

Meeting minutes

Meeting objective: Réseau express métropolitain (REM) informational meeting

Date and time: June 10, 2019, 6 p.m. to 9:30 p.m.

Location: Sheraton Laval, 2440 Autoroute des Laurentides, Laval

Meeting overview:

- Approximately 100 participants
- About 40 questions asked by the public during the question and answer period
- Seven stakeholders present during the informational meeting and the question and answer period:
 - Virginie Cousineau, Public Affairs Manager, REM project office
 - Jean-Philippe Pelletier, Assistant Director of Project Delivery, REM project office
 - Denis Andlauer, Manager, Operations, REM project office
 - Giovanni Cipolla, Segment Director, NouvLR
 - Simon Charbonneau, Public Affairs and Media Relations Advisor, ARTM
 - Caroline Larose, MTQ Spokesperson
 - Pierre Guillot-Hurtubise, Facilitator

The meeting was divided into two parts:

- Open house with information panels – 6 to 7 p.m.
- Information session, followed by a question and answer period – 7 to 9:30 p.m.

The presentation given during the informational meeting addressed:

- The context of the project
- Work completed, in progress and upcoming in 2019
- Interim public transit mitigation strategy

Questions from the public during the question and answer period were varied, but primarily pertained to:

- Details regarding shuttle buses and active transit measures during the interim period
- Noise that will be generated by REM construction and operation
- Taking into account flooding and water flow rates for work to be performed in the water

A video recording of the information session is available at the following link:

<https://www.youtube.com/watch?v=x9UkcrbvA5Y&t=7s>

The documentation presented during the meeting is available at the following link:

<https://rem.info/en/events>

Lastly, a summary of the questions posed by the public during the question period, as well as the answers provided by the various stakeholders is presented hereunder.

Questions	Answers
There is no station where the four REM segments intersect. Can you explain why? For example, is it possible to get to the airport from Deux-Montagnes?	The REM consists of a common section from the South Shore to Bois-Franc. At the Bois-Franc station, the REM separates into three branches. It's not possible to get from one branch directly to another branch – you have to go through Bois-Franc, which acts as a transfer station of sorts. For example, someone leaving from the REM's Sainte-Dorothée station to get to the airport has to go down to the Bois-Franc station and from there, take the other branch that goes to the airport. The location where the REM segments join (called the Western Junction) is similar to a highway interchange, with tracks running above and below each other. For more details, please check out the interactive REM map at the following website: https://rem.info/en
When designing the REM, do you take citizens' concerns into account? Are you aware of the discussions that have taken place with the various levels of government?	We are well informed of the concerns relating to the REM's urban integration. We have had numerous meetings and are continuing our discussions with the municipal authorities on this subject.
You say that you are in discussions with the municipal authorities. Yet, the people we are in contact with haven't been consulted for several months. So it's more at the political level that you're working?	We are collaborating both with elected representatives and public administrators. A law was passed by the National Assembly to govern the REM project. It includes terms and conditions for discussions with the various municipalities.
What will the actual footprint be of the REM tracks on the bridge crossing Rivière-des-Prairies? Will the REM tracks take up more space than the current railroad? It would be nice for the REM route to run a little further to the west, further away from homes.	The REM right-of-way is 10 metres wide, and is within the boundaries of the current railway right-of-way. The exact location of the rails is still to be determined, since the design has not reached that stage yet.
As for mitigation measures for public transit, it would be helpful to have more options that encourage active transit, such as secure places to store bicycles. Are these mitigation measures temporary or permanent? If they are permanent, they could	There will be more details when we make the official announcement in September. Your comment will be considered. Active transit measures could start when winter ends. As for the permanence of these measures, the government is in fact planning a network of

Questions	Answers
be even more ambitious.	reserved lanes on the highways. These types of projects are currently under study.
I'm worried about the grade crossing on Des Cèdres street, which will be 4-5 metres behind my home. Is it finalized?	What was presented tonight regarding the grade crossing was a reference project published in 2016. We are well informed of the concerns and requests. Discussions continue with the municipal authorities and other stakeholders.
Two years ago, you said the Deux-Montagnes Line would not be impacted. Today, we see that is far from the truth. How do you explain this change?	You're correct – in 2016, we were hoping to keep the Deux-Montagnes Line open throughout the work. We thought it was doable. Right now, we are working in certain sectors while the line is still operational. All of our safety experts have told us that as soon as the construction site grows, the risks for workers and train users become too great to keep the line open; people's safety would be at risk. Service interruption was planned as late as possible, i.e. beginning January 2020.
Why do you vary the height of the REM line, instead of keeping it the same across the entire network? Seems to me it's going to look like a roller coaster.	Our goal is for the REM to be at ground level as much as possible. That's why it is not elevated everywhere. Our analyses indicate that it will be comfortable. Users won't get the feeling they're on an amusement park ride.
If I am understanding correctly, there won't be any buses on Île Bigras. Will I have to go somewhere else to get on a shuttle bus?	Through July 2021, railway shuttles will be on site to take you to the Bois-Franc station where other shuttles will transport you to the Côte-Vertu metro station. That will be your quickest option for getting to the metro. From July 2021 until the REM is fully commissioned, there will be shuttle buses, including some at your station.
How much will my ticket cost to take these shuttle buses?	That is still being studied by the Autorité régionale de transport métropolitain.
Even though the orange line branch is congested, will it be possible to plan to have buses going to the Montmorency metro station, for those who prefer that option?	Our goal is to maximize use of the western branch, which still has some capacity, as opposed to the east branch, which is saturated. We are taking all users into consideration. The

Questions	Answers
<i>*Another person also asked if shuttle buses would travel elsewhere, besides to the Côte-Vertu station.</i>	option of sending shuttles to that branch would have an impact on metro users, since that line is already saturated.
As for shuttle buses between Bois-Franc and Côte-Vertu, I am sceptical that route could accommodate a bus lane. What options are being considered?	Discussions are in progress on this subject between the municipality of Saint-Laurent's technical services and the service operators.
On what date will the architectural renderings be unveiled for the Bigras Station?	We believe in one year (around June 2020), the design will be sufficiently advanced to unveil the architectural renderings.
If you find that the REM's trains are empty on weekends, will you adjust the frequency?	Our goal for weekends is to offer the same frequency as we do during off-peak hours on weekdays. We have asked the operator to monitor the frequency each day. We will be able to adjust service as needed, either less frequent if trains are empty or more frequent if there are more users than expected.
The REM is a complex project. How confident are you that you will be able to meet your deadlines?	In our agreement with the government, deadlines were fixed for each project stage. Since the very start of the project, we have met each of those deadlines. All project management mechanisms and efforts have been implemented to ensure we stay on track with the schedule. So, we are very confident.
Are you going to commission the entire Deux-Montagnes line all at once, or progressively, station by station?	We will commission the REM in segments, not station by station. One of the reasons is the Western Junction that connects the lines toward the airport and Sainte-Anne-de-Bellevue. Until that junction has been completed, we can't commission the Deux-Montagnes line. Furthermore, there are several technical aspects to keep in mind, such as the electrical stations, which prevent us from opening just one station at a time. The commissioning sequence includes commissioning the segment between the South Shore and Gare Centrale in 2021, from Gare Centrale to the Du Ruisseau Station in 2022, and the rest of the branches in 2023.

Questions	Answers
Have you considered geothermy for the REM stations, to decrease energy consumption and noise generated by heating and air conditioning systems? I'm really disappointed that was not a consideration.	No, geothermy was not selected for REM operation. CDPQ Infra and Hydro-Québec have business agreements. Therefore, the network will be supplied with hydroelectricity. Regarding the noise, the decree has set criteria that we must abide by during the construction phase and during REM operation.
Why didn't you plan to use the old bridge in Pierrefonds as a route for the shuttle buses heading toward Côte-Vertu?	The general strategy was revealed in January 2019. The specific options of the strategy are still being studied. Nothing has been completely ruled out. Details will be unveiled in September. Even once these details have been announced, a follow-up will be conducted, and adjustments may be made continuously.
Exploratory drilling is taking place at the golf course entrance. Why has the drilling started already? Wouldn't it have been better to wait to find out what the details were for the future REM structure? Furthermore, the golf course can't be shut down during the work.	The purpose of the exploratory drilling is to determine the quality and capacity of the soil. This work is necessary regardless of the REM's final structure. The golf course won't be closed. Since service on the Deux-Montagnes line will be suspended, we will be able to create a temporary grade crossing over the current rails to perform the work needed. The golf course will be able to continue as usual.
When will the final decision regarding the route in the golf course sector be made?	Design won't be finalized until next summer. Discussions are ongoing.
The Mont-Royal Tunnel will be closed for two years. Does that mean that Gare Centrale will be closed during that time as well?	No. The only tracks that will be closed are lines 9 to 12 (Mascouche and Deux-Montagnes).
Will the bearing capacity of the bridge you're calling Rivière-des-Prairies-1 be sufficient to accommodate pedestrian and bicycle lanes as well?	Yes. The current railway bridge already accommodates a heavy train several times a day. That means its load-bearing capacity will be sufficient for pedestrians and bicycles as well. We extended an offer to the Cities of Montréal and Laval to take back ownership of the bridge, in order to create access for active transit. The cities are currently evaluating this case.

Questions	Answers
Will the shuttle buses running from Île Bigras and Sainte-Dorothée be equipped with bicycle racks? Will the REM be able to accommodate bicycles during off-peak hours?	In this case, the operator responsible for these shuttles is the Société de transport de Laval. They are the ones to whom you should direct this question. As for the REM, the entire network will be able to accommodate bicycles.
Can you confirm what the hours for construction work will be for the new bridge crossing Rivière-des-Prairies? The past two weekends, work on the existing bridge was unbearable.	We would like to clarify that it was exo that performed that work the past two weekends. As for the REM, there are no specific work hours in the contract. However, there are standards we must comply with regarding noise. Most of the work will be done during the week, from 7 a.m. to 7 p.m. However, some tasks can't be carried out while trains run near the tracks; that work will have to be done on weekends. There will be no work overnight. Notices will be sent out one to two weeks before work begins, detailing the nature, times and anticipated impacts.
How will these work notices be sent out?	There are several ways: SMS alerts, door-to-door distributions, newsletters, social media, the REM website, etc. The goal is to reach as many people as possible.
We've invited the REM project office to join our Facebook group, but they still haven't responded. Who is in charge of that?	We will look into that. The community relations office, who can be contacted at info@rem.info is the best method to communicate with our team.
At the Roxboro meeting, I was told that it would be possible to find out what the REM's noise level in decibels would be in operation. Would it be possible to get that number?	We don't have that data with us tonight. We are in the process of doing some sound modelling to find out what the REM's noise impact will be during operation. Once the study has been finalized in the coming months, we will publish our findings.
Would it be possible to get the information about shuttle buses between the Bois-Franc and Côte-Vertu stations prior to September? That information is very important for users.	Buses will be waiting for users who exit the train, and will run a loop between the Bois-Franc station and the Côte-Vertu station. The goal is for there to always be a bus waiting at the train, which will leave once it's full.

Questions	Answers
	We are working hard to determine exactly how many people use the train, which will help us know how many buses we will need.
I'm shocked that you don't know how many people will use these shuttle buses. Why wouldn't you just use the current number of train users? Do you think people will abandon the train?	Actually, there will be shuttle buses offering direct access from the Roxboro-Pierrefonds and Sunnybrooke stations to Côte-Vertu. So people will be able to choose not to take the train.
Will you be bringing equipment and materials over for the work intended to begin in July 2019 to Île Bigras by land or by rail? The current bridges aren't strong enough to support heavy equipment. And where will you be storing the material on Île Bigras?	A minimum amount of material and equipment will be transported by land to construct a jetty. They jetty will allow us to work in the marine corridor to build the bridge. There will be no mass storage on Île Bigras. Materials will be delivered when they are needed, not ahead of time, to limit storage necessary.
In relation to jetty construction, will the emergency response plan in the event of a flood be made public?	Before performing any work in the water, NouvLR must obtain necessary authorizations from the Departments of Fisheries and Oceans and of the Environment. Both of these departments have concerns regarding flooding. I cannot confirm at this time whether or not the emergency response plan will be made public.
Will the REM frequency be every five minutes, from the time it is commissioned?	In 2022, when it is opened through to the Du Ruisseau Station, frequency on that segment will be every 7½ minutes. When it is opened through to the Deux-Montagnes Station, frequency will in fact be every 5 minutes.
The existing bridge on Du Bord de l'Eau Road is flooded every year. Will your new bridge be out of service every year during the high-water season?	For the time being, we intend to build the new track at the same elevation as the current one. Discussions continue with the City of Laval on this subject. The cities have to decide whether they will revise the flood levels. We will adjust the elevation of the REM according to their revisions, if applicable.
Du Tour Road also floods every year. We propose condemning this road access. That would mean that the only road available	Your proposal is duly noted. Our team will evaluate your suggestion and discuss it with the relevant stakeholders, including the City of

Questions	Answers
would be the one you develop for the REM commissioning.	Laval.
What route will the shuttle buses take to get to the Bord de l'Eau Road and Des Bois Avenue stations in Laval?	The current route being studied to access those two stations in Laval runs on Des Bois Avenue. There will not be any new buses running on Bord-de-l'Eau Road.
The current train has 8-9 cars and runs at full capacity in Sainte-Dorothée. The REM will have less cars. How do you explain this?	Since the REM will run every 5 minutes, the logic is the same as the metro's: you can adjust your habits to your own schedule, not the train's schedule.
My concerns with building a grade crossing (bridge #2) is the rockfill you'll need to add there. What impact will that have on water traffic? Will the rockfill be permanent or temporary?	A hydraulic study was submitted to the Departments of Fisheries and Oceans and of the Environment for approval. The purpose of the study was to determine the impact the grade crossing would have on water flow, in order to avoid issues. The rockfill will be temporary. Only the new bridge's piers will remain in place, and they will be in line with the existing piers, to prevent further restrictions on the water flow.
In front of my house, there is a pumping station that belongs to the City of Laval. If, during your work, the water flow is restricted, a stronger pump will need to be provided. Do you have a working relationship with the City of Laval on this subject?	We are not working with the City on this specific point. We have noted your concern and will follow-up on it.
If the REM is widely successful and frequency has to be increased, will that be an option?	When it is opened, frequency will be every 2½ minutes. It will be possible to increase that frequency to every 90 seconds with just a few minor modifications.
When performing your work in the water, you will need to install floating barriers to hold back construction debris. Otherwise, the debris could cause ice jams in the winter. It will need to be monitored.	That was part of the hydraulic study we conducted and submitted to the authorities for validation.

Presentation begins at 7 p.m.

If you have any questions
about the project please
visit rem.info/en





Réseau express métropolitain

Informational meeting
Laval

2019-06-10

Réseau
express
métropolitain



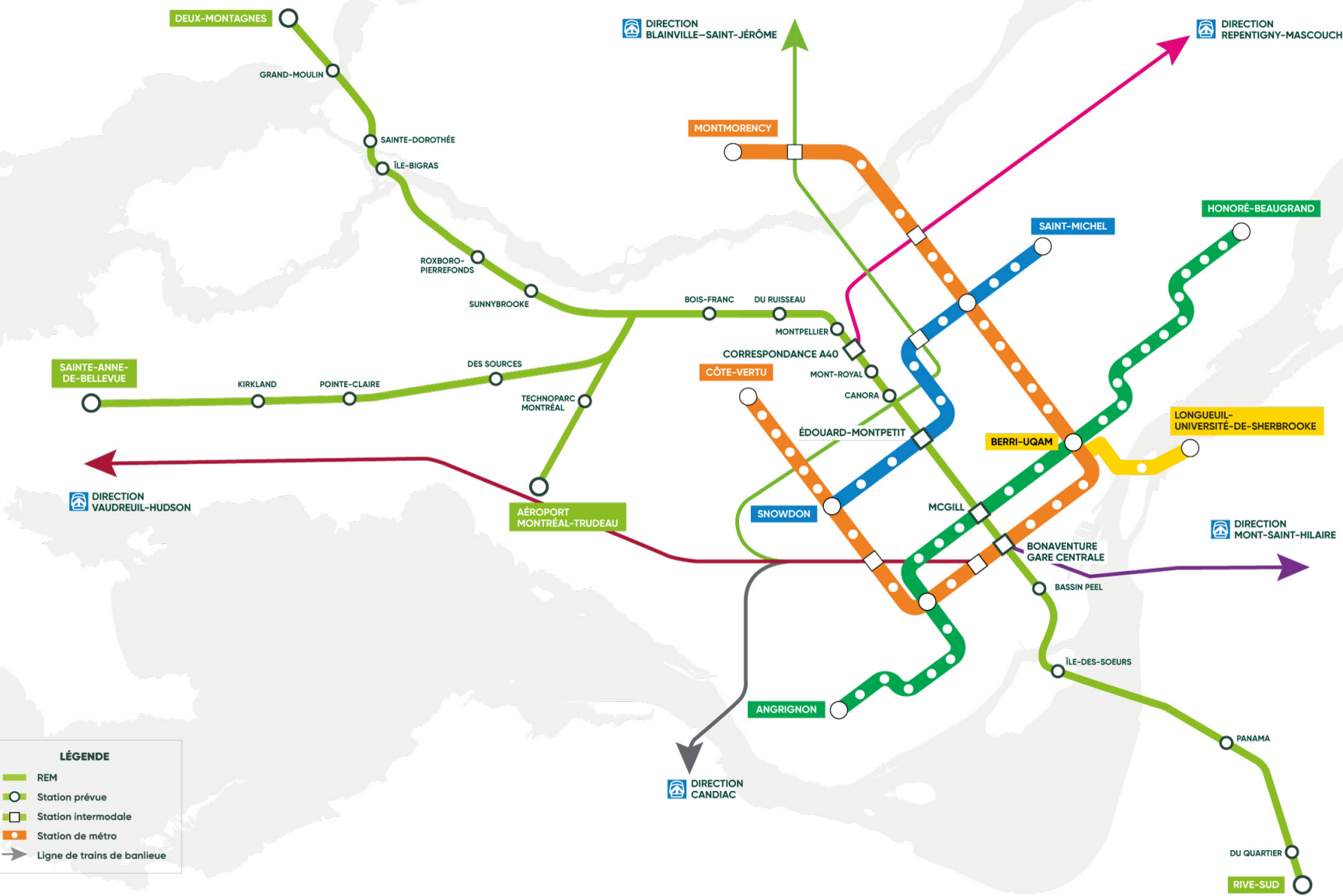
Agenda

- The REM arrives in Laval
- Work strategy
- Upcoming work in 2019
- Interim public transit mitigation strategy
- Question & answer period



The REM arrives in Laval

Réseau express métropolitain



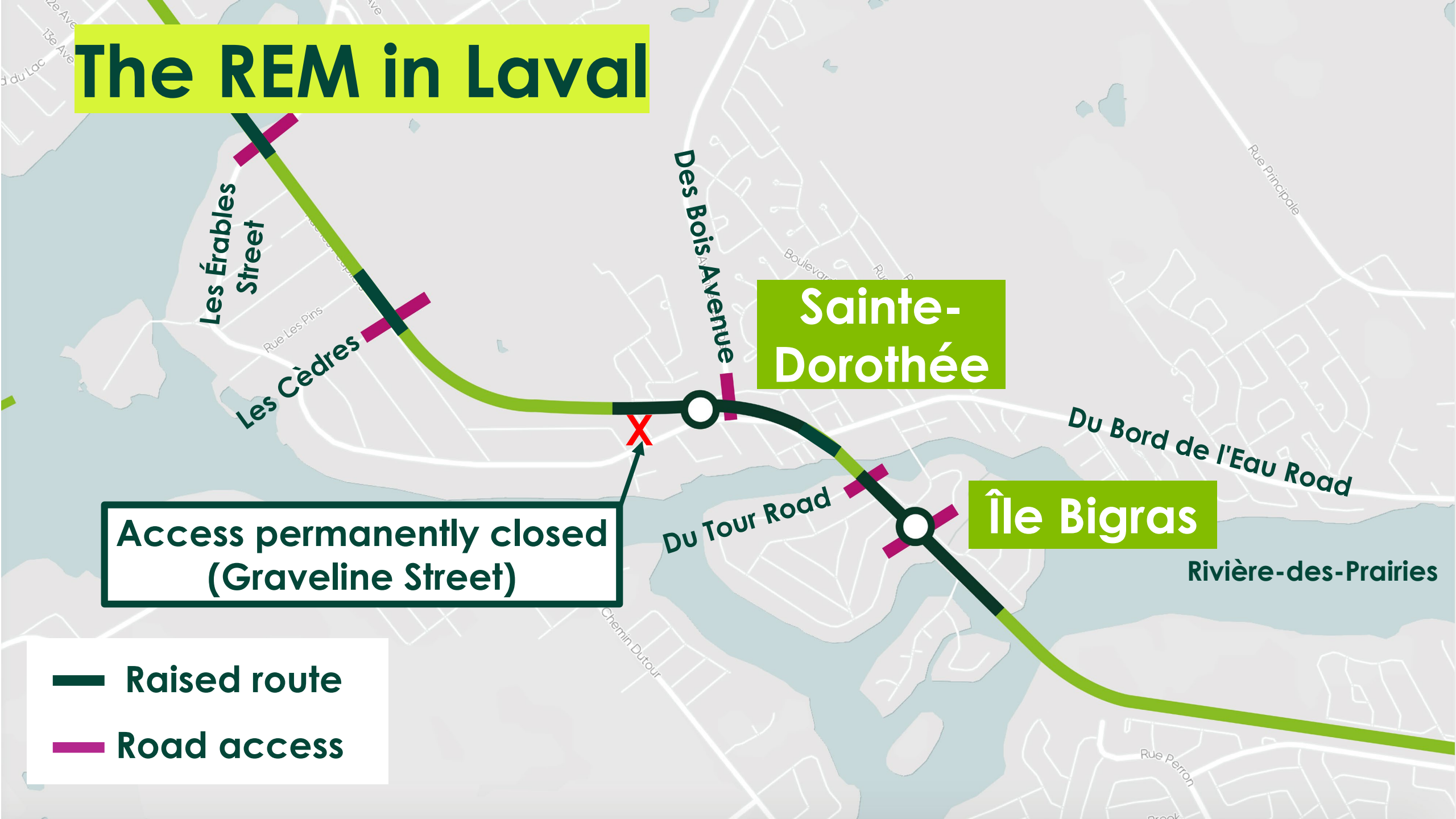
Largest public transit project in Québec in the last 50 years

Light rail
100% electric
and automated

26 stations, 67 km

Commissioning in
2023

The REM in Laval



Sainte-Dorothée

Île Bigras

Access permanently closed
(Graveline Street)

— Raised route

— Road access

Frequency, travel time and capacity



+ Fast

Île-Bigras – Gare Centrale: 26 minutes
Sainte-Dorothée – Gare Centrale: 28 minutes
Île-Bigras – Airport: 19 minutes
Sainte-Dorothée – South Shore: 44 minutes

+ Frequent

20% more frequent
5 minutes during peak hours
15 minutes during off-peak hours

+ Large capacity

2.5 times more people during peak hours (42,120 people)
Nearly 7000 seats during peak hours
(MR-90 = 8100 seats)

The REM: quieter technology



Current exo trains – 300 metres



2 cars during off-peak hours — 40 metres — 14 hours/day



4 cars during peak hours — 80 metres — 6 hours/day

REM cars

- Weight: 180 tons
- No train whistles at station arrival or grade crossing alarms
- Electric brakes
- Welded rails with rubber pads across the entire network



REM stations and rail car

Stations accessible by various means



1000 parking spaces
65 bicycle racks
5 kiss-and-ride lanes
6 bus platforms
(more stops on
streets)



**MOBILITÉ
MONTREAL**

ARTM

Autorité régionale
de transport métropolitain

exo

stm

RTL
Agglomération
de Longueuil

STL

bixi

netlift

**CAR
2GO**

VQ
Vélo Québec

Communauto

An architectural rendering of a modern building facade. The building features a large glass curtain wall on the left side, reflecting the sky and surrounding environment. To the right of the glass, there is a series of vertical wooden slats of varying heights, creating a rhythmic pattern. The building is situated in an urban environment with people walking on the sidewalk in the foreground. The sky is a soft, hazy blue.

Architectural renderings



Lines to mimic
movement

Glass for its
transparency and
natural light

Wood for its warmth
and as a hallmark

Station facilities



Outdoor area

- Landscaped for biodiversity
- Public spaces
- Safe circulation
- Street furniture



Indoor area

- Indoor platforms – enclosed, climate-controlled building
- Platform screen doors for increased safety
- Universal accessibility
- WiFi throughout the network



Work execution

Roles and responsibilities



Réseau
express
métropolitain



Project office



NouvLR

– Construction



GRUPE
PMM

– Rolling stock and
operations

Project integration

City of Montréal

Mobilité Montréal
committees

Work impact
management
committees

Coordination with
government
departments,
municipalities and
partners

Coordination
committees – ARTM
and
transit authorities

More than 20 work planning and monitoring committees

Work strategy

DESIGN – ENGINEERING

PROCUREMENT

CONSTRUCTION

**Relocation of
public utilities**



**Station
foundations**



**Construction
of
infrastructures**



**Architectural
renderings**

Vital milestones

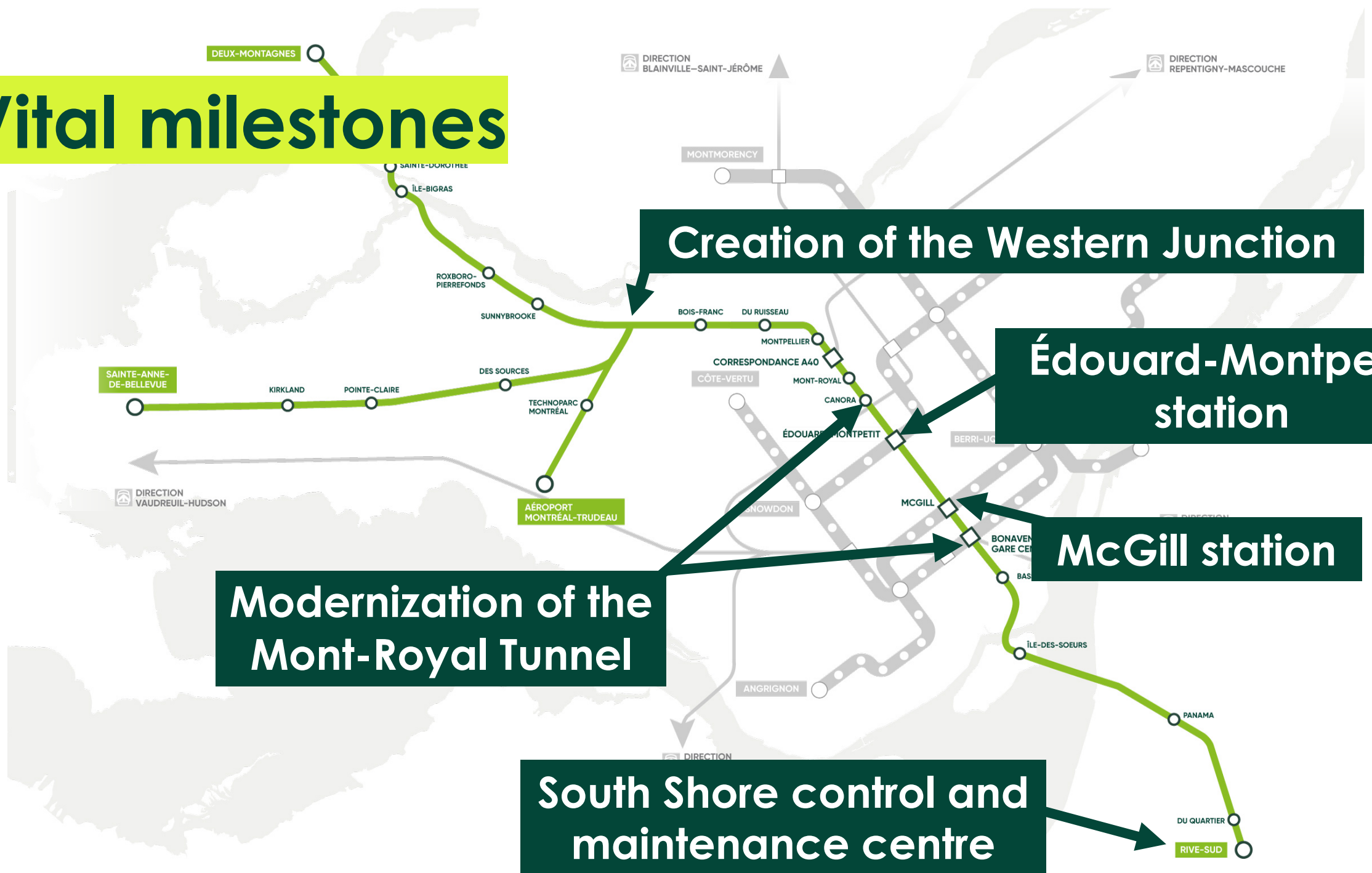
Creation of the Western Junction

Édouard-Montpetit station

McGill station

Modernization of the Mont-Royal Tunnel

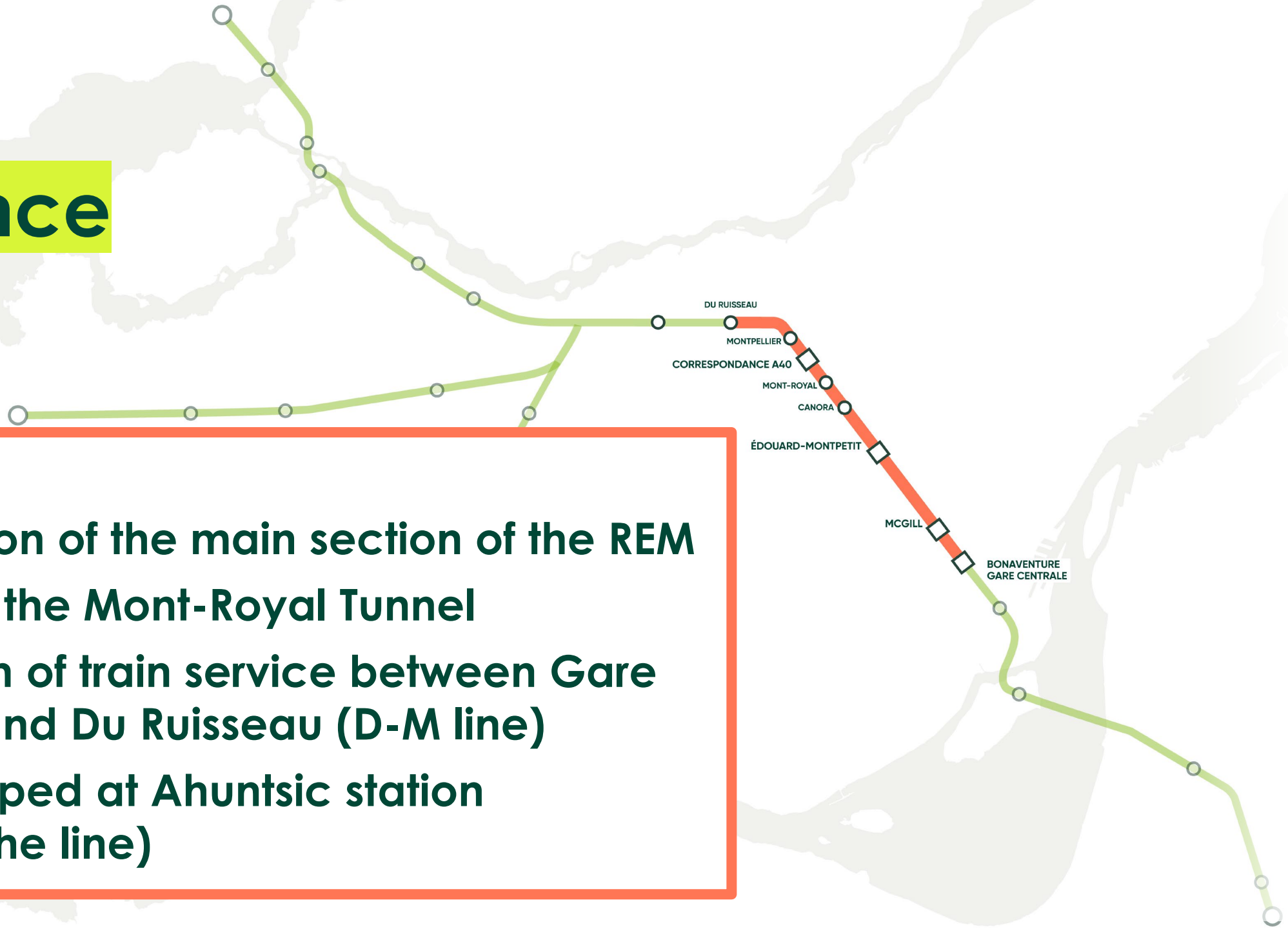
South Shore control and maintenance centre



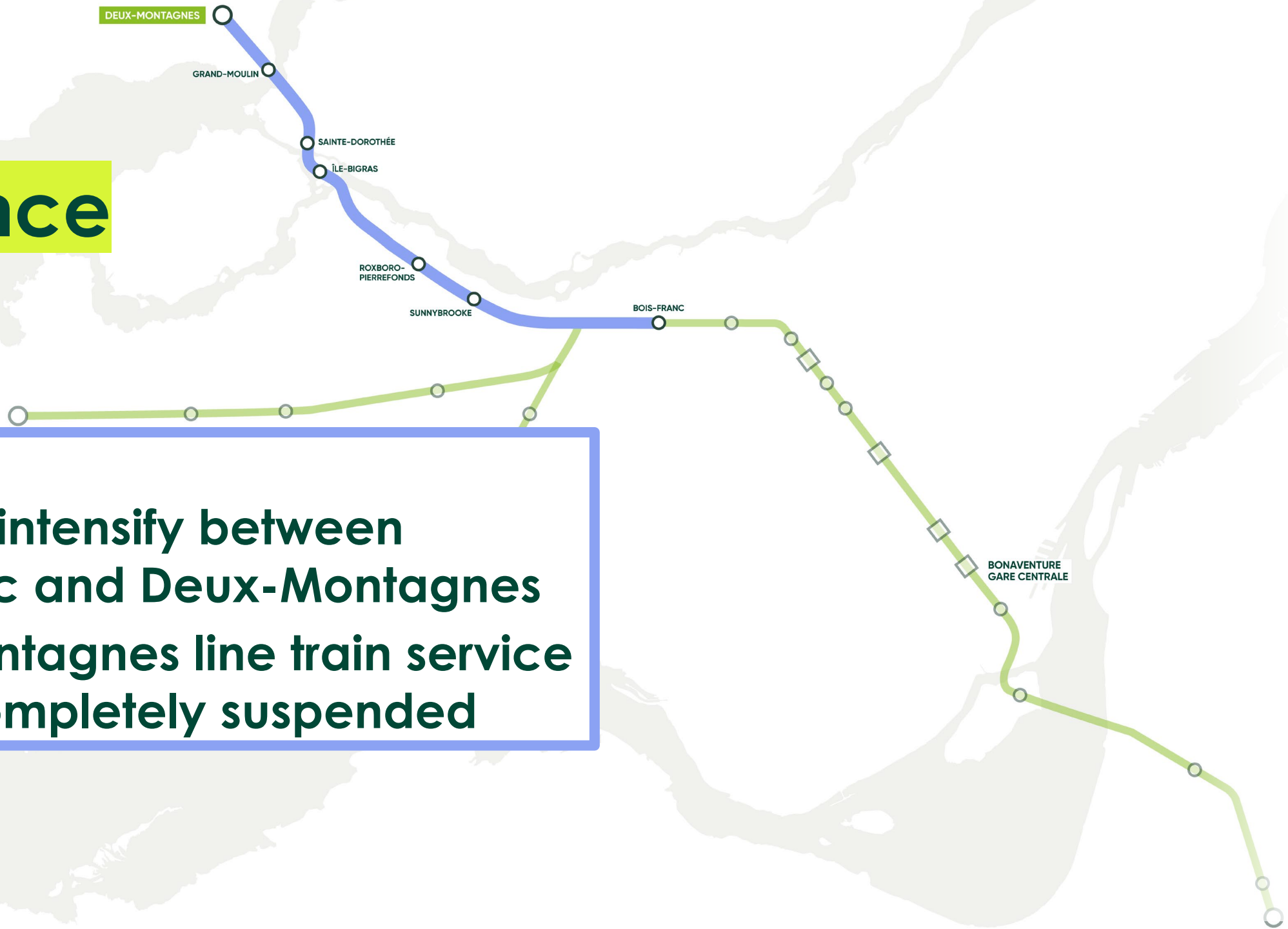
Work sequence

Early 2020

- Construction of the main section of the REM
- Closure of the Mont-Royal Tunnel
- Suspension of train service between Gare Centrale and Du Ruisseau (D-M line)
- Trains stopped at Ahuntsic station (Mascouche line)



Work sequence



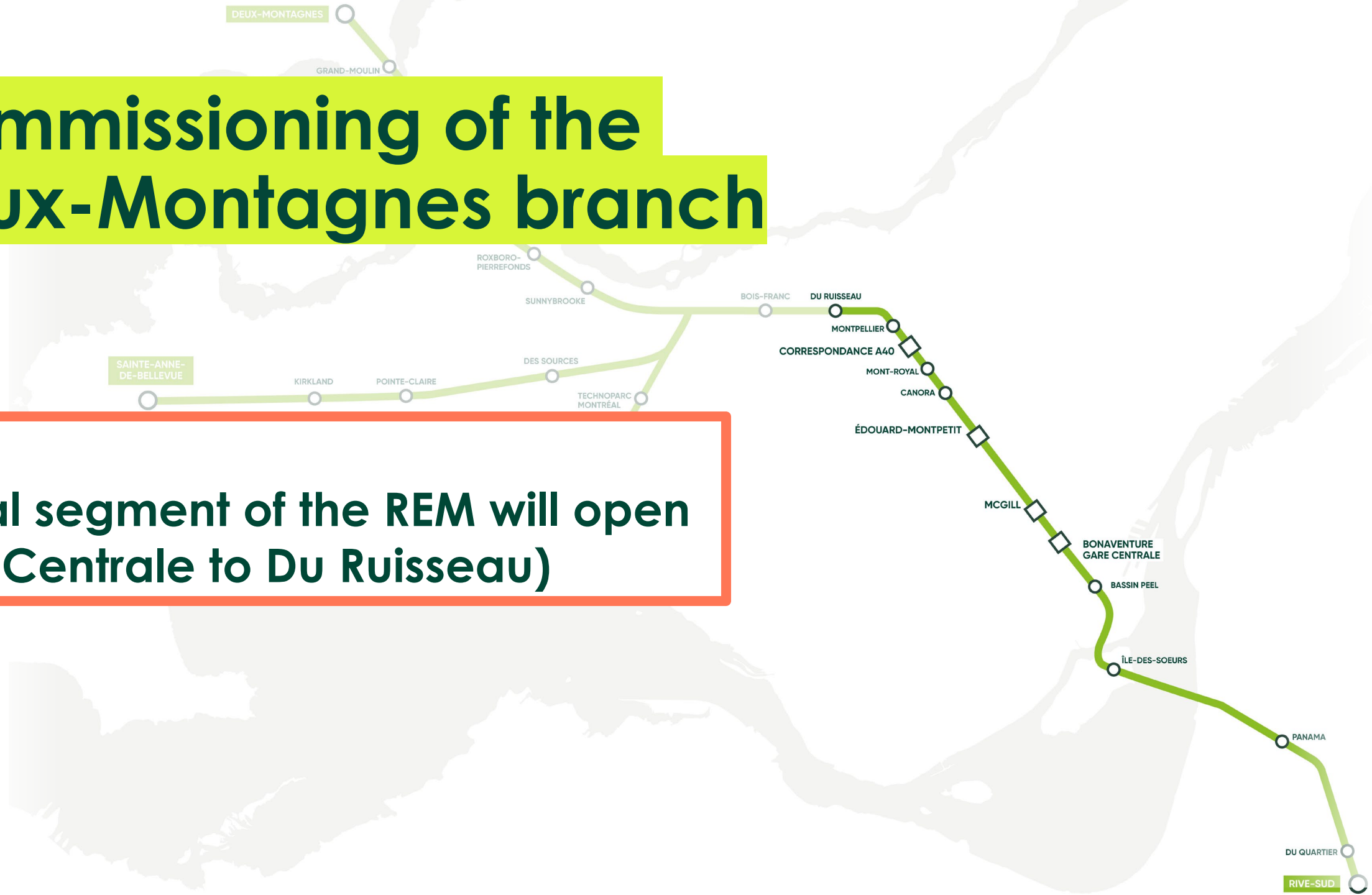
Mid-2021

- Work will intensify between Bois-Franc and Deux-Montagnes
- Deux-Montagnes line train service will be completely suspended

Commissioning of the Deux-Montagnes branch

2022

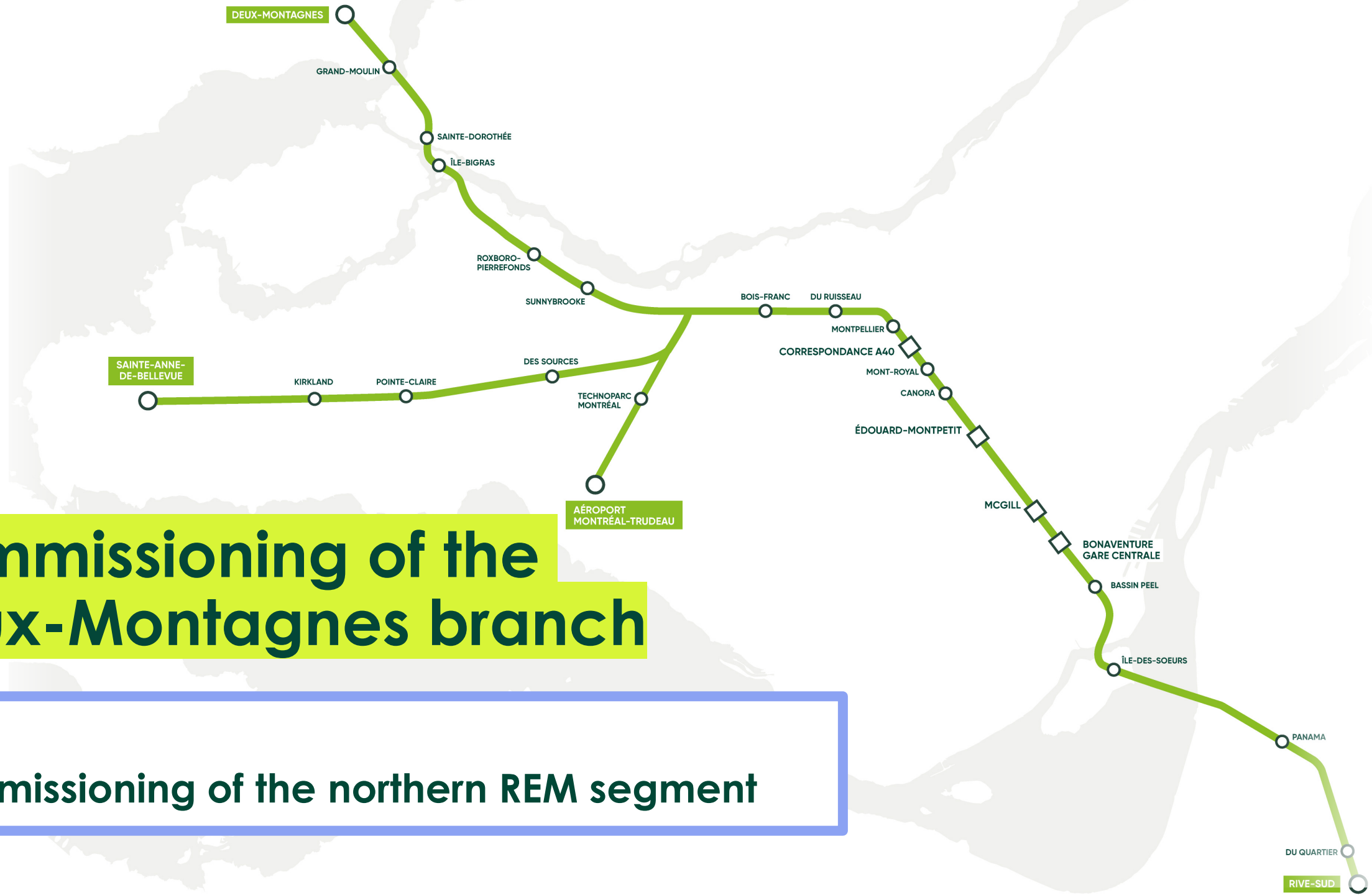
Central segment of the REM will open
(Gare Centrale to Du Ruisseau)



Commissioning of the Deux-Montagnes branch

2023

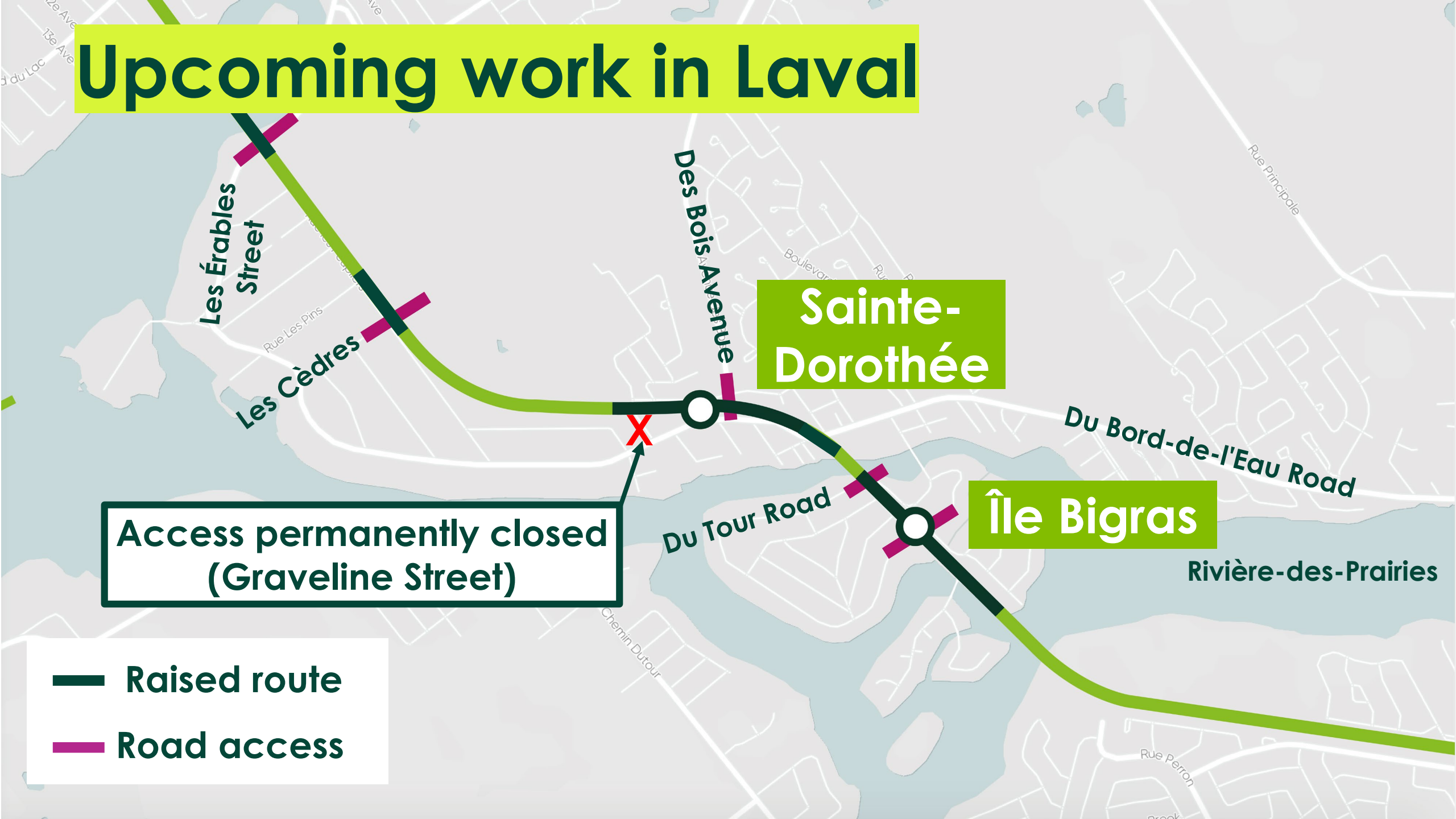
Commissioning of the northern REM segment





Upcoming work in 2019

Upcoming work in Laval



Sainte-Dorothée

Île Bigras

Access permanently closed
(Graveline Street)

— Raised route

— Road access

Summer 2019 – Dec. 2020:

- Cutting of trees and construction of access roads
- Construction of a temporary jetty and dock
- New REM dual-track railway bridge

Sainte-Dorothée

Île Bigras

Du Tour Road

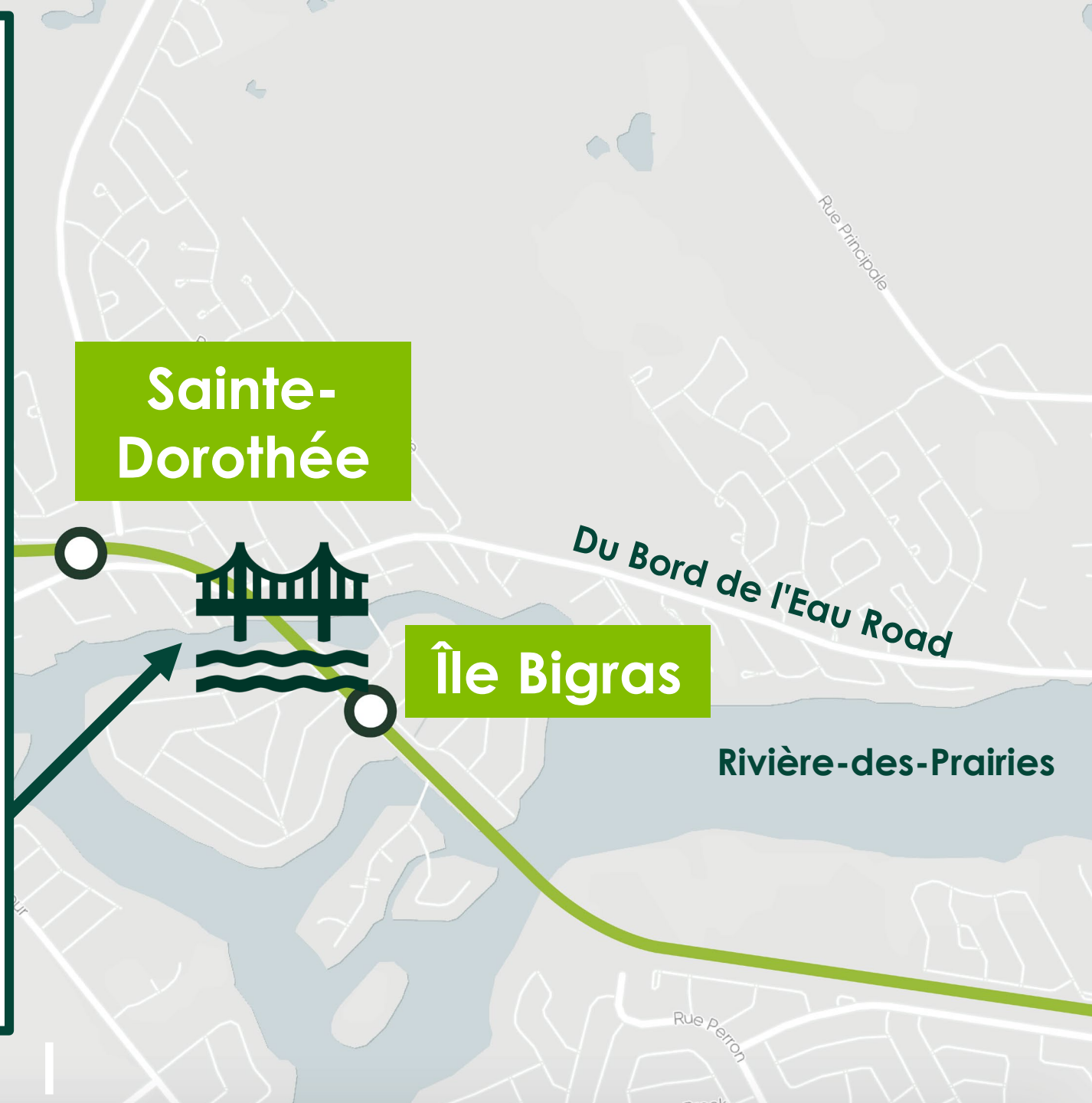
Du Bord de l'Eau Road

Rivière-des-Prairies



Summer 2019 – Dec. 2020:

- Cutting of trees and construction of access roads
- Construction of temporary jetties
- New single-track railway bridge to double the existing bridge
- Repair of the existing bridge





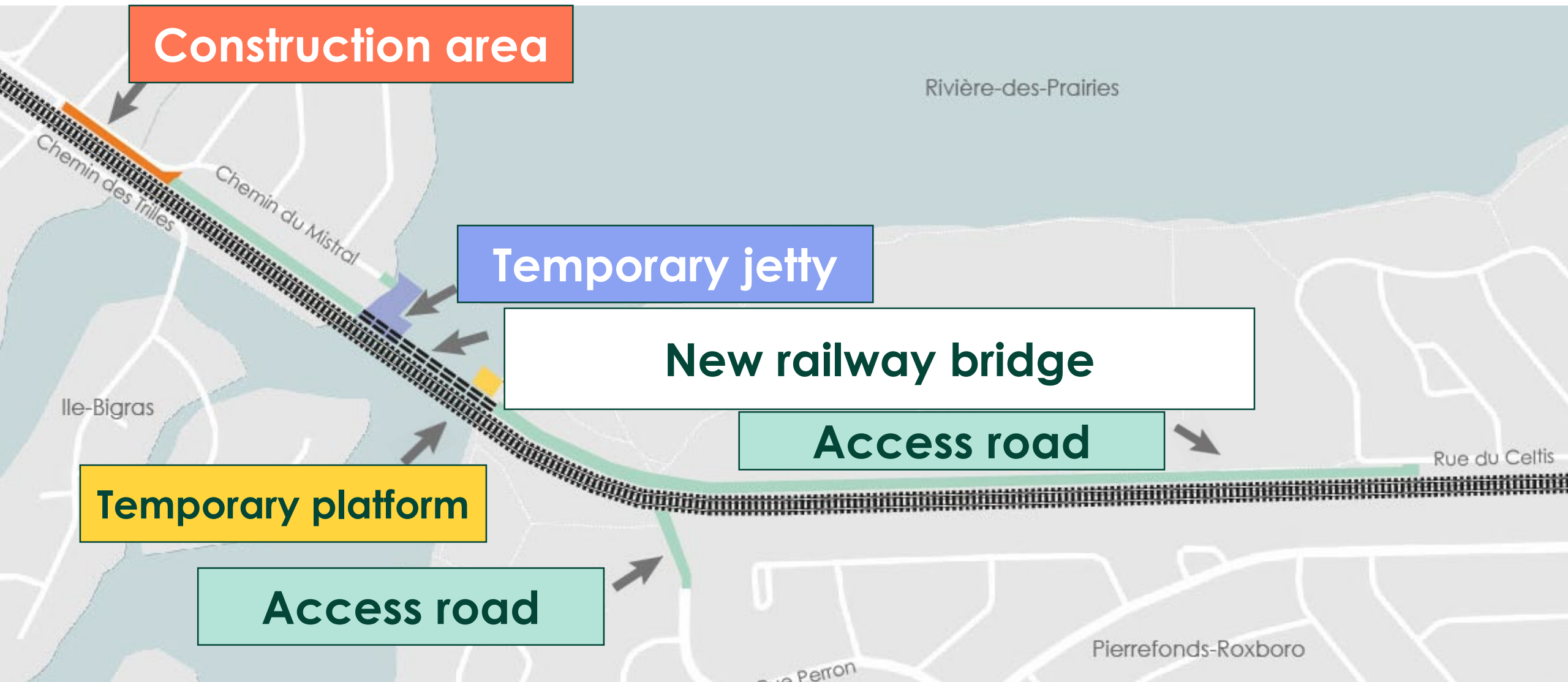
Summer 2021 – 2023:

- Station construction
- Structure construction:
 - Du Bord de l'Eau Road
 - Des Bois Avenue
 - Les Cèdres Street
 - Mille-Îles River bridge

Rivière-des-Prairies



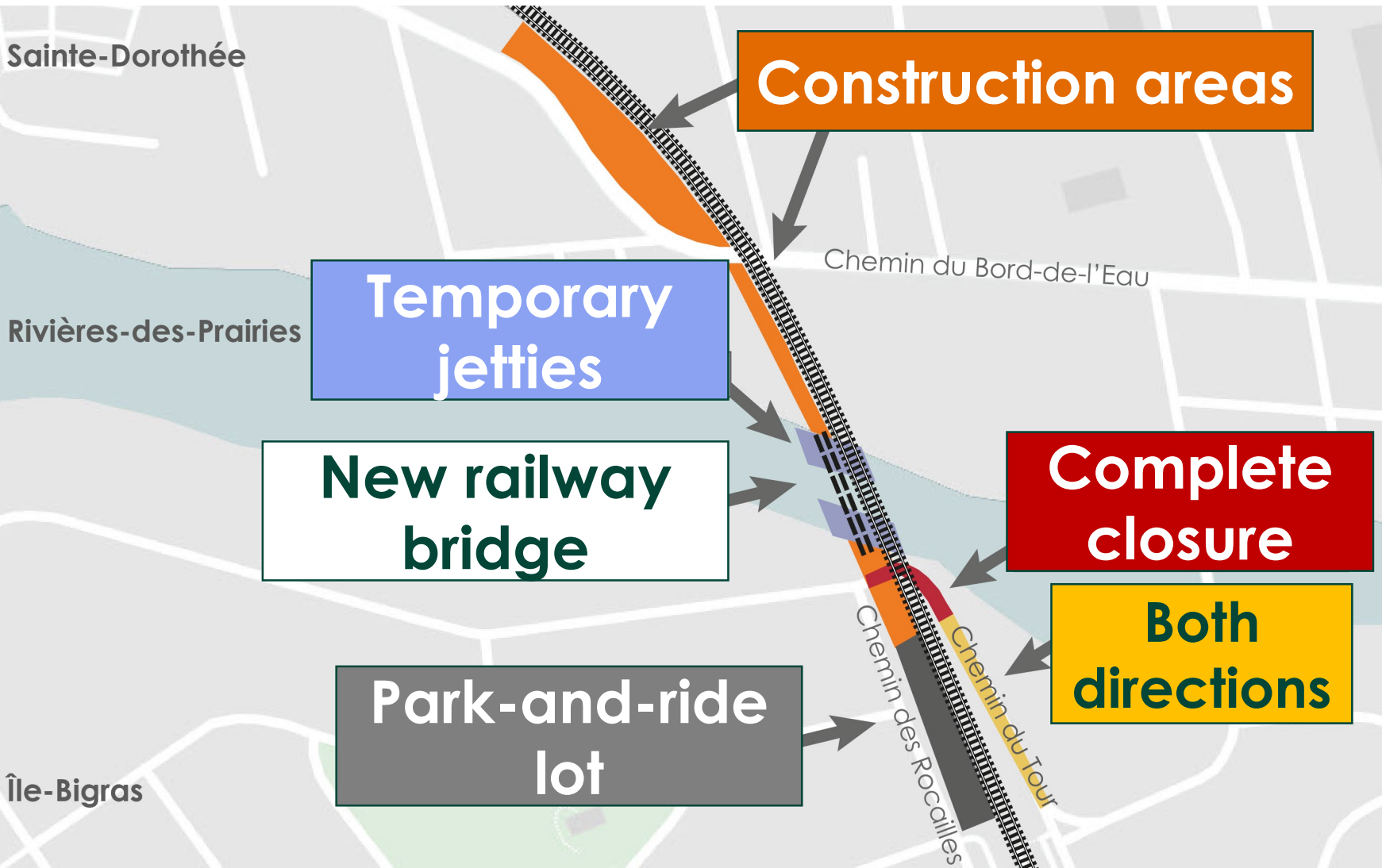
Montréal – Ile Bigras sector – Work scheduled for **summer 2019** to **December 2020**



Rivière-des-Prairies



Île Bigras – Sainte-Dorothée sector – Work scheduled from summer 2019 to December 2020



- New single-track bridge to double the existing bridge
- Repair of the existing bridge
- Park-and-ride lot will be maintained
- Preparatory work

Impacts and mitigation measures



Impacts	Examples of mitigation measures
Tree planting	– Reforestation where deforestation took place
Noise, vibration and dust	– White noise backup alarms, whenever possible – Acoustic screens – Dust control and sprayers – Seismographs (vibration measurements) – Noise and air quality measuring stations
Rail, road and cyclist hindrances	– Traffic management plan – Flaggers – Adapted signage
Truck route	– Trucking routes discussed with the City

Deux-Montagnes



2019-2021: Work scheduled

- Geotechnical campaigns
- Relocation of public utilities

Summer 2021: Work scheduled

- Repair and doubling of tracks on railway bridge over Mille Îles River
- Ground-level route
- Engineering structures
- Station construction

St-Eustache – Temporary exo maintenance centre





Réseau
express
métropolitain



ARTM

Autorité régionale
de transport métropolitain



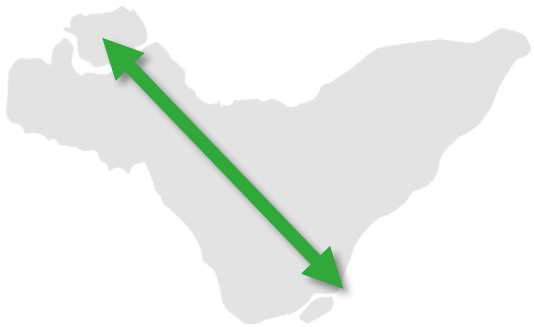
INTERIM PUBLIC TRANSIT MITIGATION STRATEGY

June 10, 2019

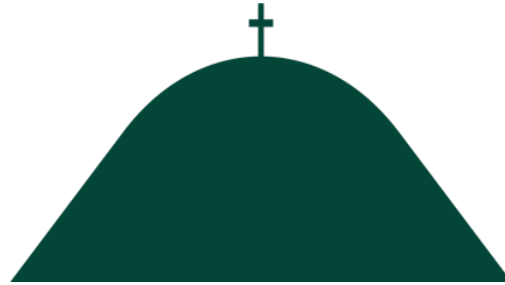
MAJOR CHALLENGES

BACKGROUND

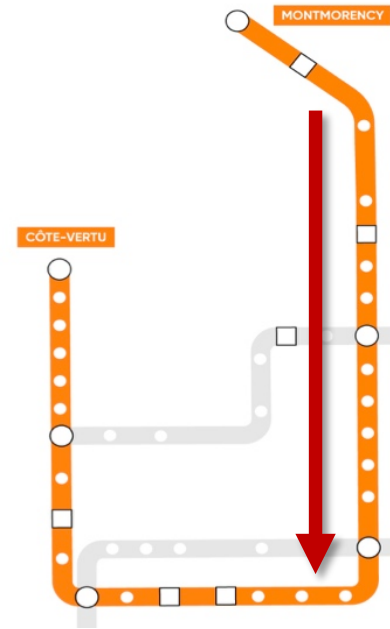
33



Irreplaceable
diagonal



Mount Royal –
an obstacle
to circumvent



Metro's
Orange line
(east branch)



Road
congestion

MAIN METROPOLITAN COLLABORATION POINTS

INTERIM NETWORK

34

**Highway
network
and priority
bus measures**

**Work group
with users**

**Steering
committee –
North Shore
and Laval**

**Municipalities
and local
networks**

**Public transit
stakeholders**

FOUR PILLARS OF THE NEW INTERIM NETWORK

INTERIM NETWORK

35



Shuttles
Rail



Improvement
of existing
service and bus
shuttles



Priority bus
measures



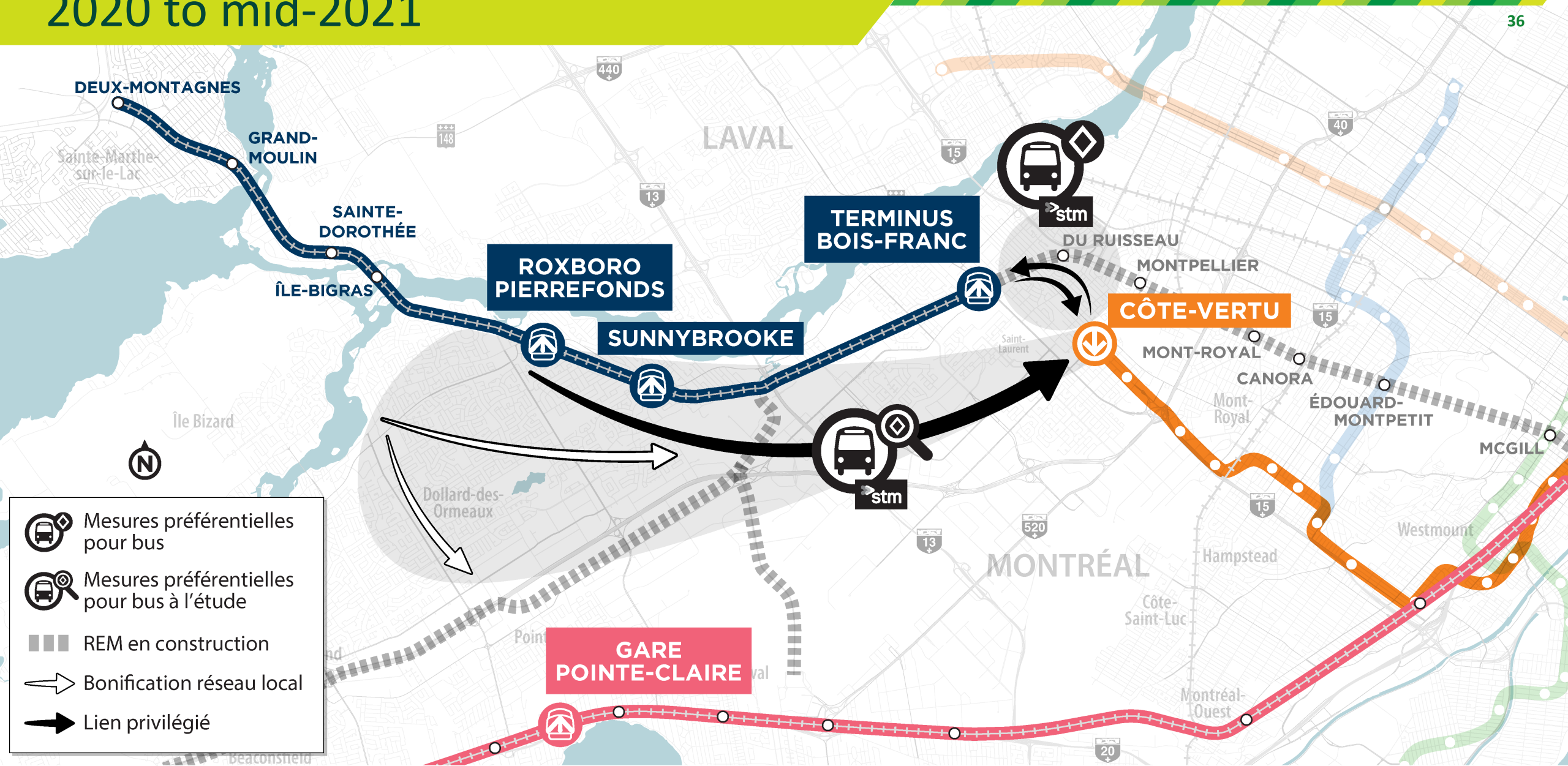
Orange*,
green
and blue lines

** West branch*

WEST ISLAND AND NORTH SHORE SECTOR 2020 to mid-2021

MEASURES BY SECTOR

36

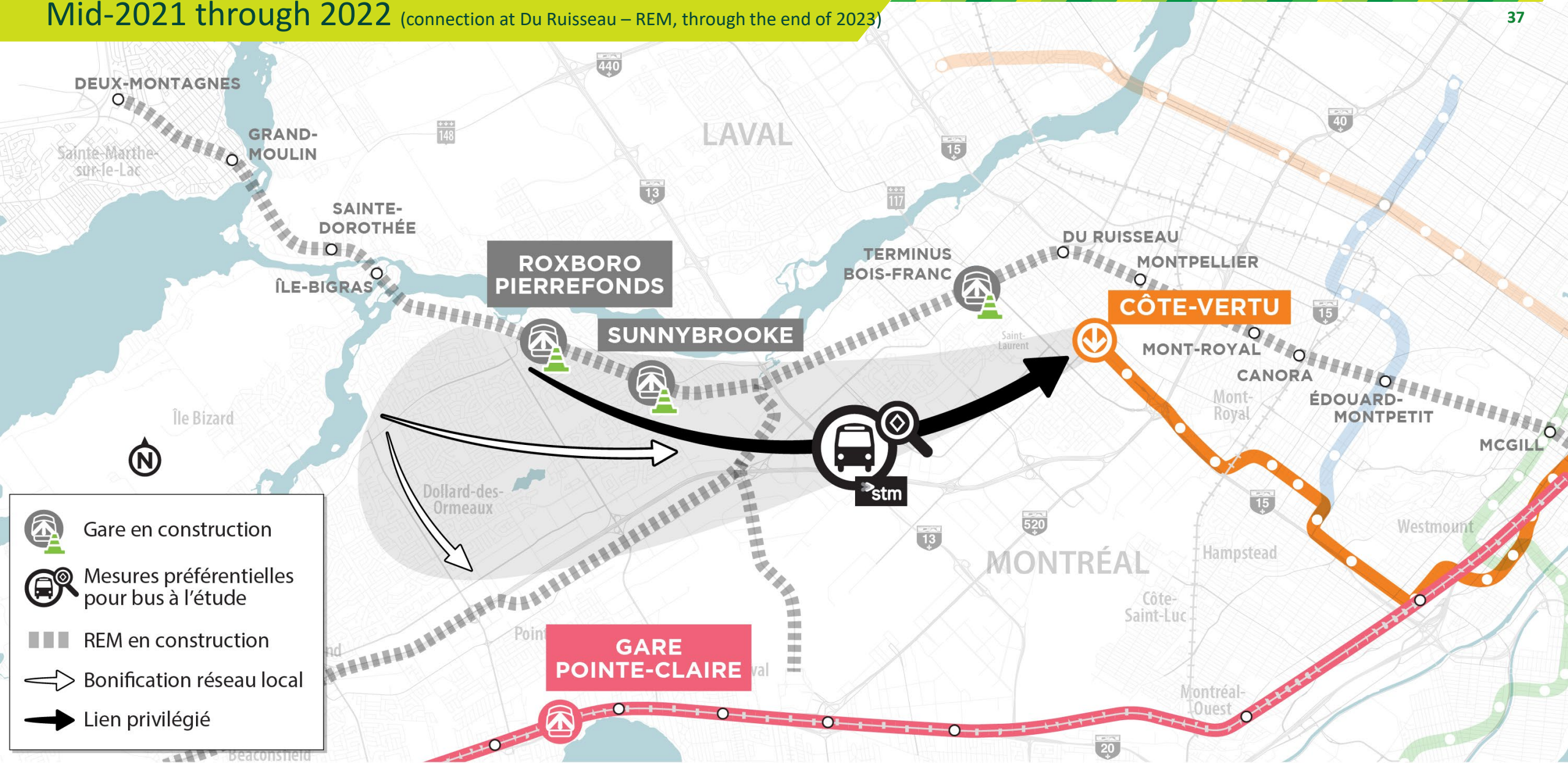


WEST ISLAND AND NORTH SHORE SECTOR

MEASURES BY SECTOR

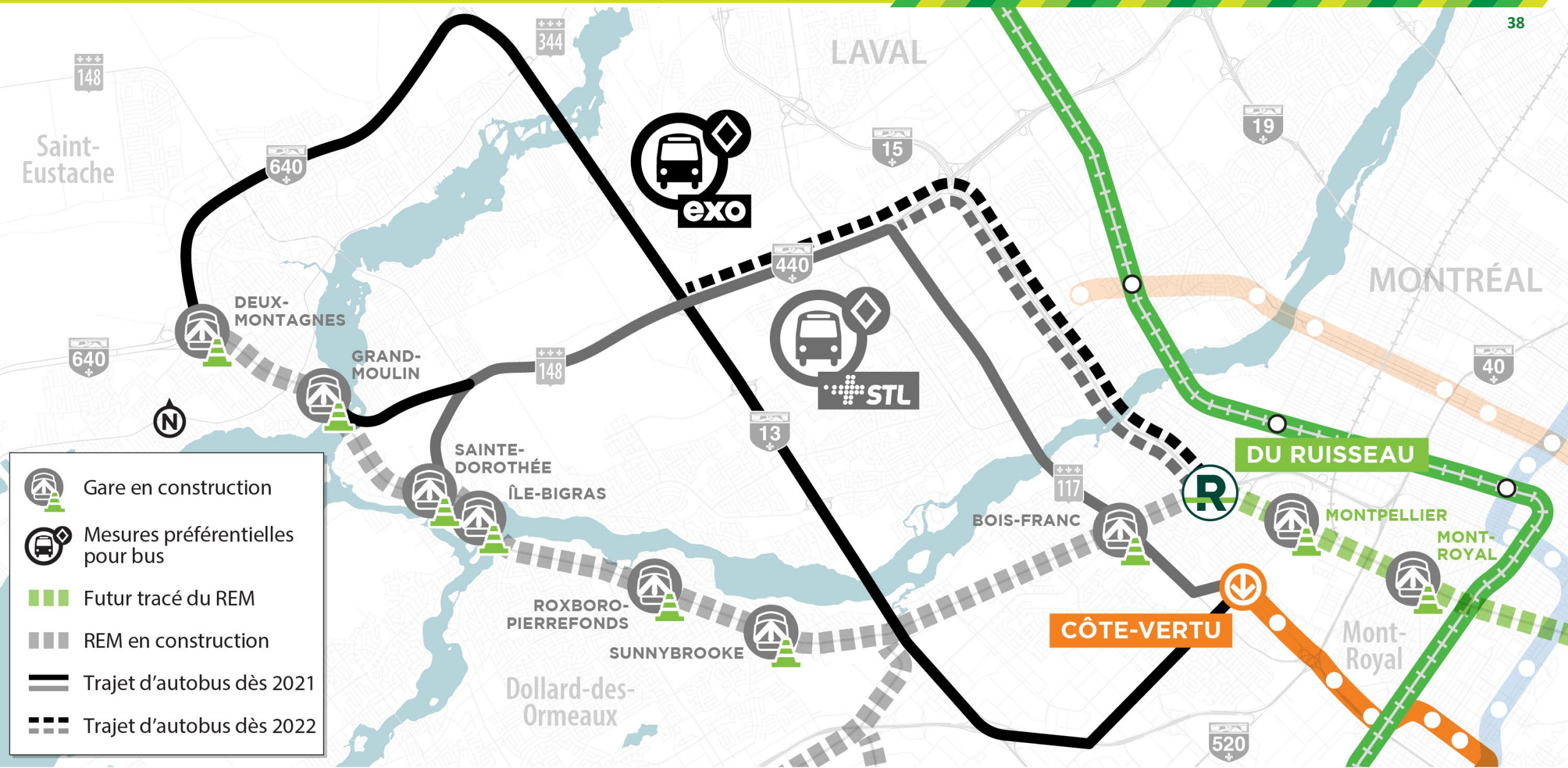
Mid-2021 through 2022 (connection at Du Ruisseau – REM, through the end of 2023)

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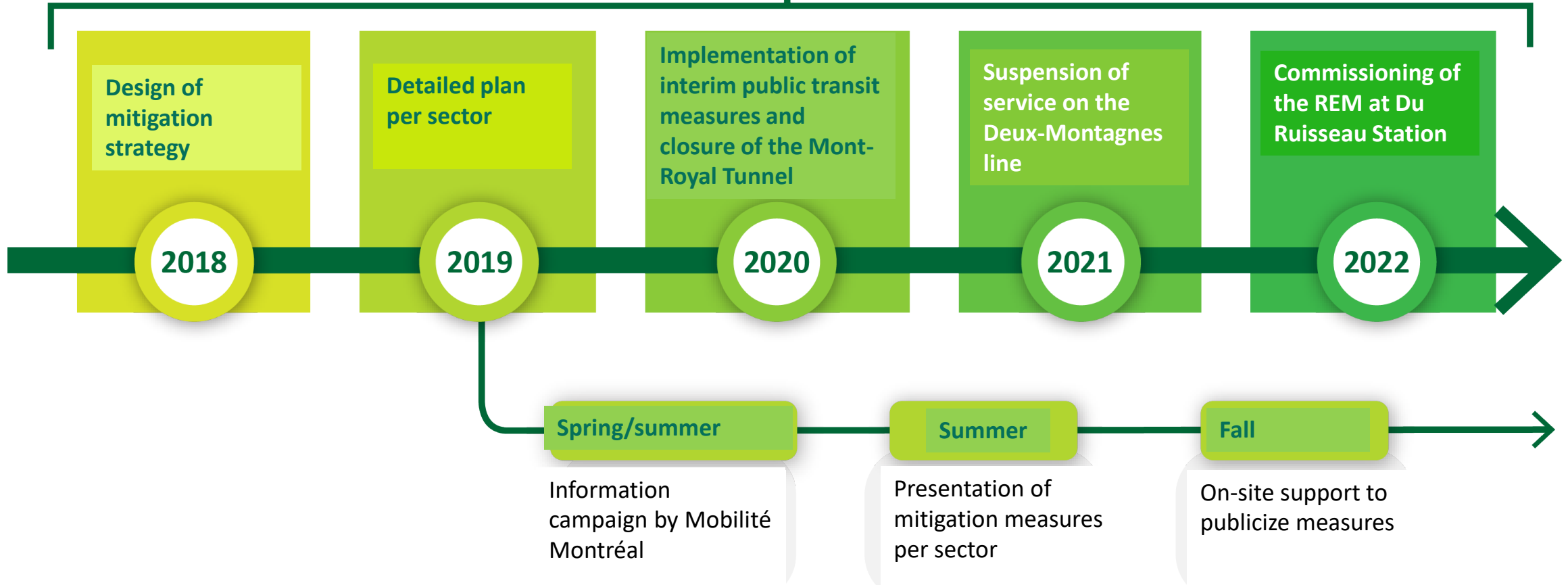


NORTH SHORE SECTOR

MEASURES BY SECTOR



COOPERATION, COORDINATION AND MONITORING OF MITIGATION MEASURES BY THE PARTNERS





Question & answer period

Réseau express métropolitain



Largest public transit project in Québec in the last 50 years

Light rail
100% electric and automated

26 stations, 67 km

Commissioning in 2023

Réseau
express
métropolitain



REMgrandmtl



REMgrandmtl



1 833 rem-info
(1 833 736-4636)



Info@rem.info

rem.info/en



Reliability and efficiency

A high-frequency metro



A system designed to tackle Québec winters



Winter climate testing phase prior to commissioning in one of the best climatic chambers



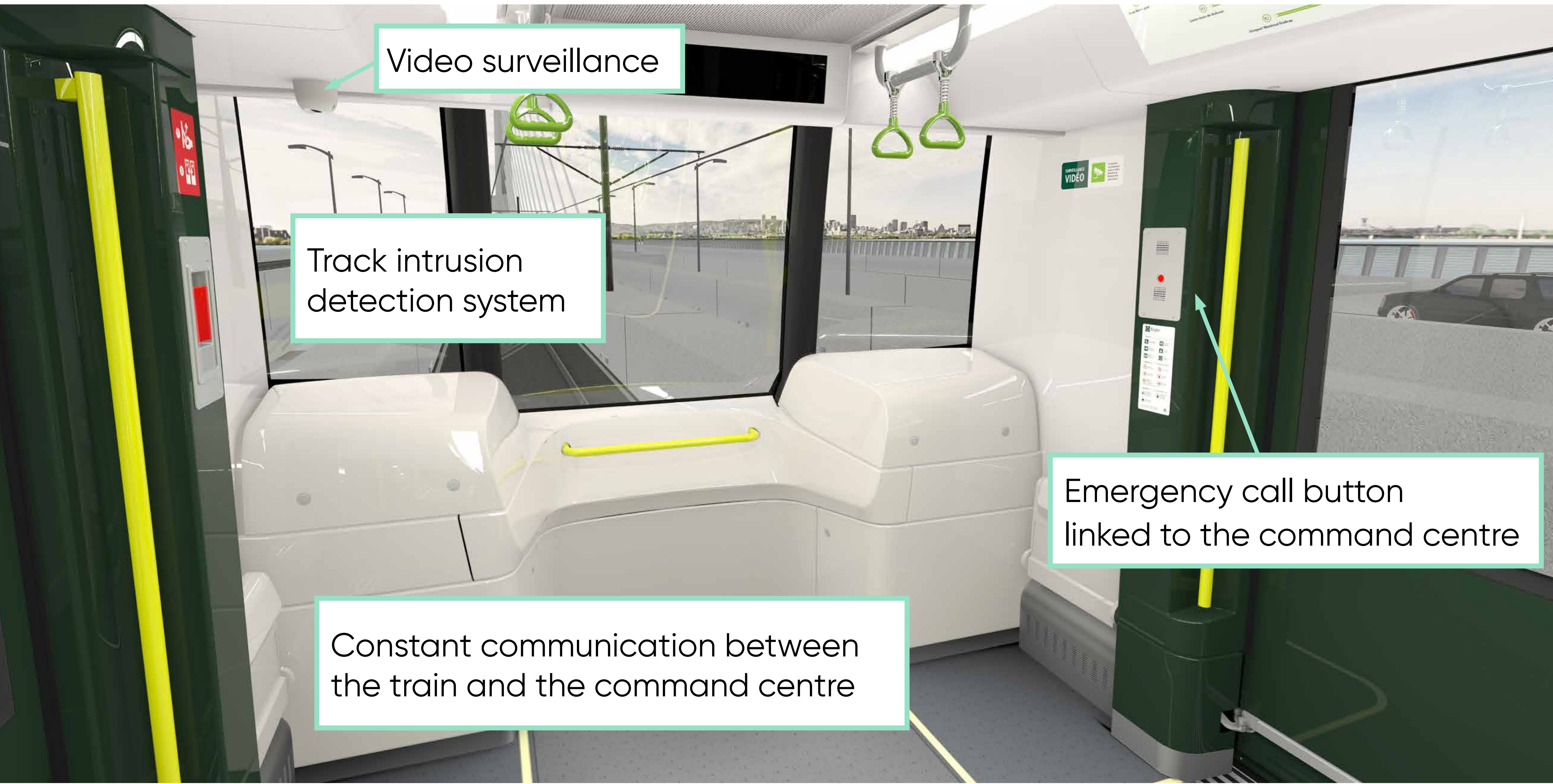
Security

Automation and command centre

Automated metros have shown high levels of resilience and average reliability rates in excess of 99%



Technology that has been proven in several countries across the globe



Platform screen doors

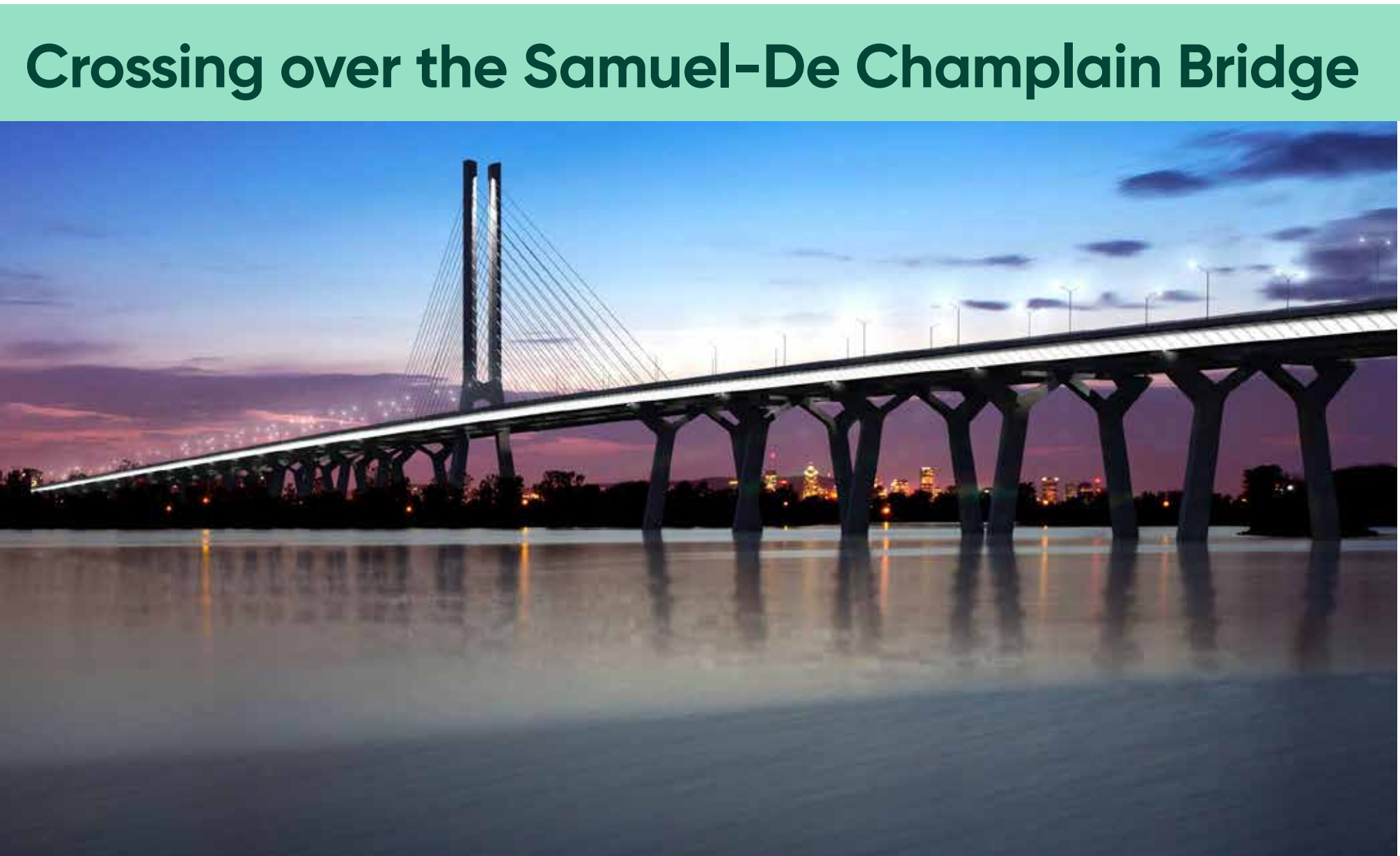
In addition to protecting users, the platform screen doors significantly increase the reliability rate

- Prevents passengers from falling on the tracks and reduces the risk of accidents
- Allows for better insulation of stations as the temperature and ventilation can be more effectively monitored
- Reduces the energy consumption of the REM network
- Prevents the piston effect caused by the movement of trains (the air stream felt by passengers that can knock them off balance)
- Allows for fluid entry and exit of passengers



Passenger cabin

Wraparound window at the front: a unique passenger experience



Breathtaking views of Greater Montréal

Services and comfort



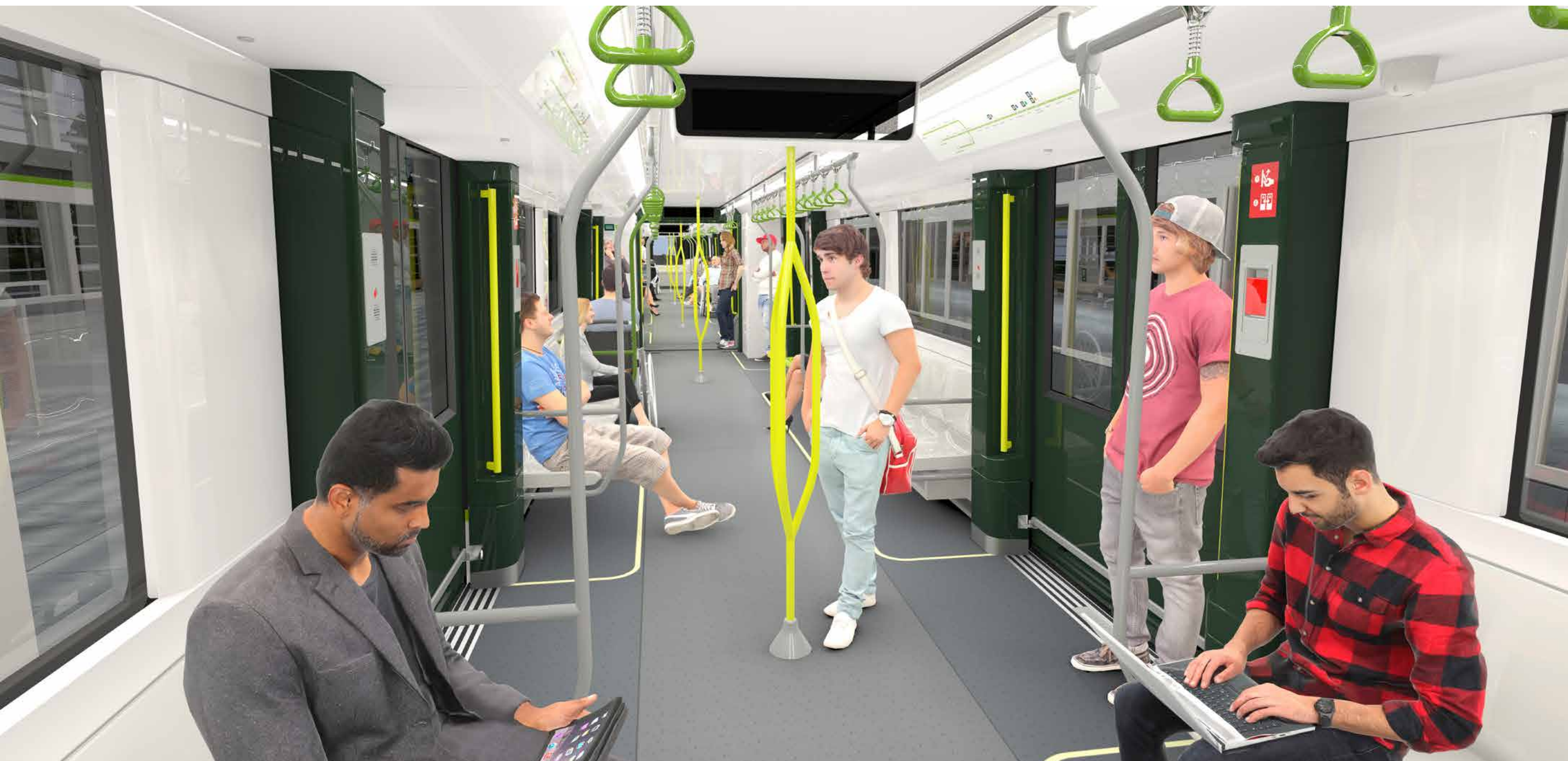
Wi-Fi



Heated floors and air conditioning

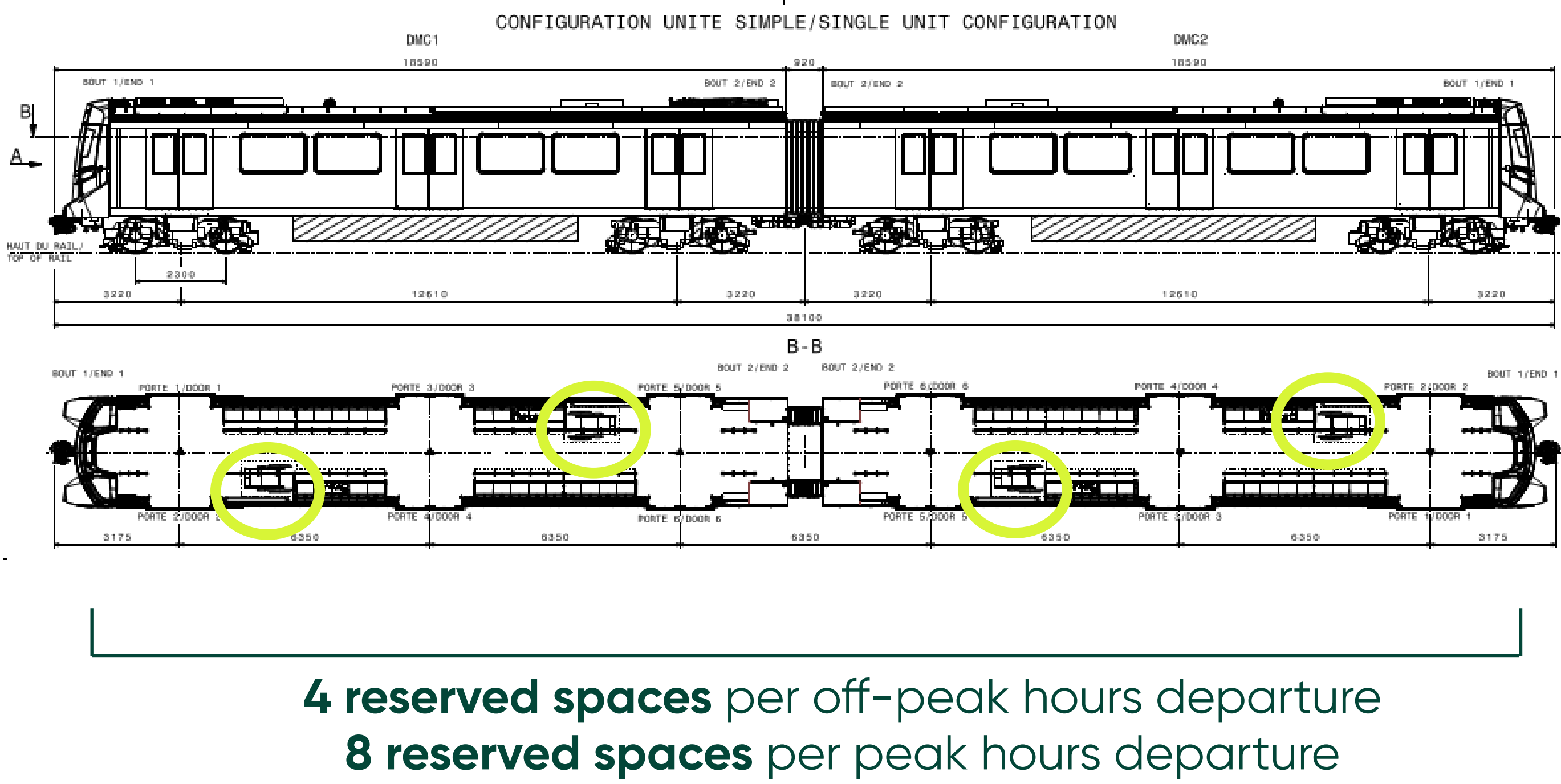
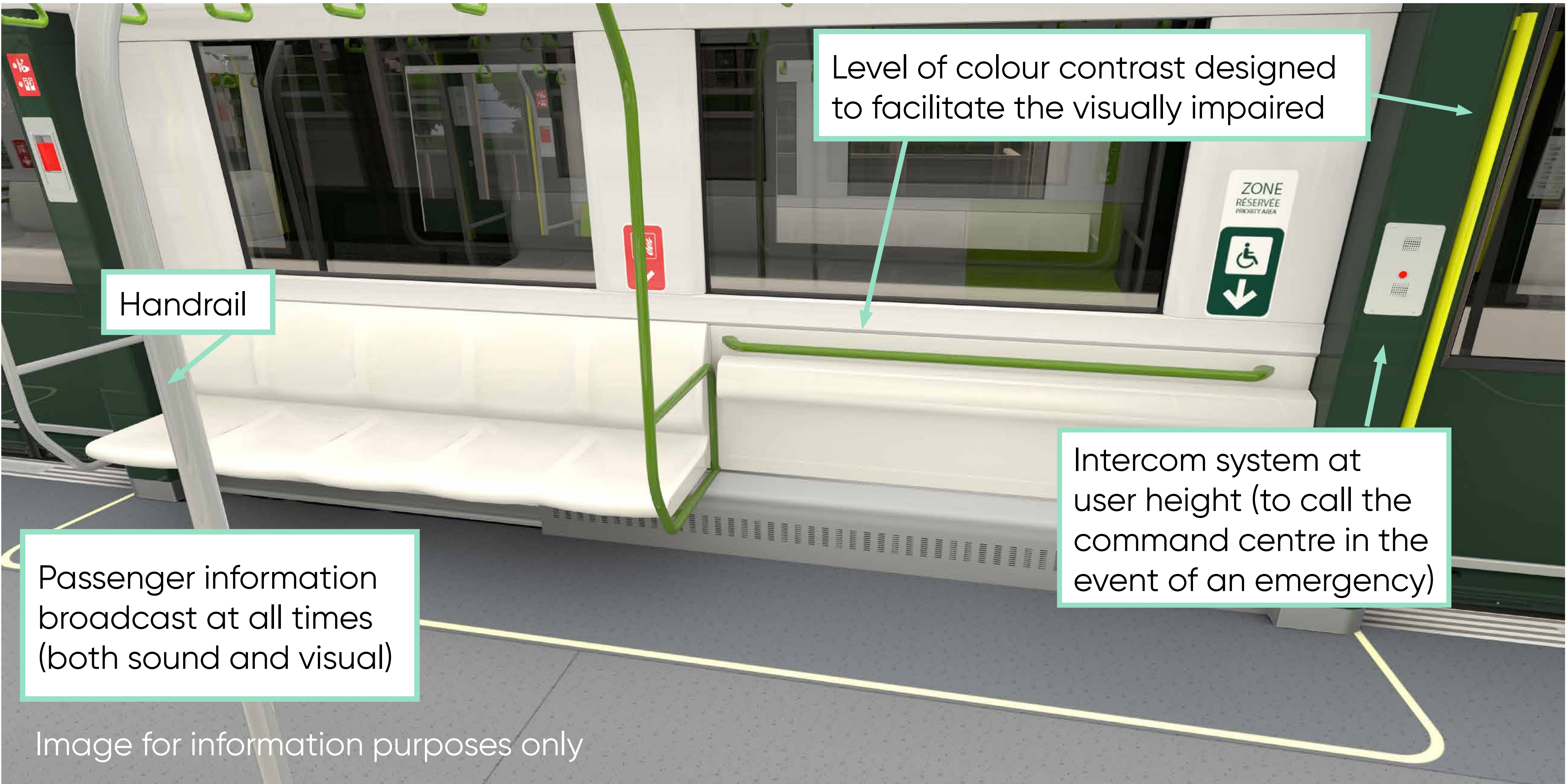


Abundant lighting



Accessibility and passenger movement

Universal access



Universal access required from the outset and consultations aimed at making adjustments to address specific needs

Free-flowing passenger movement



Reserved space for:



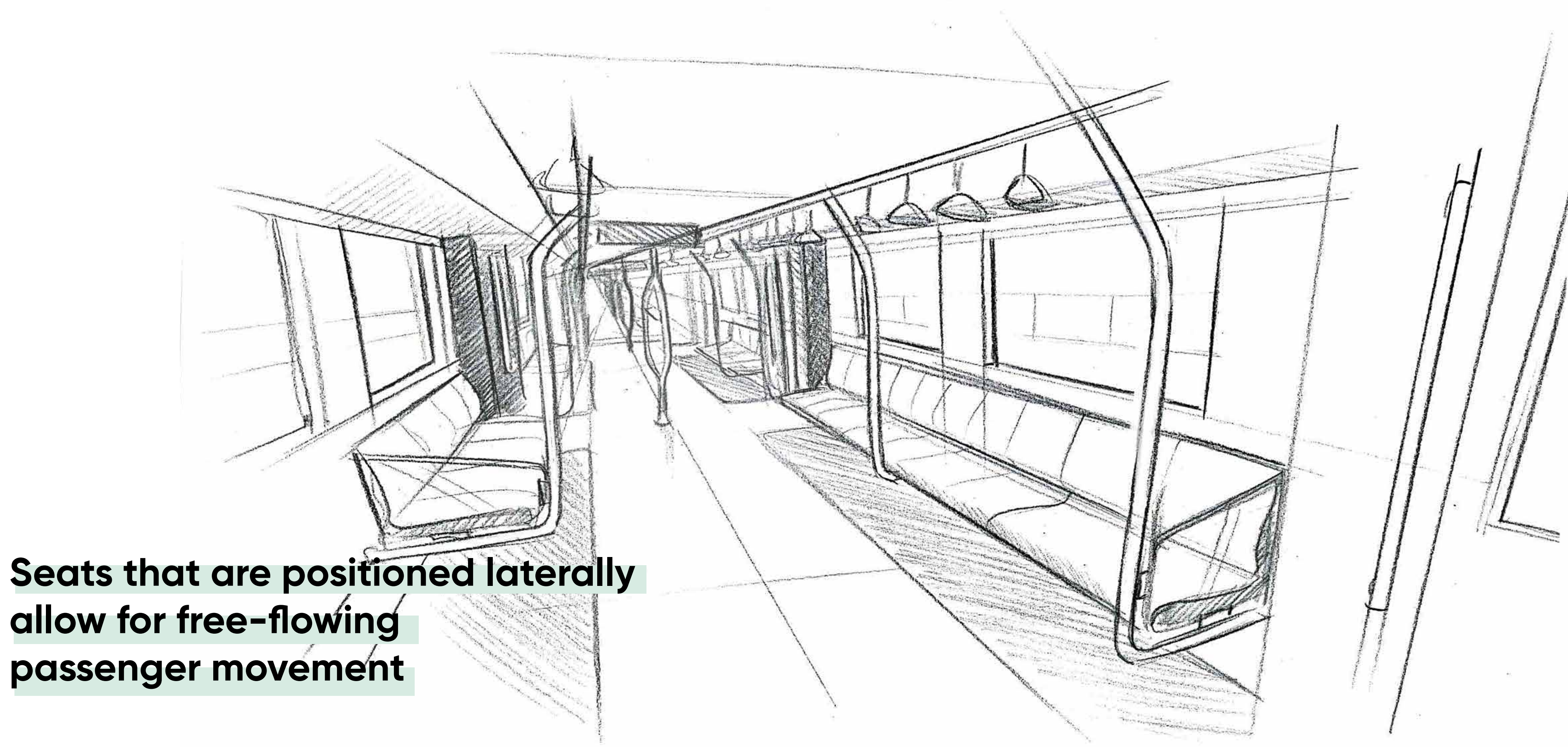
Families with strollers



Cyclists with bicycles

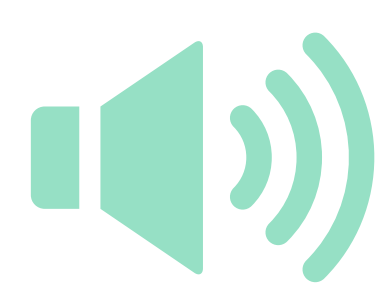


Commuters with luggage



Signage and soundscape

Audible signals



An audible signal when doors open and close and when the train departs from or arrives at a station, for example



A characteristic and audible voice announces passenger information



Sounds facilitate the movement and traffic of **all users**, including the visually impaired



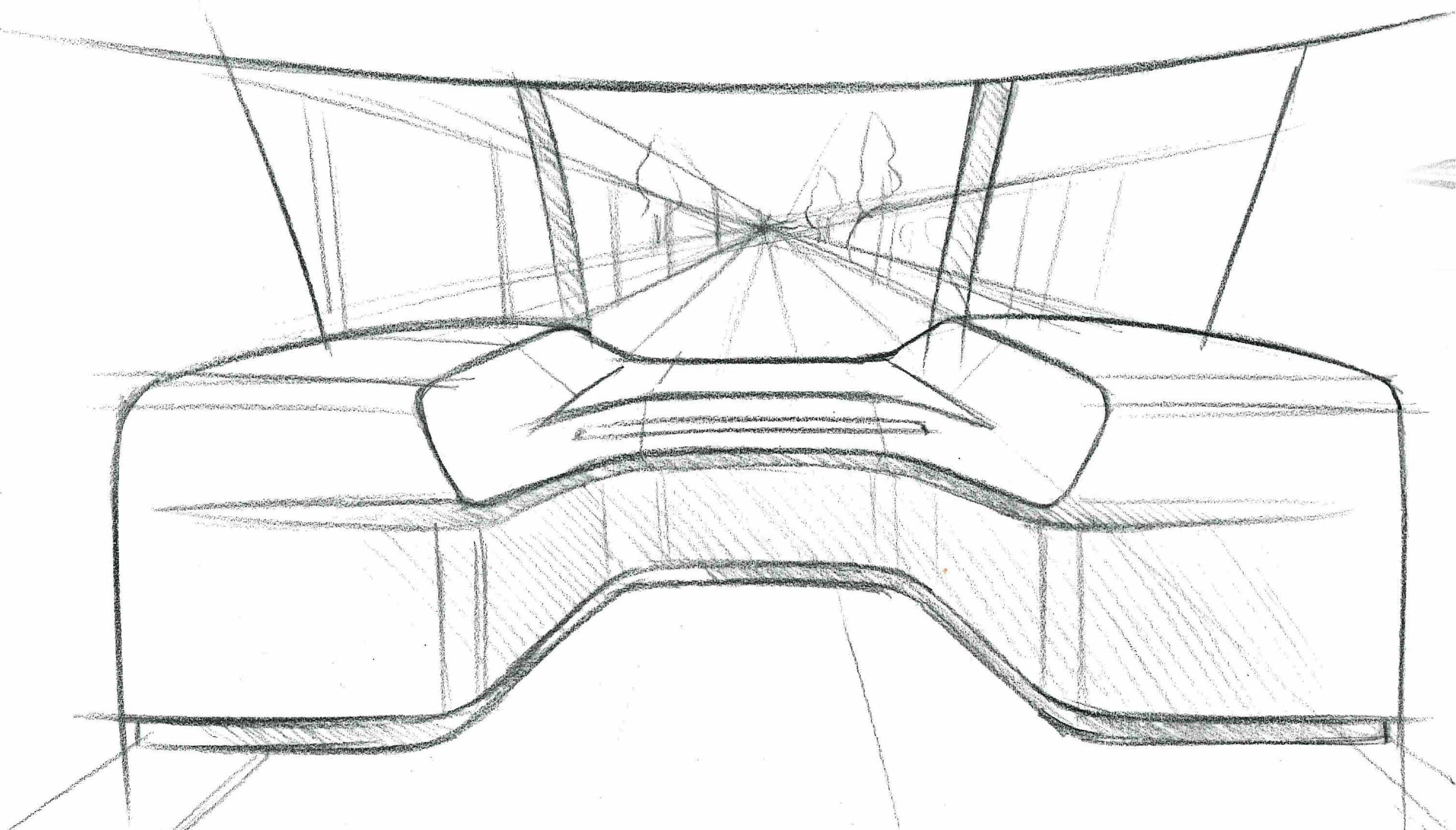
Soundscape

In addition to providing audible signals, how can sound enhance the user experience and highlight the surrounding landscape



A user experience that can:

- Change over time (seasons, special events, time of the day, etc.)
- Highlight the impressive views offered by REM routes
- Enhance the user experience and create a sense of well-being

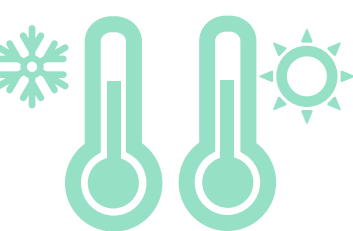


26 integrated and enclosed stations

Enclosed stations



REM stations will be inside enclosed and sheltered buildings. Passengers will be protected from inclement weather while they wait on the platform



Sheltered stations

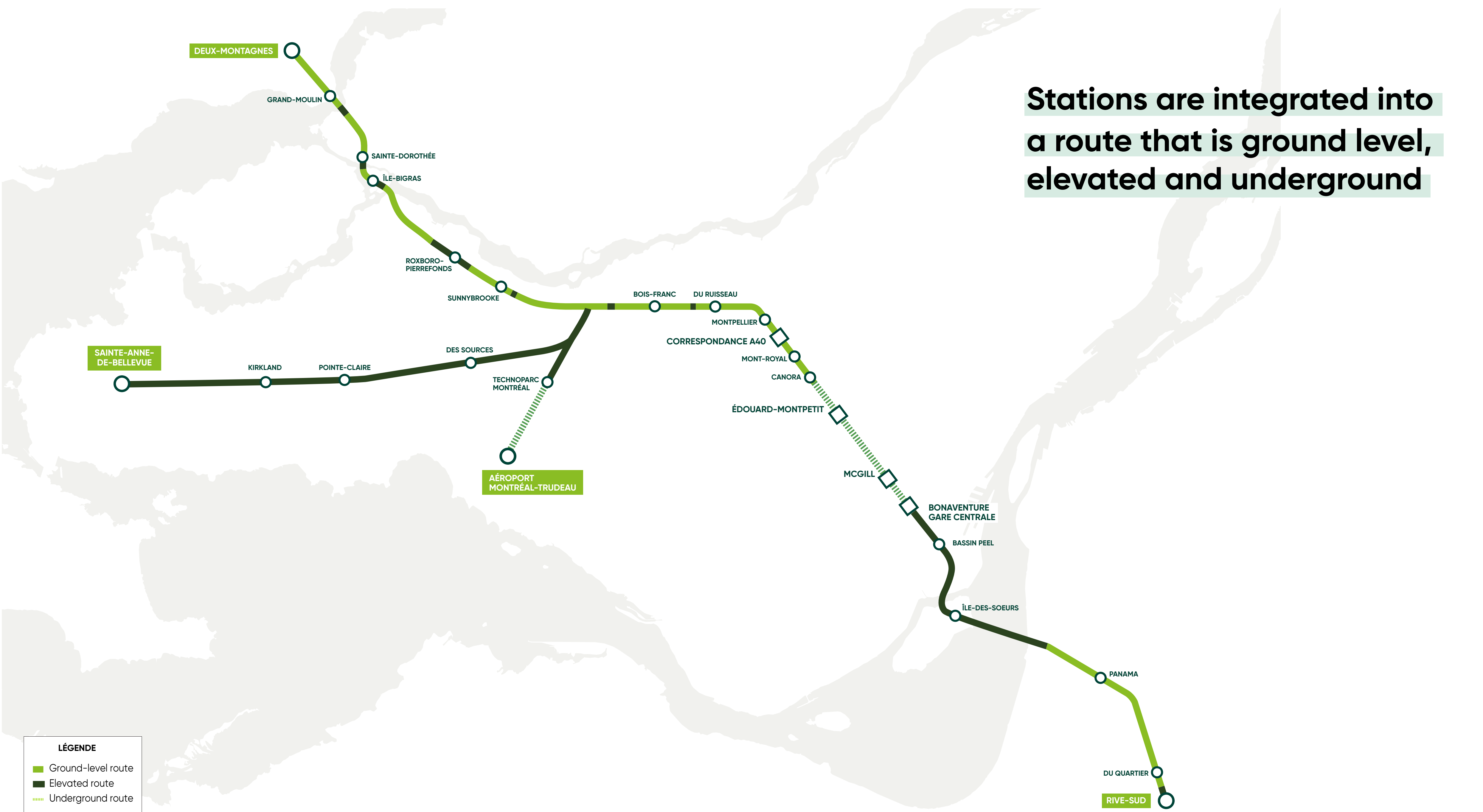


Wi-Fi

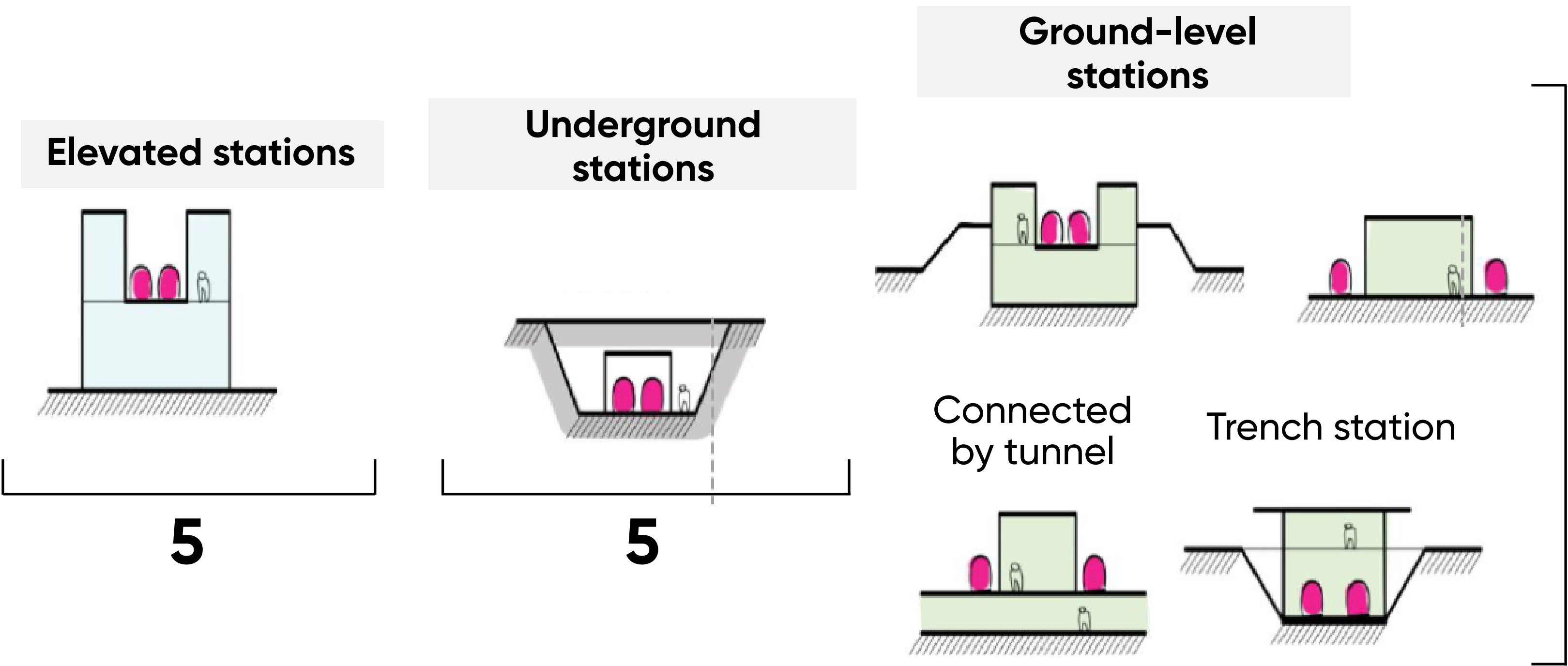


Platforms are 80 m long

Categorization



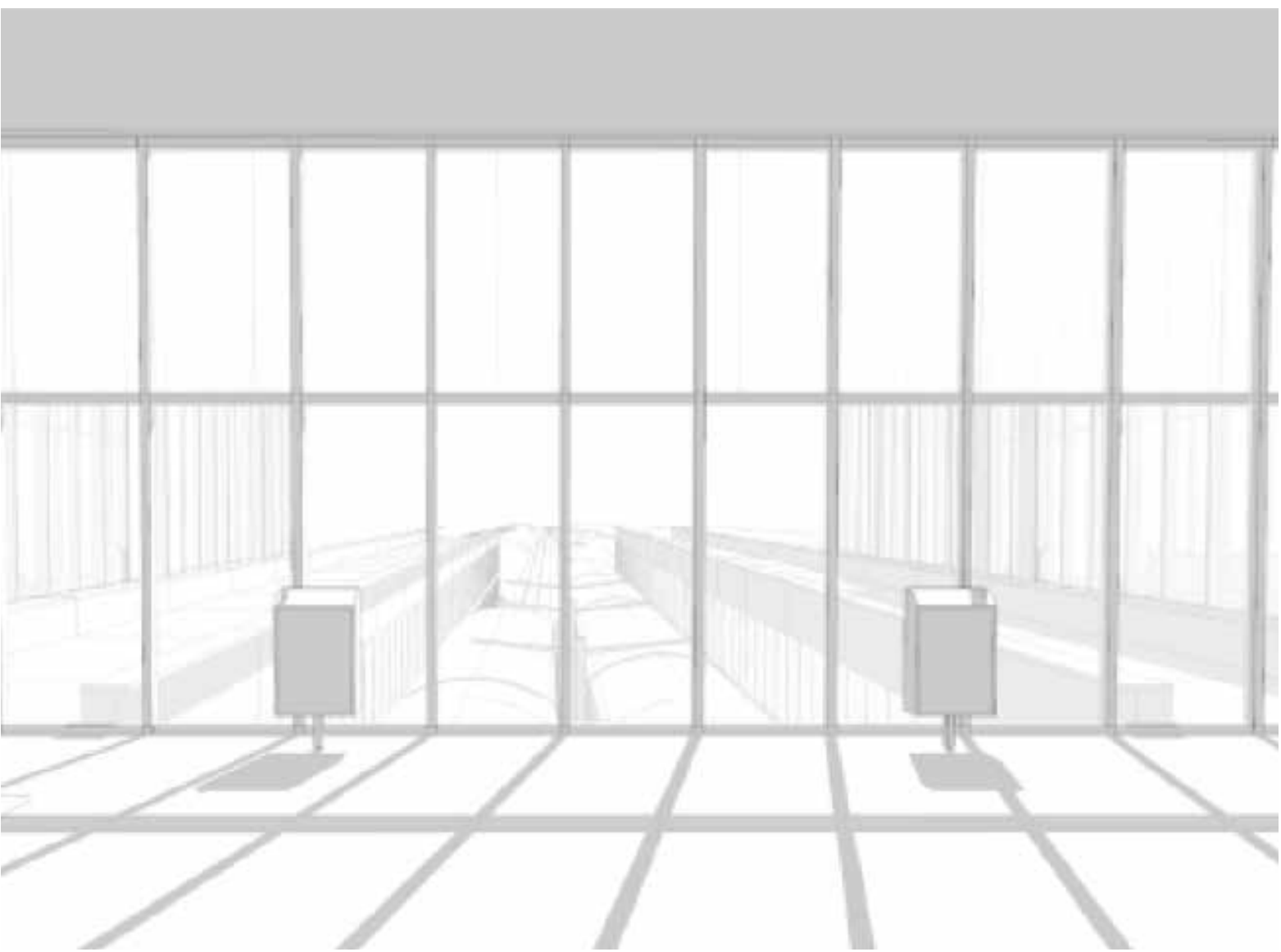
Removal of existing level crossings along the Deux-Montagnes lines, for optimal security.



Architecture

Materials and design principles

Glass



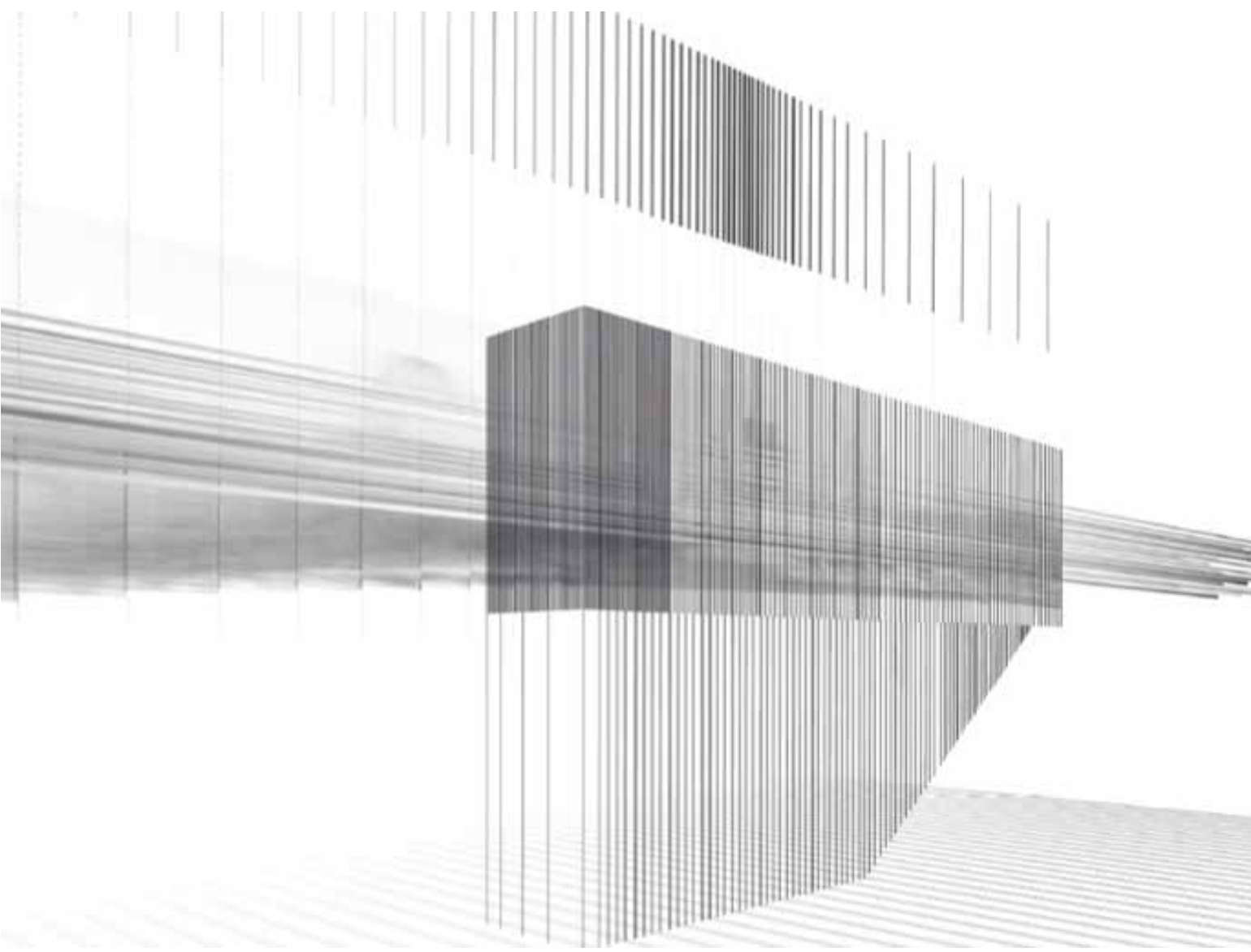
In order to let in as much natural light as possible and for increased safety, the stations are transparent (the concept of seeing and being seen). Fritted glass is used to filter the light.

Wood



Wood is used on station ceilings to provide warmth in the space. This material is used throughout the building and is an integral part of the architectural concept.

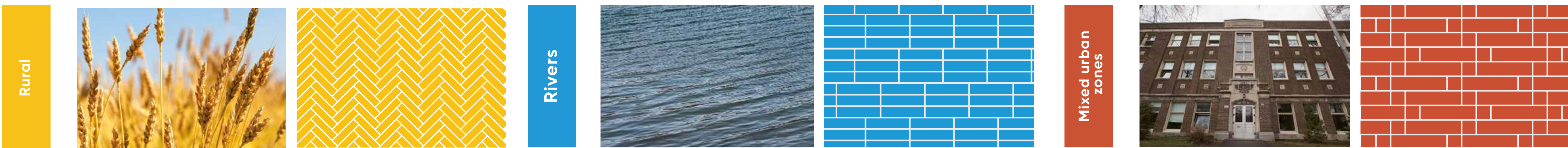
Movement



The expression of movement is a theme that is interpreted in a different way in each station. The use of horizontal and vertical lines serves to express movement in the stations.

Colour strategy

So as to represent the passenger's journey, each branch of the network may be identified by a particular colour that would be visible in the stations, furniture and vegetation.



Coloured surfaces will be visible throughout the stations (tiles, for the most part)



Architecture

Signature stations

Vertical screens will be used to integrate the stations into their surroundings while highlighting their distinctive characteristics. This will facilitate:

- 1

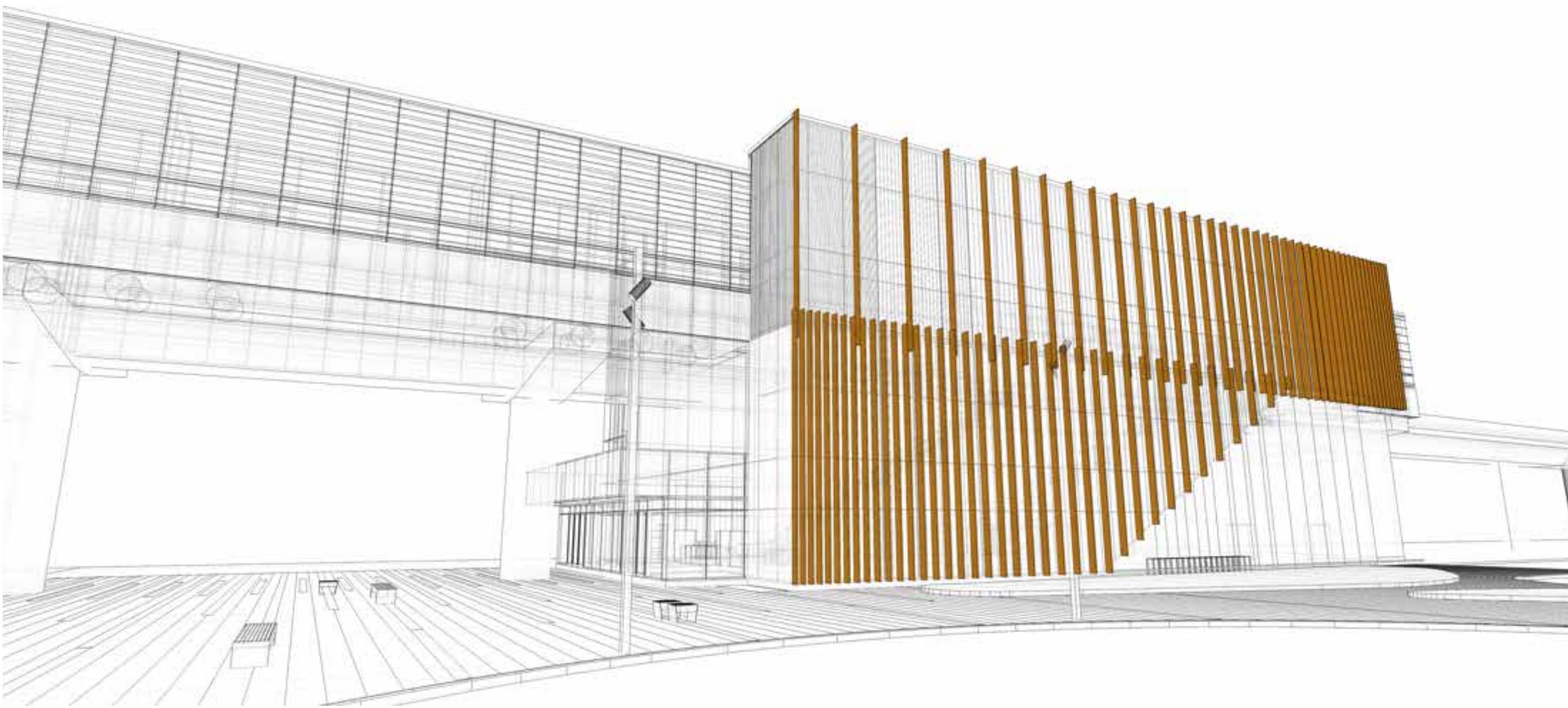
The creation of a filter for the light
- 2

The creation of depth perception effects that align with the architectural language
- 3

The creation of movement that passengers can see while the train is in motion
- 4

Better integration of the stations into the neighbourhoods

Deux-Montagnes



The station will be integrated through the addition of a screen of vertical slats that recall the wood inside the station and the surrounding natural landscape

Île-des-Sœurs

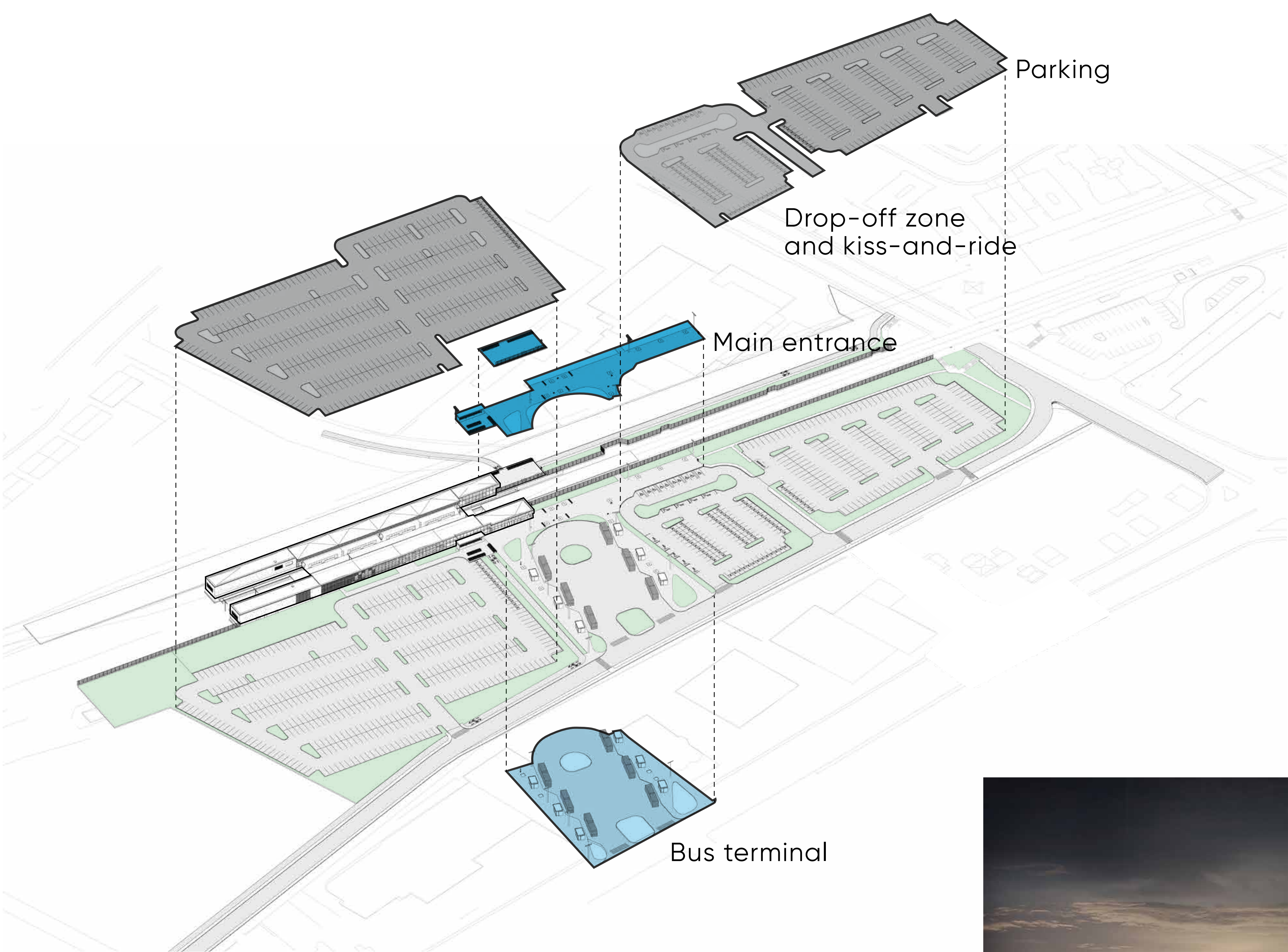


In a nod to the transit corridor of the new Samuel-De Champlain Bridge, cables will be used to create a screen that is reminiscent of the bridge's cables



Onsite amenities and user routes

The onsite zones



Across the entire network:



Bus platforms:
105 platforms



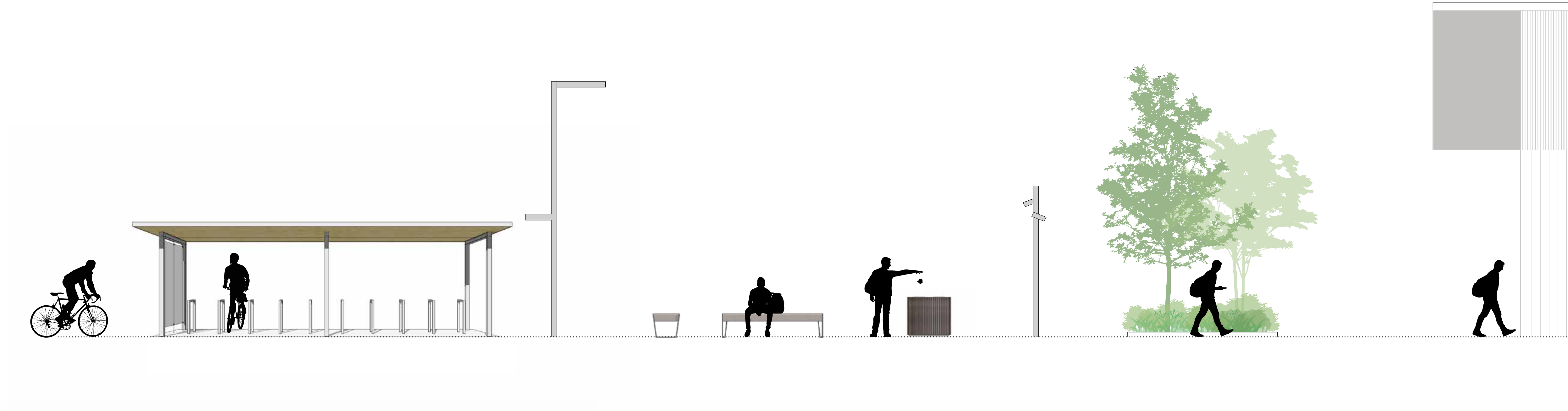
Parking:
± 9500 spaces



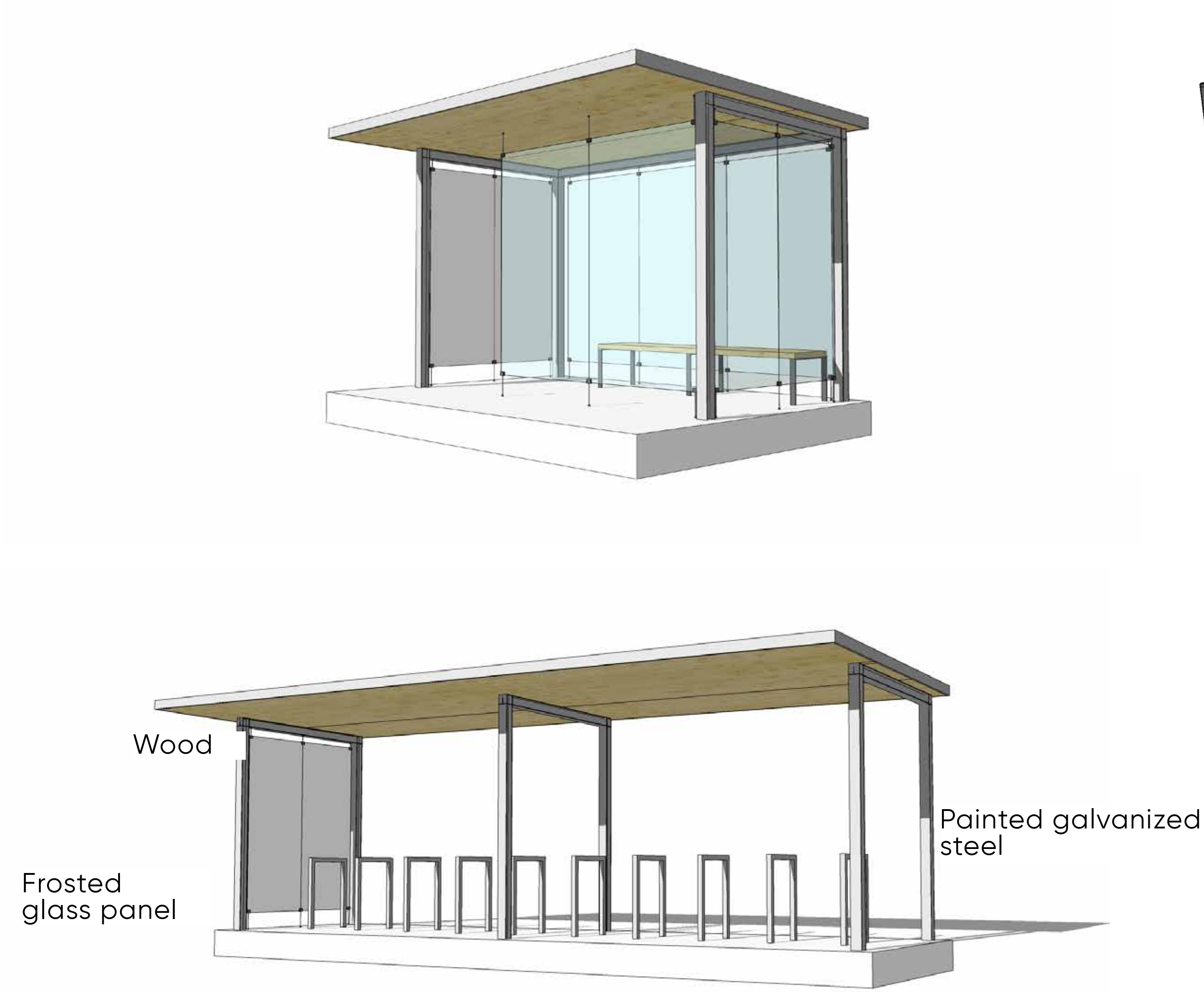
Bicycle racks:
± 1400 racks



User routes



Bicycle racks and bus shelters

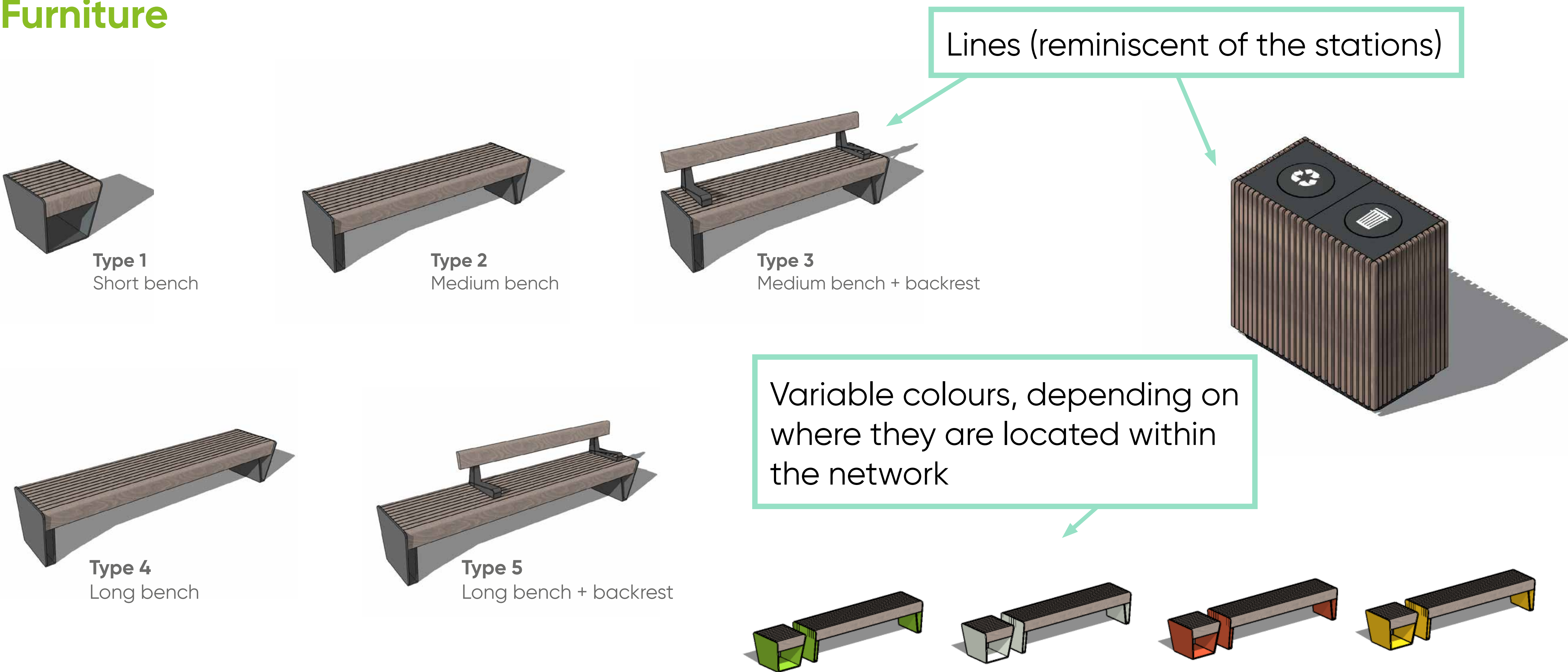


The use of wood and glass in the bus shelters and bicycle rack zones is reminiscent of the station architecture



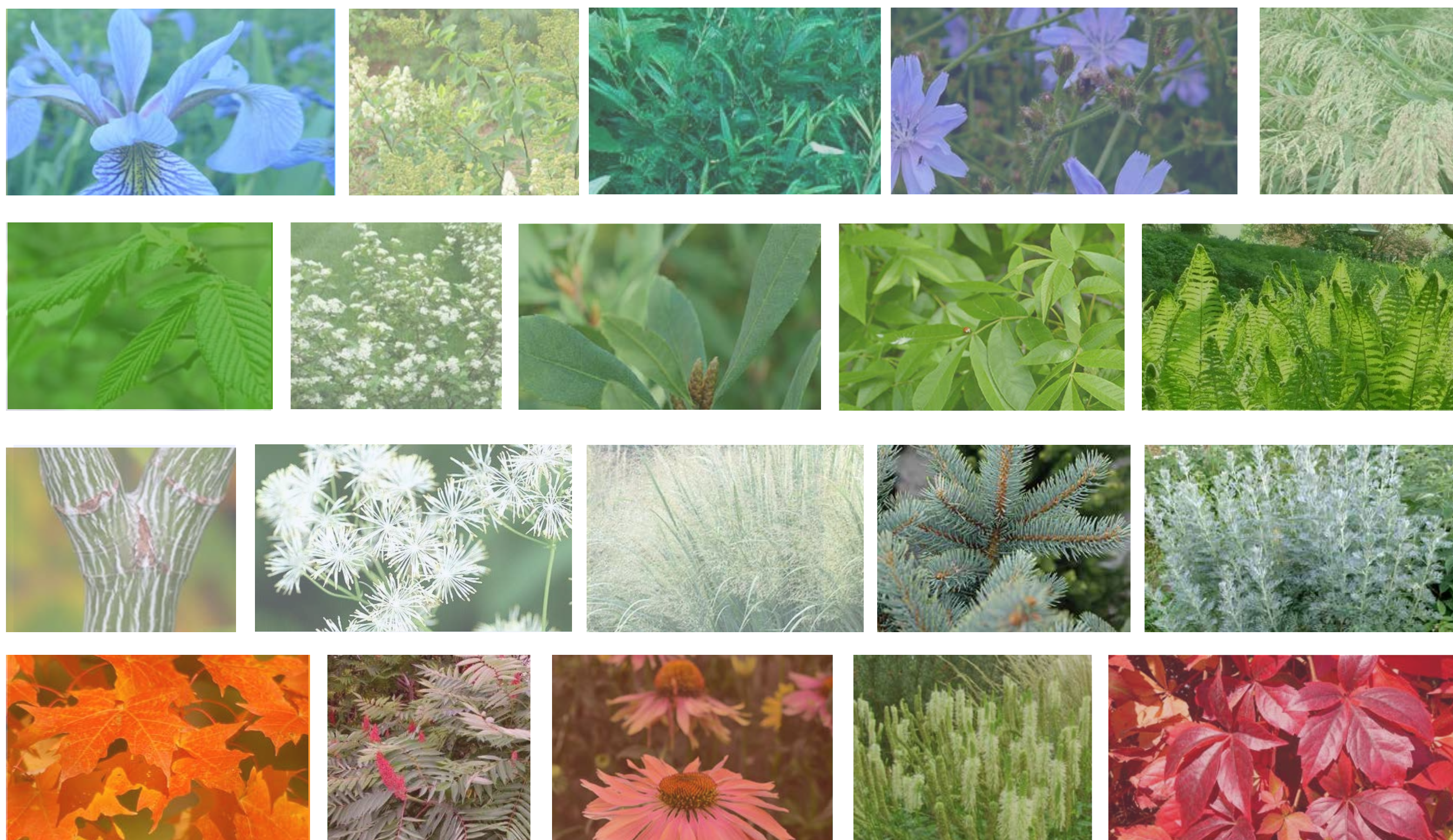
Onsite amenities and user routes (cont'd)

Furniture



Vegetation

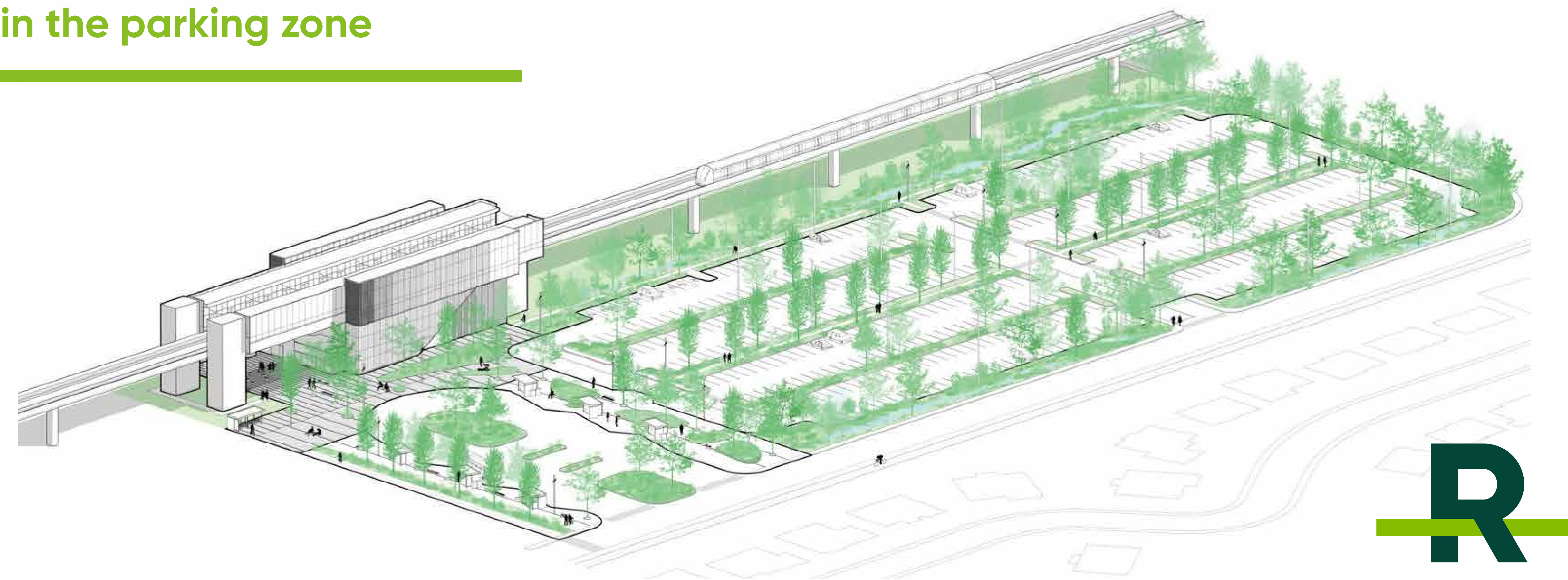
Vegetation of various colours and varieties will be planted on the station sites. The choice will be influenced by the colour strategy of the architectural charter



Placement of the vegetation:

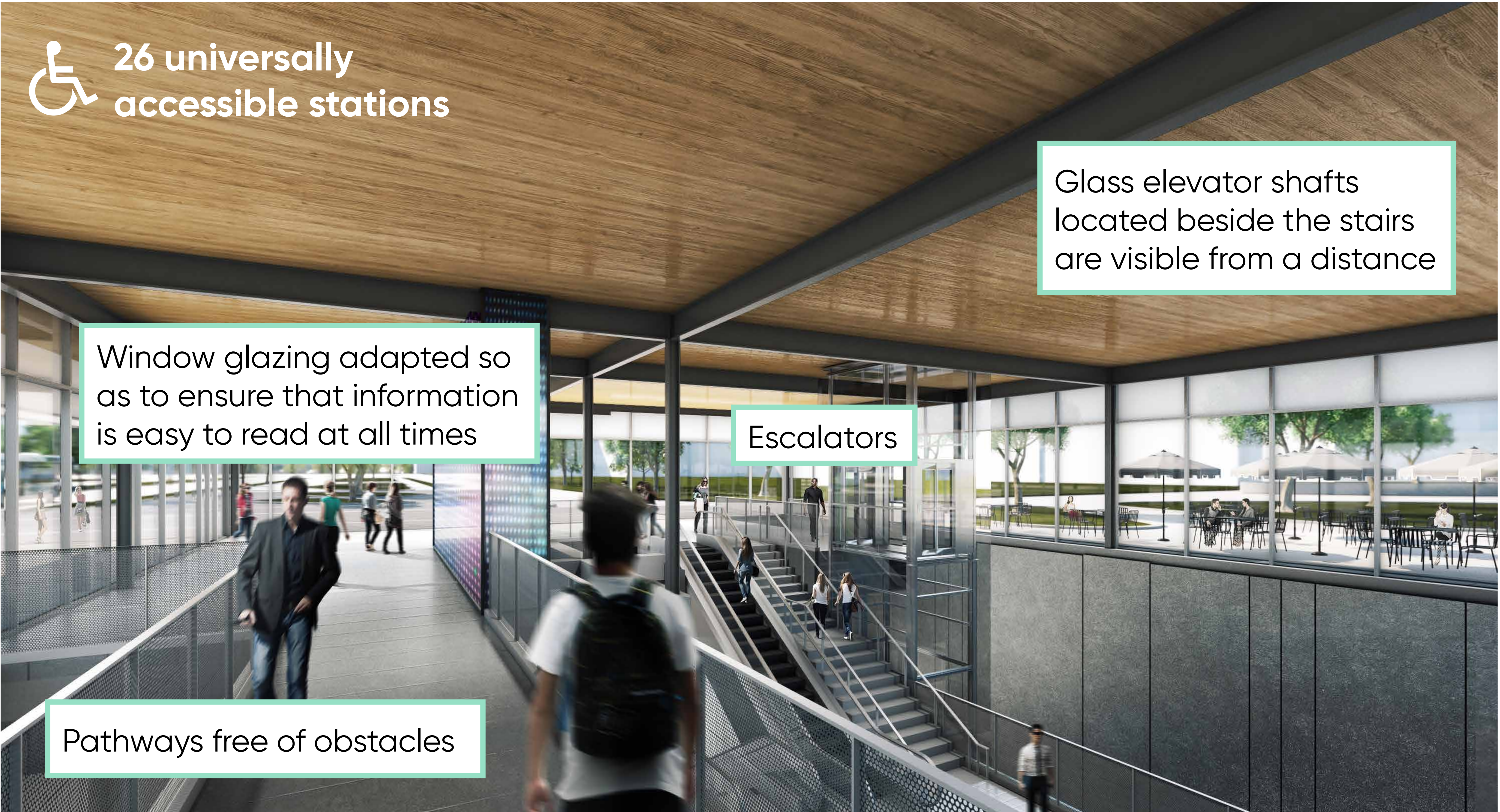
- Main entrance
- Between the site and the tracks
- Parking zone and pedestrian walkway

Minimizing heat islands in the parking zone

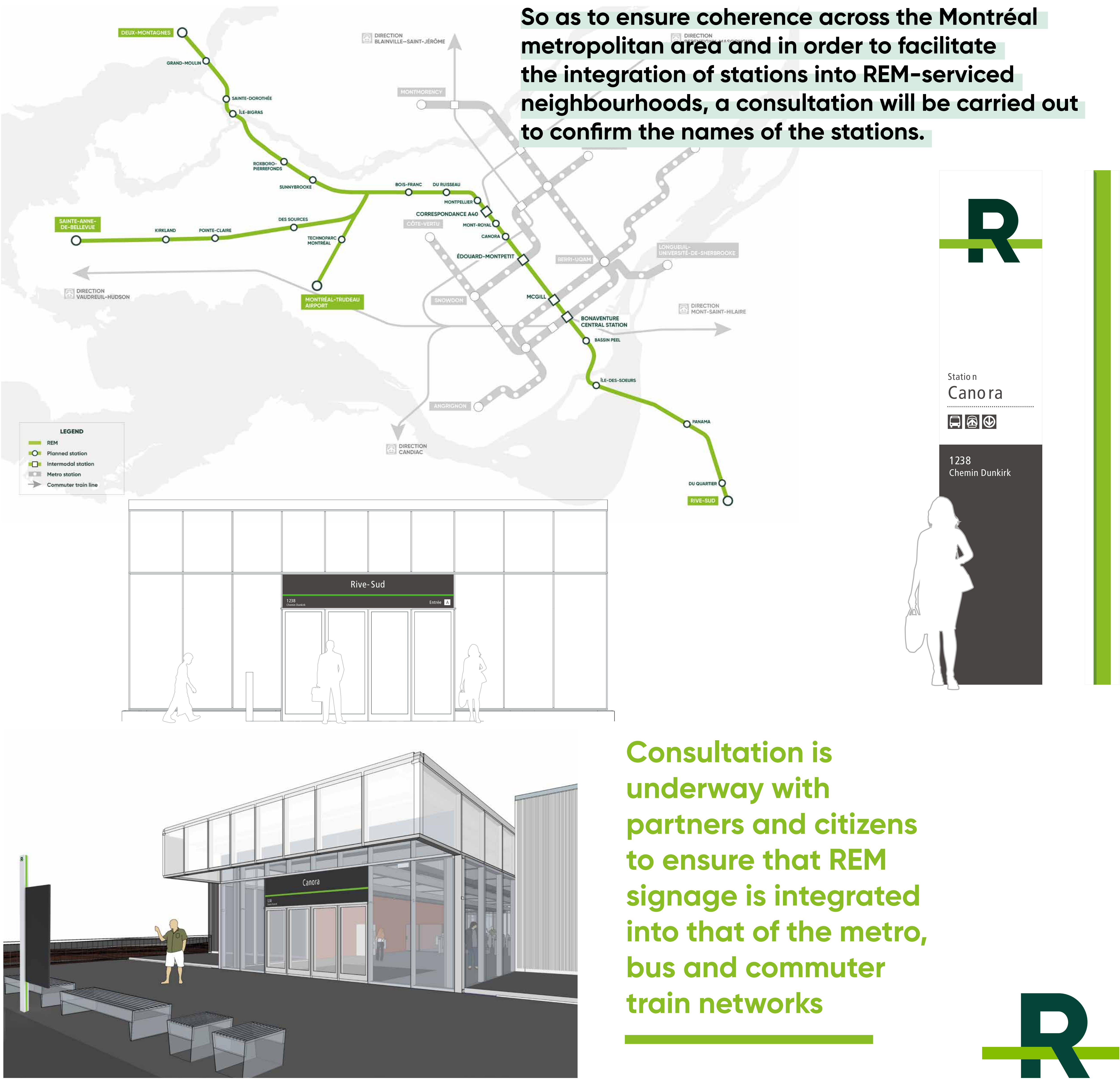


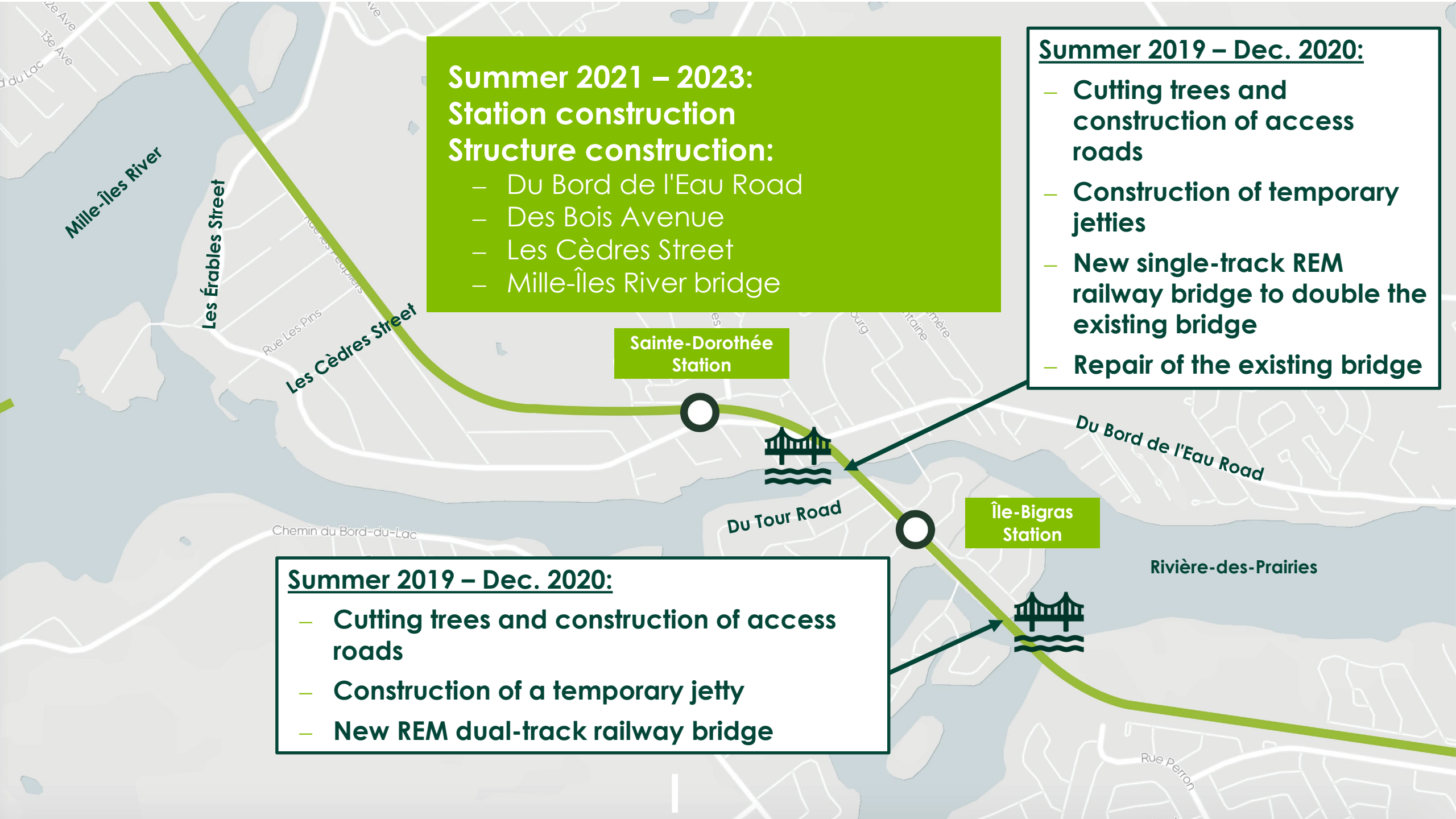
Accessibility and passenger movement

Universal access



Toponyms and signage





**Summer 2021 – 2023:
Station construction
Structure construction:**

- Du Bord de l'Eau Road
- Des Bois Avenue
- Les Cèdres Street
- Mille-Îles River bridge

Summer 2019 – Dec. 2020:

- Cutting trees and construction of access roads
- Construction of temporary jetties
- New single-track REM railway bridge to double the existing bridge
- Repair of the existing bridge

Summer 2019 – Dec. 2020:

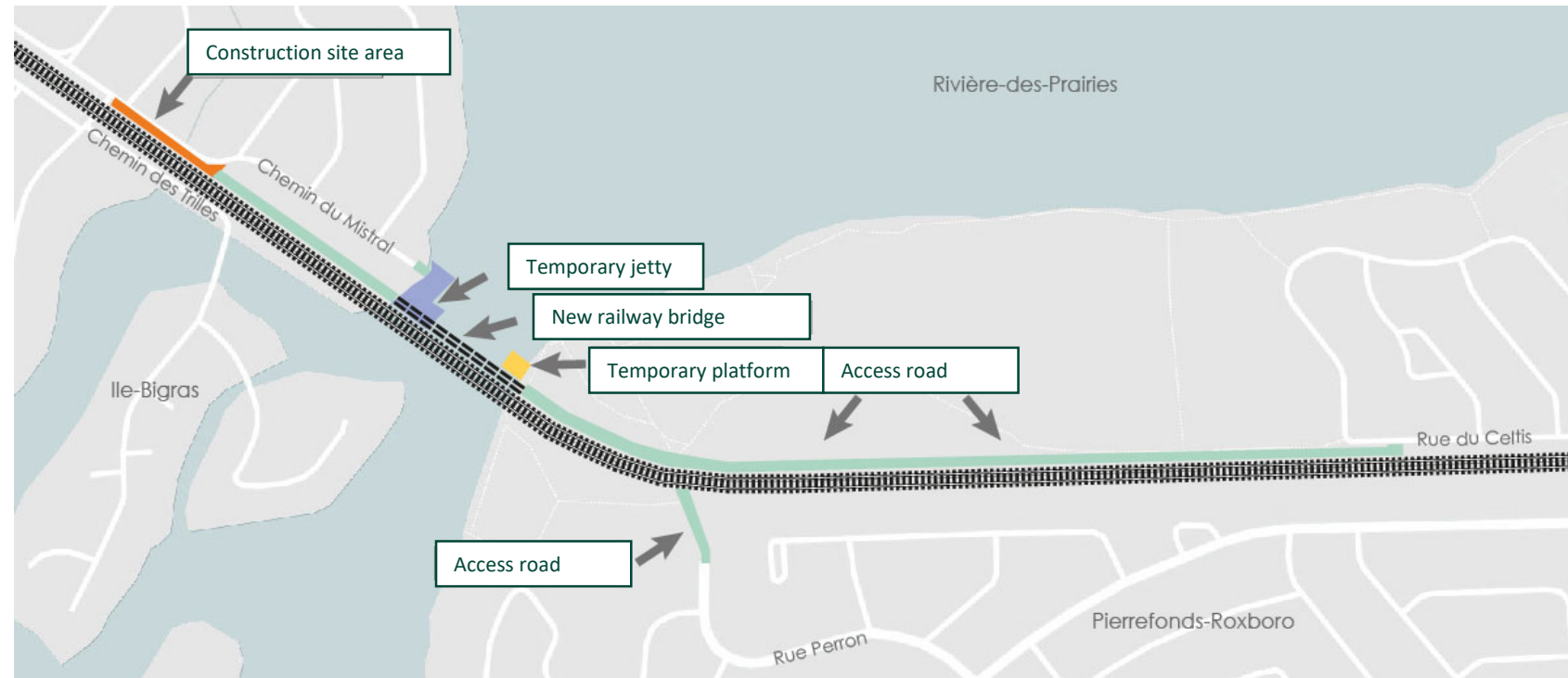
- Cutting trees and construction of access roads
- Construction of a temporary jetty
- New REM dual-track railway bridge

Rivière-des-Prairies

Montréal-Île Bigras sector

Work scheduled to begin in July 2019

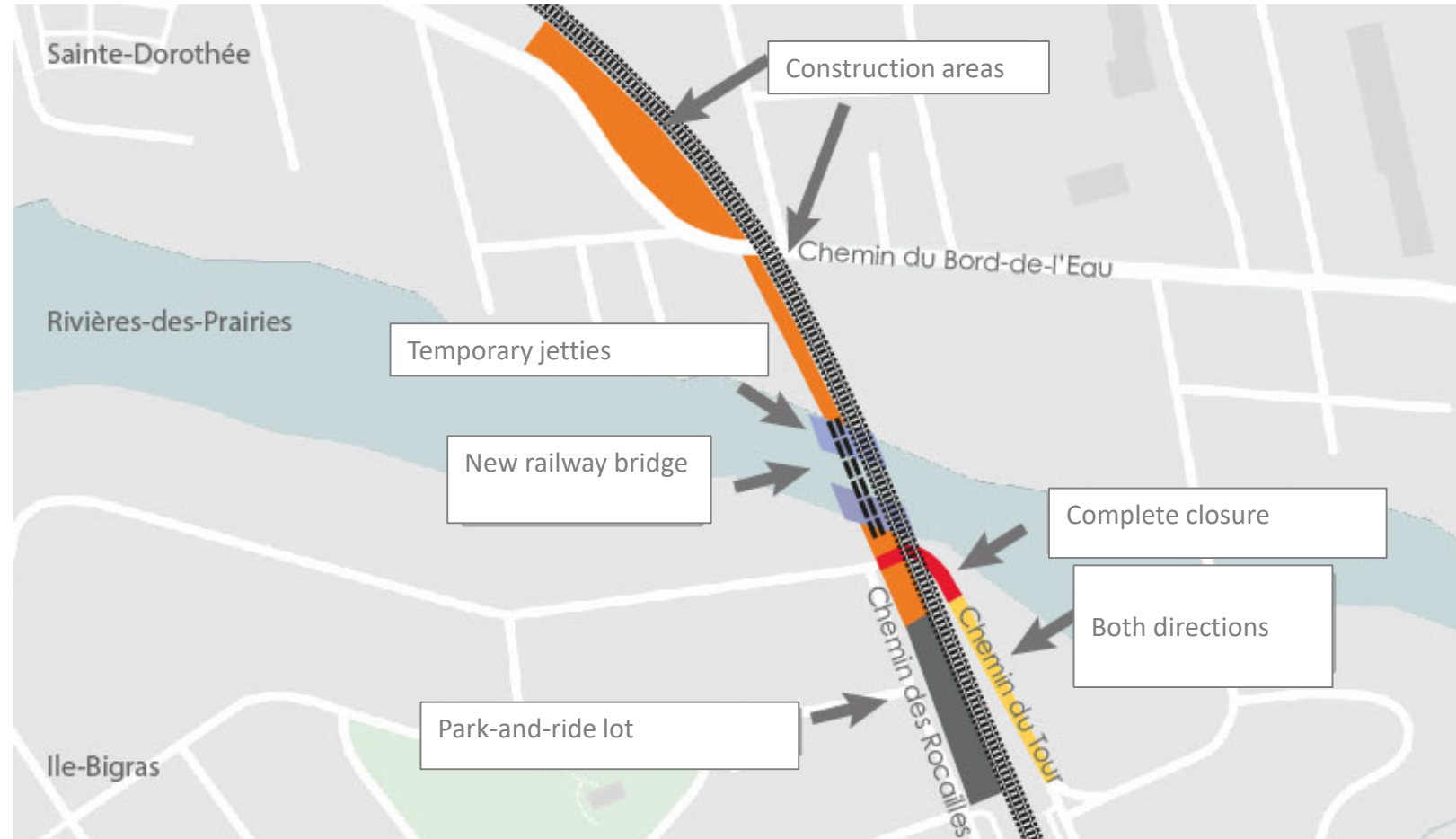
- **New, dual-track REM railway bridge**, adjacent to the existing bridge between Montréal and Ile-Bigras
- **Preparatory work** on the north and south sides of the Rivière-des-Prairies bridge



Île Bigras – Sainte-Dorothée sector

Work scheduled for summer 2019 to December 2020

- **Construction of a new single-track REM railway bridge** to double the existing bridge
- Repair of the existing bridge
- Park-and-ride lot will be maintained



The REM: quieter technology



Current exo trains – 300 metres



2 cars during off-peak hours — 40 metres — 14 hours/day



4 cars during off-peak hours — 80 metres — 6 hours/day

REM cars

- Weight: 180 tons
- No train whistles at station arrival
- No grade crossing alarms
- Electric brakes
- Welded rails with rubber pads across the entire network

ROXBORO/SUNNYBROOKE SECTOR

2020 to mid-2021

MEASURES BY SECTOR

1

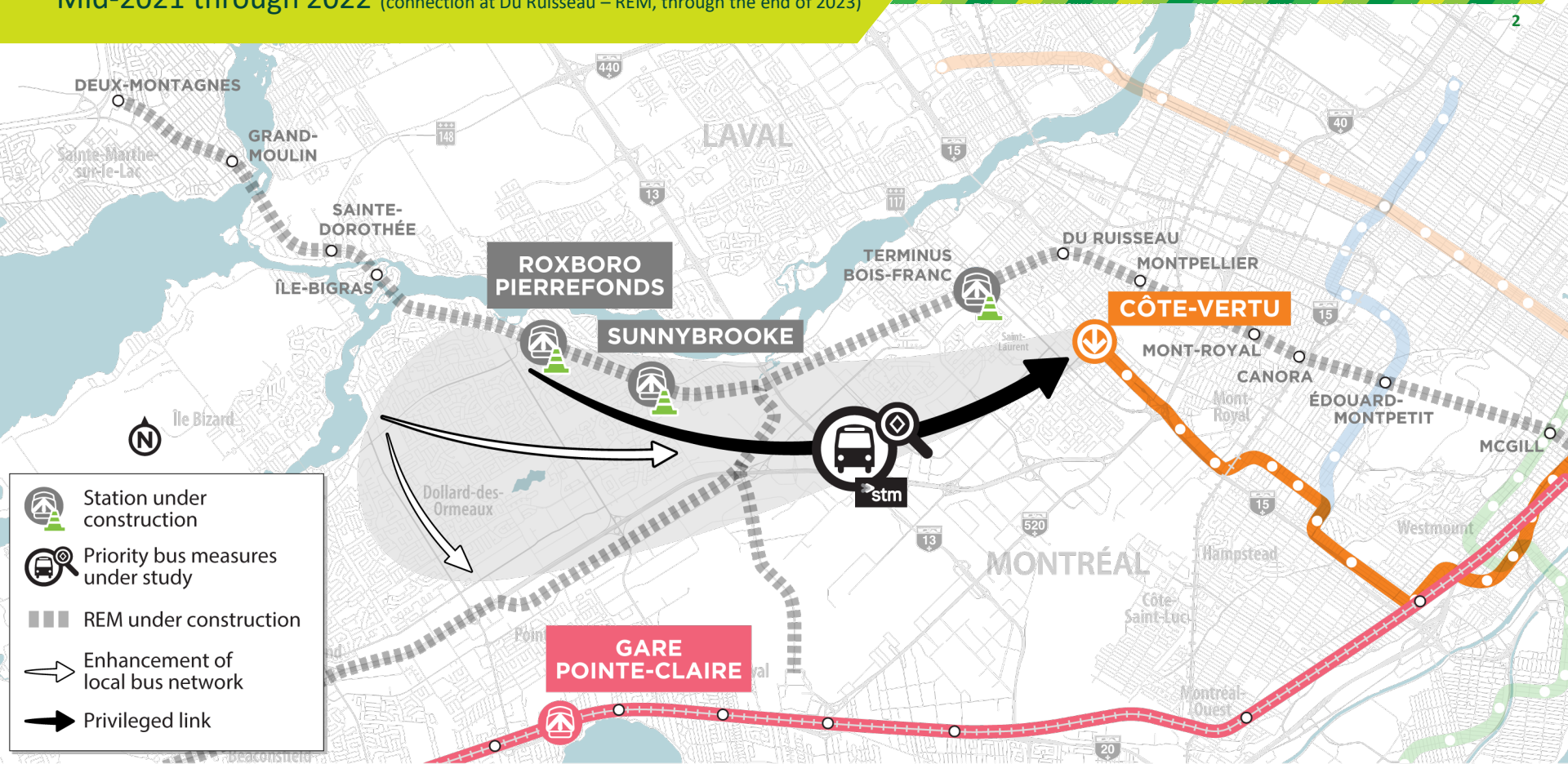


ROXBORO/SUNNYBROOKE SECTOR

Mid-2021 through 2022 (connection at Du Ruisseau – REM, through the end of 2023)

MEASURES BY SECTOR

2



NORTH SHORE SECTOR

MEASURES BY SECTOR

