

[This is an English version of the decision originally submitted in French to Montréal's City Council on October 26, 2015]



**Suspension of the Contract for Road Levelling Work,
Laying of Asphalt and Reconstruction of Curbs and
Sidewalks (PCPR) in the Montréal-North and Anjou
Boroughs (Call for Tenders 320201)**

(section 57.1.10 of *Montréal's City Charter*)

September 22, 2015

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1. The Facts

The municipal administration is responsible for overseeing the work carried out under the “Programme complémentaire de planage-revêtement” (complementary levelling and paving program) (hereinafter: PCPR 2015). On September 17, 2015, the Office of Inspector General (hereinafter: OIG) observed serious breaches during the carrying out of a contract awarded under this program.

It is based on the facts exposed in this report that the Inspector General has decided to suspend the contract awarded to Demix Construction, a division of Holcim (Canada) Inc., for road levelling work, laying of asphalt and reconstruction of curbs and sidewalks (PCPR) in the Montréal-North and Anjou boroughs (public call for tenders 320201).

2. The Inspector General’s Mandate

On February 18, 2015, the municipal administration mandated the Inspector General to actively monitor the PCPR 2015 on an ongoing basis. Given the consecutive awarding of several contracts for the implementation of this program and the fact that the Inspector General shared the administration’s concerns in this regard, the OIG therefore accepted the mandate.

3. The PCPR

The Infrastructures, Roads and Transports Department (Service des infrastructures, de la voirie et des transports) (hereafter: SIVT) provides the boroughs with an array of services for the purpose of implementing the local road network maintenance program, i.e., the PCPR 2015, in accordance with section 85 of *Montréal’s City Charter* (CQLR c. C-11.4). Under the Three-year Capital Expenditures Program for 2015-2017 (Programme triennal d’immobilisations 2015-2017), the SIVT was allocated a \$50 million budget for 2015 to implement this program and carry out levelling and paving work.

The purpose of the PCPR is to promptly improve the overall state of the city’s local road network by extending the useful life of several streets by anywhere from seven (7) to twelve (12) years and addressing the maintenance deficit, according to the decision-making summary¹ presented to the municipal administration in support of the adoption of this program.

The boroughs determine the streets that require levelling or maintenance work in accordance with the program’s parameters, and priority is given to roads whose overall condition (or performance index) displays partial degradation affecting users. The preparing of the plans and specifications, the calls for tenders, the awarding of the contracts and the execution of the projects are handled by firms retained by the city through professional service contracts.

¹ Decision-making summary in support of resolution CM14 1035 dated October 27, 2014, adopted by the Montréal’s City Council.



4. Project Design

According to the information received from the SIVT's managers, AXOR Experts-Conseils Inc.² was the firm responsible for designing the projects falling under the PCPR 2015. It was namely responsible for conducting soil analyses by way of core sampling and drainage analyses for all streets covered by the program in order to determine the feasibility of levelling and resurfacing streets.

Once feasibility was established, AXOR engineers were required to finalize the design, technical specifications and all necessary elements of each call for tenders. The firm's engineers were also responsible for answering technical questions during the bidding process, as well as during the performance of the work.

5. Oversight Contract

Given the breadth of the program and in order to achieve the established objectives, the SIVT retained the professional services of an engineering firm to assist with road work management and monitoring, traffic flow and impact management, quality control and worksite communications.

On March 26, 2015, the Agglomeration Council awarded a contract to SNC-Lavalin Inc. for the on-demand supply of professional services for the management and monitoring of work conducted under the SIVT's levelling and paving program. SNC-Lavalin Inc. agreed to provide the city with the required professional services in exchange for a maximum sum of \$2,974,725.18 including taxes, in accordance with the documents of public call for tenders 14-14106 as well as the terms and conditions stipulated in the draft agreement (resolution CG15 0147).

Under said agreement, SNC-Lavalin:

- agrees to [TRANSLATION] “not act in such a way as to adversely affect the City's rights and prerogatives” (section 5.3);
- [TRANSLATION] “ensures (...) full oversight of the work as per plans and specifications” (section 7.2.2.1);
- [TRANSLATION] “assigns (...) to the worksite qualified personnel capable of providing the required technical advice for the proper execution of the work and able to inspect the work, including an engineer with at least five (5) years of relevant experience” (section 7.2.2.2);
- ensures (...) that the work is carried out according to standard practices and the plans and specifications.

These obligations will be discussed later on in the report.

² The professional service contract is awarded under the 36-month framework agreement (call for tenders 14-13372) dated May 1, 2014, according to resolution CG14 0214 of the Agglomeration Council.

6. Levelling and Laying of Asphalt Contract (Call for Tenders 320201)

On June 15, 2015, Montréal's City Council awarded a contract to Demix Construction, a division of Holcim (Canada) Inc., for road levelling and laying of asphalt work as well as the reconstruction of curbs and sidewalks (PCPR) in the Montréal-North and Anjou boroughs. This contract represents a total expenditure of \$3,459,339.65 (320201).

7. Bid

Demix Construction was awarded this contract seeing as it was lowest compliant bidder among eight (8) bidders. The OIG examined this bid and was quickly alerted by an inconsistency involving the price tendered for surface repair and partial-depth repair.

For these two (2) items, Demix Construction tendered a unit price of \$5.00 per ton. The second bidder entered a price of \$100.00 per ton for surface repair and \$180.00 per ton for partial-depth repair. As for the city, it estimated these items at \$129.50 per ton and \$213.41 per ton respectively.

It is also interesting to note that Demix Construction, in another PCPR bid filed in response to a call for tenders issued by the St-Leonard borough (320301), proposed a unit price of \$251.50 for partial-depth repair.

It is on the basis of the unit price of \$5.00 per ton tendered for both surface and partial-depth repairs that the OIG decided to conduct an onsite inspection.

8. Observations

On September 17, 2015, the OIG sent an engineer to visit the worksites on Monselet Street and Prieur Street (contract 320201). The visit began at around 10:00 a.m. and lasted about two and a half hours.

The OIG observed that the Demix Construction team was paving Monselet Street while levelling work was being performed on Prieur Street.

The goal of this visit was to confirm that surface and partial-depth repairs were being performed.

9. Requirements of the Specifications – Road Work

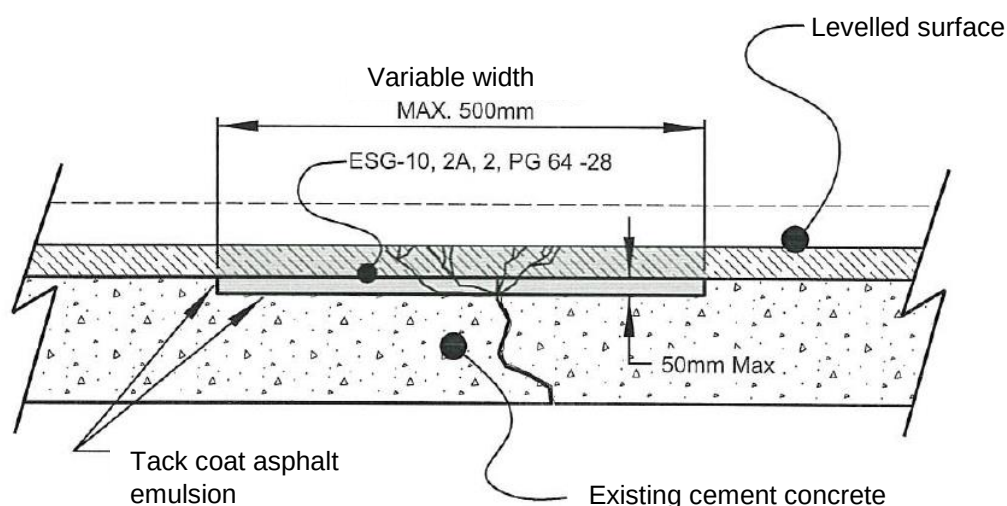
Section 1 of the road work specifications stipulates that surface and partial-depth repairs must be performed where required. Defective surfaces are defined in Bitume Québec's good practice guide (*Guide de bonnes pratiques de Bitume Québec*) as areas presenting defects associated with a low load-bearing capacity (for example, potholes, cracks measuring more than 10 mm and disjointed surfaces).

To correct surface defects, the contractor is required to scrape and remove all lifted surfaces, fully clean these surfaces, apply a bonding agent and repair the surfaces using EC-10, 3b, 2, PG58-28 plant mix.

If defects have reached the foundation materials or concrete slab, the contractor is required to perform a partial-depth repair. In the case of a granular foundation such as the one observed on the street that was inspected, the contractor is required to remove the section of the pavement that is unstable, lower the surface by 40 mm, compact the stone and apply a bonding agent followed by a layer of ESG-10, 2A, 2, PG-64-28 plant mix.

The following graph illustrates the partial-depth repair of a cracked concrete foundation, as presented in the technical specifications (booklet V – road work technical specifications – sketch M.V.C 43A):

[Translation]



REPAIR OF A CRACKED CONCRETE FOUNDATION

10. Observation Visit

While walking along Monselet Street at the moment where it is being paved, the engineer representing the OIG observed that some surface repairs have been made while most of the other levelled surfaces displaying cracks or exposed foundation **have not been repaired**. Please refer to the photos on the following page.

On Prieur Street, levelling work has just been completed when the engineer representing the OIG arrives at noon. He observes a large number of defects on the levelled surface. He also notices that the quantities entered on the price schedule are more than sufficient to perform the required work³.

The following photos were taken during the visit of the worksite.

³ According to the price schedule, 70 tons of asphalt were planned for surface repairs and 50 tons for partial-depth repairs (page II-8).



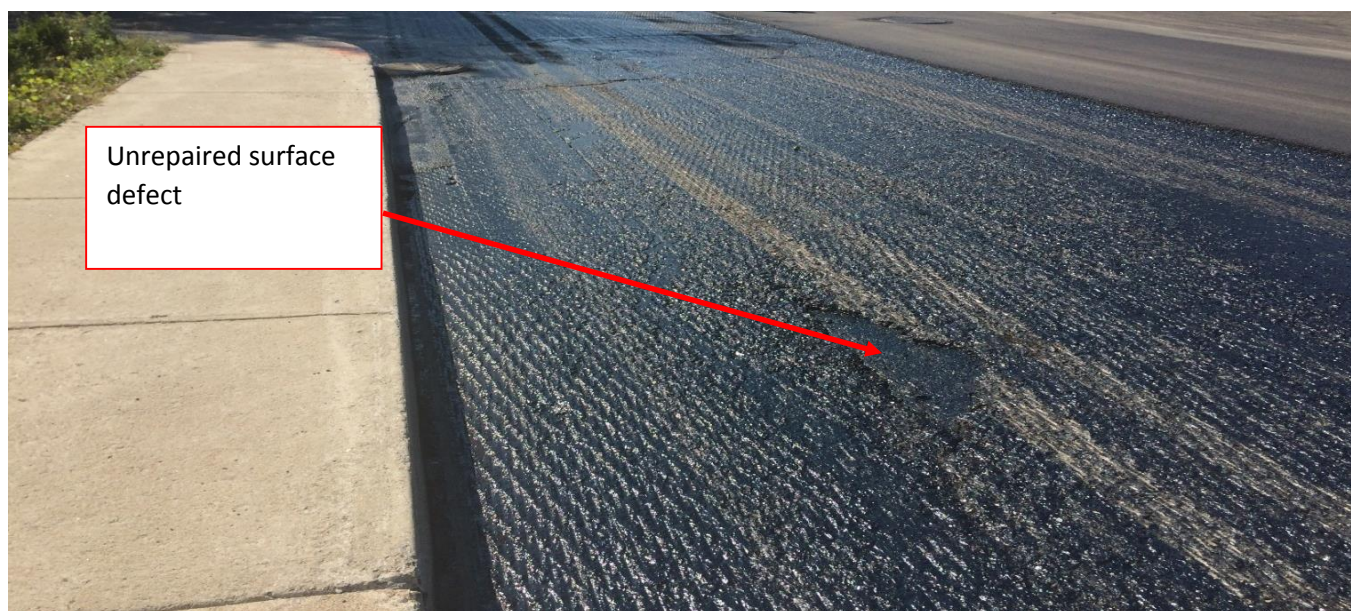
– Photo 1 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired defect that has reached the foundation.



– Photo 2 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired defect.



– Photo 3 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired defect that has reached the foundation.



– Photo 4 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired surface defect.



- Photo 5 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired defect that has reached the foundation.



- Photo 6 taken by the OIG on September 17, 2015, on Monselet Street, illustrating an unrepaired defect that has reached the foundation.

Meeting with SNC-Lavalin's site supervisor

SNC-Lavalin's supervisor confirms to the OIG that 17 tons of asphalt were used for surface repairs on September 16, 2015, date on which he was acting as supervisor⁴.

The engineer from the OIG asks the supervisor to explain how he intends to repair the defects observed on Prieur Street.



- Photo 7 taken by the OIG on September 17, 2015, on Prieur Street illustrating, a defect where the foundation is exposed and a partial-depth repair is required.

He answered that such a defect involving an exposed foundation can easily be repaired by laying asphalt on the surface. He therefore does not intend to carry out surface or partial-depth repairs as mentioned in the specifications. The OIG's engineer then asks to speak with the person who provided him with this information. He states that the information comes from the supervisor in charge. The OIG's engineer meets with the supervisor in charge, who shares the site supervisor's opinion. The OIG's engineer then shows him the specifications, which clearly stipulate that defects of this type must be repaired. The supervisor hesitates before confirming that defects of this type require partial-depth repairs but states that the information he had received from the City's "designers" was that the purpose of the PCPR was not to repair the foundation. He says that the PCPR [TRANSLATION] "is intended to patch for 4 or 5 years" before the City orders major work to have the foundation redone.

Questioned on this, the City's director of Infrastructures formally denies that a City representative could have given such instructions. The Inspector General would like to reiterate that the goal of the PCPR is to extend the useful life of the repaired streets by anywhere from 7 to 12 years⁵.

⁴ According to the site supervisor's notes.

⁵ Refer to note 1.

The Inspector General has serious reservations as to how vigilantly SNC-Lavalin's representatives supervised the work performed on this site.

11. Observations of the Office of Inspector General

- The price tendered by Demix Construction for repairs does not reflect the real cost of performing the required work. As we mentioned previously, the city had estimated the costs of surface and partial-depth repairs at \$129.50 per ton and \$213.41 per ton respectively. The bidder provided a single price of \$5.00 per ton for repairing all of the streets stipulated in the contract.
- Although required under the technical specifications and standard practices, Demix Construction did not perform surface repair work at many places on Monselet Street.
- A lot of surface repair work remained to be done on Prieur Street at the time the engineer representing the OIG visited the site.
- Although required under the technical specifications and standard practices, Demix Construction did not perform partial-depth repair work on Monselet Street and had no intention—at the time the site was visited—of performing surface and partial-depth repair work on Prieur Street.
- SNC-Lavalin, in its capacity as site supervisor, failed to enforce and comply with the technical specifications by allowing Demix Construction to act as though the obligation to perform partial-depth repair work did not exist.
- Demix Construction cannot blame the insufficiency or absence of work performed on a miscalculation by the City regarding the quantity of asphalt required since the quantities of asphalt indicated in the price schedule were largely sufficient to perform the work.
- In the case of partial-depth repairs, laying a depth of more than 40 mm of an EC-10 mix (normally used for surface repairs) instead of an ESG-10 mix is in violation of the specifications, leads to compaction problems and consequently creates weak zones and negatively affects quality.
- Several Montréal-North borough streets stipulated in contract 320201 have yet to be paved:
 - Prieur Street
 - Albert-Hudon Boulevard
 - Hébert Avenue
 - Gertrude Boulevard
 - De La Seine Avenue



12. Analysis

The Inspector General's power to intervene is provided under section 57.1.10 of *Montréal's City Charter* (CQRL c. C-11.4), which reads as follows:

*57.1.10. The inspector general may cancel any contracting process involving a contract of the city or of any legal person described in subparagraph 1 of the fifth paragraph of section 57.1.9, or **rescind or suspend the carrying out of such a contract** if the inspector general:*

*1° finds that **any of the requirements specified in a document of the call for tenders or a contract has not been met** or that **the information provided in the contracting process is false**;*

*2° is of the opinion that the **seriousness of the breach** observed justifies the cancellation, rescinding or suspension.*

(...)

The conditions giving the Inspector General the right to intervene are cumulative. First, the Inspector General must find that any of the requirements specified in the documents of a call for tenders or a contract has not been met or that the information provided by the bidder is false. It is only once one of these cases is established that the Inspector General must decide on the seriousness of the breaches.

The observations made by the OIG are unequivocal. The contractor made no partial-depth repairs whatsoever whereas the condition of the levelled surface warranted such repairs. An insufficient number of surface repairs were made. Confronted with the specifications, SNC-Lavalin's supervisor in charge finally admits that partial-depth repairs are required to correct such defects.

The specifications are indeed clear:

[TRANSLATION] "After the surface has been levelled, the Contractor shall be required to make two types of repairs depending on the nature of the problem, as described below:

- **Surface repair:**

Following levelling operations, local defects in the levelled surface must be repaired. The Contractor shall be required to scrape and remove all loose or powdery surfaces, fully clean these surfaces as well as the exposed joints, apply a 0.3 l/m2 layer of bonding agent and pave the surfaces with an EC-10, 3b, 2, PG 58-28 plant mix. If the defect has spread to the foundation material or the slab, the Contractor shall be required to make a partial-depth repair. The price of the bonding agent layer is included in the price of surface repairs.

(...)

- **Partial-depth repair:**

- *Flexible pavement: When the surface that remains after levelling is thin and loose in certain areas, the Contractor must remove the unstable section of*

pavement, lower the surface by 40 mm, compact the stone and apply a layer of ESG-10, 2A, 2, PG 64-28 plant mix.

- *Mixed pavement: When major defects are observed in areas of the levelled surface of the mixed pavement, the Contractor must lower the surface by 40 mm, clean the surface, and apply a layer of bonding agent and a layer of ESG-10, 2A, 2, PG 64-28 plant mix, as illustrated in sketch MVC-43a 'Repairing the foundation'.⁶*

The breaches observed by the OIG, to which the supervisor in charge admitted, constitute a non-compliance with one of *"the requirements specified in a document of the call for tenders or a contract"* as set forth in section 57.1.10 of the Charter.

The consequences of these breaches are serious enough to warrant the intervention of the Inspector General and the suspension of the contract. Indeed, applying a layer of EC-10 mix to a depth of more than 40 mm instead of the mix (ESG-10) intended for partial-depth repairs is not only contrary to the specifications but also leads to compaction problems that consequently create weak zones and negatively affect the quality of the final product.

In light of the observations made on site and the number of streets that remain to be repaired, including Albert-Hudon Boulevard, where the City estimated that the surface and partial-depth repairs required a total of 975 tons of asphalt, this site must be temporarily closed to allow the SIVT time to remind the contractor, Demix Construction, of its contractual obligations, including the obligation to carry out all surface and partial-depth repairs. Furthermore, the SIVT shall also need to remind SNC-Lavalin of its role as site supervisor to ensure that the City's rights are protected and that the specifications are applied to its satisfaction.

13. Conclusions and Decision

It is therefore the Inspector General's opinion that the conditions provided under section 57.1.10 of *Montréal's City Charter* have been established. Given the seriousness of the contractor's breaches, there is no other choice but to suspend the contract awarded following call for tenders 320201.

FOR THESE REASONS,

The Inspector General:

SUSPENDS the contract awarded to Demix Construction, a division of Holcim (Canada) Inc., for road levelling work, laying of asphalt and reconstruction of curbs and sidewalks (PCPR) in the Montréal-North and Anjou boroughs (public

⁶ Technical specifications – road works, public call for tenders 320201, pages V-5 and V-6.



call for tenders 320201) to enable the Infrastructures, Roads and Transports Department (Service des infrastructures, de la voirie et des transports) to:

1. remind the contractor, Demix Construction, of its contractual obligations, including the obligation to carry out all surface and partial-depth repairs;
2. formally inform SNC-Lavalin, in its capacity as site supervisor, of the situation so that it protects the City's rights and enforces the specifications to the City's satisfaction.

Said suspension, which **TAKES EFFECT IMMEDIATELY**, as set forth in section 57.1.11 of *Montréal's City Charter*, shall be lifted once the city has the assurance that the necessary conditions are in place for the proper execution of the work in accordance with the specifications, and the Infrastructures, Roads and Transports Department (Service des infrastructures, de la voirie et des transports) has informed the Inspector General of such.

RECOMMENDS that Montréal's City Council issue a formal notice and consider all possible recourses against Demix Construction in relation to the road levelling work, the laying of asphalt and the reconstruction of curbs and sidewalks (PCPR) on Monselet Street for the work already performed in violation of the technical specifications;

SENDS, in accordance with section 57.1.10 of *Montréal's City Charter*, a copy of this decision to the mayor of the City as well as to the clerk, who shall in turn send it to the council concerned, i.e., Montréal's City Council.

The Inspector General,

Denis Gallant, Ad. E.