

2.5 PUBLIC TRANSIT

Purpose

Public transit reduces demand on the road network, improves the quality of the environment, and generally consumes less energy than private vehicles. Transit also has a much higher capacity than private vehicles. Transit trips are usually divided into three parts:

- Access: this is usually walking to/from a stop. Access routes must be safe, direct, well maintained, pleasant and convenient. The City of Westmont has control over this part of a trip;
- Waiting: this is the time spent waiting for a transit vehicle either at a stop or a station. Waiting conditions must be good by providing safe, pleasant, adequate protection from the elements, adequate information for users and well maintained stops. Higher frequencies also decrease waiting times. This responsibility is shared between the City and the STM;
- In-vehicle travel: this part of the trip is the time spent in the transit vehicle travelling. Travel times must be short and reliable to attract users. Travelling conditions for passengers inside the vehicle must also be good. Cleanliness, minimal crowding, comfortable travel, and good customer service all increase transit ridership. The STM controls most of these factors, although the City of Westmont manages the street network used by buses which impacts travel times.

Access and waiting conditions must be good at both ends of a trip. In addition, to providing good quality service, the public transit system must conveniently serve multiple destinations, inside and outside Westmont.

This section examines public transit services available in Westmont. For the purposes of this report, public transit encompasses not only conventional bus, metro and commuter rail services but also car sharing and taxi services. Public transit services are provided by Société de transport de Montréal (bus and metro) and the Agence métropolitaine de transport (commuter rail). Car sharing services are provided by Communauto and taxi by numerous private operators with valid taxi permits.

Findings

- Transit is used for roughly 25,000 trips per day in Westmont (28% of trips);
- Even if there are no Metro stations in Westmont, parts of Westmont are located within walking distance of 5 Metro stations on the Green and Orange Lines (Atwater, Lionel-Groulx, Place-Saint-Henri, Vendôme and Villa-Maria) (see figure 2.15);
- The STM operates 10 bus routes within Westmont (see table 2.2);
- The transit network is structured along an east-west axis, similarly to the street network. Only the 124 runs north-south. This helps explain the little number of internal (staying within Westmont) trips using transit (350 trips per day). That being said, the small size of Westmont makes transit a less attractive option than active transportation (walking and biking) since those modes do not require to walk to and wait at a transit stop;
- The most frequent bus service is offered on Sherbrooke Street (route 24) and Sainte-Catherine Street (routes 63 and 90). The 24 - Sherbrooke and the 90 - Saint-Jacques

are part of the 10 minute max network with service every 10 minutes or less from 6 AM to 9 PM on weekdays;

- All of these routes, except for the 63 – Girouard, operate during evenings and weekends. The STM also offers night service on Sherbrooke Street (route 356) and Cabot Square in front of the Forum is a major hub for the night bus network;
- Bus stops are located within walking distance of most parts of the City (see figure 2.15), except for the area north of Sunnyside Avenue (where transit use and population density are the lowest);
- Many bus routes are impacted by congestion on a number of streets, within and outside Westmont, such as Sherbrooke and Sainte-Catherine. This congestion increases travel times for users and decreases the reliability of transit service, especially during peak periods. Congestion has a disproportionate impact on transit riders since buses cannot change their route;
- There are no bus transit priority measures within Westmont, even if a number of routes are very frequent and the streets
- Although the coverage of the STM bus network is good, many of these routes are not always reliable (poor on-time performance, bus bunching, etc.). Users have little real-time information on next bus arrivals or delays. This can frustrate transit riders. The STM is planning to put in a place a real-time information system for users (iBus);
- Three AMT commuter rail lines cross Westmont along the Canadian Pacific Railway Corridor. There are no stations located within Westmont, but the Vendôme Train Station (which replaced the Westmont Train Station) is within walking distance of the south-western quadrant of Westmont;

Car Sharing

- Communauto offers car sharing services in Westmont. Vehicles are located at four stations: Westmont Train Station, Victoria Hall, Saint-Antoine/Atwater and Dorchester/Gladstone. Westmont members can also use other Communauto stations, many of which are located within walking distance of parts of Westmont;
- There are 130 car-sharing members living in Westmont as of May 2011. Membership has grown at an annual rate of 30% since 2006;
- Communauto has indicated that they do not have enough vehicles in Westmont for the number of members. They are looking to expand this service;

Taxi

- Taxis are readily available in Westmont due to its density and proximity to downtown;
- Two taxi stands are located within City limits: Sainte-Catherine/Wood and Victoria Hall. Two other taxi stands are in place just outside City limits on Atwater Avenue in front of Place Alexis-Nihon and at Sherbrooke Street and Grey Avenue in Notre-Dame-de-Grâce. Taxis are not allowed to wait for a fare outside a taxi stand, unless responding to a call;

- Taxi services are regulated, including taxi rates, by the Commission des Transports du Québec. The *Montreal Bureau du taxi et du remorquage* manages permits for taxis and drivers in addition to enforcing other regulations pertaining to taxis;

Key issues and findings

- Transit serves close to 25,000 trips/day in Westmont;
- Westmont is generally well served by metro, bus and commuter rail services. Frequent service (10 minutes or less) is offered by the Metro (Green and Orange Lines) and certain bus routes (24 on Sherbrooke and 90 on Sainte-Catherine);
- Bus transit users are impacted by congestion, within and outside Westmont, which delays buses and reduces their reliability;
- The Metro is generally reliable and provides good service, although it can be crowded during certain times. The bus service can be crowded or unreliable at times (schedule adherence), which can be frustrating for users;
- Use of car sharing services is gradually increasing and Communauto is looking towards expanding its service.

Table 2.2 Transit routes in Westmont

Route	Name	Trips per weekday (both directions)	Typical peak period frequency (minutes)	Typical off-peak frequency (minutes)
1	Green (Metro)	392	6	3
2	Orange (Metro)	410	6	3
24	Sherbrooke	202	10	6
37	Jolicoeur	106	24	24
63	Girouard	54	32	30
66	The Boulevard	80	32	23
78	Laurendeau	84	30	30
90	Saint-Jacques	178	10	6
104	Cavendish	55	50	15
108	Bannantyne	81	30	24
124	Victoria	79	28	26
138	Notre-Dame-de-Grâce	51	50	40

Source: STM (2011)

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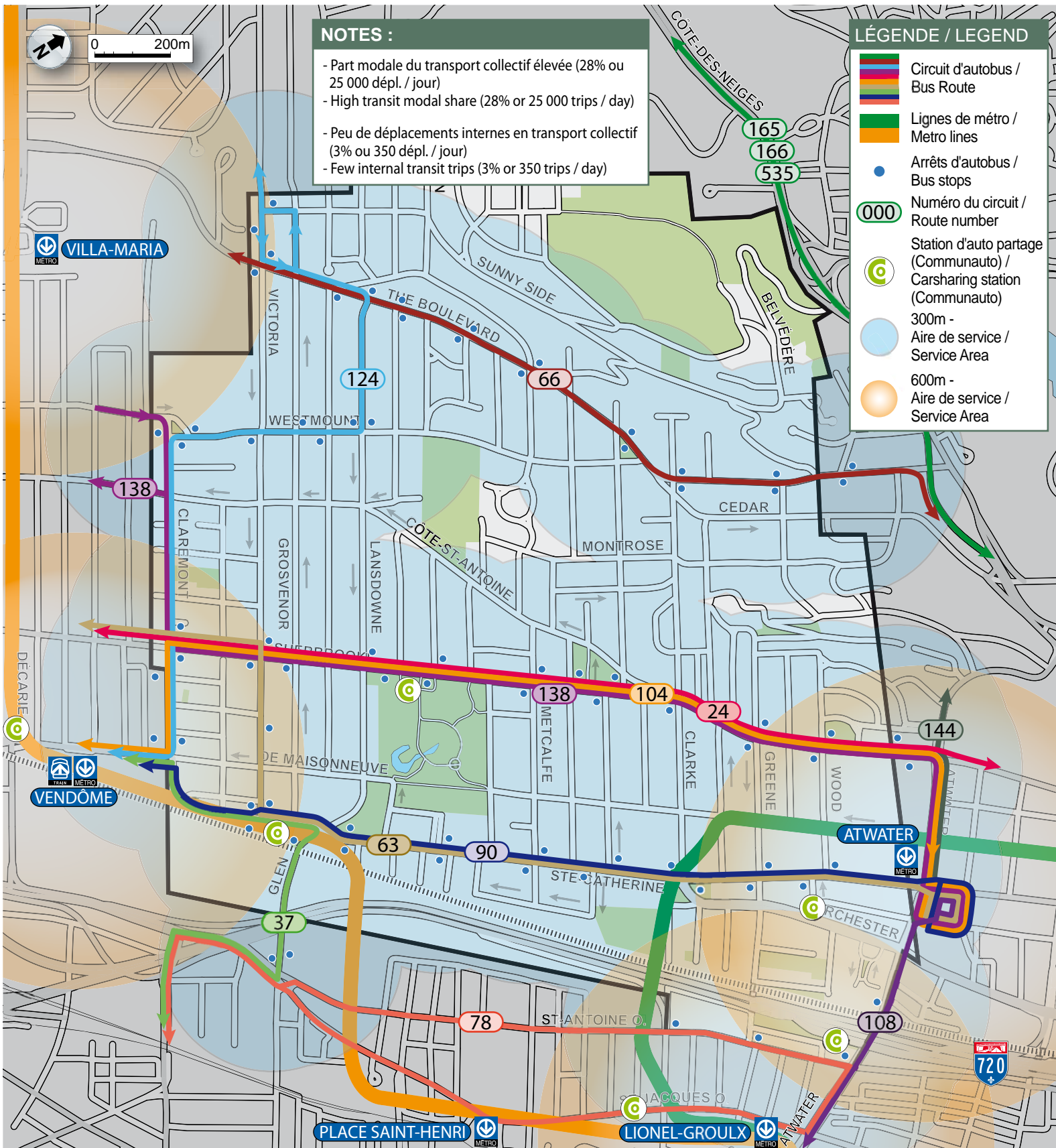


FIGURE 2.15
Réseau de transport collectif
Transit Network

2.6 ROADS AND TRAFFIC

This section is divided in two parts: roads and traffic. The first part explains the street network as it is built and managed. The second section pertains to the use of this network by vehicular traffic.

2.6.1 Road Network

Purpose

This section presents Westmont's street network as it exists today: network, road hierarchy, intersection control, speed limits and traffic calming measures. Traffic is presented in detail in the following section.

The general structure of the street network allows for an examination of which destinations and where potential bottlenecks occur. The road hierarchy presents the relative importance of different streets for vehicular traffic according to their function and capacity. Streets are classified according to the following categories:

- Freeways – limited access high capacity roads predominantly used by through traffic;
- Arterials – major roads which serve a combination of through and local traffic;
- Collectors – connect local areas to arterials and are used by local traffic with limited through traffic; and
- Local streets – which mostly serve local and external traffic.

These classifications are defined in table 2.3. The current classification of streets was based on these criteria, observed current conditions, the designation of the streets in the Westmont Master Plan which identified major thoroughfares and the Agglomeration of Montreal road hierarchy map. This classification does not imply that every street of a certain type should be managed using the exact parameters presented in the table below since the design of a street should be adapted to its specific context.

Table 2.3 Roadway hierarchy definition

Type of street	Freeway	Arterial	Collector	Local
<i>Function</i>				
Vehicles	Through traffic	Through and local traffic	Mostly local traffic with limited through traffic	Mostly local traffic
Transit (STM)	Bus service	Bus service	Some bus service	Usually no bus service
Trucks	Allowed	Usually allowed	Allowed sometimes during the day	Local deliveries only
Cyclists and pedestrians	Forbidden	Permitted	Permitted	Permitted
<i>Characteristics</i>				
Access	No private access	Private accesses allowed	Private accesses allowed	Private accesses allowed
Speed limit ⁴	70 km/h or more	50 to 60 km/h	40 to 50 km/h	40 km/h

⁴ Note: Westmont does not have speed limits above 40 km/h.

Type of street	Freeway	Arterial	Collector	Local
Intersection control	Interchanges	Traffic signals	Stops signs (usual) and some traffic signals	Stop or yield signs
Parking	None	Yes, sometimes limited during peak periods	Yes	Yes
Cyclists	None or parallel pathway	On-street or bike facility	On-street or bike facility	Usually on-street
Pedestrians	None or parallel pathway	Sidewalks provided	Sidewalks provided	Sidewalks provided
Example	Ville-Marie Expressway	Sherbrooke Street	Westmont Avenue	Melville Avenue

Adapted from: Transportation Association of Canada (1999) and Ministère des transports du Québec.

Intersection control is comprised of traffic signals, all-way stops and stops on one side of the street only. Westmont does not use other intersection control types such as roundabouts or yield control. Intersection control is examined to see if intersection management follows the roadway hierarchy and to examine the usage of all-way stops. Intersection control is especially important for pedestrians at major streets. Existing traffic signals were also surveyed to examine if they meet the current MTQ standards and best practices.

Speed limits are examined for coherency and to see if they meet current best practices. Posted speed limits were surveyed to examine if they follow the roadway hierarchy, park zones and school zones. Speed limits have some influence on travel speeds, but street design and context have a more important impact on vehicular travel speeds. Traffic calming is examined to see how these are applied and if they are consistent with the other measures and indications on the road network.

Trucks routes are examined to see where trucks are allowed in Westmont. Deliveries are also looked into to see if businesses are well served and to determine if there are any issues with current delivery practices.

Findings

Street network and hierarchy

- Westmont's street network is well integrated with neighbourhoods to the east and west. On the other hand, the street network is not as well integrated with neighbourhoods to the north and south. The probable cause of the poor integration is a combination of topography (many constraints on the design of streets with steep slopes) and the separate development of Westmont and adjacent neighbourhoods (Saint-Henri and Côte-des-Neiges). The construction of the rail corridor, the Ville-Marie Expressway, Summit Park and the Saint-Joseph Oratory were significant barriers to developing a continuous street grid;
- The orthogonal street grid allows for better traffic distribution (less concentration of traffic at bottlenecks);
- The current hierarchy of streets is the following (see figure 2.16):

- ▶ **Freeway:** The Ville-Marie Expressway (Autoroute 720) crosses Westmont along the Saint-Jacques Escarpment. The Ville-Marie Expressway and its ramps are maintained by Transports Québec (MTQ);
- ▶ **Arterials:** The arterial network was established in the *Entente to improve the functioning of the agglomeration of Montreal*, between the Québec government and agglomeration municipalities. Arterials include the following streets: Sherbrooke Street (4 to 6 lanes), Dorchester Boulevard (4 lanes), Ste-Catherine Street (4 lanes), The Boulevard (4 lanes), Greene Avenue (Saint-Antoine to Ville-Marie Expressway); Atwater Avenue (4 to 6 lanes) and Saint-Antoine Street (4 lanes). The responsibility for the Atwater Avenue and Saint-Antoine is shared with the City of Montreal;
- ▶ **Collectors:** The collector street network includes the following streets: Westmont Avenue/Notre-Dame-de-Grâce Avenue (2 to 4 lanes), Cedar Avenue, Sunnyside Avenue (Grosvenor to Victoria), de Maisonneuve Boulevard from Atwater to Clarke (2 to 3 lanes), Claremont Avenue, Victoria Avenue, Grosvenor Avenue (Sherbrooke to Sunnyside), Glen Road/Lansdowne Avenue (south City limits to Sherbrooke), Clarke Avenue (Sainte-Catherine to Sherbrooke) and Greene Avenue (Ville-Marie to Dorchester);
- ▶ **Local streets:** All other streets are considered to be local streets.

Traffic signals and intersection control

- Traffic signals are mostly located along arterial and collector streets (see figure 2.17) that carry more vehicular traffic;
- The vast majority of traffic signals do not meet the current MTQ standards and best practices. A number of important safety issues for all users (signal phasing, pedestrian crossings and visibility) and confusing information were found. Traffic signal conditions are the subject of a separate survey which present observed deficiencies (see appendix C);
- Traffic signals have the same phasings and timings at all times of the day, except for some traffic signals that operate in flashing mode during evenings and weekends. It must be noted that current MTQ traffic signal standards forbid the use of flashing mode for traffic signals;
- Traffic signals on Sherbrooke Street, The Boulevard/Cedar Avenue and parts of Sainte-Catherine Street (Clarke to Park Place) are synchronized. During the afternoon peak period, traffic signals on The Boulevard and Sainte-Catherine are synchronized in the opposite direction than the peak (westbound). Some equipment could be deficient which can unsynchronize the signals, but this was not surveyed;
- The placement of traffic signals allows pedestrians to easily cross major arterial streets. Some pedestrian crossings are unclear;
- Most intersections on local and collector streets are controlled by all-way stops;
- Many of these all-way stop are not warranted according to volumes or safety. Many of these all-way stops seem to have been implemented as a form of traffic calming, even though all standards and best practices forbid this practice.

Speed limits

- The default speed limit in Westmont is 40 km/h as specified in the traffic by-law;
- A number of streets have 30 km/h posted limits (see figure 2.18). These zones are usually reserved in front of parks and schools;
- Although 30 km/h zones are in place on streets adjacent to schools and parks, this is not always the case;
- Speed limits are sometimes only posted in one direction of the same street segment. Many street segments have two different speed limits;
- Certain by-laws setting speed limits are still in miles per hour and have not been modified into the International System of Units (metric system). In addition, *By-Law 196 Concerning Good Morals and Decency* states that “no person shall drive faster than an ordinary trot”.

Traffic calming measures

- A traffic calming policy has been in place for a number of years for the installation of speed humps. It takes into account the type of street, the speed of vehicles, the slope of the street, if it is an emergency route and the support of residents (2/3 resident approval needed);
- Traffic calming measures have been used extensively on most local streets as can be observed in figure 2.19. Traffic calming measures have been grouped into four categories:
 - ▶ Vertical measures – speed humps and raised crosswalks;
 - ▶ Horizontal measures – island, neckdown and bulbout which reduce the width of the roadway;
 - ▶ Street closures;
 - ▶ Mid-block stop signs: this measure is included since it is used as traffic calming, even though standards and best practices (e.g. MTQ) forbid its use as a traffic calming device;
- Most traffic calming measures are used appropriately, even though they are numerous;
- A number of traffic calming measures are temporary even if many have been used for a number of years. Many traffic calming measures are not well integrated into surrounding streetscapes;
- Some traffic calming measures used in Westmont are not recommended for use on public streets according to standards and best practices. The use of stop signs, especially mid-block, is not an appropriate traffic calming measure, according to prevailing standards and best practices. A few speed humps on streets perpendicular to de Maisonneuve have a high profile, and their use is not recommended for public streets (TAC);

Trucks and deliveries

- Westmont has not adopted any formal truck routes, but numerous trucking restrictions do exist. Most signed truck restrictions are concentrated on local and collector streets south of Sherbrooke Street. Many streets north of Sherbrooke Street do not have posted

truck restrictions, but demand for trucking and deliveries are lower in this area. Note that trucks are still allowed on streets with truck restrictions for a local delivery if no other route is available;

- Trucks are allowed on major streets: Dorchester, Sainte-Catherine, Sherbrooke, The Boulevard and Atwater. In addition, trucks are allowed on certain other streets: Claremont, The Glen (although a local deliveries only sign is posted in Montreal), de Maisonneuve (Atwater to Clarke), Westmount and Lansdowne (Westmount to the Boulevard);
- The signage of truck restrictions is sometimes inconsistent with by-laws. For example, no trucks are allowed throughout on Clarke Avenue according to the by-law, but only two signs are posted. In addition, one sign on a perpendicular street states that trucking is allowed. In some cases, signage allows trucks in one direction, but not the other;
- Deliveries for many businesses are done by trucks parking on the street. Some trucks double-park illegally when making deliveries (Victoria Village and Greene Avenue). This can be a safety issue for cyclists travelling on these streets in addition to impeding other traffic (private vehicles and transit). No on-street delivery zones have been put in place in Victoria Village or on Greene Avenue. The use of lanes for deliveries is encouraged, even if not all trucks seem to use them;
- The Agglomeration of Montreal has proposed truck routes for Westmount, but these have not been approved by the City of Westmount (see figure 2.20).

Snow clearing and removal

- Snow clearing consists of two operations: clearing snow and ice from street and sidewalks followed by spreading abrasives. Snow removal consists of loading and removing of snow;
- Snow clearing on sidewalks and streets is done concurrently since each operation is done using different equipment;
- Clearing snow from sidewalks takes approximately 2 hours (if done in one pass);
- Snow clearing operations on streets start as soon as the snow commences and finishes at the end of the storm;
- Snow clearing and removal priorities include (in no particular order) fire routes, school zones, commercial streets, bus stops, arterials and streets with slopes;
- Snow clearing operations prioritizes sloped over flat streets;
-
- Snow removal operations occur when there are accumulations of 10 centimetres or more. The amount of time varies according to the amount of accumulated snow and if the snow disposal site, located outside Westmont does not slow the process.

Key issues and findings

Street network and hierarchy

- The orthogonal street network allows good distribution of traffic;

- The City does not have an official street hierarchy or classification (a current hierarchy was established based on current characteristics and usage), except for arterials which are set out in an agreement between the provincial government and agglomeration municipalities;
- No formal truck routes currently exist on the territory of Westmont (truck restrictions do exist). Some posted truck restrictions are incoherent with City by-laws;

Traffic signals and intersection control

- The majority of traffic signals do not meet current MTQ standards for traffic signals. A number of these traffic signals present important safety deficiencies for all street users. A complete upgrade of the physical plant is required;
- Traffic signals are primarily located on the arterial and collector streets of Westmont and allows pedestrian to easily cross major thoroughfares;
- Traffic signals on The Boulevard and Sainte-Catherine are synchronized for eastbound traffic at all times of the day (even if the peak is westbound in the afternoon);
- The vast majority of other intersections are controlled by all-way stop signs. Many of these all-way stop signs are not warranted, a revision of their use is warranted;

Speed limits

- Posted speed limits are often different in opposite directions of the same street segment;
- Not all streets adjacent to schools have a posted 30 km/h speed limit;
- Posted speeds and legislated speeds are not always the same;
- Current speed limits are confusing for users and do not emphasize the importance of vulnerable users and a complete revision is required;

Traffic calming measures

- Traffic calming measures are used extensively throughout the City;
- Many of these measures are temporary and not integrated into the surrounding streetscape;
- Some traffic calming measures (mid-block stop signs high-profile speed bumps) are no longer seen as appropriate with respect to the state-of-the-practice and should not be used on public streets;
- Traffic calming should be revised and be converted into permanent measures as part of the streetscape.

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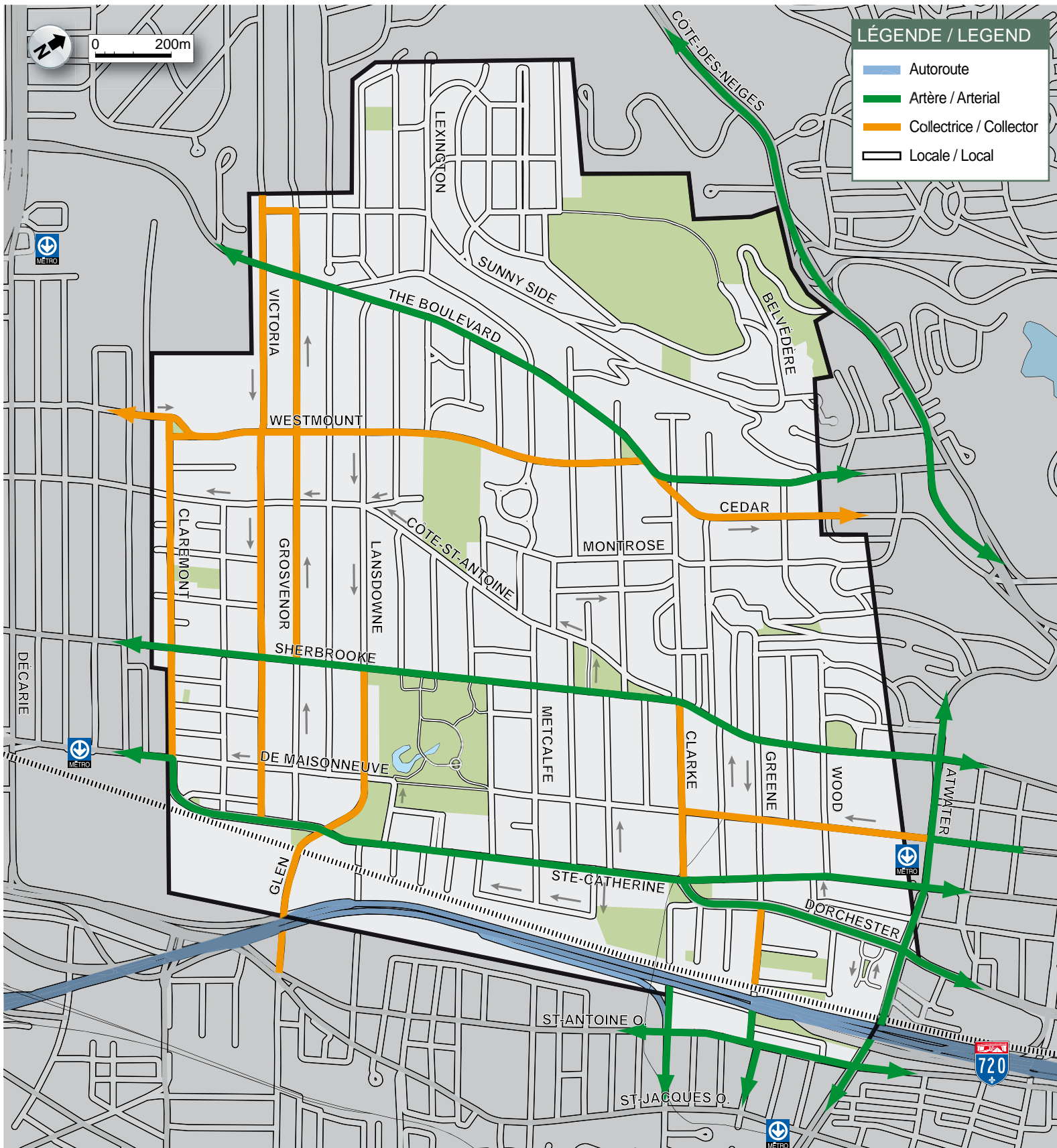


FIGURE 2.16
Hiérarchie routière
Street Hierarchy

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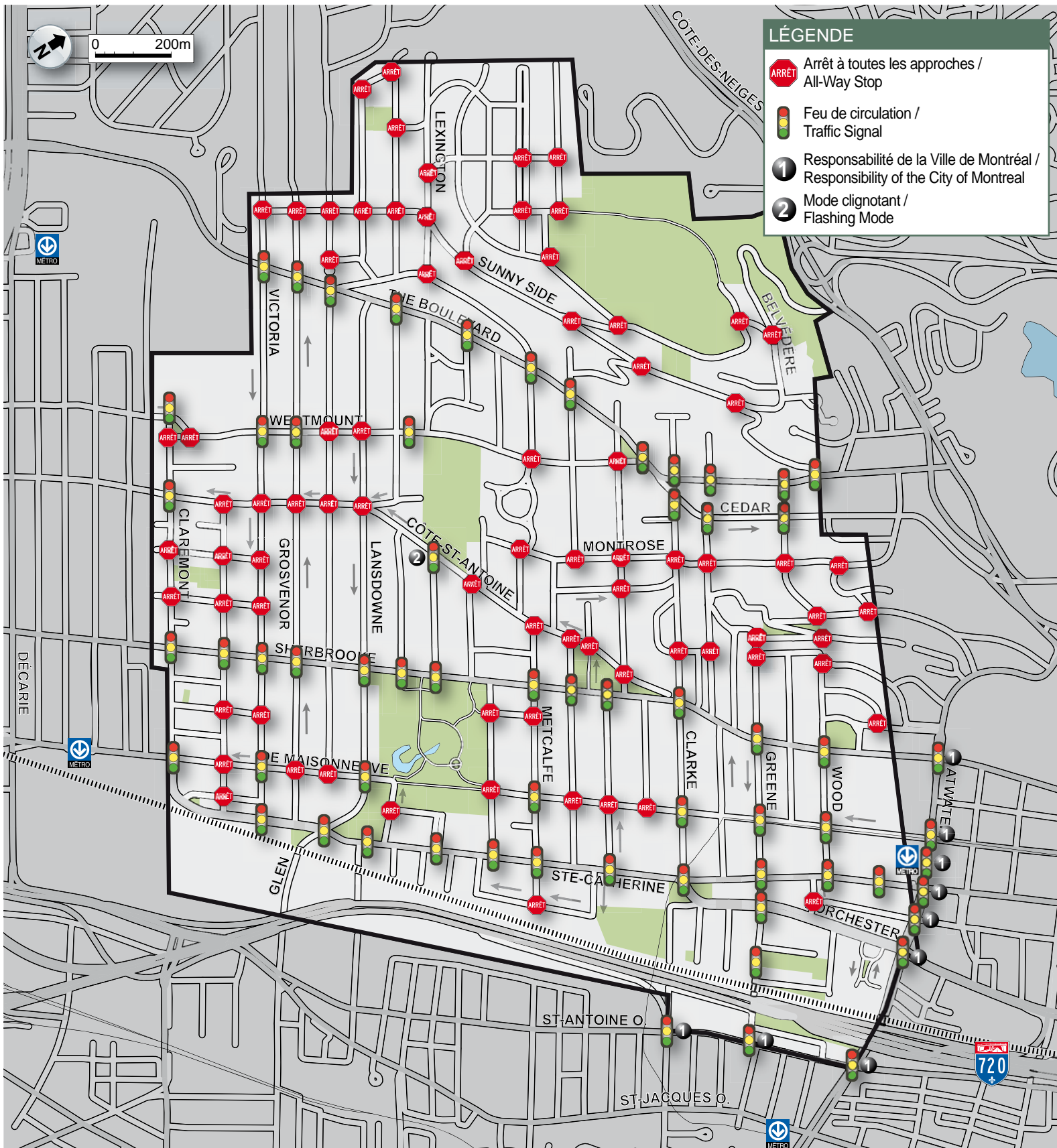


FIGURE 2.17

Gestion de la circulation et des carrefours
Traffic Management and Intersection Control

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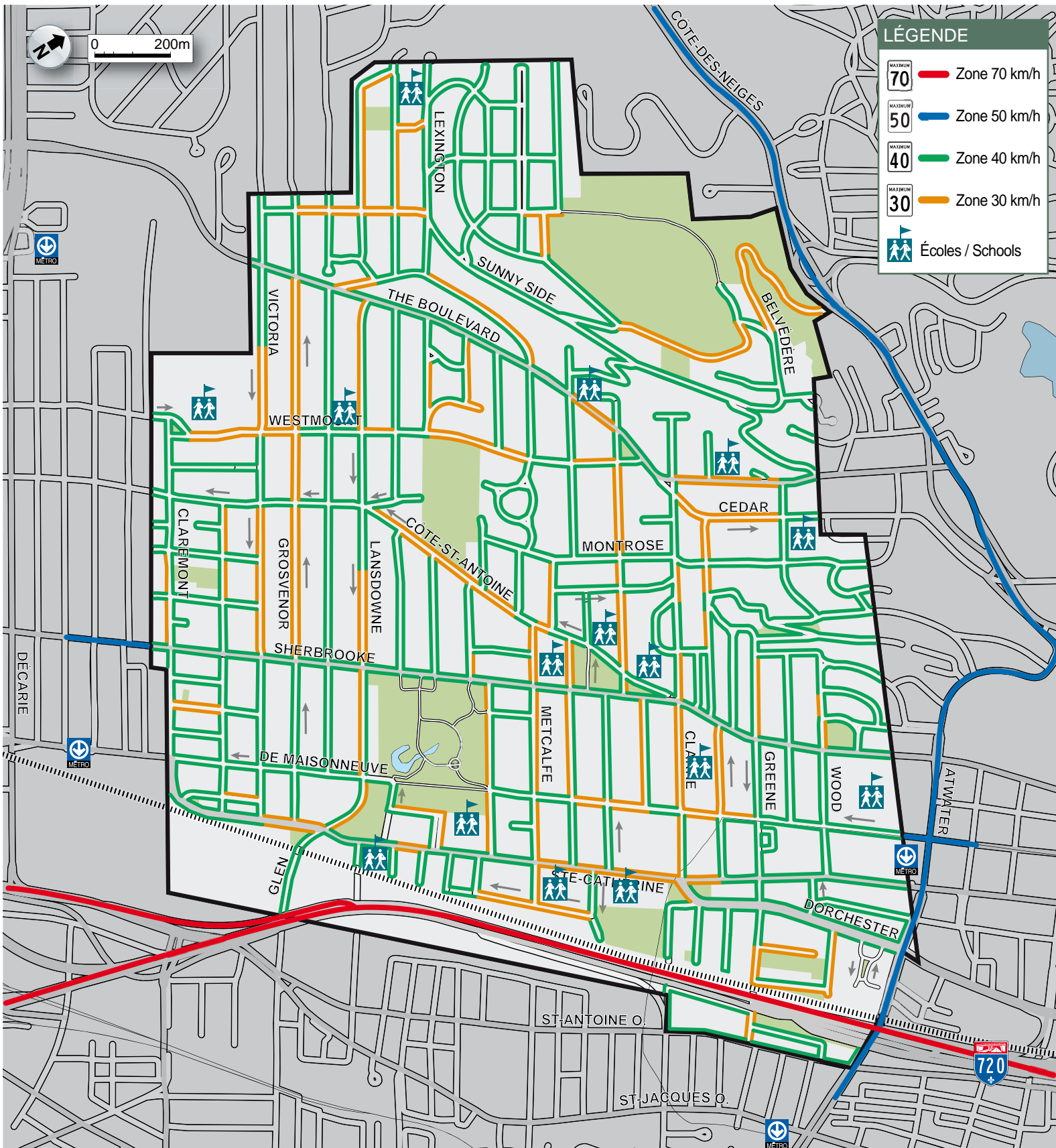


FIGURE 2.18
Limites de vitesses affichées
Posted Speed Limits

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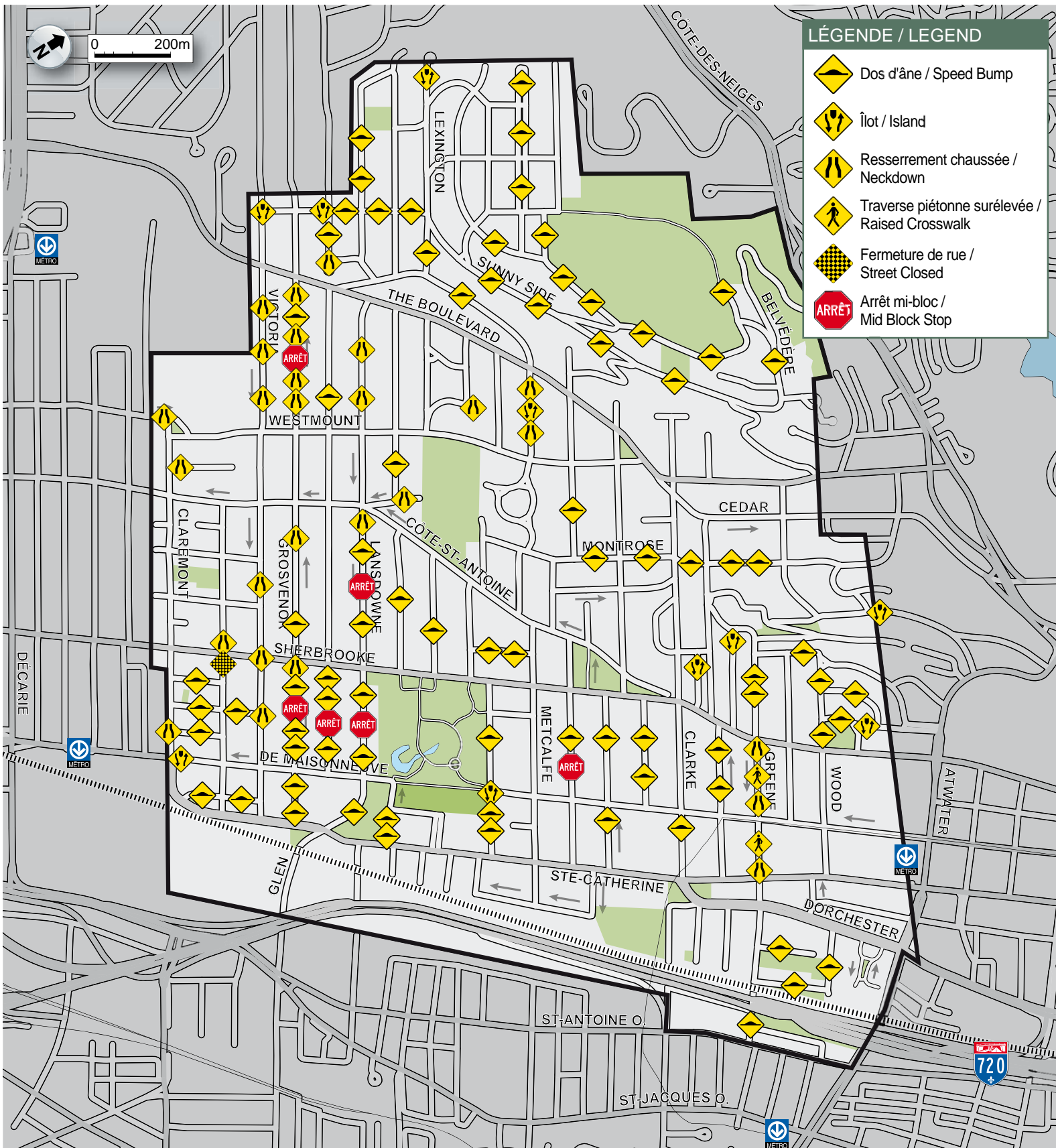


FIGURE 2.19

Mesures de modération de la circulation
Traffic Calming Measures

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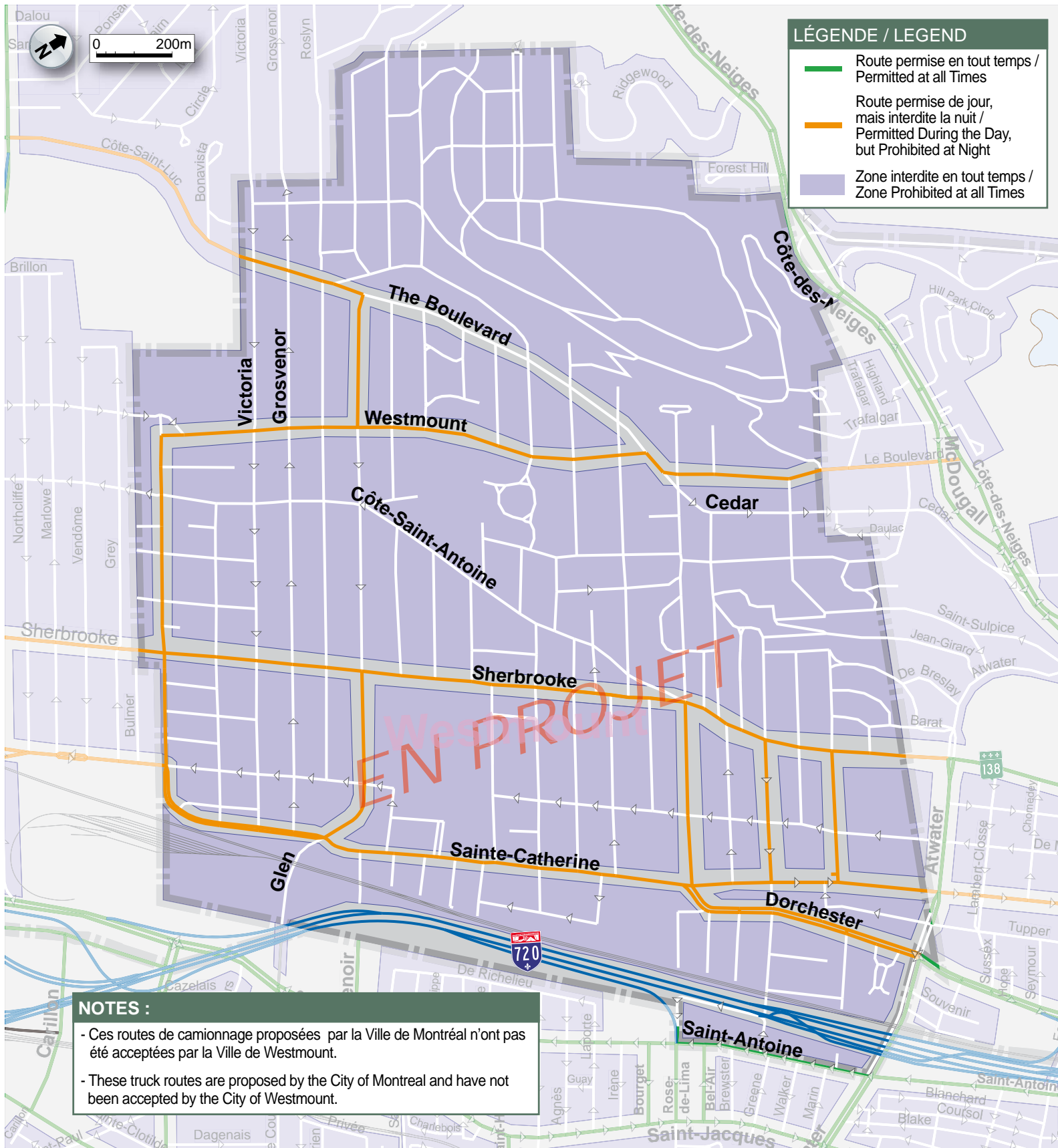


FIGURE 2.20

Itinéraires de camionnage proposés par la Ville de Montréal
Proposed Truck Routes by the City of Montreal

2.6.2 Traffic

Purpose

The main purpose of this section is to explain how the road network as it exists today is used. Vehicle counts are used to examine the relative use of various streets. Vehicle counts were undertaken at all intersections with traffic signals and numerous other intersections. These are transformed into an average annual daily traffic (AADT) in order to better compare traffic volumes.⁵

Traffic volumes are used to identify which streets have high or low traffic loads according to their typology. These counts can also be used to examine the number of vehicles entering and exiting Westmont on a typical day. Combined, with information from the origin-destination survey, the number of vehicles transiting through Westmont can also be estimated.

After vehicular traffic volumes are examined, traffic conditions are examined. Congested areas during peak periods are identified. Levels of service at signalized intersections are a representation of the average delay per vehicle at an intersection and give a measure of congestion. Levels of service are a ranking system that varies from A (best) to F (congestion) and give an indication of the quality of service offered for vehicles. These levels of service are defined in appendix D.

Findings

Traffic volumes

- Traffic volumes (see figure 2.21) are highest on major streets such as Sherbrooke (17,000 to 25,000 vehicles/day), Dorchester (10,000 to 12,000 vehicles/day), Sainte Catherine (10,000 to 18,000 vehicles/day) and The Boulevard (9,000 to 18,000 vehicles/day);
- Traffic volumes on some collectors are also relatively high such as Glen Road (12,000 vehicles/day) (see figure 2.21);
- Several through traffic routes, using part of a local street, through Westmont can be identified with traffic volume information (see figure 2.21), such as:
 - ▶ Forden and Montrose;
 - ▶ Gradual traffic increase on Côte-Saint-Antoine Road as they approach Notre-Dame-de-Grâce. Vehicles use Sherbrooke Street and Westmont Avenue then a north-south street (between Argyle to Claremont) to access Côte-Saint-Antoine Road;
- Approximately 165,000 vehicles per day are counted⁶ crossing Westmont's borders (see figure 2.22), excluding the Ville-Marie Expressway (Highway 720);

⁵ These are adjusted with 24 hour counts and an index of traffic from the City of Montreal. Traffic counts are also adjusted according to the day of the week and the month of the year.

⁶ Note that vehicle crossings of Westmont's borders are higher than the total number of vehicles travelling in Westmont since vehicles transiting through Westmont without stopping

- Most of this traffic crosses Westmont's western (73,000 vehicle/day) and eastern borders (69,000 vehicles/day) than its northern (12,500 vehicles/day) and southern borders (17,500 vehicles/day);
- Traffic patterns generally follow an east-west axis, which explains the higher traffic along Westmont's eastern and western borders. Traffic crossing Westmont's western border with Notre-Dame-de-Grace is slightly higher than its eastern border since a higher proportion of trips to/from Downtown Montreal are made by active transportation or transit than to Notre-Dame-de-Grâce;

Traffic structure

- On an average weekday, approximately 111,000 vehicles use Westmont's streets⁷, among which:
 - ▶ 5,000 internal vehicle trips staying entirely within Westmont;
 - ▶ 20,000 produced vehicle trips originating in Westmont with a destination outside the City;
 - ▶ 20,000 attracted vehicle trips originating outside Westmont with a destination inside Westmont;
 - ▶ 66,000 vehicles per day (almost 3 out of 5 vehicles) travel through Westmont without starting or ending their trip in Westmont, mostly east-west traffic;
- The Ville-Marie Expressway carries more traffic (167,000 vehicles/day) than all of Westmont's streets (111,000 vehicles/day);

Traffic conditions

- During the peak morning period, traffic levels are high on many streets, due to the overlap of work/education and shopping/recreational trips. That being said, little congestion is usually observed inside Westmont during this period apart from the intersection of Glen, Lansdowne and Sainte-Catherine;
- During the peak afternoon period, traffic levels are higher than the morning period. This increases the number of congestion points. Outside the following areas, traffic conditions are generally good during the peak afternoon period:
 - ▶ Sainte-Catherine, Glen and Lansdowne since there are many turning movements at this intersection;
 - ▶ Sainte-Catherine Street westbound from Hillside to Park Place. This is partly due to the fact that the traffic signals in the afternoon are synchronized in the opposite direction, there is little green time on Sainte-Catherine and traffic volumes are high;
 - ▶ Sherbrooke Street in Victoria Village in both directions since traffic volumes are high, there is lots of activity in the area and there is some double-parking, especially by delivery vehicles;
- Traffic volumes on major streets are also high outside peak periods. For example, from noon to 1 PM, traffic is only 20% lower on Sherbrooke than during the afternoon peak

⁷ This figure does not include the Ville-Marie Expressway (Highway 720).

hour. That being said, there is little congestion outside peak periods, therefore much less traffic on local streets during these periods;

- These congested areas influence certain drivers to use local and collector streets to transit through Westmont and avoid these congestion points;
- Traffic conditions in Westmont are usually good outside these specific areas;
- Levels of service for all signalized intersections are presented in figure 2.24 for the AM peak hour and figure 2.26 for the PM peak hour. Levels of service are given for all approaches combined and measure the average delay per vehicle. This measure does not account for pedestrian or cycling conditions at these intersections. Intersections with longer average delays include: Lansdowne/Glen/Sainte-Catherine (morning and afternoon) and Sainte-Catherine/Park Place (mostly afternoon);
- Numerous congestion points are present outside Westmont's city limits (see figure 2.25 [AM peak] and figure 2.27 [PM peak]). In turn, these congestion points influence traffic patterns within Westmont since some vehicles attempt to avoid these by transiting on local streets;

Key issues and findings

- The Ville-Marie Expressway carries more traffic (167,000 vehicles/day) than all of Westmont's streets (111,000 vehicles/day);
- Traffic volumes on arterials are heavy since they all carry at least 10,000 vehicles per day and up to 25,000 vehicles per day;
- Traffic volumes on collectors are also high (some in excess of 10,000 vehicles/day);
- There are many more vehicles crossing Westmont's city limits to the east and west than to the north and south;
- Approximately 60% of vehicles on Westmont's streets (66,000 vehicles/day) are through traffic (start and end of trip are both located outside Westmont). This figure does not include the Ville-Marie Expressway (167,000 vehicles/day);
- Some local streets seem to have more through-traffic than other local streets (Montrose, Forden, parts of de Maisonneuve, parts of Lansdowne and Metcalfe);
- During the peak morning period, there is some recurrent congestion on east-west streets, the most important Sainte-Catherine/Glen/Lansdowne. Many congestion points just outside city limits (Sherbrooke/Décarie, Côte-Saint-Luc/Décarie, The Boulevard/Côte-des-Neiges) have impacts on traffic patterns in Westmont since some vehicles use local streets to avoid these congestion points;
- Traffic congestion is higher during the afternoon peak period than the morning since traffic loads are higher. Congestion is observed on Sainte-Catherine Street (Clarke to Park Place) since there is only one westbound lane (vs. 2 in the morning) and traffic signals are synchronized opposite from the peak direction. Some congestion is observed on Sherbrooke, but mostly due to some vehicles blocking lanes. Congestion points located outside city limits also influence traffic patterns.

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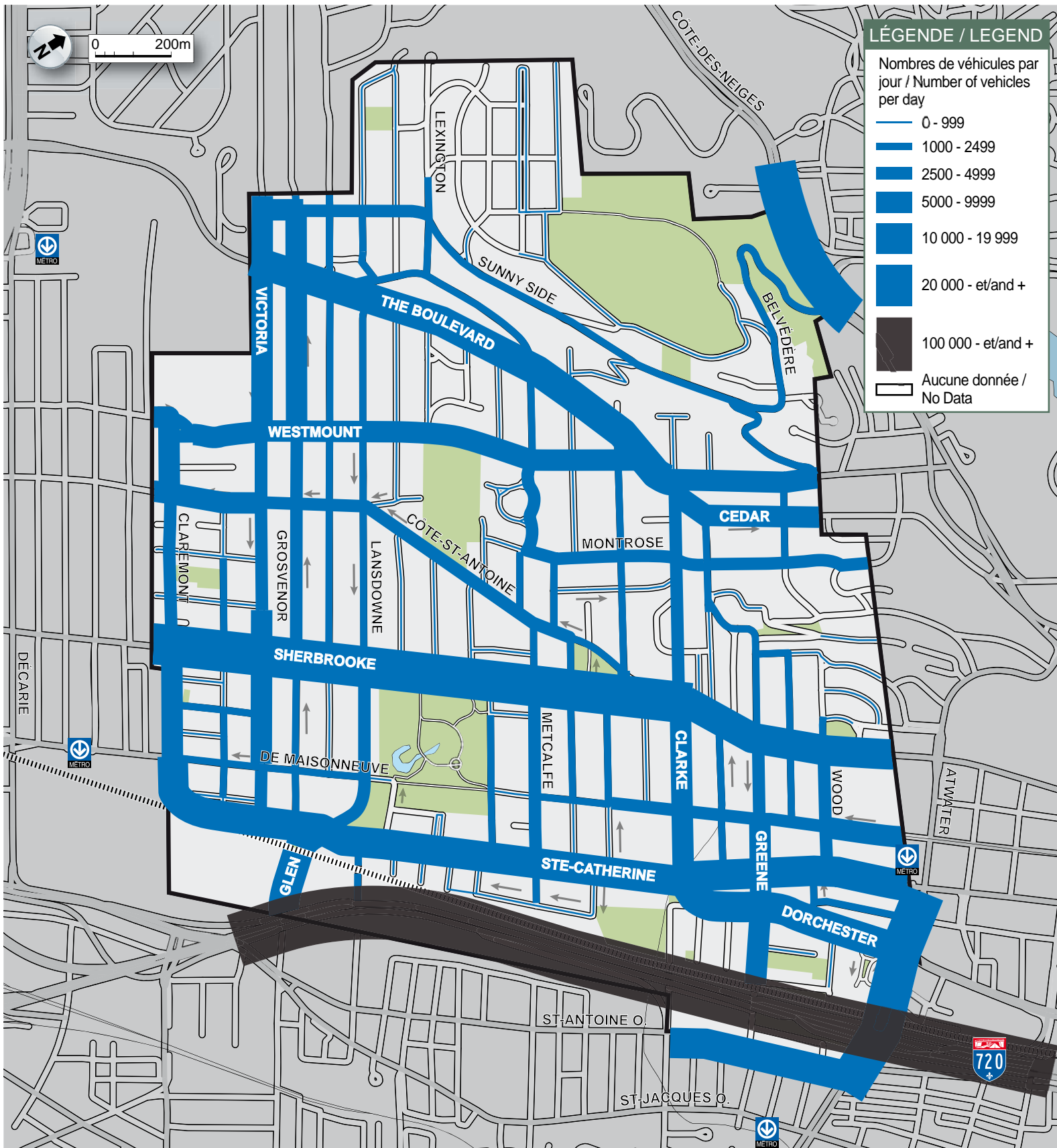


FIGURE 2.21
Volumes de circulation
Traffic Volumes

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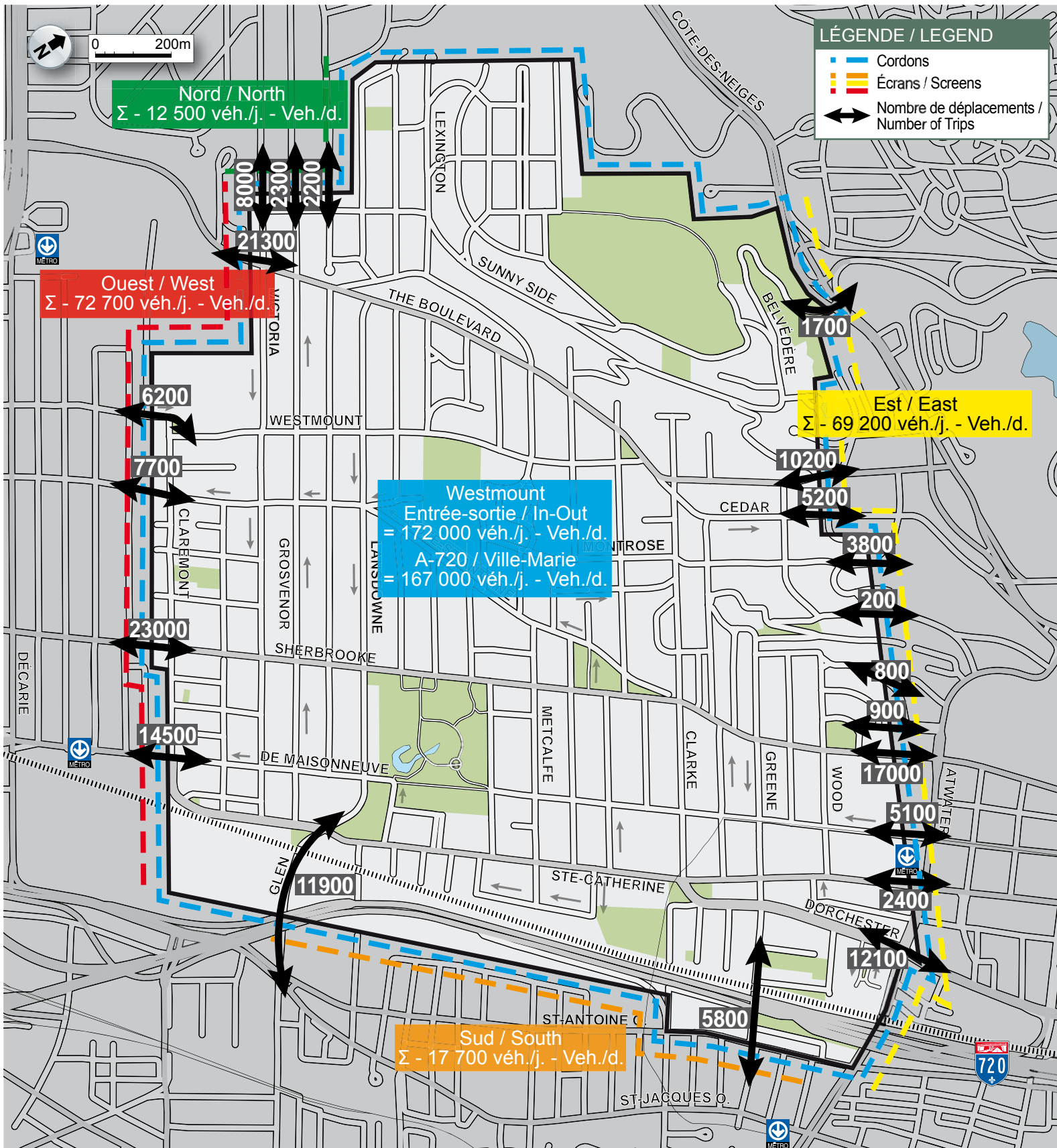


FIGURE 2.22

Volumes de trafic aux écrans et cordons
Traffic Volumes at screens and cordons

PLAN DIRECTEUR DE CIRCULATION ET DE TRANSPORT ACTIF DE WESTMOUNT WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

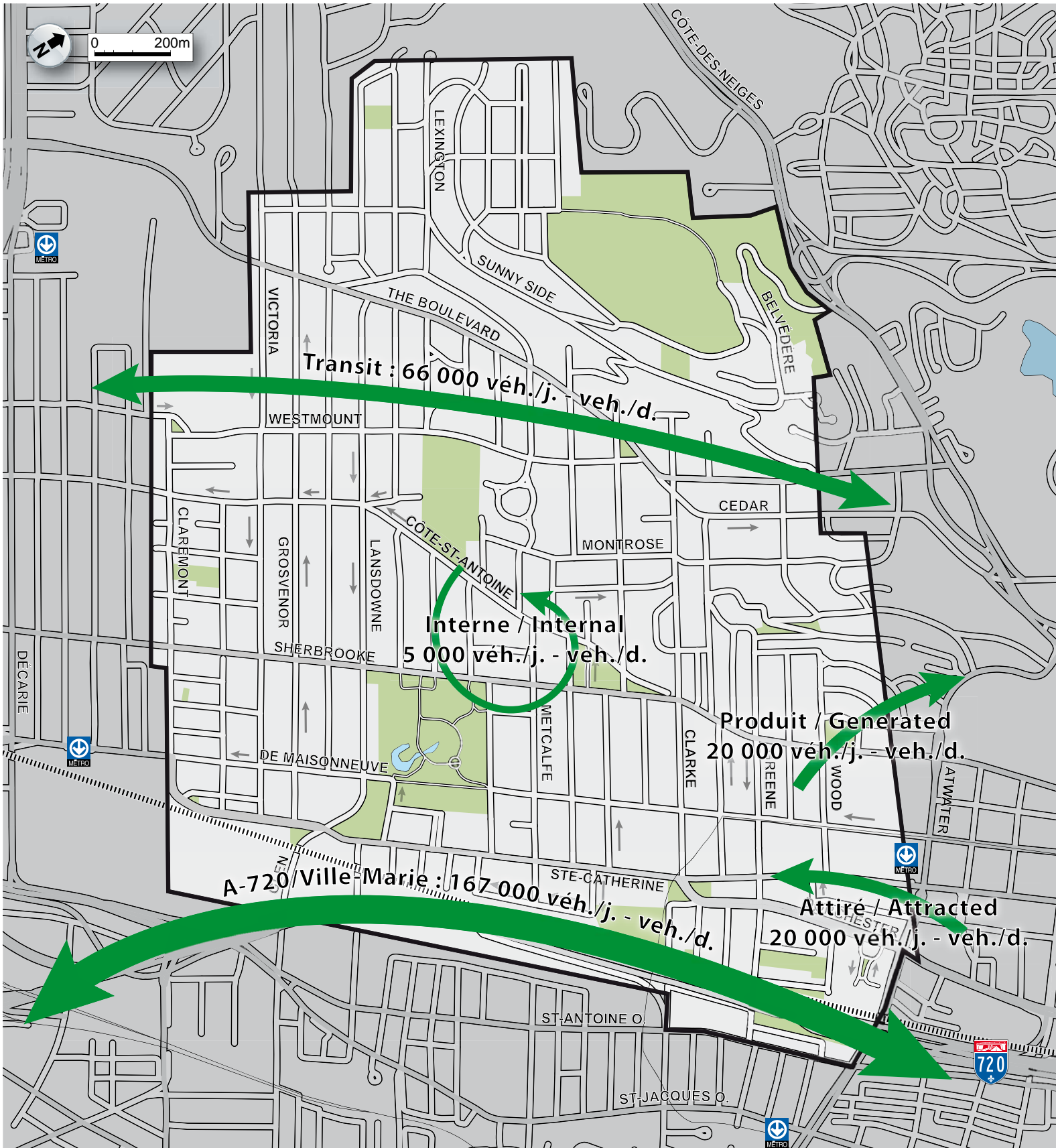


FIGURE 2.23
Structure du trafic
Traffic Structure

PLAN DIRECTEUR DE CIRCULATION ET DE TRANSPORT ACTIF DE WESTMOUNT WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

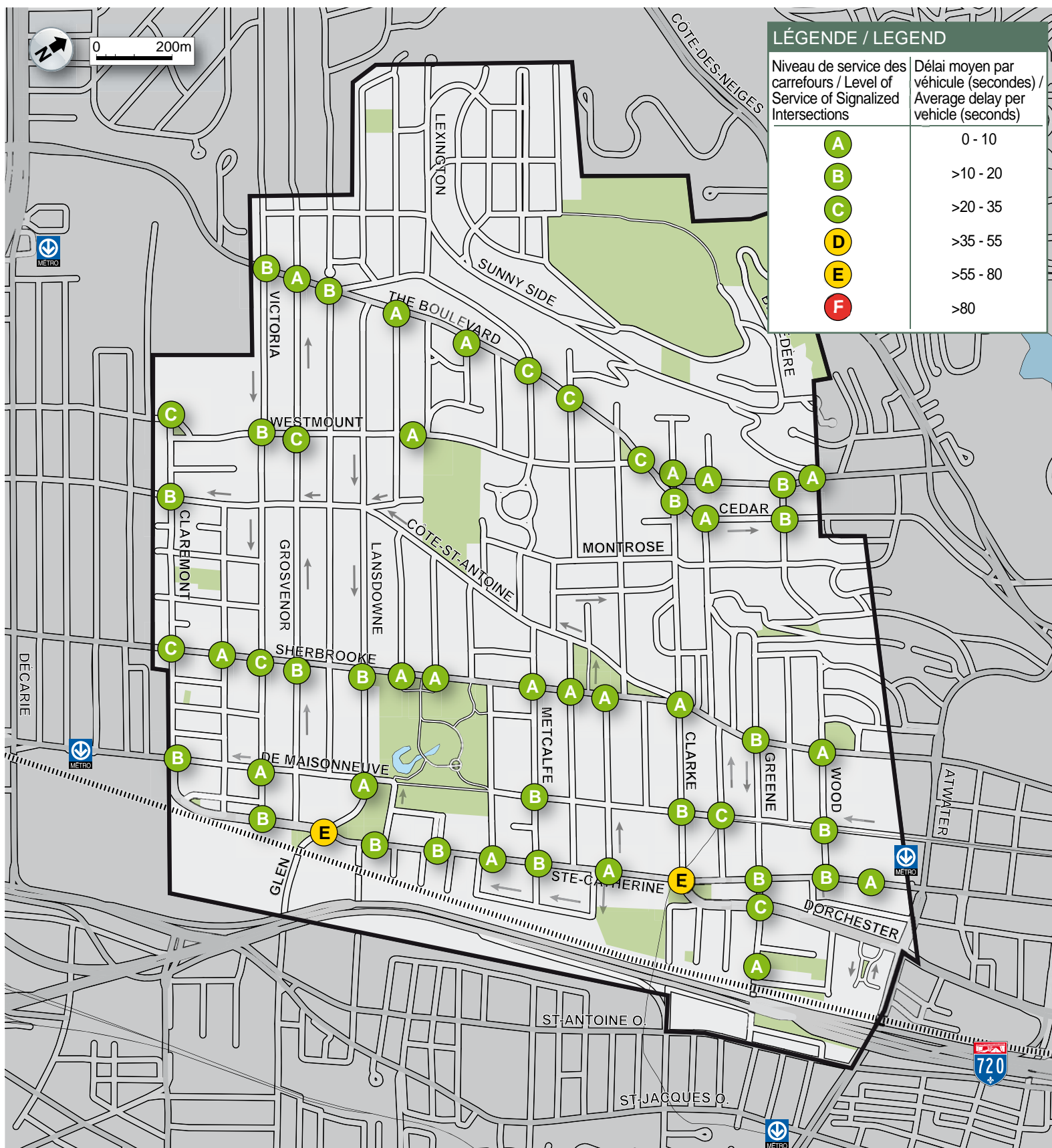


FIGURE 2.24
Heure de pointe AM
AM Peak Hour

PLAN DIRECTEUR DE CIRCULATION ET DE TRANSPORT ACTIF DE WESTMOUNT WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

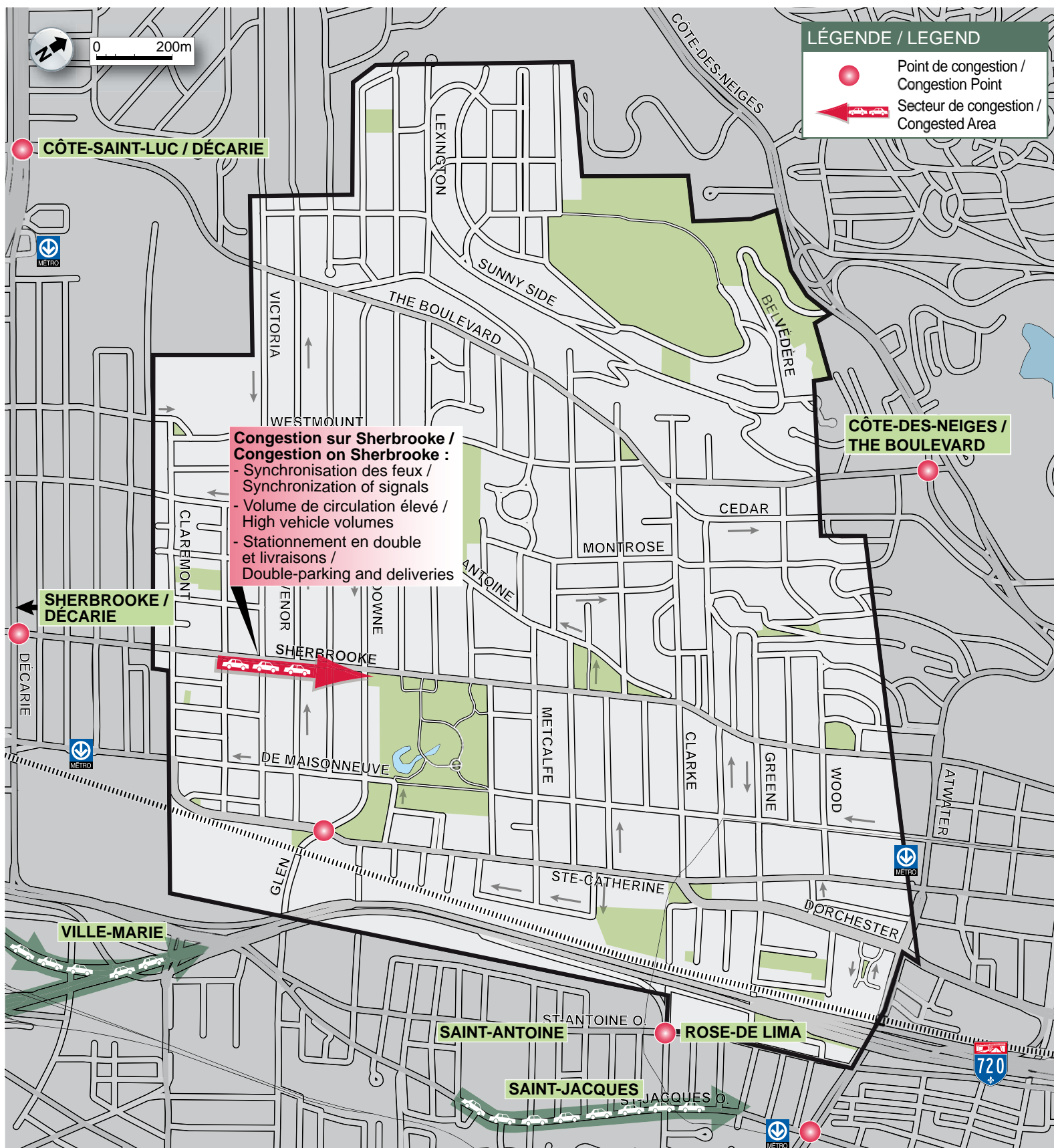


FIGURE 2.25

Conditions de circulation - Période de pointe du matin
Traffic Conditions - AM Peak Period

PLAN DIRECTEUR DE CIRCULATION ET DE TRANSPORT ACTIF DE WESTMOUNT
WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

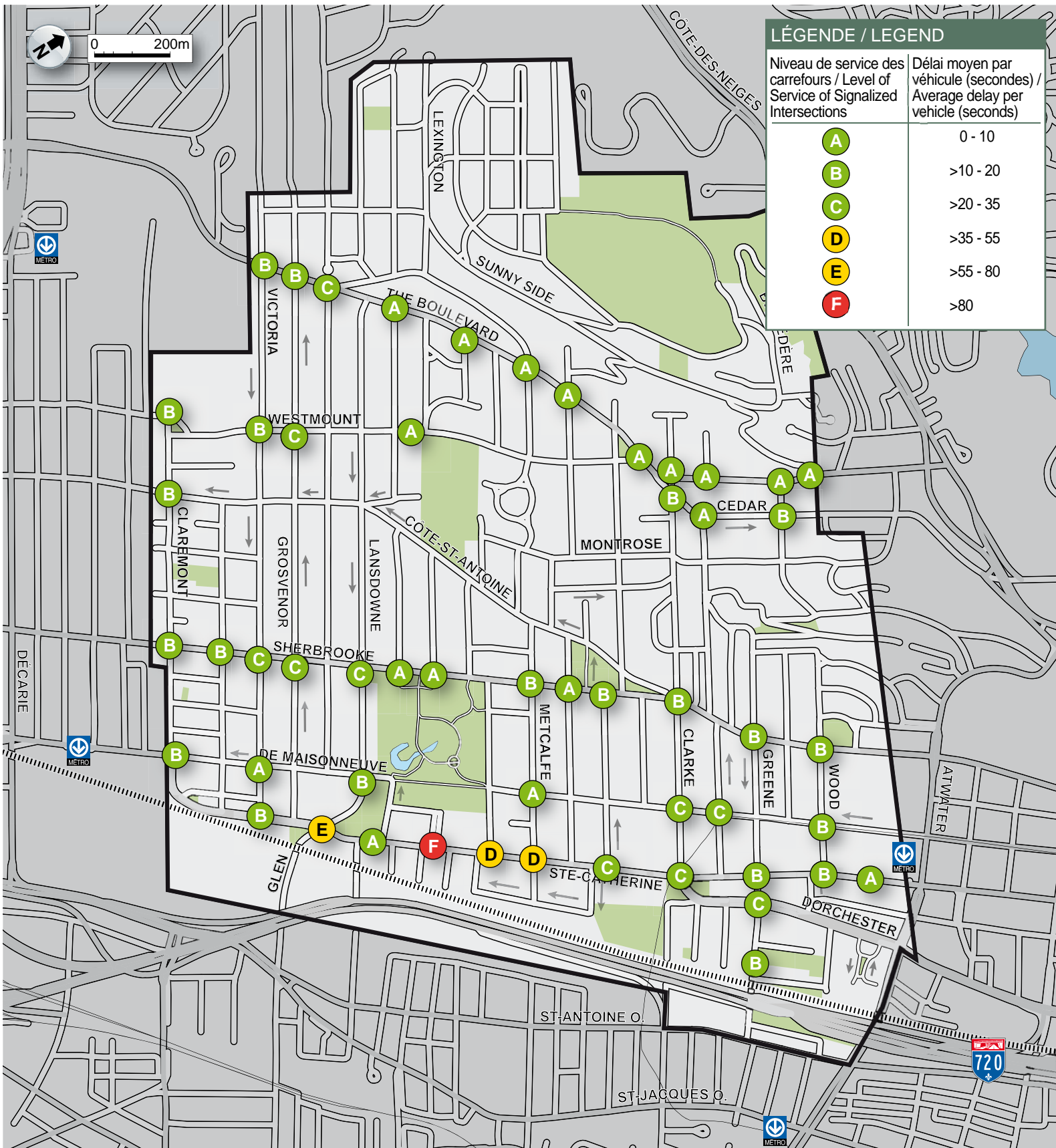


FIGURE 2.26
Heure de pointe PM
PM Peak Hour

PLAN DIRECTEUR DE CIRCULATION ET DE TRANSPORT ACTIF DE WESTMOUNT WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

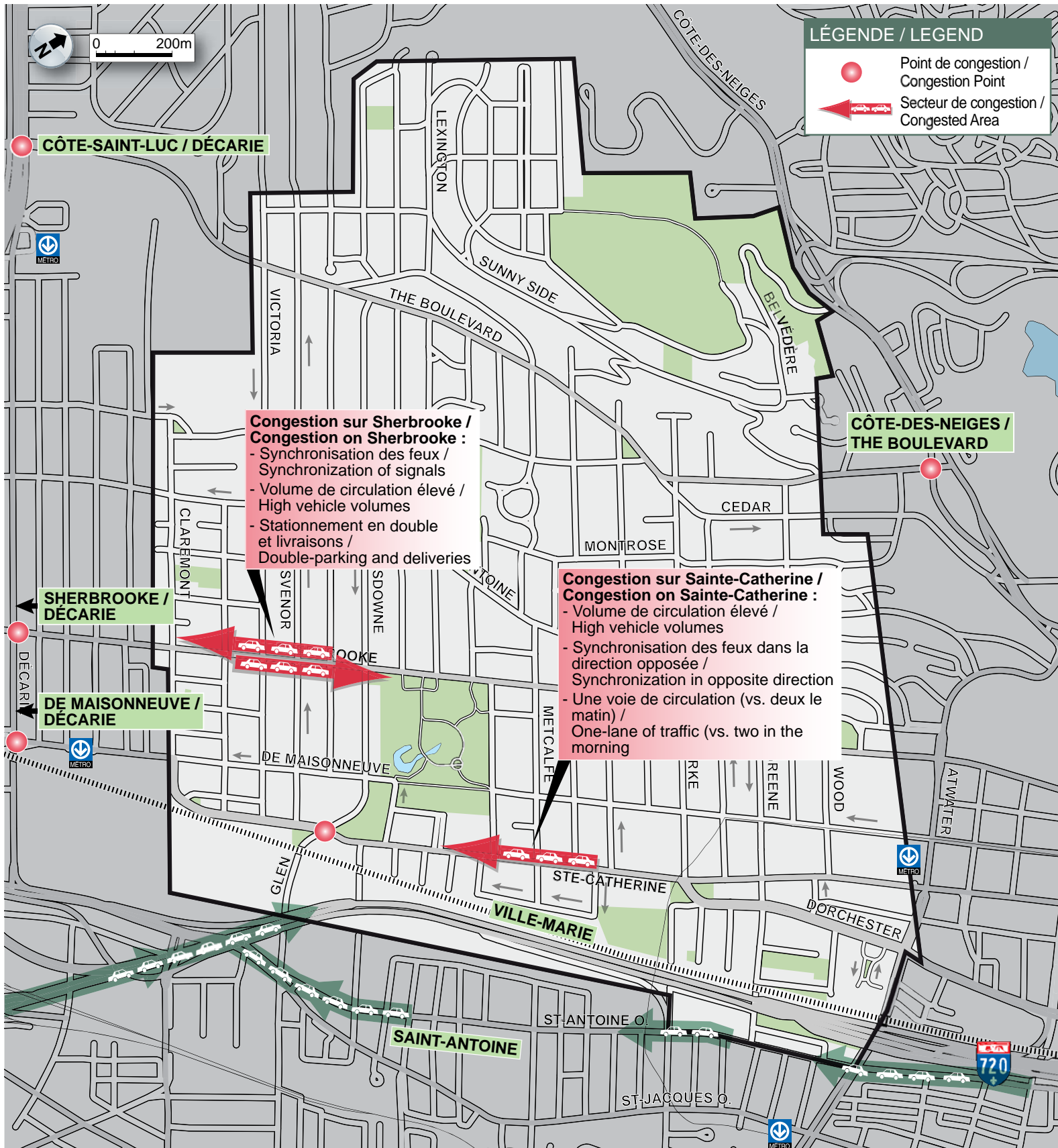


FIGURE 2.27

Conditions de circulation - Période de pointe de l'après-midi
Traffic Conditions - PM Peak Period

2.7 PARKING

Purpose

Parking is an integral part of the transportation system, since every transportation mode is composed of vehicles, some form of active transportation, networks and terminals. Parking is the terminal for private vehicles and bicycles. Parking is therefore an integral element of trips using bicycles, car sharing and private vehicles. Parking is not used for walking and public transportation trips.

This section focuses on on-street parking including parking regulations and occupancy. Some businesses require a certain amount of on-street parking for their clients that use a private automobile. Parking is also used by some clients, visitors, students and workers. Parking has an important impact on car use: abundant and free parking encourages users to drive. The bulk of this section will deal with parking private vehicles since they use a much greater proportion of street space.

Bicycle parking is also important for cycling use: sufficient and convenient bicycle parking is also very important to promote its use.

Findings

- The City of Westmont has approximately 6,180 legal on-street parking spaces in addition to off-street parking. Of these, approximately 660 are metered;
- These on-street parking spaces use approximately 9 hectares of land if we assume that every on-street parking spot takes up 15 m² of space. This is an area slightly smaller than Westmont Park (10 hectares);
- Residents can purchase two types of parking permits:
 - ▶ The G permit is reserved for residents that do not have access to an off-street parking space. This permit allows resident to park in time limit zones (1-hour, 2-hour and 4-hour) and reserved zones for up to 24 hours, except during maintenance periods. The cost of this permit increases with the number of vehicles. G permit holders can use any reserved zones in the city, irrespective of the location of their residence. Reserved zones are usually in effect during evenings and nights. They are usually implemented with the agreement of residents;
 - ▶ The W permit is available to all residents and allows parking for up to four hours in 1-hour, 2-hour or reserved zones;
- On-street parking is limited to four hours in many areas, except where posted otherwise. Only the G permits allows these users to exceed the four hour limit. The default four hour parking limit is shown at all Westmont entrances;
- South of Westmont Avenue, on-street parking is usually allowed on only one side of the street. Parking is banned on one side of the street during winter months, on the majority of streets where parking is allowed on both sides, especially north of The Boulevard, to facilitate snow clearing and removal operations (approximately 400 spaces);
- Many Westmont residents do not have access to off-street parking, especially south of Sherbrooke Street;

- Parking regulations are more restrictive in areas with high demand as shown in figure 2.28 which presents on-street parking regulations. The following regulations are prevalent (see table 2.4 for breakdown)⁸:
 - ▶ Time limits: mostly one-hour (600 spaces) and two-hour (1,930 spaces) maximums;
 - ▶ Parking meters (660 spaces);
 - ▶ Reserved parking zones for holders of “G” or “W” resident permits (180 spaces during the day and 780 spaces in the evening and/or night);
- Parking meters are used in two areas (see figure 2.28): Westmont Square/Greene Avenue/Sainte-Catherine (app. 500 spaces) and Victoria Village. Parking (app. 150 spaces). Parking rates of 2\$ per hour are in effect from 9AM to 6PM from Monday to Saturday. In January 2012, the parking meter rate will be increased to 3\$ per hour in the eastern part of the City. Only coins are accepted for payment;
- As of January 2012, Parking meter rates in the eastern part of Westmont will be the same as the adjacent Ville-Marie Borough/Downtown Montreal (3\$ per hour). Streets adjacent to Victoria Village in Notre-Dame-de-Grâce are not metered (areas with parking meters in NDG have a rate of 1.50\$ per hour). In addition, metered periods are longer in Montreal since rates are in effect until 9PM on weekdays and on Sunday afternoons;
- Average weekday parking occupancy increases during the day and is highest around noon (see figure 2.29). Overall occupancy rates at various times of the day vary from 36% in the early morning/late evening to 48% around noon.
- Parking occupancy rates vary greatly by area. The city was divided into 9 areas (see figure 2.30) to see average occupancy rates. Parking occupancy is highest in zone A (Sherbrooke/Victoria) and zone D (Greene Avenue/Westmont Square) (up to 90% during peak periods see figure 2.31). The next highest occupancy rates are found in other areas south of Sherbrooke Street (B and C). The lowest occupancy are found north of The Boulevard in zone I;
- The number of vehicles parked on-street by permit holders (Q and W) is higher in the early morning and the evening (approximately 800 permit holders parked on-street) than in the middle of the day (approximately 600). This is the opposite than overall parking occupancy for all users since peak occupancy occurs during the middle of the day;
- Parking occupancy around many schools is high at the start and end of the school day. In the morning, the number of vehicles peaks in the half-hour before the start of classes;
- Few on-street bicycle racks are provided in commercial zones;
- City by-laws do not require the provision of off-street bicycle parking facilities.

Key issues and findings

- Westmont has approximately 6,180 parking spaces, including 660 metered spaces;
- On-street parking measures (time limits, parking meters and resident zones) are more numerous in proximity to major generators;

⁸ Note: The number of parking spaces does not add up since more than one regulation can be applied to the same parking space (e.g. parking meter and time limit).

- Residents can obtain on-street parking permits for a fee. One parking permit is reserved for residents without off-street parking and allows to parking in resident zones. The other permit, available to all residents, allows parking for up to 4 hours in zones with one or two hour time limits. There are no zones for resident permits (a resident living in one area can use a resident zone in another area while shopping);
- Overall on-street parking occupancy is highest during the middle of the day, when many workers, shoppers, residents and students are present;
- High demand for on-street parking is observed in several locations, notably the dense portion of the City south of Sherbrooke Street. Highest parking occupancy rates can be found in Victoria Village, Greene Avenue and Sainte-Catherine Street.

Table 2.4 On-Street Parking Supply by Regulation

Regulation	Number of Parking Spaces
Parking meter	667
Time limit	6,010
1 hour	602
2 hours	1,929
4 hours	3,479
Reserved parking	781
Day (9 AM to 6PM)	177
Evening and/or night (6 PM to 9AM)	781
No parking during winter (December – March)	401
No parking during morning peak period	328
No parking during afternoon peak period	264
Total	6,187

Source: City of Westmont (2011) and GENIVAR (2011)

Note: The totals do not necessarily add up since more than one parking regulation can be in place for a single space (e.g. one space can have both a parking meter and a time limit).

Table 2.5 Parking Occupancy By Area

Area	Total Spaces	Surveyed Spaces	Time of Day						
			7-9 AM	9-11 AM	11 AM-1 PM	1-3 PM	3-5 PM	5-7 PM	7-9 PM
A	326	326	52.8%	60.7%	90.5%	88.3%	92.9%	80.4%	77.6%
B	471	471	52.7%		70.9%		62.4%		58.2%
C	776	766	54.4%		67.6%		57.8%		46.0%
D	869	865	30.6%	74.3%	78.3%	88.0%	86.0%	63.1%	57.6%
E	265	265	29.1%	42.3%	39.2%	34.7%	36.2%	27.9%	41.1%
F	868	830	34.2%		35.4%		33.4%		29.5%
G	708	662	43.2%		35.0%		33.8%		31.7%
H	543	543	40.3%		35.7%		26.0%		19.3%
I	1,361	1,312	16.2%		22.3%		13.9%		9.2%
Westmont	6,187	5,943	36.2%		48.8%		44.9%		36.0%

Source: City of Westmont (2011) and GENIVAR (2011)

PLAN DIRECTEUR DES TRANSPORTS DE WESTMOUNT WESTMOUNT TRAFFIC AND ACTIVE TRANSPORTATION MASTER PLAN

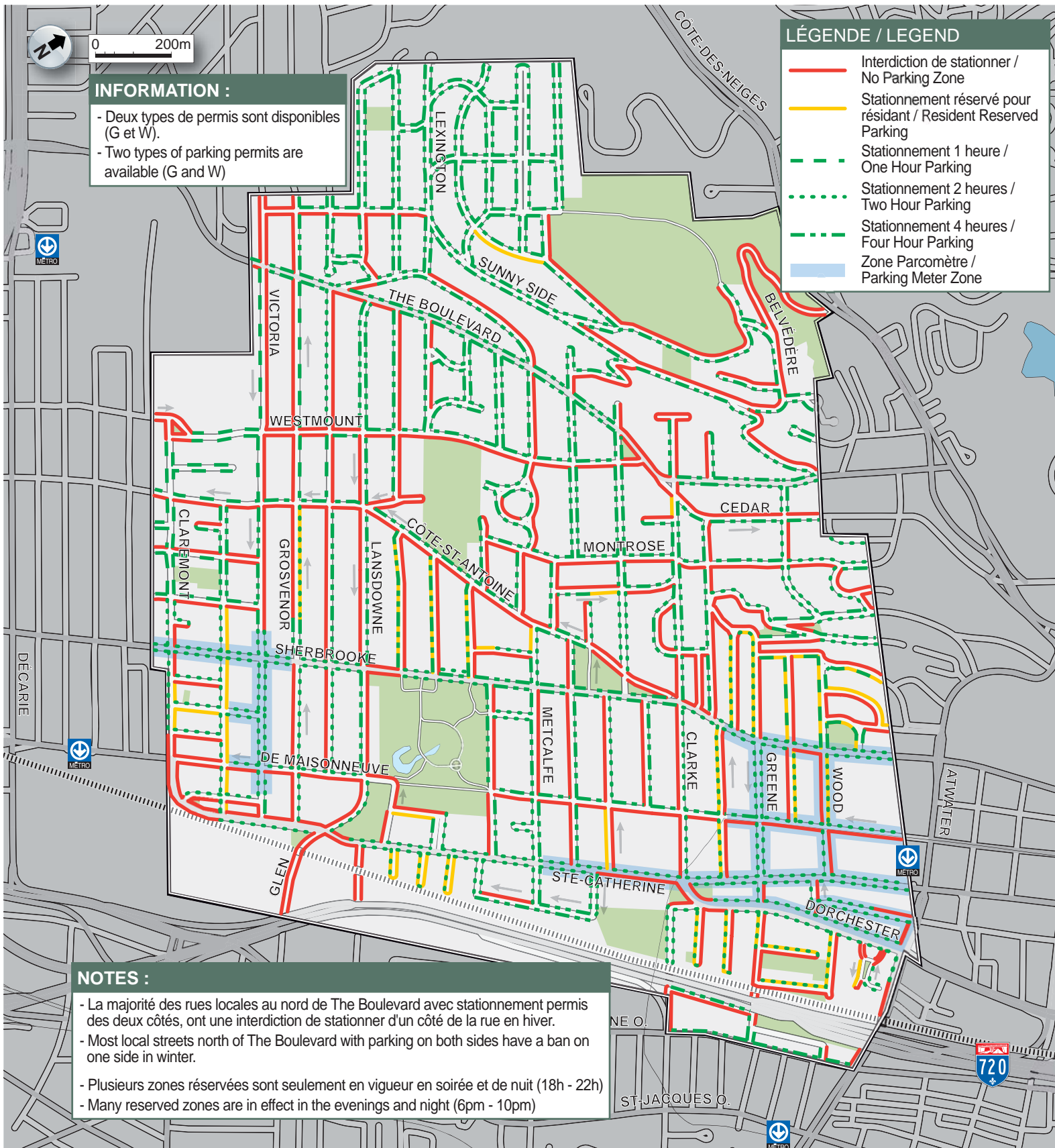
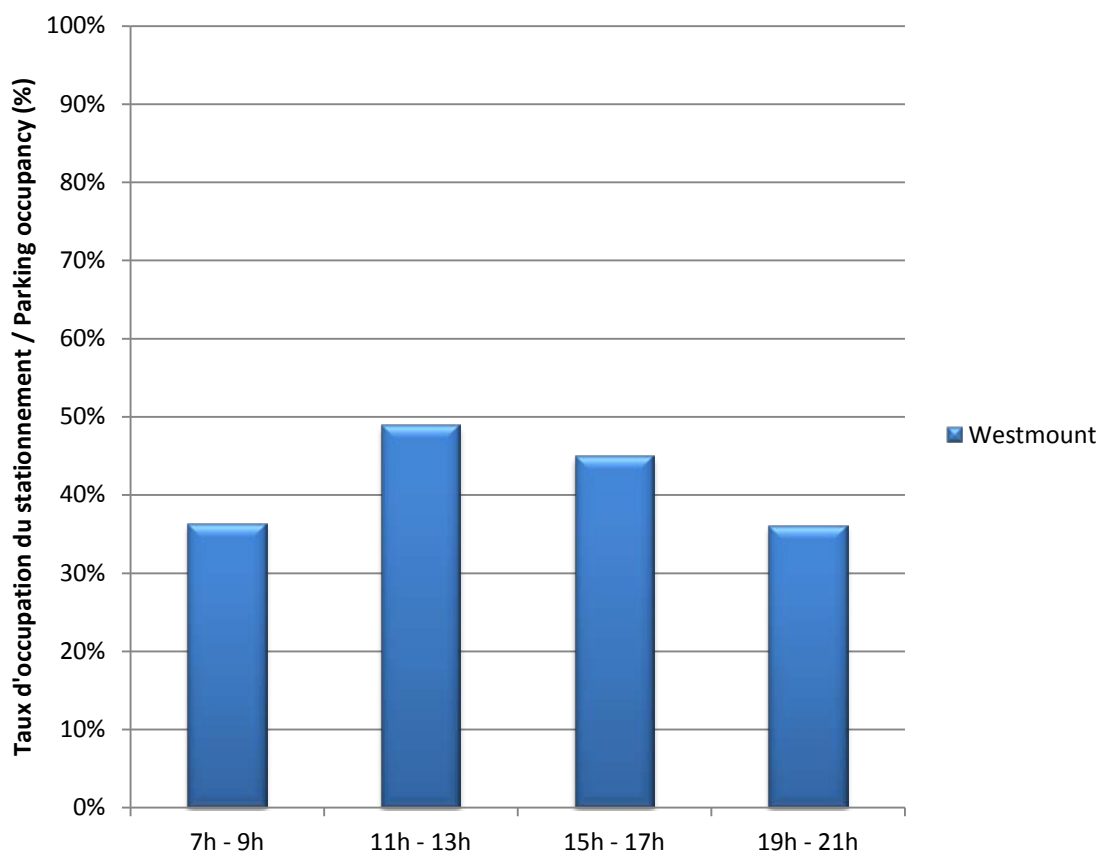


FIGURE 2.28
Règlementation du stationnement
Parking Regulations

Figure 2.29 Parking Occupancy by Time of Day in Westmont



Source: City of Westmont and GENIVAR (2011).

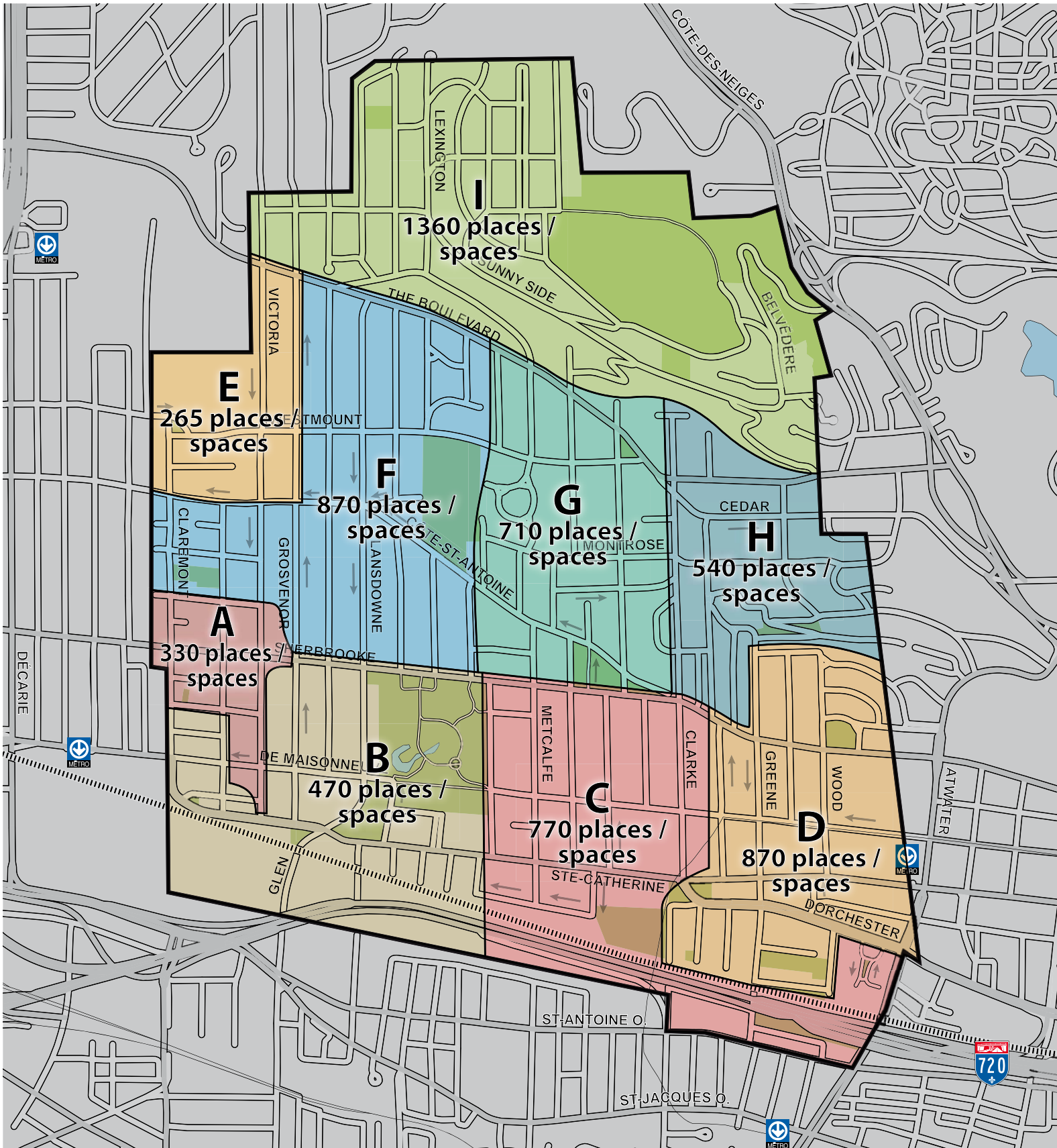
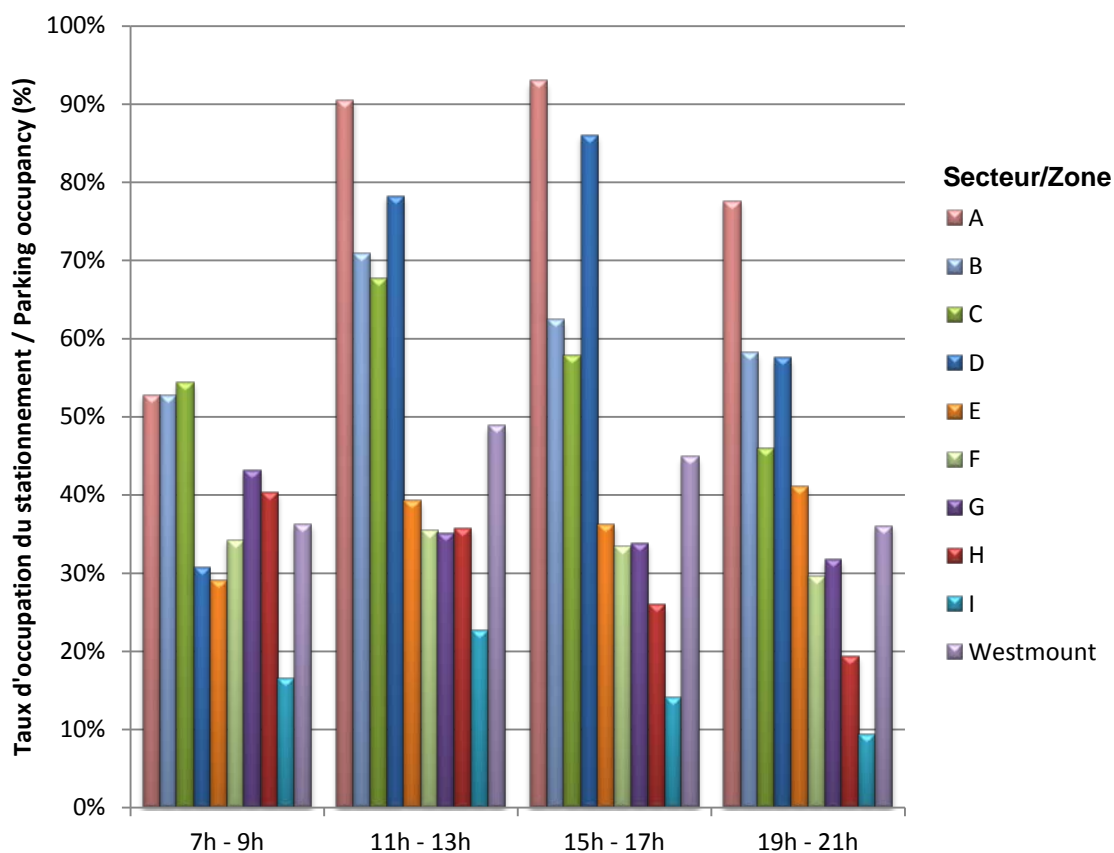


FIGURE 2.30

Places de stationnement sur rue par zone
On-street Parking Spaces by Area

Figure 2.31 Parking Occupancy by Time of Day by Area



Source: City of Westmont and GENIVAR.

Note: The letters represent the sectors identified in figure 2.30.