

# Good Neighbourly Relations Committee

Major reinforcement work on the metal structure of the  
Jacques Cartier Bridge

January 31, 2017



## Agenda

- + Work overview
- + Mitigation measures
- + Upcoming work
- + Discussion period
- + Next meeting





# Work overview

Major reinforcement work on the metal structure of the Jacques Cartier Bridge

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# Reinforcement of the metal structure of the Jacques Cartier Bridge



The largest steel contract in the bridge's history

- + Replacement of braces
- + Reinforcement of:
  - Steel towers
  - Verticals
  - Diagonals
  - Vertical gusset plates
  - Main bottom chords
  - Jacking struts

**Another nearby worksite is currently installing lighting fixtures on the Jacques-Cartier Bridge (illumination project).**





# III Replacement of braces





# Reinforcement of a vertical gusset plate



# III Replacement of a bottom chord





# Work types



- + Removal of metal rivets
- + Temporary and permanent boltings
- + Installation of scaffolding
- + Installation of steel plates
- + Bridge jacking
- + Painting of some sections

**Preparatory work is always done during the day.**

**Structural elements are replaced during the evening, night and weekend as traffic lanes must be closed above the work areas.**





## A number of partial and complete bridge closures

- + Partial closures during the evening and night (8:00 p.m. to 5:00 a.m.)
- + Complete closures at night (12:00 a.m. to 4:00 a.m.)
- + Partial lane closures on local network for mobilization and delivery activities





# Mitigation measures

Major reinforcement work on the metal structure of the Jacques Cartier Bridge

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A series of white geometric shapes at the bottom of the slide, including a vertical bar on the left, a series of vertical bars of varying heights, and several horizontal bars of varying lengths.



# III Sound level testing



- + Report from a specialized firm
  - Noise mitigation measures campaign before the work
  - Findings: Regular ambient noise is quite loud
    - Average between 58.4 dB and 64.6 dB over a 24-hr period



# Noise surveys



## Results: René-Lévesque Station

	Authorized limits	Recordings outside of work	Recordings during work
<b>Day</b> (7 am to 7 pm)	75	75.2	82
<b>Evening</b> (7 to 11 pm)	69	71.3	72.5
<b>Night</b> (11 pm to 7 am)	67	69.9	70



## Results: Falardeau Station

	Authorized limits	Recordings outside of work	Recordings during work
<b>Day</b> (7 am to 7 pm)	75	Below the threshold	84.8
<b>Evening</b> (7 to 11 pm)	69	Below the threshold	Below the threshold
<b>Night</b> (11 pm to 7 am)	68	68.3	71



# III Noise management program



- + Work done mainly during the day, between 7:00 a.m. and 7:00 p.m.
- + Traffic restrictions in residential sectors
- + Installation of acoustic barriers and sound absorption panels
- + Installation of soundproofed shelters around sensitive areas
- + Adjustment of Contractor's Work Methods
- + Equipment with noise reducers
- + Installation of two sound level meters near the work areas
- + Continuous noise surveys and monitoring of threshold overruns





# Acoustic barriers





# III Soundproofed shelters



# III Mitigation measures



Tools with noise reduction devices

Sound level meters



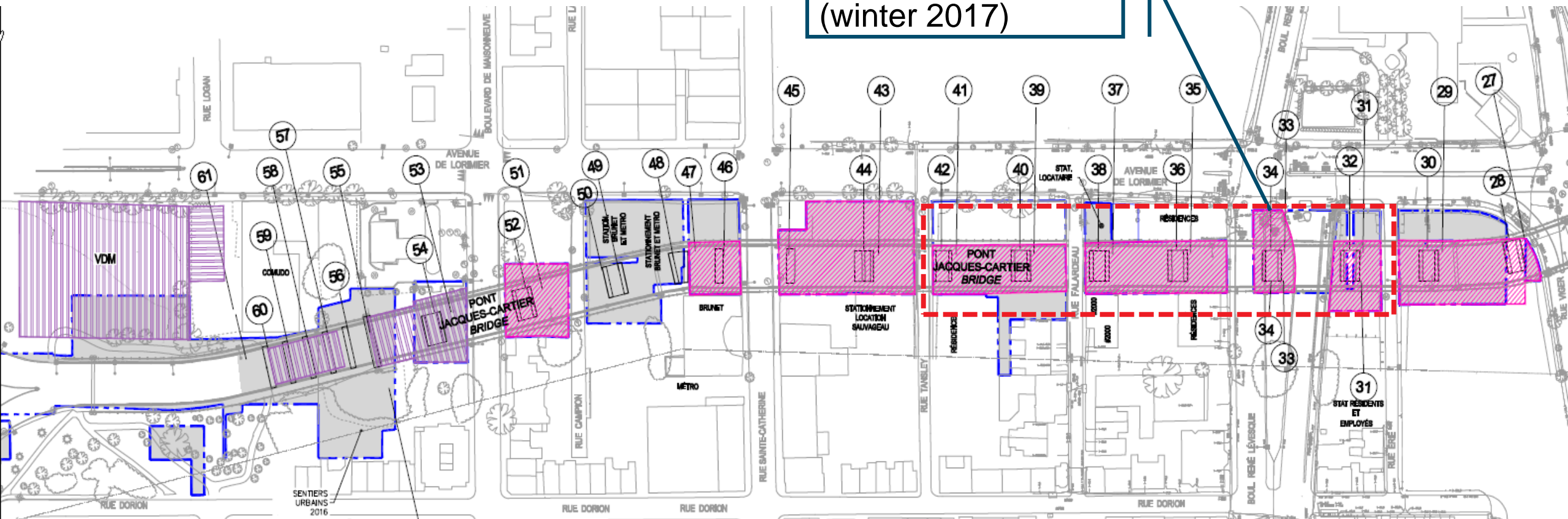


# Upcoming work phases



30% of work completed

Main work area  
(winter 2017)





# Discussion period



# Communication with waterfront residents



- + Notices to residents
- + Work advisories available online and via e-mail alerts
- + Media contacts
- + Good Neighbourly Relations Committee
- + Twitter account dedicated to the Jacques Cartier Bridge @pontJCBridge
- + [www.JacquesCartierChamplain.ca](http://www.JacquesCartierChamplain.ca)

## **Questions, complaints or comments**

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Participez à la conversation

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