



## Funicular year-in-review update

Citizen Services | Community and Recreation Facilities  
City of Edmonton

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## Introduction

The 100 Street Funicular opened to the public on December 7, 2017, with the help of the River Valley Alliance, provincial and federal governments. The project cost a total of \$24 million. Since opening, the funicular has increased access to the River Valley for Edmontonians and visitors and has created a landmark and connection between downtown and the River Valley. While the funicular is the prominent feature of the site, the Mechanized River Valley Access project also included the development of stairs, viewpoints, pedestrian bridge, artwork and an elevator.

This report reflects some of the successes and challenges for the first year of operation of the funicular and site.

## Usage

The funicular has proven to be a popular destination, with site observations and user feedback all indicating it is heavily used throughout the day. Indicators of the popularity of the funicular are identified below.

- As of November 25, 2018, the funicular had made 114,038 trips, either up or down the track.
- During point counts, staff recorded as many as 135 passengers using the funicular in an hour and as many as 28 trips in an hour.
- Telephone survey indicated 14% of the population has used the funicular and an additional 46% intend to visit the site.

*"I've been using the funicular most days since it opened. After I drop my daughter off at school on the south side of the river, I cycle downtown for work. The funicular has made that leg of the trip so much more pleasant!"*  
- Mark

Onsite surveys have also provided valuable information about funicular users. For example of the information gathered:

- 22% of visitors use the funicular as part of their commute to work
- 35% of visitors have been using the funicular for six months or more
- 31% of visitors use the funicular for access to the River Valley

## Operations

The funicular is open daily between 7 a.m. and 9 p.m which generally aligns with other amenities in the River Valley. The stairs, bridge, lookout and park space are open during park hours, between 5 a.m. to 11 p.m. Occasionally, the hours of operation have been extended during special events like the Grey Cup and the Edmonton Folk Music Festival.

Since the early stages, this project presented unique challenges for staff as there is no similar infrastructure with the same operating model that currently exists. The following three points below proved to be especially unique:

- The funicular was designed to be an unstaffed venue.

- The Alberta Elevating Devices and Amusement Rides Safety Association or AEDARSA, the regulating body, mandates specific operations and maintenance standards that must be met on an ongoing basis.
- This technology and mechanical equipment were in use for the first time in Edmonton, and in an outdoor setting.

## Incident response

The funicular has three types of response procedures. One for the funicular itself, one for the elevator and one for the rest of the site. The elevator and site procedures are similar to others around the city. However, the funicular procedures are unique and require City staff to respond to all funicular alarms to troubleshoot and resolve issues related to system failures, door malfunctions and mistakenly pressing the emergency stop button. In all procedures, 911 is contacted if there are any emergencies. The monthly alarm counts are summarized below.

Month	Funicular System Failures	Funicular Emergency Stop	Funicular Door / Wind / Overload	Elevator Emergency	Site Emergency
December 2017	12	16	14	0	0
January 2018	25	24	6	1	0
February 2018	20	13	10	2	0
March 2018	12	25	4	5	0
April 2018	7	30	7	2	0
May 2018	4	56	4	0	0
June 2018	1	33	1	0	1
July 2018	6	38	8	0	0
August 2018	5	23	10	0	0
September 2018	7	25	24	2	0
October 2018	15	31	15	2	0
November 2018	2	8	9	1	0
<b>Total</b>	<b>116</b>	<b>322</b>	<b>112</b>	<b>15</b>	<b>1</b>

Staff responded to approximately 550 alarms during the funicular's first year of operation. It should be noted that this location experienced the second highest number of alarms reported for the City of Edmonton in 2018. Below are the some of the tracked statistics:

- Over 57% of alarms were a result of users pressing the emergency stop button. These incidents resulted in temporary stoppages until the system was reset.
- About 20% of alarms were a result of door malfunctions, heavy winds or overloading. The majority of these were due to door issues including ice and snow buildup, timing,

or sensor problems. These incidents resulted in temporary stoppages until the issue was investigated and resolved.

- Around 20% of alarms were system failure alarms which include a wide variety of possible issues that the system detects. Some incidents cause a temporary stoppage of the funicular, and some incidents do not.
- Only 3% of alarms were a result of incidents in the elevator.

## Outages and Shutdowns

### Planned Maintenance

To meet regulatory requirements specified by AEDARSA, the City is required to follow a rigorous preventative maintenance and inspection process. This requires a monthly eight-hour shutdown and an annual three-day shutdown. Overall, planned maintenance activities resulted in service disruptions for eight or more hours on 13 days in 2018.

### Unplanned Maintenance

There were additional unplanned maintenance and repair requirements throughout the year. This resulted in some substantial service disruptions of four hours or more on 18 days in 2018 as outlined below.

Dates	Issue	Service Disruption
Jan. 9	Weather-related issues with doors.	4 hours
Mar. 3	Weather-related door issues	4 hours
Mar. 19	CCTV connection failure	4 hours
Aug. 31 & Sep. 1	Electrical issues.	15 hours
Sep. 2	Backup batteries not working	4 hours
Sep. 6 & 7	Glass replacement on handrail and funicular cab	Full days
Sep. 9 & 10	Electrical & battery issues	Full days
Sep. 26 & 27	Funicular glass damaged; and subsequent replacement of damaged glass	23 hours
Sep. 30	Communications loss to the funicular	9 hours
Oct. 9 & 11	Extended monthly shutdown to repair and resolve items noted during the September monthly maintenance.	Full days
Nov. 9	Weather-related door issues	4 hours
Nov. 14	Funicular glass repair	Full day
Nov. 16	Extended monthly shutdown for manufacturer required repairs and software updates	Full day

## Operational Costs

The forecasted annual operating budget for the Mechanized River Valley Access project was a range of 2 to 4% of the total project cost. In this case, \$480,000 to \$960,000 annually. During the first year, the total operating cost for the funicular and site was \$716,468, or 3% of the total project cost. As this infrastructure remains new to Edmonton, it is expected that there will be some fluctuations in the annual operating costs. A three-year comparison will be required to confirm long term operating costs.

City Team	Item	Cost
Facility Maintenance Services	Preventative Maintenance and Daily Start-Up	\$345,483
	Corrective Maintenance	\$5,154
	Emergency Breakdown Response and Repair	\$59,054
	Non-emergency Breakdown Response and Repair	\$112,641
	Other maintenance, support, modifications	\$8,054
	Elevator Maintenance Costs	\$12,927
	Custodial Services	\$31,186
River Valley Parks and Facilities	Site services and monitoring	\$90,117
	Security guard support	\$6,536
	Utilities	\$11,199
Open Space Operations	Snow Clearing	\$34,118
	Horticulture, turf, tree maintenance*	\$0
<b>Total</b>		<b>\$716,468</b>

Costs do not represent any items that would have been covered under warranty.

\* Landscape maintenance responsibilities have not yet transitioned to the City of Edmonton and were completed by the contractor during this first year of operation and will continue for one more year.

## Public Engagement

The City has been collecting and listening to the public’s feedback on their funicular experience via 311, social media and by enlisting the help of Banister Research to conduct onsite, telephone and online surveys.

### 311 Inquiries

During the first year of operation, 311 received 170 comments that were forwarded to teams for follow up. The nature of these inquiries can be summarized below:

- 41% were general inquiries about the site such as location, hours, and use.
- 40% reported information to the City related to site conditions, damage, etc.

*My 13 year old grandson and I had a hangout day and made the funicular experience a part of our day. He had fun checking out the structures at the bottom of the funicular and we both spotted a few things in the river valley that we proceeded to explore...I got a few nice pictures and we both enjoyed the FUNicular*  
- Janice

- 11% provided negative feedback regarding the project in general or the individual's experience.
- 5% provided both positive and negative feedback regarding their experiences
- 3% provided positive feedback regarding their experiences

## Social Media

In 2018, the City's messages about upcoming Funicular maintenance closures and openings generated 229,433 impressions and 2,028 engagements including 144 retweets on Twitter, and 27,232 impressions on Facebook. The funicular was also a popular Edmonton Landmark on social media, with people sharing their experiences and photos of the Funicular on both Twitter and Instagram. On Twitter, there were between 6-10 positives tweets posted a month about the funicular including hashtag #yeg between January and August 2018. People were happy to hear that the City had [extended its operating hours](#) during the Edmonton Folk Music Festival in August. In the months of Sept. - Oct. - Nov. the social chatter had more of a focus on the graffiti and vandalism the Funicular had experienced. On Instagram, more than [250 photos](#) are tagged with #yegfunicular. The average engagement for the Funicular Twitter posts is close to our overall 2018 average for a City tweet in 2018.

## Banister Research

Throughout October and November 2018, the City hired Banister Research to conduct public engagement. The main goal of this research work was to understand perceptions and opinions around the funicular including awareness, usage and impact on the community. To answer these questions, Banister conducted a phone survey with 400 Edmontonians, an onsite survey with 182 users of the funicular and an online survey with 2,206 responses. Some highlights include:

- The funicular has helped cyclists and individuals with disabilities access the River Valley and downtown.
- Edmontonians and visitors see the funicular as a destination attraction.
- Satisfaction among users is quite high.
- The biggest areas for improvement are overall maintenance and lighting.

*I love love LOVE the funicular. My husband and I live just off 99 St, south of the river and we both work downtown. Our kid used to go to daycare at Canada Place, and we often walked him to work, through all four seasons last year. The funicular was definitely a highlight for all of us. My kid LOVED that ride, and I know the daycare often used it is a daytime activity for the kids. Great view of the city, a fun way to BE in the city, and kid friendly!*

- Lynda

## Enhancements

During the months of December of 2018 and January 2019, the City made some enhancements to improve the operations, safety and accessibility of the funicular and site. A sample of some of the enhancements are as follows:

- Installation of a heating loop in the door sill to prevent ice formation at the lower doors
- Installation of a glass roof over the lower doors to help reduce issues during winter weather
- Installation of surface raised markers, handrails, and graphic signage at the staircase for people with visual impairments
- Modified bike rails on the urban stair and elevator staircase to improve use

## Next Steps

Over the next year, City staff will proactively manage the funicular by continuing to work through operational efficiencies of the site, understanding the unique features of the funicular and improving processes. Engagement and communication with citizens will continue throughout the year both formally and informally to improve communication about the funicular and its operation.