkland County residents.

Building upon this vision statement, a series of guiding principles and objectives were developed to structure the conceptual design of the trail and provide a basis for the evaluation of route options. These principles were derived from the input and ideas contributed to this project by Parkland County staff, stakeholders, and the community.

Guiding Principles and Objectives:

Technical Design: Create a multi-use, non-motorized, semi-developed trail connection between the North Saskatchewan River Valley and the Devonian Botanical Gardens.

- Design the trail to support non-motorized uses such as walking, running, biking, snow-shoeing, and cross country skiing.
- Emphasize accessibility where topography and landscape conditions permit.
- Design the trail to mitigate non-permitted uses through restrictive gates and trail-heads.
- Integrate appropriate trail amenities such as signage and garbage receptacles.



Final Report May 2014

Parkland County Devonian Gardens Trail Conceptual Plan



User Experience: Create a pleasant, enjoyable trail experience for users.

- Design the trail to for a semi-primitive user experience, emphasizing the preservation of the rural character of the study area.
- Take advantage of the natural amenities and location of the trail connection.
- Integrate site interpretation and education at key opportunities.
- Consider the longevity of the trail, and how it may connection to future trails in the area or other open spaces.

Private Property Rights: Through all stages of the trail, from concept to design and implementation, respect and acknowledge the rights and interests of adjacent property owners.

- Promote positive interaction between key project stakeholders.
- Integrate design strategies such as buffering and physical screening to mitigate potential impacts.
- Develop trail regulations that promote respect and etiquette along the trail.
- Enforce trail regulations and create a trail stewardship committee to work with user groups to regulate the trail.

Safety: Design a safe trail for all users to enjoy.

- Restrict non-permitted uses of the trail through physical design strategies.
- Encourage visibility and eyes on the trail.
- Address safety while providing for an enjoyable trail experience.
- Minimize user conflict through responsive trail design.

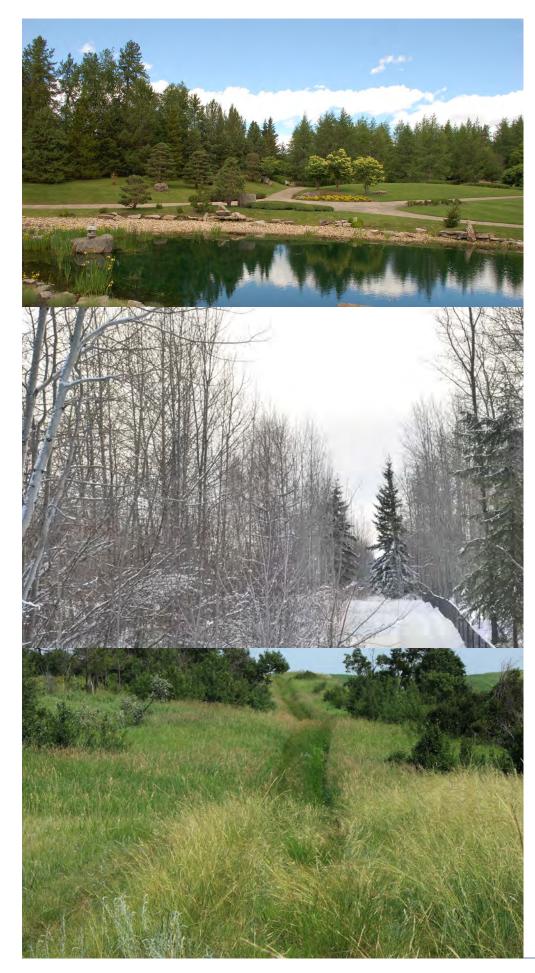
Environment: Plan and develop a trail connection that minimizes negative impact to the landscape and encourages public education and environmental stewardship.

- Recognize and mitigate potential negative impacts to wildlife and habitat along the trail corridor.
- Locate the trail along established corridors, to direct use away from more sensitive habitats.
- Integrate public education and interpretive opportunities along the trail.
- Use the trail implementation as an opportunity for restoration projects, such as the planting of native vegetation in buffer areas along the corridor.



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Trail Nodes

Devonian Botanical Gardens

The Devonian Botanical Gardens is a major tourism and educational destination in the western end of the River Valley. The opportunity to provide an active transportation connection to existing and future River Valley trails has the potential to provide significant tourism, economic, and recreational benefit for the County and the Region. Presently, the site is structured around a semi-private parking lot, with the majority of the site fee-for-access. This restricted site access is important, as it will limit the opportunity for external connections to the new trail link. Short term trail access should seek to connect to the parking area and / or other semi-public areas of the site.

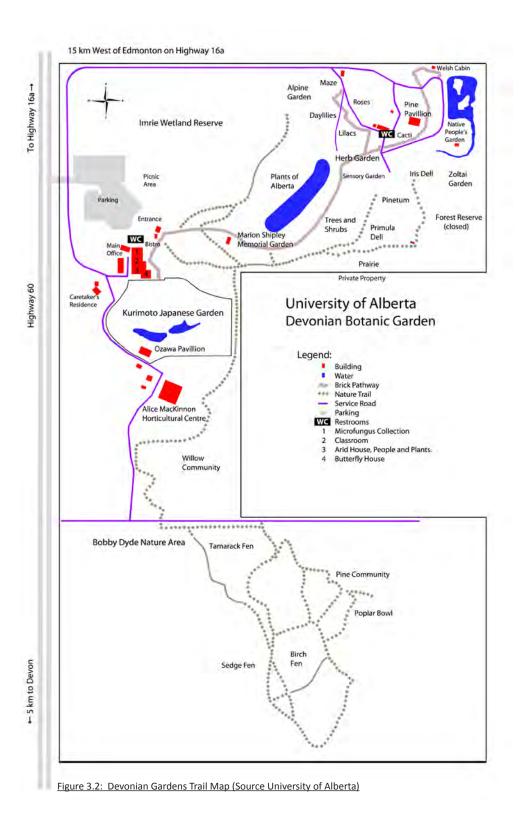
The Devonian Gardens is exploring its future growth and development, and looking at land partnerships for adjacent parcels. The County should continue to work closely with Devonian Garden / University of Alberta staff as these plans unfold, to ensure an optimal connection for the trail now and in the future. Opportunities for land partnerships should also be explored, if they provide mutual benefit.

Prospectors Point Day Use Area

Prospectors Point Day Use Area is expected to be undergoing upgrades over the 2014 construction season, to improve the condition of the facilities. These improvements will strengthen this park as an important node at the western gateway to the River Valley. The park's waterfront location is both an opportunity and a constraint for future trail connections, as the grade limits trail accessibility. In the short term, a trail connection will likely focus on stairs. Detailed design should explore the feasibility of switchbacks, to facilitate wheeled users making the climb.

Westridge Golf Course

Westridge Golf Course is a privately owned site east of the primary study area. Its location close to future proposed trail bridges provides an interesting opportunity for consideration as a future node or destination. As privately owned land, acquisition or land use agreements would be required, prior to any open space development or conceptual planning.



DEVONIAN GARDENS - PROPSECTORS POINT TRAIL



Table 3.4: Highway 60 Corridor

Guiding Principle	Opportunities	Constraints
Technical Design	 conceptually, there is sufficient width to provide for a trail along the eastern edge of the highway. 	 it is understood that in the long term, the highway may be widened and the trail would have to be removed.
	there are few physical barriers to the trail (i.e. vegetation, water courses).	 the connection from Prospector's Point to the ROW is steep and would be challenging to construct and use.
	 Alberta Transportation provides specific technical guidelines for the implementation of this type of trail. 	 Given the shoulder width, it would be difficult to design barriers to block OHV use.
		Permission would be required from Alberta Transportation.
User Experience		User experience would be negatively impacted by the proximity to a major highway.
Private Property Rights	the route would have minimal impact on adjacent landowners, given the current usage of the adjacent parcels.	
Safety	High visibility of the trail would be a natural deterrent to crime or trail user safety.	Safety of users would need to be provided through the use of a physical barrier from traffic.
Environment	There is a low likelihood of impact to habitat, given the adjacent highway.	There is low opportunity for ecological restoration or habitat improvement, given the proximity to the highway.
Other Unique Considerations		The future development of the highway may preclude the feasibility of this option.

Trail Linkages

The terms of reference for this project requested the study team consider a trail linkage from the Devonian Botanical Gardens to the Prospector's Point Day Use Area. Through the public and stakeholder consultation process, two primary options for this linkage emerged. Additionally, the idea of a third route, linking the Devonian Gardens to the River Valley through the Westridge Golf Course was raised by the community. Each of these trail alignment options has several key opportunities and constraints that are outlined in the following section.

For further detail on the trail typology proposed for each linkage, please refer to the following chapter.

Highway 60 Corridor

In Alberta, the opportunity to develop trails within the right-of-way of Provincial highways is a relatively new approach with several successful case studies. The study area for the Devonian Garden Trail is bounded to the west by Provincial Highway 60, which passes across the bridge from the Town of Devon almost above Prospector's Point before traveling north to the main gate of the Devonian Gardens. In this location, Highway 60 has a two lane, divided cross section, within an approximately 90m wide right of way. Given this alignment and cross section, it is feasible to consider a trail linkage along at least some or all of the distance between the Gardens and Prospector's Point.

Trail Typology: Multi-use Trail within Highway Right of Way

Associated Amenities: Trail heads & Trail Signage







Table 3.6: Off Road Trail

Guiding Principle	Opportunities	Constraints
Technical Design	 For the off road sections of this trail, design is relatively straightforward. The width of the road allowance would permit gates to restrict OHV use. 	For certain sections, the trail would travel adjacent to a County road, and could be challenging given the rural road cross section.
User Experience	Trails users would benefit from the semi- primitive, natural focus of this trail route.	
Private Property Rights	Design strategies for buffering should be applied for all sections bordering residential development.	Concern from specific neighbourhoods regarding the trail's potential impact on their property.
Safety	 Formalizing trail use provides the opportunity to restrict and enforce OHV restrictions. Increased trail traffic naturally deters undesirable uses. 	CPTED principles for visibility should be provided to encourage eyes on the trail.
Environment	 Trail has the potential to preserve a green corridor connecting existing large open space blocks. Trail is proposed in an alignment that already experiences non-formal trail use, therefore impact is minimized. 	
Other Unique Considerations		Iimited land acquisition / land agreements required. strong but focused community opposition.

Off Road Trail

Within the study area, several County-owned road right of ways exist that do not have roads, which would provide a natural corridor for a trail connection. The proposed off-road linkage would connect north from the Imrie Property, a land parcel presently owned by Alberta Sport, Parks, and Recreation that is undergoing a trails design exercise. This parcel, to be preserved in perpetuity as open space, is a natural node that complements both Prospector's Point and the trail connection itself. Heading north from the Imrie property, the trail would follow the 20m wide road allowance which is directly west of the West 35 subdivision. Given the residential natural of the adjacent land use, the trail should be situated as far to the west as possible, giving a 10m or 30 foot buffer to the property line. Vegetation, privacy fencing, and berming would provide additional screening for residents. Heading north, the trail would travel adjacent to Range Road 262 before crossing Graminia Road. Due to the posted speed limit of Graminia Road, a highly visible trail crossing is essential.

The trail would continue north adjacent to the road until the road ends, and return to an off-road typology. Again, buffer distances between the trail corridor and adjacent land owners should be maximized. The trail would pass immediately adjacent to Tucker's field, and would have the benefit of connecting this open space to the Devonian Gardens, the Imrie Property, and Prospector's Point.

North of Tuckers Field, two trail would head west beside Township Road 512, and connect to Devonian Gardens either along the existing Highway 60 service road allowance, or through a private land owner / land acquisition agreement. Both of these connections favour a clear connection to Devonian Gardens that is in keeping with their long range plans. The County should explore partnership opportunities with the University of Alberta towards the development of this trail route option.

Trail Typology: Multi-use Trail adjacent to County Road, Off Road Multi-use Trail.

Associated Amenities: Trail heads, & gates, Trail buffers, & Trail signage.





Table 3.8: Westridge Connector

Guiding Principle	Opportunities	Constraints
Technical Design	Unknown and requires further study.	Unknown and requires further study.
User Experience	Unknown, but would anticipate to be similar to the off-road trail option.	
Private Property Rights	Design strategies for buffering should be applied for all sections bordering residential development.	Limited public land for this connection would require extensive land acquisition / land agreements.
Safety	Formalizing trail use provides the opportunity to restrict and enforce OHV restrictions.	CPTED principles for visibility should be provided to encourage eyes on the trail.
	 Increased trail traffic naturally deters undesirable uses. 	
Environment	 Trail has the potential to preserve a green corridor connecting existing large open space blocks. 	Patterns of use and sensitive of habitat are unknown and would require further study.
Other Unique Considerations	An alternative route that provides a connection from Devonian to the River Valley, which could link into future RVA projects along the north shore.	 Unknown connection that requires further study, given the private land along the proposed alignment. There is no second node or destination for this link, and future RVA facilities along the north shore are not presently identified.

Westridge Connector

As part of the Community Engagement process, an idea was raised for the trail to link the Devonian Gardens to the River Valley through the closed Westridge Golf Course. While a more detailed site evaluation of this route was not possible by the consulting team, the notion of the connection has merit and should be explored further.

The general intention is to provide a connection to the River Valley east of the primary study area. The River Valley Alliance Capital Plan shows future trail bridge connections in this area, which would benefit this route and provide a link to the extensive trails network in Devon. A proposed trail in this area could connect to Tuckers Field, which would be further strengthen the connection to the Devonian Gardens.

As the majority of land between the Devonian Gardens and the suggested node of the Westridge site, a specific alignment has not been identified. Further conceptual planning, including consultation with land owners and the community in this area is required.

There was demonstrated public interest in a trail connection towards the Westridge area. However, the lack of existing public lands and trails infrastructure in this area suggest this would be more appropriate as a long term connection, given the land acquisition or agreements that would be required, and the financial investment needed to see this connection advance.

Trail Typology: Multi-use Trail adjacent to County Road, Off Road Multi-use Trail.

Associated Amenities: Trail heads, & gates, Trail buffers, & Trail signage.











trail design standards

This chapter provides a summary of the technical design guidelines recommended to be applied during the detailed design and implementation process. These guidelines are based on the technical review process completed for this study, and reference the Alberta Guidelines for the Construction of Trails in Highway Rights-of-Way, the Alberta Trail Builder Design Manual, the Velo Quebec Technical Handbook of Bikeway Design, the Alberta Recreation Corridor and Trails Classification System, the American Association of State Highway and Transportation Officials Guide for the Development of Bike Facilities, the International Mountain Bicycling Association Canada.

Proposed Trail Typology

The proposed typology for the Devonian Gardens trail link is a multi-use, non-motorized trail. This facility will benefit the majority of trail users, and is consistent with the vision of the Community and of the River Valley Alliance. Given the route options evaluated during this study, there are two primary facility types, an off road multi-use trail, and adjacent to the highway multi-use trail.





Off Road Multi-Use Trail - Crusher Dust

A multi-use trail is designed to meet the needs of a variety of users. The offroad multi-use trail should be designed for longevity, low maintenance, and with consideration of adjacent land uses.

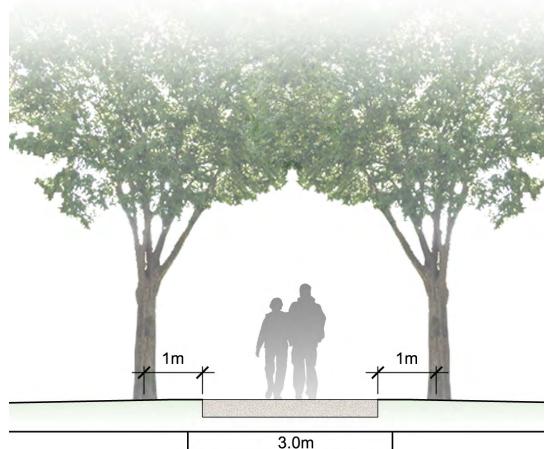
General Principles

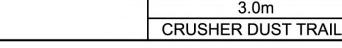
- A multi-use trail must meet the needs of a variety of non-motorized users.
- A multi-use trail is a two-way facility.
- Safety of the trail users is the most important design consideration.

Guidelines

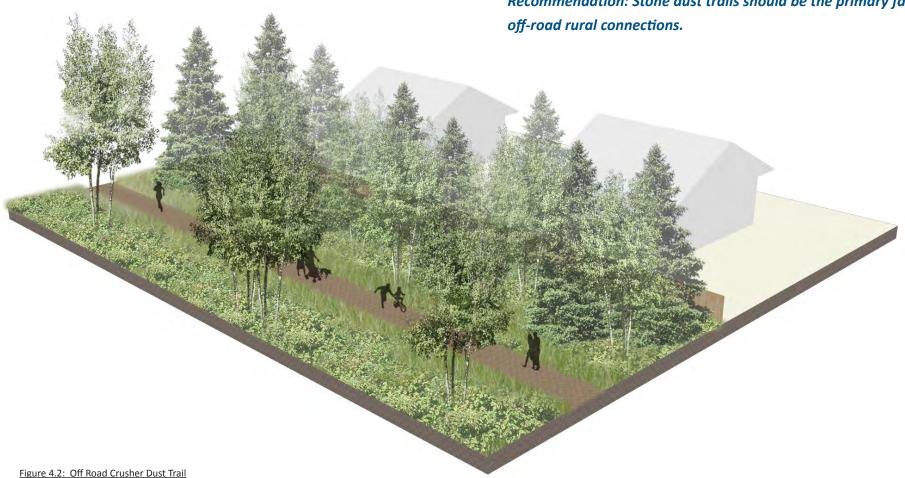
- Multi-use trails should be a minimum of 2.0m wide, constructed of high quality crushed stone, tamped down and packed.
- An additional 1.0m of clearance on either side of the trail should be provided, with 3.0 of vertical clearance from adjacent vegetation.
- Multi-use trails should be physically separated from adjacent land uses by a minimum buffer of 5.0m. Where additional buffer clearance is available, it should be maximized.
- Buffer zones should consist of vegetation, berming, privacy fencing, or a combination of approaches.
- Signage (regulatory and educational) is required to promote safe and best usage of the multi-use trail.
- Positive drainage is required to reduce ponding and erosion of the trail

Recommendation: Stone dust trails should be the primary facility for











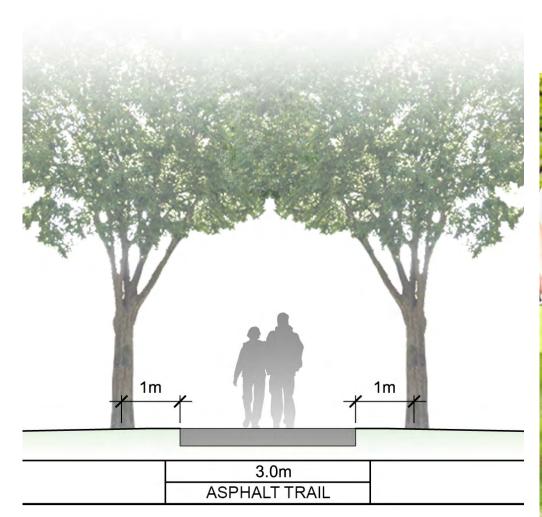
Off Road Multi-Use Trail - Asphalt

A multi-use trail is designed to meet the needs of a variety of users.

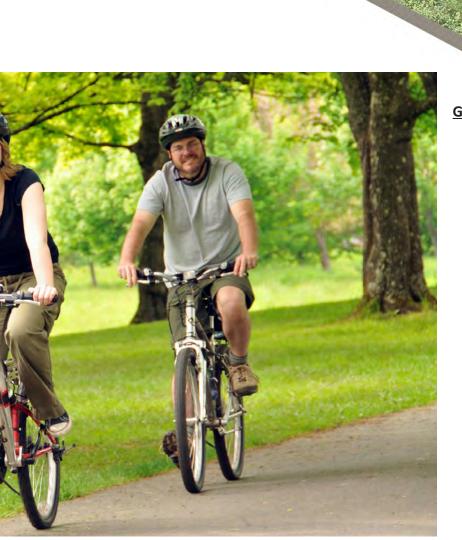
Asphalt surfacing provides greater longevity in terms of maintenance and accessibility for mobility restricted users.

General Principles

- A multi-use trail must meet the needs of a variety of non-motorized users.
- A multi-use trail is a two-way facility.
- Safety of the trail users is the most important design consideration.









• Multi-use trails should be a minimum of 3.0m wide, constructed of high quality, light duty asphalt.

Figure 4.4: Asphalt Multi-Use Trail

- An additional 1.0m of clearance on either side of the trail should be provided, with 3.0 of vertical clearance from adjacent vegetation.
- Multi-use trails should be physically separated from adjacent land uses by a minimum buffer of 5.0m. Where additional buffer clearance is available, it should be maximized.
- Buffer zones should consist of vegetation, berming, privacy fencing, or a combination of approaches.
- Signage (regulatory and educational) is required to promote safe and best usage of the multi-use trail.
- The trail should have a posted speed limit of 20 km / hr.
- Positive drainage is required to reduce ponding and erosion of the trail surface.



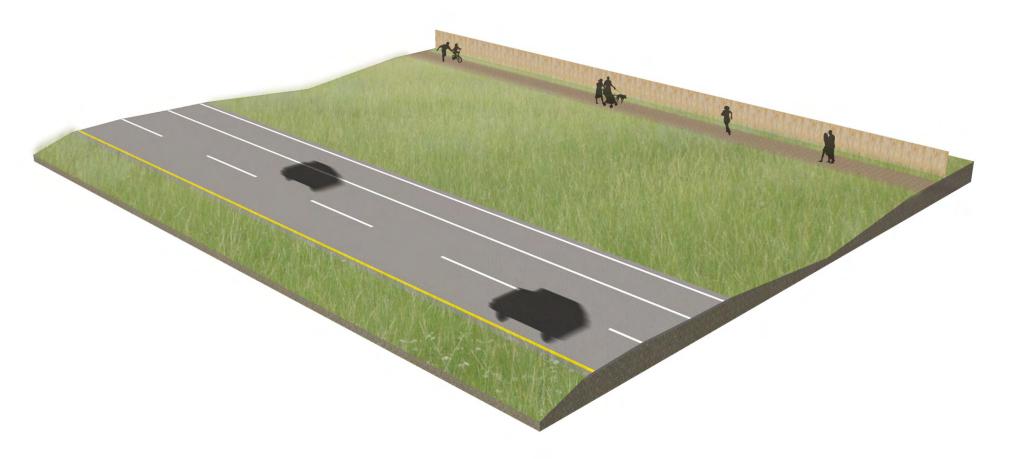


Figure 4.5: Multi-use Trail within Highway Right of Way

Multi-Use Trail within Highway Right of Way

When separate trail and road alignments are not possible, the Alberta Government has developed a process to review the technical feasibility and appropriateness of constructing the trail within the Highway right-of-way. This process requires technical review and input from Alberta Transportation, but could be an option for trail connectivity within Parkland County.

There are a number of case studies of trails within both active rail and highway rights-of-way, including those specific to the Alberta context.

The following design guidelines area based on standards from the Trails in Alberta Highway Rights-of-Ways: Policies, Guidelines, and Standards document.

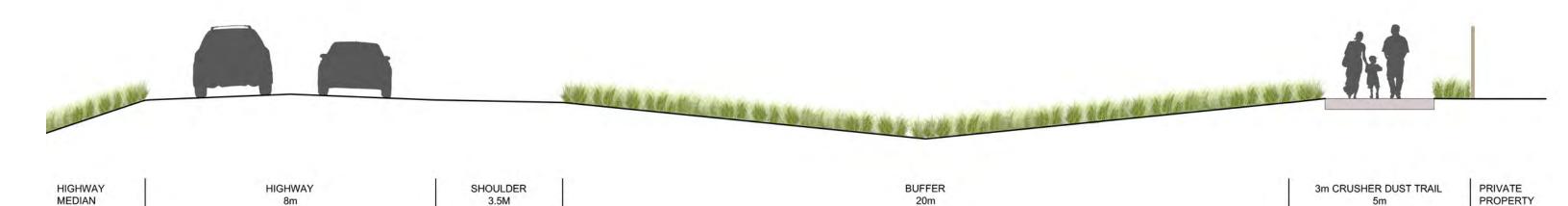


Figure 4.6: Multi-use Trail within Highway Right of Way

General Principles

- When a separate alignment is not possible, a trail route within the ROW may be possible.
- The safety of trail users and motorists must be paramount during the design process.
- Depending on the proximity of the trail and design speed of the road, physical separation of the trail may be required.
- A trail may be eligible for consideration under this program if it connects two destinations of user demand.
- Trail design should seek to maximize user experience and minimize the impacts of proximity to the highway.

Guidelines

• The trail should be located outside the highway clear zone, or no closer than 1.5m from edge of shoulder, if a physical barrier is provided.

• For detailed design specifications, refer to the Alberta Guidelines for Trails in Highway ROWs.



In areas where a municipal road has been constructed, it may still be feasible to construct the trail within the road right of way. Best practices for safe design, such as the Alberta Guidelines for Trails in ROW document should be followed, in additional to specific Parkland County Engineering Standards.



Figure 4.8: Asphalt Trail Adjacent to County Road



age Source: www.experiencecanmore.ca (accessed April 11, 2014)



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Trail Buffers

When trails are located in residential settings adjacent to private property, buffering may be desirable to clearly delineate between public and private realms. Buffers may take the form of setbacks, vegetation & planting, berming, privacy fencing, or a combination of approaches. Buffer design is unique and context specific, and should be explored on a site specific basis.

General Principles

- Buffering the trail from adjacent uses may be a desirable approach for community acceptance of the trail.
- Buffering should be designed with consideration given to the principles of Crime Prevention Through Environmental Design (CPTED).

Guidelines

- A minimum buffer of 5.0m should be provided from adjacent property lines.
- Privacy fence as a trail buffer should be a minimum height of 2.0m, without a gate access to the trail.
- When vegetation is planted as a buffer, the emphasis should be on native species.
- Vegetation buffers should be regularly maintained by the County.
- Screening berms should be a minimum of 1.2m in height, with a maximum slope of 3:1.
- Berms should be planted with low maintenance native ground covers (not sod), and additional screening vegetation if desired.

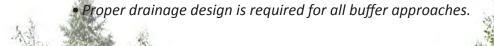




Figure 4.11: Landscape Berm as Trail Buffer

3m CRUSHER DUST TRAIL

BERM 10m PRIVATE PROPERTY

Figure 4.12: Vegetation as Trail Buffer





Bridges and Crossings

The design of water course crossings will depend on the trail and stream width, anticipated structure load, and stream classification. While a bridge provides an elevated crossing that has many positive attributes such as viewing, trail character enhancement, and interpretive opportunities, they are also expensive and require ongoing maintenance.

General Principles

- Trail alignment should seek to avoid crossings.
- When necessary, crossings should be designed with minimal impact to the trail and stream crossing.

Guidelines

- A trail crossing should be aligned along the path of travel.
- Handrails will be required if the height of the crossing exceeds 600mm.
- Handrails should be a minimum of 1.4m in height and contain a solid rub rail at 0.9 1.1m to provide cyclists from getting a handlebar caught.
- Bridges & crossing should be designed to support the load of maintenance equipment and protected from heavier vehicles by gates or bollards.
- Crossings may require a structural engineer to design and review.
- The construction of any crossing will require approval by Senior Government Agencies, to protect the watercourse.
- Bridges should be 0.6m wider than the trail they support (0.3m of clearance on each side).
- Bridge surfaces should be constructed of non-slip material.

Trail heads & Gateways

Trail heads should be implemented at primary and secondary trail access points. Trail heads and gateways not only guide and restrict access but help to establish an identity and character for the trail.

General Principles

- Primary trail heads should still respect the semi-developed nature of the proposed trail.
- Basic site amenities at trail heads should include a gate to restrict OHV use, trash receptacle, signage and signage.

Guidelines

- Trail head or chicane should have minimal clearances of 1.5m, to facilitate passage by a bicycle with a trailer.
- Trail gates and fencing should be designed and constructed to be resilient and resistant to vandalism.
- Wood, chain link, and metal are all appropriate materials for gates and fences.
- Site furnishings and amenities should be selected to be consistent across the trail and suited to the specific trail context.
- Gates should provide the capability for period access by maintenance vehicles for garbage collection, grading, and other maintenance activities.





Figure 4.13: Trail Chicane

Signage and Markings

Signage and way-finding are important elements of a trail design, even for primitive trails networks, as they provide both users and non-users with important information. Trail uses, etiquette, and directional information are all easily communicated through a well designed signage and way-finding system. Typically, trails signage follows similar standards to road signage.

Signage Types:

- Orientation
- Directional
- Regulatory
- Information

General Principles

- Trails signage should be maintained to the same standard or better as road regulatory or directional signage.
- Trails signage should be consistent in size, direction, and quality of materials.
- Signage should be installed at a frequency to establish continuous routing for trails users.
- Directional and regulatory signage should be installed at major nodes and intersections, gateways, and destinations to inform users of the trail connectivity and etiquette.
- Mileage or distance markers and secondary signage should be installed at secondary trail access points or at regular intervals.

Guidelines

- Mounting height for post-mounted signs shall be a minimum of 1.2m from the bottom of the sign to the ground elevation of the footing.
- Signage should be no closer to 0.6m and no further than 1.0m from the edge of the path.

Maintenance Implications

The successful implementation of a trail is not only dependent on the planning, design, and construction, but also the maintenance routine moving forward. Proper inspection and maintenance of the trail is essential to ensure the longevity and safety of the facility, similar to what is required for other built infrastructure. The following guidelines are suggested for the maintenance of the trail, post-implementation.





General Principles

- Surfacing. Stone dust trails should be inspected for erosion and rutting, and graded or resurfaced as required.
- Drainage. Culverts should be installed as needed and should be kept clear of debris. Swales will need to be constructed to ensure water does not pond on the trail.
- Vegetation control. Horizontal and vertical clearance distances must be maintained through pruning and management of trail vegetation. Vegetation should be cut in the spring and fall.
- Signage. Signage should inspected on at least an annual basis for information accuracy and condition. Wood signs and post should be inspected for degradation.
- Garbage. Regular collection of waste is important to communicate a well-maintained trail to users. Collection frequencies will depend on usage patterns and trail etiquette.

The entire trail alignment should be inspected at least annually, to review the condition of the trail surface, drainage structures, and signage. Other maintenance / inspection activities may be required or need to occur at a higher frequency, depending on the trail usage patterns.



Image source: www.americantrails.org (accessed April 11, 2014





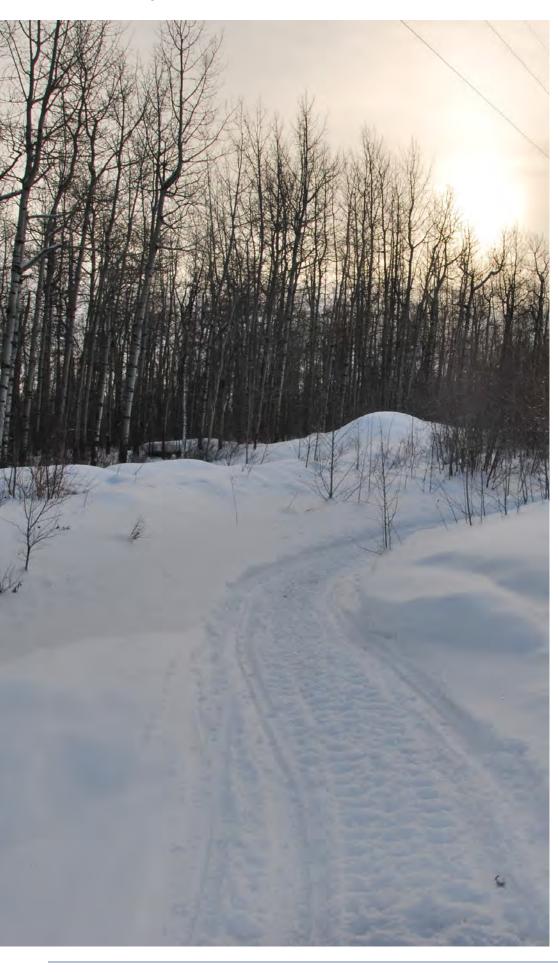


moving forward

This report describes the long term vision for a trails connection from the North Saskatchewan River Valley to the Devonian Botanical Gardens, and outlines an achievable and financially feasible phasing and implementation plan. The proposed plan is consisted with the objectives outlined by both the River Valley Alliance Plan of Action and Parkland County's strategic planning documents, as well as the direction and input received from the steering committee and the Community.



Parkland County Devonian Gardens Trail Conceptual Plan



Implementation Process

The Devonian Gardens Trail Concept plan report is an evolving document. Implementation of the trail will occur over a phased process that allows for the necessary technical and operational supports to be put into place.

Phase One: Preliminary Review

The first step in moving the trail forward is the adoption and ratification of the plan by Parkland County Council. The plan should be adopted and endorsed in principle, which will still permit Council to review the proposed alignments and trail standards on a more focused basis.

Given the public response to this process, further consultation work should be undertaken. Engagement should focus on the landowners immediately within the study area. As part of a detailed design process, County staff and Council should continue to work with local residents on design and programming strategies for the trail, such as buffering, setbacks, and the development of a trail stewardship committee.

If further interest in the Westridge Connector option exists, Council should consider a conceptual design process similar to this one, with extensive public engagement to determine general support as well as potential route alignments.

Phase Two: Detailed Design

Detailed design of the proposed route linkage should be undertaken following Council approval. Detailed design may occur with or without coordination with ongoing capital improvement projects. Design should follow the recommended facility standards, and any relevant Provincial guidelines. As part of the detailed design process, costing information should be refined to ensure alignment with established County budgeting.

Phase Three: Programming & Operational Support

Regardless of which, if any, route option is selected to move forward, it will be essential that the County allocate resources for programming and operational support for the trail. Given the strong and diverse public response to the project, building capacity for ongoing management of any trail development will be important. Resources may include staff time for community stewardship & trails enforcement, as well as regular maintenance. Programs and events to engage the community about the trail, such as a trails day would raise the profile of the project and encourage community support. These resources should be identified early in the process, prior to or in conjunction with Implementation.

Phase Four: Implementation

Parkland County has a unique opportunity to develop a significant public infrastructure asset under a cost-sharing program with the provincial and federal governments, but with a specific time-frame attached. The County should move towards implementation with the 2016 deadline in mind, and aim for construction to begin in the spring of 2015. This time frame is sufficient for detailed design and programming activities to take place in the next twelve months, and allow for construction & implementation during the 2015 season.

Phase Five: Post-Implementation

Following implementation of the trail, the County should immediately move into post-implementation planning. This phase includes allocating funds in each budget cycle for regular maintenance and operations, from year one of the trails existence. This will ensure sufficient resources exist to fund ongoing management and programming for the trail connection.

Budget Estimates

The following order of magnitude cost estimates have been development for the three trail route options. The recommended trail typology of crusher dust is outlined in table 4.1, while the enhanced asphalt surface is outlined in table 4.2. The County could potential phase in an upgrade of the surface to asphalt, if budget and interest allow.

Some of the funding for the trail linkage is available from the River Valley Alliance, so long as the construction is completed by 2016. These cost estimates are intended to provide an order of magnitude for budgeting purposes. As part of the detailed design process, a full costing exercise should be completed prior to the issuance of bid documents. Each of the route options identified in this study will require detailed design and further study.

Length of trail alignments was derived from spatial data provided by the County's GIS department. The budget estimates include allowances for design fees, but do not include costs for land acquisition or land access easements. Associated items / amenities includes an allowance for site furnishings, signage, fencing, grading, and other required trail facilities.

It is important to recognize that the drawings & designs illustrated in this document are conceptual only. A qualified design firm should be commissioned to prepare detailed design drawings for the trail, and this cost has been included in the budget estimates.

Maintenance Budgets

The capital cost to develop the trail link is only one half of the financial equation. The costs of ongoing maintenance should be taken into account when budgeting for the trail. However, the incremental cost for the maintenance of this facility is expected to be generally low, compared to annual road maintenance costs or maintenance of a recreation facility. Typically, trail signage is expected to replace replacement at a rate of 20% of the signage per year, starting after the sixth year.

Maintenance costs for an off-road stone dust multi-use trail is expected to range from \$4,000 - \$6,000 per kilometer of 3.0m wide trail, for a very basic level of regular maintenance. This figure will range, depending on the maintenance activities and service standards. For example, track setting and winter maintenance will incur significantly higher costs than regular collection of refuse and annual trail inspections. Maintenance activities could include stormwater management, surface improvements & repairs, tree and shrub pruning, and waste management. This work should be coordinated with other maintenance activities occurring in the area, when the opportunity exists.

Trail Linkage□	Approximate Length				Approximate Trail Cost	Associated Amenities / Costs	Detailed Design & Contract Adminstration (20%)	_	Estimated Cost
Highway 60 ²	Adjacent to Road	4840	5808	\$150.00	\$871,200.00	\$58,080.00	\$185,856.00	\$223,027.20	\$1,338,163.20
Off Road - option a	Off Road	1354	1625	\$130.00	\$211,224.00	\$16,248.00	\$45,494.40	\$54,593.28	\$1,087,516.80
	Adjacent to Road	2587	3104	\$160.00	\$496,704.00	\$31,044.00	\$105,549.60	\$126,659.52	
Westridge Connector	Unknown	9000	10800	\$130.00	\$1,404,000.00	\$108,000.00	\$302,400.00	\$362,880.00	\$2,177,280.00
Table 4.1: Stone Dust Trail Budg	et Estimate								<u> </u>

Trail Linkage□	Approximate Length		trail meandering		Approximate Trail Cost	· · · · · · · · · · · · · · · · · · ·	Detailed Design & Contract Adminstration (20%)		Estimated Cost
Highway 602	Adjacent to Road	4840	5808	\$250.00	\$1,210,000.00	\$96,800.00	\$261,360.00	\$313,632.00	\$1,881,792.00
Off Road - option a	Off Road	1354	1625	\$250.00	\$338,500.00	\$27,080.00	\$73,116.00	\$87,739.20	\$1,532,260.80
	Adjacent to Road	2587	3104	\$250.00	\$646,750.00	\$51,740.00	\$139,698.00	\$167,637.60	
Westridge Connector	Unknown	9000	10800	\$250.00	\$2,250,000.00	\$180,000.00	\$486,000.00	\$583,200.00	\$3,499,200.00

Table 4.2: Asphalt Trail Budget Estimate





Outreach

Education & Promotion

The physical trail is only one component of a long term trail strategy; education is a critical component that must be taken into consideration. The trail is a piece of physical recreation infrastructure; education works to contribute to the incentive to use it.

Moving forward, Parkland County should work with key stakeholders in the community and at the regional level to take an active role in promoting trail usage, trail etiquette, and enforcement so that all users may derive benefit from this investment. Both the Town of Devon and the River Valley Alliance are natural partners in the provision of outreach and educational programming. Issues such as safety and trail etiquette are two of the most common topics, and have the potential to broadly benefit both the immediate community and entire County.

Enforcement

Like any transportation system, trails require rules to protect the public interest and enjoyment of the facility. All trail users have an obligation to respect and follow the established trail standards and regulations, which may include trail uses, speed limits, and hours of operation. It will be essential that in the first five years of the trail's life that a strong enforcement presence establish the standard for trail etiquette.

Many communities work with local police and bylaw officers, as well as cultivating trail patrols, as effective approaches to trail enforcement. When combined with an outreach program to educate users on proper trail etiquette, most communities find the balance approach very successful in ensuring a positive experience for users and adjacent landowners.





Why Make the Investment?

The implementation of the Devonian Gardens Trail will require a commitment from Parkland County, not just in terms of capital and operational costs, but in terms of personnel, time, and energy. The opportunity to cost-share the implementation as part of the River Valley Alliance's Plan of Action is significant, and should not be understated. If Parkland County does not access the earmarked project funds, they will be made available to fund another RVA project in another municipality. There are also a number of other significant and tangible benefits that the County and broader region at large would enjoy, and these are reasons why implementation is so critical.

Environmental Benefits

- Expansion of active transportation in Parkland County
- Potential reduction in vehicle trips within the study area.
- Preservation of linear open space.
- Connection of contiguous green space for wildlife corridors.

Public Health Benefits

- Decreased levels of inactivity related health problems.
- Stress reduction through recreation.
- Improved community quality of life.
- Improved community social interactions.

Economic Benefits

- Direct and indirect tourism dollars.
- Creation of employment through direct and indirect plan impacts.

Transportation Benefits

- *Improved mobility for the community.*
- Improved connectivity of regional destinations.
- Synergy with active bike culture in Devon.





appendices

Online Survey Results



Online Survey Results - Public Engagement

Devonian Gardens Trail Conceptual Design



1. Are you?		
	Response Percent	Response Count
Male	51.7%	46
Female	43.8%	39
Prefer not to answer	4.5%	4
	answered question	89
	skipped question	4

2. Are you?		
	Response Percent	Response Count
Under 21	0.0%	0
21 - 34	10.1%	9
35 - 49	39.3%	35
50 - 64	36.0%	32
65+	13.5%	12
Prefer to not answer	1.1%	1
	answered question	89
	skipped question	4

3. Where do you live?		
	Response Percent	Response Count
In Parkland County	85.7%	78
Outside of Parkland County	14.3%	13
Prefer to not answer	0.0%	0
	answered question	91
	skipped question	2

4. If you answered yes, do y	ou live in any of the following subdivisions?	
	Response Percent	Response Count
Banksiana Ranch	8.8%	3
Riverview Acres	5.9%	2
West 35 Estates	44.1%	15
Beaverbrook Park	8.8%	3
Devon Ridge Estates	2.9%	1
Narao Pines	8.8%	3
Aspen Estates	0.0%	0
Grand River Valley	20.6%	7
	answered question	34
	skipped question	59



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5. How many people currently live in your household?				
	Response Percent	Response Count		
1	10.2%	9		
2	42.0%	37		
3	15.9%	14		
4	22.7%	20		
5 or more	9.1%	8		
	answered question	88		
	skipped question	5		

. How often do you participate in the following activities?							
	Daily	Weekly	Monthly				

	Daily	Weekly	Monthly	Yearly	Never	Rating Count
Walking	60.2% (53)	30.7% (27)	6.8% (6)	0.0% (0)	2.3% (2)	88
Hiking	7.1% (5)	27.1% (19)	41.4% (29)	21.4% (15)	2.9% (2)	70
Inline / Roller Skating	0.0% (0)	3.4% (2)	3.4% (2)	8.5% (5)	84.7% (50)	59
Running	13.6% (9)	31.8% (21)	10.6% (7)	4.5% (3)	39.4% (26)	66
Cross Country Skiing	2.9% (2)	17.4% (12)	13.0% (9)	26.1% (18)	40.6% (28)	69
Skateboarding	0.0% (0)	3.4% (2)	3.4% (2)	3.4% (2)	91.5% (54)	59
Equestrian	3.3% (2)	11.7% (7)	1.7% (1)	6.7% (4)	76.7% (46)	60
Snowshoeing	1.5% (1)	7.6% (5)	18.2% (12)	22.7% (15)	50.0% (33)	66
Bird watching	26.8% (19)	19.7% (14)	14.1% (10)	14.1% (10)	25.4% (18)	71
Other	28.6% (10)	31.4% (11)	5.7% (2)	5.7% (2)	28.6% (10)	35

Other (please specify) 31

answered question	88
skipped question	5



	Response Percent	Response Count
Yes	67.4%	60
No	32.6%	29
	answered question	89
	skipped question	4



8. If you answered no, why not?	
	Response Count

22

answered question	22
skipped question	71

9. If you answered yes, where do you go and how often?

Response	
Count	

55

55	answered question	
38	skipped question	

10. Please indicate the importance you place on the following trail amenities and services.

	Very Important	Important	Neutral	Not Important	Definitely Not Important	Rating Count
Single use trails	17.3% (13)	28.0% (21)	28.0% (21)	14.7% (11)	12.0% (9)	75
Winter maintenance (grooming / shovelling)	15.0% (12)	45.0% (36)	15.0% (12)	21.3% (17)	5.0% (4)	80
Length / quantity of trails in the County	37.0% (30)	43.2% (35)	13.6% (11)	4.9% (4)	1.2% (1)	81
Trail surface material	18.5% (15)	45.7% (37)	22.2% (18)	12.3% (10)	1.2% (1)	81
Proximity of trails to residence	20.0% (16)	33.8% (27)	28.8% (23)	16.3% (13)	2.5% (2)	80
Availability of benches, signs, and garbage receptacles	31.3% (26)	45.8% (38)	16.9% (14)	3.6% (3)	3.6% (3)	83
Multi-use trails	32.1% (26)	33.3% (27)	22.2% (18)	4.9% (4)	12.3% (10)	81
Nearby attractions and destinations	15.9% (13)	32.9% (27)	28.0% (23)	17.1% (14)	6.1% (5)	82
				answe	red question	83
				skipį	ped question	10

11. Are you familiar with the objectives of River Valley Alliance?

Response Percent	Response Count
Yes	61
No 29.1%	25
answered question	86
skipped question	7



Parkland County Devonian Gardens Trail Conceptual Plan

12. Would you support the development of a trail connection from the Devonian Botanical Gardens to Prospectors Point Day Use Area?

	Response Percent	Response Count
Yes	79.8%	67
No	20.2%	17

Please comment 48

answered question	84
skipped question	9

13. Do you have any other comments or concerns regarding trails development in Parkland County?

Response Count

51

51	answered question	
42	skipped question	

1	Bicycling	Mar 1, 2014 9:36 AM
2	Cycling	Feb 26, 2014 9:17 Pl
3	cycling	Feb 12, 2014 9:04 Pl
4	ATVing	Feb 12, 2014 4:43 Pl
5	Cycling	Feb 9, 2014 5:23 PM
6	Biking, skiing	Feb 6, 2014 1:15 PM
7	atv, snowmobile, bike	Feb 6, 2014 8:54 AM
8	Cycling	Feb 5, 2014 3:08 PM
9	bicycling	Feb 4, 2014 5:36 PM
10	Cycling	Feb 4, 2014 2:10 PM
11	bicycling,	Feb 4, 2014 12:56 P
12	Bicycle riding	Feb 4, 2014 11:59 A
13	Mountain Biking	Feb 3, 2014 1:53 PM
14	Biking in summer	Feb 1, 2014 2:40 PM
15	very close to home and well worth and look and try	Feb 1, 2014 11:34 A
16	biking	Feb 1, 2014 11:15 A
17	ATV, Skidoo, Access to property	Jan 31, 2014 3:01 Pl
18	watching/tracking wildlife -esp. deer	Jan 31, 2014 11:59 A
19	Mountain biking	Jan 29, 2014 10:09 P
20	water sports/ recreation	Jan 29, 2014 1:17 Pl
21	Fishing	Jan 28, 2014 1:13 Pl
22	snowmobiling and quadding	Jan 27, 2014 6:07 Pl
23	Dog walking	Jan 27, 2014 2:13 Pl
24	Mountain Biking	Jan 26, 2014 10:14 P
25	private info	Jan 26, 2014 6:31 Pl
26	road and moiuntain bike, canoe	Jan 25, 2014 9:41 Pl



Page 4	Page 4, Q6. How often do you participate in the following activities?	
28	ATV trail riding.	Jan 23, 2014 1:16 PM
29	Photography and outdoor meditation	Jan 23, 2014 11:34 AM
30	ATV	Jan 23, 2014 10:44 AM
31	cycling	Jan 22, 2014 11:15 AM

Page 5	, Q8. If you answered no, why not?	
1	no paved trails that are close. i would LOVE to rollerblade on paved trails daily if they were nearby.	Feb 19, 2014 1:44 PM
2	I live in Edmonton and there is no connection of which I am aware out to the Devon area. So I start at about 168 street and head East. I would love if the trail was continued out to the West!	Feb 13, 2014 1:25 PM
3	location of current trails not convenient	Feb 11, 2014 12:35 PM
4	not enough time	Feb 7, 2014 10:55 AM
5	Because I don't feel safe	Feb 6, 2014 10:59 PM
6	don't know much about them	Feb 6, 2014 1:29 PM
7	I use to be able to access a trail behind our subdivision with either the horses or quad, they the county put of concrete barriers blocking the path in.	Feb 5, 2014 11:13 AM
8	have trails on my own property do not like ATV and motorcycles	Feb 4, 2014 2:11 PM
9	Don't use trails	Feb 3, 2014 4:35 PM
10	Not enough equestrian trails	Feb 3, 2014 10:48 AM
11	Living in Devon we tend to stay on the Leduc county side of the river	Feb 3, 2014 10:45 AM
12	No trails to walk in my area	Jan 29, 2014 1:17 PM
13	Did not know there were trails.	Jan 28, 2014 5:11 PM
14	atv & snowmobile on unofficial trails	Jan 27, 2014 6:08 PM
15	Live too far awary	Jan 27, 2014 11:58 AM
16	Just moved to the area and haven't had time to explore much yet.	Jan 27, 2014 10:48 AM
17	personal	Jan 26, 2014 6:31 PM
18	I live in Edmonton and have not used the county areas much. I'd love to use these areas though.	Jan 23, 2014 3:52 PM
19	I live in Edmonton	Jan 23, 2014 12:48 PM
20	I don't know of any Parkland trails nearby. I do use the road allowance and trails on our property daily.	Jan 23, 2014 11:35 AM
21	Not aware of any trail systems, besides Chickaoo.	Jan 22, 2014 11:32 AM
22	Currently no trails in my area.	Jan 22, 2014 11:03 AM



Parkland County Devonian Gardens Trail Conceptual Plan

age 5	, Q9. If you answered yes, where do you go and how often?	
1	Franklin wetlands in Fallis	Mar 1, 2014 9:59 AM
2	Clifford E. Lee, a few times a year. Otherwise, daily on trails we've created on our acreage and walking/snowshoeing on the wetland adjacent to our subdivision.	Feb 27, 2014 12:19 Pf
3	Chicacoo, private lands that we have permission to access, devon river valley, crown land	Feb 26, 2014 9:18 PM
4	Chickakoo - 1 per year, Clifford E Lee Nature sanctuary - 1 per year, Wagner Natural Area - 1 per year	Feb 23, 2014 3:06 PM
5	private and crown land near Narao Pines	Feb 22, 2014 2:17 PM
6	Clifford Bird Sanc. 3-4x week Chickakoo 2x year Trail System in Devon, Spruce & Stony 3-4x month	Feb 17, 2014 11:11 Al
7	We walk from West 35 Estates to Prospect point a couple of times every summer	Feb 16, 2014 7:25 PN
8	Prospector Point 3 times a year	Feb 16, 2014 6:13 PM
9	Chickakoo	Feb 13, 2014 12:14 P
10	we go from west 35 to prospectors point a few times per week weather permitting also by Meadow Ridge	Feb 12, 2014 4:44 Pf
11	We have a trail outside of our property on the south side and also the west side. They are used often in both the summer and winter months	Feb 9, 2014 6:31 PM
12	Tucker's field monthly and the road daily	Feb 9, 2014 5:23 PM
13	Trails in Devon, and around the old Westridge Golf Course	Feb 7, 2014 11:31 Al
14	Devon Golf course trails, Devon trails, Prospector point trails and roads in all the subdivions around us.	Feb 6, 2014 9:51 PM
15	Devon trails, if trails are good, usually once a month as I have to drive there, whereas I could run to Devonian Gardens	Feb 6, 2014 2:43 PM
16	Park reserve behind beaver brook and banksiana	Feb 6, 2014 1:16 PM
17	clifford lee, banksianna area, river valley, most times daily, even in winter	Feb 6, 2014 8:55 AM
18	Westridge	Feb 6, 2014 12:10 Al
19	1	Feb 5, 2014 10:25 PI
20	in the area around West 35 Estates	Feb 5, 2014 3:08 PM
21	weekly River Valley Clifford Lee Sanctuary	Feb 4, 2014 5:37 PM
22	Chicakoo Nature Trails, a few times a year. Usually fall.	Feb 4, 2014 12:58 PI

Page 5,	Q9. If you answered yes, where do you go and how often?	
23	Mostly Clifford Lee, infrequently	Feb 4, 2014 12:00 PM
24	We ride our horses daily along local roads and subdivisions, and biweekly head toward the river valley to access the trail system along the river north of Devonweather permitting.	Feb 3, 2014 8:13 PM
25	Clifford E. Lee Nature Sanctuary - 5 times/week	Feb 3, 2014 7:26 PM
26	River Valley - each side of Devon Bridge	Feb 3, 2014 1:53 PM
27	Private trails behind our subdivision	Feb 3, 2014 1:41 PM
28	Along TWP 511 and adjacent roads and through subdivisions (on bike), and along the River Valley on foot.	Feb 2, 2014 9:27 PM
29	around home, weekly	Feb 1, 2014 2:33 PM
30	I have a knee problem so I might be limited but I think it is great Idea and I definitely would give it a try	Feb 1, 2014 11:35 AM
31	Access to and from Banksiana Ranch subdivision via public road allowances. Daily, weekly or monthly as required.	Jan 31, 2014 3:02 PM
32	to river valley etc, when possible, as tracks are completely rutted by off road vehicles and skidoos.	Jan 31, 2014 12:01 PM
33	use to use park trail entwistle this year to much snow no one cleans	Jan 31, 2014 10:08 AM
34	Along Propspector Point trails and into Devon; 2 - 3 times per week in the summer; on trails behind Devonridge Estates daily to weekly during winter	Jan 29, 2014 10:11 PN
35	Clifford E Lee Nature Sanctuary - up to 5 days a week when the trail conditions permit. We also use the Tucker's field trails when not snow covered several times a month	Jan 28, 2014 7:13 PM
36	Chicakoo Lake, Hassey Lake, Clifford Lee, Devonian Gardens, Warner's Bog	Jan 28, 2014 5:02 PM
37	On a weekly basis I will go to one of the following. Clifford E Lee bird sanctuary and walk undeveloped pathways along North Saskatchewan river. I also enjoy the trail system around Chicakoo lake area.3-5 times a year.	Jan 28, 2014 1:21 PM
38	river valley, Clifford E Lee	Jan 27, 2014 10:38 PM
39	Around Narao Pines trails and the Clifford E Lee Sanctuary; weekly and monthly, respectively	Jan 27, 2014 3:46 PM
40	River valley hiking	Jan 27, 2014 2:13 PM
41	We just moved here so so far just down by the golf course cross country skiing and walking.	Jan 27, 2014 1:16 PM
42	The "trails" through Grand River Valley Estates weekly during fair weather months	Jan 26, 2014 10:15 PM



age 5	Q9. If you answered yes, where do you go and how often?	
43	personal	Jan 26, 2014 6:31 PM
44	chickakoo lake - once a week both winter and summer for cycling, skiing, walking	Jan 25, 2014 9:41 PN
45	Chikakoo Park 2-3 times a year	Jan 25, 2014 4:10 Pl
46	Clifford e lee	Jan 23, 2014 11:02 F
47	Clifford Lee Sanctuary	Jan 23, 2014 5:13 P
48	Local and SRD trails	Jan 23, 2014 1:16 P
49	Devonian Natural area weekly	Jan 23, 2014 11:35 A
50	Rocky Mountains, Clifford E. Lee Nature Santuary, City of Edmonton Trails, Devon Trails, unmanaged trails near my property	Jan 23, 2014 10:45 A
51	Chickakoo	Jan 22, 2014 5:09 P
52	Chickakoo Recreation Area, more often in the summer, approximately 3-4 times per month on average?	Jan 22, 2014 12:01 F
53	Municipal reserve daily	Jan 22, 2014 11:49 A
54	chicacoo and hasse lake about once a month	Jan 22, 2014 11:30 A
55	Chickakoo - 3-4 x per week both winter and summer (cycle, walk, ski) plus Hasse Lake trails cycle, walk both winter and summer plus Unofficial trails by Woodland Place along N Sask at the end of Howard Road plus unofficial trails east and west of Prostpectors point on the north side of the N Sask plus	Jan 22, 2014 11:18 A

Page 6, Q12. Would you support the development of a trail connection from the Devonian Botanical Gardens to Prospectors Point Day Use Area?

1	I think a great missed opportunity is a trail connection from this area to edmonton be it via the river valley or via roads so one can safely connect to the west end of the city. A connection from prospectors point is great however it would be better if there was a footbridge connecting with devon as then the the devon folks could walk from their door as no one in their right mind would cycle/walk the devon bridge. Overall it would be great if the county could put a map of cycling / hiking friendly areas / side roads out that are connected (see the edm cycling map) highlighting points of interests, cafe's etc. I find it sad that we have to get in a car to go cycling in the edm river valley as riding on the roads is not as pleasant (hwy 60, garden valley road!!!) and sometimes dangerous. It would be nice if there were paths like they have in England that go across private lands as well and, I understand that private landowners may have reservations because of the irresponsible idiots that are becoming more frequent. Lastly my biggest concern are OHV . we used to be able to walk/ cycle /ski on a piece of crown land which had beautiful trails which got pretty much destroyed by quads who had no respect for the land nor the people that wanted to use it as well. If there is one thing the county could do is prohibit the use of OHVs as they are destructive, especially with the sensitive soils we have in this area. in addition, the riders often are aggressive and disrespectful of landowners and the land itself, with enforcement being completely useless.	Feb 26, 2014 9:44 PM
2	With the development of trails, as proposed by the RVA, throughout the North Saskatchewan River Valley, Parkland County has an opportunity to further develop this trail network. Connecting DGB to PP is the much needed start.	Feb 23, 2014 3:27 PM
3	Unless there was any chance that motorized vehicles could access the trail system.	Feb 22, 2014 2:29 PM
4	Have attended first resident conceptual meeting	Feb 17, 2014 11:13 AM
5	The more trails the better BUT bring back ATV use	Feb 12, 2014 4:46 PM
6	Great Idea	Feb 11, 2014 12:36 PM
7	Only along hwy 60 and not through any subdivisions	Feb 9, 2014 5:26 PM
8	I much prefer to walk on trails thru the county side, such as the trails along the river	Feb 6, 2014 9:53 PM
9	Just interested in route, what usage, surface, maintenance, how it is going to be monitored de	Feb 6, 2014 1:21 PM
10	Who would use it? What about impact on ranchers. Residents.	Feb 6, 2014 10:22 AM
11	It makes no sense and this survey is deliberately engineered to lead you into a positive answer at this point.	Feb 6, 2014 12:16 AM
12	Provided that it is for non motorized activities.	Feb 5, 2014 3:10 PM
13	Until I see a map of the proposed trail and how it will affect me and my property. I don't want a bunch of strangers in my Neighbourhood.	Feb 5, 2014 11:17 AM
14	It seems premature at present. Until the River Valley Trail system connects	Feb 4, 2014 5:44 PM



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Page 6, Q12. Would you support the development of a trail connection from the Devonian Botanical Gardens to Prospectors Point Day Use Area?		
	Devon with Edmonton (hopefully on the SOUTH side of the Saskatchewan river), it is a trail to nowhere and will see very little use.	
15	uncertain	Feb 4, 2014 2:15 PM
16	Would use primarily as a bike trail if practical	Feb 4, 2014 12:02 PM
17	Yes if it would allow access to the river valley without having to cross private land.	Feb 3, 2014 8:16 PM
18	Excellent concept! Please move forward on implementing this trail. Other than Devon river valley trails there is a total lack of useable greenspace in this wooded area. Clifford E. Lee is beautiful but small for serious hikers. I am constantly scoping out this area for another place to hike a good distance. I lived in Graminia for several years and know this area well - the moment I heard about this trail concept I could envision it in every way.	Feb 3, 2014 7:50 PM
19	So long as it is not used by quads and snowmobiles.	Feb 3, 2014 10:50 AM
20	I feel this survey is extremely misleading. Based on the meeting I attended at Parkland County office in Stony Plain, the proposed trail may well be multi use and run through subdivisions. There is a huge risk for environmental damage by unauthorised OHV's which cannot be adequately policed, risk of fire, potential vandalism and mistreatment of trails, no effective plan for ongoing maintenance and a huge cost burden on Parkland County residents who ultimately see no gain.	Feb 2, 2014 9:37 PM
21	Great idea and able to promote area for day trips from Edmonton	Feb 1, 2014 2:36 PM
22	Huge Bonus is that someting is finally close to home	Feb 1, 2014 11:38 AM
23	Provided absolutely no restrictions on existing uses, otherwise strongly opposed.	Jan 31, 2014 3:06 PM
24	A legacy of trails is a great investment in promoting health, fitness and activity	Jan 31, 2014 12:37 PM
25	Absolutely NO reason for it - too expensive	Jan 31, 2014 12:07 PM
26	More maintained (i.e., NO ATVs!) trails for walking would be awesome. Current traisl erosion from ATVs prevents use of main trails	Jan 29, 2014 10:17 PM
27	This an excellent iniatiative!	Jan 28, 2014 7:16 PM
28	It is likely to increase the use of ATVs in the area. ATVs are already a problem and I don't need more of it.	Jan 28, 2014 5:13 PM
29	As long as OHV were not allowed. Human efforts only	Jan 28, 2014 5:04 PM
30	Any Eco type planning and controlled development of the river trail system the better.	Jan 28, 2014 1:32 PM
31	alignment beneath the power lines is mundane; steep slope of river valley already has erosion problems, access will make this worse	Jan 27, 2014 10:41 PM

ospe	ectors Point Day Use Area?	
32	Dependent on route and whether motorized vehicles could access it (e.g. physical barriers)	Jan 27, 2014 3:48 P
33	It's beautiful country for all to enjoy.	Jan 27, 2014 2:19 P
34	walking trails are fine - am not interested in ATV or motorized trails. I do not want the noise pollution and danger they bring and disturbance to nature.	Jan 27, 2014 1:19 P
35	It is impossible to keep motorized vehicles off of trails. We moved to our subdivision and paid a premium for a peacefull lifestyle. The thought of trails running through what we thought were reserves in our subdivision is very concerning.	Jan 27, 2014 10:52 A
36	Dependent of Trail Location	Jan 26, 2014 10:24 F
37	DBG has its purpose. Prospector's point has its purpose. There is no commonality and no need for a trail to be built (and maintained) on my tax dollar. In fact, there is a trail already - it is called Hiway 60. It is used by many vehicles and bikes and bicycles, the odd jogger and a few pedestrians. I really think the River Valley alliance is overstepping their purpose here. Possibly they should review their mandate because this seems "overreaching" to me, not "overarching" as described in your mailed newsrelease of Jan 20. I am amazed that this is even a consideration	Jan 26, 2014 6:52 P
38	I think that this would be an asset. The County of Parkland seems to have a split personality about making ugly commercial development in the area and making appropriate developments that serve the community. They need encouragement to pursue more of the latter and less of the former.	Jan 26, 2014 12:56 F
39	this is a really dumb idea - people go to DBG to look at the plants and butterflies there and spend the day walking the site and have on interest in going to the river from DBG because DBG visit takes a day already. Also people go to the river to swim, fish, pan for gold and hang out for the day and have no interest or reason to trapes up to the DBG.	Jan 25, 2014 9:48 P
40	Would be a nice spur off of the River Valley Alliance system.	Jan 25, 2014 4:13 P
41	I would favor a trail connection that is more than an upgrade to the side of the existing highway. I would appreciate a nature experience trail, though I see the value in having a means for non-motorized persons to get to the devonian from. Devon, along the highway.	Jan 23, 2014 11:07 F
42	A life style of enjoying nature is of great benefit to all ages	Jan 23, 2014 5:15 P
43	I would love to take advantage of this opportunity, especially as I have guest who visit me.	Jan 23, 2014 3:53 P
44	Walking skiing trails would increase property values and decrease the use of quads and snowmobiles in the area.	Jan 23, 2014 11:38 A
45	Very important connector to get now ahead of urban sprawl	Jan 23, 2014 11:37 A
46	Definitely!!!!	Jan 23, 2014 10:47 A



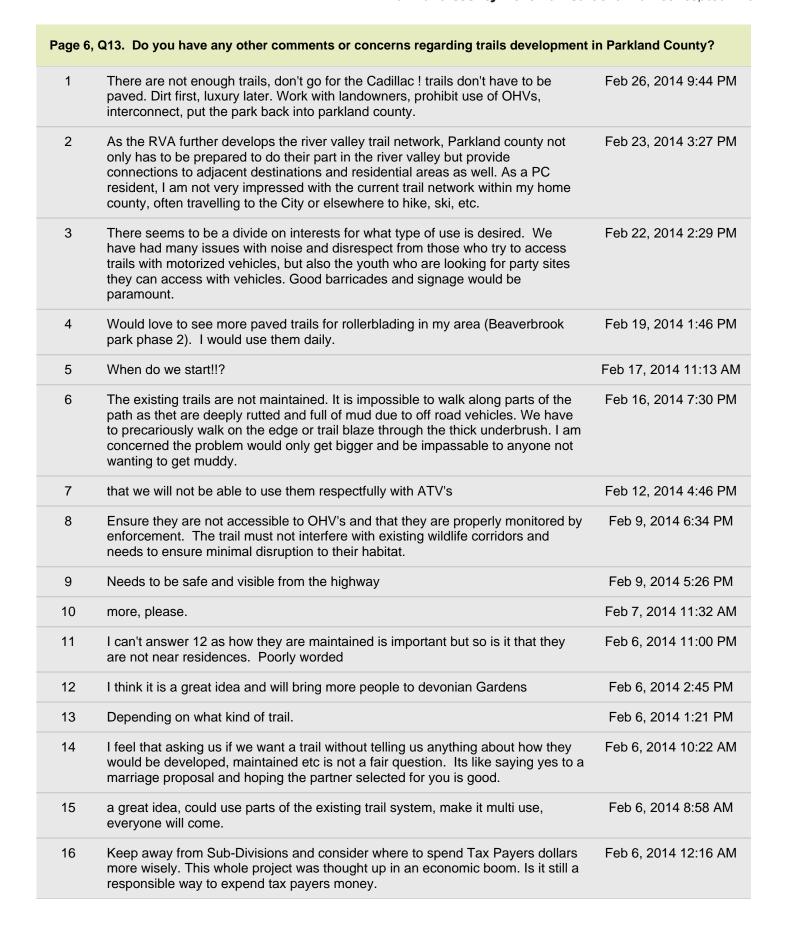
Page 6, Q12. Would you support the development of a trail connection from the Devonian Botanical Gardens to Prospectors Point Day Use Area?

This is a poor idea for this trail would link two areas that have vastly different user groups. People go to the DBG to wander around the property there and look at what they have in the DBG. A trip to DBG easily fills half a day or full day alone. People go to Prospectors Point to swim, hike, bike canoe, boat and generally hang out - they spend the day at the river - they have no interest in walking 2 miles to the DBG and if they did they would then be too tired to spend time at the DBG because they need to walk back to the Prospectors Point. Two mile walk is 30 - 45 minutes for the average person so who is going to park at PP walk to DBG to take a look and retrun or who will go to DGB then want to walk to the river - DBG is beautiful in itself and people want to maximize their time there once they are there.

Jan 22, 2014 11:37 AM

The trail system can be utilized for more than County residence and become perhaps an attaction for large group activities.

Jan 22, 2014 11:05 AM





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Page 6,	Page 6, Q13. Do you have any other comments or concerns regarding trails development in Parkland County?		
17	I think trails should be put by the Highway for bikers, pedestrians, horse back riding and no in subdivisions near peoples property. I moved to this area for privacy and safety and do not want strangers tramping through my subdivision	Feb 5, 2014 11:17 AM	
18	The ravages of OHV use have not been controlled to date and new trails will be subject to abuse unless policing is initiated.	Feb 4, 2014 5:44 PM	
19	would not like ATV or motorcycles or any motorized vehicle using the trail	Feb 4, 2014 2:15 PM	
20	Non-motorized trail use is great for travel both by foot and horse, our family definitely support development of more of these types of trails.	Feb 3, 2014 8:16 PM	
21	A big concern: there are already many skidoos, dirt bikes and quads that are out of control in this area. It appears to be an ongoing problem. I can see where policing a trail and/or trying to keep motorized vehicles off it would be next to impossible. There is nothing and I mean absolutely NOTHING more frustrating than encountering a bunch of motorized vehicles on a developed hiking/walking trail. They destroy the natural surroundings and cause deep ruts in the trail surface. This leads to heavy maintenance requirements. What could you do to ensure compliance to preventative rules/regulations? I'm assuming you would run the trail through the bush which could make isolation a factor in terms of keeping control over comings and goings. I use the Devon trails so know this scenario well. Another suggestion: please keep this trail NATURAL - i.e. a dirt trail. One more suggestion: I realize this is idealistic but is there any way you could incorporate some WASHROOMS for the ladies? A simple outhouse would be appreciated but again, I see vandalism as an issue.	Feb 3, 2014 7:50 PM	
22	Open more up to horse use.	Feb 3, 2014 10:50 AM	
23	Current trails, roads and ditches are already in a sorry state of disrepair. I would like to see the County effectively manage and police its current responsibilities before adding more.	Feb 2, 2014 9:37 PM	
24	Signage and maps important. Looped trails good.	Feb 1, 2014 2:42 PM	
25	great. but keep a line on the trail to separate bike riders and walkers. Also would take my dog on leash	Feb 1, 2014 11:38 AM	
26	Rights and privileges of any and all existing residents must be maintained. Nice to have a trail but not at the expense or liability of local residents.	Jan 31, 2014 3:06 PM	
27	Trail development should be pursued. As a 'within walking distance' of the Clifford E. Lee Bird Sanctuary, I have experienced the benefits this facility and its trail system has brought to our family over the last 30 + years that we have resided at our present home.	Jan 31, 2014 12:37 PM	
28	As a taxpayer, we cannot afford it.	Jan 31, 2014 12:07 PM	
29	not in your river valley area still would enjoy coming to meeting were on pembina river valley	Jan 31, 2014 10:12 AM	
30	ATV - caused erosion is severe in Prospectors Point side of river bank. You can't walk, bike or ski on main trails because of mud/ruts. I have to bushwak and use	Jan 29, 2014 10:17 PM	

Page 6, Q13. Do you have any other comments or concerns regarding trails development in Parkland County?		
	deer trails to get to river valley. Amazing destruction from motorbikes, quads, and snowmobiles. Other than ATV's, there is no conflict with horse, bike, and walking/running users. It's great to meet my neighbours out there. The main topic of conversation is the horrible condition of trails because of ATVs. Connecting to the Botanical Gardens would be great. I'll bet mountain bike and running races would start to use that stretch from Devon to the Gardens. ood business decision for Gardens and Town of Devon!	
31	The trail does not need to start with all the bells and whistles. It is more important to get the right of way in place and then add amenities as budget and or donations permit. Banning dogs would be a very bad idea.	Jan 28, 2014 7:16 PM
32	No ATV or OHV. Human powered trails.	Jan 28, 2014 5:04 PM
33	I would like to see Prospectors point expanded and grow into a destination location incorporated into the River Valley Alliance's plan. We need to expand the public access to the river.	Jan 28, 2014 1:32 PM
34	no maps available for new users, no trail head signs or supporting amenities	Jan 27, 2014 10:41 PM
35	no	Jan 27, 2014 6:10 PM
36	We're very supportive of positive use of trail systems, but not all users are responsible and it's these few people that can cause significant nuisance	Jan 27, 2014 3:48 PM
37	Concerns. Yes.The unwanted use of these trails by motorized vehicles such as ATV's	Jan 27, 2014 2:19 PM
38	I do not want the traffic coming basically through our yard. This is why we moved out here and if I wanted all these "conveniences" we would have stayed in the city where we didn't have a 45 min commute.	Jan 27, 2014 1:19 PM
39	If trails run through existing reserves in Parkland County Subdivisions, I am very concerned. We recenltly purchased our home with and our front doorstep looks onto a reserve. A trail through that reserve is certainly not what we envisioned when we paid top dollar to live in Parkland County. We all know that you cannot keep motorized vehicles off of trails in rural Alberta.	Jan 27, 2014 10:52 AM
40	Whom is the trail for? As a county of parkland resident and tax payer living next to Prospector Point it seems most of the people that use this area are from edmonton or other near by towns/ cities. I am against putting a trail running next to my property because as with most county residents I moved to an acreage for privacy and on the nice days when I am using my back yard I would not want strangers continually walking past. I do not mind other Grand River Valley residents walking past through our community green space along my property line but I am not in interested in a path for non county residents.	Jan 26, 2014 10:24 PM
41	Enforce and maintain what there is. Most of the users of some of these areas (esp. Prospector's Point) don't even live in this municipality.	Jan 26, 2014 6:52 PM
42	put money into making the parks you have now better - chickakoo and hasse are falling apart and you can tell the County has minimal interest in operating these placed. Plow the lakes for skating like you used to, Have full time track setting	Jan 25, 2014 9:48 PM



age 6,	Q13. Do you have any other comments or concerns regarding trails development	in Parkland County?
	and patrolling - years ago Bob Howell would be out on friday saturday and sunday track setting, patrolling, making sure dogs were on leashes, that people were respecting Chickakoo - now we are lucky to see the track set once a week - a well set track should take 2 days to do not 4 hours - look at what Devon does, Strathcona Wilderness Park, etc - they blow the County away. Build nature centers - have a place for a bit of a fire - in summer do more than just empty garbage on weekends - have a student or two out providing nature info and generally showing a County presence on weekends during the high use times. Do not waste money building DBG to river trail which would then carve up the little money you now have that cannot run the present places properly!	
43	This would fit in nicely with Devon's vision for access to the River Valley Alliance trail system and encourage those visiting Bike Town to ride out to the gardens. A win Win for both County's.	Jan 25, 2014 4:13 PM
44	I would like them to be low in maintenance, ie as natural as possible, or in other words to avoid pavement and wide tracks	Jan 23, 2014 11:07 PM
45	No.	Jan 23, 2014 3:53 PM
46	This green space and outdoor use is likely to be pivotal as hotels, housing and population increase in the eastern part of Parkland Co.	Jan 23, 2014 11:37 AM
47	Need more places for ATV's to go!	Jan 23, 2014 10:47 AM
48	Before undertaking new parks projects like this one - Parkland County needs to look at the facilities they presently run now and ask 1) is PC doing the best they can at operating and maintaining these facilities now (I see areas that can be improved)? and 2) What can PC do to make our existing parks and facilities outstanding places that PC is proud to promote as exceptional sites to visit with a family or friends - examples take a look at what the Town of Devon has done over the past three years at their side of PP and how they have maintained and improved their trail system compared to Parkland's side of Prospectors Point - there is absolutely no comparison - Devon runs a spectacular facility - Parkland's side is a mud hole, mosh pit 4x4 - ATV playground that is out of control, compare Chickakoo with what is done at Strathcona Wilderness Centre (municipal run) or out in the Blackfoot area east of Edmonton (provincial run) for both cycling trails and cross country skiing or compare Chickakoo to the mountain bike trails system Hinton ande Devon have constructed including pump tracks, features parks etc. There is no comparison between - and PC still promotes Chickakoo as a county "jewel". PC has fallen far behind other municipalities in operating, maintianing and upkeeping the present parks so why try to add another trail system to an area that is already obviously strained? Finally - go look at your Graminia Trail System - that was constructed in the late 1980's - PC built some surfaced trails in the Graminina Road road allowance to promote walking / cycling to Graminia School - the trail was never maintained, grass never mowed beside it, horses and ATV's damaged the trail and no-one ever used the trail.	Jan 22, 2014 11:37 AM
49	I would like to see trails that let people get out of the city and enjoy nature. Just birds, trees, sun, wind, and the sound of your feet on the pavement. Not too much development.	Jan 22, 2014 11:34 AM
50	we need dedicated walking/hiking trails + dedicated OHV trails. I do not support	Jan 22, 2014 11:34 AM

Page	Page 6, Q13. Do you have any other comments or concerns regarding trails development in Parkland County?		
	Multi-use trails because in practice they only get used by atvs because the ruts, noise and speed they travel at creates a negative experience for hikers. we do need dedicated OHV trails to provide them with options and to limit the damage they do. thanks for the opportunity to comment		
51	please make trails wide enough for emergency services to access with UTV fire	Jan 22, 2014 10:55 AM	

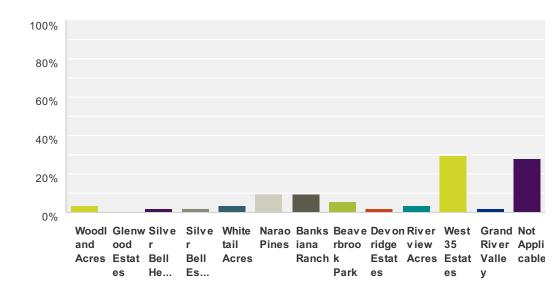
and rescue units.



Q2 Do you live in one of the following subdivisions?



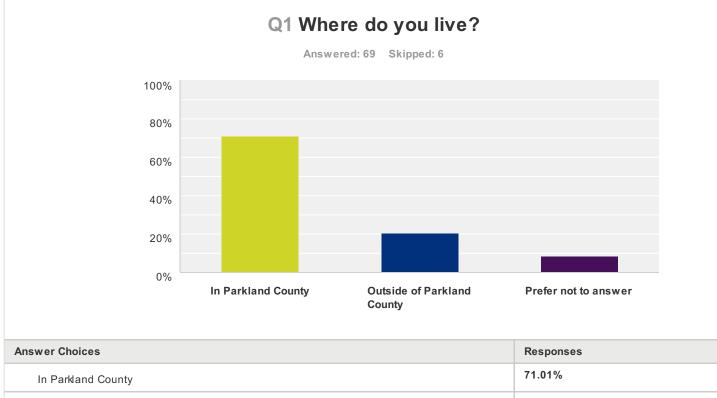




Answer Choices	Responses	
Woodland Acres	3.70%	2
Glenwood Estates	0.00%	0
Silver Bell Heights	1.85%	1
Silver Bell Estates	1.85%	1
Whitetail Acres	3.70%	2
Narao Pines	9.26%	5
Banksiana Ranch	9.26%	5
Beaverbrook Park	5.56%	3
Devonridge Estates	1.85%	1
Riverview Acres	3.70%	2
West 35 Estates	29.63%	16
Grand River Valley	1.85%	1
Not Applicable	27.78%	15
Total		54

#	Other (please specify)	Date
1	hycrest place	3/25/2014 7:55 PM
2	south parkdale	3/25/2014 5:01 PM
3	Woodland Park	3/25/2014 8:53 AM
4	Woodland Park	3/25/2014 8:51 AM
5	Hennig Acres	3/24/2014 5:30 PM

Devonian Gardens Trail Draft Plan

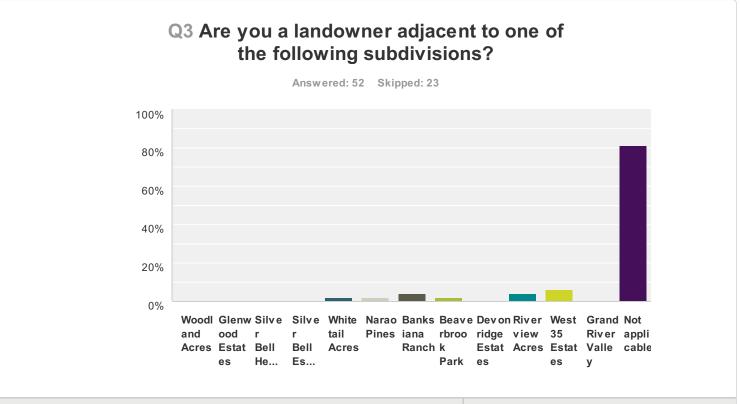


Answer Choices	Responses	
In Parkland County	71.01% 4	9
Outside of Parkland County	20.29%	4
Prefer not to answer	8.70%	6
Total	69	9

Devonian Gardens Trail Draft Plan

6	Bankiana road	3/24/2014 11:41 AM
7	Graminia and Highway 60	3/21/2014 12:06 PM
8	Sherwood Park	3/19/2014 11:48 AM
9	Parkland Village	3/19/2014 11:44 AM
10	Birch Hill Park	3/18/2014 1:22 PM
11	SANDIHLLS ESTATES	3/18/2014 12:38 PM
12	Willowridge	3/17/2014 6:28 PM
13	Town of Devon	3/15/2014 11:33 AM
14	Pine Valley 2	3/14/2014 4:08 PM
15	Harder Acres	3/12/2014 4:22 PM
16	near Sand Hills Estates	3/10/2014 9:10 AM

Devonian Gardens Trail Draft Plan



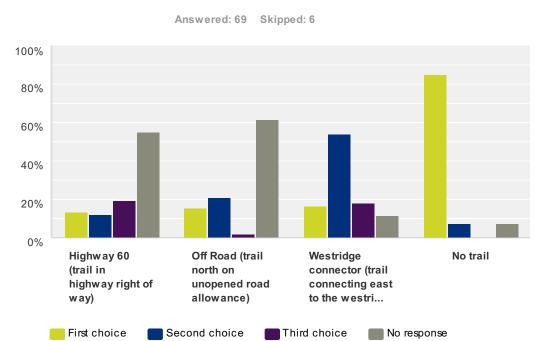
Answer Choices	Responses	Responses	
Woodland Acres	0.00%	0	
Glenwood Estates	0.00%	0	
Silver Bell Heights	0.00%	0	
Silver Bell Estates	0.00%	0	
Whitetail Acres	1.92%	1	
Narao Pines	1.92%	1	
Banksiana Ranch	3.85%	2	
Beaverbrook Park	1.92%	1	
Devonridge Estates	0.00%	0	
Riverview Acres	3.85%	2	
West 35 Estates	5.77%	3	
Grand River Valley	0.00%	0	
Not applicable	80.77%	42	
Total Respondents: 52			

#	Other (please specify)	Date
1	Maplewood	3/19/2014 11:48 AM



Devonian Gardens Trail Draft Plan

Q4 Please rank the proposed trail routes in order of your overall preference. For reference, the trail route options are identified on the options map, which may be downloaded from the County website.



	First choice	Second choice	Third choice	No response	Total
Highway 60 (trail in highway right of way)	13.73% 7	11.76% 6	19.61% 10	54.90% 28	51
Off Road (trail north on unopened road allowance)	15.38% 8	21.15% 11	1.92%	61.54% 32	52
Westridge connector (trail connecting east to the westridge lands)	16.39% 10	54.10% 33	18.03% 11	11.48% 7	61
No trail	84.91% 45	7.55% 4	0.00% 0	7.55% 4	53

Q5 Please provide any additional comments you may have on the project or the proposed trail alignments.

Answered: 20 Skipped: 55

#	Responses	Date
1	We have had numerous issues with people being destructive. We especially have no interest in a trail that is multi use or unmonitored as we have looked long and hard for land that is undisturbed and a peaceful sanctuary.	3/26/2014 4:15 PM
2	Hwy 60 route is a waste of money - the county should spend the cash on land acquisition of environmentally suitable areas for parks, etc. instead. Probably should get land now instead of other routes too, but don't waste resources on a Hwy trail.	3/25/2014 7:58 PM
3	The county cannot maintain the existing trails it has never mind entertaining any new ones. There is no need for a trail as it will impact the environment and the animals in a negative way. Existing foot paths that are created by the occaisional hiker are sufficient. As a general taxpayer there is not need to further burden all of us as the go forward maintenance costs will exceed the benefit derived.	3/25/2014 12:35 PM
4	Limited use anticipated until connection to River Valley system is completed.	3/24/2014 10:04 AM
5	No need to spend any money, will have environmental impact. Look to recent incident with coyotes in the city. Absolutely not necesary. Will be future maintenance costs and county cannot even maintain the 'trails' it already has! Will be increased crime, drug use, noise and environmental impact!(grarbage, pollution, litter etc.)	3/23/2014 9:00 AM
6	Any proposed trail is going to significantly disrupt wetlands and adjacent landowners.	3/22/2014 4:34 PM
7	Off road on the road allowance is really the only option as the costs of the Westridge land acquisition would be prohibitive. I understand that certain individuals in west 35 do not want the trail on their western border but I don't think there is any other options. Quit wasting time on the west ridge as it is not feasable. If the provincial government is prepared to pay for 65 % on the initial costs, it would seem stupid not to take advantage of it. It would be very pleasant to be able to ride your bike from in our area al the way to downtown edmonton and beyond without having a conflict with cars.	3/21/2014 12:19 PM
8	Ensure that there is incredible barriers between vehicular traffic and other modes of transport to prevent injury - PLEASE DO NOT MAKE A BIKE LANE.	3/19/2014 12:53 PM
9	I like the two I've indicated. Could both be done?	3/19/2014 11:47 AM
10	No trail is best, as I do not see the demand for hikers wanting to go between Prospectors Point and the Devonian Gardens. I have walked much of the road system in the area and it is not an interesting view; Pastures, poplar bluffs and power lines. I do not see where is the demand is for hikers, who would either park in Prospectors Point and walk to Devonian Gardens, one way - not both. In any case, the trail would be very expense to maintain. It is not just the construction of the trail, but the future costs of maintaining the trail, including policing for off road vehicles and vandals.	3/18/2014 11:26 AM
11	Trails going by residences Not all ditches have a lot of room so when I walked by where the proposed routes were to go I felt like I would be in their yard. Also. Not the view I wanted on a hike on a trail	3/18/2014 8:25 AM
12	What if the UofA does not make an entrance on the east side of the gardens. Why not extend it to the Clifford E Lee area? Perhaps consider going through the Clifford E Lee area then east to the gardens so when the city of Edmonton annexes the land up to HW 60 the trail will remain in the county jursidiction	3/17/2014 6:40 PM
13	Westridge is now private land	3/17/2014 4:37 PM
	I think it's a fantastic idea to have a trail for walking, cycling and skiing. What a great addition that	3/15/2014 11:40 AM



Devonian Gardens Trail Draft Plan

15	The Hghwy 60 option is the least attractive of the trail options due to proximity to the highway the noise and lack of natural vistas would discourage frequent use. The Westridge connector seems to have the best opportunities for immersion in the natural environment in this area.	3/12/2014 4:29 PM
16	should also be Horse friendly trails.	3/12/2014 11:36 AM
17	Make the MANY garbage receptacles animal-proof.	3/12/2014 10:19 AM
18	I am all for natural trails that provide an opportunity for residences and visitors to experience our natural surroundings. I don't see the rational for these 2 attractions to be connected, they have different customers.	3/10/2014 9:14 AM
19	The westridge connector is a waste of time and I can appreciate Dialog and PC having the grace to include the idea but it seems completely unrealistic and self serving, the vision of the connector is to connect DBG and PP and should be the most direct route not touching any subdivisions, the safety of residents and persons using the trail needs to be the most important concern, the trail along the highway provides the best visibility and security for all users. Planning should prevent OHV use on the trail as there are more wetlands on the east side of hwy 60, more OHV use on west side; maybe promote OHV traffic to move to west side, much of the trail can be placed at a further distance from the highway instead of the ditch based on property agreements with the UofA and owners on the east side of hwy 60, one comment from the last meeting stated he wanted to have a picturesque view on the trail; there are many other trails for peace and tranquility in parkland county and this, by vision, needs to be a connector not a scenic tour, if council desides to use the off road plan there will be a fight on their hands.	3/6/2014 1:55 PM
20	I believe the Highway 60 trail is useless. It would be way too close to the noise and sight of vehicle traffic on Highway 60. I would also like to see the 3 meter trail cut down to a 1 meter trail. I do not believe that there would be enough traffic on it to even have to worry about moving over to let others pass by. I would be against berming as it is not cost effective with having to wait 10 to 15 yrs. for plants, bushes or trees to get big enough to actually screen residents from the trail. I would think that any stairs built to come up from the River Valley would totally defeat the ability for "older people or anyone with mobility issues" to even want to then walk another 5 K's to the Devonian Gardens.	3/5/2014 5:47 PM



