# **Environmental Noise Study**

## **Proposed Dundalk McDonald's Restaurant**

## Flato Developments Inc.

3621 Highway 7 East, Suite 503 Markham ON, L3R 0G6

Prepared by:

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> SLR Project No: 209.40363.0000



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### 1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by the Flato Developments Inc. to conduct a noise study for the future McDonald's restaurant on Phase 11 of the Edgewood Greens development in Dundalk in Dundalk Ontario.

The Phase 11 Edgewood Greens development includes a combination of single detached homes and townhouse blocks. Highway 10 is located along the east side of the development. A copy of the current site plan is included in **Appendix A**.

The location of the proposed McDonald's restaurant will be along the west side of Highway 10, approximately 700 metres south of Main Street East. Detached single family homes and/or townhouse blocks of the Edgewood Green development are located along the north, south and west sides of the proposed McDonald's restaurant. A context plan is shown in **Figure 1**, showing the location of the proposed McDonald's restaurant, relative to the Phase 11 of the Edgewood Greens Development.

The proposed McDonald's will include a restaurant section, a surface parking lot and a 2-lane drive thru. The business hours for the proposed McDonald's restaurant is understood to be open 24-hours, including the drive-thru operation. Copies of the proposed McDonald's drawings are included in **Appendix A**.

This report was prepared to assess stationary noise impacts from the proposed McDonald's restaurant (rooftop equipment and drive-thru) on Phase 11 of the Edgewood Green development.

## 2.0 Stationary Noise Sources

## 2.1 Significant Noise Sources

At the time of the assessment, the proposed McDonald's restaurant mechanical equipment information (number, type and sound data) was not available. The significant stationary noise sources associated with the proposed McDonald's Restaurant were identified based on a combination of a review of aerial photography of McDonald's restaurants in operation (e.g. Hanover McDonald's rooftop aerial photograph), and SLR historical data for McDonald's restaurant kitchen exhaust fans in operation. The following is a summary of the significant stationary noise sources included in the noise modelling:

- Three (3) kitchen exhaust fans;
- Four (4) 5-ton rooftop HVAC units;
- One (1) 10-ton rooftop HVAC unit;
- Two (2) walk-in cooler rooftop chiller units; and
- Two (2) drive thru speaker boxes; and
- Up to sixteen (16) idling cars in the drive-thru queue.

The locations of the above sources are shown in Figure 2.

Sound emission data (sound power levels) used in the assessment were based on generic data from SLR's in-house database for rooftop HVAC units, walk-in cooler room chiller units, drive-thru speakers and idling cars. Historical McDonald's measured sound level data was applied for the kitchen exhaust fans. A summary of the sound power levels and modelling adjustments used in the analysis are included in **Appendix B**.



### 2.2 Worst-case Scenarios

The McDonald's restaurant rooftop equipment (HVAC and kitchen exhaust fans) are assumed to operate at full capacity during the daytime, with a 50% duty cycling for cooling equipment (HVACs and chillers) during the night-time periods.

As McDonald's restaurant drive thru is historically active on weekends up until 1 am, the number of idling cars/trucks were modelled based on observations made by SLR personnel. Observations of the 24-hour Shelburne McDonald's were made by SLR personnel on December 9 and 10<sup>th</sup>, between the hours of 11 pm and 1:30 am. 6am car activity was assessed based on historical SLR observations of typical McDonald's drive thru operations. Based on the observations made, the following was modelled for drive-thru queues for the worst-case hours of operation:

- Daytime/Evening (7am to 7pm/7pm to 11 pm) up to sixteen (16) cars idling, representing the worst-case operation.
- Night-time (11pm to 1 am) an average of seven (7) cars idling within 1 hour (based on an observed range of 3 to 11 cars queued), representing the highest volumes during the night-time period.
- Night-time (2 am) one (1) car idling at the pick-up window and one (1) car idling at the drivethru speaker, representing impacts during the lowest ambient noise period. Note: this is considered a worst-case condition, as a continuous stream of customers is not anticipated or observed after 1 am.

Regarding the observations made for the Shelburne McDonald's drive thru, activity is potentially higher than usual as various deals were available on this observation weekend.

#### 2.3 Excluded Sources

The following sources are generally not considered to be stationary sources of noise by the MECP, as outlined in NPC-300:

- the occasional delivery of goods for convenience stores and fast-food restaurants; and
- · parking lots for private passenger vehicles.

Therefore, a detailed assessment for the above sources was not completed.

## 3.0 Applicable Guideline Limits

The applicable guidelines for stationary noise impacts on noise sensitive land uses are provided in Ministry of the Environment Conservation and Parks (MECP) Publication NPC 300. As indicated in NPC-300, the applicable noise limits at a point of reception are the higher of the existing ambient sound level due to road traffic or the exclusion limits set out in the guideline.

The acoustic environment surrounding the proposed development is considered a Class 1 area, due to surrounding commercial/industrial lands and roadway noise during all periods of the day.

**Table 1** summarize the Class 1 exclusionary limits from NPC-300 for continuous and impulsive noise, respectively.



| Table 1: Exclusion Limits for Continuous Stationary Noise |
|---|
|---|

| Location                    | Time of Day   | Class 1 Area |  |  |
|-----------------------------|---------------|--------------|--|--|
|                             | 7am to 7 pm   | 50           |  |  |
| Plane of Windows            | 7 pm to 11 pm | 50           |  |  |
|                             | 11 pm to 7 am | 45           |  |  |
|                             | 7am to 7 pm   | 50           |  |  |
| Outdoor Points of Reception | 7 pm to 11 pm | 50           |  |  |
|                             | 11 pm to 7 am | n/a          |  |  |

As the ambient sound levels from Highway 10 were expected to exceed the NPC-300 exclusionary limits, sound exposures from roadway noise were assessed and the corresponding applicable guideline limits were determined. 2016 traffic volumes, truck volumes, and hourly distributions were obtained from the MTO iCorridor website (<a href="https://icorridor-mto-on-ca.hub.arcgis.com/">https://icorridor-mto-on-ca.hub.arcgis.com/</a>) and applied in assessing the guideline limits. A summary of the ambient traffic volumes are shown in Table 2.

Table 2: Summary of Road Traffic Data – Ambient

| Roadway Link   |  | Existing<br>Volume | w                         | orst-Case Hour [1] | Commerc<br>Breakd | Vehicle |       |                 |  |
|--|--|--------------------|---------------------------|--------------------|-------------------|---------|-------|-----------------|--|
|  |  | (24-h)             | Day/Eve<br>(7am to 11 pm) | Night<br>(12am)    | Night<br>(2am)    | Med     | Heavy | Speed<br>(km/h) |  |
| Highway 10 6,450 [3] 2.1 % 0.8% 0.4 % 4.2% 6.8% 80   |  |                    |                           |                    |                   |         |       |                 |  |
| Notes: [1] Calculated from data obtained from the MTO ICorridor Website. [2] a default MTO med/heavy truck distribution was applied. [3] 2016 traffic data applied as a conservative assessment of ambient sound levels. |  |                    |                           |                    |                   |         |       |                 |  |

Ambient road traffic sound levels were predicted using Cadna/A, a commercially available noise propagation modelling software. Roadways were modelled as line sources of sound, with sound emission rates calculated using the ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions were validated and are equivalent to those made using the MECP's ORNAMENT or STAMSON v5.04 road traffic noise models. A simplified STAMSON Validation file is included in **Appendix C**, based on the generalized application of absorptive ground noise modelling to all intervening ground.

Sound levels were predicted along the facades of the proposed development using the "building evaluation" feature of Cadna/A. This feature allows for noise levels to be predicted across the entire facade of a structure.

Ambient sound levels within the development are summarized in the following table.

Table 3: Predicted Ambient Levels on the Development

| Location                                   | Period                          | Ambient<br>Sound Levels |
|--|---------------------------------|-------------------------|
| Detached Single Home or                    | Daytime/Evening (7 am to 11 pm) | up to 59 dBA            |
| Detached Single Home or<br>Townhouse Block | Night-time (11 pm to 1 am)      | up to 55 dBA            |
| Townhouse Block                            | Night-time (1 am to 6 am)       | up to 52 dBA            |



3

## 4.0 Points of Reception

All Phase 11 Edgewood Greens single detached homes and townhouse blocks, located adjacent to the proposed McDonald's restaurant, were included in the assessment. Single detached homes and townhouses are understood to be typical 2 storey buildings. Outdoor points of reception include rear yards only. Rooftop terraces are not included with the development.

## 5.0 Noise Impact Assessment

## 5.1 Sound Level Modelling

Stationary source impact modelling was completed using Cadna/A, a prediction software consistent with the ISO 9613-2 standard. The model took into consideration the layout of the proposed McDonald's site, Phase 11 Edgewood Green development buildings (immediate surrounding buildings), and the location of the sources.

As the surrounding lands will be a mixture of absorptive ground (grass, etc.) and reflective surfaces (concrete, asphalt), localized ground absorption was applied in the noise modelling.

One (1) orders of reflection was applied in the noise modelling to account for the effect reflections from the proposed McDonald's restaurant building.

Sound levels were predicted along the facades of the surrounding townhouse blocks using the "building evaluation" feature of Cadna/A, allowing for noise levels to be predicted across the entire façade of a structure.

#### 5.2 Predicted Sound Levels

Noise levels from the proposed McDonald's restaurant were assessed for the worst-case hours of operation, identified in **Section 2.2** above. A sample modelling output file for the closest townhouse block is included in **Appendix D**.

#### 5.2.1 Facade Sound Levels

Predicted noise levels for the worst-case hours identified in **Section 2.2** above (7 am to 11 pm, 12 am, 2 am and 6 am) are shown in **Figures 3a to 3d** for the plane-of-window (height of 4.5 m). The calculated excess of the guideline limits at the plane-of-the-window is shown in **Figures 4a to 4d**.

A summary of the predicted noise impacts on each façade are shown in **Table 4** for the worst-case house or townhouse of the Phase 11 Edgewood Green development.

Table 4: Modelled McDonald's Noise Impacts

| Period   | (dBA) (dBA) (dBA) (Yes/No) |  |  |  |  |  |  |  |  |  |
|--|----------------------------|--|--|--|--|--|--|--|--|--|
| Daytime (7 am to 11 pm) up to 49 up to 59 0 Yes  |                            |  |  |  |  |  |  |  |  |  |
| Night-time (11 pm to 1 am) up to 48 up to 55 0 Yes   |                            |  |  |  |  |  |  |  |  |  |
| Night-time (1 am to 6am) up to 46 up to 52 0 Yes   |                            |  |  |  |  |  |  |  |  |  |
| Notes: refer Figures 3a to 3d for modelled sound levels, and Figures 4a to 4d for calculated excesses. |                            |  |  |  |  |  |  |  |  |  |



Based on the above results, sound levels due to McDonald's restaurant are predicted to meet the applicable sound level limits at the worst-case locations within the Phase 11 Edgewood Green development. No additional noise controls are required for the proposed McDonald's Restaurant, based on the observed drive-thru activity and typical equipment (type, number and sound level data) applied in the noise modelling.

#### 5.2.2 Yard Sound Levels

Yard sound levels (height of 1.5 m) are shown in **Figure 5** for the daytime and evening periods (7 am to 11 pm). Based on the noise contours shown in **Figure 5**, the MECP default 50 dBA sound level limits are predicted to be met within all yards of the Phase 11 Edgewood Green development. No additional noise controls are required for the proposed McDonald's Restaurant, based on the observed drive-thru activity and typical equipment (type, number and sound level data) applied in the noise modelling.

### 5.3 Recommended Noise Warning Clause

As the proposed McDonald's restaurant stationary noise sources are anticipated to be audible at times, a warning clause should be included in agreements registered on Title, and included in all agreements of purchase and sale or lease, and all rental agreements. An MECP NPC-300 Type E warning clause is recommended, as follows:

"Purchasers/tenants are advised that due to the proximity of the adjacent fast food restaurant, noise from the restaurant and drive-thru may at times be audible."

## 6.0 Conclusions and Recommendations

The potential for noise impacts from the proposed McDonald's restaurant on the Phase 11 Edgewood Green development have been considered. Noise concerns are primarily related to drive-thru noise (drive thru speaker and idling cars), and rooftop mechanical equipment (kitchen exhaust fans, HVAC units and chillers).

Based on our assessment:

- McDonald's stationary noise impacts are predicted to meet the MECP NPC-300 criteria during the
  worst-case hours. No additional noise controls are required for the proposed McDonald's
  Restaurant, based on the observed drive-thru activity and typical equipment (type, number and
  sound level data) applied in the noise modelling.
- An MECP Type E warning clause is recommended, as the McDonald's stationary noise sources are anticipated to be audible at times.

As mechanical equipment noise was assessed based on typical unit sound level data (kitchen exhaust fans, HVAC units, chillers) and a representative roof plan, a review of the mechanical systems should be completed by an acoustical consultant to confirm the MECP guideline limits will be met at phase 11 Edgewood Green development.



### 7.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Flato Developments Inc., hereafter referred to as the "Client." It is intended for the sole and exclusive use of the Client. The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. Other than by the Client, the Township of Puslinch, Township of North Dumfries and Wellington County in their role as land use planning approval authorities, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

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## 8.0 Closure

SLR concludes that the proposed McDonald's restaurant stationary noise will meet the MECP NPC-300 guideline limits for the Phase 1 Edgewood Development, based on observed drive thru activity and typical mechanical equipment (location, number and types). Once the McDonald's mechanical system information is available, an acoustical consultant should complete a review and confirm additional noise control measures are not required. In addition, an MECP Type E warning clause is recommended for the development.

Should you have any questions on the above study, feel free to contact the undersigned.

Sincerely,

SLR Consulting (Canada) Ltd.

#### Marcus Li, P.Eng

Principal, Acoustics Engineer

Distribution: 1 electronic copy – Flato Developments Inc.

1 electronic copy - SLR Consulting (Canada) Ltd.



## 9.0 References

International Organization for Standardization, ISO 9613-2: Acoustics – Attenuation of Sound During Propagation Outdoors Part 2: General Method of Calculation, Geneva, Switzerland, 1996.

Ministry of the Environment, Conservation and Parks, Model Municipal Noise Control By-Law Publication NPC-104, August 1978.

Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-300: Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning, 2013.



# **Figures**

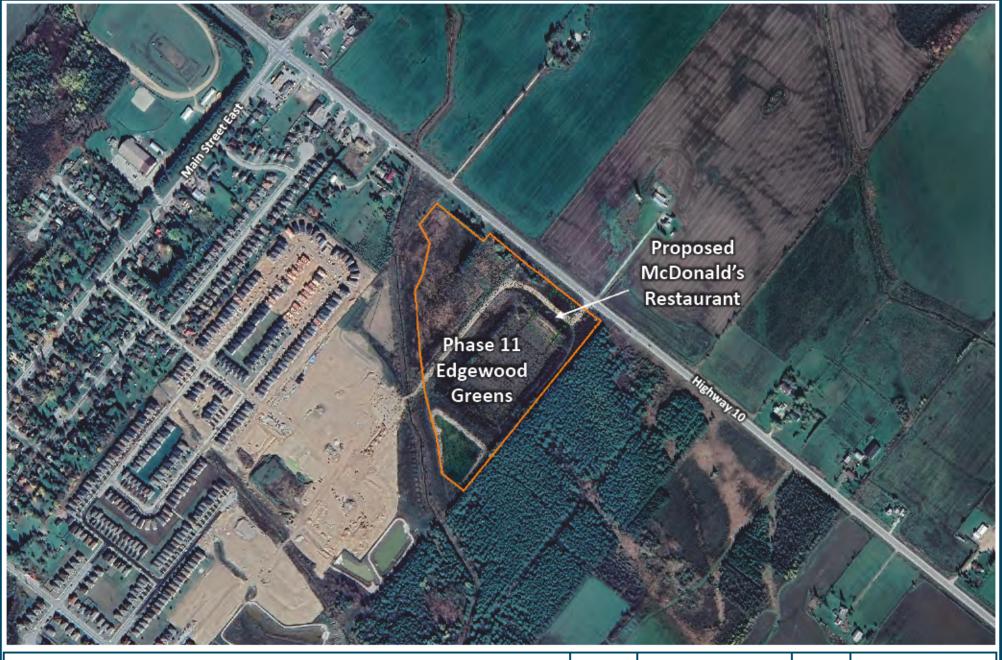
## **Environmental Noise Study**

Proposed Dundalk McDonald's Restaurant

Flato Developments Inc.

SLR Project No. 209.40363.0000





FLATO DEVELOPMENTS INC.

PROPOSED DUNDALK MCDONALD'S RESTAURANT

AREA PLAN

True North

Scale:

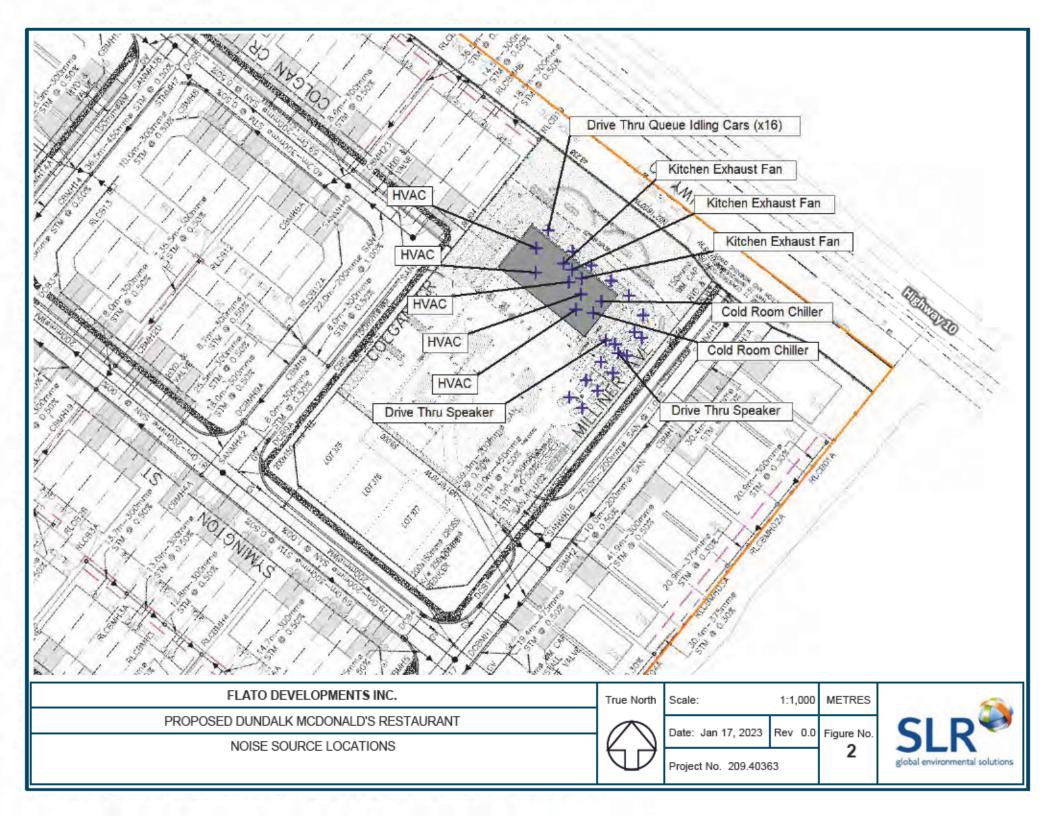
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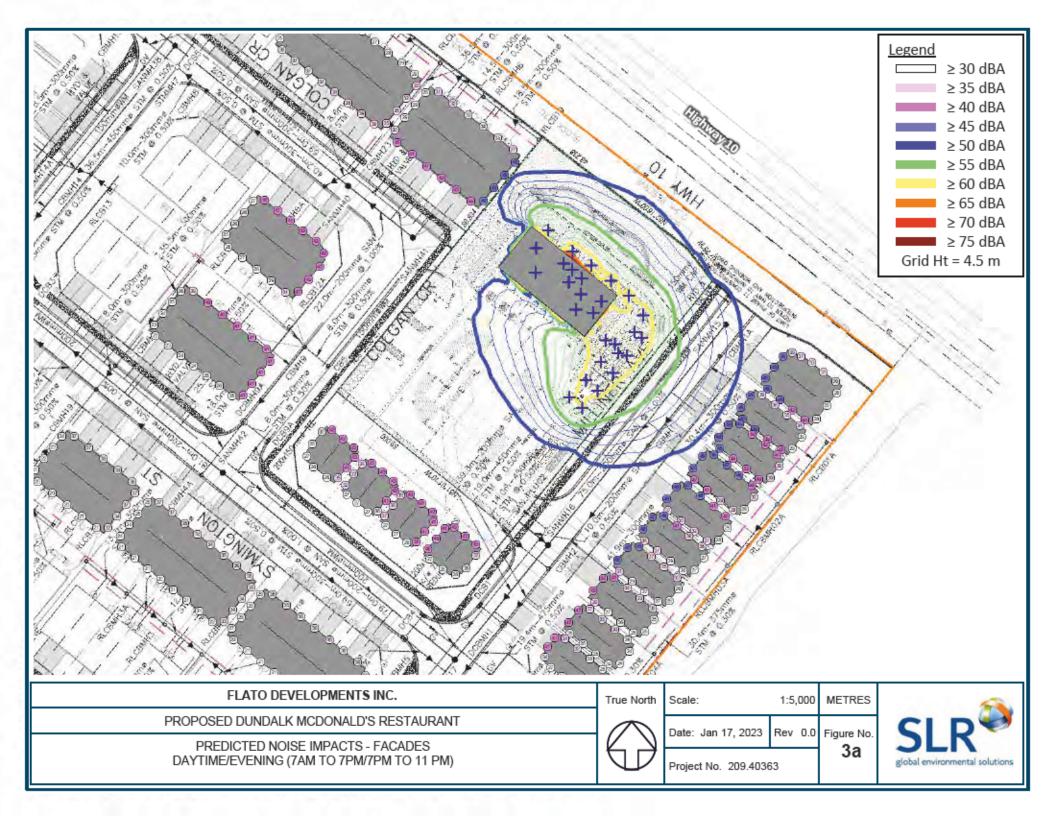
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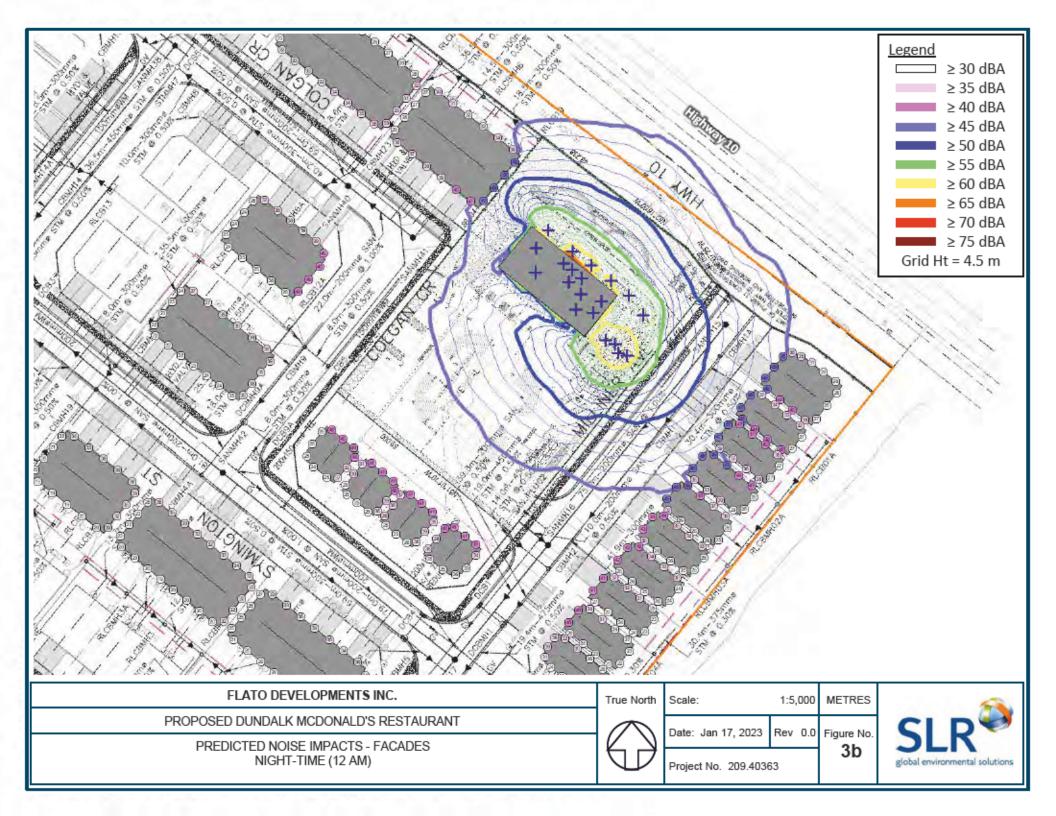
Project No. 209.40363

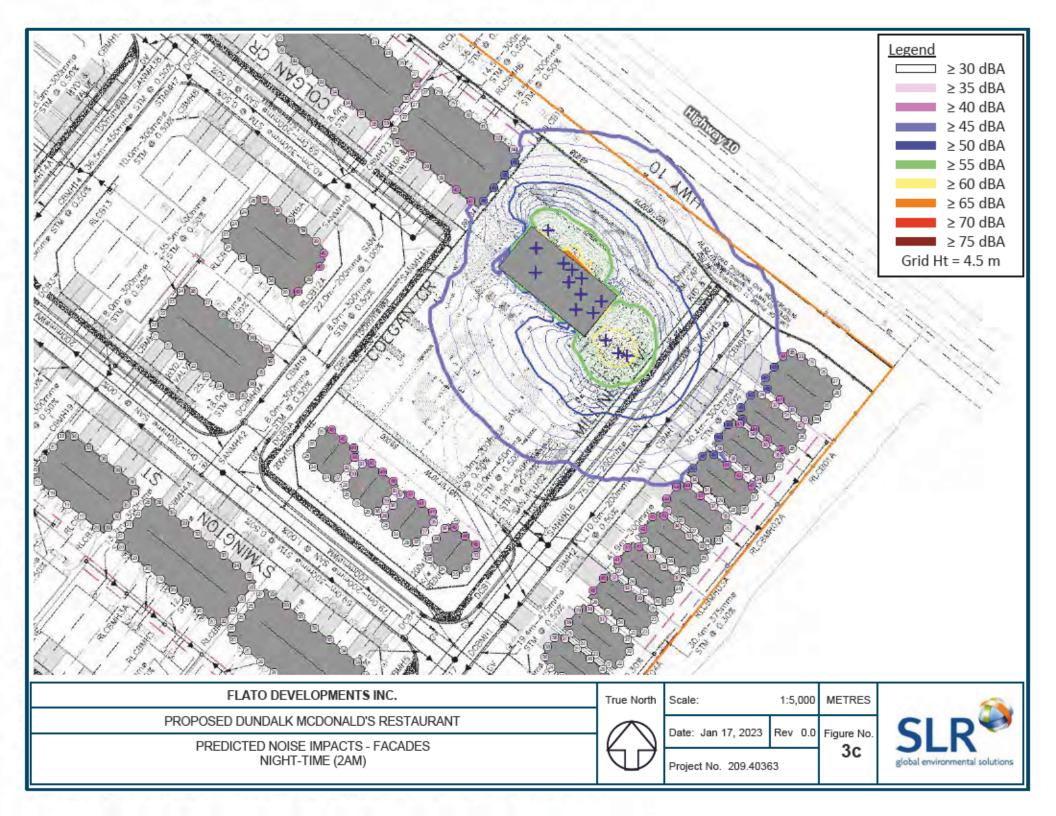
Date: Jan 17, 2023 Rev 0.0 Figure No.

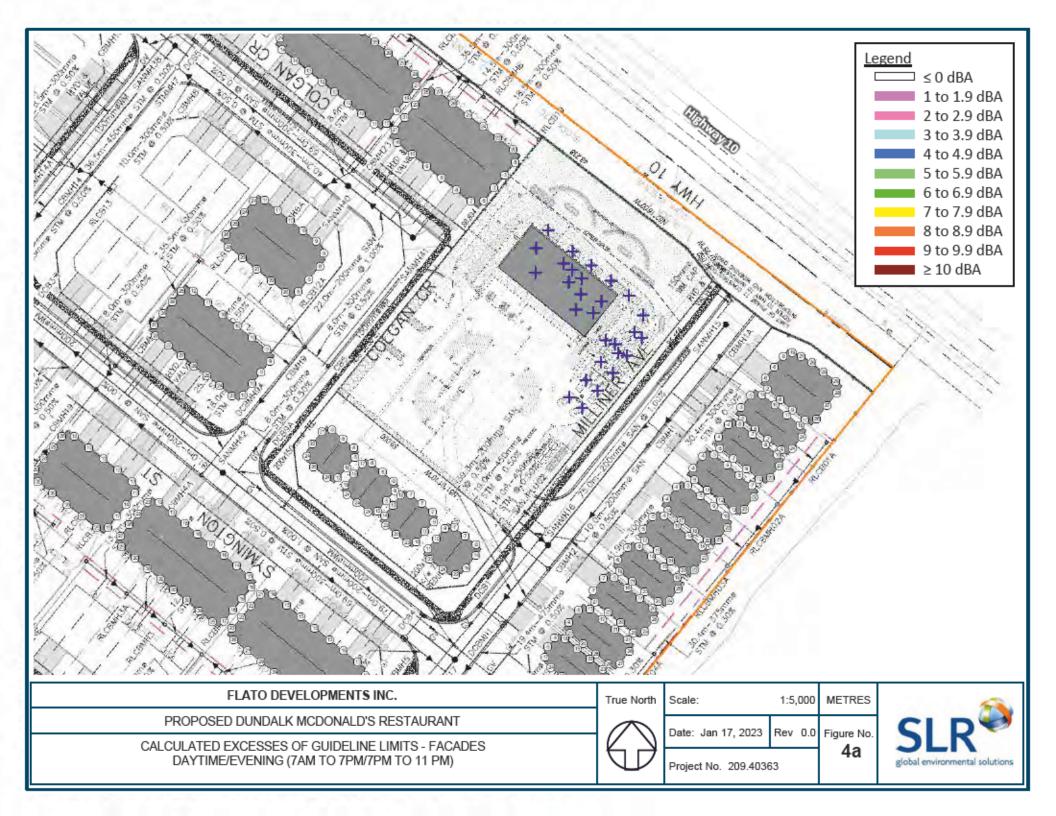


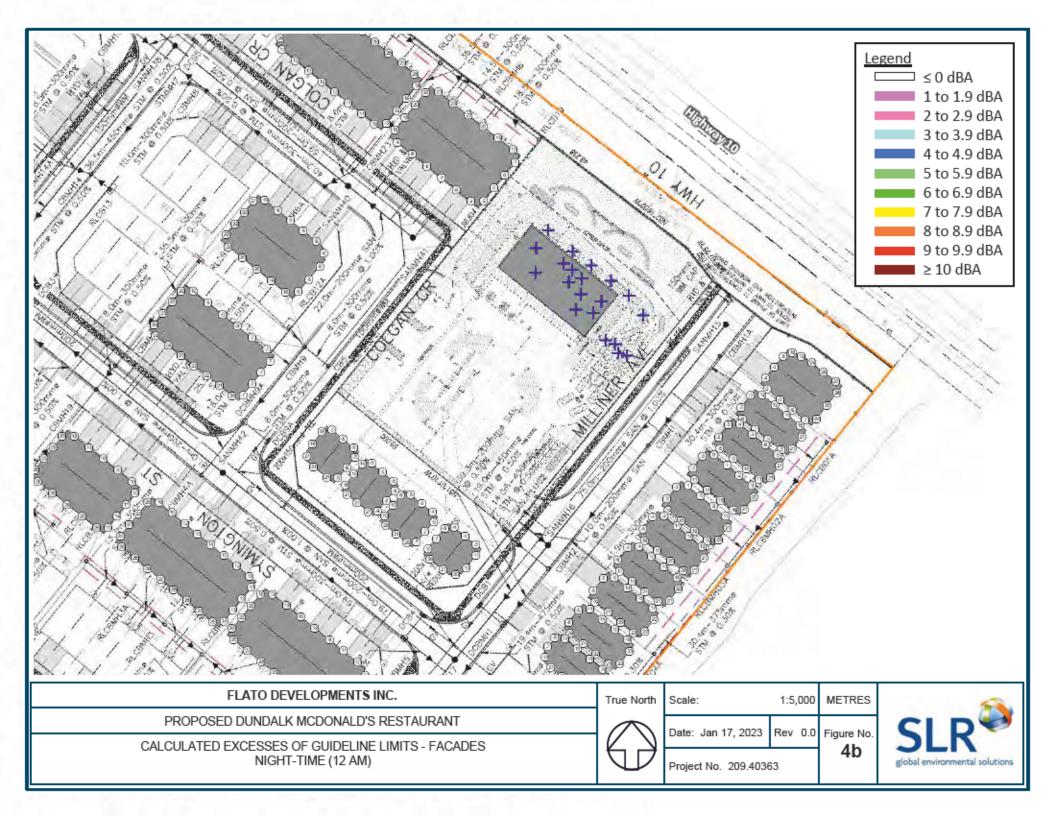


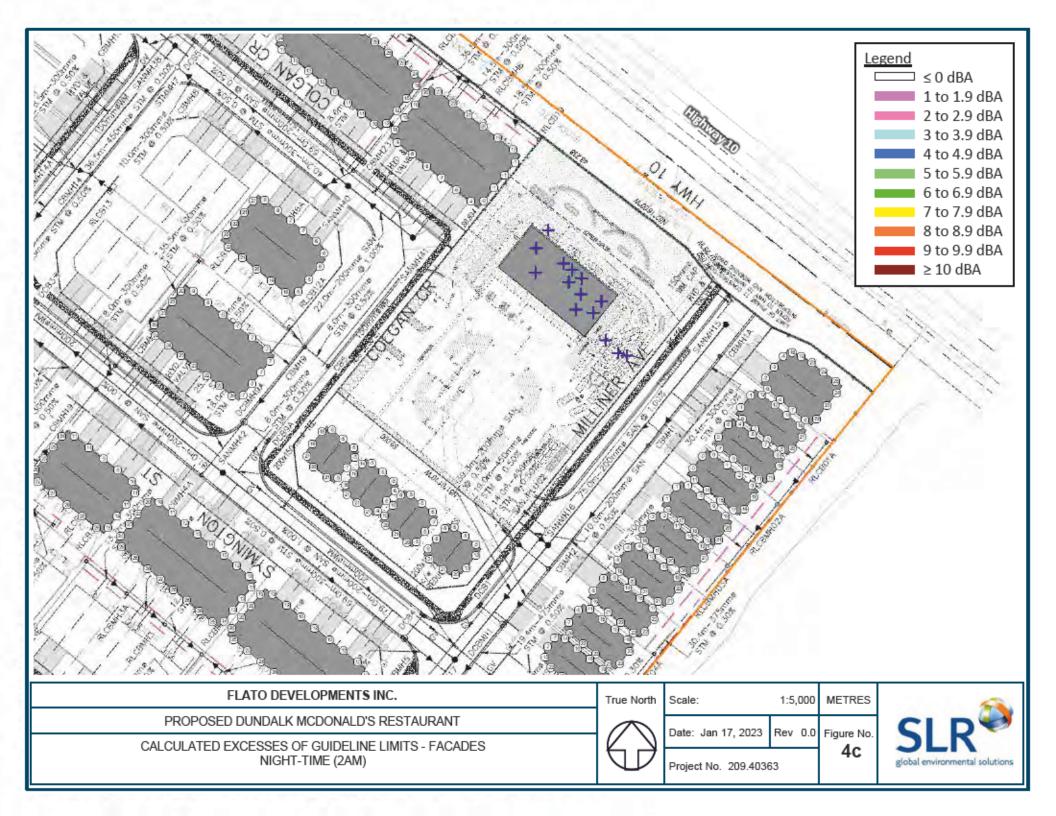


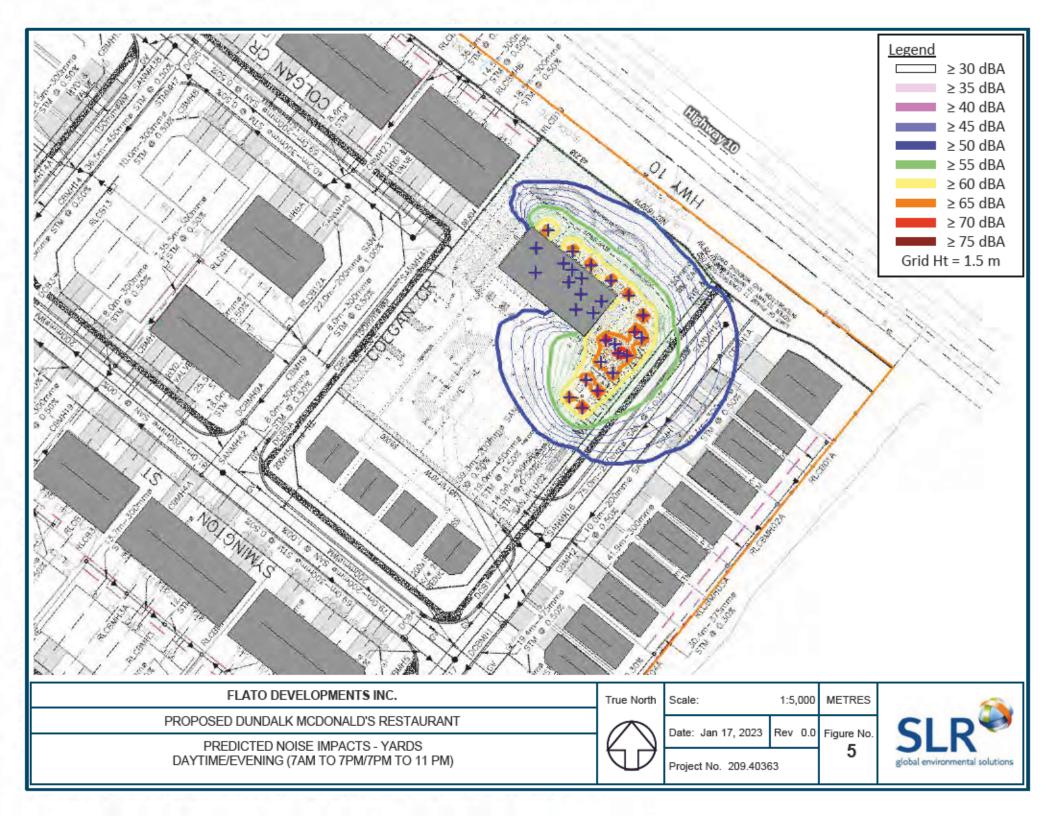












# **Appendix A Drawings**

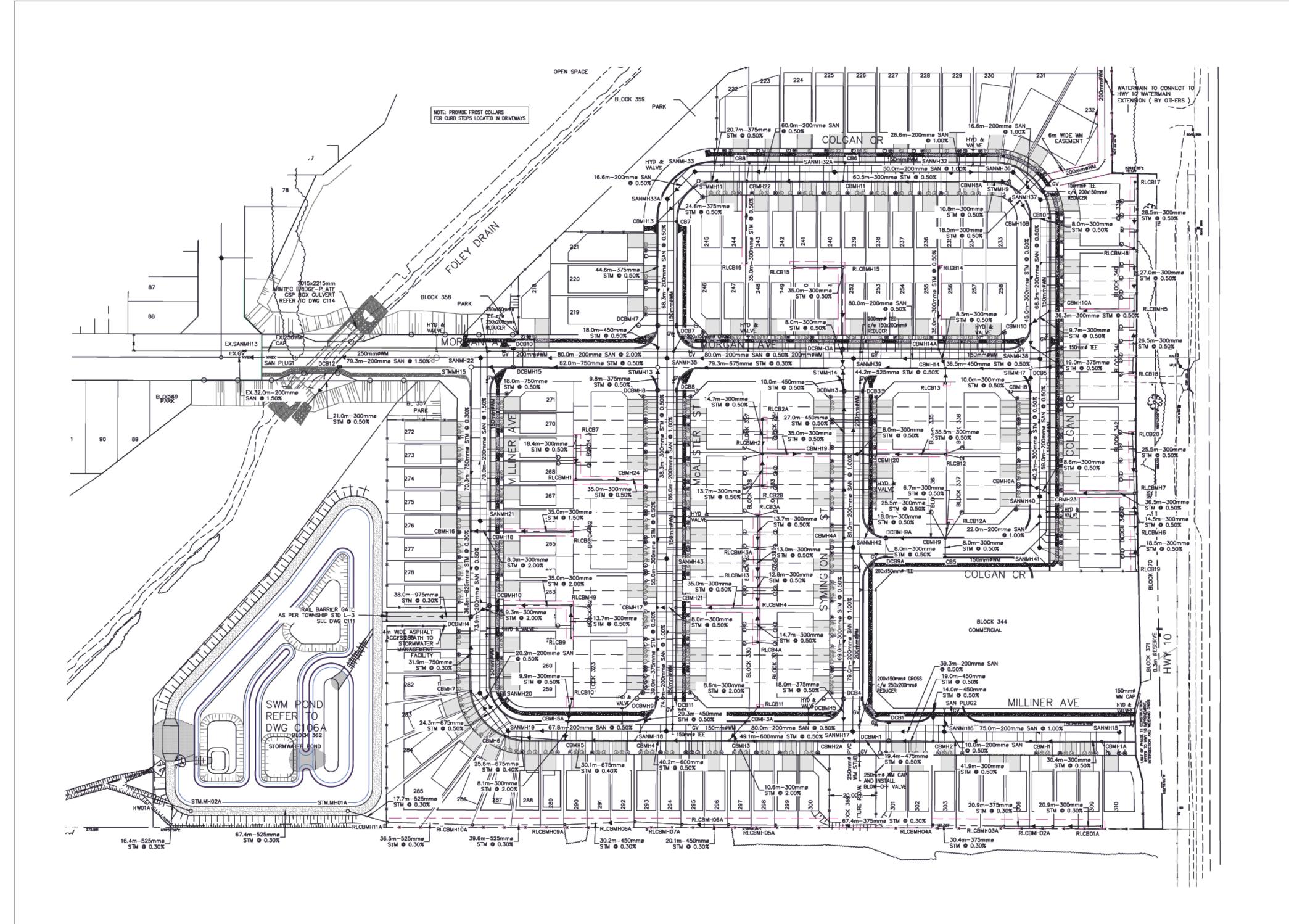
## **Environmental Noise Study**

Proposed Dundalk McDonald's Restaurant

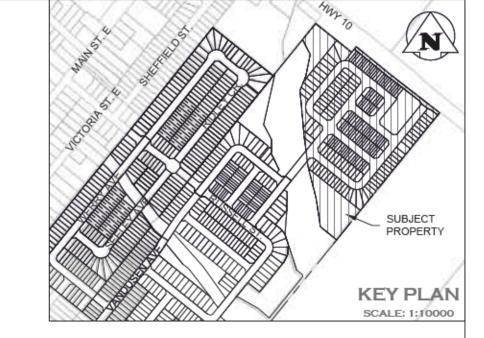
Flato Developments Inc.

SLR Project No. 209.40363.0000









LEGEND

GUIDE RAIL SYSTEM PER OPSD 912.185  $\circ$ PROP. I.2m BLACK VINYL CHAIN LINK FENCE PER OPSD 972.130

3m WIDE DRAINAGE EASEMENT

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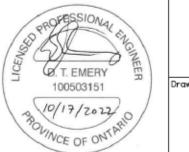
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DATE: MMM/DD/YYYY Engineer No. ISSUE ISSUED FOR 1st SUBMISSION JAN/10/2022 ISSUED FOR 2nd SUBMISSION JUN/24/2022 OCT/17/2022 ISSUED FOR 3rd SUBMISSION B.R.C. HUMMELEN 100173708 0/17/2022





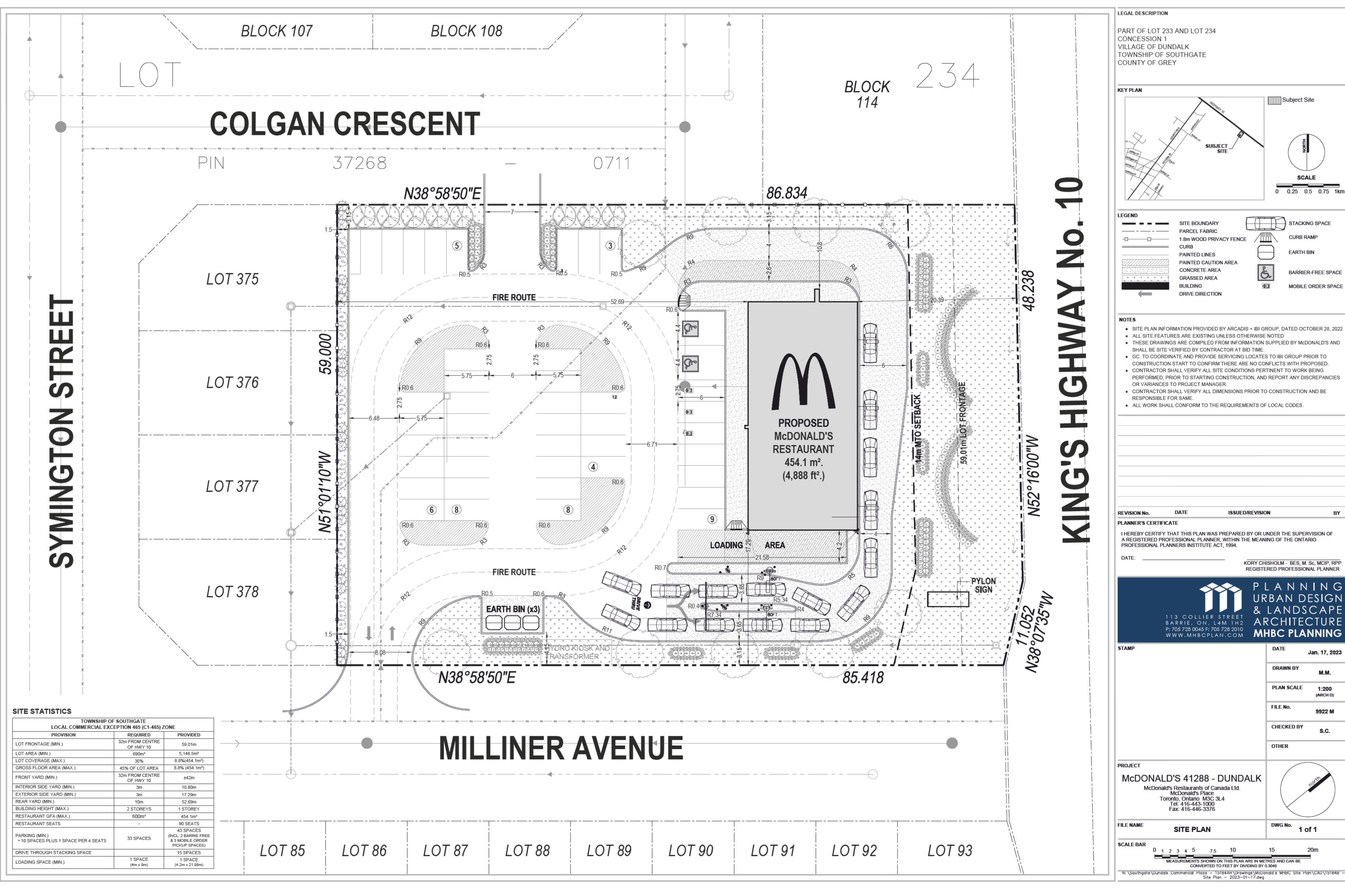
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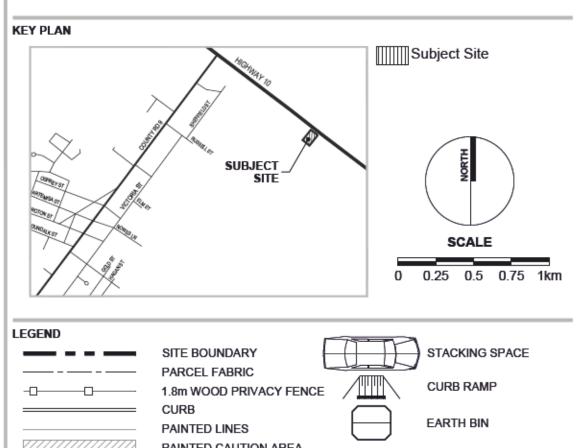
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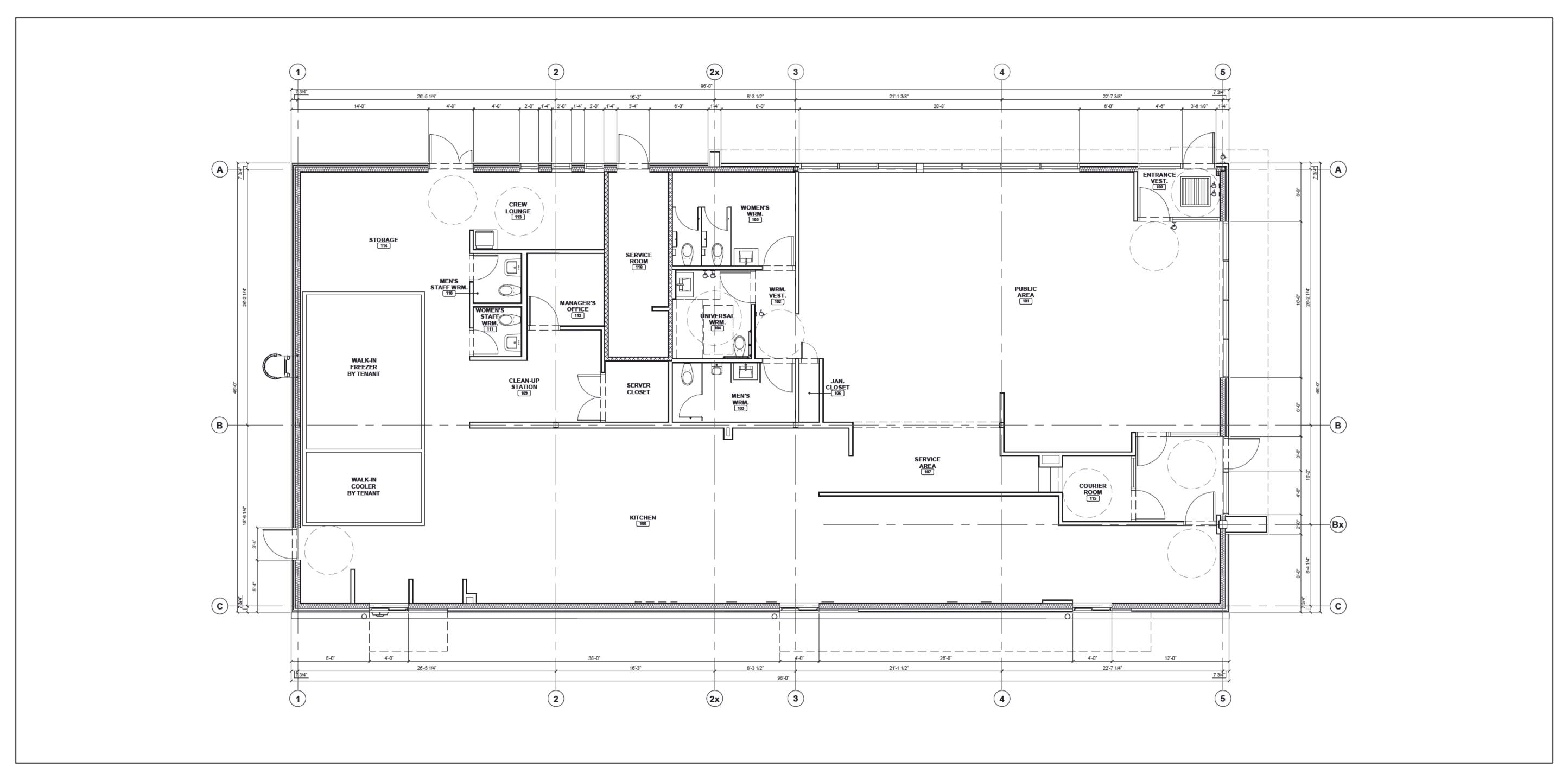


ADMIRAL BUILDING FIRST STREET, SUITE 200 LLINGWOOD, ON, L9Y 1A1 705 446-3510 T 705 446-3520 F WWW.CFCROZIER.CA INFO@CFCROZIER.CA

J.K./V.P. Design By
J.K./V.P./B.H./D.E. 1060 - 5771B.H./D.E. B.H./D.E. 1:1000







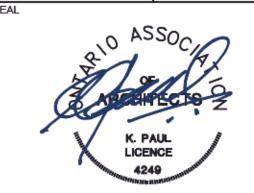
1 FLOOR PLAN A1.0 SCALE: 3/16" = 1'-0"

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STORE TYPE

MODEL R3.0-65 2023 NAT. # 41288

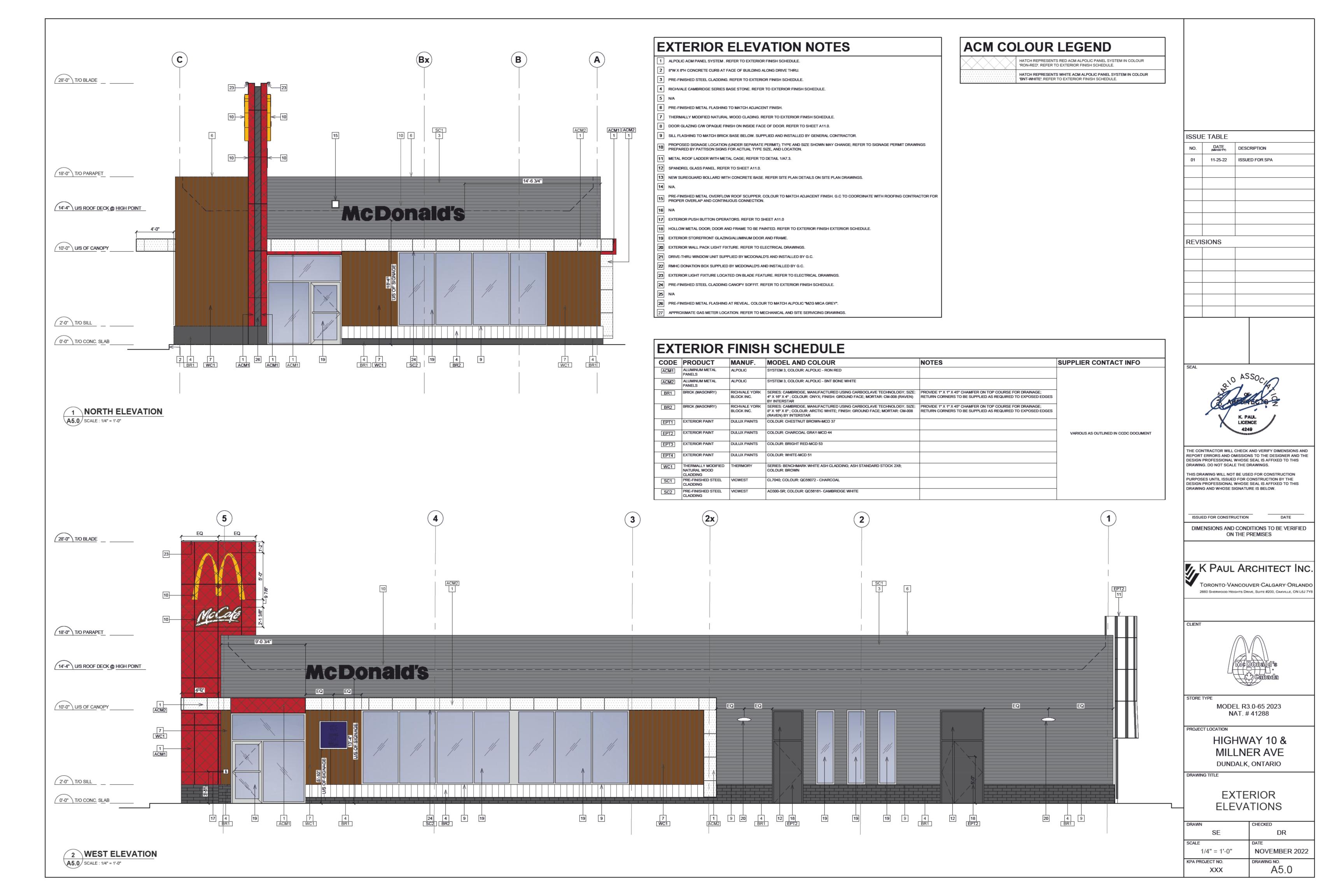
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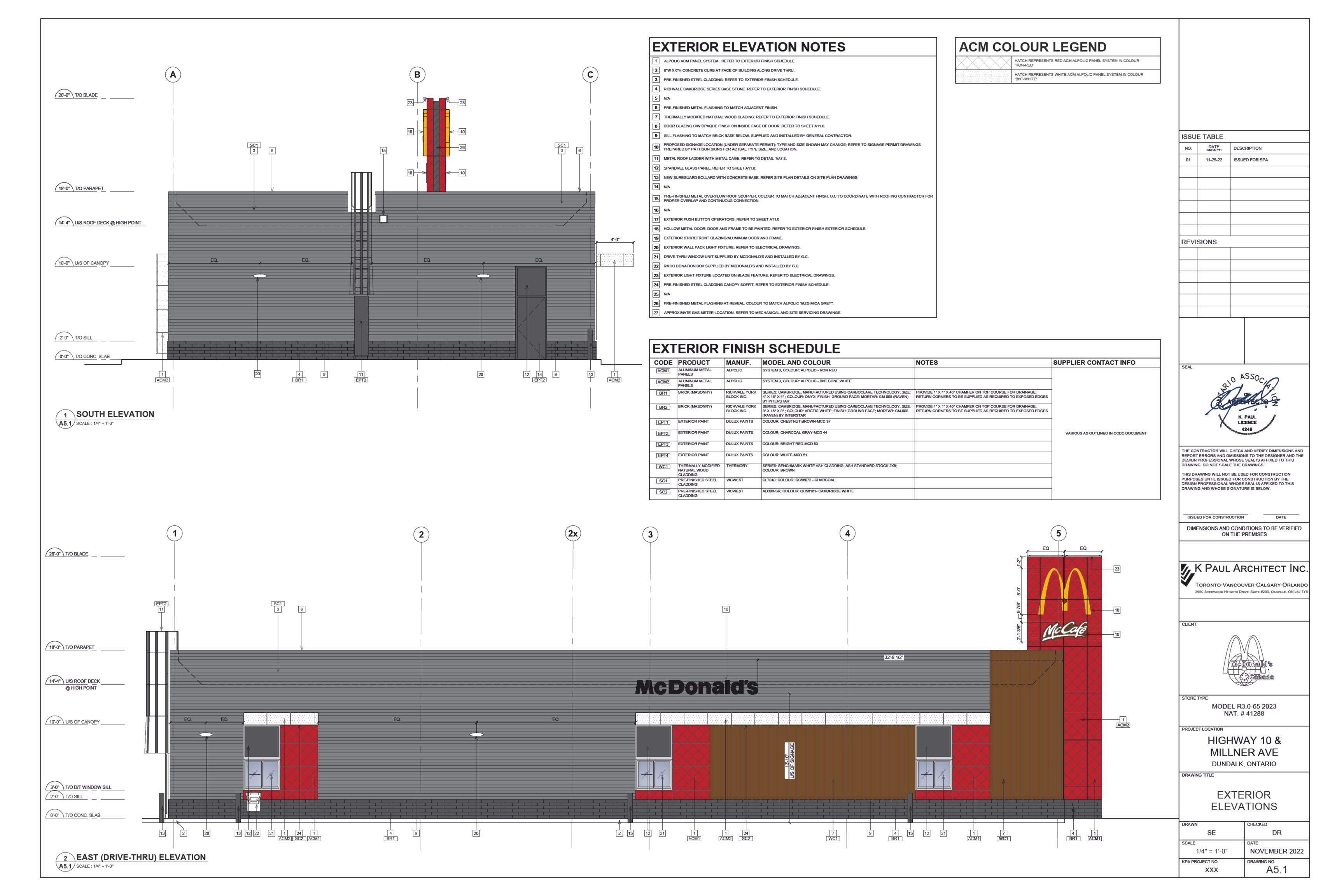
HIGHWAY 10 & MILLNER AVE DUNDALK, ONTARIO

DRAWING TITLE

FLOOR PLAN

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| SE              | DR            |  |  |  |  |
| SCALE           | DATE          |  |  |  |  |
| 1/4" = 1'-0"    | NOVEMBER 2022 |  |  |  |  |
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# **Appendix B** Source Sound Level Data

## **Environmental Noise Study**

Proposed Dundalk McDonald's Restaurant

Flato Developments Inc.

SLR Project No. 209.40363.0000



Table B.1: Summary of Noise Source Sound Power Levels (Typical Sources)

| Maximum Sound Power Levels (1/1 Octave Band Levels) |            |            |             |             |             |  | Total        |              |              |              |  |   |
|---|------------|------------|-------------|-------------|-------------|--|--------------|--------------|--------------|--------------|--|---|
| Source Description                                  | 32<br>(dB) | 63<br>(dB) | 125<br>(dB) | 250<br>(dB) | 500<br>(dB) | 1000<br>(dB)                                     | 2000<br>(dB) | 4000<br>(dB) | 8000<br>(dB) | PWL<br>(dBA) | Notes  |   |
|   |            |            |             |             |             |  |              |              |              |              | - based on SLR historical data   |   |
| 5 Ton HVAC  | 77         | 80         | 81          | 81          | 80          | 78   | 74           | 70           | 64           | 82.5         | - no duty cycling applied during daytime/evening - 30 min duty cycling applied during night-time period                    |   |
|   |            |            |             |             |             |  |              |              |              |              | - based on SLR historical data   |   |
| 10 Ton HVAC   | 80         | 83         | 84          | 84          | 83          | 81   | 77           | 73           | 67           | 85.5         | - no duty cycling applied during daytime/evening<br>- 30 min duty cycling applied during night-time period                 |   |
| wells in good and iller                             |            |            |             |             |             |  |              |              |              |              | - based on SLR historical data   |   |
| Walk-in Cooler Chiller                              |            | 85         | 86          | 76          | 71          | 68   | 66           | 60           | 52           | 75.4         | - no duty cycling applied during daytime/evening<br>- 30 min duty cycling applied during night-time period                 |   |
| Kitchen Exhaust Fan                                 |            | 88         | 93          | 85          | 77          | 75   | 71           | 67           | 62           | 82.7         | - based on SLR measurement data of a McDonald's Restaurant   |   |
|   |            |            |             |             |             | <del>                                     </del> |              |              |              |              | - no duty cycling applied<br>- based on SLR historical data  |   |
| Drive Thru Speaker                                  | 75         | 75         | 75          | 70          | 67          | 81   | 78           | 76           | 63           | 48           | 82.5   | - 30n min duty cycle applied to account for 2 way conversation. |
|   |            |            |             |             | "           |  | / "          | 03           | ~            |              | <ul> <li>system assumed to be audible at receptors, where a 5 dBA annoyance penalty is<br/>included in the PWL.</li> </ul> |   |
| Drive Thru Queue - idling car                       |            | 85         | 80          | 75          | 72          | 70   | 69           | 65           | 55           | 76.0         | - based on average idling vehicle sound level for 2000+ model years<br>- no duty cycling applied                           |   |

# **Appendix C STAMSON Validation File**

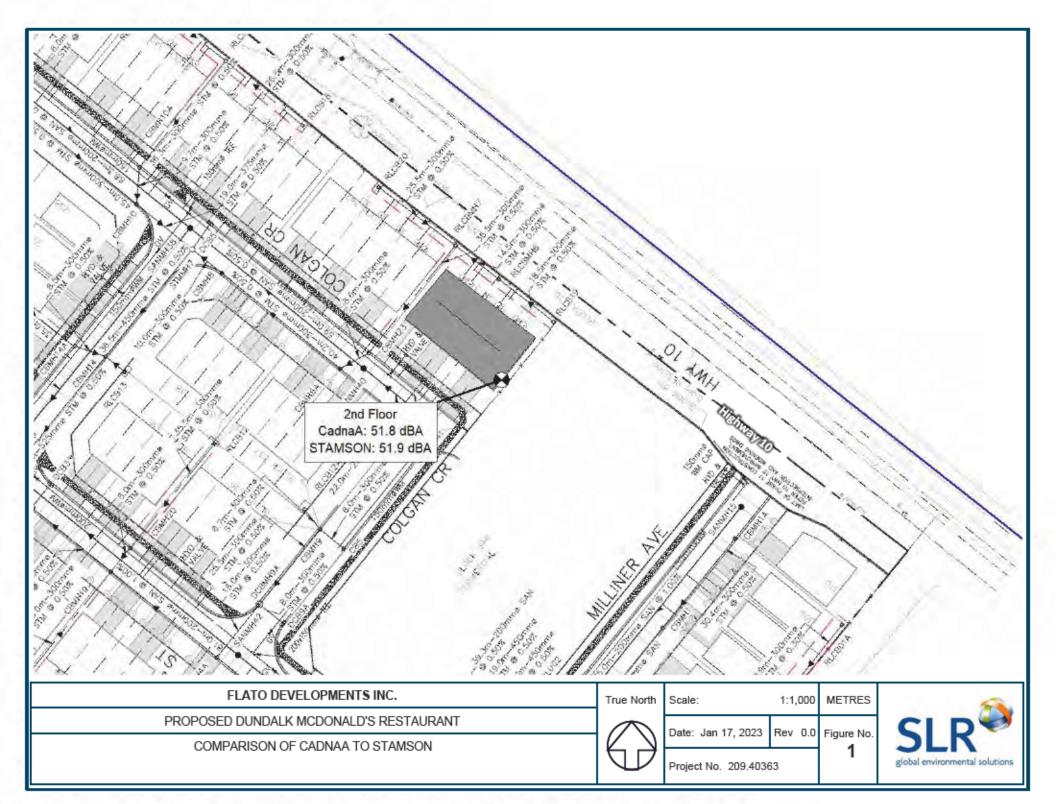
## **Environmental Noise Study**

Proposed Dundalk McDonald's Restaurant

Flato Developments Inc.

SLR Project No. 209.40363.0000





STAMSON 5.0 NORMAL REPORT Date: 16-01-2023 03:51:58 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: amb 1.te Time Period: 1 hours

Description: 2nd Floor, Evening Ambient

Road data, segment # 1: Hwy10

Car traffic volume : 121 veh/TimePeriod Medium truck volume : 6 veh/TimePeriod Heavy truck volume : 9 veh/TimePeriod Posted speed limit : 80 km/h

Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Hwy10

Angle1 Angle2 : 0.00 deg 90.00 deg Wood depth : 0 (No woods No of house rows : 0 (No woods.)

1 Surface : (Absorptive ground surface)

Receiver source distance : 52.70 m Receiver height : 4.50 m

(Flat/gentle slope; no barrier) Topography : 1

Reference angle : 0.00

Results segment # 1: Hwy10 -----

Source height = 1.60 m

ROAD (0.00 + 51.90 + 0.00) = 51.90 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq 0 90 0.57 64.76 0.00 -8.55 -4.31 0.00 0.00 0.00 51.90 \_\_\_\_\_\_

Segment Leq : 51.90 dBA

Total Leq All Segments: 51.90 dBA

TOTAL Leq FROM ALL SOURCES: 51.90

## **Appendix D** Sample Output File

## **Environmental Noise Study**

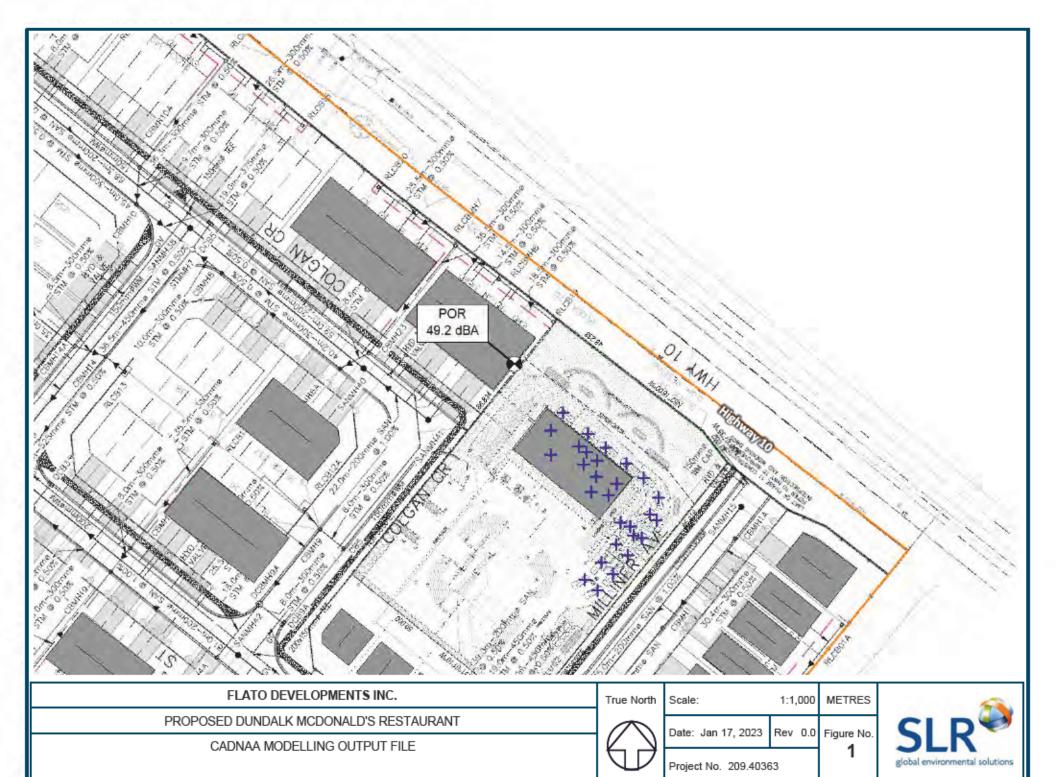
Proposed Dundalk McDonald's Restaurant

Flato Developments Inc.

SLR Project No. 209.40363.0000

January 17, 2023





Receiver Name: ID: POR

X: 550021.90 m Y: 4891449.68 m

Z: 4.50 m

|     |                  |                   | P           | oint S | Source | e, ISO       | 9613, N       | Vame:     | "HVAC      | '. ID: '     | "McD        | HVA          | C 5to         | n"   |      |             |             |       |      |              |
|-----|------------------|-------------------|-------------|--------|--------|--------------|---------------|-----------|------------|--------------|-------------|--------------|---------------|------|------|-------------|-------------|-------|------|--------------|
| Nr. | Х                | Y                 | Z           |        | _      | Frea.        | Lw            | l/a       | Optime     | <del>-</del> | Di          |              | Aatm          |      | Afol | Ahous       | Abar        | Cmet  | RL   | Lr           |
|     | (m)              | (m)               | (m)         |        |        | (Hz)         |               | dB        | dB         | _            | (dB)        | (dB)         | (dB)          | (dB) | (dB) | (dB)        | (dB)        | (dB)  | (dB) | _            |
| 1   | 550031.56        |                   | 5.40        | 0      | D      | Α            |               | 0.0       | 0.0        | 0.0          | , ,         |              | 0.1           | -1.9 | 0.0  | 0.0         | , ,         |       |      | _            |
| 1   | 550031.56        |                   | 5.40        |        | N      | A            | _             | 0.0       | -3.0       | 0.0          | _           | _            | 0.1           | -1.9 | 0.0  | _           | _           | _     | _    | _            |
| 1   |                  | 4891431.98        | 5.40        |        | E      | A            |               | 0.0       | -3.0       | 0.0          | _           | _            | 0.1           | -1.9 | _    | _           | _           | _     | _    | _            |
|     | 555551.55        | 4001401.00        |             |        |        |              |               |           |            |              |             |              |               |      |      | 0.0         | 7.0         | 0.0   | 0.0  |              |
| NI- | v                | V                 |             |        |        | _            |               |           | tchen Ex   |              |             | _            |               | _    | _    | A b =       | A I         | Ct    | DI   |              |
| Nr. | X                | Υ ()              | Z           | Reii.  | DEN    | Freq.        | LW            | l/a       | Optime     | K0           | Di          |              | Aatm          |      | _    | Ahous       | _           | _     | _    | Li           |
| _   | (m)              | (m)<br>4891427.84 | (m)         | _      | _      | (Hz)         | dB(A)         | dB        | dB         | (dB)         | (dB)        | (dB)         | (dB)          | (dB) | (dB) | (dB)        | (dB)        | (dB)  | (dB) | ,            |
| 2   | 550038.89        |                   | 5.40        |        | D      | A            | 82.7          | 0.0       | 0.0        | _            | _           |              | 0.1           | -2.1 | 0.0  | 0.0         | _           | _     | _    |              |
| 2   | 550038.89        |                   | 5.40        |        | N      | A            | _             | 0.0       | 0.0        | 0.0          | 0.0         | 39.8         | 0.1           | -2.1 | 0.0  | 0.0         | _           | _     | _    | -            |
| 2   | 550038.89        | 4891427.84        | 5.40        | U      | E      | A            | 82.7          | 0.0       | 0.0        | 0.0          | 0.0         | 39.8         | 0.1           | -2.1 | 0.0  | 0.0         | 7.2         | 0.0   | 0.0  | 37           |
|     |                  |                   | P           | oint S | ource  | , ISO 9      | 9613, N       | lame:     | "HVAC"     | , ID: "      | McD.        | _HVA(        | C_10to        | n"   |      |             |             |       |      |              |
| Nr. | X                | Y                 | Z           | Refl.  | DEN    | Freq.        | Lw            | l/a       | Optime     | K0           | Di          | Adiv         | Aatm          | Agr  | Afol | Ahous       | Abar        | Cmet  | RL   | Lr           |
|     | (m)              | (m)               | (m)         |        |        | (Hz)         | dB(A)         | dB        | dB         | (dB)         | (dB)        | (dB)         | (dB)          | (dB) | (dB) | (dB)        | (dB)        | (dB)  | (dB) | dB(          |
| 3   | 550040.16        | 4891423.04        | 5.60        | 0      | D      | Α            | 85.5          | 0.0       | 0.0        | 0.0          | 0.0         | 41.2         | 0.2           | -2.3 | 0.0  | 0.0         | 8.0         | 0.0   | 0.0  | 38           |
| 3   | 550040.16        | 4891423.04        | 5.60        | 0      | N      | Α            | 85.5          | 0.0       | -3.0       | 0.0          | 0.0         | 41.2         | 0.2           | -2.3 | 0.0  | 0.0         | 8.0         | 0.0   | 0.0  | 35           |
| 3   | 550040.16        | 4891423.04        | 5.60        | 0      | Е      | Α            | 85.5          | 0.0       | -3.0       | 0.0          | 0.0         | 41.2         | 0.2           | -2.3 | 0.0  | 0.0         | 8.0         | 0.0   | 0.0  | 35           |
|     |                  |                   | Point       | Sour   | rce IS | O 961        | 3 Nam         | se∙ "Ki   | tchen Ex   | haue         | t Fan       | " ID- '      | 'McD          | KEE' | ,    |             |             |       |      |              |
| Nr. | Х                | Y                 | Z           |        |        | Freq.        | Lw            | _         | Optime     |              | Di          |              | Aatm          | _    | _    | Ahous       | Abar        | Cmet  | RI   | L            |
|     | (m)              | (m)               | (m)         |        |        | (Hz)         | dB(A)         | dB        | dB         | (dB)         | _           | (dB)         | (dB)          | (dB) | (dB) | (dB)        | (dB)        | (dB)  | (dB) | _            |
| 4   | 550041.03        | 4891426.24        | 5.40        | 0      | D      | Α            | 82.7          | 0.0       | 0.0        | 0.0          | 0.0         | 40.6         | 0.1           | -2.2 | 0.0  | 0.0         | , ,         | ` /   |      | 36           |
| 4   | 550041.03        |                   | 5.40        |        | N      | A            |               | 0.0       | 0.0        | 0.0          | _           |              | 0.1           | -2.2 | 0.0  | _           | _           | _     | _    | _            |
| 4   | 550041.03        |                   | 5.40        |        | E      | A            | _             | 0.0       | 0.0        | 0.0          | _           |              | 0.1           | -2.2 | 0.0  | 0.0         | _           | _     | _    | _            |
|     |                  |                   |             |        |        |              |               |           |            |              |             |              |               |      |      |             |             |       |      | _            |
| NI- | Х                | Y                 | Z           |        | _      | Freq.        | <del></del>   |           | "HVAC      |              | "McD<br>Di  |              | C_5to<br>Aatm |      | A.F. | Ahous       | Abar        | Const | ы    | Lr           |
| Nr. |                  |                   |             | IVEII. | DLIN   |              | LW            | _         | Optime     | _            | _           |              |               |      | _    |             | _           | _     | _    | -            |
| 5   | (m)<br>550031.43 | (m)<br>4891425.58 | (m)<br>5.40 | 0      | D      | (Hz)         | dB(A)<br>82.5 | dB<br>0.0 | dB         |              | (dB)<br>0.0 | (dB)<br>39.3 | (dB)<br>0.2   | (dB) | (dB) | (dB)<br>0.0 | (dB)<br>8.0 |       | (dB) | _            |
| 5   |                  |                   |             |        | N      | A            | _             | _         | 0.0        | 0.0          | _           | _            | _             | _    | 0.0  |             | _           | _     | _    | _            |
| 5   | 550031.43        |                   | 5.40        |        | E      | A            | _             | 0.0       | -3.0       | 0.0          | 0.0         | 39.3         | 0.2           | -2.2 | 0.0  |             |             | _     | _    | -            |
| э   | 550031.43        | 4891425.58        | 5.40        | U      | -      | A            | 82.5          | 0.0       | -3.0       | 0.0          | 0.0         | 39.3         | 0.2           | -2.2 | 0.0  | 0.0         | 0.0         | 0.0   | 0.0  | 34           |
|     |                  |                   | Poin        |        |        |              | 3, Nan        | ne: "Ki   | tchen Ex   | chaus        | t Fan       |              |               |      |      |             |             |       |      |              |
| Nr. | X                | Y                 | Z           | Refl.  | DEN    | Freq.        | Lw            | l/a       | Optime     | _            | Di          |              | Aatm          | Agr  | Afol | Ahous       | Abar        | Cmet  | RL   | Lr           |
|     | (m)              | (m)               | (m)         |        |        | (Hz)         | dB(A)         | dB        | dB         | (dB)         | (dB)        | (dB)         | (dB)          | (dB) | (dB) | (dB)        | (dB)        | (dB)  | (dB) | dB(          |
| 6   | 550043.63        | 4891424.05        | 5.40        |        | D      | Α            | 82.7          | 0.0       | 0.0        | 0.0          | 0.0         | 41.5         | 0.1           | -2.2 | 0.0  | 0.0         | 7.2         | 0.0   | 0.0  | 36           |
| 6   | 550043.63        | 4891424.05        | 5.40        |        | N      | Α            | 82.7          | 0.0       | 0.0        | 0.0          | 0.0         | 41.5         | 0.1           | -2.2 | 0.0  | 0.0         |             |       | 0.0  | 36           |
| 6   | 550043.63        | 4891424.05        | 5.40        | 0      | E      | Α            | 82.7          | 0.0       | 0.0        | 0.0          | 0.0         | 41.5         | 0.1           | -2.2 | 0.0  | 0.0         | 7.2         | 0.0   | 0.0  | 36           |
|     |                  |                   | Po          | int Sc | ource  | ISO 9        | 613 N         | ame. '    | "Idling ca | ar" ID       | )- "Mc      | D Ca         | rldle         | 01"  |      |             |             |       |      |              |
| Nr. | X                | Y                 | Z           |        |        | Freq.        | <del> </del>  |           | Optime     | <u> </u>     |             |              |               |      | Afol | Ahous       | Abar        | Cmet  | RL   | Li           |
|     | (m)              | (m)               | (m)         |        |        |              | dB(A)         | dB        | dB         | _            | (dB)        |              | (dB)          | (dB) |      |             | (dB)        |       | (dB) | -            |
| 7   |                  | 4891436.69        | 1.00        | 0      | D      | Α            |               | 0.0       |            | 0.0          |             | -            | 0.1           | -1.8 | -    |             |             |       |      | <del>-</del> |
| 7   |                  | 4891436.69        | 1.00        |        | N      | A            | _             | 0.0       | 0.0        |              |             | _            | 0.1           | -1.8 | _    | _           | _           | _     | _    | -            |
| 7   |                  | 4891436.69        | 1.00        |        | E      | A            | _             | 0.0       | 0.0        | _            | _           | _            | _             | _    | _    | _           | _           | _     | _    | -            |
|     |                  |                   |             |        |        |              |               |           |            |              |             |              |               |      |      |             |             |       |      |              |
|     |                  |                   |             |        |        | <del> </del> | <del></del>   |           | "HVAC      | <del>-</del> |             |              |               |      |      |             |             |       |      |              |
| Nr. | X                | Y                 | Z           | Refl.  | DEN    | Freq.        |               | l/a       | Optime     | _            | Di          | _            | _             | _    | _    | Ahous       | _           | _     | _    | Lı           |
|     | (m)              | (m)               | (m)         |        |        | (Hz)         | dB(A)         |           | dB         |              | (dB)        |              | 1/            |      |      | , ,         | (dB)        |       |      | _            |
|     | 550043.40        | 4891419 84        | 5.40        | 0      | ID.    | I Λ          | 92.5          | 0.0       |            | וחח          | 100         | 12.3         | l no          | 124  | 0.0  | 1 00        | 9.4         | 1 00  | 0.0  | 1 2/         |

0 D

0 N

0 E

A 82.5

A 82.5

Α

82.5

0.0

0.0

0.0

0.0 0.0 0.0 42.3

-3.0 0.0 0.0 42.3

-3.0 0.0 0.0 42.3 0.2 -2.4 0.0

0.2 -2.4 0.0

0.2 -2.4 0.0

0.0 8.4

0.0 8.4

0.0 8.4

0.0 0.0 34.0

0.0 0.0 30.9

0.0 0.0 30.9

5.40

5.40

5.40

8 550043.49 4891419.84

8 550043.49 4891419.84

550043.49 4891419.84

8

| No.   X  | Point Source, ISO 9613, Name: "HVAC", ID: "McD_HVAC_5ton"   Nr.   X   Y   Z   Refl.   DEN   Freq.   Lw   I/a   Optime   K0   Di   Adiv   Aatm   Agr   Afol   Ahous   Abar   Cmet   RL   Lr |           |              |      |        |               |       |               |         |            |        |        |          |         |       |       |        |         |       |      |               |
|--|--|-----------|--------------|------|--------|---------------|-------|---------------|---------|------------|--------|--------|----------|---------|-------|-------|--------|---------|-------|------|---------------|
| (m)  | Mr   | v         | V            |      |        |               |       |               |         |            | _      |        |          |         |       | Afol  | About  | Abar    | Cmat  | Вı   | l e           |
| 9   \$50042.09   48914(15.71   \$-40   \$0   \$0   \$A   \$25.5   \$0.0   \$0.0   \$0.0   \$4.99   \$0.3   \$24.0   \$0.0   \$0.5   \$0.0   \$0.0   \$0.0   \$0.3   \$9.5   \$0.0   \$0.0   \$0.0   \$0.0   \$0.3   \$9.5   \$0.0   \$0. | INF.   |           |              |      | reii.  | DEN           |       |               |         |            |        |        |          | _       |       | _     |        | _       |       |      |               |
| 9   \$50042.09   48091415.71   \$.40   0   N   A   82.5   0.0   3.0   0.0   0.0   42.9   0.3   2.4   0.0   0.0   8.5   0.0   0.0   0.3   0.3   0.0   0.0   0.0   42.9   0.3   2.4   0.0   0.0   8.5   0.0   0.0   0.3   0.3   0.3   0.3   0.0   0.   | <u> </u>   |           |              |      |        | _             |       |               |         |            |        |        | , ,      |         |       | , ,   | ` '    |         | , ,   |      |               |
| Point Source, ISO 9613, Name: "Direct Provided First Provided Fi   | <u> </u>   |           |              |      |        | _             |       |               |         |            | _      |        |          |         |       | _     |        |         |       |      | $\overline{}$ |
| Point Source, ISO 9813, Name: "Drive Thru Speaker", ID: "McD_DTS"   Nr.  | $\rightarrow$  |           |              |      |        | $\overline{}$ |       |               |         |            |        |        | _        |         |       |       |        |         |       |      | -             |
| Nr.   X  | 9  | 550042.09 | 4891415./1   | 5.40 | 0      | E             | А     | 82.5          | 0.0     | -3.0       | 0.0    | 0.0    | 42.9     | 0.3     | -2.4  | 0.0   | 0.0    | 8.5     | 0.0   | 0.0  | 30.3          |
| Nr.   X  |  |           |              | Doin | t Sou  | rca IS        | 061   | 13 Nam        | חיי ים: | rive Thru  | Sna    | akar   | ' ID: "  | McD [   | ייפדר |       |        |         |       |      | $\overline{}$ |
| mm   | Nr   | ~         | V            |      |        |               |       | _             |         |            |        |        | _        |         |       | Afol  | Aboue  | Abar    | Cmat  | DI   |               |
| 10   \$50000 02   489140754   1.00   0   0   A   \$2.5   0.0   -3.0   0.0   0.0   45   0.3   -2.5   0.0   0.0   21   0.0   0.0   15.6   10   \$50000 02   489140754   1.00   0   E   A   82.5   0.0   -3.0   0.0   0.4   51   0.3   -2.5   0.0   0.0   21   0.0   0.0   15.6   10   \$50000 02   489140754   1.00   0   E   A   82.5   0.0   -3.0   0.0   0.4   51   0.3   -2.5   0.0   0.0   21   0.0   0.0   15.6   10   \$50000 02   489140754   1.00   0   E   A   82.5   0.0   -3.0   0.0   0.0   45.1   0.3   -2.5   0.0   0.0   21.1   0.0   0.0   15.6   | 141.   |           |              |      | IVCII. | DLIN          |       | $\overline{}$ |         |            |        |        |          |         |       | _     |        |         |       |      |               |
| 10   550050.02   4891407.54   1.00   0   N   A   82.5   0.0   3.30   0.0   0.0   45.1   0.3   2.5   0.0   0.0   0.1   1.1   0.0   0.0   15.6   | 10   | . ,       |              |      | 0      | <u></u>       |       | . ,           |         |            | . ,    | . ,    | , ,      |         |       |       | , ,    |         | . ,   |      |               |
| The control   Figure   Figur   | $\rightarrow$  |           |              |      |        |               |       |               |         |            | _      |        | _        |         |       |       |        | _       |       |      |               |
| Point Source, ISO 9613, Name: "Idling car", ID: "McD_Cartdle, 02"   Nr.   X  | _  |           |              |      |        |               |       |               |         |            |        |        |          |         |       |       |        |         |       |      |               |
| Intr.   X  | 10   | 330030.02 | 403 1407 .34 | 1.00 | U      |               |       | 02.3          | 0.0     | -5.0       | 0.0    | 0.0    | 43.1     | 0.5     | -2.5  | 0.0   | 0.0    | 21.1    | 0.0   | 0.0  | 13.0          |
| Intr.   X  |  |           |              | Po   | int Sc | urce          | ISO 9 | 613 Ns        | ame: '  | 'Idling ca | r" ID  | )- "Mc | :D Ca    | rldle ( | 12"   |       |        |         |       |      |               |
| (m) (m) (m) (m) (m) (k) (k) (k) (k) (k) (k) (k) (k) (k) (k   | Nr.  | X         | Υ            |      |        |               |       |               |         |            | _      |        |          |         |       | Afol  | Ahous  | Abar    | Cmet  | RL   | Lr            |
| 11   550041.29   4891431.22   1.00   0   D   A   76.0   0.0  | <del>                                     </del>   |           |              |      |        |               |       |               |         |            |        |        |          | _       |       |       |        |         |       |      |               |
| 11   550041.29   4891431.22   1.00   0   N   A   76.0   0.0   -188.0   0.0   0.0   36.6   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.3   36.2   0.2   2.1   0.0   0.0   0.0   0.0   0.3   36.2   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.0   0.3   32.2   1.2   550041.29   4891431.22   1.00   1   D   A   76.0   0.0   0.0   0.0   0.0   0.0   0.0   38.8   0.2   -1.9   0.0   0.0   0.0   0.0   0.0   0.3   32.2   1.2   550041.29   4891431.22   1.00   1   E   A   76.0   0.0   -188.0   0.0   0.0   0.0   38.8   0.2   -1.9   0.0   0.0   0.0   0.0   0.0   2.4   35.5   0.2   550041.29   4891431.22   1.00   1   E   A   76.0   0.0   -188.0   0.0   0.0   0.0   38.8   0.2   -1.9   0.0  | 11   | . ,       |              |      | n      | n             |       |               |         |            |        |        |          |         |       | -     | -      |         |       |      |               |
| 11 \$50041.29   4891431.22   1.00   0   E   A   76.0   0.0   | -  |           |              |      |        | $\overline{}$ |       |               |         |            |        |        | _        |         |       | _     |        |         |       |      | -             |
| 12   550041.29   4891431.22   1.00   | _  |           |              |      |        |               |       | $\overline{}$ |         |            |        |        |          |         |       | _     |        |         |       |      |               |
| 12   55004129   4891431.22   1.00  | $\rightarrow$  |           |              |      |        | $\overline{}$ |       |               |         |            |        |        |          |         |       | _     |        | _       |       |      |               |
| Point Source, ISO 9613, Name: "Drive Thru Speaker", ID: "McD_DTS"   Nr.   X   Y   Z   Reff.   DEN Freq.   Lw   Va   Optime   Ko   Di   Adiv   Adam   Agr   Afo   Afou   Abar   Cmet   RL   Lr   Va   Spossor   Reff.   DEN Freq.   Lw   Va   Optime   Ko   Di   Adiv   Adam   Agr   Afo   Ahou   Abar   Cmet   RL   Lr   Va   Spossor   Reff.   DEN Freq.   Lw   Va   Optime   Ko   Di   Adiv   Adam   Agr   Afo   Ahou   Abar   Cmet   RL   Lr   Va   Spossor   Reff.   DEN Freq.   Lw   Va   Optime   Ko   Di   Adiv   Adam   Agr   Afo   Ahou   Abar   Cmet   RL   Lr   Afo   Ahou   Abar   Cmet   RL   Afo   Ahou   Abar   Cmet   Afo   Ahou   Abar   Cmet   RL   Afo   Ahou   Abar   Cmet   Ahou  | $\rightarrow$  |           |              |      |        | $\overline{}$ |       |               |         |            | _      |        |          |         |       |       |        | _       |       |      | -             |
| Point Source, ISO 9613, Name: "Drive Thru Speaker", ID: "McD_DTS"  |  |           |              |      |        | $\overline{}$ |       |               |         |            | _      |        | _        |         |       |       |        |         |       |      | -             |
| Nr.   X  | 12   | 330041.23 | 4001401.22   | 1.00 |        |               |       | 70.0          | 0.0     | 0.0        | 0.0    | 0.0    | 55.0     | 0.2     | -1.0  | 0.0   | 0.0    | 0.0     | 0.0   | 2.4  | 55.5          |
| (m)  |  |           |              | Poin | t Sou  | rce, IS       | O 961 | I3. Nan       | ne: "D  | rive Thru  | Spe    | aker"  | '. ID: " | McD [   | DTS"  |       |        |         |       |      |               |
| (m)  | Nr.  | Х         | Υ            | Z    | Refl.  | DÉN           | Freq. | Ĺw            | l/a     | Optime     | K0     | Di     | Adiv     | Aatm    | Agr   | Afol  | Ahous  | Abar    | Cmet  | RL   | Lr            |
| 13   550053.31   4891404.21   1.00   0   0   0   A   82.5   0.0   -3.0   0.0   45.9   0.3   2.5   0.0   0.0   19.4   0.0   0.0   16.5  |  |           | (m)          |      |        |               | (Hz)  | $\overline{}$ |         |            |        |        |          |         |       | _     |        |         |       |      | dB(A)         |
| 13   | 13   | . ,       |              |      | 0      | D             |       |               |         |            |        |        | • •      |         |       | -     |        |         |       |      |               |
| 13   550053.31   4891404.21   1.00   0   E   A   82.5   0.0   -3.0   0.0   0.5   45.9   0.3   -2.5   0.0   0.0   19.4   0.0   0.0   0.1   6.5  | 13   | 550053.31 | 4891404.21   | 1.00 | 0      | N             |       |               |         |            |        |        |          |         |       | _     |        |         | 0.0   |      |               |
| Nr.   X   Y   Z   Refi.   DEN   Freq.   Lw   Va   Optime   K0   Di   Adiv   Aatm   Agr   Afo   Ahous   Abar   Cmet   RL   Lr   (m)   | $\rightarrow$  |           |              |      |        | $\overline{}$ |       |               |         |            | _      |        | _        |         | _     |       |        |         |       |      | -             |
| Nr.   X  |  |           |              |      |        |               |       |               |         |            |        |        |          |         |       |       |        |         |       |      |               |
| (m)  |  |           |              | Po   | int So | urce,         | ISO 9 | 613, Na       | ame: '  | 'Idling ca | r", ID | : "Mc  | :D_Ca    | rldle_( | )3"   |       |        |         |       |      |               |
| 14   550046.13   4891427.42   1.00   0   D   A   76.0   0.0   0.0   0.0   0.0   41.4   0.2   2.3   0.0   0.0   0.0   0.0   0.0   0.0   36.7     14   550046.13   4891427.42   1.00   0   N   A   76.0   0.0   -188.0   0.0   0.0   41.4   0.2   2.3   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0     14   550046.13   4891427.42   1.00   1   D   A   76.0   0.0   0.0   0.0   0.0   0.0   41.4   0.2   2.3   0.0   0.0   0.0   0.0   0.0   0.0   0.0     15   550046.13   4891427.42   1.00   1   D   A   76.0   0.0   0.0   0.0   0.0   41.5   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0     15   550046.13   4891427.42   1.00   1   N   A   76.0   0.0   -188.0   0.0   0.0   41.5   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0     15   550046.13   4891427.42   1.00   1   E   A   76.0   0.0   -188.0   0.0   0.0   41.5   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0     15   550046.13   4891427.42   1.00   1   E   A   76.0   0.0   -188.0   0.0   0.0   0.0   41.5   0.2   2.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0     16   550051.45   4891423.27   1.00   1   E   A   76.0   0.   | Nr.  | X         | Υ            | Z    | Refl.  | DEN           | Freq. | Lw            | l/a     | Optime     | K0     | Di     | Adiv     | Aatm    | Agr   | Afol  | Ahous  | Abar    | Cmet  | RL   | Lr            |
| 14   |  | (m)       | (m)          | (m)  |        |               | (Hz)  | dB(A)         | dB      | dB         | (dB)   | (dB)   | (dB)     | (dB)    | (dB)  | (dB)  | (dB)   | (dB)    | (dB)  | (dB) | dB(A)         |
| 14   550046.13   4891427.42   1.00   0   E   | 14   | 550046.13 | 4891427.42   | 1.00 | 0      | D             | Α     | 76.0          | 0.0     | 0.0        | 0.0    | 0.0    | 41.4     | 0.2     | -2.3  | 0.0   | 0.0    | 0.0     | 0.0   | 0.0  | 36.7          |
| 15   550046.13   4891427.42   1.00   | 14   | 550046.13 | 4891427.42   | 1.00 | 0      | N             | Α     | 76.0          | 0.0     | -188.0     | 0.0    | 0.0    | 41.4     | 0.2     | -2.3  | 0.0   | 0.0    | 0.0     | 0.0   | 0.0  | 151.3         |
| 15   550046.13   4891427.42   1.00   1   N   | 14   | 550046.13 | 4891427.42   | 1.00 | 0      | E             | Α     | 76.0          | 0.0     | 0.0        | 0.0    | 0.0    | 41.4     | 0.2     | -2.3  | 0.0   | 0.0    | 0.0     | 0.0   | 0.0  | 36.7          |
| Point Source, ISO 9613, Name: "Idling car", ID: "McD_Carldle_04"   Nr.   X   Y   Z   Refl.   DEN   Freq.   Lw   Va   Optime   K0   Di   Adiv   Aatm   Agr   Afo    Ahous   Abar   Cmet   RL   Lr   (m)   (   | 15   | 550046.13 | 4891427.42   | 1.00 | 1      | D             | Α     | 76.0          | 0.0     | 0.0        | 0.0    | 0.0    | 41.5     | 0.2     | -2.1  | 0.0   | 0.0    | 0.0     | 0.0   | 2.9  | 33.4          |
| Nr.   X   Y   Z   Reff.   DEN   Freq.   Lw   I/a   Optime   K0   Di   Adiv   Aatm   Agr   Afol   Ahous   Abar   Cmet   RL   Lr   | 15   | 550046.13 | 4891427.42   | 1.00 | 1      | N             | Α     | 76.0          | 0.0     | -188.0     | 0.0    | 0.0    | 41.5     | 0.2     | -2.1  | 0.0   | 0.0    | 0.0     | 0.0   | 2.9  | 154.6         |
| Nr. X Y Z Refl. DEN Freq. Lw Va Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (m) (m) (m) (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB   | 15   | 550046.13 | 4891427.42   | 1.00 | 1      | E             | Α     | 76.0          | 0.0     | 0.0        | 0.0    | 0.0    |          | 0.2     |       | 0.0   | 0.0    | 0.0     | 0.0   |      |               |
| Nr. X Y Z Refl. DEN Freq. Lw Va Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (m) (m) (m) (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB   |  |           |              |      |        |               |       | <u> </u>      |         |            |        |        |          |         |       |       |        |         |       |      |               |
| (m) (m) (m) (m) (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB   |  |           |              | Po   | int So | urce,         | ISO 9 | 613, Na       | ame: '  | 'Idling ca | r", ID | : "Mc  | :D_Ca    | rldle_( | )4"   |       |        |         |       |      |               |
| 16   | Nr.  | Х         | Υ            | Z    | Refl.  | DEN           | Freq. | Lw            | l/a     | Optime     | K0     | Di     | Adiv     | Aatm    | Agr   | Afol  | Ahous  | Abar    | Cmet  | RL   | Lr            |
| 16   |  |           | 3 2          |      |        |               | (Hz)  |               | dB      |            |        |        |          | -       |       | -     | (dB)   |         |       |      |               |
| 16 550051.45 4891423.27 1.00 0 E A 76.0 0.0 0.0 0.0 0.0 0.0 43.0 0.3 -2.8 0.0 0.0 0.0 0.0 0.0 0.0 35.5 17 550051.45 4891423.27 1.00 1 D A 76.0 0.0 0.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 32.1 17 550051.45 4891423.27 1.00 1 N A 76.0 0.0 -188.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 155.9 17 550051.45 4891423.27 1.00 1 E A 76.0 0.0 0.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 0.0 2.9 155.9 17 550051.45 4891423.27 1.00 1 E A 76.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.9 32.1 Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"  Nr. X Y Z Refi. DEN Freq. Lw I/a Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d   | 16   |           |              | 1.00 |        | $\overline{}$ | Α     | 76.0          | 0.0     |            | _      |        | _        |         |       | _     |        | _       | 0.0   | 0.0  | 35.5          |
| 17 550051.45 4891423.27 1.00 1 D A 76.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 32.1 17 550051.45 4891423.27 1.00 1 N A 76.0 0.0 -188.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 155.9 17 550051.45 4891423.27 1.00 1 E A 76.0 0.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 0.0 2.9 32.1 Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"  Nr. X Y Z Refi. DEN Freq. Lw I/a Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d  | 16   |           |              | 1.00 |        | $\overline{}$ | Α     | 76.0          | 0.0     | -188.0     | 0.0    | 0.0    |          | _       |       | _     | 0.0    | 0.0     | 0.0   | 0.0  | 152.5         |
| 17 550051.45 4891423.27 1.00 1 N A 76.0 0.0 -188.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 155.9 17 550051.45 4891423.27 1.00 1 E A 76.0 0.0 0.0 0.0 0.0 0.0 43.1 0.3 -2.4 0.0 0.0 0.0 0.0 0.0 2.9 32.1 Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"  Nr. X Y Z Refl. DEN Freq. Lw I/a Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d   | $\rightarrow$  |           |              |      |        | $\overline{}$ | Α     |               |         |            | _      | _      |          | _       |       | _     |        | _       |       |      |               |
| Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"   Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"   ID: "M   | $\longrightarrow$  |           |              |      |        |               | Α     |               |         |            |        |        |          |         |       | _     |        |         |       |      |               |
| Point Source, ISO 9613, Name: "Walk-in Cold Room Chiller", ID: "McD_Chiller"  Nr. X Y Z Refl. DEN Freq. Lw I/a Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr  (m) (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d  | 17   |           |              | 1.00 |        | $\overline{}$ | Α     | 76.0          | 0.0     | -188.0     | 0.0    | 0.0    | 43.1     | 0.3     | -2.4  | 0.0   | 0.0    | 0.0     | 0.0   | 2.9  | 155.9         |
| Nr.         X         Y         Z         Refl. DEN Freq. Lw         Lw         I/a         Optime K0         Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr         Cmet RL Lr         Lr           (m)         (m)         (m)         (m)         (m)         (m)         (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB)  | 17   | 550051.45 | 4891423.27   | 1.00 | 1      | E             | Α     | 76.0          | 0.0     | 0.0        | 0.0    | 0.0    | 43.1     | 0.3     | -2.4  | 0.0   | 0.0    | 0.0     | 0.0   | 2.9  | 32.1          |
| Nr.         X         Y         Z         Refl. DEN Freq. Lw         Lw         I/a         Optime K0         Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr         Cmet RL Lr         Lr           (m)         (m)         (m)         (m)         (m)         (m)         (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB)  |  |           |              | D-1  |        | 000           | 040 . |               | A.C. 17 |            |        |        |          |         |       | n - 2 |        |         |       |      |               |
| (m) (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d  | L  |           |              |      | _      |               |       |               |         |            |        |        | _        |         | _     |       | 4.1    |         |       | ъ.   | لب            |
| 18 550048.95 4891417.89 4.90 0 D A 75.4 0.0 0.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 26.1 18 550048.95 4891417.89 4.90 0 N A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0  | Nr.  |           |              |      | refl.  | DEN           |       | $\overline{}$ |         | _          | _      | _      |          | _       |       | _     |        |         |       |      |               |
| 18 550048.95 4891417.89 4.90 0 N A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 8.1 0.0 0.0 0.0 23.1 18 550048.95 4891417.89 4.90 0 E A 75.4 0.0 -3.0 0.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 0.0 0.0 0.0 0.0 43.4 0.2 -2.4 0.0 0.0 0.0 8.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0   |  |           | , ,          |      | _      |               |       |               |         |            |        |        |          |         |       | -     |        |         |       |      |               |
| 18   550048.95   4891417.89   4.90   0   E   A   75.4   0.0   -3.0   0.0   0.0   43.4   0.2   -2.4   0.0   0.0   8.1   0.0   0.0   23.1  | $\rightarrow$  |           |              |      |        |               |       |               |         |            |        |        | _        |         |       | _     |        | _       | _     |      |               |
| Point Source, ISO 9613, Name: "Idling car", ID: "McD_Carldle_R13"   Nr. X Y Z Refl. DEN Freq. Lw I/a Optime K0 Di Adiv Aatm Agr Afol Ahous Abar Cmet RL Lr (m) (m) (m) (Hz) dB(A) dB dB (dB) (dB) (dB) (dB) (dB) (dB) (d   | $\rightarrow$  |           |              |      |        |               |       |               |         |            |        |        |          |         |       |       |        |         |       |      |               |
| Nr.         X         Y         Z         Refl.         DEN         Freq.         Lw         I/a         Optime         K0         Di         Adiv         Aatm         Agr         Afol         Ahous         Abar         Cmet         RL         Lr           (m)         (m)         (m)         (m)         (Hz)         dB(A)         dB         dB         (dB)         (dB)<   | 18   | 550048.95 | 4891417.89   | 4.90 | 0      | E             | Α     | 75.4          | 0.0     | -3.0       | 0.0    | 0.0    | 43.4     | 0.2     | -2.4  | 0.0   | 0.0    | 8.1     | 0.0   | 0.0  | 23.1          |
| Nr.         X         Y         Z         Refl.         DEN         Freq.         Lw         I/a         Optime         K0         Di         Adiv         Aatm         Agr         Afol         Ahous         Abar         Cmet         RL         Lr           (m)         (m)         (m)         (m)         (Hz)         dB(A)         dB         dB         (dB)         (dB)<   |  |           |              |      | -4.0:  |               | 00.00 | 42 11         |         | lalliano e |        |        |          | Idle D  | 42"   |       |        |         |       |      |               |
| (m)         (m)         (m)         (Hz)         dB(A)         dB         dB         (dB)         (dB)<  | N-   | v         | V            |      |        |               |       |               |         |            |        |        |          |         |       | A.F!  | Abarra | A Is == | Cnr-t | Di   |               |
| 19 550055.58 4891403.57 1.00 0 D A 76.0 0.0 0.0 0.0 0.0 46.1 0.4 -2.6 0.0 0.0 15.9 0.0 0.0 16.1 19 550055.58 4891403.57 1.00 0 N A 76.0 0.0 0.0 0.0 0.0 0.0 46.1 0.4 -2.6 0.0 0.0 15.9 0.0 0.0 16.1  | INF.   |           |              |      | rtefi. | DEN           |       |               |         |            | _      |        |          | _       |       | _     |        |         |       |      |               |
| 19 550055.58 4891403.57 1.00 0 N A 76.0 0.0 0.0 0.0 0.0 46.1 0.4 -2.6 0.0 0.0 15.9 0.0 0.0 16.1  | 40   |           |              |      |        |               |       | _             |         |            |        |        | · ·      |         |       | , ,   | , ,    |         |       |      |               |
|  | $\rightarrow$  |           |              |      |        |               |       |               |         |            | _      |        |          |         |       | _     |        | _       |       |      | -             |
| [ 18] 000000.00[4081403.07] 1.00[ UE   | $\rightarrow$  |           |              |      |        |               |       |               |         |            | _      |        | _        |         |       | _     |        |         |       |      |               |
|  | 19   | 550055.58 | 4091403.5/   | 1.00 | U      | _             | А     | 76.0          | U.U     | 0.0        | U.U    | U.U    | 46.1     | 0.4     | -2.6  | 0.0   | 0.0    | 15.9    | 0.0   | 0.0  | 16.1          |

|          |                        |                          | Point So     | _       |        | _          |               |           |               |             |             |              |             | _            |             |             |              |             |      |                |
|----------|------------------------|--------------------------|--------------|---------|--------|------------|---------------|-----------|---------------|-------------|-------------|--------------|-------------|--------------|-------------|-------------|--------------|-------------|------|----------------|
| Nr.      | X                      | Y                        | Z            | Refl.   | DEN    | Freq.      | LW            | l/a       | Optime        | K0          | Di          | Adiv         | Aatm        | Agr          | Afol        | Ahous       | Abar         | Cmet        | RL   | Lr             |
| 20       | (m)                    | (m)                      | (m)          | _       | _      | (Hz)       | dB(A)         | dB        | dB            | (dB)        |             | (dB)         | (dB)        | (dB)         | (dB)        | (dB)        | (dB)         | (dB)        | , ,  | dB(A)          |
| 20       | 550046.74<br>550046.74 | 4891414.91<br>4891414.91 | 4.90<br>4.90 |         | D<br>N | A          | 75.4<br>75.4  | 0.0       | 0.0<br>-3.0   | 0.0         | _           | 43.6<br>43.6 | 0.2         | -2.3<br>-2.3 | 0.0         | 0.0         | _            | 0.0         | 0.0  | 25.6<br>22.6   |
| 20       | 550046.74              |                          | 4.90         |         | E      | A          | 75.4          | 0.0       | -3.0          | 0.0         |             | 43.6         | 0.2         | -2.3         | 0.0         | 0.0         | _            | 0.0         | 0.0  | 22.6           |
| 20       | 330040.74              | 4051414.51               | 4.30         | U       |        |            | 13.4          | 0.0       | -5.0          | 0.0         | 0.0         | 45.0         | 0.2         | -2.0         | 0.0         | 0.0         | 0.5          | 0.0         | 0.0  | 22.0           |
|          |                        |                          | Po           | int So  | ource, | ISO 9      | 613, N        | ame: '    | 'Idling ca    | ır", IC     | ): "Mc      | :D_Ca        | rldle_(     | 05"          |             |             |              |             |      |                |
| Nr.      | X                      | Υ                        | Z            | Refl.   | DEN    | Freq.      | Lw            | l/a       | Optime        | K0          | Di          | Adiv         | Aatm        | Agr          | Afol        | Ahous       | Abar         | Cmet        | RL   | Lr             |
|          | (m)                    | (m)                      | (m)          |         |        | (Hz)       | dB(A)         | dB        | dB            | (dB)        | (dB)        | (dB)         | (dB)        | (dB)         | (dB)        | (dB)        | (dB)         | (dB)        | (dB) | dB(A)          |
| 21       | 550056.12              | 4891419.53               | 1.00         | 0       | D      | Α          | 76.0          | 0.0       | 0.0           | 0.0         | 0.0         | 44.2         | 0.3         | -2.8         | 0.0         | 0.0         | 0.0          | 0.0         | 0.0  | 34.3           |
| 21       | 550056.12              | 4891419.53               | 1.00         |         | N      | Α          | 76.0          | 0.0       | -188.0        | 0.0         |             | 44.2         | 0.3         | -2.8         | 0.0         | 0.0         | _            | 0.0         | 0.0  | -153.7         |
| 21       | 550056.12              | 4891419.53               | 1.00         | _       | E      | Α          | 76.0          | 0.0       | 0.0           | 0.0         |             | 44.2         | 0.3         | -2.8         | 0.0         | 0.0         | _            | 0.0         | 0.0  | 34.3           |
| 22       | 550056.12              | 4891419.53               | 1.00         | _       | D      | Α          | 76.0          | 0.0       | 0.0           | 0.0         | _           | 44.3         | 0.3         | -2.6         | 0.0         | 0.0         |              | 0.0         | 4.2  | 29.8           |
| 22       | 550056.12              | 4891419.53               | 1.00         |         | N      | A          | 76.0          | 0.0       | -188.0        | 0.0         | _           | 44.3         | 0.3         | -2.6         | 0.0         | 0.0         |              | 0.0         |      | -158.2         |
| 22       | 550056.12              | 4891419.53               | 1.00         | 1       | Е      | A          | 76.0          | 0.0       | 0.0           | 0.0         | 0.0         | 44.3         | 0.3         | -2.6         | 0.0         | 0.0         | 0.0          | 0.0         | 4.2  | 29.8           |
|          |                        |                          | Do           | vint Sc | urca   | ISO 0      | 613 N         | ama· '    | 'Idling ca    | e" IF       | )- "Mo      | n Ca         | rldla (     | 16"          |             |             |              |             |      |                |
| Nr.      | Х                      | Υ                        | Z            |         | DEN    |            | Lw            | l/a       | Optime        |             | Di          | Adiv         | Aatm        | Agr          | Δfol        | Ahous       | Abar         | Cmet        | RL   | Lr             |
| 141.     | (m)                    | (m)                      | (m)          | . com.  | 2514   |            | dB(A)         | dB        | dB            | (dB)        |             |              |             | (dB)         |             | (dB)        | (dB)         | (dB)        |      | dB(A)          |
| 23       | 550059.92              | 4891414.21               | 1.00         | 0       | D      | (112)<br>A | 76.0          | 0.0       | 0.0           | 0.0         |             | 45.3         | 0.4         | -2.7         | 0.0         | 0.0         |              | 0.0         | 0.0  | 33.0           |
| 23       | 550059.92              | 4891414.21               | 1.00         | _       | N      | A          | 76.0          | 0.0       |               | 0.0         | _           | 45.3         | 0.4         | -2.7         | 0.0         | 0.0         | _            | 0.0         |      | -155.0         |
| 23       | 550059.92              | 4891414.21               | 1.00         |         | E      | A          | 76.0          | 0.0       | 0.0           | 0.0         | _           | 45.3         | 0.4         | -2.7         | 0.0         | 0.0         |              | 0.0         | 0.0  | 33.0           |
|          |                        |                          |              |         |        |            |               |           |               |             |             |              |             |              |             |             |              |             |      |                |
|          |                        |                          |              |         |        |            |               |           | ldling car    |             |             |              |             |              |             |             |              |             |      |                |
| Nr.      | X                      | Y                        | Z            | Refl.   | DEN    | -          | Lw            | l/a       | Optime        |             | Di          | Adiv         | Aatm        |              |             | Ahous       | -            | Cmet        |      | Lr             |
|          | (m)                    | (m)                      | (m)          |         | _      | (Hz)       | dB(A)         | dB        | dB            | (dB)        |             | (dB)         | (dB)        | (dB)         |             | (dB)        | (dB)         | (dB)        | , ,  | dB(A)          |
| 24       | 550052.46              | 4891406.59               | 1.00         |         | D      | A          | 76.0          | 0.0       | 0.0           | 0.0         |             | 45.5         | 0.4         | -2.7         | 0.0         | 0.0         | _            | 0.0         | 0.0  | 15.5           |
| 24       | 550052.46              | 4891406.59               | 1.00         |         | N      | A          | 76.0          | 0.0       |               | 0.0         |             | 45.5         | 0.4         | -2.7         | 0.0         | 0.0         |              | 0.0         |      | -172.5         |
| 24       | 550052.46              | 4891406.59               | 1.00         | 0       | E      | A          | 76.0          | 0.0       | 0.0           | 0.0         | 0.0         | 45.5         | 0.4         | -2.7         | 0.0         | 0.0         | 17.4         | 0.0         | 0.0  | 15.5           |
|          |                        |                          | Poi          | int So  | urce.  | ISO 96     | 313. Na       | me: "     | Idling car    | r". ID      | : "Mcl      | D Car        | idle L      | .07"         |             |             |              |             |      |                |
| Nr.      | Х                      | Y                        | Z            |         | DEN    |            | Lw            | l/a       | Optime        | _           | Di          | Adiv         | Aatm        |              | Afol        | Ahous       | Abar         | Cmet        | RL   | Lr             |
|          | (m)                    | (m)                      | (m)          |         |        | (Hz)       | dB(A)         | dB        | dB            | (dB)        | _           | (dB)         | (dB)        | (dB)         | (dB)        | (dB)        | (dB)         | (dB)        |      | dB(A)          |
| 25       | 550057.70              | 4891409.76               | 1.00         | 0       | D      | A          | 76.0          | 0.0       | 0.0           | 0.0         |             | 45.6         | 0.4         | -2.1         | 0.0         | 0.0         | 12.5         | 0.0         | 0.0  | 18.3           |
| 25       | 550057.70              | 4891409.76               | 1.00         | 0       | N      | Α          | 76.0          | 0.0       | -188.0        | 0.0         | -1.3        | 45.6         | 0.4         | -2.1         | 0.0         | 0.0         | 12.5         | 0.0         | 0.0  | -169.7         |
| 25       | 550057.70              | 4891409.76               | 1.00         | 0       | Е      | Α          | 76.0          | 0.0       | -188.0        | 0.0         | -1.3        | 45.6         | 0.4         | -2.1         | 0.0         | 0.0         | 12.5         | 0.0         | 0.0  | -169.7         |
|          |                        |                          |              |         |        | 100.0      |               |           |               |             |             |              |             | 2011         |             |             |              |             |      |                |
| Ne       | X                      | Υ                        |              | _       | _      |            |               |           | Idling car    | _           | _           |              |             |              | A.f.a.l     | A baus      | Abor         | Const       | DI   |                |
| Nr.      |                        |                          | Z (m)        | Reii.   | DEN    | Freq.      | LW            | l/a       | Optime        |             | Di          |              | Aatm        |              |             | Ahous       | _            |             |      | Lr<br>Lr       |
| 26       | (m)<br>550048.75       | (m)<br>4891401.88        | (m)<br>1.00  | 0       | D      | (Hz)       | dB(A)<br>76.0 | dB<br>0.0 | dB<br>0.0     | (dB)<br>0.0 | (dB)<br>0.0 | (dB)<br>45.8 | (dB)<br>0.4 | (dB)<br>-2.8 | (dB)<br>0.0 | (dB)<br>0.0 | (dB)<br>17.2 | (dB)<br>0.0 | 0.0  | dB(A)<br>15.4  |
| 26       |                        | 4891401.88               | 1.00         |         | N      | A          | 76.0          |           | -188.0        |             | _           | 45.8         | _           | -2.8         |             |             | 17.2         |             |      | -172.6         |
| 26       | 550048.75              |                          | 1.00         |         | E      | A          | 76.0          | 0.0       |               |             |             | 45.8         |             | -2.8         |             |             | 17.2         |             |      | 172.6          |
|          |                        |                          |              |         |        |            |               |           |               |             |             |              |             |              |             |             |              |             |      |                |
|          |                        |                          | Poi          |         |        |            | 13, Na        | me: "I    | dling car     | ", ID       | _           |              |             | _            |             |             |              |             |      |                |
| Nr.      | Х                      | Υ                        | Z            | Refl.   | DEN    | Freq.      | Lw            |           | Optime        |             |             |              |             |              |             | Ahous       |              |             |      | Lr             |
|          | (m)                    | (m)                      | (m)          |         |        | (Hz)       | dB(A)         | _         | dB            |             | (dB)        |              | (dB)        | (dB)         |             | (dB)        | (dB)         | (dB)        |      | dB(A)          |
| 27       | 550059.47              | 4891408.31               | 1.00         |         | D      | A          | 76.0          | 0.0       | 0.0           |             | -           |              | 0.4         |              | 0.0         | 0.0         | -            | 0.0         | 0.0  | 20.4           |
| 27       | 550059.47              | 4891408.31               | 1.00         | _       | N      | A          | 76.0          | 0.0       |               | _           | _           | 46.0         | 0.4         | _            | 0.0         |             | 11.5         |             |      | 167.6          |
| 27       | 550059.47              | 4891408.31               | 1.00         | 0       | Е      | Α          | 76.0          | 0.0       | -188.0        | 0.0         | 0.0         | 46.0         | 0.4         | -2.2         | 0.0         | 0.0         | 11.5         | 0.0         | 0.0  | 167.6          |
|          |                        |                          | Doi          | int So  | urce   | ISO 9      | 313 No        | me· "     | Idling car    | r" ID       | · "Mc       | D Car        | idle I      | 10"          |             |             |              |             |      |                |
| Nr.      | Х                      | Υ                        | Z            |         |        | Freq.      | Lw            | _         | Optime        |             |             |              |             |              | Afol        | Ahous       | Abar         | Cmet        | RI   | Lr             |
|          | (m)                    | (m)                      | (m)          |         |        | _          | dB(A)         | _         | dB            |             | (dB)        |              | (dB)        |              |             | (dB)        | (dB)         | (dB)        |      | dB(A)          |
| 28       | 550044.84              | 4891397.17               | 1.00         | 0       | D      | Α          | 76.0          | 0.0       |               | 0.0         |             |              |             | -1.9         |             |             | 14.9         | 0.0         |      | 16.3           |
| 28       | 550044.84              | 4891397.17               | 1.00         |         | N      | A          | 76.0          | 0.0       |               | 0.0         |             | 46.2         | _           | -1.9         |             |             | 14.9         | 0.0         |      | -171.7         |
| 28       | 550044.84              |                          | 1.00         | 0       | Е      | Α          | 76.0          | 0.0       |               | 0.0         | _           |              | 0.4         | _            | 0.0         |             | 14.9         | 0.0         |      | 171.7          |
|          |                        |                          |              |         |        |            |               |           |               |             |             |              |             |              |             |             |              |             |      |                |
|          |                        |                          |              |         |        |            |               |           | dling car     |             |             |              |             |              |             |             |              | _           |      |                |
| Nr.      | X                      | Υ ()                     |              | Refl.   | DEN    | Freq.      | Lw            |           | Optime        |             |             |              |             |              |             |             | _            |             |      | Lr             |
| - 20     | (m)                    | (m)                      | (m)          | -       | D.     |            | dB(A)         |           | dB            |             |             |              |             | (dB)         |             | (dB)        | (dB)         | (dB)        |      | dB(A)          |
| 29<br>29 | 550051.88<br>550051.88 | 4891398.92<br>4891398.92 | 1.00         |         | D<br>N | A          | 76.0<br>76.0  | 0.0       | 0.0<br>-188.0 |             | _           | 46.4<br>46.4 | 0.4         |              | 0.0         |             | 16.2<br>16.2 | 0.0         | 0.0  | 15.4<br>-172.6 |
| 29       | 550051.88              |                          | 1.00         |         | E      | A<br>A     | 76.0          | 0.0       |               | 0.0         |             | 46.4         |             |              | 0.0         |             | 16.2         | 0.0         |      | -172.6         |
| 23       | 330031.00              | +001300.32               | 1.00         | U       | _      | A          | 70.0          | 0.0       | -100.0        | U.U         | 0.0         | 40.4         | 0.4         | -2.4         | 0.0         | U.U         | 10.2         | 0.0         | 0.0  | 172.0          |

|     | Point Source, ISO 9613, Name: "Idling car", ID: "McD_Carldle_L11" |            |      |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |        |
|-----|---|------------|------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|--------|
| Nr. | X   | Y          | Z    | Refl. | DEN | Freq. | Lw    | l/a | Optime | K0   | Di   | Adiv | Aatm | Agr  | Afol | Ahous | Abar | Cmet | RL   | Lr     |
|     | (m)   | (m)        | (m)  |       |     | (Hz)  | dB(A) | dB  | dB     | (dB)  | (dB) | (dB) | (dB) | dB(A)  |
| 30  | 550040.47   | 4891392.57 | 1.00 | 0     | D   | Α     | 76.0  | 0.0 | 0.0    | 0.0  | 0.0  | 46.6 | 0.4  | -1.9 | 0.0  | 0.0   | 13.5 | 0.0  | 0.0  | 17.3   |
| 30  | 550040.47   | 4891392.57 | 1.00 | 0     | N   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 46.6 | 0.4  | -1.9 | 0.0  | 0.0   | 13.5 | 0.0  | 0.0  | -170.7 |
| 30  | 550040.47   | 4891392.57 | 1.00 | 0     | Е   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 46.6 | 0.4  | -1.9 | 0.0  | 0.0   | 13.5 | 0.0  | 0.0  | -170.7 |

| _ |     |   |            |      |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |        |
|---|-----|---|------------|------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|--------|
|   |     | Point Source, ISO 9613, Name: "Idling car", ID: "McD_Carldle_R15" |            |      |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |        |
|   | Nr. | X   | Υ          | Z    | Refl. | DEN | Freq. | Lw    | l/a | Optime | K0   | Di   | Adiv | Aatm | Agr  | Afol | Ahous | Abar | Cmet | RL   | Lr     |
|   |     | (m)   | (m)        | (m)  |       |     | (Hz)  | dB(A) | dB  | dB     | (dB)  | (dB) | (dB) | (dB) | dB(A)  |
|   | 31  | 550047.91   | 4891394.15 | 1.00 | 0     | D   | Α     | 76.0  | 0.0 | 0.0    | 0.0  | 0.0  | 46.8 | 0.4  | -1.7 | 0.0  | 0.0   | 14.6 | 0.0  | 0.0  | 15.9   |
|   | 31  | 550047.91   | 4891394.15 | 1.00 | 0     | N   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 46.8 | 0.4  | -1.7 | 0.0  | 0.0   | 14.6 | 0.0  | 0.0  | -172.1 |
|   | 31  | 550047.91   | 4891394.15 | 1.00 | 0     | E   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 46.8 | 0.4  | -1.7 | 0.0  | 0.0   | 14.6 | 0.0  | 0.0  | -172.1 |

|     | Point Source, ISO 9613, Name: "Idling car", ID: "McD_Carldle_R16" |            |      |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|-----|---|------------|------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| Nr. | X   | Υ          | Z    | Refl. | DEN | Freq. | Lw    | l/a | Optime | K0   | Di   | Adiv | Aatm | Agr  | Afol | Ahous | Abar | Cmet | RL   | Lr    |
|     | (m)   | (m)        | (m)  |       |     | (Hz)  | dB(A) | dB  | dB     | (dB)  | (dB) | (dB) | (dB) | dB(A) |
| 32  | 550043.81   | 4891389.71 | 1.00 | 0     | D   | Α     | 76.0  | 0.0 | 0.0    | 0.0  | 0.0  | 47.1 | 0.5  | -1.8 | 0.0  | 0.0   | 13.3 | 0.0  | 0.0  | 16.9  |
| 32  | 550043.81   | 4891389.71 | 1.00 | 0     | N   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 47.1 | 0.5  | -1.8 | 0.0  | 0.0   | 13.3 | 0.0  | 0.0  | 171.1 |
| 32  | 550043.81   | 4891389.71 | 1.00 | 0     | Е   | Α     | 76.0  | 0.0 | -188.0 | 0.0  | 0.0  | 47.1 | 0.5  | -1.8 | 0.0  | 0.0   | 13.3 | 0.0  | 0.0  | 171.1 |

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