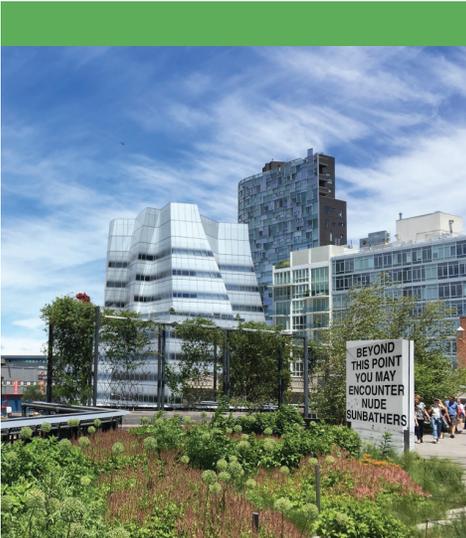


Trails

Providing for community trails in municipal land use planning.

Municipalities in southern Alberta are increasingly recognizing the benefits of multi-use trails designed for walking, running, cycling, and other small-wheeled activities. Trails animate the public realm, promote engagement with the outdoors and serve as vital corridors for active transportation. This periodical will explore the planning and design of trails from the perspective of municipal planning. As urban areas grow, providing for trails in planning initiatives—either independently or in collaboration with neighbouring municipalities and other regional partners—is a surefire approach to support active living and cultivate a connected community.



The High Line, Manhattan

An emerging phenomenon in the 21st century is the “rail trail”—a colloquial term that describes a multi-use trail located on an abandoned rail line. The longest rail trail in Canada is Newfoundland T’Railway Provincial Park, which spans nearly 900 km across the island. From a design perspective, the generous width of a railway right-of-way opens up a world of possibility to enhance the public realm, particularly in urban settings where multiple sources of funding can be accessed to fund the capital improvements. One of the more remarkable examples of this is the High Line in Manhattan, which is equal parts transportation corridor and public space. A 2.3-km-long elevated structure, the High Line physically separates pedestrians from the traffic impacts below. It includes overlooks, public seating areas, sculptures, water features, spaces for community programming and performance art, and even an open-air food court. The High Line is owned by the City of New York and operated by a local non-profit organization pursuant to a licence agreement with the municipal parks department.

On the legislative side, the province has committed to improving recreational access to public land by enacting the *Trails Act*, which establishes a trail management planning process with consideration of the many land uses and values on the landscape. While the *Trails Act* does contemplate the development of non-motorized trails, the backcountry locations associated with most public lands are—except in Crowsnest Pass—well removed from the urban and edge environments that are the focus of this periodical.

Municipal planning for trails

Trails facilitate exploration—within the urban environment itself and along its outer reaches. They also serve a utilitarian purpose as the fundamental connective tissue in the fabric of the urban open space environment. Whereas neighbourhoods, parks and other nodes function as hubs of concentrated activity, trails facilitate navigation between these various gathering spaces. The spatial interdependence of trails and nodes reinforces the significance of each of these elements: a trail acquires meaning when it leads to a node, and a node becomes more memorable if it exists at the end of a trail. Interpretive elements like signage help contextualize and tell the narrative of the place. Recognizing how the positive imagery of a thoughtfully planned trails system can positively influence the perception of the urban environment, municipalities are increasingly integrating comprehensive trails planning into broader land use planning frameworks.

For a trail network to be successful it should emphasize unique local conditions, thus producing a memorable reflection of the area. For this reason, effective trails planning is contingent on engaging residents to tap into knowledge of place. The engagement process is frequently spearheaded by a local non-profit organization functioning as a trails committee. These volunteer-driven groups can play a central role by advocating for trail initiatives, engaging in fundraising, formulating trails concepts, and entering into trail management agreements with municipal councils.

From a local governance perspective, the municipal development plan (MDP) is the starting point for a local government to articulate policy that formally recognizes multi-use trails as a valuable recreational amenity and integral component of the local transportation network. MDP policy could be aimed at initiating the development of a trails master plan or, conversely, at embedding elements of an existing trails master plan into the MDP to give them statutory authority. Due to the high-level nature of an MDP, policy at this planning stage will typically be more general in nature, emphasizing connectivity and promoting the health and wellness benefits of engagement with the outdoors. An MDP may also include coarse-scale mapping of trail corridors, or at least of environmentally significant areas as a precursor to trail mapping at a subsequent planning stage. Open spaces and other naturalised areas have the capacity to secure crucial links within a municipal trail network and enhance multi-modal connectivity to surrounding neighbourhoods, parks and other nodes within the community.

A more precise evaluation of layouts for specific trail segments often occurs

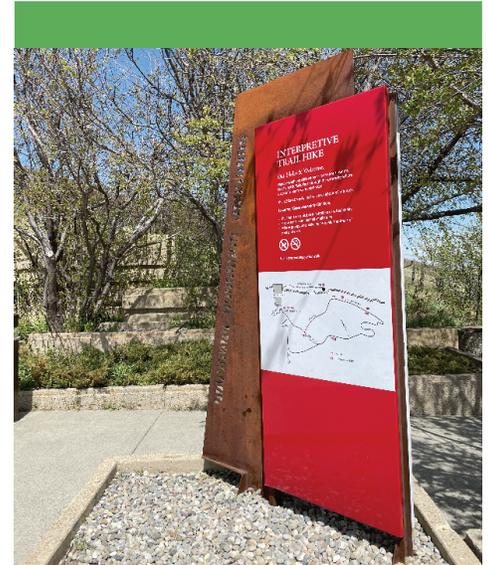
at the area structure plan (ASP) stage, where the vision of how a specific area will be developed becomes more crystallised. For example, a biophysical impact assessment undertaken as a preliminary study to an ASP could uncover information about the local flora and fauna that warrants a specific trail alignment to prevent unnecessary habitat loss or otherwise minimize environmental impact. Likewise, findings from a geotechnical investigation could bring to light information regarding the suitability of certain lands for trail development based on the subsurface characteristics. Naturally, a municipality should be aware of the costs associated with this more detailed consideration of trail alignments—not only the costs of due diligence investigations but of land surveying and engineering design as well. Where trail alignments are mapped within an ASP, those alignments will guide the layout of future subdivisions within the plan area. ASP policy can also articulate phasing for development of the trail network and outline specific trail-related requirements for subdivision proposals within the plan area.

Trails planning also has the capacity to extend beyond municipal boundaries, as in the regional trails system in the Town of Magrath and Cardston County, or the Meadowlark Trail east of Calgary. The latter stretches 7 km along a former rail line from the Village of Beiseker to the Town of Irricana, featuring interpretive signage and scenic lookouts across the grasslands. This regional trail is part of the Trans Canada Trail (formerly known as the “Great Trail”), the longest multi-use trail system in the world.

Trail design considerations

Trails should not be perfectly linear, curved or curvilinear. Rather, they should embody aspects of all these forms to reflect the distinctive shape of nature: unpredictability. Where trails meander in harmony with the physical transitions and natural rhythms of the local environment, the result is a more intriguing visual experience for trail users. The sense of place can be further enhanced by accentuating changes in direction by integrating trees or other vertical elements (“anchors”) adjacent to the trail, which serve to provide a memorable point of reference. Naturally, the qualitative benefits of a meandering route should be balanced with the goal of maintaining clear sightlines. The desired minimum sight distance will be directly proportional to the design speed of the trail, with an unobstructed distance of 45 m (147 ft) being the target where cycling will be accommodated.

To complement the existing terrain, trails should be developed at grade where cross-slopes are negligible. In the case of a paved trail, where the cross-slope of the existing grade exceeds 2% (3% for an unpaved trail), the best practice is to construct the trail either on an embankment or using partial cut and fill. Depending on the context, hard surfaces like asphalt, granular-based surfaces like limestone, and rough dirt trails are all potentially suitable surface finishes. The finish will depend, among other factors, on the desired user groups, the cost of constructing and maintaining the capital improvements, and the subsurface characteristics of the land. As soil composition determines structural stability, well-drained soils are the



Interpretive signage at Head-Smashed-In Buffalo Jump (Estipah-skikikini-kots / Áistipahskikikinikots) celebrates history by weaving storytelling into the trail experience.



The MPE Link Pathway in Lethbridge County connects the City of Lethbridge and the Town of Coaldale and parallels a drainage drain owned by the St. Mary River Irrigation District. A combination of provincial, municipal and private funding was leveraged to build Phase 1 of the MPE Link Pathway, with the trails committee raising a total of \$3.5 million to-date.

SAMPLE TRAIL STANDARDS:

Min. Right-of-Way Width:

Natural	6.1 m
Local Connector	7.6 m
Regional Multi-Use	9.1 m

Min. Surface Width:

Natural	1.2 m
Local Connector	1.8 m
Regional Multi-Use	2.4 m

Max. Sustained Vertical Grade:

Natural	3–10% *
Local Connector	7%
Regional Multi-Use	5%

* Contingent on erosion control

Source:
Magrath Regional Trails
Master Plan

The ongoing development of the 2,987-km portion of the Trans Canada Trail located within Alberta is supported by Alberta TrailNet, a non-profit organization who acts as the provincial trail council. Alberta TrailNet works with trail supporters, trail operators, provincial trail user associations, municipalities and the provincial government to support trail projects throughout Alberta.

most ideal subgrade. The Alberta Recreation Corridor & Trails Classification System provides a baseline set of standards for trail development.

Natural trails are low-impact corridors that are suitable in settings where the anticipated traffic is mostly low-volume foot traffic. They are generally found in the outer reaches of a comprehensive urban trail network, or where an urban cross-section design is challenged by the presence of steep slopes, narrow spaces, obstructed sightlines or other physical constraints. In comparison, local connector trails involve moderate design impact and accommodate more diverse user types and medium traffic volumes. They provide community links and enhanced access to local services and points of interest. At the far end of the continuum are the regional multi-use trails. Characterised by gentle slopes and smooth, hard surfaces, these trails are designed to be barrier-free and accommodate the full spectrum of non-motorized users and high traffic volumes.

As one of the key purposes of a trail is to create an aesthetically pleasing environment, furnishing the trail network with ample amenities like garbage receptacles will be central to maintaining functionality and convenience. To this end, one receptacle per kilometre is a reasonable distribution in most settings. Receptacles should be bear-resistant and sufficiently separated from seating areas. In the Magrath regional trails system, the preferred spacing between benches is 500 metres for regional multi-use and local connector trails, and 700 metres for natural trails. Native landscaping should be adopted so as to accentuate the allure of the most consequential amenity—the landscape itself. Annual flowerbeds and natural plant xeriscapes are two popular planting strategies that can create visual interest and enhance the user experience. Lastly, to discourage trespassing on private property and prohibit access to hazard lands, fencing may be necessary for certain segments of a trail.

Land acquisition and funding

Under Part 17 of the *Municipal Government Act* (MGA), a community trail falls under the category of “pedestrian walkway.” The scope of what constitutes a pedestrian walkway was considered by the Alberta Court of Appeal in *Stantec Consulting Ltd. v. Edmonton (City of)*, 2004 ABCA 241. In this case, the local subdivision and development appeal board imposed a condition on subdivision approval under s. 655(1)(b)(ii) of the MGA requiring the developer to construct a pedestrian walkway within a dedicated three-metre-wide strip of land. The developer appealed the condition, arguing that these dimensional standards were excessive because a pedestrian walkway should be reserved exclusively for foot traffic. The Court disagreed, concluding that a pedestrian walkway was analogous to a sidewalk, the only difference being that it is outside the road right-of-way. Since the city’s traffic bylaw allowed the use of sidewalks by individuals using roller skates, in-line skates, skateboards, scooters, and bicycles, it made sense that those same mechanical devices would be accommodated on a pedestrian walkway. The Court also cited Black’s Law Dictionary to demonstrate that the term

“pedestrian” is not confined to individuals travelling on foot. Ultimately, the condition specifying the width and surface finish of the pedestrian walkway was upheld and it was determined that specifics relating to the scope of non-foot traffic allowed on a pedestrian walkway was a discretionary matter for the municipal authority to decide. Today, winter skating is even accommodated on select pedestrian walkways in Edmonton. The city refers to these scenic ice trails as “iceways.”

An important point about s. 655(1)(b)(ii)—and about the equivalent provision dealing with conditions attached to the issuance of a development permit (s. 650(1)(b))—is that the requirement to construct or pay for the construction of a pedestrian walkway can be imposed to serve the subject lands and/or to connect to pedestrian walkways that serve (or will serve) adjacent lands. This authority to require a developer to connect to off-site trails can help facilitate implementation of a municipality’s trails master plan.

Land for a trail corridor can be secured at the subdivision stage, either as a public utility right-of-way, a separately titled public utility lot owned by the municipality, or reserve land. For land abutting the bed and shore of a water body, environmental reserve may be the preferred tool, provided that the banks are stable enough to accommodate the development of low-impact trail facilities. Environmental reserve may also be suitable for trails where physical constraints make the land unsuitable for permanent structures yet public access can still be safely accommodated. Municipal reserve is another popular mechanism; however, it is generally accepted that this designation is best utilized for recreational facilities that are not intended solely for circulation purposes. Where the trail corridor was not acquired at the subdivision stage, a municipality can negotiate with the landowner to make the land subject to an access easement, or purchase the land outright. This is also where a local trails committee can step in and help obtain the land through donations, fundraising, or by securing government grants.

Government funding is available to support the planning and development of trails. The federal Active Transportation Fund offers funding for the creation of formal strategic planning documents as well as for capital projects involving new construction, enhancement of existing infrastructure, and/or improvements to design and safety features that encourage active transportation. At the provincial level, the Alberta Community Partnership can be leveraged for trail initiatives that involve intermunicipal collaboration.

Concluding remarks

Community trails are an important component of a municipality’s recreation profile. By undertaking comprehensive trails planning, a municipality can align infrastructure investments with community goals and create vital assets. The development of accessible trail networks ultimately supports regional connectivity, active living and engagement with the great outdoors for southern Albertans—today, and for generations to come.

Under the Occupiers’ Liability Act, “occupier” refers to the person responsible for the condition of a trail, while a trail user is deemed to be a “trespasser.” The Act provides that an occupier is only liable for damages for injury to the trespasser that result from the occupier’s willful or reckless conduct. The caveat is that there is a higher expectation on occupiers regarding child trespassers, who are less perceptive of danger. It is thus in the best interest of a municipality to provide a reasonable duty of care that contributes to the safety of all trail users.

In many cases, a municipality will outsource trail management to a local grassroots organization by entering into a management agreement. The third-party is then responsible for monitoring trail conditions, undertaking repairs, installing erosion control measures, managing vegetation, removing litter, etc. However, even under such an arrangement, the municipality may still be liable for damages despite any insurance and indemnity provisions included in the underlying management agreement. The determinative factor is whether the municipality exercised reasonable care in the selection and supervision of the third party.

For more information on this topic contact admin@orrsc.com or visit our website at orrsc.com.

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