



TOWN OF DRUMHELLER
DRUMHELLER WAYFINDING
ASSESSMENT

FINAL REPORT

September 2024 A row of five small, solid-colored squares: orange, green, dark blue, red, and light blue.



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Table of Contents

- 1.0 Introduction.....1**
- 2.0 Methodology2**
 - 2.1 Assessment Purpose2
 - 2.2 Assessment Process.....2
- 3.0 Wayfinding Assessment.....3**
- 4.0 Wayfinding Concept and Placement6**
 - 4.1 Wayfinding Hierarchy6
 - 4.2 Wayfinding Placement Plan6
- 5.0 Public Engagement Summary.....10**
 - 5.1 Engagement Methods10
 - 5.2 Notable Findings10
- 6.0 Implementation Strategy11**
 - 6.1 Implementation Staging.....11
 - 6.2 Costing11
 - 6.3 Additional Implementation Recommendations12
- 7.0 Conclusion.....14**

APPENDICES

Appendix A Public Engagement Summary

TABLES

- Table 6.1: Proposed Signage Estimated Budget..... 12

FIGURES

- Figure 3.1: Existing Wayfinding and Trail Network Map5
- Figure 4.1: Wayfinding Hierarchy Designs7
- Figure 4.1.1: Proposed Location Map8
- Figure 4.1.2: Proposed Location Map9



1.0 Introduction

Drumheller is a thriving town of nearly 8000 residents. It is the largest urbanized centre between Calgary and Saskatchewan, servicing approximately 30,000 people from Starland County, Kneehill County, Special Areas 2, and Wheatland County. In addition, Drumheller attracts nearly 500,000 seasonal visitors each year seeking out the badlands experience and Tyrell Museum.

Drumheller's trail system provides a critical recreational asset for the residents and visitors. The Parks and Recreation Master Plan 2023-2043 survey found that 76% of respondents prefer hiking, walking, or running on trails or pathways, making it the top outdoor activity.

Efficient wayfinding plays a crucial role in promoting connection, improving accessibility and ensuring smooth navigation within communities and outdoor environments. With Drumheller being home to a well-used, interconnected system of trails, establishing clear navigation routes is imperative to enhance the user experience of the network.

Drumheller's current wayfinding signage is a strong base to build upon to generate a consistent network for navigation. Implementing cohesive wayfinding signage throughout the community not only elevates the current functionality but also sets a precedent for future trail development projects. Strong wayfinding will activate outdoor spaces and encourage active transportation.

2.0 Methodology

2.1 Assessment Purpose

The assessment provides an analysis of wayfinding signage to develop a plan for the Town of Drumheller (the Town) to move forward with. It will be used to aid in prioritizing signage opportunities based on the need for wayfinding in key locations and balanced investment in the trail system. In order to achieve this, the scope of this assessment project includes:

- An assessment of Drumheller current trails and wayfinding system
- Identifying potential issues and opportunities for improvement
- Creation of new wayfinding hierarchy concepts and a proposed placement location plan
- Development of a staging plan, complete with costing, to achieve a more cohesive wayfinding network over time

2.2 Assessment Process

The assessment project was conducted in three phases:

Phase 1 – Network Inventory and Mapping: Trail mapping using GIS was undertaken. Data sets were developed and updated from existing Town GIS data and new GPS/GIS data collected on site. The outcome was a comprehensive analysis of wayfinding opportunities as well as proposed placements for future signage.

Phase 2 – Analysis and Wayfinding Ideation: The analysis phase considered the data and observations collected in Phase 1 and enhanced understanding of the network in Drumheller as well as the existing wayfinding assets. It determined wayfinding signage discrepancies and gaps that exist as well as opportunities for enhancing the connectivity of the network. Hierarchical wayfinding signage concepts were developed and refined for final recommendation.

Phase 3 – Assessment Report: The final deliverable, this report, summaries the first two phases of work and provides direction for wayfinding concepts and implementation staging for the Town to move forward with.

3.0 Wayfinding Assessment

Drumheller currently has various wayfinding signage locations throughout the town. Newer wayfinding signage is of similar branding, style and form, but older signage exists through the trail system and lacks consistency, provides outdated information, and is generally in poor condition.

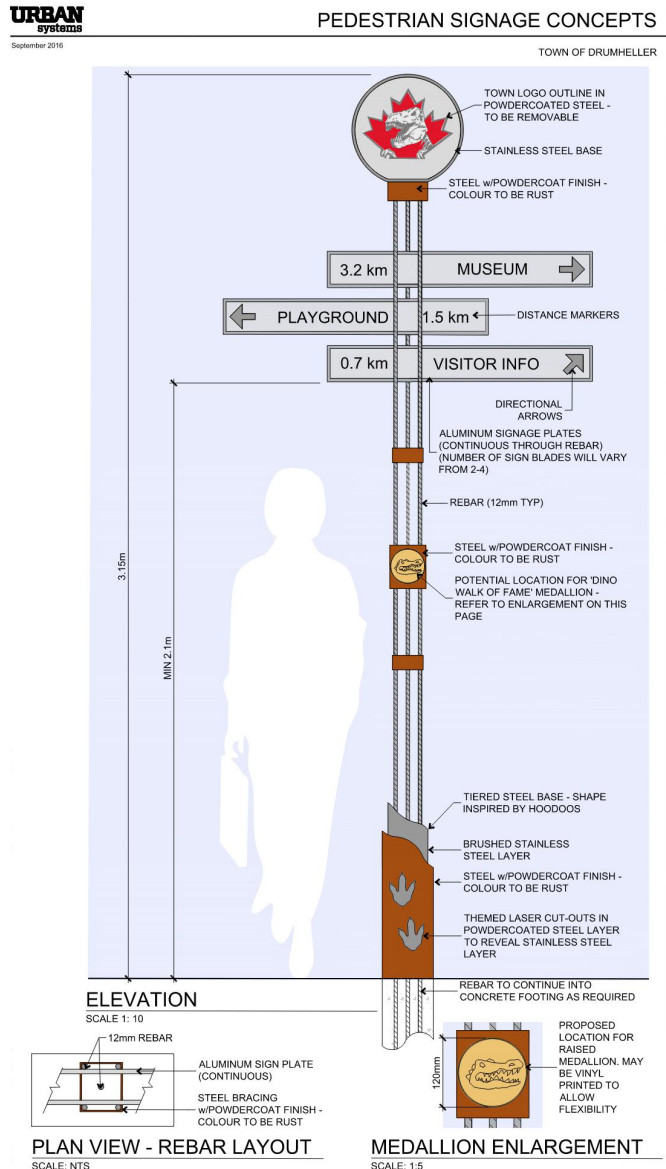


Old Wayfinding Signage

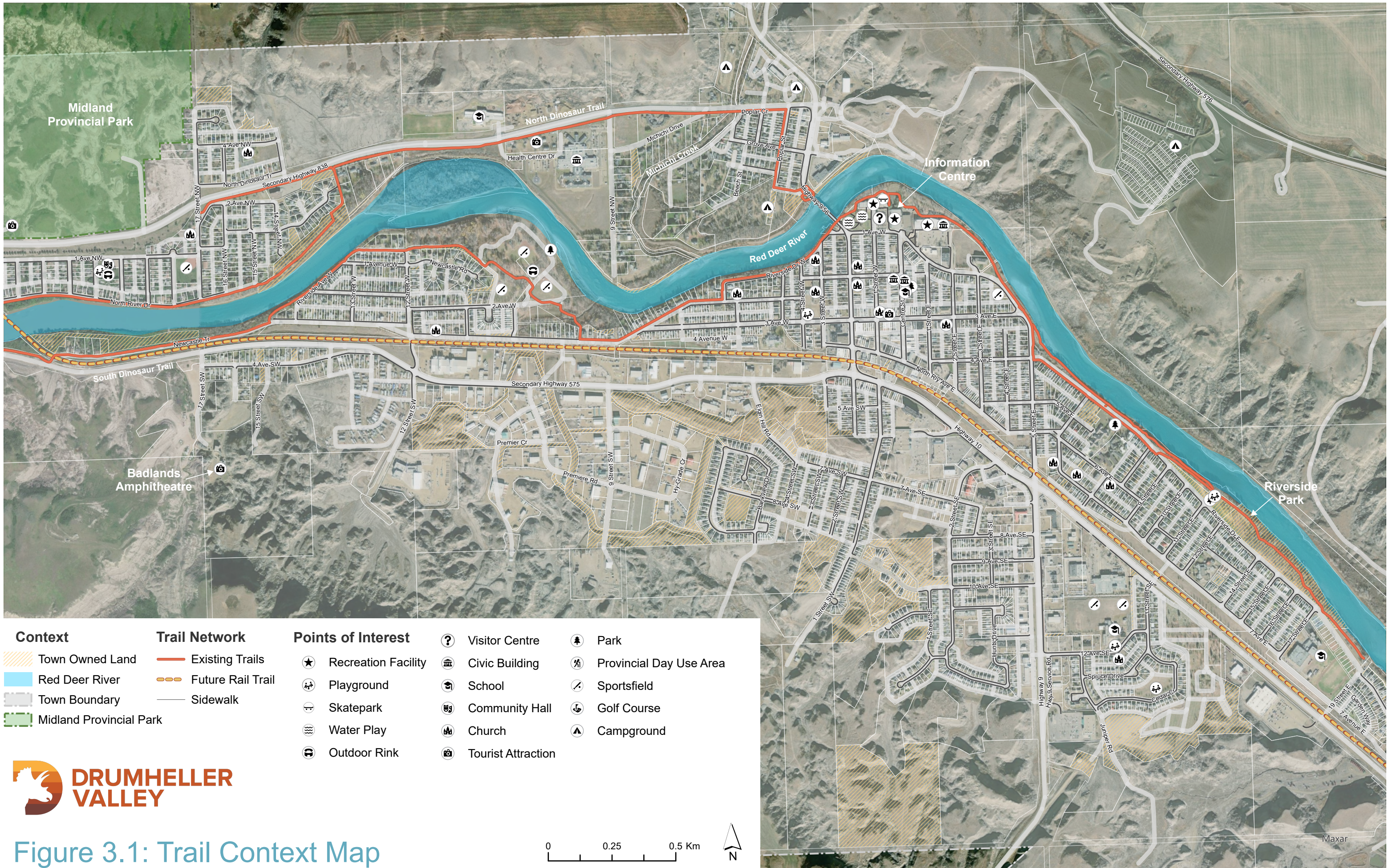
In recent years, the Town has installed new wayfinding signage consistent with Town branding. There is currently one wayfinding signage style (corten steel with directional arrows). This signage type is aesthetic and consistent with Town branding and landscape context. However, this single style of sign has not been yet adapted for varying uses (i.e. mapping kiosk, trail marker, etc). To accommodate wayfinding needs throughout the trail system, a hierarchical suite of wayfinding signage types is needed. The current directional marker design provides a solid basis for the aesthetics and branding of additional signage types.

Trail networks throughout the area demonstrate good connectivity and appear to be well-used (see Figure 3.1 on following page). However, inconsistency and lack of signage throughout the wayfinding system, may limit the functionality of the trail system and user ability to navigate through it. Some trail connections within the core area of Drumheller are not clearly established or easy to find. In addition, new trails have been under construction and require the installation of new signage to connect them to other established routes.

Currently, the Town is undertaking planning and design for the future CN Rails to Trails project. Investment into the wayfinding system should proactively consider connections between the Rail Trail and Drumheller trail and open space system. Additional general areas for improvement include potential signage locations highlighting entrances to major parks, trails, and newly developed trail connections.



Updated Wayfinding Signage Style



4.0 Wayfinding Concept and Placement

4.1 Wayfinding Hierarchy

Design concepts for the new wayfinding signage were devised to seamlessly integrate with existing style elements of the existing signage in town, ensuring consistency and familiarity for residents and visitors. Locally available materials were prioritized to reflect the Town's character and history. Additionally, the incorporation of the Town's branding was essential to accurately represent the area and provide consistent imagery to follow. Overall, these decisions aimed to enhance wayfinding and the user experience while enhancing the visual appeal and cohesion of the Town's trail system.

As part of the project, a sign hierarchy was created with the goal of establishing a cohesive and scaled network of wayfinding signage connecting the various trail routes in Drumheller. This hierarchy not only differentiates types of wayfinding in order to guide users, it also supports an investment-conscious staging plan that aligns with the Town's budget.

The wayfinding sign hierarchy is as follows:

- **Major Map Kiosk:** Comprehensive information sign kiosks located at trailheads and major trail intersections. Displaying large maps of the trail system, points of interest, and other essential information about navigating the area. The main purpose of these kiosk is to help people select destinations and routes.
- **Major Directional Signage:** Signs are strategically placed at key decisions points along trails. These signs provide directional information about significant landmarks, surrounding trails and other key destinations. The purpose of these signs is to help people orient themselves in relation to their destinations, especially when there are intersecting trails.
- **Minor Direction Signage:** These signs are smaller and placed along the trail to guide users between the major decision points. They indicate turns, confirm the correct path, or provide short distance directions and are essential for ensuring that trail users can easily follow the trail without getting lost.
- **Trail Markers:** Trail markers are the most frequent and basic form of trail signage, used to mark the path of the trail itself. Typically small, unobtrusive, and placed at regular intervals along the trail to guide users. Markers may include arrows, symbols, or numbers and are key for helping users stay on the correct trail and within bounds. Trail markers can also be used to provide distances at intervals along the trail.

Our proposed Wayfinding Hierarchy Designs are provided in Figure 4.1 on the following page.

4.2 Wayfinding Placement Plan

Proposed trail wayfinding locations were identified along Drumheller's existing and proposed trail network to highlight key destinations and guide users throughout the town. These new trail sign locations are intended to replace existing signage that is not adequately serving its purpose. Proposed locations include multi-trail intersections, connections to main roads, major trail entrances and viewpoints.

Our proposed Wayfinding Location Map is provided in Figure 4.1.1-2 on Pages 8 and 9.

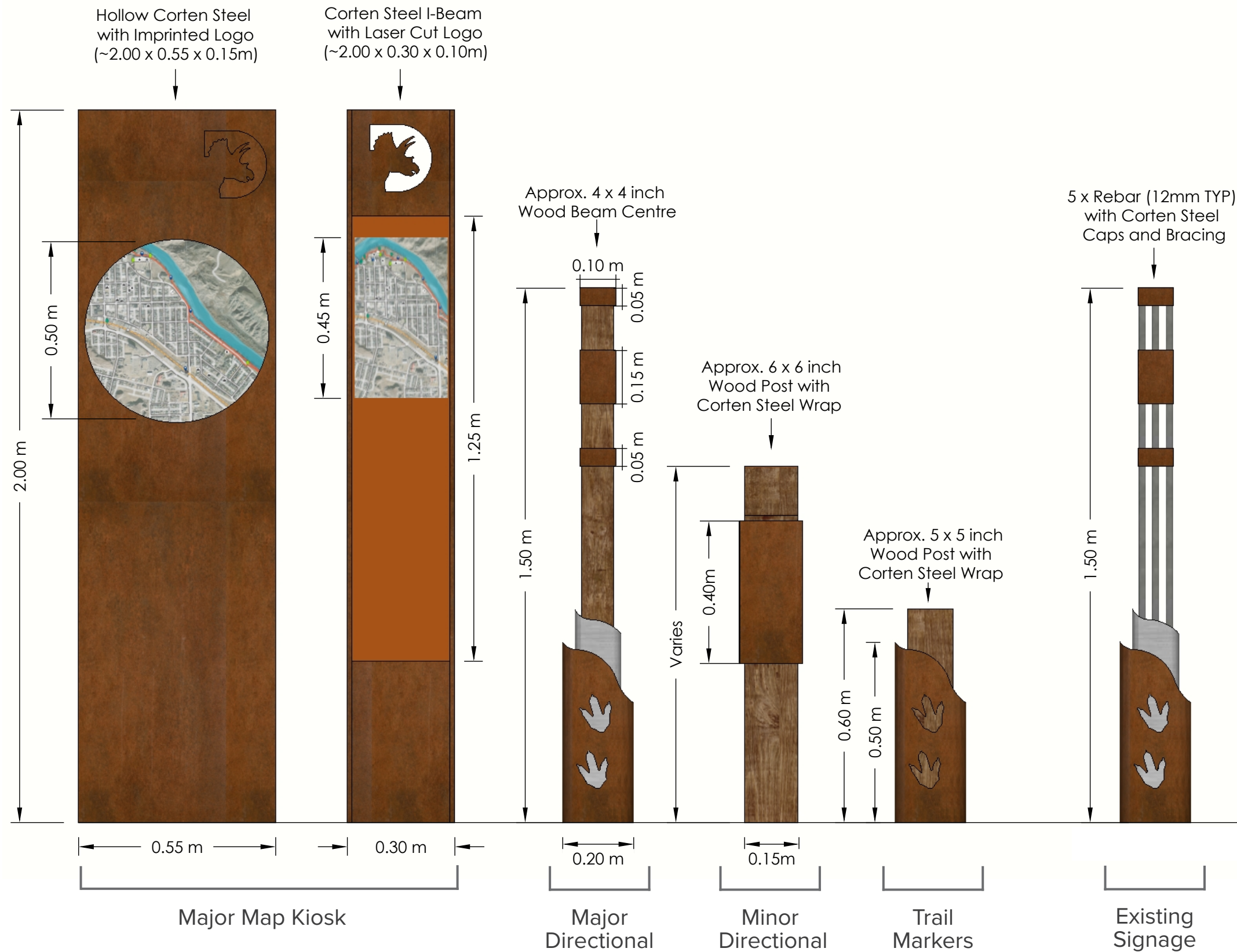
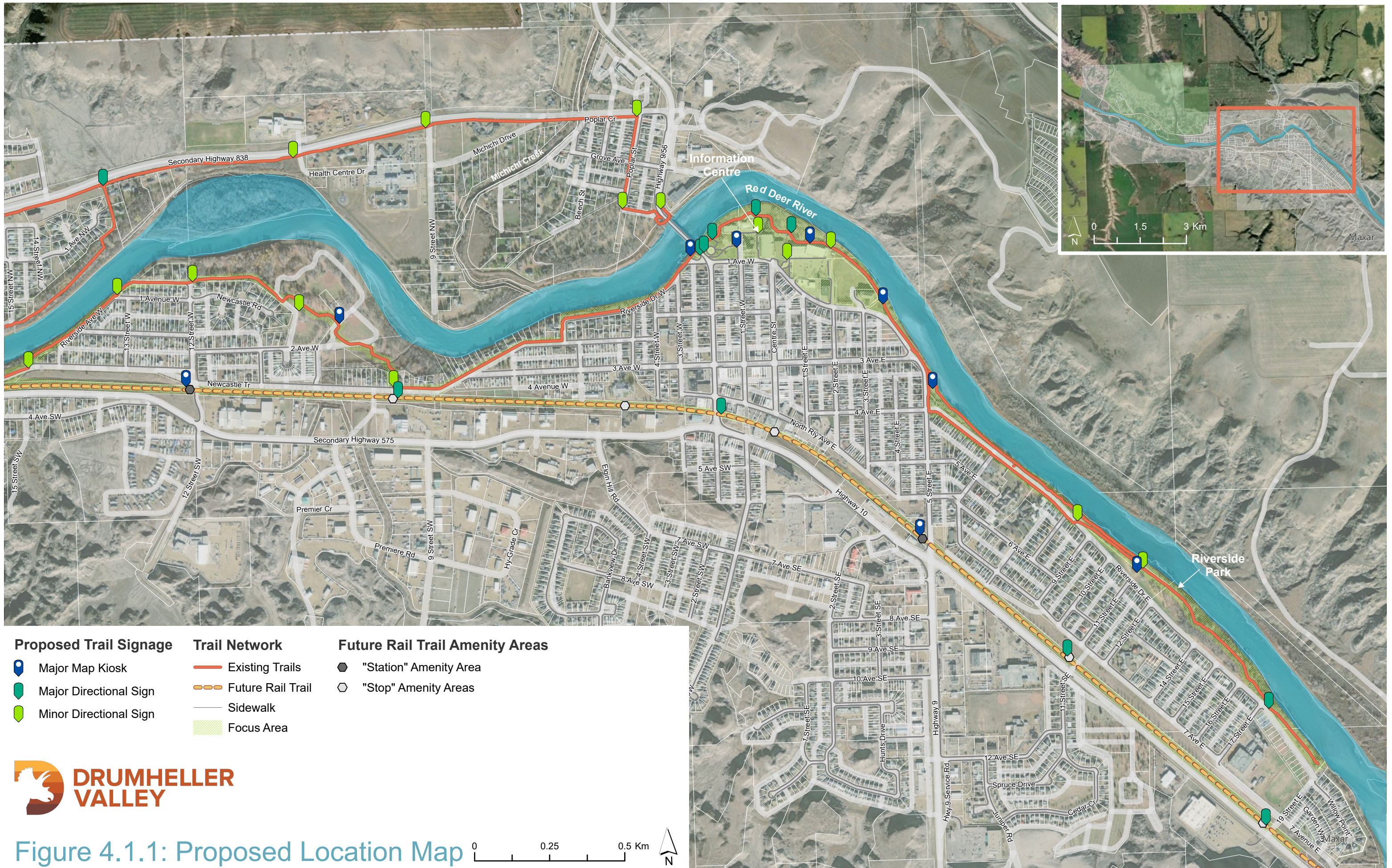


FIGURE 4.1: WAYFINDING HIERARCHY





■ 5.0 Public Engagement Summary

Once signage concepts and potential signage placements were identified, public engagement was carried out by community engagement strategists in Drumheller to gather feedback from the public and key stakeholders for the signage designs and preliminary placement areas. Feedback gathered helped the refinement of designs and placement plan and will be useful data to reference moving forward with projects regarding the trails and wayfinding network in Drumheller.

5.1 Engagement Methods

To gather public feedback on the designs and high-level wayfinding sign placement map, the following engagement activities were offered:

- An online survey, open for three weeks in the Fall of 2023, on the Town's CitizenLab engagement webpage.
- A pop-up event was hosted at the Drumheller Recreation, Arts, and Wellness Exhibit in early September.

The public was shown the wayfinding hierarchy design concepts and wayfinding placement plan. They were given the opportunity to comment directly on the display boards and/or respond to survey questions.

5.2 Notable Findings

Through online and in-person engagement, the public provided useful and insightful feedback and comments on the signage concepts and placement. Most respondents supported the sign designs, mentioning that they liked their simple design, branding and materials. The majority of participants mentioned that they liked the sign designs for the following reasons:

- The materials and design choices, including metal, wood and colours.
- The hierarchy of signs
- The signs are large and include clear maps.
- The designs fit in with the Town's current branding.

Other high-level feedback received included:

- Some respondents mentioned that the current signs were confusing for users and that they needed an upgrade.
- Some respondents mentioned that the users should be consulted in the placement process.
- Some respondents mentioned the need for signs to be easily visible in size and colour.
- Some respondents mentioned areas where there was missing signage on the Signage Type and Placement Map, and that the Town's entire trail network should be considered for new signage.

6.0 Implementation Strategy

6.1 Implementation Staging

The wayfinding implementation staging follows a strategic approach, prioritizing the highest level of signage in the Wayfinding Hierarchy (i.e. Major Map Kiosk) to be completed first before moving on to the next level in the hierarchy (i.e. Major Directional Signage). This method ensures that critical directional information is established promptly, facilitating efficient navigation of the Town's trail system. The aim is to have all new signage installed within the next five years to achieve a cohesive system as swiftly as possible, minimizing confusion and maximizing usability across the Town's various trails and paths.

An exception to this approach would be areas where the trail network is being expanded or redeveloped. In this case, it would be best to include all hierarchy of wayfinding signage as an integral part of the trail construction project.

6.2 Costing

Recommendations have been considerate of capital implications and the anticipated cost of new signage installation. Consideration was made of the existing signage surplus that can be utilized in the rollout of these recommendations to reduce start-up costs. Wayfinding opportunities should be evaluated and prioritized to reflect the Town's budget for the initiative. The following are current estimate of the fabrication cost of each type of sign in the wayfinding hierarchy:

Major Map Kiosk	\$5500-5700 / Sign +/-
Major Directional Signage	\$4800 / Sign +/-
Minor Directional Signage	\$2600 / Sign +/-
Trail Markers	\$2500 / Sign +/-

Fabrication pricing above includes:

- Anchors to cast in place foundation
- Corten Weathering Steel
- Wood Timbers
- Full Color Sign Panels (Type 1&2)
- Shop Drawings (Excludes Foundation and Engineering)

Implementation projects will need to consider additional project costs, including:

- Sign foundations, including engineering and site restoration
- Engineering (ensure that fabricator produces signed shop drawings)
- Graphic design of panel content
- Delivery to site
- Installation
- Removal of old obsolete signs

The following table provide the estimated budget for proposed signage:

Table 6.1: Proposed Signage Estimated Budget

Sign Type	Qty.	Unit Cost	Installation per Unit	Subtotal
Major Map Kiosk	12	\$ 5,600	\$ 6,000	\$ 139,200
Major Directional Sign	13	\$ 4,800	\$ 5,000	\$ 127,400
Minor Directional Sign	18	\$ 2,600	\$ 2,500	\$ 91,800
Trail Markers	12	\$ 2,500	\$ 2,500	\$ 60,000
Old Sign Removal	Allowance	n/a	n/a	\$ 5,000
Subtotal				\$ 423,400
Contingency (15%)				\$ 63,510
Total Budget				\$ 486,910

Please note that the cost of these signs were based on a minimum order of ten signs per type. Orders with larger quantities of signs tend to be more cost effective than ordering smaller quantities. When working with signage fabricators during the implementation phasing, it is important to discuss potential budget optimization.

6.3 Additional Implementation Recommendations

The following additional recommendations should be considered during the implementation process:

- Removal of old signage should be conducted whenever wayfinding signage is installed nearby. However, as an initial step of improved wayfinding, we recommend that trail maintenance staff review existing signage as part of their operational duties and immediately remove any signage that is inaccurate or falling apart.
- Engage the walking and biking community in determining the best locations for wayfinding signage since they know the trail system the best.
- Continually review the trail network to understand community destination and likely routes of travel.
- Walk or cycle the trails to see how intuitive the route is or where there may be confusion needing wayfinding signage.
- Review walking routes to important destinations both inside and outside of the community and integrate signage as needed on in the sidewalk network.
- Anticipate future trail expansion projects when determining signage on the existing trail network.
- Ensure that future trail development projects include wayfinding signage in their plans.
- Include wayfinding signage in all active transportation and open space projects.
- Ensure that signage components such as maps and destination names can be easily changed out without replacement of major sign components.
- Be selective with signage. Signage can have a negative impact on the aesthetics and enjoyment of an outdoor space.
- Establish an assessment and maintenance strategy for wayfinding signage.

- Consider partnership funding opportunities, where local tourism-based businesses can have their business listed as a destination if they contribute to the cost of signage. This funding approach may need careful consideration to ensure that the wayfinding system is not overwhelmed by business destinations. A sunset clause should be included so that the Town is not required to list the business in perpetuity, and sign locations should not be tailored to the business's needs.
- Work with sign fabricator to determine whether the sign design will work for multiple foundation types (i.e. screw piles, cast-in-place). Because sign location conditions will vary, an adaptable design would be useful and potentially cost effective.



7.0 Conclusion

This Drumheller Wayfinding Assessment report outlines recommendations for the provision, development, and installation of a new wayfinding signage hierarchy to apply to the Town's trail network. While the underlying principles of improving the user experience of the Town's trail network will remain constant, other factors and conditions will change and the recommendations in this assessment may also change. For this reason, the recommendations should be reassessed in the future to ensure accuracy and alignment with the Town's budget and priorities.



APPENDIX A

Public Engagement Summary

Town of Drumheller Wayfinding Study - Engagement Summary

Project Overview

The Town of Drumheller retained ISL Engineering and Land Services (ISL) to complete a trail wayfinding study. For the first step of the study, ISL has created updated signage designs for use within the Town's trail network. Engagement events were conducted in September 2023, to gather feedback from the public and key stakeholders on the signage designs and preliminary placement areas. The feedback gathered will help the consultant team update and refine the designs for Council review and approval.

Engagement Process

To gather public feedback on the designs and high-level placement map, the following engagement activities were offered:

- An online survey, open from August 28 to September 18, 2023, on the Town's CitizenLab engagement webpage. Twenty-three surveys were completed.
- A pop-up event was hosted at the Drumheller Recreation, Arts and Wellness Exhibit at the Badlands Community Facility (80 Veterans Way) on September 13, 2023, from 4 – 7 p.m. Twenty-eight participants provided feedback at the event.

High-level Feedback Summary

The following is a summary of high-level themes identified through analysis of the public feedback gathered at the pop-up event and online survey.

- Most respondents supported the sign designs, mentioning that they liked their simple design, branding and materials.
- Some respondents mentioned that the current signs were confusing for users and that they needed an upgrade.
- Some respondents mentioned that the users should be consulted in the placement process.
- Some respondents mentioned the need for signs to be easily visible in size and colour.
- Some respondents mentioned areas where there was missing signage on the Signage Type and Placement Map, and that the Town's entire trail network should be considered for new signage.

Detailed Feedback Summary

The following is a detailed summary of feedback received during the pop-up event and through the online survey.

Pop-Up Event

What do you like about the design concepts?

The majority of participants mentioned that they liked the sign designs for the following reasons:

- The materials and design choices, including metal, wood and colours.
- The hierarchy of signs
- The signs are large and include clear maps.
- The designs fit in with the Town's current branding.

How do you think the design concepts could be improved?

Respondents noted the following ways the designs could be improved:

- A few mentioned QR codes, one respondent said they should be included on signage or a link to a trail app, and the other felt QR codes should not be used on signs because they are difficult to use, and that the technology may become outdated.
- The Town should consider using the 'dinosaur feet design' on the signs to help direct the public e.g. If the next landmark is north, have the feet pointing north.
- The Town should consider adding a 5-minute walking radius on maps.

Is there anything else we should consider when refining the wayfinding signs for the Town's trail network?

Sign Design Considerations:

Respondents provided the following suggestions:

- The Town should share the criteria developed for signage placement with the public.
- The Town should consider replacing the "pathway rules" signs in addition to the wayfinding signs or incorporate the rules into the new wayfinding signs.
- Major wayfinding signs should include a full community-wide map.

Signage Placement Considerations:

Respondents provided the following suggestions:

- Some respondents mentioned that the current wayfinding signs that are paired with street signs cause emergency services issues because dispatch is not familiar with the honorary street names/wayfinding names.
- A few respondents mentioned that current wayfinding signs also confuse tourists because they are faded, or do not provide proper directional information.
- A few respondents mentioned the need for better signage to and from New Castle Beach, the Plaza area and the Visitor's Centre for tourists.
- A few respondents mentioned the need for better trail connectivity, updated bike lanes, street crossings and safety signage where trails and roadways intersect. Two respondents specifically mentioned signage under the railway bridge to the north side of the river.

Other suggestions respondents provided:

- More signage should be added to the north side of the community and there may be too many signs planned for the south side.
- The Town should consider paving and adding wayfinding signage to the pathway to the museum on the north side of the river.
- Details about sign orientation should be included in the signage report/guide.
- Update the hike-a-saurus trail signage, pathway, and roadway markings, as these wayfinding elements currently direct users to a resident driveway on 7 Street West.
- Pathway users are entering the backyards on a goat path (1 Avenue W, backing onto the river).
- A major sign should be included when entering Town on Highway 10.
- Additional wayfinding signage is needed to direct users to the ball diamond (off 2 Avenue West) and on the localized pathway system within that area.
- A sign is needed to let users know how far it is until they arrive at the pedestrian bridge to cross the river, heading east, along Newcastle Trail.

Online Survey

What do you like about the design concepts?

Respondents provided the following suggestions:

- Many respondents mentioned that they supported making the trail signs around the Town more consistent.
- Some respondents mentioned liking the natural materials – wood, and steel.
- Some mentioned they liked the designs for the following reasons:
 - The dinosaur designs.
 - The design suits the Town brand.
 - The modern look
 - The simple design

How do you think the design concepts could be improved?

Respondents provided the following suggestions:

- The signs should be designed to be easily maintained.
- The signs should be easily visible, and large, and the colour palette noticeable.
- Signs should be cohesive throughout the valley.
- Minutes to a destination should be posted on the signs, not blocks or km.
- Major signs should have a square map instead of a circular map.
- The Town should use cost-effective and locally sourced materials.
- Add lighting to the signs (e.g., solar lights, reflective or bright colours to help them stand out).
- Add more metal cut-outs to the designs.
- Signs should be coated so graffiti is easily removed.
- Maps should be large enough to read easily.
- The Town should ensure signs are easy and economical to update as the Town grows and changes.
- The Town should think critically about the attractions, facilities, and businesses identified on the map.
- The Town should consider adding a weatherproof poster holder for advertising on the proposed signposts.
- The regular signposts work fine.

Is there anything else we should consider when refining the wayfinding signs for the Town's trail network?

Sign Design Considerations:

Respondents provided the following suggestions:

- A few respondents mentioned the need to keep the designs simple, low cost and easy to maintain.
- A few respondents mentioned that the map was missing signage in the following key areas:
 - The North side of Drumheller
 - Rosedale
 - Midland
 - Nacmine
 - Midland McMullan Island area

Other suggestions respondents shared:

- Include Indigenous content on the signs.
- Include historical information or interactive elements on the signs for children and youth.
- Towns share the final designs and placement with tourism businesses so that they can share the updated information with their customers.
- The Town should consider signage needed for new developments e.g., Rosedale.
- The need for additional signage specifically about keeping dogs on leashes on the pathways.
- Local businesses and services should be included on the maps.
- The Town should consider changing the language from trail to pathway because the term trail often relates to a more rugged terrain, which sets different expectations for the experience for users.

Signage Placement Considerations:

Respondents provided the following suggestions:

- The public should be consulted on the placement of signs.
- The Town should consider hiring a wayfinding signage company to complete the study and placement of the signs.
- That signage should be placed downtown to identify and direct tourists to trails outside of the downtown core.
- The Town should provide clear criteria on when each sign in the hierarchy should be used and at what type of location.
- The Town should consider all types of users with the placements of signs (E.g., On foot, wheeling, horse - where permitted).
- That the signs should not be over-populated with content and that the Town should be designing signs with the most relevant content in mind.



- When including 'pathway rules', the Town should include positive language, what you "can do", rather than negative language, what you 'cannot do'.
- The Town should be thoughtful in where major maps should be placed, e.g. A large map could be placed inside the BCF which is along the trail system and has bathrooms.

Next Steps

Updated sign designs and placement will be presented to Council for review and approval in Fall 2023.

To learn more, visit: drumheller.citizenlab.co/en/projects/wayfinding-signage-study-1