



3.5.

Management of Public Roadwork – Integrated Planning and Coordination Component

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Auditor General of the Ville de Montréal

3.5. Management of Public Roadwork–Integrated Planning and Coordination Component

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Background

For several years, the Ville de Montréal (the City) has been known for the multitude of roadwork projects being carried out on the municipal road system, as well as the countless detours this has caused. These numerous projects are necessary to repair, optimize or modernize the City's infrastructure. Work done by the City accounts for more than 30%¹ of all the roadwork on the territory. In addition to the work carried out by the City, there is work done by external partners, including the ministère des Transports du Québec (MTQ), urban coordination network (UCN), such as Hydro-Québec, Energir and Bell, and private entrepreneurs. This requires planning and coordination of all the roadwork to minimize disruptions to the mobility of users. Two divisions of the Service des infrastructures du réseau routier (SIRR) primarily share these responsibilities. One division is responsible for planning and coordinating the City's projects prior to the start of work on the ground to prevent mobility issues. The other division performs the operational coordination of impediments on the ground to ensure accessibility and the maintenance of traffic and ensures disruptions during completion of infrastructure projects are kept to a minimum by recommending the implementation of various mitigation measures.

Purpose of the Audit

To ensure that the City has a structured approach that enables it to have a proactive view of all the roadwork that could have an impact on its road system, to minimize impediments and the impacts on its citizens.

Results

The planning and coordination processes for infrastructure projects put in place by the City are not totally effective in providing a comprehensive proactive view of all the roadwork and minimizing its impact. Roles and responsibilities are not clearly defined. There is no centralization of all the projects that could impede traffic, especially borough projects that are not all shared with the SIRR. The planning process is not carried out within appropriate timelines to enable all planned projects to be completed. Receipt of projects at different times results in the SIRR having to perform new mobility analyses. While the City has established mobility corridors to limit roadwork and impediments, boroughs have issued permits to complete work in these corridors without prior consultation with the SIRR. In short, the SIRR must improve the management of the planning and coordination processes to make them more effective and efficient, thereby ensuring the mobility of citizens and the smooth flow of traffic on its territory.

¹ Based on the number of permits issued in 2019.

Main Findings

Governance

- The roles and responsibilities of all participants in project planning and operational coordination are not clearly defined, documented and communicated.
- There is no feedback mechanism enabling the two teams responsible for coordination to exchange information regarding the implementation of mitigation measures proposed during the project planning phase.

Process for Capturing All Projects

- The planning and coordination processes fail to identify all the projects of the central departments and boroughs carried out on- or off-street that have an impact on public roads.

Process Based on a Structured Analysis

- The planning and coordination processes are based on results of mobility analyses that can be used to organize the projects prior to the start of work. When constraints are identified, mitigation measures are proposed to enable the mobility of users.
- Delays encountered throughout the implementation of the planning process leave only a very short timeframe for preparing the design of the projects and do not ensure that all planned projects will be carried out.
- There is no mechanism in place when analyzing non-integrated projects (NIP) to help identify the projects attached to a subsidy to ensure that their completion is prioritized. As a result, the City was deprived of a subsidy of almost \$11M for not complying with the requirements of the Fonds pour l'infrastructure municipale d'eau (FIMEAU) when awarding contracts to complete the work of the Service de l'eau.
- Despite the City's directive to limit work and impediments on the mobility corridors, several permits for temporary occupation of the public domain were issued by the boroughs without the SIRR being consulted.
- The process of selecting sectors/boroughs that are subject to operational coordination of impediments is not supported by a formal documented analysis.

Performance Indicators

- While there are indicators in place, they do not help monitor and measure the efficacy and performance of the roadwork planning and coordination processes.

In addition to these results, we have made various recommendations to the business units, which are presented in the following pages. These business units were given the opportunity to agree to the recommendations.

List of Acronyms

AGIR	Assistance à la gestion des interventions dans la rue
BVG	Bureau du vérificateur général
City	Ville de Montréal
COP	équipe de coordination opérationnelle
DEEU	Direction de l'épuration des eaux usées
DEP	Direction de l'eau potable
DGPP	Direction des grands projets partenaires
DI	Direction des infrastructures
DRE	Direction des réseaux d'eau
FIMEAU	Fonds pour l'infrastructure municipale d'eau
IP	standard integrated project
MTQ	ministère des Transports du Québec
NIP	non-integrated project
REM	Réseau express métropolitain
RLPP	Rosemont–La Petite-Patrie borough
SE	Service de l'eau
SIRR	Service des infrastructures du réseau routier
SUM	Service de l'urbanisme et de la mobilité
UCN	urban coordination network
VM	Ville-Marie borough

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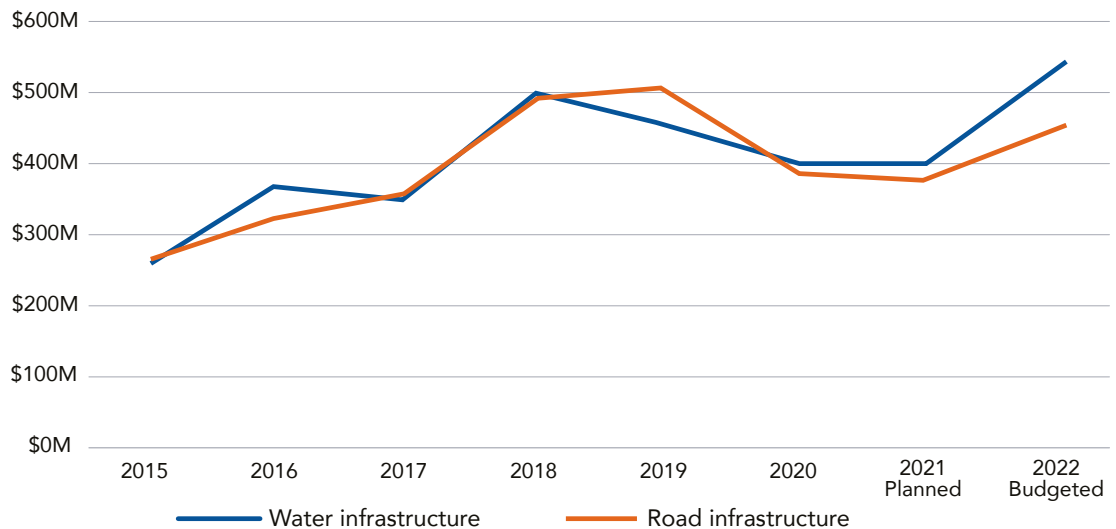
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1. Background

For several years, the Ville de Montréal (the City) has been known for the multitude of roadwork projects being carried out on its territory,² along with the many detours that this has caused. A veritable maze for citizens and drivers, this roadwork is necessary to repair assets and maintain them in good condition, minimize the risks of breakdowns, and modernize the infrastructure. As the owner of a large portfolio of arterial and local road infrastructure assets (streets/sidewalks totalling \$2.7B) and water systems (aqueducts/sewers totalling \$4.2B), the City has continued its efforts in the few years to make up for years of underinvestment (see Graph 1). Investments for the years 2015 to 2020 totalled \$4.7B.

GRAPH 1

Investments Made and Planned for Water and Road Infrastructure Between 2015 and 2022



Source: Graph produced by the City's Bureau du vérificateur général (BVG) based on data compiled during our audit.

The City also carries out structuring projects³ that are vital to the development of the metropolis, including upgrading streets (e.g., Sainte-Catherine Ouest and Peel streets) and bicycle paths (Réseau express vélo).

² Newspaper articles: "Encore un festival de cônes orange à Montréal" and "Le retour des cônes orange".

³ Project that improves the quality of life, since it meets a need expressed by the community.

3.5. Management of Public Roadwork—Integrated Planning and Coordination Component

While 30% of the work⁴ on public roads⁵ is carried out by the City, work done by external partners⁶ accounts for the other 70%, including the ministère des Transports du Québec (MTQ), the Caisse de dépôt et placement du Québec, urban coordination network (UCN)⁷ and private entrepreneurs. This work, planned or not, includes integrated⁸ and non-integrated⁹ projects. For 2021, the City planned almost 1,000 projects. As a matter of interest, more than 91,000 annual requests¹⁰ for permits to temporarily occupy the public domain were processed by the boroughs as of November 2021. These requests were for occupation of both the roadway and the sidewalks and involved the City, UCN, partner projects,¹¹ film shoots, and private projects (e.g., construction sites, window washing). While the City's projects account for a small percentage of the total, they are carried out for the most part in central neighbourhoods,¹² such as downtown.

While some major roadwork will be ending soon, such as the redevelopment of Sainte-Catherine Street and the McGill REM station, the rate of construction starts is not likely to decrease. In the coming decade (2021–2030), the City plans to invest \$9.4B¹³ in its road and water infrastructure, and large partner projects will be carried out and have a major impact on traffic, including work on the Louis-Hippolyte-La Fontaine, Ville-Marie and Viger tunnels.

Such projects require planning¹⁴ and coordination of all work being carried out on the municipal road system to minimize the impact on the mobility of users.¹⁵

Two divisions under the Service des infrastructures du réseau routier (SIRR) primarily share these responsibilities (see Appendix 5.2. for more details):

- The Division Assistance à la gestion des interventions dans la rue (AGIR) is responsible for planning and coordinating the City's roadwork projects prior to their start on the ground to prevent mobility issues;
- The équipe de coordination opérationnelle (COP) of the Division Gestion des impacts et maintien de la circulation ensures the coordination of impediments on the municipal network to enable the performance and cohabitation of the roadwork.

⁴ This percentage was calculated at the request of the Mayor during preparation of the 2021 worksite report, using the number of permits issued in 2019 on the territories for roadwork carried out by the City (16,225) and by other parties (37,317).

⁵ Streets, alleys, sidewalks, bicycle paths and curbs.

⁶ Réseau express métropolitain (REM), extension of the Blue Line, major refurbishing of the Louis-Hippolyte-La Fontaine Tunnel.

⁷ Hydro-Québec, Energir, Bell, and others.

⁸ Road project combining work by different applicants within or external to the City on the same worksite.

⁹ Projects that consist of short-term work within a program to update infrastructure (e.g., water, roads), as well as all other ad hoc work not requiring an integrated project.

¹⁰ Planned and unplanned work.

¹¹ The City has little influence on the completion schedule of partner projects.

¹² Due to the age of the infrastructure, population density and traffic.

¹³ 2021 Montréal Budget and 2021–2030 PDI.

¹⁴ In this report, planning refers to completion of roadwork on the territory and not the management of a worksite.

¹⁵ In this report, the expression "user" stands for all users of the road, including pedestrians, cyclists and drivers, as well as neighbourhood residents.

More specifically, the AGIR is responsible for planning the completion of projects, which is the process by which infrastructure work is identified, programmed, prioritized and coordinated. It is responsible for:

- Preparing yearly programming¹⁶ of the work of the central departments carried out by the Direction des infrastructures (DI) of the SIRR,¹⁷ which includes planning standard integrated projects (IP) and scheduling¹⁸ non-integrated projects (NIP) following a mobility analysis. More specifically, the yearly work programming by the AGIR includes:
 - Planning the completion of IPs based on work priorities. Integration makes it possible to group together all the needs identified by internal¹⁹ and external applicants for the same section of road to optimize the work and avoid opening the street several times, thereby reducing the inconvenience to users (e.g., rebuilding an aqueduct, including redeveloping the street);
 - Prioritizing IPs to be carried out based on criteria established within the City;
 - Scheduling NIPs, submitted by applicants in the year minus a day, based on a mobility analysis to minimize the impact on mobility (e.g., pavement repair program involving levelling and resurfacing, and aqueduct/sewer rehabilitation programs);
- Planning and coordinating integrated work with work done by the other central departments,²⁰ boroughs, UCN and other external partners, including:
 - Proposing coordination requirements or scheduling work completion;
 - Proposing mitigation measures to facilitate mobility;
- Presenting all the City's planned projects annually to the elected officials responsible for approval (programming) (see Table 1).

This does not include, however, the preparation of programming for large-scale projects,²¹ projects carried out by the Service de l'eau (SE) and those of the boroughs, which is done by the departments or boroughs responsible for the work.

¹⁶ Final list of all the integrated projects planned for completion on the ground.

¹⁷ Completion based on this order: finishing work, burying of underground lines, bicycle paths, IPs.

¹⁸ Completion of work in order (e.g., before another project or after the school year).

¹⁹ The main internal applicants are the Direction des réseaux d'eau (DRE) of the SE and the Division Gestion des actifs routiers et cyclables of the Service de l'urbanisme et de la mobilité (SUM).

²⁰ Large-scale projects and projects carried out by the SE.

²¹ Major projects of the Direction de l'urbanisme and the Direction de la mobilité of the SUM, as well as those of major project partners and of the Service des grands parcs, du Mont-Royal et des sports.

TABLE 1

Comparison of Programming of Planned Projects Within the Ville de Montréal Since 2021

Planned projects	Programming of projects and programs presented to elected officials					
	2021 prior to revision		2021 revised		2022	
	Number of projects	\$M	Number of projects	\$M	Number of projects	\$M
Integrated projects carried out by the Direction des infrastructures of the Service des infrastructures du réseau routier						
Standard projects	29	94	23	76	36	149
Large-scale projects ²²	32	130	18	98	21	167
Projects carried out by others						
Projects of the Service de l'eau and the boroughs	28	133	24	130	24	131
Total planned projects	89	357	65	304	81	447
Programs (non-integrated projects carried out by the Service des infrastructures du réseau routier)²³	2021 prior to revision \$M		2021 revised \$M		2022 \$M	
Sidewalks + bridges and tunnels	91		91		77	
Rehabilitation of aqueducts and sewers	98		93		106	
Lead service line replacement	35		35		35	
Other (e.g., bicycle paths, lighting)	42		42		41	
Total program investments	266		261		259	
Total investments in planned projects/programs	623		565		706	

Source: Table produced by the City's BVG based on data compiled during our audit.

²² Large-scale projects are projects associated with major issues for the City (excerpt from the *Cadre de gouvernance des projets et programmes de la Ville de Montréal*).

²³ Annual work aimed at upgrading assets (e.g., roadways, sewers).

For the year 2021, at the request of the elected officials, the City postponed 20 (standard/large-scale) integrated projects (33%), planned in the initial programming (61), to reduce impediments and improve traffic flow on roads, thereby giving the population a break. This roadwork consisted of major and minor work involving mostly the rebuilding and rehabilitation of aqueducts and sewers. The City's projects were the only ones targeted by this decision. The City also identified some 50 mobility corridors²⁴ that had to be kept free of impediments to facilitate traffic flow. These corridors were established to bypass major roadwork. Only emergency work, some work by developers and one-off projects were permitted.

The COP is responsible for ensuring the operational coordination of impediments by proposing mitigation measures to use on the road system to ensure harmonious cohabitation and sequencing of the work in order to resolve potential conflicts and mitigate the impact on the population. The work of the COP is concentrated mainly on key corridors and sectors,²⁵ i.e., those where several work projects converge and where impediments are liable to create conflicts. In the cases in which the COP is not involved, this coordination is done by the boroughs.

2. Purpose and Scope of the Audit

Under the provisions of the *Cities and Towns Act*, we conducted a performance audit mission on the Management of Public Roadwork–Integrated Planning and Coordination Component. We performed this mission in accordance with the *Canadian Standard on Assurance Engagement (CSAE) 3001* described in the *CPA Canada Handbook–Assurance*.

The purpose of this audit was to ensure that the City has a structured approach that enables it to have a proactive view of all the roadwork that could impact on its road system to minimize impediments and the impact on its citizens.

The role of the Auditor General of the Ville de Montréal is to provide a conclusion regarding the objectives of the audit. To do so, we collected a sufficient amount of relevant evidence on which to base our conclusion and to obtain a reasonable level of assurance. Our assessment is based on criteria we have deemed valid for the purposes of this audit. They are presented in Appendix 5.1.

The Auditor General of the Ville de Montréal applies *Canadian Standard on Quality Control (CSQC) 1* from the *CPA Canada Handbook – Assurance* and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory

²⁴ Arterial roads with or without planned work to bypass major roadwork as much as possible and to maintain the mobility of users (e.g., Notre-Dame Street, Sherbrooke Street, De Lorimier Avenue, René-Lévesque Boulevard).

²⁵ These sectors vary from one year to the next. However, for several years now, these sectors have been concentrated in the Ville-Marie, Le Sud-Ouest, Ahuntsic-Cartierville, Rosemont–La Petite-Patrie (RLPP) and Plateau-Mont-Royal boroughs.

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requirements. In addition, it complies with the independence and other ethical requirements of the *Code of ethics of chartered professional accountants*, which are founded on the fundamental principles of integrity, professional competence and due diligence, confidentiality and professional conduct.

Our audit covered the period from January 1, 2019, to September 30, 2021. However, for certain aspects, data after this period was also taken into consideration. Our work was conducted primarily between the months of May 2021 and December 2021. We also took into account information that was sent to us up to March 2022. Our work consisted of conducting interviews with staff, reviewing various documents and conducting surveys that we deemed appropriate to gather the necessary evidence.

We excluded from the scope of our mission the steps involved in the operational coordination process (steps carried out by the COP) but nevertheless looked at the process used to determine the choice of sectors that the COP will be covering as part of this work to ensure that there was continuity in the planning and coordination of the roadwork on the City's territory. We also excluded the planning of roadwork carried out by external partners, information disseminated to the public about the impact caused by the work, and the process of granting municipal consents²⁶ and issuing public property occupation permits. The development of the AGIR application solution was also excluded.

Our work dealt primarily with the following business units:

- The Service des infrastructures du réseau routier (SIRR) (Direction de la gestion du portefeuille de projets, Direction des infrastructures);
- The Service de l'eau (SE) (Division stratégies et pratiques d'affaires);
- The Service de l'urbanisme et de la mobilité (SUM) (Direction de la mobilité);
- The Rosemont—La Petite-Patrie (RLPP) borough (Direction du développement du territoire et des études techniques);
- The Côte-des-Neiges—Notre-Dame-de-Grâce borough (Division des études techniques);
- Le Sud-Ouest borough (Direction des travaux publics, Division du bureau de projet, Direction de l'aménagement urbain et du patrimoine);
- The Ville-Marie borough (VM) (Direction des travaux publics, Direction de l'aménagement urbain et du patrimoine).

Upon completing our audit, we submitted a draft audit report to the managers concerned in each audited business unit for discussion purposes. The final report was forwarded to the management of each of the business units concerned

²⁶ Designates the written approval given by the City, called municipal consent with or without conditions, to allow the UCN to carry out work on the public right-of-way and to permanently occupy the public domain. This consent is recognized by the federal authorities (article 43 of the *Telecommunications Act*) and the Régie de l'énergie as being required for all work on the municipality's public domain.

to obtain action plans and timelines for implementing the recommendations. A copy of the final report was also forwarded for information purposes to the Direction générale, the deputy director-general of the Service aux citoyens, the deputy director-general of Mobilité et attractivité, and the deputy director-general of the Service de concertation des arrondissements, as well as to all borough directors not directly audited so that they could implement the recommendations where warranted.

3. Audit Results

3.1. Governance of the Project Completion Planning and Operational Coordination Processes

3.1.1. Roles and Responsibilities Not Sufficiently Defined

The fact that several players are involved in the project completion planning and operational coordination processes requires that the roles and responsibilities of each of them, including their interrelationships, be clearly defined, documented and communicated to ensure the efficient implementation of the processes.

The roles and responsibilities of the AGIR and COP teams have been documented for internal needs, but without specifying those of the other participants²⁷ involved in the processes.

Specifications and clarifications were made ad hoc, however, in meetings between the AGIR and the DI's Division de la conception des travaux. This is how, during a workshop, the roles and responsibilities of each of the teams (AGIR and Division de la conception) came to be determined for some stages of the integrated project prioritization process. While minutes were sent to participants following the meeting, these roles and responsibilities were not formally documented or shared with other participants.

Similarly, the COP, as part of an internal initiative, performed a diagnosis (end of 2019) that identified issues during work done by the various stakeholders²⁸ in traffic management and operational coordination. For example, during the coordination of projects in a sector covered by the COP, permits can be issued by the borough without prior consultation with the COP. At the time of our audit, the COP had met with the mobility squad to raise awareness about the issues identified in its diagnosis regarding roles and responsibilities. For their part, the boroughs were informed about this during the many meetings that they had with the COP as part of their work.

The COP also issued a written reminder of its responsibilities to the boroughs as part of the post-mortems that it conducted following the examination of operational coordination activities conducted during the year.

²⁷ Planning: applicants for large-scale and integrated projects, Division de la conception des travaux. Coordination: boroughs, mobility squad.

²⁸ Mobility squad, borough, Comité mobilité Montréal, Centre de gestion de la mobilité.

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While the AGIR and the COP carried out various communication activities²⁹ regarding their roles and responsibilities, no official documentation was communicated to the stakeholders with whom they interact.

The applicants we met did not have any documentation regarding their roles and responsibilities related to the activities of these processes. There is no document describing the interrelationships between the various participants in the work planning and operational coordination processes or defining each of their responsibilities. Without complete clarity, it is difficult for applicants to know what is expected of them.

These various situations highlight the need to better define the roles and responsibilities of each participant in these processes and to ensure that they are communicated.

3.1.1.A. Recommendation

We recommend that the Service des infrastructures du réseau routier, in collaboration with the stakeholders, ensure that the roles and responsibilities of all participants involved in the project completion planning and operational coordination processes for roadwork be clearly defined, documented and communicated to facilitate their application.

3.1.2. Inadequate Exchanges of Information

As previously mentioned, the AGIR and the COP share the responsibilities involved in coordinating projects, but at different points in time. At the start of each year of completing projects on the ground, the AGIR passes on programming information to the COP, which enables the two teams to discuss the planned projects and proposed coordination measures. However, once coordination on the ground has concluded, there is no other mechanism to enable the two teams to discuss the concrete vision of the application on the ground of the measures raised by the AGIR.

The little exchange of information between the two teams means that issues raised during the work are not always shared, leading to them not being addressed, and thus possibly limiting improvements to mobility on the ground.

3.1.2.A. Recommendation

We recommend that the Service des infrastructures du réseau routier adopt a mechanism for exchanging information between the teams responsible for coordination to enable them to discuss the issues raised during the work and ensure that they are dealt with.

²⁹ Including presentation of the 2022 programming to the boroughs by the SIRR.

3.2. Process for Capturing All Projects

3.2.1. Inadequate Identification of all the City's Projects that Have an Impact on Public Roads

To produce an effective completion plan for the central departments' projects, it is important that the process capture all the projects that will be carried out on the territory³⁰ in order to integrate, coordinate and schedule them to ensure the mobility of users.

As part of its annual programming process, the AGIR, in collaboration with the applicants who have roadwork needs, receives the list of standard projects for integration, along with the NIPs. It also receives information on large-scale projects³¹ from the divisions in charge, projects carried out by the SE and certain borough projects.³² While the AGIR is not responsible for ensuring the planning of these other projects, it takes them into consideration as part of the mobility analysis to coordinate completion of the projects. Finally, the AGIR consults the Info-UCN tool to make certain to identify other projects not communicated to it that can have an impact on its programming.

In 2013, the City adopted the administrative framework titled "*Directive d'utilisation d'info-RTU*** Réseaux techniques urbains*";³³ which applies to all the City's municipal services and boroughs when planning or carrying out roadwork that could cause significant impediments to the public right-of-way. Data should be entered immediately, as soon as the information is available. Failure to do so could result in the projects that are not entered being omitted from the work planning or mobility analysis.

While all the audited boroughs said that they planned their work, none shared this planning with the AGIR. They did mention, however, that they entered it in the Info-UCN. This could explain the reasons for several reminders that the AGIR had to send to the VM borough to gain knowledge of the work projects planned in 2021 and thus be able to take them into consideration in the mobility analyses and programming. The AGIR proceeded in this fashion since the VM borough has several projects that have an impact on streets.

Although a directive regarding the Info-UCN exists, tests conducted as part of our audit based on information collected from borough plans and the COP show that some boroughs in our selection failed to enter all their work projects in the Info-UCN. For example, planned projects not found in the application include curb extensions,³⁴ a bicycle path, a pedestrian street, and safety work to be carried out near schools in the VM borough and/or the RLPP borough.

³⁰ To the extent that the City can obtain information on external partners' projects.

³¹ Major projects of the Direction de la mobilité and the Direction de l'urbanisme of the SUM, as well as major projects of partners and of the Service des grands parcs, du Mont-Royal et des sports.

³² Those assigned by the Service de l'eau artériel (based on section 85) or local.

³³ Under review during the audit.

³⁴ Ontario/Sanguinet (2021) in the VM borough and on the corner of 13th and 14th avenues/Soubiros (2022) in the RLPP borough.

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It is not possible to enter building projects that can have an impact on streets, such as private developers' projects (e.g., barred sidewalks or street closure), into the Info-UCN application. The AGIR is only informed of these projects once the borough has issued a permit for the temporary occupation of the public domain. It is too late at that stage, since the AGIR is no longer in the planning phase, and these projects risk having an impact on other projects that were previously planned. If the AGIR had been informed sooner, i.e., during the process to obtain the building permit, the planning of some of the City's projects would have been different, since requirements could have been included when the permit was issued to ensure better mobility for users.

To improve planning in the key sector of the VM borough, the AGIR sent a letter to the borough at the end of 2020. The letter outlined certain aspects could be improved, as well as some recommendations to help with future planning, in particular the absence of a process automatically advising the AGIR immediately of steps being taken by property developers wanting to carry out a project, and the absence of key participants able to guide the AGIR on urban development projects during planning meetings. In this same letter, the AGIR reminds the borough of the importance of entering information in Info-UCN and keeping it up to date. No follow-up was done by either side, however, after the letter was sent.

In addition to the boroughs that did not communicate all their projects to the AGIR, the audit also identified other projects planned by the central departments that had an impact on streets, without the AGIR being informed. This was the case with the large-scale construction project involving the Rosemont aquatic complex, which resulted in the complete closure of a section of Bellechasse Street in 2021. Although mobility conflicts and mitigation measures were mentioned when the project was presented to the capital project and program governance committees³⁵ in 2019, the AGIR was never informed of the project before this audit. In addition, the oversight process for large-scale projects stipulates that, when a project has an impact on the public domain or represents a mobility issue, steps must be taken to inform the AGIR. Since this mechanism was put in place, the AGIR has not been contacted on any large-scale project.

Three NIPs, such as the valve chambers of the SE, were also not submitted to the AGIR for completion in 2021,³⁶ although they were part of their internal planning. Despite this oversight, the work had to be completed in 2021. The AGIR was informed of the omission of one of these projects and felt obliged to redo a mobility analysis and submit traffic requirements to enable the work to be carried out. In the case of the other two valve chamber projects, the AGIR was never informed of the work. It was the COP that discovered these two projects during its activities and had to harmonize them with the other projects in the sector.

³⁵ Since this project qualifies as large-scale based on the criteria of the *Cadre de gouvernance des projets et programmes de la Ville*, it has an obligation to follow this framework's governance process.

³⁶ On Notre-Dame Street near Georges V at the border between Montréal-Est and the Mercier–Hochelaga-Maisonneuve borough and on Papineau and Iberville streets in the Plateau-Mont-Royal borough.

While these were NIPs, the AGIR needed to be aware of them to take them into consideration in mobility analyses to ensure coordination on the ground. The AGIR cannot delay their completion but will be able to adjust the completion sequence of the work that it is planning to avoid traffic issues with these projects.

While the current programming process captured a large portion of the City's projects to be completed, it does not enable the AGIR to identify all of them. This incomplete picture of projects can lead to conflicts during completion of the work and mobility issues, putting increased pressure on the COP's activities and causing discontent among users.

3.2.1.A. Recommendation

We recommend that the Service des infrastructures du réseau routier adopt a mechanism to identify all infrastructure projects planned by the central departments that could have an impact on the street to enable it to have a view of all upcoming projects and allow for better planning of the projects.

3.2.1.B. Recommendation

We recommend that the Service des infrastructures du réseau routier, in collaboration with one or several boroughs, put in place a mechanism, as part of a pilot project, to capture all work in the borough(s) in a timely manner to improve the planning of projects on the territory.

3.2.1.C. Recommendation

We recommend that the Service des infrastructures du réseau routier, in collaboration with one or several boroughs, establish a mechanism, as part of a pilot project, to identify and obtain information about private promoters' or institutional off-street roadwork ahead of start-up so that it can take this work into consideration in planning the City's projects.

3.2.1.D. Recommendation

We recommend that the Service des infrastructures du réseau routier remind all central departments and boroughs of the Info-UCN's usage guideline and put in place the monitoring mechanisms needed to ensure that complete and updated information on planned projects is entered.

3.3. Process Based on a Structured Analysis

The aim of the audit was to examine the steps in the planning and coordination processes to ensure that they are supported by mobility analyses that make it possible to harmonize the completion of work on the territory. While the audit did not cover the steps in the operational coordination process, we looked at the process that helps determine the choice of sectors that the COP will cover as part of its work, to ensure that there is continuity in the planning and coordination of roadwork on the City's territory.

3.3.1. Ineffective Process for the Yearly Programming of Projects

The yearly programming of projects is based on a process that was officially defined in 2017. The annual programming cycle begins with receipt of the list of required work from the DRE and the Division de la gestion stratégique des actifs of the SUM.

To know whether these work needs can be accepted for integration, the AGIR conducts a mobility analysis, which consists of verifying whether:

- The section where the work will take place is under a moratorium (Integration Rules³⁷ that the City adopted to avoid having to work several times on the same sections within a short period of time);
- The project does not create major mobility issues by being added to other work already under way in the sector.

These analyses draw on information obtained in the Info-UCN and on the AGIR's knowledge of projects in the analyzed sector. The results of these analyses, as well as the comments, are recorded right on the lists of needs received. This mobility analysis takes into consideration the projects of the other central departments, such as those carried out by the SE (Direction de l'épuration des eaux usées (DEEU)/Direction de l'eau potable (DEP)), those of bridges and tunnels, and projects submitted as part of large-scale project programming, including those of the SUM and of the Direction des grands projets partenaires (DGPP). The goal is to coordinate all the work and ensure mobility. However, as in the case of some standard projects, it happens that the AGIR must ask the DEEU/DEP to postpone a project because it will impede mobility. The decision is taken in collaboration with the SE to evaluate the urgency of the work and the impact of postponing it.

³⁷ These rules form a management framework that dictates integration or coordination needs based on the type of work to be carried out on the roadway (e.g., reconstruction or rehabilitation of an aqueduct).

Once the projects have been analyzed, they are entered in a document that is shared with the City's other applicants to begin integrating their needs. Once the projects are accepted, the process continues with the prioritization of the projects to be carried out. During workshops³⁸ with the applicants, all the projects are discussed to prioritize them³⁹ and retain those that will be carried out based on each applicant's budgets. The programming exercise ends when consensus is reached with all the parties, and the programming of standard projects is considered final after it has been presented to the elected officials responsible for water infrastructure, urban planning and mobility. The AGIR then passes it on to the pre-project and design teams of the Direction des infrastructures.

In tandem with the standard project programming exercise, the AGIR analyzes the mobility of the NIPs (more than 1,000 annually) submitted for completion the following year. The results of these analyses enable the AGIR to establish the list of projects that can be carried out based on the various constraints and mitigation measures that it recommends. These proposed measures involve either coordinating the work with the other projects or scheduling the work over time.

According to the AGIR, the applicants and the DI's pre-project and design teams, the programming of integrated projects must be finalized ideally two years before the start of the work to enable the various teams to complete all the prerequisite steps prior to deployment of the projects on the ground, especially the preparation of requirements for the pre-project and design phase. To ensure that they reach their goal, they adopt a timeline⁴⁰ showing the various steps to be completed quarterly (see Appendix 5.3.). Table 2 presents the interval in months between the start of programming, presentation to elected officials, and the timeline.

³⁸ Approximately four meetings a year.

³⁹ Priority projects are finishing work, burying of underground lines, bicycle paths, and IPs (priority 1 project of the DRE and priority 1 or 2 project of the SUM, among others).

⁴⁰ October 2021.

TABLE 2

Discrepancies in Month Between the Start of Programming, Presentation to Elected Officials and Timeline

Programming	Date of first meeting of applicants (start of programming)	Number of months between the first meeting of applicants and presentation to elected officials	Date of the presentation of programming to elected officials	Anticipated date for final programming based on the timeline (months)	Delay between the anticipated date and the presentation to elected officials (months)	Time between the presentation to elected officials and completion of the work on the ground (months)
2019	n/r	n/r	03.15.2018	01 to 03.2017	12	12
2020 revised	n/r	n/r	11.07.2019	01 to 03.2018	20	4
2021 Prior to post-ponement of the work	12.2019	4	04.06.2020	01 to 03.2019	13	11
2022	10.2020	7	05.12.2021	01 to 03.2020	14	10
2023	08.2021	6	Targeted period: 02.22	01 to 03.2021	11	13
2024	12.2021	n/a	n/a	01 to 03.2022	n/a	n/a

Source: Table produced by the City's BVG based on data compiled during our audit.

n/r: Not requested as part of our audit.

n/a: Not applicable since the work is not completed.

While the programming exercise complied in large part with the steps of the process established in 2017, and mobility analyses were performed, our work highlighted that the operation was not optimal since it did not allow for so-called final programming to be produced 2 years before work is carried out on the ground (e.g., final programming in 2021 for completion in 2023). Part of the delay in the planning calendar is attributed to unforeseen events experienced in 2020 (pandemic) and 2021 (scientists' strike). The other part was caused by a lack of thoroughness in transmitting applicants' information, which prevented starting the programming exercise earlier to produce programming that could be final two years before completion of the work.

Some reasons that explain these delays include:

- Late submission of some inputs (e.g., bicycle path projects for 2022 were received by the AGIR at the end of November 2020 and those for 2023 at the end of September 2021);
- Delays incurred in updating some information (e.g., the DRE took a month to update the projects retained for 2023, despite the fact that the AGIR reminded them on several occasions);
- Time required to perform new mobility analyses after the projects currently being programmed were added (e.g., a project of the DRE was added in November 2020 for completion in 2022).

While each of these delays may have seemed minor, once combined they reduced the time available to prepare the pre-project prerequisites, thereby putting the completion of planned projects in jeopardy. Consequently, delays in the production of the 2022 programming resulted in the prerequisites of some projects not being produced in the time needed because of a lack of capacity, which caused 11 planned standard projects to be put on the list of over-programmed projects.⁴¹

As well, for the 2023 programming, among the 40 or so projects proposed by the DRE for which a mobility analysis was performed by the AGIR, only some 15 projects were accepted since the DRE/SUM was certain of being able to provide the necessary prerequisites for completion of the projects in time. The other non-prioritized projects were carried over to the following year. Thus the AGIR performed work/analyses that served no purpose, which is inefficient in such a process.

⁴¹ Over-programming consists of projects that will not be completed within the scheduled programming unless they replace standard planned projects that will ultimately not be completed.

3.5. Management of Public Roadwork—Integrated Planning and Coordination Component

The process used to perform a feasibility analysis of NIPs in the year preceding their completion was also inefficient. The AGIR requires that projects (more than 1,000 annually) be submitted in February to give it time to perform the mobility analysis and make recommendations. However, some applicants are late in submitting the list of their projects. For example, for the 2022 planning exercise, lead service line projects were received around the month of June 2021, and valve chamber projects in October after the AGIR sent reminders. Given the number of lead service line replacement projects and the fact that the work takes several weeks, these projects have a major impact on mobility. The sooner they are known, the better the coordination will be with the other work in the area. It is more efficient for the AGIR to receive all the lists of NIPs at the same time, as early as possible in the year, to allow for better analysis and coordination of the projects while leaving more time to prepare specifications. Receiving the NIPs at different times involves performing analyses again every time.

Consequently, despite the time invested by the stakeholders in preparing the annual programming, its actual rollout does not allow for project planning within timelines that will ensure their completion. Analyzing the reasons for delays during production is essential, therefore, to take the corrective measures required.

3.3.1.A. Recommendation

We recommend that the *Service des infrastructures du réseau routier*, in collaboration with the *Service de l'eau* and the *Service de l'urbanisme et de la mobilité*, review the critical dates of the various steps involved in the programming process and ensure that they are met to facilitate the completion of planned projects.

3.3.2. Financial Loss Incurred for Non-Compliance with Requirements Linked to a Subsidy Program

In January 2019, the governments of Canada and Québec implemented a new financial assistance program titled “*Fonds pour l'infrastructure municipale d'eau (FIMEAU)*” to help municipalities comply with new public health and environmental standards and ensure the sustainability of their infrastructure.

This program lies with the *Ministère des Affaires municipales et de l'Habitation*. The terms and conditions of this program provide for the City to receive maximum funding of \$210.96M between June 25, 2019, and October 31, 2027. To benefit from these subsidies, contracts for the completion of projects may not be awarded prior to the acceptance by both levels of government of the programming of the work planned by the SE.

During the first call for projects, 11 work programs totalling \$84M were submitted by the SE to the governments. This work, mainly the rehabilitation of sewer mains, received approval from the provincial government on May 19, 2020, and from the federal government on June 16, 2020. Nevertheless, in the case of some subsidized rehabilitation work, the City awarded contracts prior to approval

of the programming by the governments, thereby invalidating the subsidy agreements. The City was thus deprived of a \$10.6M subsidy. While this amount was returned to the City's FIMEAU program envelope and will be available for future calls for projects, the City had to finance this work from its own funds, which was not planned at the start.

In January 2021, without oversight by the DRE, subsidies amounting to \$1.4M, also intended for rehabilitation projects, would have been lost if the AGIR had not reversed its decision. The AGIR had initially refused the completion of these projects for reasons of mobility issues or a moratorium.

The AGIR said that it had not been informed of the subsidized projects when conducting mobility analyses for the projects submitted by the SE.

Consequently, while there is a control in place within the SE to catch these problems, this control kicks in after the AGIR has completed its mobility analyses and refused the work. This is not optimal, since the AGIR must perform mobility analyses again for the same projects and submit mitigation measures.

3.3.2.A. Recommendation

We recommend that the Service des infrastructures du réseau routier establish a mechanism as part of the yearly programming to identify subsidized projects, prioritize them and ensure that the program requirements are met to take advantage of the amounts planned for the program.

3.3.3. Mobility Corridors Impeded Despite Instructions Set Out by the City

As previously mentioned, the City has defined mobility corridors on its territory to limit roadwork and impediments and ensure the mobility of users. Only emergency work, some property development projects and ad hoc projects causing minor disruptions⁴² carried out by the City and the UCNs are permitted. To ensure that the boroughs responsible for issuing permits for the temporary occupation of the public domain comply with work requests on these corridors, a validation process for emergency work requests was put in place by the SIRR.

The boroughs were invited to familiarize themselves with the new process during virtual meetings in March 2021, and the SIRR sent a note to all boroughs in July 2021, asking them to mobilize their teams to apply it. As part of our audit, we found that three of the four boroughs we met mentioned that they were not aware of this process. In addition, based on statistics obtained from the COP for the boroughs that it covers, several permits issued in 2021⁴³ were for work in these corridors (see Table 3). Without knowing the reason for each of these permits, one can wonder whether they were all related to emergency work.

⁴² Work limited in space and time with no major impact on traffic or the occupation of the public domain.

⁴³ For the period from April to October, since production of the AGIR-Permis platform.

TABLE 3

Number of Permits Issued on Certain Mobility Corridors for the Main Boroughs Covered by the Équipe de Coordination Opérationnelle

Main boroughs covered by the équipe de coordination opérationnelle	Number of permits issued on certain mobility corridors (up to October 2021)
Ville-Marie	4,549
Le Sud-Ouest	580
Rosemont—La Petite-Patrie and Mercier—Hochelaga-Maisonneuve	1,076
Plateau-Mont-Royal	727 ⁴⁴
Ahuntsic-Cartierville	50
Total	6,982

Source: Table produced by the City's BVG based on data received from the COP.

In view of the elements raised, it is clear that the process for validating emergency work requests is not known or not understood by those responsible for issuing permits for the temporary occupation of the public domain. Consequently, unauthorized impediments occur on mobility corridors, hindering the mobility of users.

3.3.3.A. Recommendation

We recommend that the Service des infrastructures du réseau routier, in collaboration with the boroughs, make the validation process for emergency work requests known to those responsible for issuing temporary permits to occupy the public domain within mobility corridors and oversee its application to ensure mobility in these corridors.

3.3.4. Absence of a Structured Process to Support the Choice of Boroughs Served

While the AGIR's annual project planning process takes into consideration all the City's planned projects on the entire territory of Montréal, the COP's activities are concentrated mostly on key sectors⁴⁵ where the needs are greatest. These sectors are those identified by the AGIR based on certain criteria during the annual programming exercise, but it happens that the COP identifies other sectors through the work done by its team Gestion des impacts et maintien de la circulation. Such was the case with the Laurentien/Lachapelle sector

⁴⁴ Does not include those issued by the former permit-granting application (January to March 2021).

⁴⁵ Sector that has a high concentration of roadwork projects that involve several internal/external partners, with major mobility issues.

in the Ahuntsic-Cartierville borough where, according to the COP, there was a major concentration of work that could have an impact on the crossing between the north shore and the Island of Montréal. Thus, it is through key sectors that the COP identifies the boroughs that it will cover. In addition, it may at times provide sporadic guidance to a borough, as was the case with Saint-Laurent borough, which wanted to measure the interactions between its work and the work in the Laurentien/Lachapelle sector.

In 2021, nine of the City's 19 boroughs were supervised by the COP, either completely (100% coordination of the work carried out on the borough's territory, e.g., the Plateau-Mont-Royal borough) or partially, for projects in key sectors of the borough. In the latter case, e.g., the LaSalle borough, work supervised by the COP was limited to the key Angrignon key sector.

Although being a key sector is a selection criterion for the COP, the Saint-Léonard and Anjou boroughs, which are part of the key Jean-Talon sector identified by the AGIR, are not covered by the COP. Until very recently, only the key sector affected by the Blue Line project of the Société de transport de Montréal was covered by the COP, prior to the mobility mandate of the project being brought under the DGPP. Having lost resources with this reorganization, the COP is no longer able to cover this sector.

Currently, the choice of sectors/boroughs served and the type of coverage offered depends primarily on the COP's experience and knowledge of the environment rather than on a formal documented methodology with established criteria. Without a formal analysis, there is a risk that some key sectors will not be considered and that traffic issues will not be addressed. This is the opposite of what the City intended when it created the AGIR and COP teams.

3.3.4.A. Recommendation

We recommend that the Service des infrastructures du réseau routier adopt a method to evaluate coordination needs on the entire territory, prioritize them and ensure guidance based on their criticality for all the City's boroughs.

3.4. Absence of Performance Indicators

To know whether a process is effective, one must be able to measure it. By defining and constantly monitoring indicators, it is possible to identify the trends, limitations and strengths of a process and to implement solutions to improve it. Using a performance indicator to measure whether results have been achieved relies upon a combination of the objective, the indicator and the target.⁴⁶ These elements form the basis for constructing an adequate performance indicator.

⁴⁶ Guide sur les indicateurs – Secrétariat du Conseil du trésor – Government of Québec.
https://www.tresor.gouv.qc.ca/fileadmin/PDF/cadre_gestion/guide_indicateur.pdf

Project Completion Planning Process

The AGIR currently calculates and monitors two indicators related to the project completion planning process, i.e., the mobility index and the budget for work planned by City program. The basic elements needed to construct a performance indicator are not in place for all the indicators monitored by the AGIR.

The mobility index is an indicator that was put in place in 2020, with the goal of quantifying the mobility of each project based on defined criteria, with a view to suggesting the postponement of a series of projects included in the 2021 programming to provide a break to citizens during the pandemic. This indicator is used today to identify projects that could be postponed at the request of elected officials during the completion year.

As for the budget indicator for work planned by program, the AGIR uses it to ensure that the projects accepted in the programming do not exceed the budgets available to the applicants. While the applicants are responsible for their budgets and for deciding on the level of investment that they want to achieve, the AGIR ensures that these budgets are not exceeded.

The results of these indicators are presented to elected officials for information purposes.

Therefore, none of these indicators make it possible to evaluate the performance of the work completion planning and real benefits on the mobility of citizens as part of this work.

Operational Coordination Process

As previously stated, the COP's role is to ensure the coordination of impediments on the municipal network to enable the completion and cohabitation of the roadwork. Although the COP prepares reports with the goal of improving its coordination activities with certain boroughs, it has not developed and adopted performance indicators that enable it to measure whether these objectives have been achieved.

3.4.A. Recommendation

We recommend that the Service des infrastructures du réseau routier develop and adopt performance indicators to measure the effects of work planning and coordination on traffic flow and the mobility of citizens and make the necessary adjustments.

4. Conclusion

Overall, we concluded that the approach deployed by the Ville de Montréal (the City), through the implementation of project planning and coordination processes, is not completely effective in providing the City with a proactive view of all the roadwork that could impact its road system and allowing it to minimize the impact for users.

Each year, based on the priority work needs of the various applicants and the analysis of their impact on mobility, the Division Assistance à la gestion des interventions dans la rue (AGIR) establishes the programming of the standard integrated projects to be completed. It also coordinates the work planned by the City, boroughs and external partners and, where mobility issues are identified, suggests mitigation measures to facilitate mobility during the completion of the work. However, tests that were conducted show that the actual work does not identify all the on- and off-road projects to be carried out that will have an impact on public roads. This incomplete view of the projects fails to ensure optimal planning and coordination of roadwork prior to its completion, which could lead to a negative impact on the mobility of users.

As well, delays incurred throughout the implementation of the planning process leave only a very short timeframe to prepare the design of the projects, which does not ensure completion of all these projects. The effect is that the 2022 and 2023 scheduling of projects initially planned or proposed was postponed because the prerequisites needed for their completion could not be provided in time. This could raise some concern about the impact on the City's infrastructure of fewer projects initially considered priorities by the applicants being completed.

More specifically, below are the major findings we drew regarding the evaluation criteria:

Evaluation Criterion – Governance

Only the roles and responsibilities of the teams responsible for planning and operational coordination (COP) have been documented. Without a clear definition, it is difficult to know what is expected of all the participants involved in the process. In addition, there is no documentation describing the interrelationships between the various participants in the planning and operational coordination processes, as well as the definition of the responsibilities of each team.

There is no feedback mechanism for the two coordinating teams to discuss the field implementation of mitigation measures proposed at the time of project planning.

Evaluation Criterion–Identification of All Projects and Events for a Complete Picture of Impediments

The planning and coordination process does not identify all the projects that have an impact on public roads.

The tests performed revealed that some of the audited boroughs' projects were not entered in the Info-UCN application, even though a directive to do so exists.

Not all off-road projects are captured at the time of planning. Some projects were not identified because they were known only once permits for occupation of the public domain were issued and construction work was started. As well, one of the City's large-scale projects that had an impact on the street was not communicated to the AGIR.

Evaluation Criterion–Planning and Coordination of Roadwork Based on a Structured Analysis of the Work Involved

The planning and coordination processes rely on mobility analyses aimed at organizing projects prior to undertaking them. When constraints are identified, mitigation measures are proposed to facilitate the mobility of users.

The planning and coordination processes as currently implemented do not make it possible to produce an annual plan within the timelines to ensure the completion of all the planned projects.

There is no mechanism in place at the time that non-integrated projects are analyzed to identify those projects attached to a subsidy to prioritize their completion despite mobility constraints. The City was thus deprived of a subsidy of almost \$11M because it did not comply with the program requirements when awarding contracts for completion of the subsidized work.

Permits for the temporary occupation of the public domain were issued on mobility corridors by the boroughs despite a directive aimed at keeping these corridors free of impediments.

The process for supporting the selection of sectors/boroughs covered by the coordination work of the COP is not based on any formal documented analysis.

Evaluation Criterion–Performance Indicators

The indicators in place do not allow for adequate monitoring and measurement of the efficacy and performance of the processes for planning the completion of projects and the operational coordination of the roadwork.

5. Appendices

5.1. Objective and Evaluation Criteria

Objective

To ensure that the Ville de Montréal (the City) has a structured approach that enables it to have a proactive view of all the roadwork that could have an impact on its road system, to minimize impediments and the impact on its citizens.

Evaluation Criteria

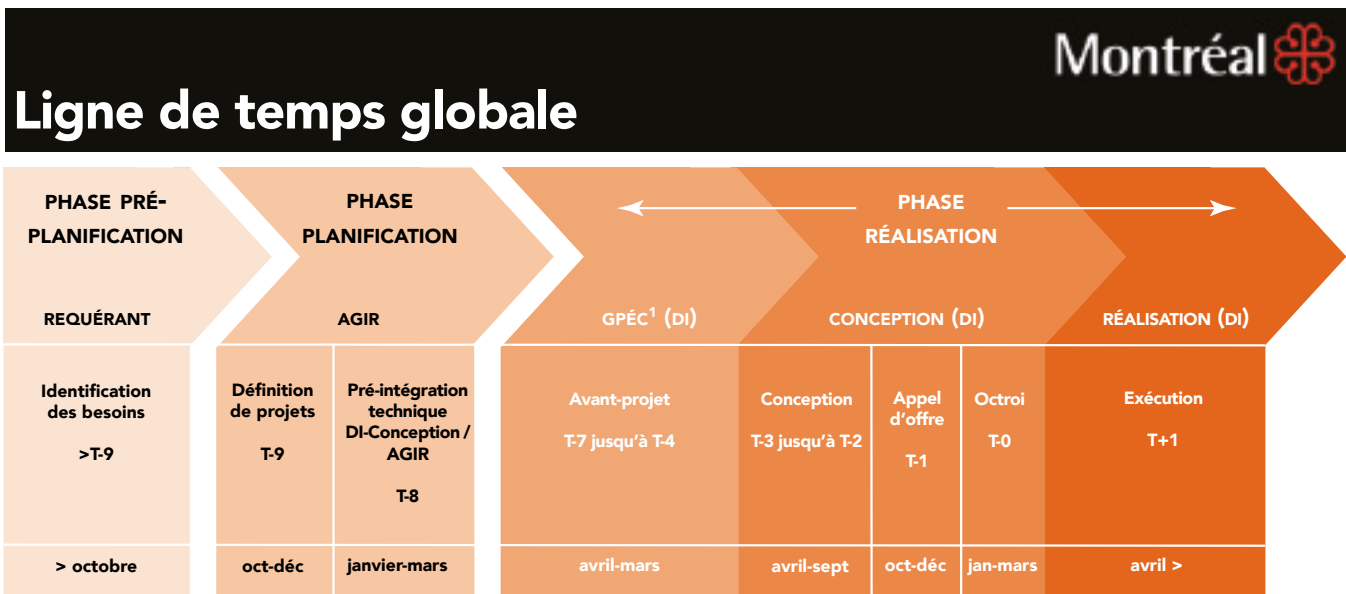
- Oversight of the planning and coordination of work on all the City's territory is clearly defined, communicated and applied to foster the efficiency of these activities.
- The work planning and coordination processes capture all the roadwork and events on the territory to provide a complete representation of the impediments.
- The work planning and coordination processes are based on a structured analysis of the work to harmonize its completion on the territory and to minimize impediments for users.
- The City has developed and adopted indicators that enable it to evaluate its performance in terms of roadwork planning and coordination to minimize the impact on mobility on its territory.

5.2. Units Responsible for Integrating and Carrying Out Projects

Applicants	Type of project	Project description
<p>Service de l'eau</p> <ul style="list-style-type: none"> • Direction des réseaux d'eau <p>Service de l'urbanisme et de la mobilité</p> <ul style="list-style-type: none"> • Gestion des actifs routiers et cyclables 	<p>Standard integrated projects</p>	<p>Combination, in a single project, of several work projects on the infrastructure of different applicants within and external to the City.</p> <p>Examples :</p> <ul style="list-style-type: none"> • Reconstruction of sewers and aqueducts; • Repairs to streets and sidewalks; • Development of bicycle paths.
	<p>Non-integrated projects</p>	<p>Projects involving only one type of work</p> <p>Example :</p> <ul style="list-style-type: none"> • Pavement repair program involving levelling and resurfacing; • Rehabilitation of aqueducts/sewers program, lead surface line connections.
<p>Internal partners (major projects)</p> <ul style="list-style-type: none"> • Direction de la mobilité • Direction de l'urbanisme • Direction des grands projets partenaires • Service des grands parcs, du Mont-Royal et des sports 	<p>Large-scale projects</p>	<p>Combination, in a single major work site, of several work projects on the infrastructure of different applicants within and external to the City by establishing a consistent overall view of sector development.</p> <p>These units are responsible for integrating their project.</p>
<p>Service de l'eau</p> <ul style="list-style-type: none"> • Direction de l'eau potable • Direction de l'épuration des eaux usées <p>Boroughs</p>	<p>Standard integrated projects</p> <ul style="list-style-type: none"> • Direction de l'eau potable <p>Boroughs Non-integrated projects</p> <ul style="list-style-type: none"> • Direction de l'épuration des eaux usées 	<p>Direction de l'eau potable/boroughs</p> <ul style="list-style-type: none"> • Combination, in a single work project, of several work projects on the infrastructure of different applicants within or external to the City. <p>Example :</p> <ul style="list-style-type: none"> • New drinking water mains (Direction de l'eau potable). <p>These units are responsible for integrating their project.</p> <p>Direction de l'épuration des eaux usées</p> <ul style="list-style-type: none"> • Project to upgrade the wastewater system. Due to its nature, integrating other work is difficult <p>Example :</p> <ul style="list-style-type: none"> • Rehabilitation of retention work or sewer mains.

	YEAR-2	YEAR-1	YEAR-0	
	Division Assistance à la gestion des interventions dans la rue (Service des infrastructures du réseau routier)		Équipe de coordination opérationnelle/ boroughs	Carrying out of the work
	<p>Plans the integration of applicants' needs to create standard integrated projects.</p> <p>Coordinates work with the other projects of internal/external partners (based on mobility analyses, suggests mitigation measures to facilitate mobility).</p> <p>Prioritize projects in the following order:</p> <ul style="list-style-type: none"> • Finishing work; • Burying of underground lines; • Bicycle path; • Standard integrated projects. 		<p>Équipe de coordination opérationnelle</p> <ul style="list-style-type: none"> • Coordinates projects in key sectors/boroughs where the needs are greatest; • Recommends mitigation measures when mobility issues arise; • Follows up on the ground. <p>Boroughs</p> <ul style="list-style-type: none"> • Coordinates what the équipe de coordination opérationnelle does not cover. 	<p>Direction des infrastructures of the Service des infrastructures du réseau routier.</p>
		<p>Draws up the list of non-integrated projects (following mobility analyses, suggests mitigation measures to establish the order of work to be completed).</p>		
				<p>Depending on the project:</p> <ul style="list-style-type: none"> • Direction de l'eau potable; • Direction de l'épuration des eaux usées; • Boroughs.

5.3. Timeline



¹ Gestion de projets et économie de la consultation.

Source: Assistance à la gestion des interventions dans la rue (AGIR).