



Stantec Consulting Ltd.
300W-675 Cochrane Drive, Markham ON L3R 0B8

February 28, 2018
File: 160401284

Attention: Kris Kilborn, Senior Associate, Community Development
Stantec Consulting Ltd.
400 – 1331 Clyde Avenue
Ottawa, Ontario K2C 3G4

Dear Kris,

**Reference: Noise Feasibility Assessment – Proposed Gas Bar with Vendor Drive-through,
3500 Hawthorne Road, Ottawa, ON**

As requested by the 2520333 Ontario Inc., Stantec Consulting Ltd. (Stantec) completed a feasibility assessment of noise effects from the gas bar with a vendor drive-through facility to be located at 3500 Hawthorne Road, Ottawa, Ontario. This letter report summarizes the modelling, analysis and conclusions. This letter report has been updated to address the Technical Circulation Comments from the City of Ottawa (the City) on December 4, 2017 on the Noise Impact Assessment report submitted to the City on November 6, 2017.

1 BACKGROUND

Stantec understands that 2520333 Ontario Inc. is proposing to build a gas bar with vendor drive through facility at 3500 Hawthorne Road, Ottawa, Ontario. An area map showing the property and its surroundings, and zoning map are provided in Attachment A as Figure 1 and Figure 2, respectively.

The subject property is zoned as a general mixed use zone (GM); the lands to the east are zoned for light industrial (IL); lands to the south are zoned for agricultural (AG); and lands to the west are zoned for residential.

There are several residential receptors located to the west of the property. An existing barrier between these receptors and the gas bar and encompasses the north and west of the proposed gas bar along the property boundary and is approximately 2 metres in height and 130 metres in length. This barrier was observed and confirmed to be in good condition with photos provided in Attachment D.

Ambient sound in the area are dominated by road traffic from Hunt Club Road and Hawthorne Road, other industrial facilities, and natural sounds from the environment (e.g. potential natural environmental sound from agricultural lands during night time hours). Neighbouring facilities include another gas bar at the northeast corner of Hunt Club Road and Hawthorne Road.

The City of Ottawa Noise guideline entitled "City of Ottawa Environmental Noise Control Guidelines" dated January, 2016 and the Ontario Ministry of the Environment and Climate Change (MOECC) guideline "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning Publication NPC-300" dated August 2013, exclude gas bars from noise impact assessments. However,



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drive-through facilities are required to be assessed and compliance must be demonstrated for compliance approval.

Accordingly, this report assesses the noise impact from the proposed vendor operation (including drive-through) on the surrounding residential receptors.

2 PROPOSED OPERATION AND NOISE SOURCES

The property at 3500 Hawthorne Road concept site plan is included as Attachment B. The concept plan includes a vendor with drive-through facility. The noise sources associated with the vendor are as follows:

1. Drive-through speaker system
2. Vehicles idling and moving along the drive-through
3. Rooftop exhaust (vendor)
4. Washroom exhaust fan
5. Gas bar rooftop unit (RTU)
6. Vendor RTU

Sound power data for these sources are provided in the table below:

Table 1 Typical Source Sound Power Level

Source Description	Source ID ¹	Sound Power Level in Octave Band Centre Frequency [dBA]								Overall Sound Power Level [dBA]
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
Slow moving and idling cars in drive-through	Mixed_Car	101	80	71	73	75	75	74	70	82
Rooftop exhaust (vendor) ²	RTE	86	77	79	69	68	64	64	64	75
Drive-through speakers ³	DTS	75	72	71	72	71	69	69	68	77
Washroom exhaust fan	WF	68	71	70	67	63	59	55	51	69
Gas Bar RTU	rtu_gas	61	61	65	70	67	64	58	49	72
Vendor RTU	rtu_vendor	61	61	65	70	67	64	58	49	72

¹ Refer to Figure 3 for source locations.

² Final unit selection should be limited to unit with overall sound power levels no greater than stated.

³ Drive-through speaker sound power level includes automatic volume control (AVC) to limit the sound level from the speaker.

The final source locations and types have yet been determined. Therefore, typical data was used in the assessment for the fans, based on assumptions of the equipment capacities. A preliminary selection for the gas bar RTU has been specified. The gas bar RTU was used for the vendor RTU as well to complete this noise assessment and both RTUs were placed on the ground for this assessment on either side of the gas bar. The rooftop exhaust sound power level was limited to a maximum as noted in Table 1.

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Reference: Noise Feasibility Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

3 POINTS OF RECEPTION

Figure 3 shows the location of the site and the nearby representative points of reception (PORs). PORs to the facility are located to the west on Forestglade Crescent and Foxden Place. A total of six PORs were included as representative of the receptors abutting the proposed site in the assessment and their descriptions, locations and the height above ground considered for the assessment are summarized in Table 2.

Table 2 Points of Reception

POR ID	Description	Height Plane of Window [m]	UTM Coordinates		
			Zone	Easting [m]	Northing [m]
POR01	Foxden Place Receptor – near Hunt Club Road	4.5	18T	453145	5024670
POR02	Foxden Place Receptor – near building	4.5	18T	453152	5024704
POR03	Foxden Place Receptor – near drive-through speakers	4.5	18T	453141	5024722
POR04	Foxden Place Receptor – near drive-through speakers	4.5	18T	453133	5024735
POR05	Forestglade Crescent Receptor – near drive-through path	4.5	18T	453136	5024753
POR06	Forestglade Crescent Receptor – near drive-through entrance	4.5	18T	453150	5024762
OLA01	Foxden Place Receptor – near Hunt Club Road	1.5	18T	453163	5024665
OLA02	Foxden Place Receptor – near building	1.5	18T	453155	5024705
OLA03	Foxden Place Receptor – near drive-through speakers	1.5	18T	453148	5024723
OLA04	Foxden Place Receptor – near drive-through speakers	1.5	18T	453141	5024738
OLA05	Forestglade Crescent Receptor – near drive-through path	1.5	18T	453136	5024753
OLA06	Forestglade Crescent Receptor – near drive-through entrance	1.5	18T	453153	5024758



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4 CRITERIA

The MOECC has published Noise Pollution Control Publication 300 (NPC-300), which has particular relevance to the proposed facility's activities. The "City of Ottawa Environmental Noise Control Guidelines" (January, 2016) as issued by the Planning and Growth Management Department is applicable to this project, which is consistent with MOECC's publication NPC-300.

The City's limits for stationary sources are defined as one-hour energy equivalent sound levels (i.e., a constant sound that would possess the same energy as the time-varying sound from activities at the facility). Per the MOECC publication NPC-300 and the City's guidelines, the one-hour equivalent sound level from stationary sources should not exceed the maximum of the lowest background sound levels during any given hour or the exclusionary limit provided in the guidelines at any noise-sensitive point of reception (POR). The background sound level is considered to be the sound in the environment from sources other than the facility under assessment.

Sound level measurements were not conducted and, therefore, the City's exclusion limits were used. The sound level in the surrounding area of the facility are dominated by anthropogenic sound during day and the natural environment during night time hours, accordingly the surrounding area can be defined as Class 2 acoustical environment as per City's guideline. As such, the City's limits for Class 2 acoustical environment were used in the assessment. The limits are provided in Table 3.

Table 3 Exclusion Limits of One-Hour Equivalent Sound Level - Class 2 Area

Time of Day	Applicable Performance Limit – Plane of Window [dBA]	Applicable Performance Limit – Outdoor Living Area [dBA]
Day (07:00 h to 19:00 h)	50	50
Evening (19:00 h to 23:00 h)	50	45
Night (23:00 h to 07:00 h)	45	N/A*

* N/A - not applicable for outdoor living area during night time.

The noise from the facility during a predictable worst case hour should not exceed the limits provided in Table 3.

5 METHODS

The acoustic assessment was conducted using the CADNA/A software which is a computerized implementation of the algorithms contained in ISO 9613-1 and ISO 9613-2 standards. The model accounts for the following factors:

- Source sound power levels
- Source location

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- Distance attenuation, including source and receptor heights
- Barrier effects due to structures and buildings
- Ground attenuation
- Atmospheric attenuation
- Meteorological effects

The facility and surrounding ground surfaces were modeled as a combination of reflective and absorptive surfaces. Considering the facility's surrounding areas to be a combination of paved area and grass, a ground absorption coefficient of $G=0.5$ was used in the acoustic model.

Typical Ontario meteorological values were used to initialize several parameters in the model. These included a temperature of 10°C and a relative humidity of 70%.

The modelled scenarios for the facility were considered under daytime (07:00-19:00 hours) operation with 35 cars per hour, and evening/night-time (19:00-07:00 hours) operation of the drive-through facility would also be 35 cars per hour. The drive-through system was assumed to be on speaker mode for 30 seconds per car (typically, it was assumed to be active to ask the order and at the end of order). Therefore, each speaker system was assumed to be active for 17.5 minutes per hour during the day, evening or night. The facility's concept site plan is provided in Attachment B.

6 RESULTS

The resulting modelled sound levels at each POR yields the overall predicted sound level at the outdoor living area and plane of window, and are provided in Table 4 below. In order to achieve compliance with the sound level limits, the following mitigation measures are required:

- an existing noise barrier wall of approximately 130 metres in length and 2 metres in height (starting at the northeast corner of the property line, and ending at the south west corner of the property line) must remain.
- Restrictions on sound level and location selection must be implemented on the fans and RTUs and are described below:
 - The RTUs should be placed at ground level.
 - The rooftop exhaust should be selected such that it does not exceed the sound power levels provided in Table 1.
 - Both the rooftop exhaust and washroom fan should not be located west of the lengthwise center line of the building.
- Speaker box sound power level limited to 77 dBA by using automatic volume control

Since there is no additional physical mitigation added to the Project (e.g. silencers, additional barriers), there is no assessment of the unmitigated sound levels. The proposed mitigations and equivalent sound



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level contours are shown in Figure 4 and 5 and mitigated predicted sound levels are provided in Table 4. The sound level contours are shown in Figure 4 at a 4.5 m height and Figure 5 at a 1.5 m height.

Table 4 Acoustic Assessment Summary

POR ID	POR Description	SPL at POR without Mitigation (L_{eq}) [dBA] Day/Night	SPL at POR with Mitigation (L_{eq}) [dBA] Day/Night	Performance Limit (L_{eq}) [dBA] Day/Night	Compliant with Performance Limit with Mitigation?
Plane of window – at a 4.5 metre height					
POR01	Foxden Place Receptor – near Hunt Club Road	N/A	36/36	50 / 45	Yes
POR02	Foxden Place Receptor – near building	NA	45/45	50 / 45	Yes
POR03	Foxden Place Receptor – near drive-through speakers	NA	43/43	50 / 45	Yes
POR04	Foxden Place Receptor – near drive-through speakers	NA	40/40	50 / 45	Yes
POR05	Forestglade Crescent Receptor – near drive-through path	NA	40/40	50 / 45	Yes
POR06	Forestglade Crescent Receptor – near drive-through entrance	NA	40/40	50 / 45	Yes
Outdoor living area – at a 1.5 metre height					
OLA01	Foxden Place Receptor – near Hunt Club Road	NA	36/NA	50 / NA	Yes
OLA02	Foxden Place Receptor – near building	NA	40/NA	50 / NA	Yes
OLA03	Foxden Place Receptor – near drive-through speakers	NA	39/NA	50 / NA	Yes
OLA04	Foxden Place Receptor – near drive-through speakers	NA	37/NA	50 / NA	Yes
OLA05	Forestglade Crescent Receptor – near drive-through path	NA	34/NA	50 / NA	Yes
OLA06	Forestglade Crescent Receptor – near drive-through entrance	NA	35/NA	50 / NA	Yes

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Reference: Noise Feasibility Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

7 CONCLUSION AND CLOSURE

Stantec Consulting Ltd. (Stantec) was retained by 2520333 Ontario Inc. to prepare a Noise Impact Assessment (NIA) for the proposed gas bar and vendor to be located at 3500 Hawthorne Road, Ottawa, Ontario. With the typical sound power data and placement of sources described in Section 6, Stantec's predictive analysis indicated compliance with the applicable MOECC noise criteria and the City of Ottawa environmental noise control guidelines. Therefore, it is concluded that it is feasible to operate the facility in compliance with MOECC's /City's noise criteria. It is recommended that once the equipment units are selected (e.g., drive-through speaker system and exhaust fans), an acoustical engineer registered to practice in the province of Ontario or approved professional from the City's building department must verify that the noise control is adequate (based on equipment selected) and the noise control is included in the drawings.

This report has been prepared on behalf 2520333 Ontario Inc. The acoustic analysis highlighted in this report is based on information obtained from 2520333 Ontario Inc. and their planning team. The assessment represents the planned excavation operations. The conclusions are based on the professional judgment of the assessor using current environmental standards. Stantec attests that to the best of our knowledge, the information presented in this report is accurate.

Regards,

STANTEC CONSULTING LTD.

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Leaman.Chow@stantec.com



Attachment: A. Figures
B. Site Concept Plans
C. Manufacturer's Data (Typical)
D. Existing Barrier Photo
E. Sample Calculation

c. Nancy Meloshe, Stantec

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ATTACHMENTS

Reference: Noise Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

Attachment A. Figures



Notes
 1. Coordinate System: NAD 1983 UTM Zone 18N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.

Legend

- Proposed Development Area
- Hydro Line
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse
- Municipal Boundary - Lower Tier
- Wooded Area

0 375 750 metres
 1:30,000 (at original document size of 8.5x11)



Project Location
 City Of Ottawa
 Client/Project
 2520333 ONTARIO INC.
 ACOUSTIC ASSESSMENT
 160401284 REV A
 Prepared by SPE on 2018-02-28
 Technical Review by BCC on 2017-04-10
 Independent Review by KG on 2017-04-12

Figure No.
 1
 Title

Area Map Showing Site Location

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Legend

- Proposed Building
- Watercourse
- Municipal Boundary - Lower Tier
- Zoning Boundary / Limite de la zone

0 40 80 metres
1:4,000 (at original document size of 8.5x11)



Project Location: 160401284 REVA
City Of Ottawa
Prepared by SPE on 2017-04-12
Technical Review by BCC on 2017-04-10
Independent Review by KG on 2017-04-12

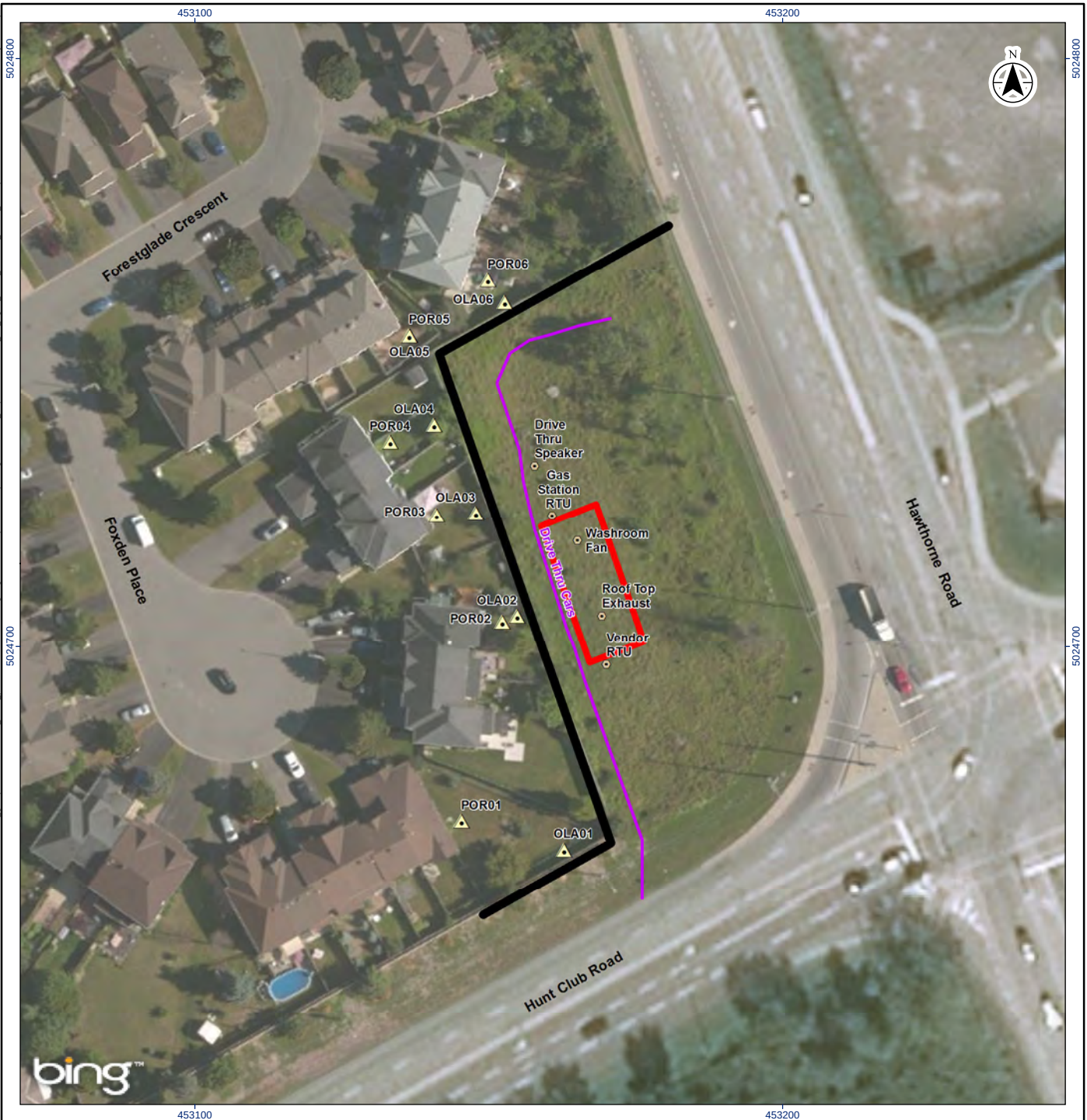
Client/Project: 2520333 ONTARIO INC.
ACOUSTIC ASSESSMENT

Figure No.
2

Title
Zoning Map

Notes
1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
3. Zoning Data from the City of Ottawa WMS.
4. Orthomage: © 2017 DigitalGlobe Image courtesy of USGS Earthstar Geographics SIO © 2017 Microsoft Corporation

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Legend

- Point Sources
- Receptor
- 2m Height Existing Barrier
- Drive Through Traffic
- Proposed Building

0 10 20 metres
1:1,000 (at original document size of 8.5x11)



Project Location 160401284 REV A
City Of Ottawa Prepared by SPE on 2018-02-27
Technical Review by BCC on 2017-04-10
Independent Review by KG on 2017-04-12

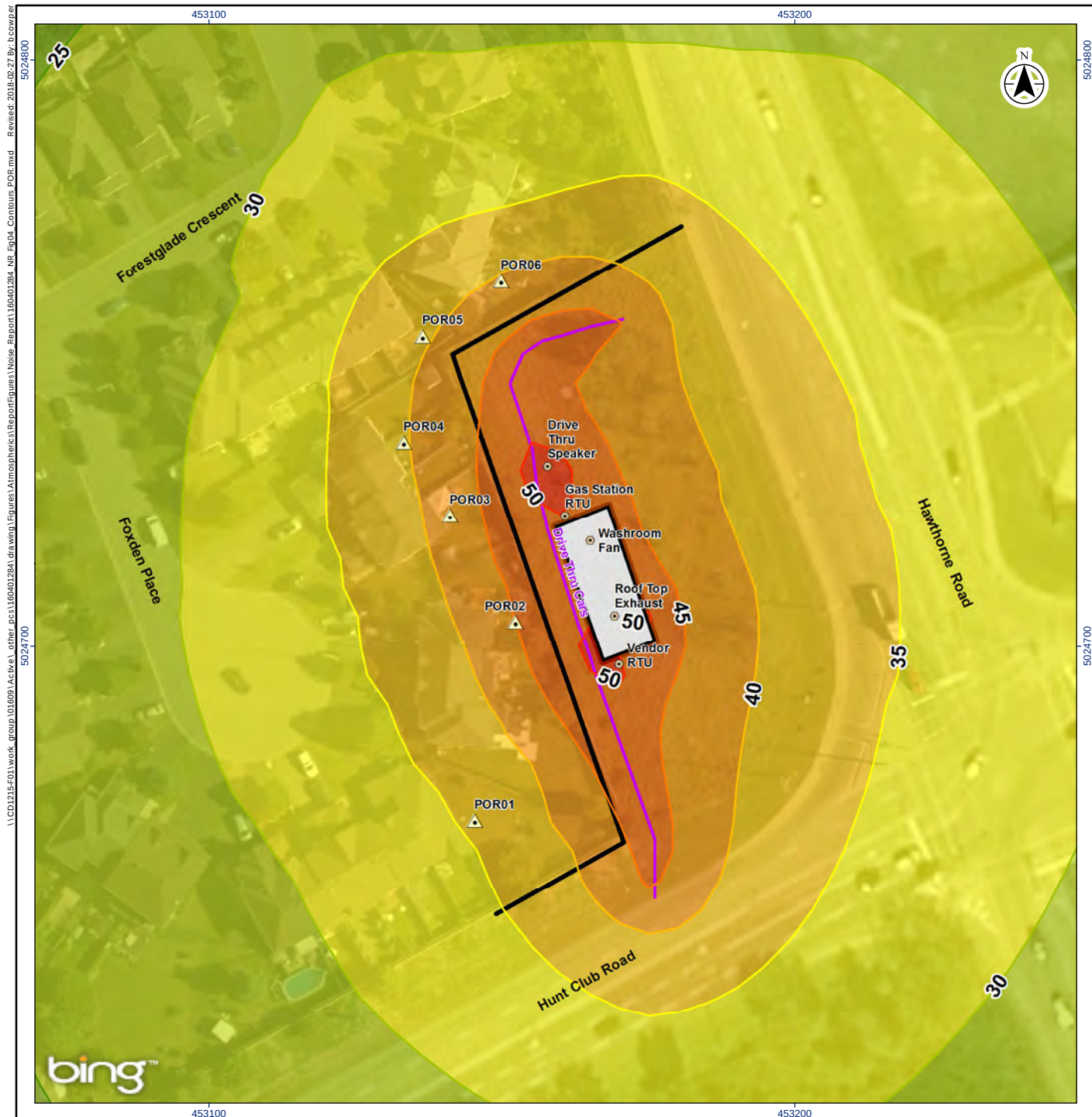
Client/Project
2520333 ONTARIO INC.
ACOUSTIC ASSESSMENT

Figure No.
3

Location of Noise Sources, Barriers
and Nearby Points of Receptors

Notes
1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
3. Orthomimagery: © 2018 Microsoft Corporation © 2018 DigitalGlobe © CNES (2018) Distribution Airbus DS. Date of Imagery, unknown.

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Legend

- Point Sources
- Receptor
- 2m Height Existing Barrier
- Drive Thru Traffic
- Proposed Building

Sound Level (dBA)

- 20 - 25
- 25 - 30
- 30 - 35

- 35 - 40
- 40 - 45
- 45 - 50
- > 50

0 10 20 metres
1:1,000 (at original document size of 8.5x11)



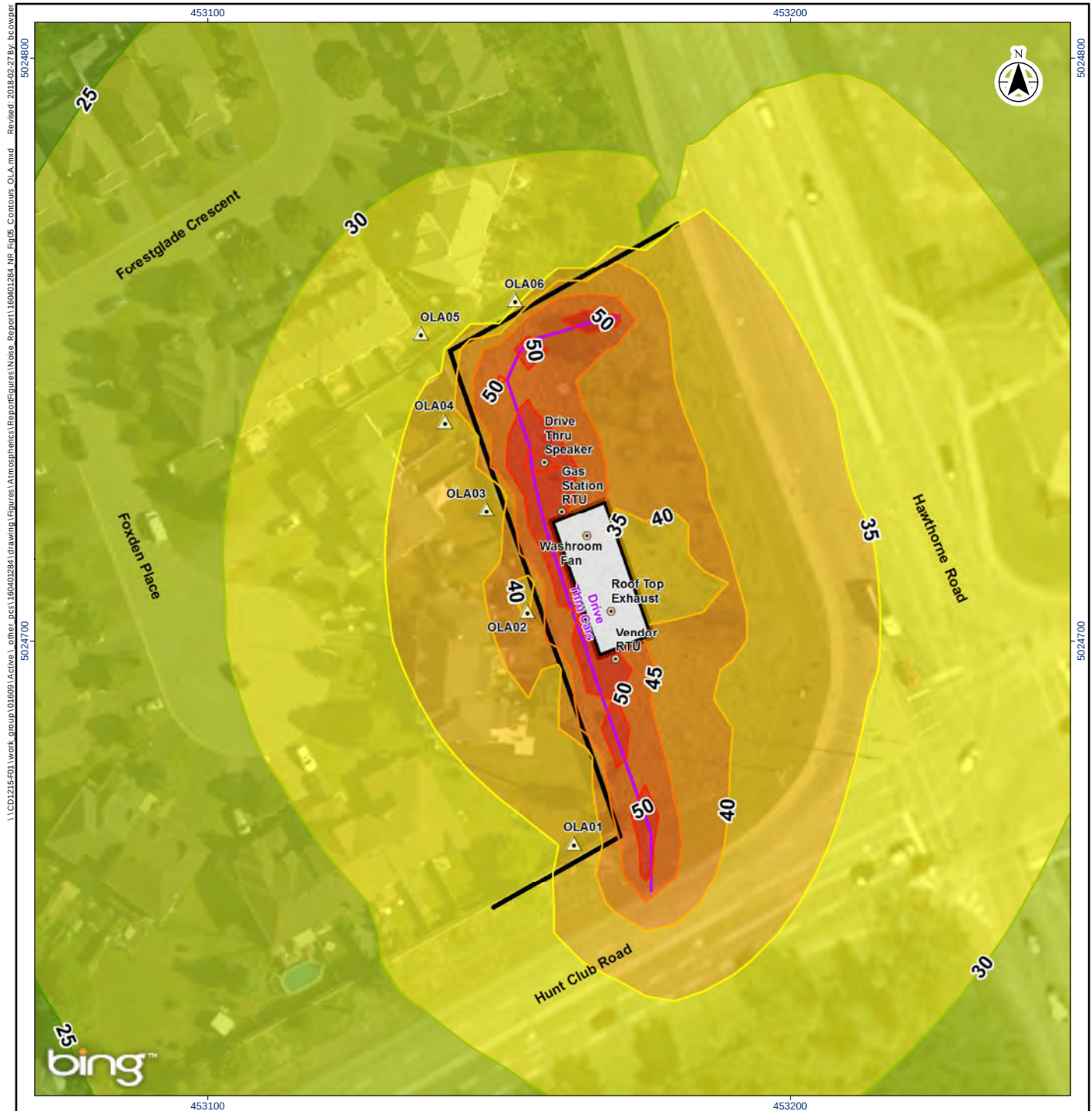
Project Location: City Of Ottawa
Client/Project: 2520333 ONTARIO INC. ACOUSTIC ASSESSMENT
160401284 REV A
Prepared by SPE on 2018-02-27
Technical Review by BCC on 2017-04-10
Independent Review by KG on 2017-04-12

Figure No.
4

Equivalent Sound Level Contours at
a 4.5 m Height

Notes
1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
3. Orthoimagery: © 2018 Microsoft Corporation © 2018 DigitalGlobe © CNES (2018) Distribution Airbus DS. Date of Imagery, unknown.

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Legend

- Point Sources
- Receptor
- 2m Height Existing Barrier
- Drive Through Traffic
- Proposed Building

Sound Level (dBA)

- 20 - 25
- 25 - 30
- 30 - 35

- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55

0 10 20 metres
1:1,000 (at original document size of 8.5x11)



Project Location: City Of Ottawa
Prepared by SPE on 2018-02-27
Technical Review by BCC on 2017-04-10
Independent Review by KG on 2017-04-12

Client/Project: 2520333 ONTARIO INC.
ACOUSTIC ASSESSMENT

Figure No. 5
Title

Equivalent Sound Level Contours at a 1.5 m Height

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
3. Orthomimagery: © 2018 Microsoft Corporation © 2018 DigitalGlobe © CNES (2018) Distribution Airbus DS. Date of Imagery, unknown.

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February 28, 2018

Kris Kilborn, Senior Associate, Community Development

ATTACHMENTS

Reference: Noise Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

Attachment B. Site Plans

OWNER:
2520333 ONTARIO INC.
5 MILLCREEK COURT, NEPEAN, ON K2G 6Y7

APPLICANT:
STANTEC CONSULTING INC.
1331 CLYDE AVENUE, OTTAWA ON K2C 3G4

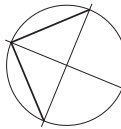
SURVEYOR:
STANTEC GEOMETRICS LTD.
1331 CLYDE AVENUE, OTTAWA, ON K2C 3G4

ARCHITECT:
MCROBIE ARCHITECTS + INTERIOR DESIGNERS
66 QUEEN STREET, OTTAWA, ON K1P 5C8

LANDSCAPE ARCHITECT:
STANTEC CONSULTING INC.

CIVIL ENGINEER:
STANTEC CONSULTING INC.

North



Revisions

No.	By	Description	Date
01	JAS	SPA SUBMISSION	13 APR 2017
02	JAS	REVISED FOR SPA	31 OCT 2017

APPROVED ☐ REFUSED ☐
THIS ____ DAY OF ____, 20__

DON HERWEYER, MCIP, RPP, ACTING MANAGER
DEVELOPMENT REVIEW, URBAN SERVICES

Project

NEW GAS BAR/
CONVENIENCE STORE/
DRIVE-THROUGH

3500 HAWTHORNE ROAD, OTTAWA

Drawing

SITE PLAN

Scale

Stamp

AS SHOWN

Drawn

JAS

Checked

Project No.

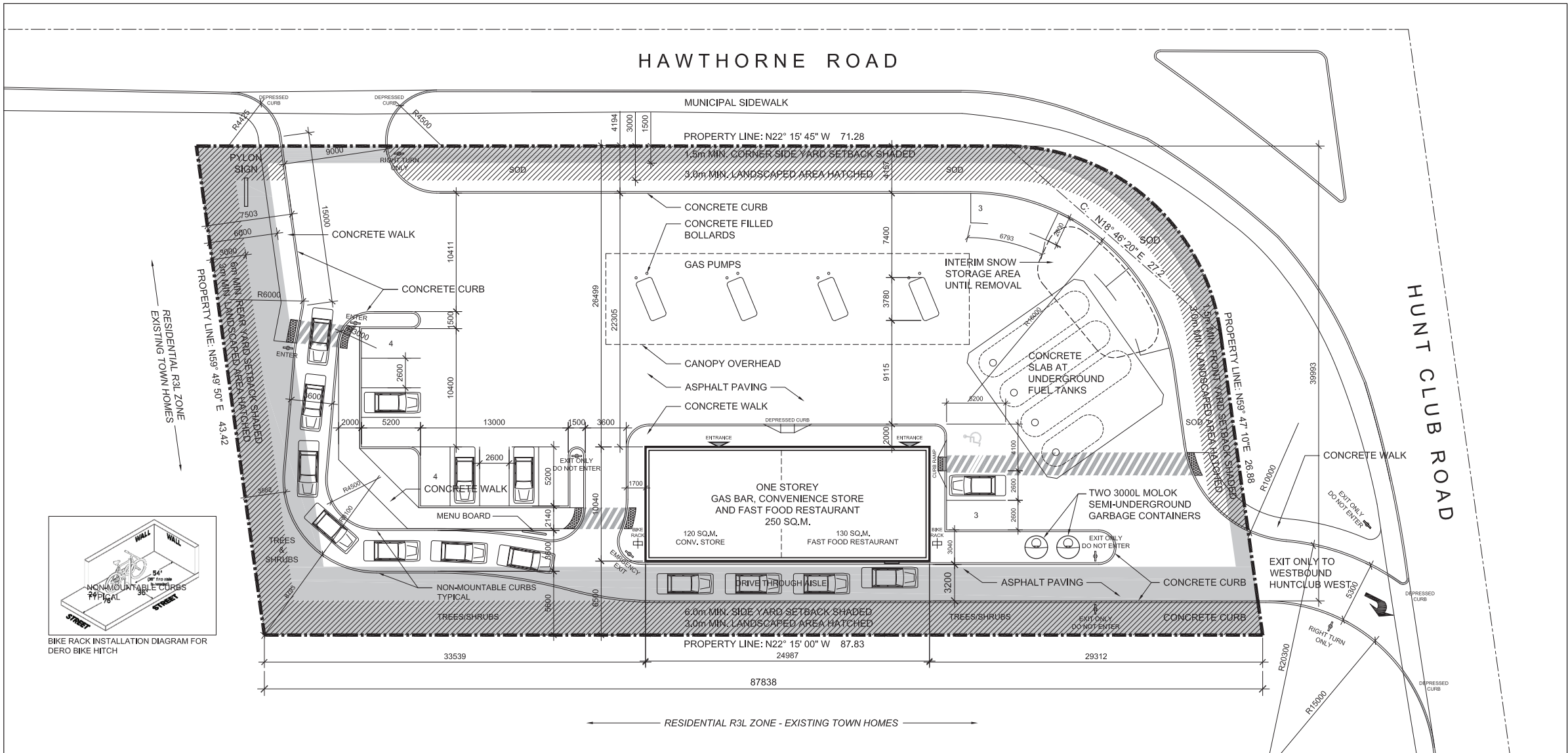
Drawing No.

16-240

Date

01 APRIL 2017

SP-A01



03 SITE PLAN
SP-A01 SCALE: 1:200

SITE INFORMATION

SITE AREA: 3,720sm

BUILDING DATA:

AREA CALCULATIONS:

Gross Area (by Ontario Building Code definition):
The total area of all floors above grade measured
between the outside surfaces of exterior walls is:

Ground Floor: 650sm

Gross Floor Area (City of Ottawa Zoning Bylaw
definition for the purpose of determining maximum
building area and parking requirements):
The total floor area measured from the interior of
outside walls excluding mechanical/electrical service
rooms, stairwells, elevator shafts, parking/loading
facilities, washrooms and storage areas:

Ground Floor: 650sm

ZONING

DESIGNATION: GM1[50]F(0.25)
General Mixed use, Sub-Zone 1
Exception 50

PERMITTED NON RESIDENTIAL USES:

Section 187-188: Convenience Store
Drive-through facility
Restaurant

Exception 50: All commercial uses prohibited except:
Car Wash
Gas Bar
Retail Food Store
Retail Store
Small Batch Brewery

MAXIMUM FSI:

Table 187(f): 2 times coverage

Exception 50: Full floor space index may be used for
commercial uses.
Retail Store limited to 120sm

Permitted: 7,440sm
Proposed: 250sm (.067 time coverage)

ZONING (cont'd)

SETBACKS:

Table 187(c)(d)(e): Front & Corner Yard: 3.0m
Interior Side Yard: 5.0m (from to res. zone)
Rear Side Yard: 7.5m (from to res. zone)

Exception 50: Front: 1.5m
Side: 6.0m
Rear: 6.0m

MAXIMUM BUILDING HEIGHT:

Table 187(f): 18m

PARKING:

Table 101: Convenience Store: 3.4 cars per 100sm of GFA
Fast-Food Restaurant: 10 cars per 100sm of GFA

Required: 17 cars
Provided: 14 cars (plus 8 cars at fuel dispensers)

MINIMUM WIDTH OF LANDSCAPED AREA:

Table 187(h): Abutting at Street: 3.0m
Abutting and Res.Zone: 3.0m

Exception 50: All yards to be landscaped

ZONING (cont'd)

PROVISIONS FOR DRIVE-THROUGHS:

Table 112: 7 before/at order board and
a minimum total of 11

BARRIER-FREE PARKING (Bylaw 2003-530):

Part C, Sect. 122: 0 spaces required

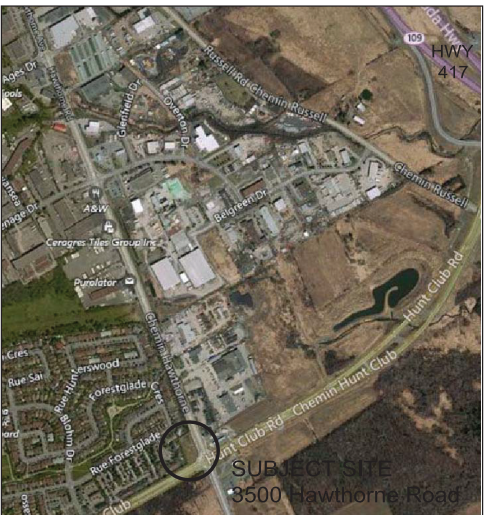
LOADING FACILITIES:

Section 113: 0 required for less than 350sm of GFA

BICYCLE PARKING:

Section 111: 1 per 250sm of GFA

Required: 1
Provided: 2



01 LOCATION PLAN
SP-A01 SCALE: NTS

FINISH LEGEND	
SYMBOL	DESCRIPTION
(SM-1)	PRECAST STONE VENEER
(MP-1)	METAL PANEL 1 - SIENA ALUM. COMPOSITE
(MP-2)	METAL PANEL 2 - SILVER ALUM. COMPOSITE
(MP-3)	METAL PANEL 3 - CHARCOAL ALUM. COMPOSITE
(MP-4)	METAL PANEL 4 - CHARCOAL CORRUGATED STEEL
(VG-1)	VISION GLAS 1 - CLEAR GLAZING
(SP-1)	SPANDREL GLASS 1 - WHITE BACKPAINTED GLASS
(WP1)	WOOD PANEL 1

North

Revisions			
No.	By	Description	Date
01	JAS	SPA SUBMISSION	13 APR 2017

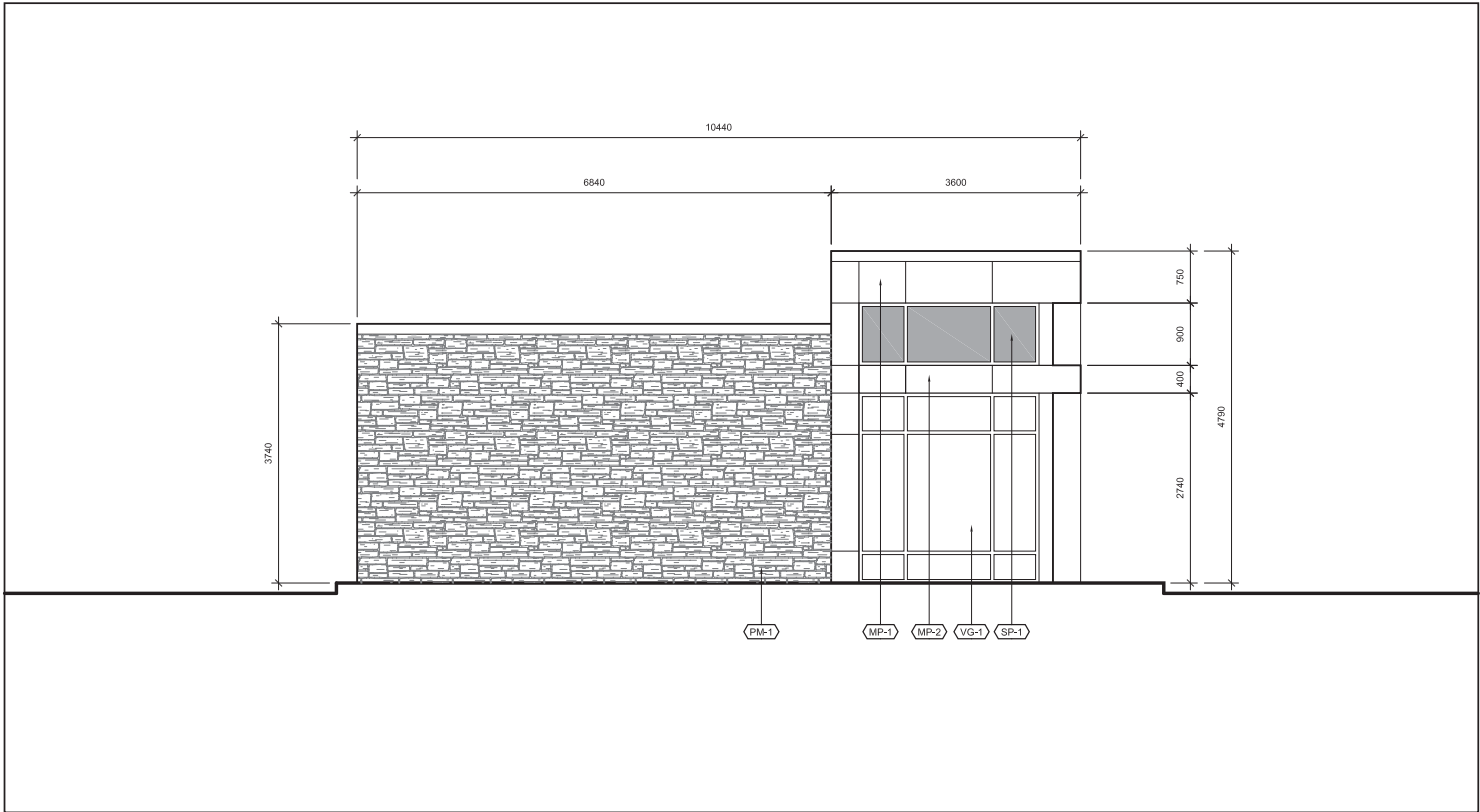
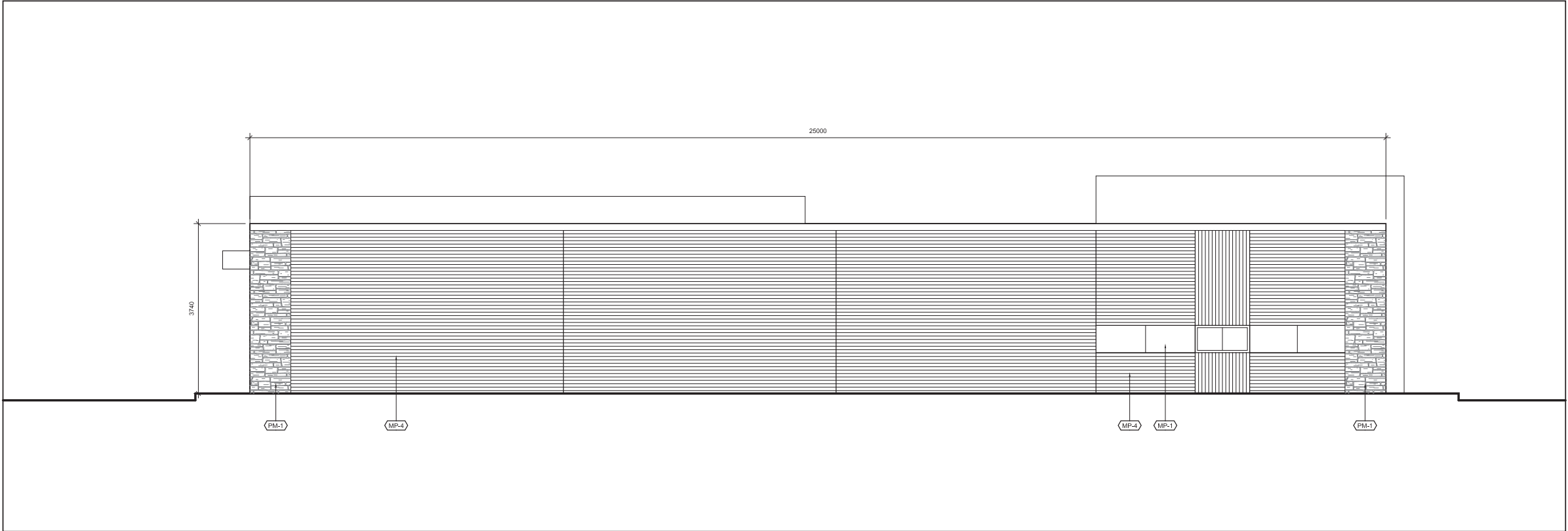
Project
NEW GAS BAR/
CONVENIENCE STORE/
DRIVE-THROUGH

3500 HAWTHORNE ROAD, OTTAWA

Drawing
EXTERIOR
ELEVATIONS

Scale	Stamp
AS SHOWN	
Drawn	
Checked	

Project No.	Drawing No.
	16-240
Date	A202
01 APRIL 2017	



FINISH LEGEND	
SYMBOL	DESCRIPTION
(SM-1)	PRECAST STONE VENEER
(MP-1)	METAL PANEL 1 - SIENA ALUM. COMPOSITE
(MP-2)	METAL PANEL 2 - SILVER ALUM. COMPOSITE
(MP-3)	METAL PANEL 3 - CHARCOAL ALUM. COMPOSITE
(MP-4)	METAL PANEL 4 - CHARCOAL CORRUGATED STEEL
(VG-1)	VISION GLASS 1 - CLEAR GLAZING
(SP-1)	SPANDREL GLASS 1 - WHITE BACKPAINTED GLASS
(WP-1)	WOOD PANEL 1

North

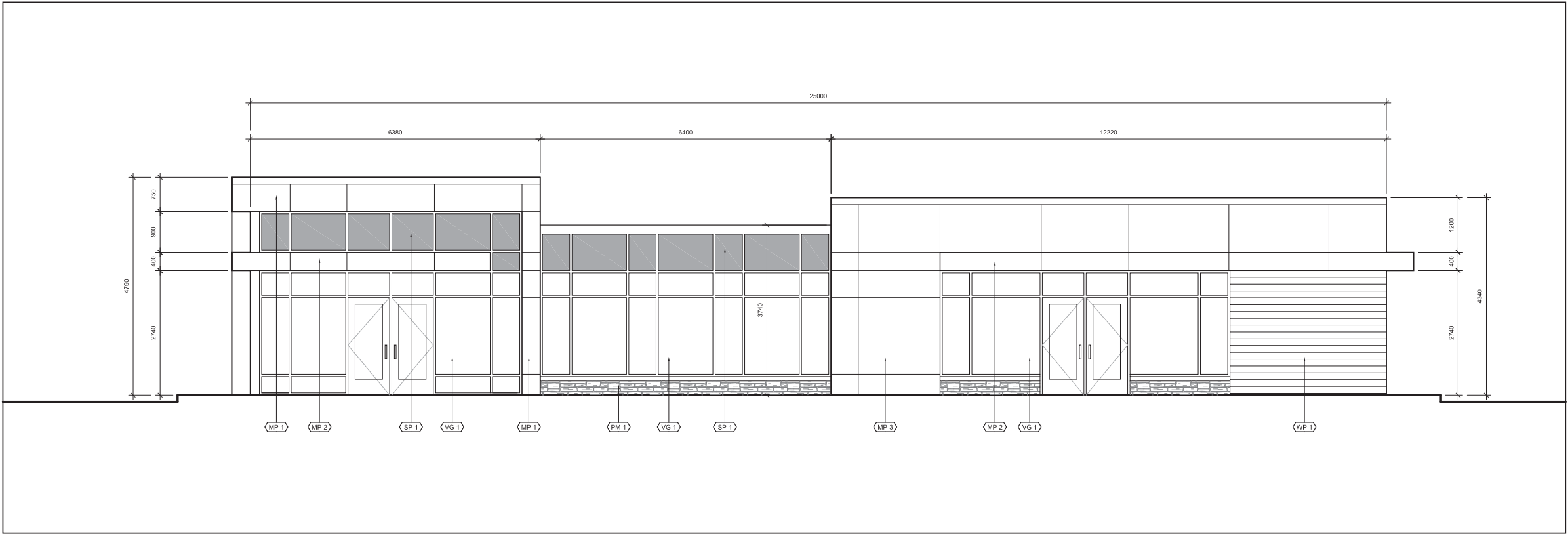
Revisions			
No.	By	Description	Date
01	JAS	SPA SUBMISSION	13 APR 2017

Project
NEW GAS BAR/
CONVENIENCE STORE/
DRIVE-THROUGH

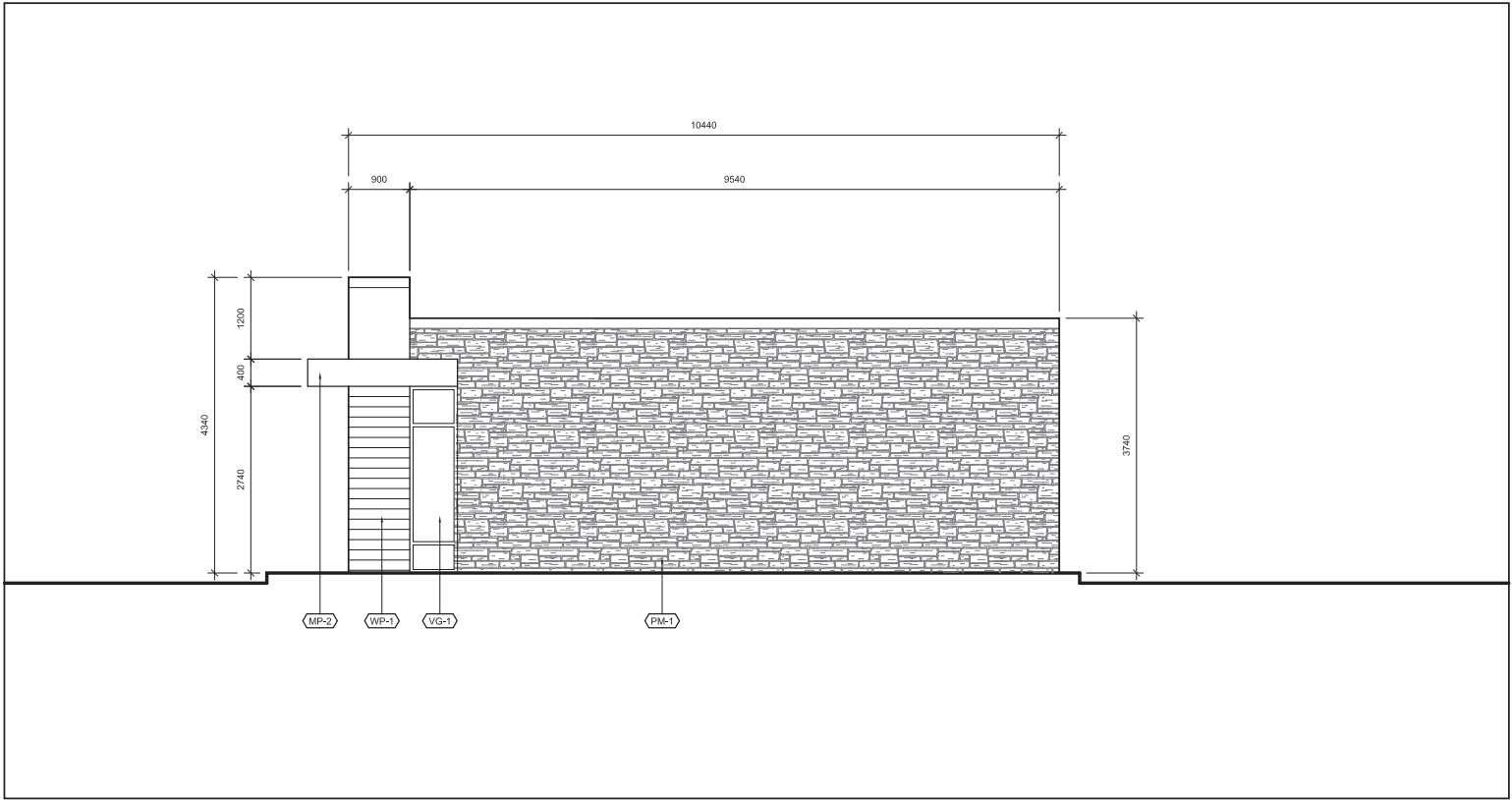
3500 HAWTHORNE ROAD, OTTAWA
Drawing
EXTERIOR
ELEVATIONS

Scale	Stamp
AS SHOWN	
Drawn	
Checked	

Project No.	Drawing No.
	16-240
Date	A201
01 APRIL 2017	



01 EAST ELEVATION
A201 SCALE: 1:50



02 NORTH ELEVATION
A201 SCALE: 1:50



February 28, 2018

Kris Kilborn, Senior Associate, Community Development

ATTACHMENTS

Reference: Noise Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

Attachment C. Manufacturer's Data (Typical)

CENTRIFUGAL UPBLAST ROOF EXHAUSTERS

COMMERCIAL KITCHEN APPLICATIONS

Belt Driven Model VRBK

DESIGNED AND ENGINEERED TO MEET INDUSTRY NEEDS

The Carnes Company series VR centrifugal upblast fan is designed and built to handle the exhaust of hot, greasy air from commercial kitchen hoods. Maximum exhaust temperature for continuous operation is 300° F. The Model VRBK fan discharges contaminated air away from supply air intakes and building exteriors. These exhaust fans can be roof or wall mounted through size 24 (with HP limitations shown below). Sizes 30-48 are to be roof mounted only.

The unique diffuser/support structure combined with the backwardly inclined wheel and deep spun venturi enable the Carnes VR series upblast fans to operate at high static

pressures (up to 3 inches w.g.) as standard.

The deep spun venturi is precision matched to the wheel inlet to ensure maximum airflow along with protection from entry of adverse weather elements.

The airflow design of these fans has been thoroughly tested at Carnes' AMCA Registered Laboratory.

Testing has also been conducted to ensure trouble-free start-up and to ensure product durability and dependability of operation.



Model VRBK - Sizes 06 through 24

Designed for roof or wall mounted installations except for the following:

Selections which are suitable for roof mount only-

VRBK 10 - 1½ HP	VRBK 15 - 2 HP	VRBK 24 - 5 HP
VRBK 12 - 1½ HP	VRBK 18 - 3 HP	VRBK 24 - 7½ HP

The Models VRBK sizes 06-24 incorporate the patented diffuser assembly. This unique support framework enhances the units structural integrity while increasing the static pressure capabilities up to 3 inches w. g. Housing construction is a spun aluminum outer shroud with a spark resistant wheel.

Model VRBK - Sizes 30 through 48

Designed for roof mounted installation only.

Models VRBK sizes 30-48 are designed with a two piece spun and shaped aluminum housing for ease of accessibility to the unit interior. Structural rigidity is accomplished by utilizing a circular welded steel support frame.



TYPICAL SPECIFICATIONS

VRBK Belt Drive Series

Upblast exhaust ventilators shall be of the centrifugal belt driven type. The motor compartments shall be constructed of heavy gauge aluminum mounted on an independent support structure. The outer shroud shall have a rolled bead for added strength. The wheel and spun inlet venturi shall be a centrifugal design of non-sparking construction. For maximum performance and quiet, efficient operation, the wheel shall overlap the inlet venturi and have backward inclined blades. The wheels shall be dynamically balanced to assure smooth and vibration-free rotation under maximum loading. The complete drive assembly, including the motor and the wheel, shall be mounted on vibration isolators. Motor and drives shall be factory mounted. All fans shall be test run prior to shipment.

Motor and drives shall be isolated from the exhaust airstream. Air for cooling the motor shall be supplied to the internal motor compartment through a vent tube from a location free from discharge contaminants. Motors shall be of the heavy duty type with permanently lubricated, sealed ball bearings. Motors shall be readily accessible for maintenance. Wheel shaft shall be ground, polished, coated with a rust inhibitive finish and mounted in heavy duty, permanently sealed pillowblock ball bearings which are

capable of 200,000 hours of life, average operation. Drives shall be sized at a minimum of 165% of driven horsepower. Drive belts shall be oil-resistant, non-static and be capable of 25,000 hours of life, average operation. Sheaves shall be fully machined cast iron or pressed steel, keyed and securely attached to the shafts. Variable pitch motor sheaves shall be standard.

The motor shall be factory wired to the disconnect switch which shall be mounted in a junction box located on the fan plate inside the motor compartment. Wiring connected to the switch will travel through rigid conduit to a weatherproof junction box mounted on the exterior of the unit.

Horsepower and noise levels shall not exceed the published values and oversized motors will not be acceptable. Performance ratings shall be AMCA licensed for air and sound.

Centrifugal power upblast ventilators for commercial kitchen applications shall be Carnes Company Model VRBK, belt drive, sizes 06 through 48, as manufactured at Carnes Company of Verona, Wisconsin.

AMCA LICENSED AIR and SOUND DATA

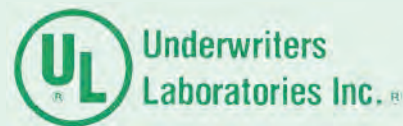
Licensed to bear the AMCA Seal for both air and sound.

The Carnes Company certifies that the Model VR shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



UL LISTINGS

Most models are standard as listed by Underwriters Laboratories under Standard 762 (YZHW).



CONSTRUCTION

FAN HOUSING

- Constructed with heavy gauge aluminum
- Designed for maximum weather protection, outer shroud prevents the entrance of inclement weather
- Outer shroud beaded for rigidity
- Fan plate designed to prevent the entrance of contaminated air and airborne particles into the motor compartment
- Two piece motor cover design (lid and motor tube) allows easy access to motor, drives and bearings for maintenance
- Drain opening

MOTOR/ELECTRICAL

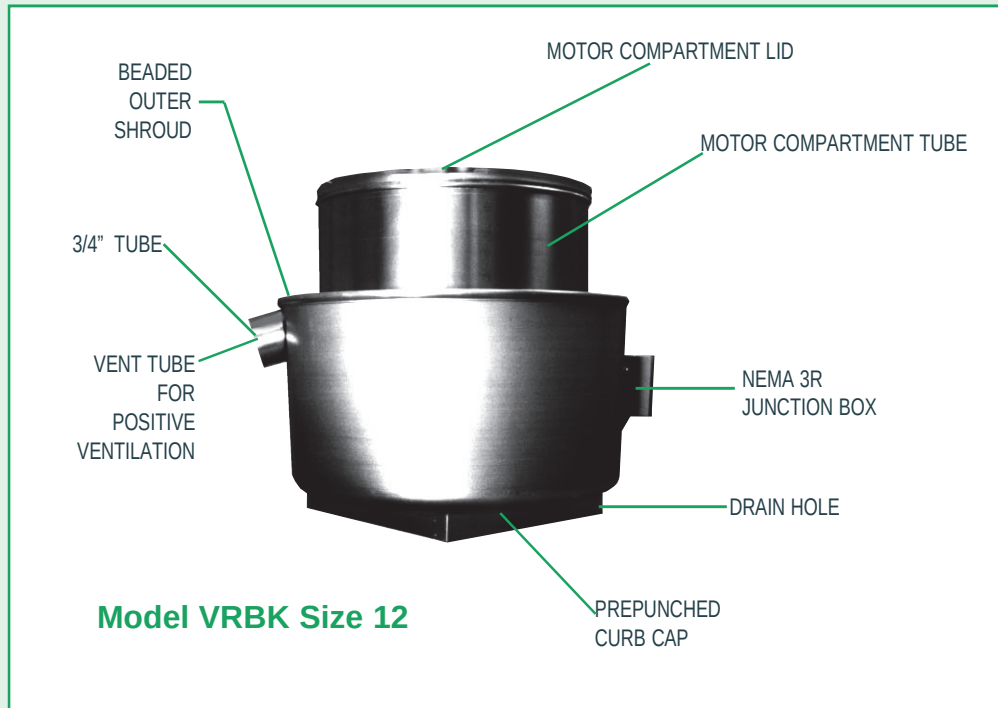
- **UL** listing under Standard 762 available as option on most models
- Motors are **UL** recognized components supplied by nationally recognized manufacturers
- Switch is mounted and wired
- Sealed conduit chase complies with **NEC**, allows passage of electrical wire into motor compartment
- Wiring external to exhaust air

MOTOR SUPPORT ASSEMBLY

- Bolted, heavy gauge material
- Easily adjustable belt tension
- Motor plate accommodates multiple motor frames
- Isolated from fan plate to reduce vibration and noise transmission
- Allows horizontal adjustment of wheel
- Electrically grounded to meet **NEC** and **UL** requirements

MOTOR COMPARTMENT/TUBE

- Motor compartment insulated for operating temperatures to 300°F
- Vent tube provides positive motor cooling to maximize motor life
- Easily removable lid and tube utilize durable threaded fastener retainers
- Fan plate isolates motor compartment from contaminated exhaust air
- Opening around shaft sized to allow optimum air passage to ensure proper motor compartment cooling



FEATURES

BEARINGS/SHAFT

- Dual bearings utilized to properly support the fan shaft
- Prelubricated sealed, self-aligning
- Rated at 200,000 hours average operation
- Polished CRS fan shaft with rust inhibitive coating

DRIVES

- Selected for 165% of the motor horsepower
- Adjustable V-belt drives with oil resistant non-static conducting belts
- Two belts standard on units 5 HP and larger
- Factory preset fan RPM
- Adjustable sheaves allow for final air system balancing

WHEEL

- Backward inclined wheels constructed of non-corrosive or coated heavy gauge material
- Usage of cooling fins on fan wheel backplate draws cooling air down over the motor facilitating motor longevity while motor remains out of the airstream
- Self-limiting power characteristics
- Dynamically balanced and test run in each individual unit

SUPPORT STRUCTURE

Sizes 06 - 24

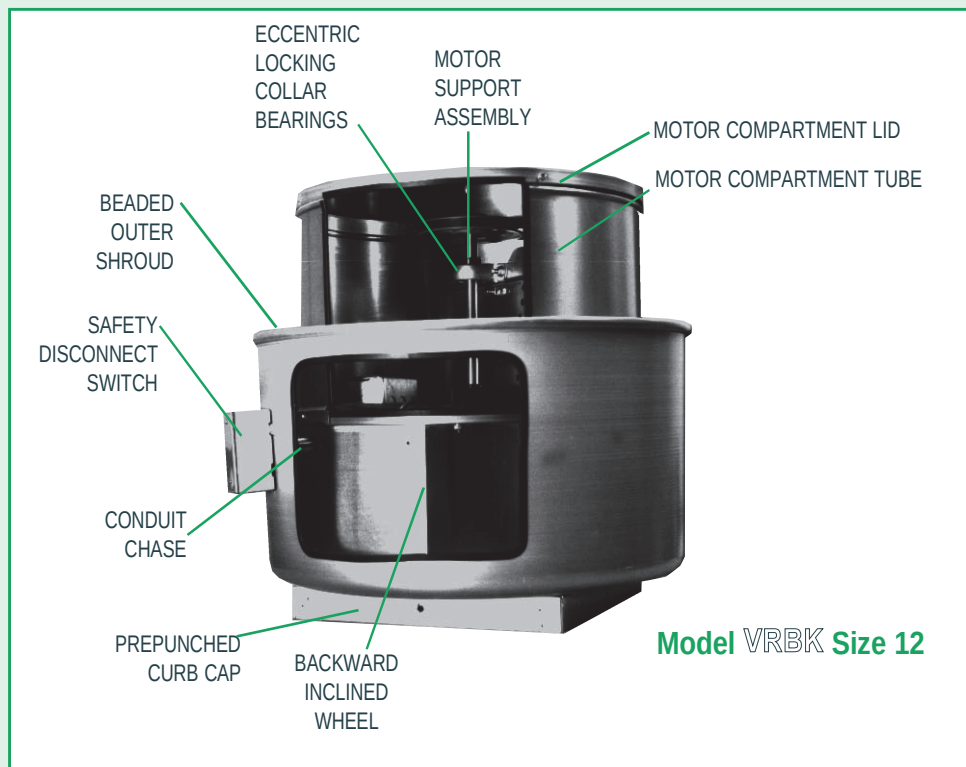
- Galvanized patented diffuser provides structural integrity and protection against weather penetration
- Self-sealing diffuser fasteners prevent leakage

Sizes 30 - 48

- Heavy gauge coated circular steel structural frame provides strength and unit rigidity

CURB CAP/WALL MOUNTING CAP

- One piece construction with fastened/welded, overlapping corners to ensure strength
- Prepunched mounting holes for ease of installation
- Support structure attached with self-sealing fasteners
- The deep spun venturi is precision matched to the wheel inlet to ensure maximum airflow along with protection from entry of adverse weather elements
- VRBK sizes 06-24 up to 3 HP can be wall mounted for exhaust



KITCHEN EXHAUST APPLICATION GUIDELINES

GENERAL RULES TO FOLLOW

- Kitchen air pressure should be kept negative relative to dining and other areas to ensure odor control.
- The exhaust fan should be located at the discharge end of the duct run to minimize the effect of any ductwork leaks.
- Outdoor air louvers, intake and exhaust, should be located so the exhaust air is not drawn back into the system.
- On large hoods (over 12 feet long), if possible, use two small exhaust fans instead of one large fan. Benefits include uniform air distribution and the capability, depending on need, of operating one or both fans.
- Make-up air should equal 80-85% of exhausted air levels.

NFPA 96 - Standard for the Installation of Equipment for the Removal of Smoke and Grease-laden Vapors from Commercial Cooking Equipment.

REQUIREMENTS

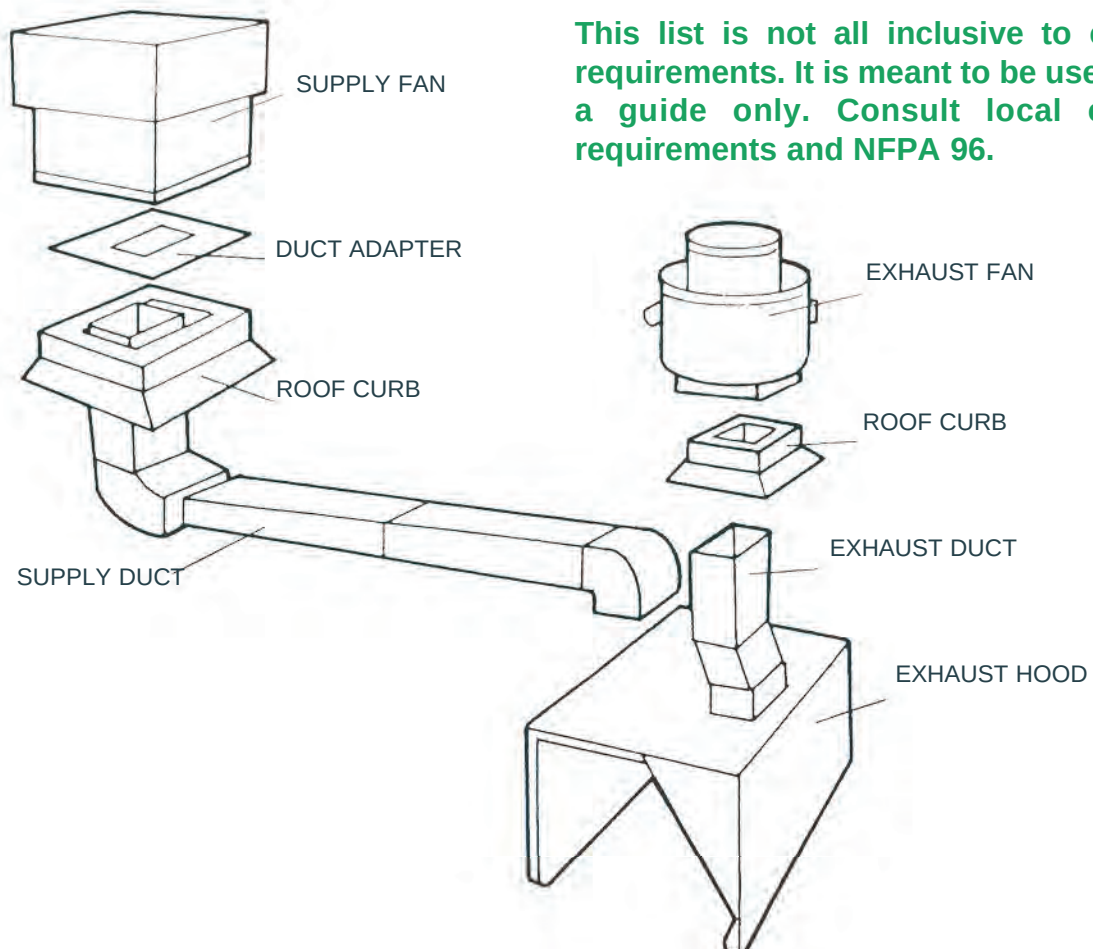
- Air velocity through ductwork is not to be less than 1500 FPM.
- Ventilators approved and listed for commercial cooking equipment use.
- 10 feet minimum distance between exhaust fan and air intake unit.

ROOFTOP TERMINATIONS

- 10 feet clearance from fan outlet to adjacent buildings and property lines.
- 40 inches minimum clearance between fan outlet and roof surface with exhaust airflow directed up.
- Ductwork extends a minimum of 18 inches above the roof surface.

WALL TERMINATIONS

- Through masonry wall with a minimum of 10 feet clearance from the outlet to adjacent buildings, property lines, combustible construction or electrical lines or equipment.
- Exhaust airflow perpendicular outward from the wall or upward.



VRBK 06

BELT DRIVE

PERFORMANCE DATA

DESIGN DATA

Max BHP = .023 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 2.75 x RPM
 Max. Motor Frame Size = 56
 Unit Weight (less motor) = 40 lbs.
 Roof Opening = 11" Sq.
 Curb O. D. = 14" Sq.
 Wall Opening = 12" Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.												
K1 (1/6)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	600	225 .01 .5												
	700	263 .01 1.0	119 .01 1.3											
K3 (1/6)	800	300 .01 1.6	193 .01 1.7											
	900	338 .01 2.1	248 .02 2.1											
K4 (1/6)	1000	376 .02 2.8	297 .02 2.7	179 .02 3.5										
	1100	413 .02 3.5	343 .03 3.3	253 .03 3.7										
K5 (1/6)	1200	451 .03 4.1	387 .04 3.9	314 .04 4.0	194 .04 5.0									
	1300	488 .04 4.7	429 .04 4.6	365 .05 4.5	278 .05 5.3									
L1 (1/4)	1400	526 .05 5.4	471 .05 5.3	414 .06 5.2	343 .06 5.6	239 .06 6.5								
	1500	563 .06 6.1	513 .07 6.0	461 .07 5.9	400 .07 6.0	320 .08 6.8								
M1 (1/3)	1550	582 .07 6.5	533 .07 6.3	483 .08 6.2	426 .08 6.2	354 .08 7.0	252 .09 7.9							
	1600	601 .07 6.8	553 .08 6.7	505 .08 6.6	451 .09 6.5	385 .09 7.2	300 .09 8.0							
	1650	620 .08 7.2	574 .09 7.1	527 .09 7.0	475 .10 6.9	416 .10 7.4	338 .10 8.2	218 .10 9.2						
	1700	639 .09 7.6	594 .09 7.5	548 .10 7.4	500 .10 7.3	446 .11 7.6	375 .11 8.4	278 .11 9.3						
	1750	657 .10 8.0	614 .10 7.9	570 .11 7.8	524 .11 7.7	471 .12 7.8	407 .12 8.6	327 .12 9.5						
	1800	676 .10 8.4	634 .11 8.3	591 .12 8.1	548 .12 8.1	496 .13 8.0	438 .13 8.8	365 .13 9.7						
	1850	695 .11 8.8	654 .12 8.7	612 .13 8.6	570 .13 8.5	521 .14 8.4	468 .14 9.0	401 .14 9.9						
	1900	714 .12 9.2	674 .13 9.1	633 .14 9.0	592 .14 8.9	546 .15 8.8	498 .15 9.3	435 .15 10.1						
	1950	732 .13 9.6	693 .14 9.5	654 .15 9.4	614 .15 9.3	571 .16 9.2	523 .16 9.5	466 .17 10.3	308 .17 12.2					
	2000	751 .14 10.0	713 .15 9.9	675 .16 9.8	636 .16 9.8	595 .17 9.7	549 .18 9.8	497 .18 10.5	357 .18 12.4					
	2050	770 .15 10.5	733 .16 10.4	696 .17 10.3	658 .18 10.2	619 .18 10.1	574 .19 10.1	527 .19 10.8	400 .20 12.6					
	2100	789 .16 10.9	753 .17 10.9	716 .18 10.8	679 .19 10.7	642 .19 10.6	599 .20 10.5	555 .21 11.0	437 .21 12.8					
	2150	808 .18 11.4	772 .18 11.3	737 .19 11.2	701 .20 11.2	664 .21 11.1	623 .21 11.0	580 .22 11.3	474 .23 13.0	307 .23 15.0				
	2200	826 .19 12.0	792 .20 11.8	757 .21 11.7	722 .21 11.7	686 .22 11.6	648 .23 11.5	606 .23 11.5	506 .24 13.3	364 .24 15.2				
	2250	845 .20 12.4	811 .21 12.3	777 .22 12.2	743 .23 12.2	708 .23 12.1	672 .24 12.0	631 .25 11.9	537 .26 13.5	413 .26 15.3				
	2300	864 .22 12.8	831 .23 12.8	798 .23 12.7	764 .24 12.6	730 .25 12.6	696 .26 12.5	656 .26 12.4	568 .27 13.7	453 .28 15.5				
	2350	883 .23 13.3	850 .24 13.2	818 .25 13.1	785 .26 13.1	752 .26 13.0	719 .27 13.0	680 .28 12.9	598 .29 13.9	490 .30 15.7	330 .30 17.7			
	2400	901 .25 13.7	870 .25 13.6	838 .26 13.6	806 .27 13.5	774 .28 13.5	741 .29 13.4	704 .29 13.4	628 .31 14.1	527 .31 15.8	389 .32 17.8			
	2450	920 .26 14.1	889 .27 14.1	858 .28 14.0	827 .29 14.0	795 .30 13.9	763 .30 13.9	729 .31 13.9	654 .33 14.4	560 .33 16.0	438 .34 17.9			
	2500	939 .28 14.6	909 .29 14.5	878 .30 14.5	848 .31 14.5	816 .31 14.4	785 .32 14.4	753 .33 14.4	679 .34 14.7	591 .35 16.2	482 .36 18.0			

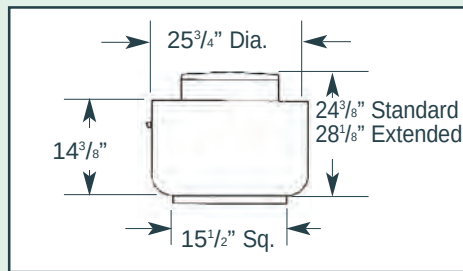
Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 08

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = $.033 \times \left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = $2.75 \times \text{RPM}$

Max. Motor Frame Size = 56

Unit Weight (less motor) = 40 lbs.

Roof Opening = 11" Sq.

Curb O. D. = 14" Sq.

Wall Opening = 12" Sq.

RPM Range - Motor HP			STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	650	359 .01 2.0	154 .01 1.4											
	750	415 .01 2.8	267 .01 2.0											
K3 (1/6)	850	470 .02 3.7	347 .02 2.8											
	950	525 .02 4.6	421 .03 3.8	266 .03 3.8										
K4 (1/6)	1050	580 .03 5.4	488 .04 4.5	368 .04 3.9										
	1150	636 .04 6.2	552 .05 5.4	452 .05 4.8	305 .05 4.6									
L1 (1/4)	1250	691 .05 7.1	614 .06 6.3	527 .06 5.6	420 .06 5.4									
	1350	746 .07 7.9	676 .07 7.2	600 .08 6.6	505 .08 6.3	385 .08 6.1								
M1 (1/3)	1450	802 .08 8.8	736 .09 8.2	667 .09 7.6	584 .10 7.1	490 .10 7.0	340 .10 6.9							
	1500	829 .09 9.3	766 .10 8.6	700 .10 8.1	622 .11 7.6	533 .11 7.4	417 .11 7.3							
P1 (1/2)	1550	857 .10 9.7	795 .11 9.1	732 .11 8.6	660 .12 8.1	576 .12 7.9	474 .12 7.7	280 .12 7.8						
	1600	884 .11 10.2	825 .12 9.6	764 .12 9.0	696 .13 8.6	617 .13 8.3	527 .13 8.2	390 .13 8.1						
	1650	912 .12 10.7	854 .13 10.1	795 .13 9.6	733 .14 9.1	656 .14 8.8	573 .15 8.7	468 .15 8.6						
	1700	940 .13 11.2	884 .14 10.6	827 .14 10.1	768 .15 9.6	694 .16 9.3	616 .16 9.1	522 .16 9.0						
	1750	967 .14 11.7	913 .15 11.1	858 .16 10.6	801 .16 10.2	732 .17 9.7	658 .17 9.6	574 .18 9.5						
	1800	995 .15 12.3	942 .16 11.8	889 .17 11.2	833 .18 10.6	769 .18 10.2	699 .19 10.1	621 .19 10.0	352 .18 10.0					
	1850	1023 .17 13.0	971 .18 12.4	920 .18 11.9	865 .19 11.3	806 .20 10.8	737 .20 10.7	664 .20 10.6	455 .20 10.4					
	1900	1050 .18 13.7	1000 .19 13.1	950 .20 12.5	897 .21 12.0	842 .21 11.5	776 .22 11.2	706 .22 11.1	532 .23 11.0					
	1950	1078 .20 14.4	1029 .21 13.8	981 .21 13.2	929 .22 12.7	878 .23 12.2	813 .23 11.8	748 .24 11.7	589 .24 11.5					
	2000	1106 .21 15.1	1057 .22 14.5	1011 .23 14.0	961 .24 13.4	911 .25 12.9	851 .25 12.5	787 .25 12.4	641 .26 12.1	359 .26 12.1				
	2050	1133 .23 15.9	1086 .24 15.3	1041 .25 14.7	992 .25 14.2	944 .26 13.6	888 .27 13.1	826 .27 13.0	693 .28 12.8	480 .28 12.6				
	2100	1161 .25 16.6	1115 .25 16.0	1070 .26 15.5	1024 .27 14.9	976 .28 14.4	924 .29 13.9	864 .29 13.6	736 .30 13.4	558 .30 13.3				
	2150	1189 .26 17.4	1143 .27 16.8	1100 .28 16.2	1055 .29 15.7	1008 .30 15.2	960 .31 14.7	901 .31 14.3	779 .32 14.1	626 .33 13.9				
	2200	1216 .28 18.2	1172 .29 17.6	1130 .30 17.0	1086 .31 16.4	1040 .32 15.9	995 .33 15.5	939 .33 15.0	821 .34 14.7	679 .35 14.5	419 .33 14.4			
	2250	1244 .30 18.7	1201 .31 18.1	1159 .32 17.6	1116 .33 17.0	1072 .34 16.6	1028 .35 16.1	975 .35 15.6	862 .36 15.3	732 .37 15.1	532 .37 14.9			
	2300	1271 .32 19.2	1229 .33 18.7	1189 .34 18.2	1147 .35 17.6	1104 .36 17.2	1060 .37 16.7	1012 .38 16.3	903 .39 15.9	782 .40 15.7	610 .40 15.6			
	2350	1299 .34 19.8	1258 .35 19.3	1218 .36 18.7	1178 .37 18.2	1135 .38 17.8	1093 .39 17.3	1048 .40 16.9	940 .41 16.5	825 .42 16.3	680 .43 16.2			
	2400	1327 .37 20	1286 .38 19.8	1247 .39 19.3	1208 .40 18.9	1166 .41 18.4	1125 .42 18.0	1083 .43 17.6	979 .44 17.1	867 .45 16.9	733 .45 16.8	519 .44 16.7		
	2450	1354 .39 21	1314 .40 20	1276 .41 19.9	1238 .42 19.5	1198 .43 19.1	1157 .44 18.6	1116 .45 18.2	1016 .46 17.7	909 .47 17.5	786 .48 17.4	606 .48 17.3		
	2500	1382 .41 21	1343 .43 21	1305 .44 21	1268 .45 20	1229 .46 19.7	1189 .47 19.3	1149 .48 18.9	1054 .49 18.2	951 .50 18.1	839 .51 18.0	683 .51 17.9		

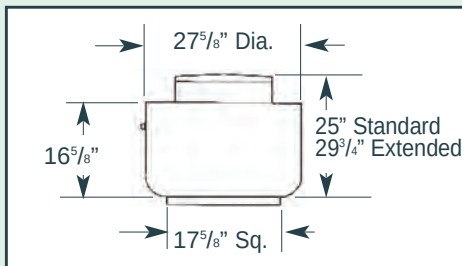
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 10

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = .082 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 3.27 x RPM

Max. Motor Frame Size = 145T

Unit Weight (less motor) = 45 lbs.

Roof Opening = 13" Sq.

Curb O. D. = 16" Sq.

Wall Opening = 14" Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	650	616 .02 2.4											
	750	711 .03 3.4	331 .03 3.2										
	850	805 .04 4.3	515 .05 4.0										
L1 (1/4)	950	900 .06 5.5	657 .07 4.8										
	1050	995 .08 6.7	782 .09 5.9	439 .09 6.0									
	1150	1090 .10 7.0	897 .12 6.3	645 .12 6.3									
	1200	1136 .11 7.5	954 .13 6.7	725 .14 6.8									
	1250	1184 .13 8.0	1009 .15 7.3	800 .16 7.2	416 .15 7.3								
	1300	1230 .14 8.5	1064 .16 7.8	875 .18 7.7	576 .17 7.8								
	1350	1279 .16 9.0	1118 .18 8.3	937 .20 8.2	684 .20 8.3								
	1400	1327 .18 9.6	1172 .20 8.9	1001 .22 8.7	775 .22 8.8								
	1450	1374 .20 10.2	1226 .22 9.5	1063 .24 9.2	858 .25 9.3	508 .23 9.4							
M1 (1/3) P1 (1/2)	1500	1421 .22 10.8	1279 .24 10.1	1124 .26 9.8	933 .27 9.8	662 .26 9.9							
	1550	1469 .24 11.5	1331 .27 10.8	1182 .29 10.3	1007 .30 10.4	773 .30 10.5							
	1600	1516 .27 12.2	1383 .29 11.5	1239 .31 11.0	1080 .33 11.0	865 .33 11.1	480 .30 11.1						
	1650	1563 .29 12.9	1435 .32 12.2	1296 .34 11.5	1144 .36 11.6	954 .36 11.7	667 .35 11.7						
	1700	1611 .32 13.6	1486 .35 12.9	1352 .37 12.3	1207 .39 12.2	1030 .40 12.2	801 .39 12.3						
	1750	1658 .35 14.3	1536 .38 13.6	1407 .40 13.0	1270 .42 12.9	1105 .43 12.9	896 .43 12.9	514 .40 13.0					
R1 (3/4)	1800	1706 .38 15.1	1587 .41 14.3	1462 .43 13.8	1332 .45 13.6	1178 .47 13.5	987 .47 13.5	710 .45 13.6					
	1850	1753 .42 15.8	1637 .44 15.1	1517 .47 14.5	1393 .49 14.3	1250 .51 14.2	1075 .51 14.2	845 .50 14.2					
	1900	1800 .45 16.6	1688 .48 15.9	1571 .50 15.3	1450 .53 14.9	1314 .55 14.9	1151 .55 14.8	950 .55 14.8	596 .51 14.9				
S1 (1)	1950	1848 .49 17.4	1738 .52 16.7	1625 .54 16.1	1507 .57 15.7	1378 .59 15.6	1225 .60 15.5	1042 .60 15.5	783 .58 15.5				
	2000	1895 .53 18.0	1788 .56 17.4	1679 .58 16.8	1564 .61 16.3	1440 .63 16.2	1299 .64 16.1	1132 .65 16.1	918 .63 16.1	446 .55 16.2			
	2050	1942 .57 18.7	1838 .60 18.1	1733 .63 17.5	1620 .65 17.0	1502 .67 16.9	1374 .69 16.8	1213 .70 16.7	1022 .69 16.7	716 .66 16.7			
T1 (1-1/2)	2100	1990 .61 19.4	1887 .64 18.8	1786 .67 18.2	1676 .70 17.7	1564 .72 17.5	1438 .74 17.4	1288 .75 17.3	1114 .74 17.3	878 .73 17.3			
	2150	2037 .65 20	1937 .69 19.5	1839 .72 18.9	1731 .74 18.4	1625 .77 18.2	1502 .79 18.1	1363 .80 18.0	1204 .80 17.9	1013 .78 17.9	658 .74 18.0		
	2200	2085 .70 21	1987 .73 20	1891 .77 19.6	1786 .79 19.1	1681 .82 18.9	1565 .84 18.8	1436 .86 18.6	1289 .86 18.5	1108 .86 18.5	857 .83 18.5		
	2250	2132 .75 21	2036 .78 21	1943 .82 20	1841 .84 19.9	1738 .87 19.7	1628 .89 19.5	1510 .92 19.3	1364 .92 19.2	1200 .92 19.1	993 .89 19.1	601 .84 19.2	
	2350	2227 .85 23	2135 .89 22	2046 .92 22	1950 .95 21	1851 .98 21	1751 1.01 21	1639 1.03 21	1513 1.05 21	1375 1.05 20	1206 1.05 20	988 1.02 20	563 .93 21
	2450	2321 .97 24	2233 1.00 24	2148 1.04 23	2057 2.07 23	1963 1.10 23	1868 1.13 23	1765 1.16 22	1657 1.18 22	1525 1.19 22	1387 1.19 22	1221 1.18 22	996 1.15 22

Roof Mount Only

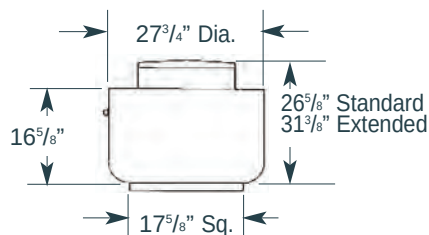
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 12

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = .094 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 3.27 x RPM
 Max. Motor Frame Size = 145T
 Unit Weight (less motor) = 45 lbs.
 Roof Opening = 13" Sq.
 Curb O. D. = 16" Sq.
 Wall Opening = 14" Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	550	660 .01 2.0											
	650	780 .02 3.1											
K3 (1/6)	750	900 .03 4.3	468 .04 3.6										
	850	1020 .05 5.5	690 .06 4.7										
L1 (1/4)	950	1140 .07 6.6	865 .08 5.8										
	1050	1260 .09 7.9	1023 .11 7.1	631 .10 6.9									
M1 (1/3)	1100	1321 .11 8.6	1094 .12 7.7	771 .12 7.5									
	1200	1442 .14 10.0	1232 .16 9.2	862 .16 8.8									
P1 (1/2)	1250	1500 .15 10.8	1301 .17 9.9	1067 .18 9.5	633 .16 9.5								
	1300	1562 .18 11.6	1368 .20 10.8	1152 .21 10.3	813 .20 10.3								
R1 (3/4)	1350	1620 .20 12.4	1435 .22 11.6	1234 .23 11.0	952 .23 11.1								
	1450	1740 .25 14.1	1567 .27 13.5	1395 .28 12.9	1153 .29 12.9	758 .26 13.0							
S1 (1)	1500	1800 .27 15.1	1633 .29 14.4	1469 .31 13.9	1248 .32 13.7	935 .31 13.9							
	1550	1860 .30 16.0	1698 .32 15.5	1539 .34 14.9	1340 .35 14.6	1075 .35 14.8							
T1 (1-1/2)	1600	1920 .33 17.0	1763 .36 16.4	1609 .37 15.8	1423 .38 15.4	1185 .39 15.6	743 .33 15.8						
	1650	1980 .37 17.6	1828 .39 17.1	1678 .41 16.4	1506 .42 16.1	1284 .42 16.1	963 .40 16.2						
Roof Mount Only	1700	2040 .40 18.3	1892 .42 17.8	1747 .44 17.0	1587 .46 16.7	1380 .46 16.6	1110 .45 16.8						
	1750	2100 .44 19.1	1956 .46 18.5	1815 .48 17.9	1667 .50 17.5	1476 .50 17.3	1249 .48 17.5	792 .43 17.6					
	1800	2160 .47 19.9	2020 .50 19.3	1883 .52 18.9	1746 .54 18.5	1564 .55 18.2	1347 .55 18.2	1025 .51 18.2					
	1900	2280 .56 22	2148 .58 21	2017 .61 21	1887 .63 20	1730 .64 20	1542 .64 19.9	1321 .64 19.9	929 .57 19.8				
	1950	2340 .60 23	2211 .63 22	2084 .65 22	1957 .67 21	1811 .69 21	1637 .70 21	1432 .70 21	1131 .66 21				
	2000	2400 .65 24	2274 .68 23	2150 .70 23	2027 .72 22	1892 .74 22	1728 .75 22	1531 .75 22	1281 .73 22	745 .59 22			
	2050	2460 .70 25	2337 .73 24	2216 .75 24	2095 .78 23	1971 .80 23	1812 .80 23	1629 .81 23	1421 .81 23	1069 .73 23			
	2100	2520 .75 26	2400 .78 25	2281 .81 25	2164 .83 24	2047 .85 24	1894 .86 24	1725 .87 24	1534 .87 24	1262 .83 24	559 .60 24		
	2200	2640 .87 28	2526 .90 27	2412 .93 27	2300 .95 26	2188 .97 26	2057 .99 26	1908 1.00 26	1732 1.00 26	1542 1.00 26	1238 .93 26		
	2250	2700 .93 29	2588 .96 28	2477 .99 28	2367 1.01 27	2258 1.04 27	2137 1.05 27	1992 1.06 27	1828 1.07 27	1650 1.07 27	1403 1.03 27	946 .89 27	
	2300	2760 .99 30	2651 1.02 29	2542 1.05 29	2434 1.08 29	2327 1.10 28	2217 1.12 28	2074 1.13 28	1924 1.14 28	1750 1.14 28	1543 1.13 28	1228 1.05 28	
	2350	2820 1.06 31	2713 1.09 31	2606 1.12 30	2501 1.15 30	2396 1.17 29	2291 1.19 29	2156 1.21 29	2017 1.22 29	1848 1.22 29	1677 1.22 29	1417 1.17 29	910 .98 29
	2400	2880 1.12 32	2775 1.16 32	2671 1.19 31	2567 1.22 31	2465 1.24 31	2362 1.27 30	2237 1.28 30	2101 1.29 30	1944 1.30 30	1778 1.30 30	1558 1.27 30	1238 1.17 30
	2450	2940 1.20 34	2837 1.23 33	2735 1.26 32	2634 1.29 32	2533 1.32 32	2432 1.34 32	2318 1.36 31	2184 1.37 31	2040 1.38 31	1876 1.38 31	1697 1.37 31	1440 1.31 31

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 15

BELT DRIVE

PERFORMANCE DATA

DESIGN DATA

Max BHP = .285 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 4.06 x RPM

Max. Motor Frame Size = 182T

Unit Weight (less motor) = 65 lbs.

Roof Opening = 16" Sq.

Curb O. D. = 19" Sq.

Wall Opening = 17" Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	550	1214 .04 4.1	441 .04 4.6										
	600	1324 .06 5.0	796 .07 5.3										
L1 (1/4)	650	1434 .07 5.9	973 .08 6.1										
	700	1545 .09 6.8	1132 .10 6.9										
M1 (1/3)	750	1655 .11 7.7	1279 .13 7.8										
	800	1765 .14 8.7	1422 .15 8.7	854 .15 9.1									
	850	1876 .16 9.8	1557 .18 9.7	1131 .19 10.0									
	900	1986 .19 10.8	1689 .21 10.7	1309 .22 10.9									
P1 (1/2)	950	2096 .23 11.9	1819 .25 11.7	1480 .26 11.9	713 .22 12.1								
	1000	2207 .27 13.1	1948 .29 12.8	1630 .30 12.9	1170 .30 13.3								
	1050	2317 .31 14.2	2074 .33 14.0	1778 .35 13.9	1418 .35 14.3								
	1100	2427 .35 15.5	2195 .38 15.2	1922 .40 15.1	1595 .41 15.3	882 .35 15.6							
R1 (3/4)	1150	2538 4.0 16.8	2316 .43 16.6	2062 .45 16.4	1770 .47 16.5	1324 .45 16.8							
	1200	2648 .46 18.1	2436 .49 17.9	2196 .51 17.7	1923 .53 17.8	1593 .53 18.0							
S1 (1)	1250	2758 .52 19.4	2555 .55 19.2	2329 .57 19.0	2072 .59 19.1	1771 .60 19.3	1215 .54 19.5						
	1300	2868 .58 21	2673 .61 21	2460 .64 20	2218 .66 20	1946 .67 20	1560 .66 21						
T1 (1-1/2)	1400	3089 .73 24	2908 .76 23	2718 .79 23	2503 .82 23	2263 .83 23	1989 .84 23	1575 .81 23					
	1450	3199 .81 25	3024 .84 25	2846 .87 25	2637 .90 25	2412 .92 25	2164 .93 25	1851 .93 25	1067 .76 25				
	1500	3310 .90 27	3141 .93 26	2970 .96 26	2771 .99 26	2558 1.01 26	2333 1.03 26	2058 1.03 26	1627 .97 26				
	1550	3420 .99 28	3257 1.02 28	3091 1.06 28	2903 1.09 28	2702 1.11 28	2485 1.13 28	2236 1.14 28	1911 1.13 28	1138 .93 28			
V1 (2)	1600	3530 1.09 30	3372 1.12 30	3212 1.16 30	3033 1.19 29	2845 1.22 29	2634 1.24 29	2411 1.25 29	2152 1.26 29	1707 1.18 29			
	1650	3641 1.19 32	3487 1.23 31	3332 1.27 31	3163 1.30 31	2980 1.33 31	2781 1.35 31	2577 1.37 31	2330 1.38 31	2004 1.35 31	1322 1.16 31		
	1700	3751 1.31 33	3602 1.34 33	3452 1.38 33	3292 1.42 33	3114 1.45 33	2926 1.47 32	2728 1.49 32	2506 1.50 32	2263 1.51 32	1837 1.42 32		
	1725	3806 1.36 34	3660 1.40 34	3511 1.44 34	3356 1.48 33	3181 1.51 33	2998 1.54 33	2803 1.56 33	2593 1.57 33	2352 1.57 33	1986 1.52 33	1118 1.22 33	
	1750	3861 1.43 35	3717 1.46 34	3571 1.50 34	3419 1.54 34	3247 1.57 34	3070 1.60 34	2877 1.62 34	2681 1.64 34	2441 1.64 34	2125 1.61 34	1557 1.45 34	
	1800	3972 1.55 36	3831 1.59 36	3689 1.63 36	3546 1.67 36	3379 1.70 35	3211 1.73 35	3024 1.76 35	2837 1.78 35	2618 1.79 35	2389 1.79 35	1993 1.70 35	985 1.31 36
Roof Mount Only	1850	4082 1.68 38	3946 1.72 37	3807 1.77 37	3669 1.81 37	3509 1.84 37	3346 1.87 37	3170 1.90 37	2988 1.92 37	2793 1.94 37	2567 1.94 37	2270 1.91 37	1766 1.74 37
	1900	4192 1.82 39	4060 1.87 39	3925 1.91 39	3790 1.95 39	3639 1.99 38	3480 2.02 38	3314 2.05 38	3137 2.07 38	2959 2.10 38	2745 2.10 38	2528 2.10 39	2157 2.02 39
	1950	4303 1.97 41	4174 2.01 41	4042 2.06 41	3911 2.10 40	3767 2.14 40	3613 2.17 40	3458 2.21 40	3284 2.23 40	3111 2.26 40	2920 2.27 40	2706 2.27 40	2434 2.25 40
	1975	4358 2.05 42	4230 2.09 42	4101 2.14 42	3971 2.18 41	3832 2.22 41	3679 2.25 41	3526 2.29 41	3356 2.31 41	3186 2.34 41	3006 2.36 41	2795 2.36 41	2570 2.36 41

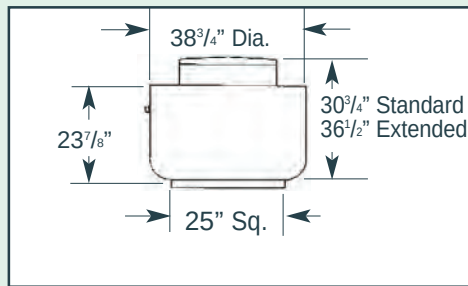
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

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VRBK 18

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = .659 x $\left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 4.94 x RPM

Max. Motor Frame Size = 184T

Unit Weight (less motor) = 85 lbs.

Roof Opening = 20-1/2" Sq.

Curb O. D. = 23-1/2" Sq.

Wall Opening = 22" Sq.

RPM Range - Motor HP			STATIC PRESSURE, INCHES W. G.											
K1 (1/6)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	
L1 (1/4)	550	2045 .10 5.5	1364 .11 3.7											
	M1 (1/3)	600	2231 .13 6.4	1642 .14 4.7										
		650	2417 .17 7.3	1891 .18 5.8	820 .14 4.8									
	P1 (1/2)	700	2603 .21 8.3	2126 .23 6.8	1383 .21 5.5									
R1 (3/4)		750	2789 .26 9.3	2349 .28 7.9	1754 .27 6.6									
		800	2974 .32 10.4	2569 .33 9.0	2067 .33 7.7	1089 .27 7.0								
		850	3160 .38 11.6	2785 .40 10.3	2330 .40 9.0	1635 .38 7.8								
	S1 (1)	900	3346 .45 12.4	2997 .47 11.1	2579 .48 10.1	2025 .47 9.2								
		950	3532 .53 13.6	3208 .56 12.4	2823 .56 11.3	2347 .56 10.3	1581 .49 10.2							
	T1 (1-1/2)	1000	3718 .62 14.8	3413 .65 13.7	3051 .66 12.6	2644 .66 11.6	2035 .62 11.1							
		1050	3904 .72 16.1	3613 .75 15.0	3275 .76 14.0	2899 .76 13.0	2412 .74 12.1	1640 .64 12.1						
		1100	4090 .83 17.5	3812 .86 16.4	3496 .87 15.5	3148 .88 14.5	2728 .86 13.5	2132 .82 13.3						
		1150	4276 .95 19.0	4010 .98 18.0	3714 .99 17.0	3392 1.00 16.0	3029 1.00 15.0	2523 .97 14.5	1795 .84 14.5					
		1175	4369 1.01 19.7	4108 1.04 18.7	3822 1.06 17.8	3513 1.07 16.8	3158 1.06 15.8	2703 1.04 15.0	2055 .95 15.0					
		1200	4462 1.08 20	4207 1.11 19.5	3929 1.13 18.6	3625 1.14 17.6	3285 1.13 16.6	2863 1.11 15.7	2296 1.06 15.6	1030 .77 15.6				
	V1 (2)	1225	4555 1.15 21	4305 1.18 20	4036 1.20 19.3	3738 1.21 18.4	3410 1.21 17.4	3020 1.19 16.5	2494 1.15 16.3	1727 .99 16.3				
		1250	4648 1.22 22	4402 1.25 21	4142 1.27 20	3851 1.28 19.2	3535 1.28 18.3	3176 1.27 17.3	2689 1.24 16.9	2021 1.10 16.9				
	1275	4740 1.29 23	4500 1.32 22	4248 1.35 21	3962 1.36 20	3659 1.36 19.1	3330 1.35 18.2	2883 1.33 17.6	2280 1.22 17.6					
	1300	4833 1.37 24	4598 1.40 23	4354 1.43 22	4073 1.44 21	3781 1.45 19.9	3460 1.44 19.0	3043 1.41 18.2	2510 1.35 18.2	1639 1.12 18.2				
	1325	4926 1.45 24	4695 1.48 24	4459 1.51 23	4184 1.52 22	3903 1.53 21	3588 1.53 19.8	3202 1.50 18.9	2708 1.45 18.8	2042 1.31 18.8				
	1350	5019 1.54 25	4792 1.57 24	4564 1.60 23	4294 1.61 23	4024 1.62 22	3714 1.62 21	3359 1.60 19.8	2903 1.56 19.5	2303 1.42 19.5				
W1 (3)	1375	5112 1.62 26	4889 1.66 25	4668 1.69 24	4403 1.70 23	4138 1.71 23	3840 1.71 22	3514 1.69 21	3096 1.67 20	2560 1.56 20	1655 1.29 20			
	1400	5205 1.71 27	4986 1.75 26	4769 1.78 25	4511 1.79 24	4251 1.81 23	3965 1.80 22	3666 1.80 22	3261 1.77 21	2765 1.70 21	2109 1.53 21			
	1425	5298 1.81 28	5083 1.84 27	4870 1.87 26	4620 1.89 25	4364 1.90 24	4088 1.90 23	3795 1.90 22	3420 1.86 22	2962 1.81 22	2371 1.65 22			
	1450	5391 1.90 29	5179 1.94 28	4970 1.97 27	4727 1.99 26	4476 2.00 25	4211 2.01 24	3923 2.00 23	3577 1.97 22	3156 1.93 22	2629 1.81 22	1758 1.52 22		
	1475	5484 2.00 30	5276 2.04 29	5070 2.07 28	4835 2.09 27	4588 2.11 26	4333 2.11 25	4050 2.11 24	3733 2.09 23	3346 2.06 23	2854 1.97 23	2215 1.79 23		
	1500	5577 2.11 31	5372 2.14 30	5170 2.18 29	4942 2.20 28	4699 2.21 27	4454 2.22 26	4175 2.22 25	3887 2.20 24	3507 2.16 24	3052 2.10 24	2478 1.92 24		
	1525	5670 2.21 32	5468 2.25 31	5269 2.29 30	5048 2.31 29	4809 2.32 28	4570 2.34 27	4300 2.33 26	4026 2.32 25	3666 2.29 24	3247 2.24 24	2736 2.09 24	1936 1.81 24	
	1550	5763 2.32 33	5564 2.36 32	5369 2.40 31	5154 2.42 30	4919 2.44 29	4684 2.45 28	4424 2.45 27	4155 2.44 26	3823 2.41 25	3440 2.38 25	2970 2.28 25	2355 2.09 25	
Roof Mount Only	1575	5856 2.44 33	5660 2.48 32	5468 2.51 31	5260 2.54 30	5028 2.56 30	4797 2.57 29	4547 2.57 28	4282 2.56 27	3979 2.54 26	3617 2.51 25	3169 2.43 25	2617 2.23 26	

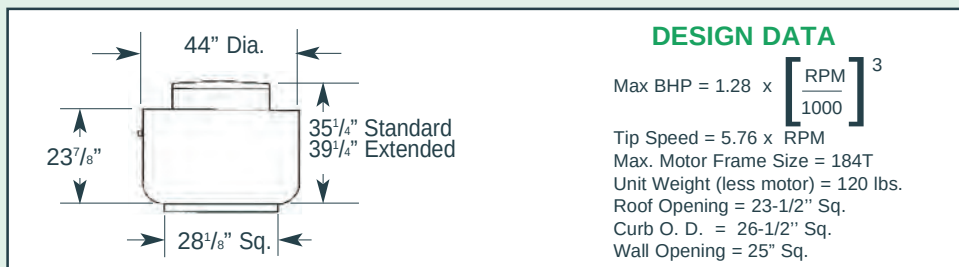
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 21

BELT DRIVE

PERFORMANCE DATA



RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
L1 (1/4)	RPM	.000 CFM BHP SONES	.250 CFM BHP SONES	.500 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES	1.500 CFM BHP SONES	1.750 CFM BHP SONES	2.000 CFM BHP SONES	2.250 CFM BHP SONES	2.500 CFM BHP SONES	2.750 CFM BHP SONES
M1 (1/3)	400	2168 .08 4.2	728 .06 3.3										
	450	2439 .11 5.3	1443 .11 4.2										
P1 (1/2)	500	2709 .15 6.4	1883 .15 5.3										
	550	2980 .20 7.6	2261 .21 6.4	329 .10 6.1									
	600	3251 .26 8.8	2614 .27 7.4	1608 .25 7.1									
R1 (3/4) S1 (1)	650	3522 .34 10.0	2941 .35 8.6	2163 .34 8.2									
	700	3793 .42 11.2	3261 .43 9.9	2602 .42 9.4	1401 .35 9.3								
	750	4064 .52 12.6	3575 .53 11.3	2992 .53 10.7	2162 .50 10.5								
T1 (-1/12)	800	4335 .63 14.0	3884 .65 12.8	3360 .65 12.0	2685 .63 11.8	1456 .50 11.7							
	850	4606 .75 15.6	4189 .77 14.4	3707 .78 13.4	3124 .75 13.2	2297 .71 13.1							
	875	4742 .82 16.4	4339 .84 15.2	3872 .85 14.1	3336 .84 13.9	2603 .80 13.8	812 .48 13.7						
	900	4877 .89 17.2	4485 .92 16.0	4035 .93 14.9	3525 .92 14.7	2886 .89 14.5	1737 .73 14.4						
	925	5012 .97 18.1	4631 .99 16.9	4197 1.00 15.7	3713 1.00 15.4	3111 .97 15.2	2162 .87 15.1						
	950	5148 1.05 18.9	4777 1.08 17.7	4358 1.09 16.6	3897 1.09 16.1	3333 1.06 15.9	2563 .99 15.8						
V1 (2)	975	5283 1.13 19.8	4921 1.16 18.6	4517 1.17 17.5	4080 1.18 16.9	3551 1.13 16.7	2871 1.11 16.6	1690 .87 16.6					
	1000	5419 1.22 21	5066 1.25 19.5	4676 1.27 18.4	4261 1.27 17.7	3766 1.24 17.6	3164 1.21 17.4	2152 1.15 17.4					
	1050	5690 1.41 22	5353 1.44 21	4989 1.46 20	4599 1.47 19.4	4152 1.46 19.2	3619 1.43 19.1	2930 1.36 19.0	1764 1.07 19.0				
	1075	5825 1.52 23	5497 1.55 22	5145 1.57 21	4764 1.58 20	4338 1.57 20	3839 1.51 20	3227 1.49 19.9	2240 1.42 19.8				
	1100	5961 1.62 24	5639 1.66 23	5300 1.68 22	4927 1.69 21	4523 1.69 21	4056 1.63 21	3513 1.62 21	2648 1.48 21	657 .78 21			
W1 (3)	1125	6096 1.74 25	5782 1.77 24	5454 1.80 23	5089 1.81 22	4705 1.81 22	4270 1.76 22	3740 1.74 22	3047 1.65 22	1935 1.33 22			
	1150	6232 1.86 26	5924 1.89 25	5607 1.92 24	5251 1.93 23	4886 1.93 23	4461 1.92 23	3963 1.88 23	3354 1.82 22	2408 1.73 22			
	1175	6367 1.98 27	6066 2.02 26	5759 2.05 25	5411 2.06 24	5062 2.06 23	4650 2.05 23	4183 1.97 23	3648 1.95 23	2815 1.80 23	1146 1.18 23		
	1200	6503 2.11 28	6208 2.15 27	5911 2.18 26	5570 2.19 25	5228 2.20 24	4836 2.19 24	4400 2.12 24	3903 2.11 24	3215 1.99 24	2184 1.68 24		
	1225	6638 2.24 29	6349 2.28 28	6063 2.32 27	5728 2.33 26	5394 2.34 25	5021 2.33 25	4615 2.27 25	4128 2.26 25	3533 2.19 25	2640 2.11 25		
	1250	6774 2.38 30	6490 2.42 29	6210 2.46 27	5886 2.47 27	5558 2.48 26	5204 2.48 26	4813 2.46 26	4350 2.41 26	3828 2.36 26	3046 2.18 26	2009 1.82 26	
	1275	6909 2.53 30	6631 2.57 29	6356 2.61 28	6042 2.62 28	5721 2.63 27	5385 2.63 27	5002 2.62 27	4569 2.52 27	4101 2.52 27	3445 2.39 26	2499 2.10 26	
	1300	7045 2.68 31	6772 2.72 30	6502 2.76 29	6198 2.78 28	5883 2.79 28	5566 2.80 27	5190 2.78 27	4786 2.70 27	4327 2.69 27	3756 2.62 27	2926 2.53 27	1320 1.63 27
	1325	7180 2.84 32	6912 2.88 31	6648 2.92 30	6353 2.94 29	6044 2.95 29	5735 2.96 28	5375 2.95 28	5001 2.88 28	4550 2.87 28	4051 2.81 28	3330 2.62 28	2383 2.24 28
	1350	7316 3.00 33	7053 3.04 32	6793 3.08 31	6508 3.11 30	6204 3.12 30	5901 3.13 29	5560 3.12 29	5198 3.10 29	4771 3.05 29	4328 2.99 29	3716 2.89 29	2848 2.81 29
	1375	7451 3.17 34	7193 3.22 33	6938 3.26 32	6662 3.28 31	6364 3.29 31	6066 3.30 30	5742 3.30 30	5387 3.28 30	4989 3.18 30	4555 3.18 30	4015 3.10 30	3256 2.88 30

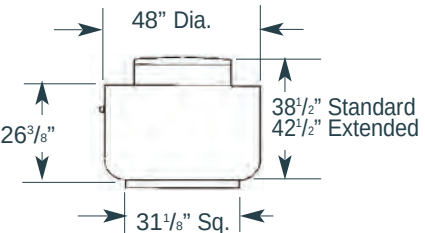
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 24

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = $3.26 \times \left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = $6.68 \times \text{RPM}$

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 150 lbs.

Roof Opening = $26\text{--}1/2''$ Sq.

Curb O. D. = $29\text{--}1/2''$ Sq.

Wall Opening = $28''$ Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
M1 (1/3)	RPM	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
P1 (1/2)	400	3618 .21 6.5	2241 .19 5.0										
	425	3845 .25 7.3	2595 .24 5.7										
	450	4070 .29 8.2	2927 .29 6.5										
	475	4298 .34 8.9	3247 .34 7.1										
	500	4523 .40 9.7	3559 .40 7.8	1907 .33 7.3									
R1 (3/4) S1 (1)	525	4750 .47 10.4	3848 .47 8.6	2484 .42 7.9									
	550	4975 .54 11.2	4125 .54 9.4	2942 .50 8.7									
	575	5201 .61 12.0	4398 .62 10.3	3303 .58 9.5									
	600	5427 .70 12.9	4667 .70 11.2	3655 .67 10.3	1941 .53 9.9								
	625	5653 .79 13.8	4934 .80 12.2	3991 .77 11.2	2664 .67 10.7								
T1 (1-1/2)	650	5879 .88 14.6	5197 .90 13.2	4315 .87 12.1	3173 .78 11.5								
	675	6105 .99 15.5	5458 1.01 14.1	4633 .98 13.0	3623 .92 12.4	1346 .59 12.2							
	700	6332 1.10 16.5	5711 1.12 15.1	4945 1.10 13.9	3985 1.04 13.4	2504 .88 13.0							
	725	6558 1.23 17.7	5959 1.25 16.1	5247 1.24 14.9	4339 1.18 14.4	3162 1.06 13.9							
	750	6784 1.36 18.8	6205 1.38 17.2	5526 1.38 16.0	4686 1.32 15.4	3654 1.20 14.9							
V1 (2)	775	7010 1.50 19.9	6450 1.52 18.3	5803 1.52 17.1	5013 1.47 16.4	4111 1.37 15.9	2520 1.14 15.7						
	800	7236 1.65 21	6693 1.67 19.5	6077 1.68 18.2	5335 1.63 17.5	4482 1.55 17.1	3261 1.39 16.8						
	825	7462 1.81 22	6936 1.83 21	6348 1.83 19.4	5653 1.80 18.6	4839 1.73 18.3	3833 1.61 17.9	1535 1.04 17.9					
	850	7688 1.98 23	7178 2.00 22	6616 2.00 21	5966 1.97 19.7	5189 1.91 19.4	4296 1.77 19.0	2799 1.52 18.9					
	875	7914 2.16 25	7418 2.18 23	6883 2.19 22	6275 2.16 21	5528 2.10 20	4730 2.00 20	3537 1.81 20					
W1 (3)	900	8141 2.35 26	7658 2.37 24	7148 2.38 23	6561 2.37 22	5854 2.31 22	5092 2.22 21	4129 2.08 21	2244 1.56 21				
	950	8595 2.76 28	8136 2.79 27	7671 2.81 25	7116 2.80 24	6494 2.74 24	5797 2.67 23	5050 2.52 23	3948 2.34 23				
	1000	9045 3.22 30	8611 3.25 29	8177 3.28 28	7662 3.28 27	7118 3.22 26	6464 3.16 25	5779 3.06 25	4978 2.87 25	3813 2.62 25			
	1050	9497 3.73 33	9084 3.76 31	8671 3.79 30	8199 3.78 29	7697 3.77 28	7107 3.69 28	6480 3.61 27	5810 3.49 27	4969 3.34 27	3756 2.97 27		
	1075	9723 4.00 34	9320 4.03 33	8916 4.06 31	8465 4.06 30	7975 4.06 29	7423 3.98 29	6814 3.91 28	6169 3.79 28	5431 3.58 28	4419 3.38 28	2636 2.64 28	
X1 (5)	1100	9550 4.28 35	9555 4.32 34	9160 4.35 33	8730 4.35 32	8250 4.35 31	7735 4.28 30	7141 4.21 30	6523 4.11 29	5884 3.98 29	5014 3.80 29	3711 3.33 29	
	1125	10176 4.58 36	9790 4.62 35	9404 4.65 34	8993 4.66 33	8524 4.66 32	8044 4.59 31	7463 4.52 31	6873 4.43 30	6247 4.30 30	5480 4.05 30	4446 3.80 30	2602 2.94 30
	1150	10402 4.90 38	10024 4.93 37	9647 4.96 35	9255 4.98 34	8796 4.99 33	8337 4.94 32	7782 4.85 32	7217 4.77 32	6606 4.65 31	5940 4.42 31	5093 4.27 31	3756 3.75 31
	1175	10628 5.22 39	10258 5.26 38	9889 5.29 37	9515 5.32 36	9066 5.29 35	8617 5.28 34	8098 5.19 33	7542 5.12 33	6960 5.00 33	6361 4.86 32	5575 4.68 32	4534 4.27 32
	1200	10854 5.56 40	10492 5.60 39	10131 5.63 38	9769 5.67 37	9335 5.64 36	8895 5.64 35	8411 5.55 35	7866 5.47 34	7310 5.37 34	6724 5.23 34	6038 4.97 33	5184 4.81 33

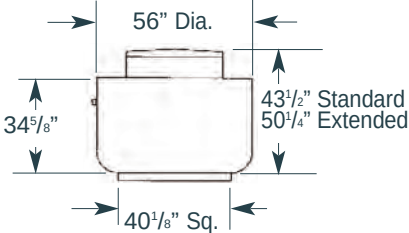
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 30

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = $7.40 \times \left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = $8.25 \times \text{RPM}$

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 220 lbs.

Roof Opening = $35\text{--}1\frac{1}{2}\text{'}$ Sq.

Curb O. D. = $38\text{--}1\frac{1}{2}\text{'}$ Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
P1 (1/2)	RPM	.000 CFM BHP SONES	.250 CFM BHP SONES	.500 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES	1.500 CFM BHP SONES	1.750 CFM BHP SONES	2.000 CFM BHP SONES	2.250 CFM BHP SONES	2.500 CFM BHP SONES	2.750 CFM BHP SONES
P2 (1/2)	275	4591 .14 4.7											
	300	5009 .18 5.5	1657 .14 3.4										
R1 (3/4)	325	5426 .23 6.4	2935 .24 4.0										
	350	5843 .28 7.3	3723 .31 4.8										
S1 (1)	375	6261 .35 8.3	4390 .39 5.8										
	400	6678 .43 9.3	4972 .47 6.9										
T1 (1-1/2)	425	7095 .51 10.2	5537 .57 7.9	2391 .41 6.6									
	450	7513 .61 11.2	6085 .68 9.0	3817 .63 7.3									
V1 (2)	475	7930 .71 12.2	6590 .79 10.1	4675 .76 7.9									
	500	8347 .83 13.3	7086 .92 11.2	5403 .90 8.9									
W1 (3)	525	8765 .96 14.4	7576 1.06 12.4	6078 1.06 10.1	3218 .82 9.4								
	550	9182 1.11 15.5	8059 1.21 13.6	6669 1.22 11.5	4635 1.14 10.3								
X1 (5)	575	9600 1.26 16.7	8538 1.38 14.8	7244 1.40 12.9	5497 1.32 11.3								
	600	10017 1.43 17.9	9012 1.56 16.1	7807 1.60 14.3	6276 1.55 12.6	3313 1.15 12.4							
Y1 (7-1/2)	625	10434 1.62 19.1	9476 1.75 17.4	8361 1.79 15.8	6961 1.77 14.0	4816 1.51 13.5							
	650	10852 1.82 20	9930 1.96 18.7	8882 2.03 17.3	7615 2.01 15.6	5871 1.93 14.6							
	675	11269 2.04 22	10382 2.19 20	9385 2.27 18.7	8200 2.26 17.1	6720 2.18 15.7	3975 1.70 15.7						
	700	11687 2.28 23	10831 2.43 21	9881 2.52 20	8776 2.53 18.6	7445 2.47 17.2	5453 2.13 16.9						
	725	12104 2.53 25	11277 2.68 23	10373 2.79 22	9341 2.82 20	8128 2.77 18.6	6504 2.68 18.0	3055 1.74 18.0					
	750	12521 2.80 26	11722 2.96 24	10860 3.07 23	9899 3.09 22	8780 3.09 20	7356 2.97 19.1	5033 2.50 19.1					
	775	12939 3.09 27	12165 3.26 26	11344 3.38 24	10449 3.42 23	9366 3.42 22	8113 3.35 20	6425 2.99 20					
	800	13356 3.40 29	12606 3.57 27	11823 3.71 26	10957 3.79 25	9944 3.77 23	8800 3.71 22	7325 3.62 21	4789 2.86 21				
	825	13773 3.73 30	13046 3.90 28	12299 4.06 27	11460 4.14 26	10513 4.15 25	9475 4.11 23	8173 3.97 22	6271 3.43 22				
	850	14191 4.08 32	13485 4.26 30	12772 4.43 28	11957 4.51 27	11074 4.55 26	10087 4.51 25	8916 4.41 24	7425 4.27 23	4781 3.31 23			
	875	14608 4.45 33	13922 4.63 31	13240 4.82 30	12451 4.91 29	11629 4.91 27	10670 4.93 26	9603 4.86 25	8284 4.78 25	6316 3.97 25			
	900	15026 4.84 34	14359 5.03 33	13695 5.22 31	12940 5.32 30	12717 5.41 29	11245 5.38 28	10279 5.33 27	9125 5.21 26	7635 5.01 26	4970 3.88 26		
	925	15443 5.26 36	14794 5.45 34	14148 5.65 33	13426 5.76 31	12677 5.85 30	11813 5.85 29	10905 5.81 28	9821 5.70 27	8500 5.60 27	6527 4.80 27		
	950	15860 5.70 38	15228 5.90 36	14599 6.10 34	13909 6.23 33	13180 6.32 32	12374 6.35 31	11490 6.30 30	10506 6.22 29	9349 6.05 28	7914 5.53 28	5324 4.61 28	
	975	16278 6.16 39	15662 6.36 38	15049 6.57 36	14389 6.72 35	13678 6.81 33	12929 6.80 32	12068 6.83 31	11180 6.78 30	10115 6.65 29	8806 6.52 29	6878 5.63 29	
	1000	16695 6.64 41	16094 6.85 39	15497 7.06 38	14865 7.23 36	14173 7.33 35	13479 7.34 34	12639 7.38 33	11800 7.34 32	10806 7.23 31	9659 7.00 30	8265 6.42 30	5819 5.49 30

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 36

BELT DRIVE

PERFORMANCE DATA

DESIGN DATA

Max BHP = $19.71 \times \left[\frac{\text{RPM}}{1000} \right]^3$

Tip Speed = 9.62 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 350 lbs.

Roof Opening = 41-1/2" Sq.

Curb O. D. = 44-1/2" Sq.

RPM Range - Motor HP			STATIC PRESSURE, INCHES W. G.											
R1 (3/4)	RPM	.000	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	2.250	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
S1 (1)	250	6697 .30 9.2	2317 .22 3.7											
	270	7233 .37 10.3	4086 .35 4.8											
	290	7769 .46 11.4	5275 .47 6.2											
	310	8304 .57 12.5	6161 .58 7.5	3363 .46 5.7										
T1 (1-1/2)	330	8840 .68 13.7	6979 .71 8.9	4960 .64 6.9										
	350	9376 .82 14.9	7690 .85 10.4	6213 .82 8.3	2711 .53 7.0									
V1 (2)	370	9912 .96 16.1	8370 1.00 11.7	7140 .99 9.7	4963 .84 8.2									
	390	10447 1.13 17.4	9039 1.17 13.2	7972 1.17 11.3	6296 1.08 9.5	2764 .69 8.4								
	410	10983 1.31 18.7	9697 1.36 14.6	8772 1.36 13.0	7454 1.32 11.0	5254 1.12 9.6								
	430	11519 1.51 20	10346 1.56 16.1	9464 .157 14.8	8361 1.55 12.7	6657 1.43 10.1	3593 1.04 10.1							
W1 (3)	450	12055 1.74 21	10988 1.79 17.7	10145 1.80 16.5	9191 1.79 14.6	7907 1.73 12.9	5826 1.48 11.6							
	470	12591 1.98 23	11596 2.04 19.2	10816 2.05 18.1	10003 2.05 16.5	8871 2.01 14.7	7226 1.86 13.4							
	490	13126 2.24 24	12173 2.30 21	11478 2.32 19.6	10704 2.32 18.5	9734 2.30 16.6	8480 2.21 15.2	2817 1.18 13.2						
	510	13662 2.53 25	12746 2.59 22	12132 2.61 21	11389 2.62 20	10558 2.61 18.5	9494 2.56 17.0	5949 2.07 14.6						
X1 (5)	530	14198 2.84 27	13316 2.90 24	12780 2.93 23	12064 2.93 22	11349 2.94 21	10381 2.91 18.9	7528 2.59 16.5						
	550	14734 3.17 28	13884 3.24 25	13421 3.27 24	12732 3.28 24	12042 3.29 23	11211 3.27 21	8806 3.03 18.3	3594 1.83 16.8					
	570	15269 3.53 30	14450 3.60 27	14040 3.63 26	13392 3.65 25	12726 3.65 24	12025 3.66 23	10051 3.51 20	6635 2.89 18.3					
	590	15805 3.91 31	15013 3.99 28	14617 4.02 27	14045 4.04 27	13402 4.05 26	12760 4.06 25	11014 3.97 22	8243 3.50 19.9					
Y1 (7-1/2)	610	16341 4.32 33	15575 4.40 30	15192 4.44 29	14693 4.46 28	14071 4.47 27	13449 4.48 27	11904 4.43 24	9535 4.10 22	5347 3.18 20				
	630	16877 4.76 34	16135 4.84 32	15764 4.88 31	15335 4.91 29	14733 4.92 29	14131 4.93 28	12735 4.91 26	10788 4.69 24	7723 3.94 22				
	650	17412 5.23 36	16694 5.31 34	16334 5.35 32	15972 5.39 31	15389 5.40 30	14805 5.41 30	13554 5.41 28	11866 5.27 26	9277 4.78 24	4095 2.94 22			
	670	17948 5.73 38	17251 5.81 35	16902 5.85 34	16553 5.90 33	16039 5.91 32	15473 5.93 31	14341 5.95 29	12790 5.85 27	10557 5.45 26	7309 4.65 23			
	680	18216 5.99 39	17529 6.07 36	17185 6.12 35	16842 6.16 34	16363 6.18 33	15805 6.19 32	14689 6.21 30	13225 6.14 28	11187 5.79 27	8303 4.94 24			
	690	18484 6.26 39	17807 6.34 37	17468 6.39 36	17129 6.43 35	16685 6.46 34	16135 6.47 33	15036 6.49 31	13643 6.43 29	11810 6.15 28	9108 5.41 26			
	700	18752 6.53 40	18084 6.62 38	17750 6.66 37	17417 6.71 36	17005 6.74 35	16464 6.75 34	15380 6.77 32	14059 6.72 30	12426 6.53 28	9885 5.95 27	5422 4.26 25		
	710	19020 6.82 41	18359 6.91 39	18032 6.95 38	17703 6.99 37	17325 7.03 36	16791 7.04 35	15723 7.06 33	14471 7.03 31	12904 6.86 29	10531 6.33 28	6954 5.27 26		
	720	19288 7.11 42	18636 7.20 40	18314 7.24 39	17990 7.29 38	17644 7.33 37	17117 7.34 36	16064 7.37 34	14880 7.35 32	13369 7.20 30	11170 6.72 29	8311 5.81 27		
	730	19555 7.41 43	18913 7.50 41	18595 7.55 40	18275 7.59 39	17955 7.64 38	17442 7.65 37	16403 7.67 35	15287 7.67 33	13830 7.55 32	11082 7.12 30	9123 6.20 28		
	740	19823 7.72 44	19189 7.81 42	18876 7.86 41	18560 7.90 40	18245 7.95 39	17766 7.97 38	16741 7.99 36	15691 8.01 34	14281 7.90 33	12428 7.53 31	9926 6.74 29	5250 4.74 28	
	750	20091 8.03 45	19466 8.13 43	19157 8.18 42	18845 8.22 41	18534 8.27 40	18089 8.29 39	17077 8.32 37	16066 8.34 36	14701 8.24 34	13047 7.96 32	10676 7.34 30	6592 6.06 29	

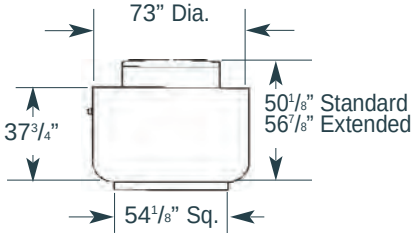
Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 42

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = 39.60 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 11.26 x RPM

Max. Motor Frame Size = 254T

Unit Weight (less motor) = 530 lbs.

Roof Opening = 49-1/2" Sq.

Curb O. D. = 52-1/2" Sq.

RPM Range - Motor HP			STATIC PRESSURE, INCHES W. G.											
S1 (1)	RPM	.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
T1 (1-12)	215	8225 .36 6.5	6840 .39 5.1											
	230	8799 .44 7.4	7505 .47 6.1	4752 .41 4.4										
	245	9372 .53 8.3	8159 .57 7.1	7610 .55 5.3										
	260	9946 .64 9.1	8804 .67 8.0	7188 .68 6.4										
	275	10520 .76 9.9	9441 .79 8.8	8111 .81 7.4	5046 .68 6.1									
V1 (2)	290	11094 .89 10.8	10071 .93 9.7	9008 .96 8.5	6655 .87 7.0									
	305	11668 1.03 11.6	10695 1.07 10.6	9715 1.11 9.5	7855 1.08 8.1									
	320	12242 1.19 12.5	11314 1.23 11.5	10382 1.28 10.6	8902 1.26 9.2	6182 1.10 8.1								
W1 (3)	335	12815 1.37 13.5	11929 1.41 12.4	11040 1.46 11.5	9824 1.47 10.3	7698 1.34 9.1								
	350	13389 1.56 14.6	12541 1.61 13.5	11691 1.65 12.6	10725 1.69 11.5	8904 1.62 10.2								
	365	13963 1.77 15.7	13150 1.82 14.7	12335 1.87 13.7	11515 1.92 12.7	9997 1.87 11.4	7650 1.66 10.5							
X1 (5)	380	14537 1.99 17.0	13755 2.05 15.9	12974 2.10 15.0	12187 2.15 14.1	10927 2.13 12.7	9085 2.03 11.8							
	395	15111 2.24 18.2	14359 2.29 17.2	13609 2.35 16.3	12851 2.40 15.4	11838 2.41 14.1	10235 2.34 13.2	7887 2.06 12.4						
	410	15685 2.50 19.5	14960 2.56 18.5	14237 2.62 17.7	13508 2.67 16.8	12732 2.72 15.6	11297 2.65 14.6	9400 2.46 13.8						
	425	16258 2.79 21	15559 2.85 19.8	14862 2.91 19.0	14160 2.96 18.3	13456 3.02 17.2	12226 2.98 16.1	10626 2.89 15.3						
	440	16832 3.09 22	16157 3.15 21	15483 3.22 20	14806 3.28 19.6	14126 3.34 18.9	13138 3.33 17.6	11761 3.25 16.8						
Y1 (7-1/2)	455	17406 3.42 23	16753 3.48 23	16102 3.55 22	15448 3.61 21	14790 3.67 20	14034 3.71 19.2	12741 3.63 18.4	8994 3.18 17.0					
	470	17980 3.77 25	17347 3.84 24	16717 3.90 23	16085 3.97 23	15448 4.03 22	14812 4.10 21	13664 4.04 19.9	10512 3.66 18.5					
	485	18554 4.14 26	17940 4.21 26	17330 4.28 25	16719 4.35 24	16102 4.41 23	15484 4.48 23	14572 4.47 21	11828 4.25 20					
	500	19128 4.54 28	18532 4.61 27	17940 4.68 26	17347 4.75 25	16750 4.82 25	16151 4.89 24	15466 4.93 23	12973 4.76 22					
	515	19701 4.96 29	19123 5.03 28	18548 5.10 27	17973 5.17 27	17394 5.25 26	16813 5.32 25	16232 5.39 24	14064 5.24 23	10698 4.64 22				
C1 (10)	530	20275 5.41 30	19714 5.48 29	19155 5.55 28	18596 5.63 28	18034 5.70 27	17469 5.77 27	16905 5.85 26	14998 5.76 24	12204 5.32 23				
	545	20849 5.88 31	20303 5.95 30	19759 6.03 30	19215 6.11 29	18671 6.18 28	18121 6.26 28	17572 6.33 27	15918 6.30 25	13435 6.05 24				
	560	21423 6.38 32	20891 6.46 32	20362 6.53 31	19833 6.61 30	19304 6.69 30	18769 6.77 29	18235 6.84 29	16825 6.88 27	14579 6.69 26	11296 5.89 24			
	575	21997 6.90 33	21479 6.98 33	20963 7.06 32	20448 7.14 32	19933 7.22 31	19413 7.30 30	18893 7.38 30	17720 7.49 28	15674 7.29 27	12812 6.69 26			
	590	22570 7.46 35	22065 7.54 34	21563 7.62 33	21061 7.70 33	20559 7.79 32	20054 7.87 32	19547 7.95 31	18532 8.11 30	16610 7.93 28	14176 7.61 27			
	605	23144 8.04 36	22652 8.13 35	22162 8.21 35	21672 8.29 34	21183 8.38 34	20691 8.46 33	20196 8.54 33	19207 8.71 32	17533 8.61 30	15329 8.36 29	12214 7.42 28		
	620	23718 8.65 37	23237 8.74 37	22759 8.83 36	22281 8.91 36	21804 9.00 35	21325 9.09 35	20842 9.17 35	19877 9.34 34	18443 9.32 32	16463 9.13 30	13731 8.36 29		
	635	24292 9.30 39	23822 9.39 38	23356 9.47 38	22889 9.56 37	22423 9.65 37	21956 9.74 37	21485 9.83 36	20543 10.00 36	19343 10.06 34	17491 9.85 32	15136 9.46 31	11640 8.33 30	
	650	24866 9.97 41	24407 10.06 40	23951 10.15 40	23495 10.24 39	23039 10.33 39	22584 10.42 38	22125 10.51 38	21204 10.69 37	20233 10.85 36	18423 10.26 34	16292 10.33 33	13387 9.30 31	

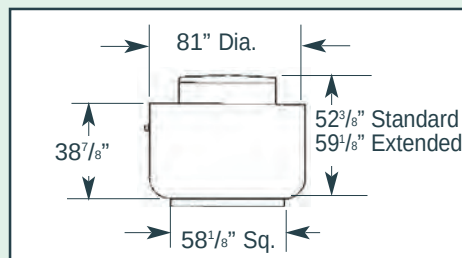
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 48

BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = $66.04 \times \left[\frac{\text{RPM}}{1000} \right]^3$

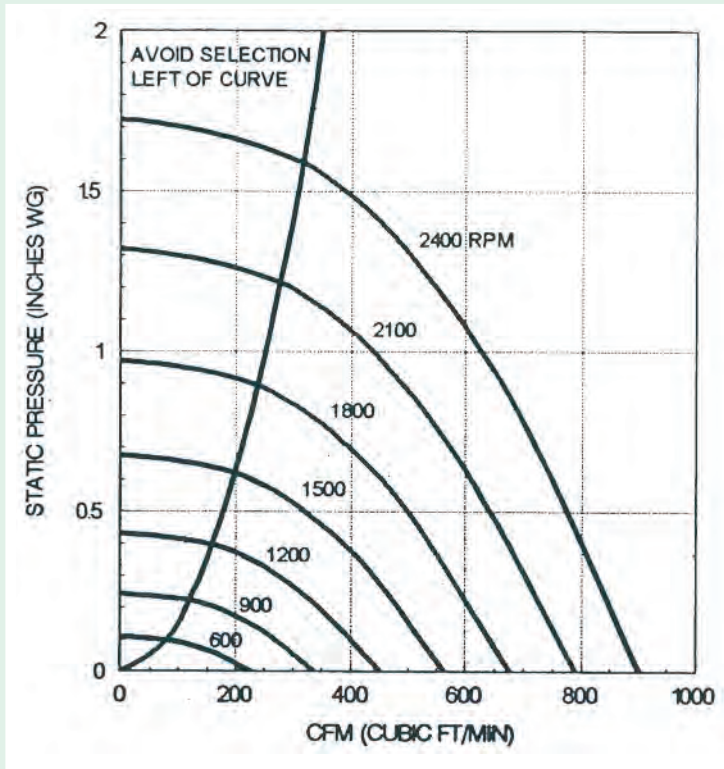
Tip Speed = 12.83 x RPM
 Max. Motor Frame Size = 254T
 Unit Weight (less motor) = 585 lbs.
 Roof Opening = 53-1/2" Sq.
 Curb O. D. = 56-1/2" Sq.

RPM Range - Motor HP		STATIC PRESSURE, INCHES W. G.											
T1 (1-1/2)	RPM	.000 CFM BHP SONES	.125 CFM BHP SONES	.250 CFM BHP SONES	.375 CFM BHP SONES	.500 CFM BHP SONES	.625 CFM BHP SONES	.750 CFM BHP SONES	1.000 CFM BHP SONES	1.250 CFM BHP SONES	1.500 CFM BHP SONES	1.750 CFM BHP SONES	2.000 CFM BHP SONES
V1 (2)	200	11712 .46 7.4	9785 .52 5.9										
	220	12383 .61 8.7	11136 .68 7.2	8433 .74 6.5									
	240	14054 .80 10.0	12457 .87 8.7	10432 .91 7.9									
	260	15226 1.01 11.5	13755 1.10 10.3	12111 1.16 9.6	9063 1.23 9.3								
W1 (3)	280	16397 1.26 13.5	15036 1.36 12.2	13643 1.44 11.4	11568 1.45 11.0								
	290	16982 1.40 14.5	15670 1.50 13.2	14326 1.59 12.4	12438 1.61 11.9								
	300	17568 1.55 15.5	16300 1.65 14.2	15002 1.75 13.4	13292 1.78 12.9	10428 1.88 12.8							
	310	18154 1.71 16.6	16927 1.82 15.3	15673 1.91 14.4	14133 1.97 13.9	11783 2.09 13.7							
X1 (5)	320	18739 1.89 17.6	17551 1.99 16.4	16338 2.09 15.5	14692 2.17 15.0	13042 2.17 14.7							
	330	19325 2.07 18.7	18172 2.18 17.5	16999 2.28 16.6	15780 2.37 16.1	13941 2.38 15.7	10731 2.33 15.7						
	340	19910 2.26 19.7	18792 2.38 18.6	17655 2.48 17.7	16508 2.58 17.3	14803 2.60 16.9	12330 2.85 16.8						
	350	20496 2.47 21	19409 2.58 19.7	18307 2.70 18.8	17193 2.80 18.4	15652 2.83 18.0	13607 2.95 17.8						
Y1 (7-1/2)	360	21082 2.69 22	20025 2.81 21	18956 2.92 19.9	17873 3.03 19.5	16490 3.08 19.1	14805 3.08 18.9	11497 2.94 18.9					
	370	21667 2.92 23	20639 3.04 22	19601 3.16 21	18547 3.27 21	17317 3.35 20	15678 3.35 20	13190 3.71 20					
	380	22253 3.16 24	21251 3.29 23	20243 3.41 22	19217 3.52 22	18135 3.63 21	16539 3.63 21	14474 3.84 21					
	390	22838 3.41 26	21863 3.54 24	20883 3.67 24	19883 3.79 23	18883 3.91 23	17389 3.92 22	15734 3.97 22					
C1 (10)	400	23424 3.68 27	22472 3.82 26	21519 3.95 25	20545 4.07 24	19570 4.19 24	18229 4.23 24	16712 4.23 24					
	410	24010 3.97 28	23081 4.10 27	22154 4.24 26	21203 4.36 25	20252 4.49 25	19059 4.55 25	17579 4.56 25					
	420	24595 4.26 29	23689 4.41 28	22784 4.55 27	21857 4.67 27	20929 4.80 26	19880 4.89 26	18436 4.90 26	14018 4.97 26				
	430	25181 4.58 30	24295 4.72 29	23412 4.86 28	22509 5.00 28	21602 5.12 27	20694 5.25 27	19283 5.25 27	15587 5.76 27				
	440	25766 4.90 32	24901 5.05 31	24038 5.20 30	23157 5.33 29	22271 5.47 28	21385 5.60 28	20120 5.63 28	16867 5.93 28				
	450	26352 5.25 33	25506 5.40 32	24662 5.55 31	23803 5.69 30	22937 5.82 29	22070 5.96 29	20950 6.02 29	18126 6.10 29				
	460	26938 5.60 34	26110 5.76 33	25284 5.91 32	24446 6.06 32	23599 6.19 31	22751 6.33 30	21771 6.43 30	19133 6.43 30				
	470	27523 5.98 35	26713 6.13 35	25905 6.29 34	25087 6.44 33	24258 6.58 32	23428 6.72 32	22584 6.86 31	20003 6.86 31	15746 7.00 31			
	480	28109 6.37 37	27315 6.53 36	26524 6.69 35	25726 6.84 34	24914 6.99 33	24101 7.13 33	23289 7.27 33	20863 7.31 32	17330 8.04 32			
	490	28694 6.77 38	27917 6.94 37	27142 7.10 36	26362 7.26 36	25567 7.41 35	24771 7.55 34	23975 7.70 34	21715 7.78 33	18612 8.25 33			
	500	29280 7.20 39	28518 7.36 39	27758 7.53 38	26997 7.70 37	26217 7.85 36	25437 8.00 36	24657 8.15 35	22558 8.26 35	19876 8.46 34			
	510	29866 7.64 41	29118 7.81 40	28374 7.98 39	27629 8.15 39	26865 8.30 38	26100 8.45 37	25336 8.61 37	23394 8.77 36	21015 8.77 36	16412 8.47 36		
	520	30451 8.09 42	29718 8.27 42	28988 8.44 41	28257 8.62 40	27510 8.77 39	26761 8.93 39	26011 9.09 38	24222 9.29 38	21889 9.29 37	18127 9.83 37	9825 6.03 37	
	530	30137 8.57 44	30317 8.75 43	29601 8.92 42	28884 9.10 42	28154 9.27 41	27418 9.42 40	26682 9.58 40	25044 9.84 39	22754 9.84 39	19523 10.67 38	10966 6.65 38	

Performance certified is for installation type A - free inlet, free outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

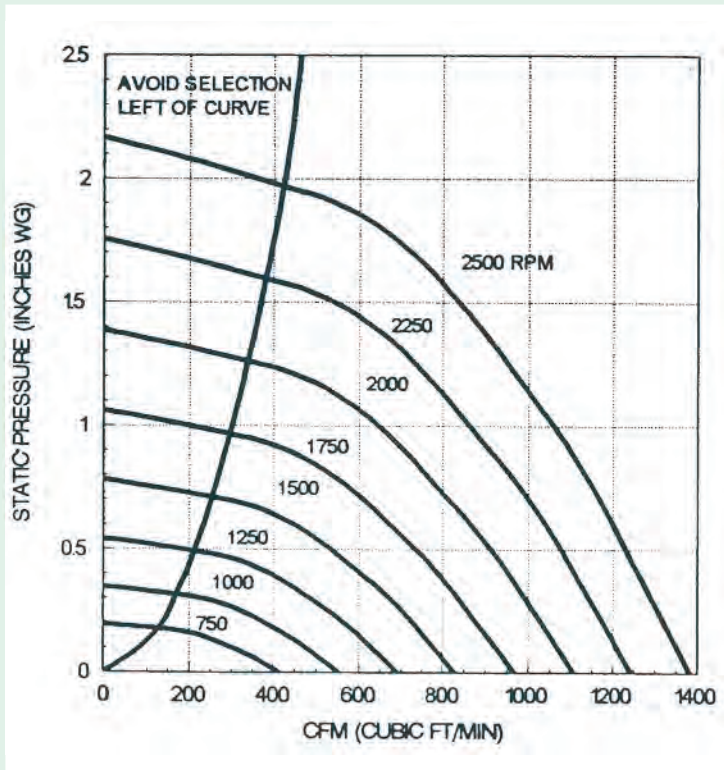
The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet fan sone levels.

VRBK 06
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 08
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 06
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
600	.000	40	39	36	37	34	30	26	22	39
1000	.000	58	56	52	49	48	44	40	36	53
	.125	58	57	51	49	47	43	39	35	52
1400	.000	65	62	61	58	55	55	51	46	62
	.500	68	68	64	62	59	56	52	47	65
1800	.000	71	67	70	65	63	60	59	54	69
	.375	71	69	70	65	62	59	57	53	68
	.750	74	74	73	68	66	62	59	54	71
2100	.000	78	70	76	69	67	63	63	58	73
	.500	76	73	75	69	67	63	62	57	73
	1.000	79	78	78	71	70	65	63	58	75
2300	.000	81	73	78	71	70	65	66	61	75
	.500	79	76	77	72	69	65	64	60	75
	1.000	79	79	79	73	71	66	64	60	76
2500	.000	82	76	80	74	72	68	67	63	78
	.500	81	78	79	74	71	67	66	62	77
	1.000	79	80	80	75	71	68	66	62	78
	1.500	83	84	84	78	75	71	68	64	81

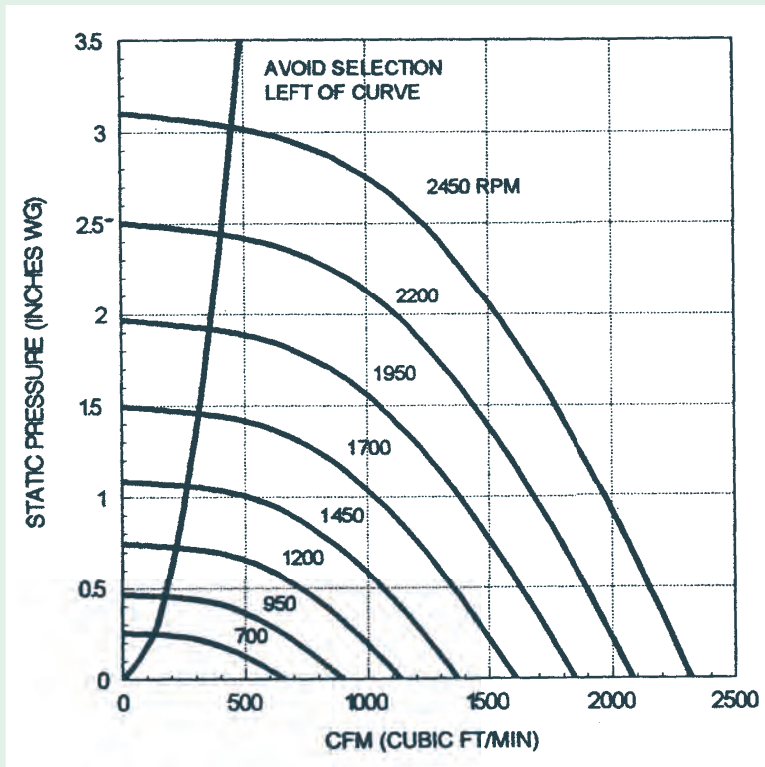
The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 08
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
650	.000	52	57	42	41	39	40	38	37	47
1050	.000	69	68	66	54	52	50	50	48	61
	.250	68	70	62	53	51	48	46	41	60
1450	.000	69	71	70	63	58	57	58	59	67
	.500	69	68	65	60	58	57	55	53	65
1800	.000	80	74	79	70	65	61	62	63	74
	.500	79	73	74	66	63	60	60	59	71
	1.000	76	73	72	66	64	63	61	57	71
2100	.000	87	76	86	75	69	65	65	66	80
	.500	86	77	82	71	68	64	64	64	77
	1.000	83	77	80	70	68	65	64	62	75
2300	.000	90	79	88	78	72	67	67	68	82
	.750	88	80	84	74	70	66	65	65	79
	1.500	84	80	81	73	71	68	67	64	78
2500	.000	91	83	89	82	75	69	69	70	84
	.500	90	83	87	79	74	69	68	68	82
	1.000	89	83	85	77	73	68	67	67	81
	1.750	86	83	83	76	73	70	69	66	80

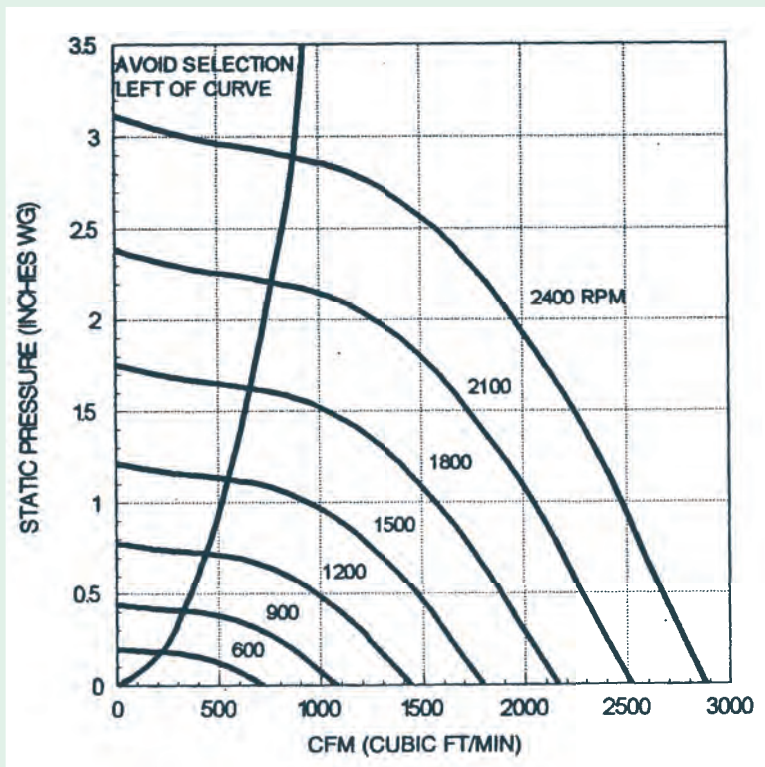
The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 10
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 12
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

CARNES®

VRBK 10
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
650	.000	52	55	50	47	47	44	37	31	51
950	.000	64	65	64	58	55	54	49	43	62
	.375	63	65	60	55	53	51	49	46	60
1300	.000	64	69	69	65	62	62	59	51	69
	.375	67	70	67	63	60	60	56	50	67
	.750	68	70	66	62	59	60	58	53	67
1650	.000	72	74	76	72	68	67	67	59	75
	.625	71	78	74	70	66	65	64	58	73
	1.250	72	78	73	69	65	64	64	60	73
2000	.000	78	78	82	78	73	71	73	65	81
	.500	76	82	81	77	72	69	70	64	80
	1.000	74	84	80	76	71	69	69	64	79
	2.000	76	84	80	75	70	68	69	65	78
2350	.000	81	84	85	83	78	75	76	71	85
	.500	79	86	86	82	77	74	74	69	84
	1.000	78	87	86	82	76	73	73	68	84
	2.000	75	87	85	80	75	72	73	70	83
	2.500	76	87	85	80	75	72	73	70	83

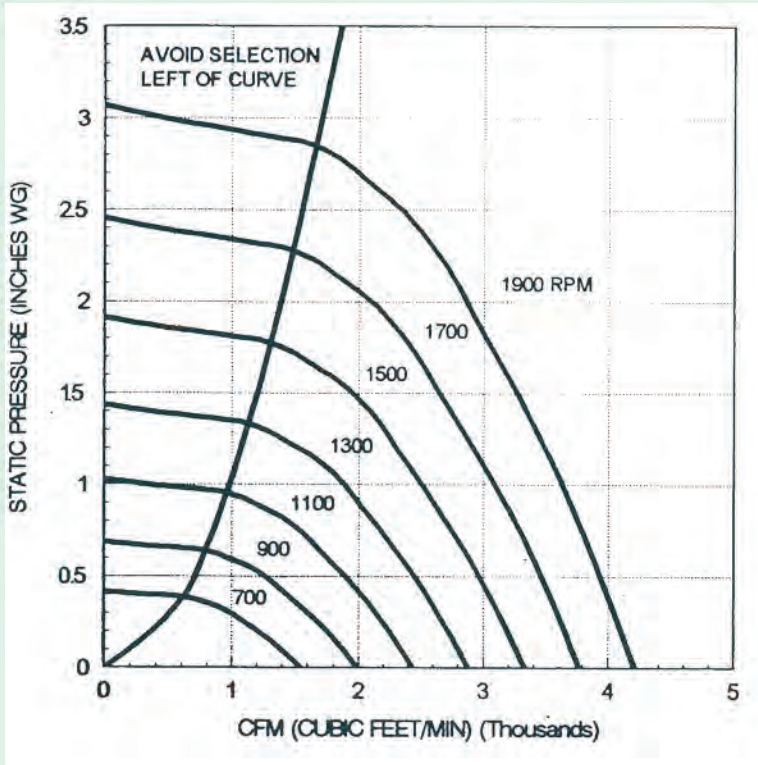
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 12
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
550	.000	53	50	46	48	48	40	30	20	51
950	.000	67	68	64	59	61	59	50	40	65
	.375	67	67	64	57	56	54	50	44	62
1250	.000	70	77	74	68	65	67	60	50	73
	.250	69	77	73	67	64	65	58	51	71
	.500	69	77	73	67	62	62	58	52	70
1600	.000	72	85	82	76	69	74	69	59	80
	.750	71	85	81	75	67	68	65	59	78
	1.250	74	86	80	75	66	67	65	60	78
1950	.000	75	87	88	83	76	77	75	66	85
	.750	75	87	87	82	74	74	72	65	84
	1.250	75	87	87	82	74	72	70	65	84
	1.750	77	88	87	82	73	71	70	66	83
2250	.000	78	88	92	88	80	79	79	71	89
	1.000	77	88	92	87	79	77	76	70	88
	1.500	77	88	92	87	79	75	74	70	88
	2.000	79	89	92	86	79	75	74	70	88
	2.500	80	90	92	86	78	74	74	70	88

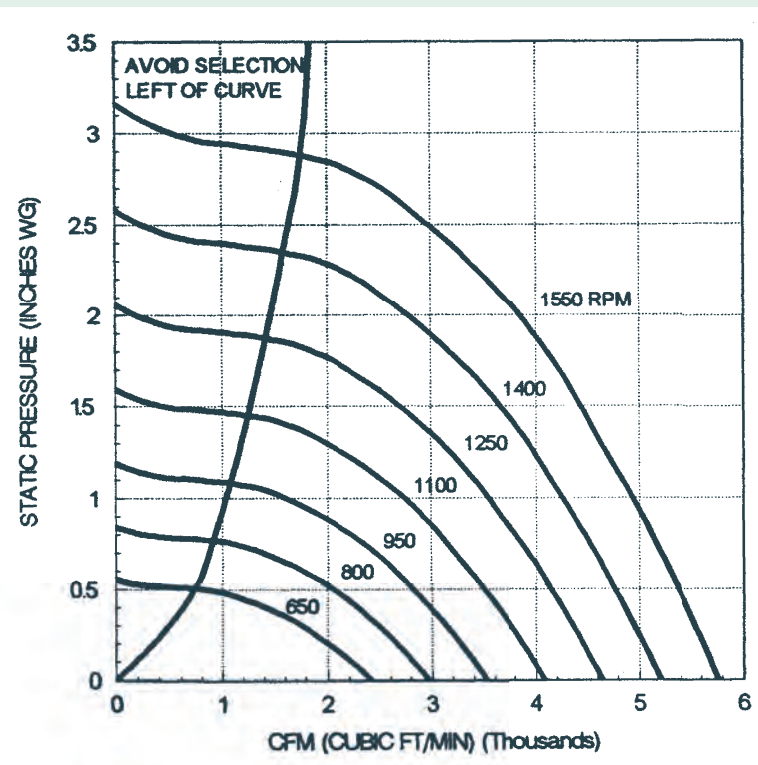
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 15
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 18
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 15
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
550	.000	62	64	60	55	53	48	41	33	58
800	.000	73	75	72	67	63	59	53	45	70
	.375	72	74	71	68	64	60	55	49	70
1050	.000	80	81	81	76	70	67	61	54	77
	.375	79	80	79	76	71	67	62	56	77
	.750	81	79	79	76	72	68	63	58	78
1300	.000	84	87	87	82	76	72	68	61	84
	.750	83	86	86	82	78	73	68	63	84
	1.250	85	86	85	82	78	74	70	64	84
1550	.000	87	92	93	88	82	77	73	67	89
	.750	86	91	92	87	82	78	73	67	87
	1.250	87	91	91	87	83	78	74	68	89
	1.750	88	91	91	87	83	79	74	70	89
1750	.000	89	95	96	92	85	80	77	71	93
	1.000	88	94	95	91	86	81	76	71	92
	1.500	89	95	94	90	86	81	77	72	92
	2.000	89	95	94	90	86	82	78	73	92
	2.500	90	95	94	90	87	82	78	73	92

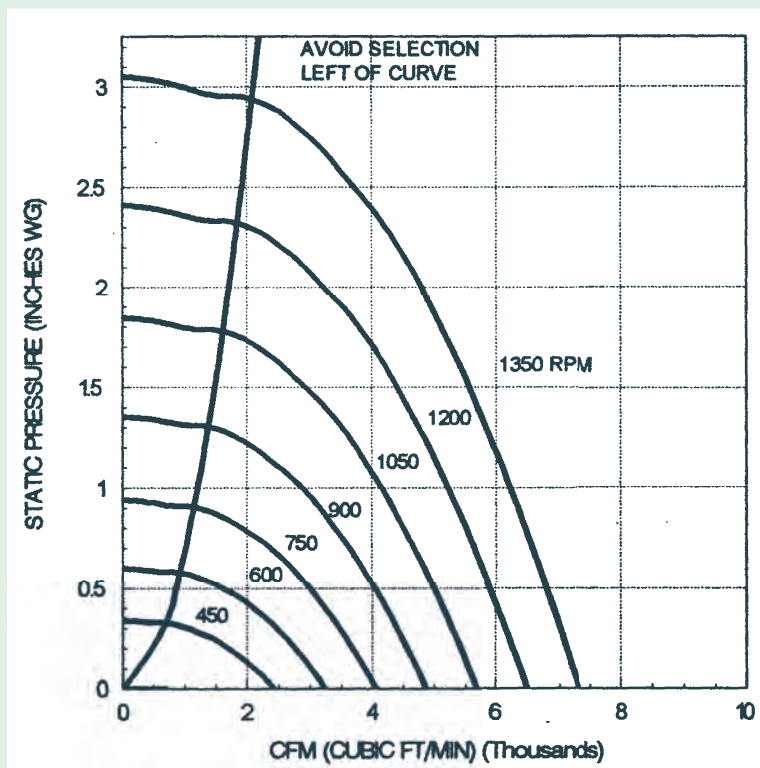
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 18
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
550	.000	67	66	59	59	58	53	46	39	62
750	.000	76	75	70	66	66	62	56	49	70
	.500	72	70	64	59	58	56	52	46	64
950	.000	78	81	76	72	71	69	64	58	76
	.375	78	79	75	70	68	66	61	55	74
	.625	76	78	73	68	66	64	60	56	72
1150	.000	84	85	84	77	75	74	69	64	82
	1.000	82	82	80	72	70	69	65	61	77
	1.500	81	81	79	72	69	68	65	61	76
1350	.000	88	89	90	81	79	78	74	69	86
	1.000	87	87	87	78	75	74	71	66	83
	1.500	86	86	85	76	73	72	70	66	81
	2.000	86	85	85	76	73	72	69	66	81
1500	.000	91	91	94	84	81	81	77	72	89
	1.000	90	90	92	82	79	78	74	69	87
	1.500	89	89	90	80	77	76	73	69	86
	2.000	88	88	89	79	75	75	72	68	84
	2.500	89	88	89	79	75	75	72	68	84

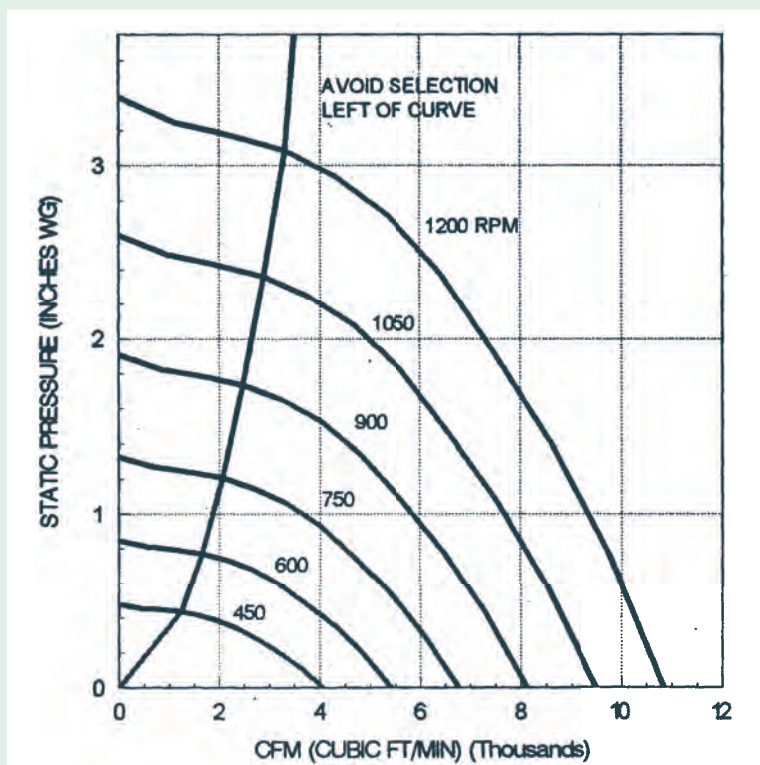
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 21
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 24
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 21
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
400	.000	59	59	57	57	55	50	43	37	59
600	.000	68	72	66	66	67	62	56	49	70
	.500	70	71	61	60	62	60	53	46	66
775	.000	77	77	75	72	72	69	64	57	76
	.375	77	77	73	69	68	66	61	55	74
	.750	78	77	72	66	67	66	61	54	73
950	.000	84	82	82	77	76	75	70	64	82
	.500	84	82	80	74	73	72	67	61	79
	1.250	85	83	80	71	71	72	67	60	78
1125	.000	90	85	87	81	79	80	75	69	86
	1.000	89	87	86	77	75	77	72	66	83
	1.500	90	87	86	76	74	76	73	66	83
	2.000	90	87	86	76	74	76	73	68	83
1300	.000	93	90	91	85	83	83	79	73	90
	1.000	91	91	90	83	80	80	76	71	88
	1.500	92	91	90	82	78	79	76	70	87
	2.000	93	92	90	81	77	79	77	70	87
	2.750	93	92	90	80	77	79	77	70	87

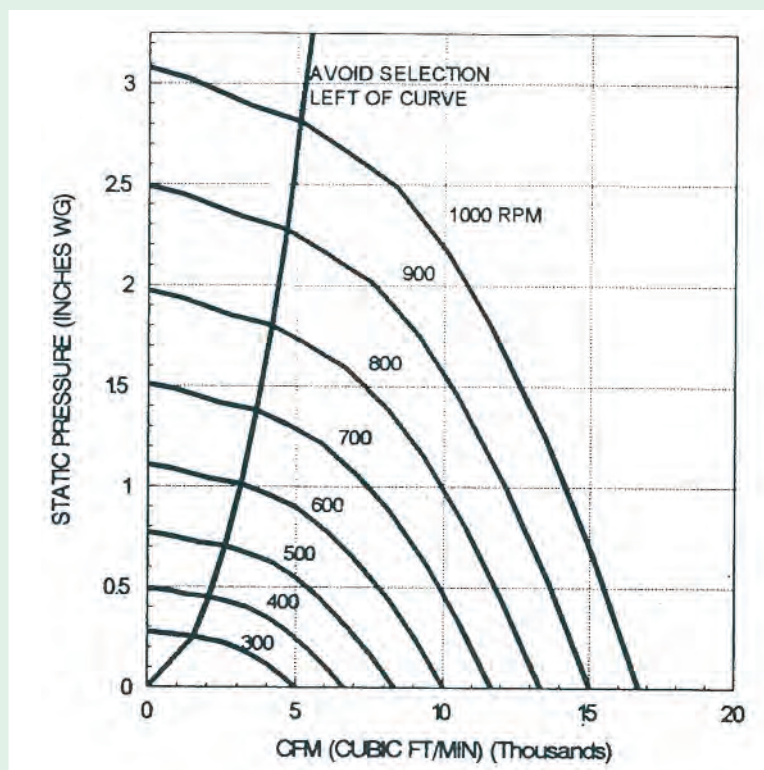
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 24
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
400	.000	69	68	61	59	60	59	50	40	65
550	.000	76	78	72	67	66	67	61	51	73
	.375	75	75	68	64	64	62	57	50	69
	.625	74	75	67	62	63	62	56	50	68
700	.000	82	84	80	73	71	72	70	60	79
	.500	81	82	78	71	69	69	64	58	76
	.750	82	81	77	69	68	68	64	57	75
	1.000	82	81	77	68	68	68	64	57	75
850	.000	87	89	87	78	75	76	76	67	84
	.500	86	88	85	77	73	75	72	65	82
	.750	86	87	85	76	72	75	70	64	82
	1.000	87	87	84	75	72	74	70	63	81
	1.500	87	86	84	73	71	73	70	63	81
1000	.000	90	93	92	84	79	80	81	73	89
	.500	90	92	91	83	78	79	78	71	87
	1.000	90	91	89	81	76	78	75	69	86
	1.500	90	91	89	80	76	77	75	68	85
	2.000	91	90	89	79	75	77	74	68	85

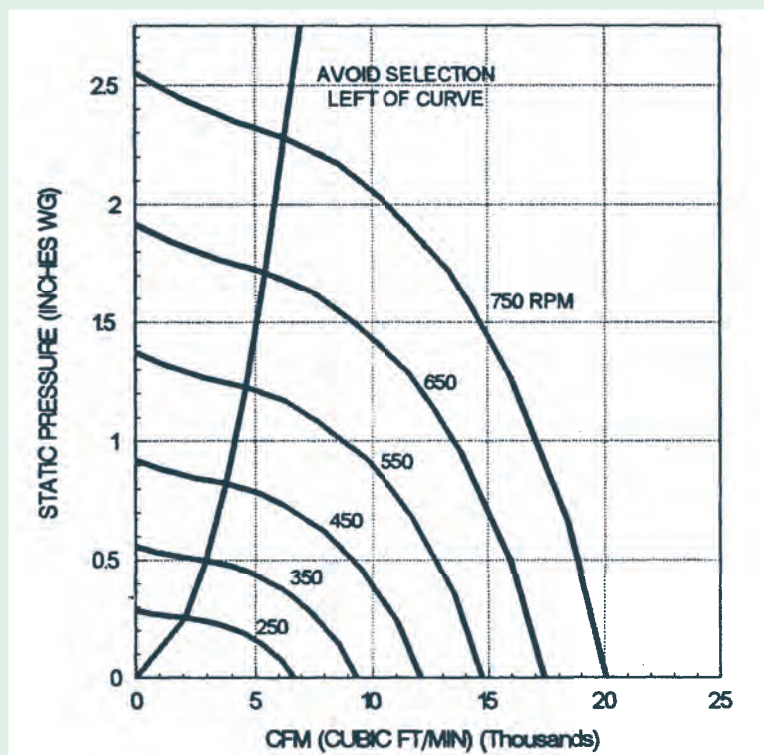
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 30
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 36
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 30
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
275	.000	64	61	60	60	56	49	43	37	61
375	.000	73	70	66	67	65	59	52	46	69
	.375	70	64	58	58	57	52	48	43	61
475	.000	78	78	73	72	71	66	60	53	75
	.375	77	74	67	66	65	61	56	51	69
	.625	77	72	65	63	62	59	54	50	67
575	.000	82	83	79	76	76	72	66	59	80
	.500	81	81	74	71	70	67	62	57	75
	.750	82	79	71	67	67	64	60	55	72
675	.000	85	88	84	80	80	77	71	64	84
	.500	85	87	81	76	76	73	68	62	81
	1.000	86	85	77	71	70	69	64	60	77
	1.250	86	85	77	71	70	69	64	60	77
775	.000	88	93	88	83	83	82	75	69	88
	.500	88	91	86	80	80	79	73	67	86
	.750	88	91	85	78	79	77	71	66	84
	1.000	88	90	83	76	76	75	70	65	83
	1.500	89	90	81	74	74	73	68	64	81

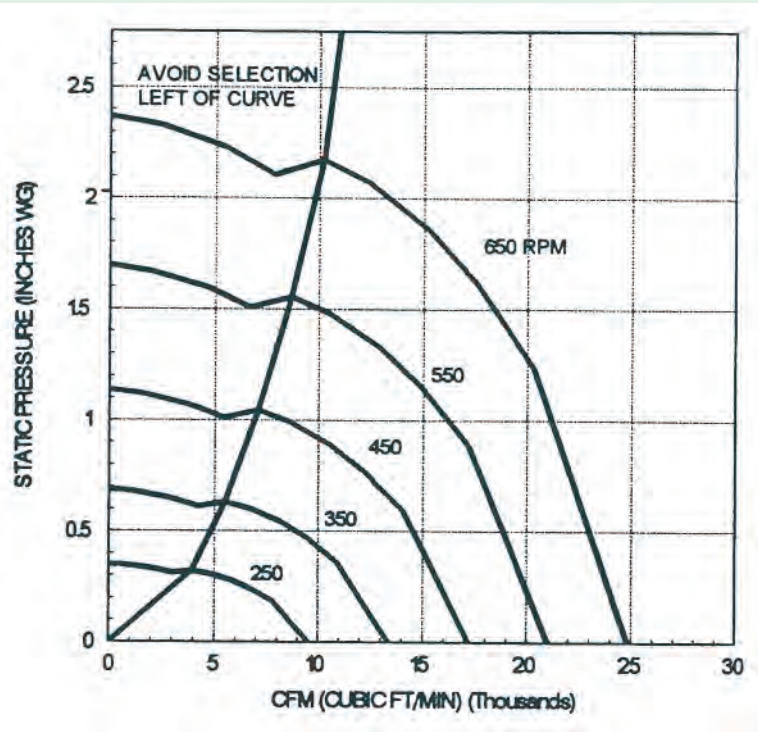
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{Wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 36
SOUND PERFORMANCE

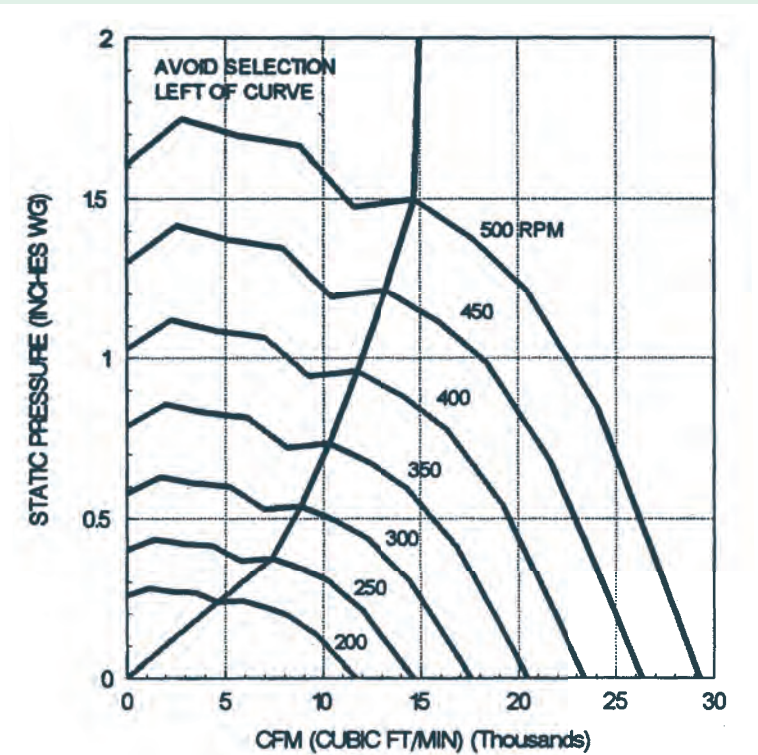
RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
250	.000	71	67	63	61	59	60	61	61	67
325	.000	78	75	70	67	65	65	66	66	73
	.375	73	68	63	61	59	56	51	47	64
400	.000	83	82	76	72	70	69	70	71	78
	.375	81	78	72	68	66	66	64	58	73
	.625	80	74	69	65	64	60	55	51	69
475	.000	87	87	82	77	74	73	74	74	82
	.500	86	84	78	72	71	70	70	64	78
	.750	86	81	75	70	69	67	64	59	75
550	.000	91	92	86	80	78	76	77	78	86
	.500	91	90	83	77	76	73	76	71	83
	1.000	91	86	80	74	73	71	68	63	79
	1.250	91	85	78	72	72	69	63	59	78
600	.000	93	94	89	83	80	78	79	79	88
	.500	92	93	87	80	78	76	78	74	86
	.750	92	92	85	78	77	75	77	72	85
	1.000	93	90	84	77	76	74	73	68	83
	1.250	93	89	82	76	75	73	69	65	81

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{Wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 42
AIR PERFORMANCE



VRBK 48
AIR PERFORMANCE



VRBK 42
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
215	.000	68	67	63	60	58	59	51	42	64
275	.000	75	73	70	67	63	65	59	51	71
	.375	72	68	63	61	58	54	48	42	64
335	.000	82	79	76	72	69	69	66	57	76
	.250	82	78	73	69	66	67	62	50	73
	.500	80	75	70	67	64	61	56	48	70
390	.000	87	83	80	76	73	71	71	62	80
	.375	87	82	77	72	70	69	67	55	77
	.750	86	78	74	70	68	64	59	52	73
445	.000	91	87	84	80	76	73	75	67	83
	.375	91	86	82	76	74	72	73	62	81
	.750	91	84	79	74	72	69	67	58	79
	1.000	91	82	78	73	71	68	62	56	77
500	.000	95	90	87	83	80	75	79	71	86
	.500	95	90	85	79	77	74	77	66	84
	.750	95	89	84	78	76	73	75	64	83
	1.000	95	87	83	77	75	72	70	62	82
	1.250	96	86	81	76	74	71	66	60	80

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

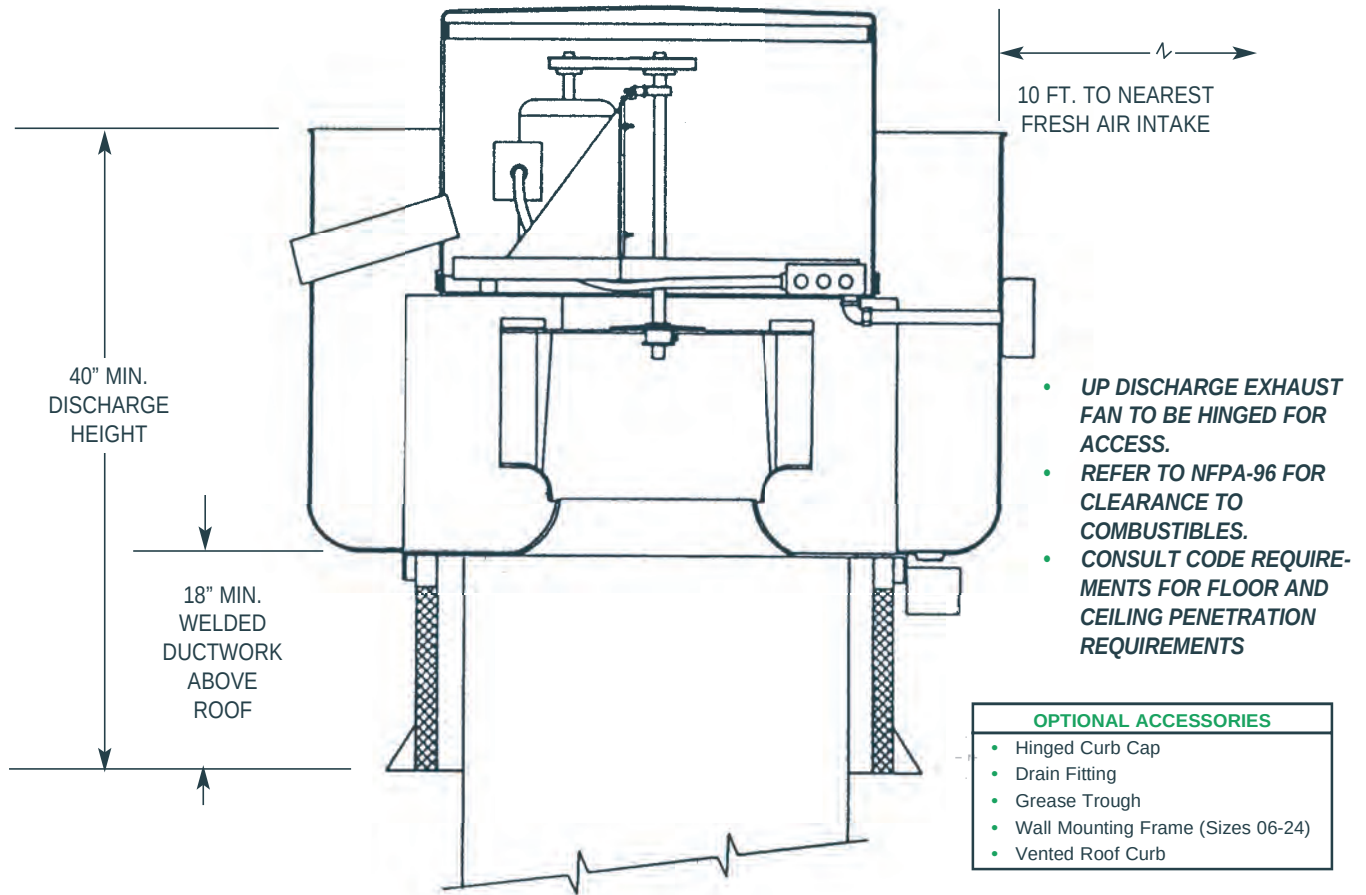
VRBK 48
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								LWA
		1	2	3	4	5	6	7	8	
200	.000	77	69	65	63	59	59	52	44	66
250	.000	83	77	72	69	65	64	59	52	72
	.250	82	74	66	64	62	60	53	45	68
300	.000	89	84	77	73	70	68	65	58	77
	.250	89	82	73	69	68	66	62	52	74
	.500	89	81	72	67	67	64	59	51	73
350	.000	93	89	81	77	74	71	70	63	81
	.375	94	87	78	72	71	69	66	57	78
	.625	94	87	77	70	71	68	64	56	77
400	.000	97	94	85	80	78	74	74	67	85
	.250	98	93	83	77	76	73	73	64	83
	.500	98	92	82	74	75	72	71	62	82
	.750	99	92	81	73	74	71	68	60	82
450	.000	99	98	89	84	81	77	77	71	88
	.250	100	97	88	81	79	76	76	69	87
	.500	100	96	87	79	78	76	75	67	86
	.750	101	96	86	78	77	75	73	65	86
	1.000	101	96	86	77	77	74	71	64	85

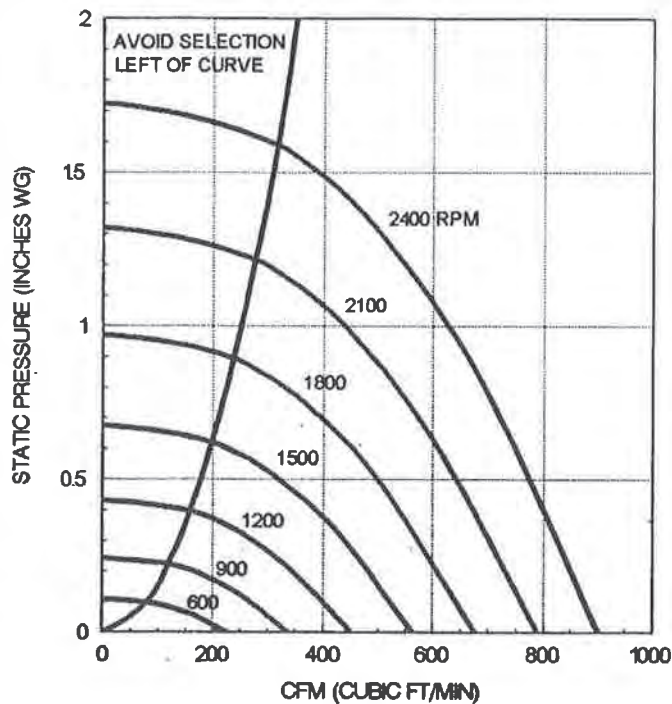
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

RESTAURANT INSTALLATION

Typical installation - Consult local codes for specific requirements

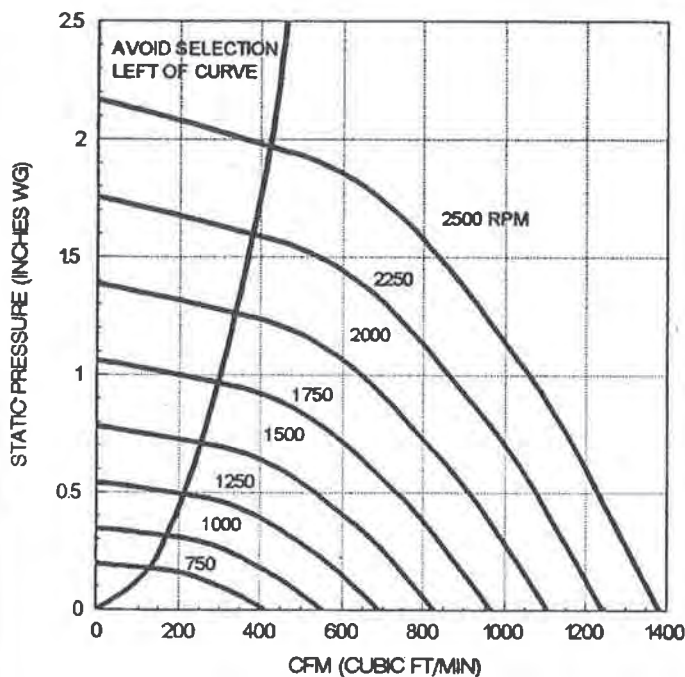


VRBK 06
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 08
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 06
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
600	.000	40	39	36	37	34	30	26	22	39
	.125	58	56	51	49	47	43	39	35	52
1000	.000	65	62	61	58	55	51	46	42	62
	.125	68	68	64	62	59	56	52	47	65
1400	.000	71	67	70	65	63	60	59	54	69
	.125	74	74	73	68	66	62	59	54	71
1800	.000	78	70	76	69	67	63	63	58	73
	.125	76	73	75	69	67	63	62	57	73
2100	.000	79	78	78	71	70	65	63	58	75
	.125	81	73	78	71	70	65	66	61	75
2300	.000	79	76	77	72	69	65	64	60	75
	.125	79	79	79	73	71	66	64	60	76
2500	.000	82	76	80	74	72	68	67	63	78
	.125	81	78	79	74	71	67	66	62	77
	.125	79	80	80	75	71	68	66	62	78
	.150	83	84	84	78	75	71	68	64	81

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

VRBK 08
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
650	.000	52	57	42	41	39	40	38	37	47
	.125	69	68	66	54	52	50	50	48	61
1050	.000	68	70	62	53	51	48	46	41	60
	.125	69	71	70	63	58	57	58	59	67
1450	.000	69	68	65	60	58	57	55	53	65
	.125	80	74	79	70	65	61	62	63	74
1800	.000	79	73	74	66	63	60	60	59	71
	.125	76	73	72	66	64	63	61	57	71
2100	.000	87	76	86	75	69	65	65	66	80
	.125	86	77	82	71	68	64	64	64	77
2300	.000	83	77	80	70	68	65	64	62	75
	.125	90	79	88	78	72	67	67	68	82
2500	.000	88	80	84	74	70	66	65	65	79
	.125	84	80	81	73	71	68	67	64	78
	.000	91	83	89	82	75	69	69	70	84
	.125	90	83	87	79	74	69	68	68	82
	.125	89	83	85	77	73	68	67	67	81
	.175	86	83	83	76	73	70	69	66	80

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction.

Memo

Re: Drive-Thru Sound Pressure Levels From the Menu Board or Speaker Post

The sound pressure levels from the menu board or speaker post are as follows:

1. Sound pressure level (SPL) contours (A weighted) were measured on a typical HME SPP2 speaker post. The test condition was for pink noise set to 84 dBA at 1 foot in front of the speaker. All measurements were conducted outside with the speaker post placed 8 feet from a non-absorbing building wall and at an oblique angle to the wall. These measurements should not be construed to guarantee performance with any particular speaker post in any particular environment. They are typical results obtained under the conditions described above.
2. The SPL levels are presented for different distances from the speaker post:

Distance from the Speaker (Feet)	SPL (dBA)
1 foot	84 dBA
2 feet	78 dBA
4 feet	72 dBA
8 feet	66 dBA
16 feet	60 dBA
32 feet	54 dBA

3. The above levels are based on factory recommended operating levels, which are preset for HME components and represent the optimum level for drive-thru operations in the majority of the installations.

Also, HME incorporates automatic volume control (AVC) into many of our Systems. AVC will adjust the outbound volume based on the outdoor, ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. See below for example:

Distance from Outside Speaker	Decibel Level of standard system with 45 dB of outside noise <u>without</u> AVC	Decibel level of standard system with 45 dB of outside noise <u>with</u> AVC active
1 foot	84 dBA	60 dBA
2 feet	78 dBA	54 dBA
4 feet	72 dBA	48 dBA
8 feet	66 dBA	42 dBA
16 feet	60 dBA	36 dBA

If there are any further questions regarding this issue please contact HME customer service at 1-800-848-4468.

Thank you for your interest in HME's products.

RTU Sound Power Level Data provided by Mechanical

OUTDOOR SOUND DATA								
Unit Model No.	Octave Band Linear Sound Power Levels dBA, re 10 ⁻¹² Watts - Center Frequency - Hz							¹ Sound Rating Number (SRN) (dBA)
	125	250	500	1000	2000	4000	8000	
KGB024, 030, 036, 048	61	65	70	67	64	58	49	74
KGB060	66	71	74	73	70	65	57	79
KGB072, 074, 090	66	71	74	73	70	65	57	79



February 28, 2018

Kris Kilborn, Senior Associate, Community Development

ATTACHMENTS

Reference: Noise Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

Attachment D. Existing Barrier







February 28, 2018

Kris Kilborn, Senior Associate, Community Development

ATTACHMENTS

Reference: Noise Assessment – Proposed Gas Bar with Vendor Drive-through, 3500 Hawthorne Road, Ottawa, ON

Attachment E. Sample Calculation

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (m)	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (m)	1000.00
Min. Length of Section (m)	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	1
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (°C)	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (m/s)	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receiver

Name: POR01

ID: POR01

X: 453145.26

Y: 5024670.25

Z: 4.50

Point Source, ISO 9613, Name: "Roof Top Exhaust", ID: "RTE"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
70	453169.16	5024705.19	4.74	0	D	32	42.6	0.0	0.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	2.5	0.0	0.0	-0.4
70	453169.16	5024705.19	4.74	0	D	63	59.8	0.0	0.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	3.0	0.0	0.0	16.2
70	453169.16	5024705.19	4.74	0	D	125	60.9	0.0	0.0	0.0	0.0	43.5	0.0	0.2	0.0	0.0	3.7	0.0	0.0	13.5
70	453169.16	5024705.19	4.74	0	D	250	73.4	0.0	0.0	0.0	0.0	43.5	0.0	-0.8	0.0	0.0	5.0	0.0	0.0	25.6
70	453169.16	5024705.19	4.74	0	D	500	67.8	0.0	0.0	0.0	0.0	43.5	0.1	-1.5	0.0	0.0	6.5	0.0	0.0	19.2
70	453169.16	5024705.19	4.74	0	D	1000	68.0	0.0	0.0	0.0	0.0	43.5	0.2	-1.5	0.0	0.0	8.5	0.0	0.0	17.3
70	453169.16	5024705.19	4.74	0	D	2000	65.2	0.0	0.0	0.0	0.0	43.5	0.4	-1.5	0.0	0.0	10.8	0.0	0.0	12.0
70	453169.16	5024705.19	4.74	0	D	4000	65.0	0.0	0.0	0.0	0.0	43.5	1.4	-1.5	0.0	0.0	13.4	0.0	0.0	8.2
70	453169.16	5024705.19	4.74	0	D	8000	62.9	0.0	0.0	0.0	0.0	43.5	4.9	-1.5	0.0	0.0	16.2	0.0	0.0	-0.3
70	453169.16	5024705.19	4.74	0	N	32	42.6	0.0	0.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	2.5	0.0	0.0	-0.4
70	453169.16	5024705.19	4.74	0	N	63	59.8	0.0	0.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	3.0	0.0	0.0	16.2
70	453169.16	5024705.19	4.74	0	N	125	60.9	0.0	0.0	0.0	0.0	43.5	0.0	0.2	0.0	0.0	3.7	0.0	0.0	13.5
70	453169.16	5024705.19	4.74	0	N	250	73.4	0.0	0.0	0.0	0.0	43.5	0.0	-0.8	0.0	0.0	5.0	0.0	0.0	25.6
70	453169.16	5024705.19	4.74	0	N	500	67.8	0.0	0.0	0.0	0.0	43.5	0.1	-1.5	0.0	0.0	6.5	0.0	0.0	19.2
70	453169.16	5024705.19	4.74	0	N	1000	68.0	0.0	0.0	0.0	0.0	43.5	0.2	-1.5	0.0	0.0	8.5	0.0	0.0	17.3
70	453169.16	5024705.19	4.74	0	N	2000	65.2	0.0	0.0	0.0	0.0	43.5	0.4	-1.5	0.0	0.0	10.8	0.0	0.0	12.0
70	453169.16	5024705.19	4.74	0	N	4000	65.0	0.0	0.0	0.0	0.0	43.5	1.4	-1.5	0.0	0.0	13.4	0.0	0.0	8.2
70	453169.16	5024705.19	4.74	0	N	8000	62.9	0.0	0.0	0.0	0.0	43.5	4.9	-1.5	0.0	0.0	16.2	0.0	0.0	-0.3
70	453169.16	5024705.19	4.74	0	E	32	42.6	0.0	-188.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	2.5	0.0	0.0	-188.4
70	453169.16	5024705.19	4.74	0	E	63	59.8	0.0	-188.0	0.0	0.0	43.5	0.0	-3.0	0.0	0.0	3.0	0.0	0.0	-171.8
70	453169.16	5024705.19	4.74	0	E	125	60.9	0.0	-188.0	0.0	0.0	43.5	0.0	0.2	0.0	0.0	3.7	0.0	0.0	-174.5
70	453169.16	5024705.19	4.74	0	E	250	73.4	0.0	-188.0	0.0	0.0	43.5	0.0	-0.8	0.0	0.0	5.0	0.0	0.0	-162.4
70	453169.16	5024705.19	4.74	0	E	500	67.8	0.0	-188.0	0.0	0.0	43.5	0.1	-1.5	0.0	0.0	6.5	0.0	0.0	-168.8
70	453169.16	5024705.19	4.74	0	E	1000	68.0	0.0	-188.0	0.0	0.0	43.5	0.2	-1.5	0.0	0.0	8.5	0.0	0.0	-170.7
70	453169.16	5024705.19	4.74	0	E	2000	65.2	0.0	-188.0	0.0	0.0	43.5	0.4	-1.5	0.0	0.0	10.8	0.0	0.0	-176.0
70	453169.16	5024705.19	4.74	0	E	4000	65.0	0.0	-188.0	0.0	0.0	43.5	1.4	-1.5	0.0	0.0	13.4	0.0	0.0	-179.8
70	453169.16	5024705.19	4.74	0	E	8000	62.9	0.0	-188.0	0.0	0.0	43.5	4.9	-1.5	0.0	0.0	16.2	0.0	0.0	-188.3

Point Source, ISO 9613, Name: "Washroom Fan", ID: "WF"

Nr.	X (m)	Y (m)	Z (m)	Refl.	DEN	Freq. (Hz)	Lw dB(A)	l/a dB	Optime dB	K0 (dB)	Di (dB)	Adiv (dB)	Aatm (dB)	Agr (dB)	Afol (dB)	Ahous (dB)	Abar (dB)	Cmet (dB)	RL (dB)	Lr dB(A)
72	453165.03	5024718.00	4.74	0	D	32	42.6	0.0	0.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-3.8
72	453165.03	5024718.00	4.74	0	D	63	59.8	0.0	0.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	12.9
72	453165.03	5024718.00	4.74	0	D	125	60.9	0.0	0.0	0.0	0.0	45.3	0.0	0.4	0.0	0.0	4.8	0.0	0.0	10.4
72	453165.03	5024718.00	4.74	0	D	250	73.4	0.0	0.0	0.0	0.0	45.3	0.1	-0.7	0.0	0.0	5.9	0.0	0.0	22.8
72	453165.03	5024718.00	4.74	0	D	500	67.8	0.0	0.0	0.0	0.0	45.3	0.1	-1.5	0.0	0.0	7.0	0.0	0.0	16.9
72	453165.03	5024718.00	4.74	0	D	1000	68.0	0.0	0.0	0.0	0.0	45.3	0.2	-1.5	0.0	0.0	8.6	0.0	0.0	15.5
72	453165.03	5024718.00	4.74	0	D	2000	65.2	0.0	0.0	0.0	0.0	45.3	0.5	-1.5	0.0	0.0	10.6	0.0	0.0	10.3
72	453165.03	5024718.00	4.74	0	D	4000	65.0	0.0	0.0	0.0	0.0	45.3	1.7	-1.5	0.0	0.0	13.0	0.0	0.0	6.5
72	453165.03	5024718.00	4.74	0	D	8000	62.9	0.0	0.0	0.0	0.0	45.3	6.0	-1.5	0.0	0.0	15.7	0.0	0.0	-2.6
72	453165.03	5024718.00	4.74	0	N	32	42.6	0.0	0.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-3.8
72	453165.03	5024718.00	4.74	0	N	63	59.8	0.0	0.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	12.9
72	453165.03	5024718.00	4.74	0	N	125	60.9	0.0	0.0	0.0	0.0	45.3	0.0	0.4	0.0	0.0	4.8	0.0	0.0	10.4
72	453165.03	5024718.00	4.74	0	N	250	73.4	0.0	0.0	0.0	0.0	45.3	0.1	-0.7	0.0	0.0	5.9	0.0	0.0	22.8
72	453165.03	5024718.00	4.74	0	N	500	67.8	0.0	0.0	0.0	0.0	45.3	0.1	-1.5	0.0	0.0	7.0	0.0	0.0	16.9
72	453165.03	5024718.00	4.74	0	N	1000	68.0	0.0	0.0	0.0	0.0	45.3	0.2	-1.5	0.0	0.0	8.6	0.0	0.0	15.5
72	453165.03	5024718.00	4.74	0	N	2000	65.2	0.0	0.0	0.0	0.0	45.3	0.5	-1.5	0.0	0.0	10.6	0.0	0.0	10.3
72	453165.03	5024718.00	4.74	0	N	4000	65.0	0.0	0.0	0.0	0.0	45.3	1.7	-1.5	0.0	0.0	13.0	0.0	0.0	6.5
72	453165.03	5024718.00	4.74	0	N	8000	62.9	0.0	0.0	0.0	0.0	45.3	6.0	-1.5	0.0	0.0	15.7	0.0	0.0	-2.6
72	453165.03	5024718.00	4.74	0	E	32	42.6	0.0	-188.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-191.8
72	453165.03	5024718.00	4.74	0	E	63	59.8	0.0	-188.0	0.0	0.0	45.3	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	-175.1
72	453165.03	5024718.00	4.74	0	E	125	60.9	0.0	-188.0	0.0	0.0	45.3	0.0	0.4	0.0	0.0	4.8	0.0	0.0	-177.6
72	453165.03	5024718.00	4.74	0	E	250	73.4	0.0	-188.0	0.0	0.0	45.3	0.1	-0.7	0.0	0.0	5.9	0.0	0.0	-165.2

Point Source, ISO 9613, Name: "Washroom Fan", ID: "WF"																				
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(A)
72	453165.03	5024718.00	4.74	0	E	500	67.8	0.0	-188.0	0.0	0.0	45.3	0.1	-1.5	0.0	0.0	7.0	0.0	0.0	-171.1
72	453165.03	5024718.00	4.74	0	E	1000	68.0	0.0	-188.0	0.0	0.0	45.3	0.2	-1.5	0.0	0.0	8.6	0.0	0.0	-172.5
72	453165.03	5024718.00	4.74	0	E	2000	65.2	0.0	-188.0	0.0	0.0	45.3	0.5	-1.5	0.0	0.0	10.6	0.0	0.0	-177.7
72	453165.03	5024718.00	4.74	0	E	4000	65.0	0.0	-188.0	0.0	0.0	45.3	1.7	-1.5	0.0	0.0	13.0	0.0	0.0	-181.5
72	453165.03	5024718.00	4.74	0	E	8000	62.9	0.0	-188.0	0.0	0.0	45.3	6.0	-1.5	0.0	0.0	15.7	0.0	0.0	-190.6

Point Source, ISO 9613, Name: "Vendor RTU", ID: "rtu_vendor"																				
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(A)
158	453167.00	5024704.61	4.74	0	D	32	-39.4	0.0	-3.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	3.2	0.0	0.0	-85.8
158	453167.00	5024704.61	4.74	0	D	63	34.8	0.0	-3.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-12.4
158	453167.00	5024704.61	4.74	0	D	125	44.9	0.0	-3.0	0.0	0.0	43.2	0.0	0.1	0.0	0.0	5.0	0.0	0.0	-6.5
158	453167.00	5024704.61	4.74	0	D	250	56.4	0.0	-3.0	0.0	0.0	43.2	0.0	-0.8	0.0	0.0	6.6	0.0	0.0	4.4
158	453167.00	5024704.61	4.74	0	D	500	66.8	0.0	-3.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	13.6
158	453167.00	5024704.61	4.74	0	D	1000	67.0	0.0	-3.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	10.7	0.0	0.0	11.4
158	453167.00	5024704.61	4.74	0	D	2000	65.2	0.0	-3.0	0.0	0.0	43.2	0.4	-1.5	0.0	0.0	13.3	0.0	0.0	6.8
158	453167.00	5024704.61	4.74	0	D	4000	59.0	0.0	-3.0	0.0	0.0	43.2	1.3	-1.5	0.0	0.0	16.1	0.0	0.0	-3.1
158	453167.00	5024704.61	4.74	0	D	8000	47.9	0.0	-3.0	0.0	0.0	43.2	4.8	-1.5	0.0	0.0	19.0	0.0	0.0	-20.5
158	453167.00	5024704.61	4.74	0	N	32	-39.4	0.0	-3.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	3.2	0.0	0.0	-85.8
158	453167.00	5024704.61	4.74	0	N	63	34.8	0.0	-3.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-12.4
158	453167.00	5024704.61	4.74	0	N	125	44.9	0.0	-3.0	0.0	0.0	43.2	0.0	0.1	0.0	0.0	5.0	0.0	0.0	-6.5
158	453167.00	5024704.61	4.74	0	N	250	56.4	0.0	-3.0	0.0	0.0	43.2	0.0	-0.8	0.0	0.0	6.6	0.0	0.0	4.4
158	453167.00	5024704.61	4.74	0	N	500	66.8	0.0	-3.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	13.6
158	453167.00	5024704.61	4.74	0	N	1000	67.0	0.0	-3.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	10.7	0.0	0.0	11.4
158	453167.00	5024704.61	4.74	0	N	2000	65.2	0.0	-3.0	0.0	0.0	43.2	0.4	-1.5	0.0	0.0	13.3	0.0	0.0	6.8
158	453167.00	5024704.61	4.74	0	N	4000	59.0	0.0	-3.0	0.0	0.0	43.2	1.3	-1.5	0.0	0.0	16.1	0.0	0.0	-3.1
158	453167.00	5024704.61	4.74	0	N	8000	47.9	0.0	-3.0	0.0	0.0	43.2	4.8	-1.5	0.0	0.0	19.0	0.0	0.0	-20.5
158	453167.00	5024704.61	4.74	0	E	32	-39.4	0.0	-188.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	3.2	0.0	0.0	-270.8
158	453167.00	5024704.61	4.74	0	E	63	34.8	0.0	-188.0	0.0	0.0	43.2	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-197.4
158	453167.00	5024704.61	4.74	0	E	125	44.9	0.0	-188.0	0.0	0.0	43.2	0.0	0.1	0.0	0.0	5.0	0.0	0.0	-191.5
158	453167.00	5024704.61	4.74	0	E	250	56.4	0.0	-188.0	0.0	0.0	43.2	0.0	-0.8	0.0	0.0	6.6	0.0	0.0	-180.6
158	453167.00	5024704.61	4.74	0	E	500	66.8	0.0	-188.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	-171.4
158	453167.00	5024704.61	4.74	0	E	1000	67.0	0.0	-188.0	0.0	0.0	43.2	0.1	-1.5	0.0	0.0	10.7	0.0	0.0	-173.6
158	453167.00	5024704.61	4.74	0	E	2000	65.2	0.0	-188.0	0.0	0.0	43.2	0.4	-1.5	0.0	0.0	13.3	0.0	0.0	-178.2
158	453167.00	5024704.61	4.74	0	E	4000	59.0	0.0	-188.0	0.0	0.0	43.2	1.3	-1.5	0.0	0.0	16.1	0.0	0.0	-188.1
158	453167.00	5024704.61	4.74	0	E	8000	47.9	0.0	-188.0	0.0	0.0	43.2	4.8	-1.5	0.0	0.0	19.0	0.0	0.0	-205.5

Point Source, ISO 9613, Name: "Drive Thru Speaker", ID: "DTS"																				
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(A)
179	453157.75	5024730.77	1.25	0	D	32	-44.4	0.0	-5.4	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-97.2
179	453157.75	5024730.77	1.25	0	D	63	48.8	0.0	-5.4	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-4.6
179	453157.75	5024730.77	1.25	0	D	125	55.9	0.0	-5.4	0.0	0.0	46.8	0.0	-0.2	0.0	0.0	4.8	0.0	0.0	-0.8
179	453157.75	5024730.77	1.25	0	D	250	62.4	0.0	-5.4	0.0	0.0	46.8	0.1	1.6	0.0	0.0	3.9	0.0	0.0	4.6
179	453157.75	5024730.77	1.25	0	D	500	68.8	0.0	-5.4	0.0	0.0	46.8	0.1	0.9	0.0	0.0	5.5	0.0	0.0	10.1
179	453157.75	5024730.77	1.25	0	D	1000	71.0	0.0	-5.4	0.0	0.0	46.8	0.2	-1.1	0.0	0.0	7.7	0.0	0.0	12.0
179	453157.75	5024730.77	1.25	0	D	2000	70.2	0.0	-5.4	0.0	0.0	46.8	0.6	-1.5	0.0	0.0	9.5	0.0	0.0	9.5
179	453157.75	5024730.77	1.25	0	D	4000	70.0	0.0	-5.4	0.0	0.0	46.8	2.0	-1.5	0.0	0.0	11.7	0.0	0.0	5.6
179	453157.75	5024730.77	1.25	0	D	8000	66.9	0.0	-5.4	0.0	0.0	46.8	7.2	-1.5	0.0	0.0	14.3	0.0	0.0	-5.3
179	453157.75	5024730.77	1.25	0	N	32	-44.4	0.0	-5.4	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-97.2
179	453157.75	5024730.77	1.25	0	N	63	48.8	0.0	-5.4	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-4.6
179	453157.75	5024730.77	1.25	0	N	125	55.9	0.0	-5.4	0.0	0.0	46.8	0.0	-0.2	0.0	0.0	4.8	0.0	0.0	-0.8
179	453157.75	5024730.77	1.25	0	N	250	62.4	0.0	-5.4	0.0	0.0	46.8	0.1	1.6	0.0	0.0	3.9	0.0	0.0	4.6
179	453157.75	5024730.77	1.25	0	N	500	68.8	0.0	-5.4	0.0	0.0	46.8	0.1	0.9	0.0	0.0	5.5	0.0	0.0	10.1
179	453157.75	5024730.77	1.25	0	N	1000	71.0	0.0	-5.4	0.0	0.0	46.8	0.2	-1.1	0.0	0.0	7.7	0.0	0.0	12.0
179	453157.75	5024730.77	1.25	0	N	2000	70.2	0.0	-5.4	0.0	0.0	46.8	0.6	-1.5	0.0	0.0	9.5	0.0	0.0	9.5
179	453157.75	5024730.77	1.25	0	N	4000	70.0	0.0	-5.4	0.0	0.0	46.8	2.0	-1.5	0.0	0.0	11.7	0.0	0.0	5.6
179	453157.75	5024730.77	1.25	0	N	8000	66.9	0.0	-5.4	0.0	0.0	46.8	7.2	-1.5	0.0	0.0	14.3	0.0	0.0	-5.3
179	453157.75	5024730.77	1.25	0	E	32	-44.4	0.0	-188.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-279.8
179	453157.75	5024730.77	1.25	0	E	63	48.8	0.0	-188.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-187.2
179	453157.75	5024730.77	1.25	0	E	125	55.9	0.0	-188.0	0.0	0.0	46.8	0.0	-0.2	0.0	0.0	4.8	0.0	0.0	-183.5
179	453157.75	5024730.77	1.25	0	E	250	62.4	0.0	-188.0	0.0	0.0	46.8	0.1	1.6	0.0	0.0	3.9	0.0	0.0	-178.0
179	453157.75	5024730.77	1.25	0	E	500	68.8	0.0	-188.0	0.0	0.0	46.8	0.1	0.9	0.0	0.0	5.5	0.0	0.0	-172.5

Point Source, ISO 9613, Name: "Drive Thru Speaker", ID: "DTS"																				
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(A))
179	453157.75	5024730.77	1.25	0	E	1000	71.0	0.0	-188.0	0.0	0.0	46.8	0.2	-1.1	0.0	0.0	7.7	0.0	0.0	-170.6
179	453157.75	5024730.77	1.25	0	E	2000	70.2	0.0	-188.0	0.0	0.0	46.8	0.6	-1.5	0.0	0.0	9.5	0.0	0.0	-173.2
179	453157.75	5024730.77	1.25	0	E	4000	70.0	0.0	-188.0	0.0	0.0	46.8	2.0	-1.5	0.0	0.0	11.7	0.0	0.0	-177.0
179	453157.75	5024730.77	1.25	0	E	8000	66.9	0.0	-188.0	0.0	0.0	46.8	7.2	-1.5	0.0	0.0	14.3	0.0	0.0	-187.9

Point Source, ISO 9613, Name: "Gas Station RTU", ID: "rtu_gas"																				
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(A)
200	453162.82	5024716.62	4.74	0	D	32	-39.4	0.0	-3.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-88.7
200	453162.82	5024716.62	4.74	0	D	63	34.8	0.0	-3.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-15.2
200	453162.82	5024716.62	4.74	0	D	125	44.9	0.0	-3.0	0.0	0.0	44.9	0.0	0.4	0.0	0.0	5.5	0.0	0.0	-8.9
200	453162.82	5024716.62	4.74	0	D	250	56.4	0.0	-3.0	0.0	0.0	44.9	0.1	-0.7	0.0	0.0	6.9	0.0	0.0	2.2
200	453162.82	5024716.62	4.74	0	D	500	66.8	0.0	-3.0	0.0	0.0	44.9	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	11.8
200	453162.82	5024716.62	4.74	0	D	1000	67.0	0.0	-3.0	0.0	0.0	44.9	0.2	-1.5	0.0	0.0	10.5	0.0	0.0	9.9
200	453162.82	5024716.62	4.74	0	D	2000	65.2	0.0	-3.0	0.0	0.0	44.9	0.5	-1.5	0.0	0.0	13.0	0.0	0.0	5.3
200	453162.82	5024716.62	4.74	0	D	4000	59.0	0.0	-3.0	0.0	0.0	44.9	1.6	-1.5	0.0	0.0	15.6	0.0	0.0	-4.7
200	453162.82	5024716.62	4.74	0	D	8000	47.9	0.0	-3.0	0.0	0.0	44.9	5.8	-1.5	0.0	0.0	18.5	0.0	0.0	-22.8
200	453162.82	5024716.62	4.74	0	N	32	-39.4	0.0	-3.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-88.7
200	453162.82	5024716.62	4.74	0	N	63	34.8	0.0	-3.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-15.2
200	453162.82	5024716.62	4.74	0	N	125	44.9	0.0	-3.0	0.0	0.0	44.9	0.0	0.4	0.0	0.0	5.5	0.0	0.0	-8.9
200	453162.82	5024716.62	4.74	0	N	250	56.4	0.0	-3.0	0.0	0.0	44.9	0.1	-0.7	0.0	0.0	6.9	0.0	0.0	2.2
200	453162.82	5024716.62	4.74	0	N	500	66.8	0.0	-3.0	0.0	0.0	44.9	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	11.8
200	453162.82	5024716.62	4.74	0	N	1000	67.0	0.0	-3.0	0.0	0.0	44.9	0.2	-1.5	0.0	0.0	10.5	0.0	0.0	9.9
200	453162.82	5024716.62	4.74	0	N	2000	65.2	0.0	-3.0	0.0	0.0	44.9	0.5	-1.5	0.0	0.0	13.0	0.0	0.0	5.3
200	453162.82	5024716.62	4.74	0	N	4000	59.0	0.0	-3.0	0.0	0.0	44.9	1.6	-1.5	0.0	0.0	15.6	0.0	0.0	-4.7
200	453162.82	5024716.62	4.74	0	N	8000	47.9	0.0	-3.0	0.0	0.0	44.9	5.8	-1.5	0.0	0.0	18.5	0.0	0.0	-22.8
200	453162.82	5024716.62	4.74	0	E	32	-39.4	0.0	-188.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-273.7
200	453162.82	5024716.62	4.74	0	E	63	34.8	0.0	-188.0	0.0	0.0	44.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-200.1
200	453162.82	5024716.62	4.74	0	E	125	44.9	0.0	-188.0	0.0	0.0	44.9	0.0	0.4	0.0	0.0	5.5	0.0	0.0	-193.9
200	453162.82	5024716.62	4.74	0	E	250	56.4	0.0	-188.0	0.0	0.0	44.9	0.1	-0.7	0.0	0.0	6.9	0.0	0.0	-182.8
200	453162.82	5024716.62	4.74	0	E	500	66.8	0.0	-188.0	0.0	0.0	44.9	0.1	-1.5	0.0	0.0	8.5	0.0	0.0	-173.2
200	453162.82	5024716.62	4.74	0	E	1000	67.0	0.0	-188.0	0.0	0.0	44.9	0.2	-1.5	0.0	0.0	10.5	0.0	0.0	-175.1
200	453162.82	5024716.62	4.74	0	E	2000	65.2	0.0	-188.0	0.0	0.0	44.9	0.5	-1.5	0.0	0.0	13.0	0.0	0.0	-179.6
200	453162.82	5024716.62	4.74	0	E	4000	59.0	0.0	-188.0	0.0	0.0	44.9	1.6	-1.5	0.0	0.0	15.6	0.0	0.0	-189.7
200	453162.82	5024716.62	4.74	0	E	8000	47.9	0.0	-188.0	0.0	0.0	44.9	5.8	-1.5	0.0	0.0	18.5	0.0	0.0	-207.8

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
11	453168.77	5024687.19	0.60	0	D	32	31.5	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	0.9
11	453168.77	5024687.19	0.60	0	D	63	45.7	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	14.9
11	453168.77	5024687.19	0.60	0	D	125	45.8	11.6	0.0	0.0	0.0	40.3	0.0	-0.8	0.0	0.0	5.3	0.0	0.0	12.6
11	453168.77	5024687.19	0.60	0	D	250	52.3	11.6	0.0	0.0	0.0	40.3	0.0	0.6	0.0	0.0	5.1	0.0	0.0	17.8
11	453168.77	5024687.19	0.60	0	D	500	55.7	11.6	0.0	0.0	0.0	40.3	0.1	1.1	0.0	0.0	5.4	0.0	0.0	20.4
11	453168.77	5024687.19	0.60	0	D	1000	60.9	11.6	0.0	0.0	0.0	40.3	0.1	-0.7	0.0	0.0	7.7	0.0	0.0	25.1
11	453168.77	5024687.19	0.60	0	D	2000	61.1	11.6	0.0	0.0	0.0	40.3	0.3	-1.5	0.0	0.0	9.4	0.0	0.0	24.2
11	453168.77	5024687.19	0.60	0	D	4000	60.9	11.6	0.0	0.0	0.0	40.3	1.0	-1.5	0.0	0.0	11.6	0.0	0.0	21.1
11	453168.77	5024687.19	0.60	0	D	8000	55.8	11.6	0.0	0.0	0.0	40.3	3.4	-1.5	0.0	0.0	14.1	0.0	0.0	11.0
11	453168.77	5024687.19	0.60	0	N	32	31.5	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	0.9
11	453168.77	5024687.19	0.60	0	N	63	45.7	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	14.9
11	453168.77	5024687.19	0.60	0	N	125	45.8	11.6	0.0	0.0	0.0	40.3	0.0	-0.8	0.0	0.0	5.3	0.0	0.0	12.6
11	453168.77	5024687.19	0.60	0	N	250	52.3	11.6	0.0	0.0	0.0	40.3	0.0	0.6	0.0	0.0	5.1	0.0	0.0	17.8
11	453168.77	5024687.19	0.60	0	N	500	55.7	11.6	0.0	0.0	0.0	40.3	0.1	1.1	0.0	0.0	5.4	0.0	0.0	20.4
11	453168.77	5024687.19	0.60	0	N	1000	60.9	11.6	0.0	0.0	0.0	40.3	0.1	-0.7	0.0	0.0	7.7	0.0	0.0	25.1
11	453168.77	5024687.19	0.60	0	N	2000	61.1	11.6	0.0	0.0	0.0	40.3	0.3	-1.5	0.0	0.0	9.4	0.0	0.0	24.2
11	453168.77	5024687.19	0.60	0	N	4000	60.9	11.6	0.0	0.0	0.0	40.3	1.0	-1.5	0.0	0.0	11.6	0.0	0.0	21.1
11	453168.77	5024687.19	0.60	0	N	8000	55.8	11.6	0.0	0.0	0.0	40.3	3.4	-1.5	0.0	0.0	14.1	0.0	0.0	11.0
11	453168.77	5024687.19	0.60	0	E	32	-83.9	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-114.6
11	453168.77	5024687.19	0.60	0	E	63	-69.7	11.6	0.0	0.0	0.0	40.3	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-100.5
11	453168.77	5024687.19	0.60	0	E	125	-69.6	11.6	0.0	0.0	0.0	40.3	0.0	-0.8	0.0	0.0	5.3	0.0	0.0	-102.9
11	453168.77	5024687.19	0.60	0	E	250	-63.1	11.6	0.0	0.0	0.0	40.3	0.0	0.6	0.0	0.0	5.1	0.0	0.0	-97.6
11	453168.77	5024687.19	0.60	0	E	500	-59.7	11.6	0.0	0.0	0.0	40.3	0.1	1.1	0.0	0.0	5.4	0.0	0.0	-95.0
11	453168.77	5024687.19	0.60	0	E	1000	-54.5	11.6	0.0	0.0	0.0	40.3	0.1	-0.7	0.0	0.0	7.7	0.0	0.0	-90.4

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
11	453168.77	5024687.19	0.60	0	E	2000	-54.3	11.6	0.0	0.0	0.0	40.3	0.3	-1.5	0.0	0.0	9.4	0.0	0.0	-91.3
11	453168.77	5024687.19	0.60	0	E	4000	-54.5	11.6	0.0	0.0	0.0	40.3	1.0	-1.5	0.0	0.0	11.6	0.0	0.0	-94.3
11	453168.77	5024687.19	0.60	0	E	8000	-59.6	11.6	0.0	0.0	0.0	40.3	3.4	-1.5	0.0	0.0	14.1	0.0	0.0	-104.4
22	453173.63	5024673.73	0.60	0	D	32	31.5	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	1.0
22	453173.63	5024673.73	0.60	0	D	63	45.7	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	15.1
22	453173.63	5024673.73	0.60	0	D	125	45.8	11.6	0.0	0.0	0.0	40.2	0.0	-0.8	0.0	0.0	5.2	0.0	0.0	12.7
22	453173.63	5024673.73	0.60	0	D	250	52.3	11.6	0.0	0.0	0.0	40.2	0.0	0.6	0.0	0.0	5.1	0.0	0.0	18.0
22	453173.63	5024673.73	0.60	0	D	500	55.7	11.6	0.0	0.0	0.0	40.2	0.1	1.1	0.0	0.0	5.3	0.0	0.0	20.6
22	453173.63	5024673.73	0.60	0	D	1000	60.9	11.6	0.0	0.0	0.0	40.2	0.1	-0.7	0.0	0.0	7.6	0.0	0.0	25.3
22	453173.63	5024673.73	0.60	0	D	2000	61.1	11.6	0.0	0.0	0.0	40.2	0.3	-1.5	0.0	0.0	9.3	0.0	0.0	24.4
22	453173.63	5024673.73	0.60	0	D	4000	60.9	11.6	0.0	0.0	0.0	40.2	0.9	-1.5	0.0	0.0	11.5	0.0	0.0	21.3
22	453173.63	5024673.73	0.60	0	D	8000	55.8	11.6	0.0	0.0	0.0	40.2	3.4	-1.5	0.0	0.0	14.0	0.0	0.0	11.3
22	453173.63	5024673.73	0.60	0	N	32	31.5	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	1.0
22	453173.63	5024673.73	0.60	0	N	63	45.7	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	15.1
22	453173.63	5024673.73	0.60	0	N	125	45.8	11.6	0.0	0.0	0.0	40.2	0.0	-0.8	0.0	0.0	5.2	0.0	0.0	12.7
22	453173.63	5024673.73	0.60	0	N	250	52.3	11.6	0.0	0.0	0.0	40.2	0.0	0.6	0.0	0.0	5.1	0.0	0.0	18.0
22	453173.63	5024673.73	0.60	0	N	500	55.7	11.6	0.0	0.0	0.0	40.2	0.1	1.1	0.0	0.0	5.3	0.0	0.0	20.6
22	453173.63	5024673.73	0.60	0	N	1000	60.9	11.6	0.0	0.0	0.0	40.2	0.1	-0.7	0.0	0.0	7.6	0.0	0.0	25.3
22	453173.63	5024673.73	0.60	0	N	2000	61.1	11.6	0.0	0.0	0.0	40.2	0.3	-1.5	0.0	0.0	9.3	0.0	0.0	24.4
22	453173.63	5024673.73	0.60	0	N	4000	60.9	11.6	0.0	0.0	0.0	40.2	0.9	-1.5	0.0	0.0	11.5	0.0	0.0	21.3
22	453173.63	5024673.73	0.60	0	N	8000	55.8	11.6	0.0	0.0	0.0	40.2	3.4	-1.5	0.0	0.0	14.0	0.0	0.0	11.3
22	453173.63	5024673.73	0.60	0	E	32	-83.9	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-114.4
22	453173.63	5024673.73	0.60	0	E	63	-69.7	11.6	0.0	0.0	0.0	40.2	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-100.4
22	453173.63	5024673.73	0.60	0	E	125	-69.6	11.6	0.0	0.0	0.0	40.2	0.0	-0.8	0.0	0.0	5.2	0.0	0.0	-102.7
22	453173.63	5024673.73	0.60	0	E	250	-63.1	11.6	0.0	0.0	0.0	40.2	0.0	0.6	0.0	0.0	5.1	0.0	0.0	-97.5
22	453173.63	5024673.73	0.60	0	E	500	-59.7	11.6	0.0	0.0	0.0	40.2	0.1	1.1	0.0	0.0	5.3	0.0	0.0	-94.8
22	453173.63	5024673.73	0.60	0	E	1000	-54.5	11.6	0.0	0.0	0.0	40.2	0.1	-0.7	0.0	0.0	7.6	0.0	0.0	-90.2
22	453173.63	5024673.73	0.60	0	E	2000	-54.3	11.6	0.0	0.0	0.0	40.2	0.3	-1.5	0.0	0.0	9.3	0.0	0.0	-91.1
22	453173.63	5024673.73	0.60	0	E	4000	-54.5	11.6	0.0	0.0	0.0	40.2	0.9	-1.5	0.0	0.0	11.5	0.0	0.0	-94.1
22	453173.63	5024673.73	0.60	0	E	8000	-59.6	11.6	0.0	0.0	0.0	40.2	3.4	-1.5	0.0	0.0	14.0	0.0	0.0	-104.1
31	453158.87	5024716.21	0.60	0	D	32	31.5	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-5.2
31	453158.87	5024716.21	0.60	0	D	63	45.7	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	8.0
31	453158.87	5024716.21	0.60	0	D	125	45.8	8.7	0.0	0.0	0.0	44.6	0.0	-0.5	0.0	0.0	6.1	0.0	0.0	4.3
31	453158.87	5024716.21	0.60	0	D	250	52.3	8.7	0.0	0.0	0.0	44.6	0.1	1.5	0.0	0.0	6.5	0.0	0.0	8.3
31	453158.87	5024716.21	0.60	0	D	500	55.7	8.7	0.0	0.0	0.0	44.6	0.1	2.2	0.0	0.0	8.0	0.0	0.0	9.6
31	453158.87	5024716.21	0.60	0	D	1000	60.9	8.7	0.0	0.0	0.0	44.6	0.2	-0.4	0.0	0.0	12.4	0.0	0.0	12.8
31	453158.87	5024716.21	0.60	0	D	2000	61.1	8.7	0.0	0.0	0.0	44.6	0.5	-1.5	0.0	0.0	15.1	0.0	0.0	11.2
31	453158.87	5024716.21	0.60	0	D	4000	60.9	8.7	0.0	0.0	0.0	44.6	1.6	-1.5	0.0	0.0	17.9	0.0	0.0	7.0
31	453158.87	5024716.21	0.60	0	D	8000	55.8	8.7	0.0	0.0	0.0	44.6	5.6	-1.5	0.0	0.0	19.6	0.0	0.0	-3.9
31	453158.87	5024716.21	0.60	0	N	32	31.5	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-5.2
31	453158.87	5024716.21	0.60	0	N	63	45.7	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	8.0
31	453158.87	5024716.21	0.60	0	N	125	45.8	8.7	0.0	0.0	0.0	44.6	0.0	-0.5	0.0	0.0	6.1	0.0	0.0	4.3
31	453158.87	5024716.21	0.60	0	N	250	52.3	8.7	0.0	0.0	0.0	44.6	0.1	1.5	0.0	0.0	6.5	0.0	0.0	8.3
31	453158.87	5024716.21	0.60	0	N	500	55.7	8.7	0.0	0.0	0.0	44.6	0.1	2.2	0.0	0.0	8.0	0.0	0.0	9.6
31	453158.87	5024716.21	0.60	0	N	1000	60.9	8.7	0.0	0.0	0.0	44.6	0.2	-0.4	0.0	0.0	12.4	0.0	0.0	12.8
31	453158.87	5024716.21	0.60	0	N	2000	61.1	8.7	0.0	0.0	0.0	44.6	0.5	-1.5	0.0	0.0	15.1	0.0	0.0	11.2
31	453158.87	5024716.21	0.60	0	N	4000	60.9	8.7	0.0	0.0	0.0	44.6	1.6	-1.5	0.0	0.0	17.9	0.0	0.0	7.0
31	453158.87	5024716.21	0.60	0	N	8000	55.8	8.7	0.0	0.0	0.0	44.6	5.6	-1.5	0.0	0.0	19.6	0.0	0.0	-3.9
31	453158.87	5024716.21	0.60	0	E	32	-83.9	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-120.6
31	453158.87	5024716.21	0.60	0	E	63	-69.7	8.7	0.0	0.0	0.0	44.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-107.5
31	453158.87	5024716.21	0.60	0	E	125	-69.6	8.7	0.0	0.0	0.0	44.6	0.0	-0.5	0.0	0.0	6.1	0.0	0.0	-111.2
31	453158.87	5024716.21	0.60	0	E	250	-63.1	8.7	0.0	0.0	0.0	44.6	0.1	1.5	0.0	0.0	6.5	0.0	0.0	-107.1
31	453158.87	5024716.21	0.60	0	E	500	-59.7	8.7	0.0	0.0	0.0	44.6	0.1	2.2	0.0	0.0	8.0	0.0	0.0	

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A))
39	453161.37	5024708.53	0.60	0	D	2000	61.1	9.4	0.0	0.0	0.0	43.4	0.4	-1.5	0.0	0.0	15.7	0.0	0.0	12.6
39	453161.37	5024708.53	0.60	0	D	4000	60.9	9.4	0.0	0.0	0.0	43.4	1.4	-1.5	0.0	0.0	18.5	0.0	0.0	8.5
39	453161.37	5024708.53	0.60	0	D	8000	55.8	9.4	0.0	0.0	0.0	43.4	4.9	-1.5	0.0	0.0	19.6	0.0	0.0	-1.1
39	453161.37	5024708.53	0.60	0	N	32	31.5	9.4	0.0	0.0	0.0	43.4	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-3.2
39	453161.37	5024708.53	0.60	0	N	63	45.7	9.4	0.0	0.0	0.0	43.4	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	9.9
39	453161.37	5024708.53	0.60	0	N	125	45.8	9.4	0.0	0.0	0.0	43.4	0.0	-0.6	0.0	0.0	6.3	0.0	0.0	6.1
39	453161.37	5024708.53	0.60	0	N	250	52.3	9.4	0.0	0.0	0.0	43.4	0.0	1.2	0.0	0.0	7.1	0.0	0.0	10.0
39	453161.37	5024708.53	0.60	0	N	500	55.7	9.4	0.0	0.0	0.0	43.4	0.1	1.8	0.0	0.0	8.8	0.0	0.0	11.0
39	453161.37	5024708.53	0.60	0	N	1000	60.9	9.4	0.0	0.0	0.0	43.4	0.2	-0.5	0.0	0.0	12.9	0.0	0.0	14.4
39	453161.37	5024708.53	0.60	0	N	2000	61.1	9.4	0.0	0.0	0.0	43.4	0.4	-1.5	0.0	0.0	15.7	0.0	0.0	12.6
39	453161.37	5024708.53	0.60	0	N	4000	60.9	9.4	0.0	0.0	0.0	43.4	1.4	-1.5	0.0	0.0	18.5	0.0	0.0	8.5
39	453161.37	5024708.53	0.60	0	N	8000	55.8	9.4	0.0	0.0	0.0	43.4	4.9	-1.5	0.0	0.0	19.6	0.0	0.0	-1.1
39	453161.37	5024708.53	0.60	0	E	32	-83.9	9.4	0.0	0.0	0.0	43.4	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-118.7
39	453161.37	5024708.53	0.60	0	E	63	-69.7	9.4	0.0	0.0	0.0	43.4	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-105.6
39	453161.37	5024708.53	0.60	0	E	125	-69.6	9.4	0.0	0.0	0.0	43.4	0.0	-0.6	0.0	0.0	6.3	0.0	0.0	-109.3
39	453161.37	5024708.53	0.60	0	E	250	-63.1	9.4	0.0	0.0	0.0	43.4	0.0	1.2	0.0	0.0	7.1	0.0	0.0	-105.5
39	453161.37	5024708.53	0.60	0	E	500	-59.7	9.4	0.0	0.0	0.0	43.4	0.1	1.8	0.0	0.0	8.8	0.0	0.0	-104.4
39	453161.37	5024708.53	0.60	0	E	1000	-54.5	9.4	0.0	0.0	0.0	43.4	0.2	-0.5	0.0	0.0	12.9	0.0	0.0	-101.1
39	453161.37	5024708.53	0.60	0	E	2000	-54.3	9.4	0.0	0.0	0.0	43.4	0.4	-1.5	0.0	0.0	15.7	0.0	0.0	-102.9
39	453161.37	5024708.53	0.60	0	E	4000	-54.5	9.4	0.0	0.0	0.0	43.4	1.4	-1.5	0.0	0.0	18.5	0.0	0.0	-106.9
39	453161.37	5024708.53	0.60	0	E	8000	-59.6	9.4	0.0	0.0	0.0	43.4	4.9	-1.5	0.0	0.0	19.6	0.0	0.0	-116.6
47	453162.91	5024703.83	0.60	0	D	32	31.5	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	4.1	0.0	0.0	-11.5
47	453162.91	5024703.83	0.60	0	D	63	45.7	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	1.5
47	453162.91	5024703.83	0.60	0	D	125	45.8	0.6	0.0	0.0	0.0	42.6	0.0	-0.6	0.0	0.0	6.7	0.0	0.0	-2.2
47	453162.91	5024703.83	0.60	0	D	250	52.3	0.6	0.0	0.0	0.0	42.6	0.0	1.1	0.0	0.0	7.7	0.0	0.0	1.6
47	453162.91	5024703.83	0.60	0	D	500	55.7	0.6	0.0	0.0	0.0	42.6	0.1	1.7	0.0	0.0	9.4	0.0	0.0	2.6
47	453162.91	5024703.83	0.60	0	D	1000	60.9	0.6	0.0	0.0	0.0	42.6	0.1	-0.5	0.0	0.0	13.5	0.0	0.0	5.9
47	453162.91	5024703.83	0.60	0	D	2000	61.1	0.6	0.0	0.0	0.0	42.6	0.4	-1.5	0.0	0.0	16.2	0.0	0.0	4.0
47	453162.91	5024703.83	0.60	0	D	4000	60.9	0.6	0.0	0.0	0.0	42.6	1.2	-1.5	0.0	0.0	19.1	0.0	0.0	0.1
47	453162.91	5024703.83	0.60	0	D	8000	55.8	0.6	0.0	0.0	0.0	42.6	4.5	-1.5	0.0	0.0	19.7	0.0	0.0	-8.8
47	453162.91	5024703.83	0.60	0	N	32	31.5	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	4.1	0.0	0.0	-11.5
47	453162.91	5024703.83	0.60	0	N	63	45.7	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	1.5
47	453162.91	5024703.83	0.60	0	N	125	45.8	0.6	0.0	0.0	0.0	42.6	0.0	-0.6	0.0	0.0	6.7	0.0	0.0	-2.2
47	453162.91	5024703.83	0.60	0	N	250	52.3	0.6	0.0	0.0	0.0	42.6	0.0	1.1	0.0	0.0	7.7	0.0	0.0	1.6
47	453162.91	5024703.83	0.60	0	N	500	55.7	0.6	0.0	0.0	0.0	42.6	0.1	1.7	0.0	0.0	9.4	0.0	0.0	2.6
47	453162.91	5024703.83	0.60	0	N	1000	60.9	0.6	0.0	0.0	0.0	42.6	0.1	-0.5	0.0	0.0	13.5	0.0	0.0	5.9
47	453162.91	5024703.83	0.60	0	N	2000	61.1	0.6	0.0	0.0	0.0	42.6	0.4	-1.5	0.0	0.0	16.2	0.0	0.0	4.0
47	453162.91	5024703.83	0.60	0	N	4000	60.9	0.6	0.0	0.0	0.0	42.6	1.2	-1.5	0.0	0.0	19.1	0.0	0.0	0.1
47	453162.91	5024703.83	0.60	0	N	8000	55.8	0.6	0.0	0.0	0.0	42.6	4.5	-1.5	0.0	0.0	19.7	0.0	0.0	-8.8
47	453162.91	5024703.83	0.60	0	E	32	-83.9	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	4.1	0.0	0.0	-127.0
47	453162.91	5024703.83	0.60	0	E	63	-69.7	0.6	0.0	0.0	0.0	42.6	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	-113.9
47	453162.91	5024703.83	0.60	0	E	125	-69.6	0.6	0.0	0.0	0.0	42.6	0.0	-0.6	0.0	0.0	6.7	0.0	0.0	-117.7
47	453162.91	5024703.83	0.60	0	E	250	-63.1	0.6	0.0	0.0	0.0	42.6	0.0	1.1	0.0	0.0	7.7	0.0	0.0	-113.9
47	453162.91	5024703.83	0.60	0	E	500	-59.7	0.6	0.0	0.0	0.0	42.6	0.1	1.7	0.0	0.0	9.4	0.0	0.0	-112.8
47	453162.91	5024703.83	0.60	0	E	1000	-54.5	0.6	0.0	0.0	0.0	42.6	0.1	-0.5	0.0	0.0	13.5	0.0	0.0	-109.5
47	453162.91	5024703.83	0.60	0	E	2000	-54.3	0.6	0.0	0.0	0.0	42.6	0.4	-1.5	0.0	0.0	16.2	0.0	0.0	-111.4
47	453162.91	5024703.83	0.60	0	E	4000	-54.5	0.6	0.0	0.0	0.0	42.6	1.2	-1.5	0.0	0.0	19.1	0.0	0.0	-115.4
47	453162.91	5024703.83	0.60	0	E	8000	-59.6	0.6	0.0	0.0	0.0	42.6	4.5	-1.5	0.0	0.0	19.7	0.0	0.0	-124.2
55	453176.05	5024666.39	0.60	0	D	32	31.5	0.8	0.0	0.0	0.0	40.9	0.0	-3.0	0.0	0.0	3.1	0.0	0.0	-8.6
55	453176.05	5024666.39	0.60	0	D	63	45.7	0.8	0.0	0.0	0.0	40.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	4.9
55	453176.05	5024666.39	0.60	0	D	125	45.8	0.8	0.0	0.0	0.0	40.9	0.0	-0.8	0.0	0.0	4.3	0.0	0.0	2.1
55	453176.05	5024666.39	0.60	0	D	250	52.3	0.8	0.0	0.0	0.0	40.9	0.0	0.7	0.0	0.0	4.4	0.0	0.0	7.0
55	453176.05	5024666.39	0.60	0	D	500	55.7	0.8	0.0	0.0	0.0	40.9	0.1	1.2	0.0	0.0	4.9	0.0	0.0	9.4
55	453176.05	5024666.39	0.60																	

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
55	453176.05	5024666.39	0.60	0	N	2000	61.1	0.8	0.0	0.0	0.0	40.9	0.3	-1.5	0.0	0.0	9.1	0.0	0.0	13.1
55	453176.05	5024666.39	0.60	0	N	4000	60.9	0.8	0.0	0.0	0.0	40.9	1.0	-1.5	0.0	0.0	11.3	0.0	0.0	10.0
55	453176.05	5024666.39	0.60	0	N	8000	55.8	0.8	0.0	0.0	0.0	40.9	3.7	-1.5	0.0	0.0	13.8	0.0	0.0	-0.3
55	453176.05	5024666.39	0.60	0	E	32	-83.9	0.8	0.0	0.0	0.0	40.9	0.0	-3.0	0.0	0.0	3.1	0.0	0.0	-124.1
55	453176.05	5024666.39	0.60	0	E	63	-69.7	0.8	0.0	0.0	0.0	40.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-110.5
55	453176.05	5024666.39	0.60	0	E	125	-69.6	0.8	0.0	0.0	0.0	40.9	0.0	-0.8	0.0	0.0	4.3	0.0	0.0	-113.3
55	453176.05	5024666.39	0.60	0	E	250	-63.1	0.8	0.0	0.0	0.0	40.9	0.0	0.7	0.0	0.0	4.4	0.0	0.0	-108.4
55	453176.05	5024666.39	0.60	0	E	500	-59.7	0.8	0.0	0.0	0.0	40.9	0.1	1.2	0.0	0.0	4.9	0.0	0.0	-106.0
55	453176.05	5024666.39	0.60	0	E	1000	-54.5	0.8	0.0	0.0	0.0	40.9	0.1	-0.7	0.0	0.0	7.3	0.0	0.0	-101.4
55	453176.05	5024666.39	0.60	0	E	2000	-54.3	0.8	0.0	0.0	0.0	40.9	0.3	-1.5	0.0	0.0	9.1	0.0	0.0	-102.3
55	453176.05	5024666.39	0.60	0	E	4000	-54.5	0.8	0.0	0.0	0.0	40.9	1.0	-1.5	0.0	0.0	11.3	0.0	0.0	-105.4
55	453176.05	5024666.39	0.60	0	E	8000	-59.6	0.8	0.0	0.0	0.0	40.9	3.7	-1.5	0.0	0.0	13.8	0.0	0.0	-115.7
64	453176.01	5024662.61	0.60	0	D	32	31.5	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.2	0.0	0.0	-0.7
64	453176.01	5024662.61	0.60	0	D	63	45.7	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.6	0.0	0.0	13.1
64	453176.01	5024662.61	0.60	0	D	125	45.8	8.0	0.0	0.0	0.0	41.1	0.0	-0.7	0.0	0.0	3.0	0.0	0.0	10.5
64	453176.01	5024662.61	0.60	0	D	250	52.3	8.0	0.0	0.0	0.0	41.1	0.0	0.8	0.0	0.0	3.0	0.0	0.0	15.5
64	453176.01	5024662.61	0.60	0	D	500	55.7	8.0	0.0	0.0	0.0	41.1	0.1	1.3	0.0	0.0	3.1	0.0	0.0	18.3
64	453176.01	5024662.61	0.60	0	D	1000	60.9	8.0	0.0	0.0	0.0	41.1	0.1	-0.7	0.0	0.0	4.7	0.0	0.0	23.7
64	453176.01	5024662.61	0.60	0	D	2000	61.1	8.0	0.0	0.0	0.0	41.1	0.3	-1.5	0.0	0.0	5.3	0.0	0.0	24.0
64	453176.01	5024662.61	0.60	0	D	4000	60.9	8.0	0.0	0.0	0.0	41.1	1.0	-1.5	0.0	0.0	6.2	0.0	0.0	22.2
64	453176.01	5024662.61	0.60	0	D	8000	55.8	8.0	0.0	0.0	0.0	41.1	3.7	-1.5	0.0	0.0	7.4	0.0	0.0	13.2
64	453176.01	5024662.61	0.60	0	N	32	31.5	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.2	0.0	0.0	-0.7
64	453176.01	5024662.61	0.60	0	N	63	45.7	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.6	0.0	0.0	13.1
64	453176.01	5024662.61	0.60	0	N	125	45.8	8.0	0.0	0.0	0.0	41.1	0.0	-0.7	0.0	0.0	3.0	0.0	0.0	10.5
64	453176.01	5024662.61	0.60	0	N	250	52.3	8.0	0.0	0.0	0.0	41.1	0.0	0.8	0.0	0.0	3.0	0.0	0.0	15.5
64	453176.01	5024662.61	0.60	0	N	500	55.7	8.0	0.0	0.0	0.0	41.1	0.1	1.3	0.0	0.0	3.1	0.0	0.0	18.3
64	453176.01	5024662.61	0.60	0	N	1000	60.9	8.0	0.0	0.0	0.0	41.1	0.1	-0.7	0.0	0.0	4.7	0.0	0.0	23.7
64	453176.01	5024662.61	0.60	0	N	2000	61.1	8.0	0.0	0.0	0.0	41.1	0.3	-1.5	0.0	0.0	5.3	0.0	0.0	24.0
64	453176.01	5024662.61	0.60	0	N	4000	60.9	8.0	0.0	0.0	0.0	41.1	1.0	-1.5	0.0	0.0	6.2	0.0	0.0	22.2
64	453176.01	5024662.61	0.60	0	N	8000	55.8	8.0	0.0	0.0	0.0	41.1	3.7	-1.5	0.0	0.0	7.4	0.0	0.0	13.2
64	453176.01	5024662.61	0.60	0	E	32	-83.9	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.2	0.0	0.0	-116.2
64	453176.01	5024662.61	0.60	0	E	63	-69.7	8.0	0.0	0.0	0.0	41.1	0.0	-3.0	0.0	0.0	2.6	0.0	0.0	-102.3
64	453176.01	5024662.61	0.60	0	E	125	-69.6	8.0	0.0	0.0	0.0	41.1	0.0	-0.7	0.0	0.0	3.0	0.0	0.0	-105.0
64	453176.01	5024662.61	0.60	0	E	250	-63.1	8.0	0.0	0.0	0.0	41.1	0.0	0.8	0.0	0.0	3.0	0.0	0.0	-100.0
64	453176.01	5024662.61	0.60	0	E	500	-59.7	8.0	0.0	0.0	0.0	41.1	0.1	1.3	0.0	0.0	3.1	0.0	0.0	-97.2
64	453176.01	5024662.61	0.60	0	E	1000	-54.5	8.0	0.0	0.0	0.0	41.1	0.1	-0.7	0.0	0.0	4.7	0.0	0.0	-91.7
64	453176.01	5024662.61	0.60	0	E	2000	-54.3	8.0	0.0	0.0	0.0	41.1	0.3	-1.5	0.0	0.0	5.3	0.0	0.0	-91.5
64	453176.01	5024662.61	0.60	0	E	4000	-54.5	8.0	0.0	0.0	0.0	41.1	1.0	-1.5	0.0	0.0	6.2	0.0	0.0	-93.2
64	453176.01	5024662.61	0.60	0	E	8000	-59.6	8.0	0.0	0.0	0.0	41.1	3.7	-1.5	0.0	0.0	7.4	0.0	0.0	-102.2
66	453175.96	5024658.10	0.60	0	D	32	31.5	4.2	0.0	0.0	0.0	41.4	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	-2.7
66	453175.96	5024658.10	0.60	0	D	63	45.7	4.2	0.0	0.0	0.0	41.4	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	11.5
66	453175.96	5024658.10	0.60	0	D	125	45.8	4.2	0.0	0.0	0.0	41.4	0.0	-0.7	0.0	0.0	0.0	0.0	0.0	9.3
66	453175.96	5024658.10	0.60	0	D	250	52.3	4.2	0.0	0.0	0.0	41.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	14.2
66	453175.96	5024658.10	0.60	0	D	500	55.7	4.2	0.0	0.0	0.0	41.4	0.1	1.4	0.0	0.0	0.0	0.0	0.0	17.1
66	453175.96	5024658.10	0.60	0	D	1000	60.9	4.2	0.0	0.0	0.0	41.4	0.1	-0.6	0.0	0.0	0.0	0.0	0.0	24.2
66	453175.96	5024658.10	0.60	0	D	2000	61.1	4.2	0.0	0.0	0.0	41.4	0.3	-1.5	0.0	0.0	0.0	0.0	0.0	25.1
66	453175.96	5024658.10	0.60	0	D	4000	60.9	4.2	0.0	0.0	0.0	41.4	1.1	-1.5	0.0	0.0	0.0	0.0	0.0	24.1
66	453175.96	5024658.10	0.60	0	D	8000	55.8	4.2	0.0	0.0	0.0	41.4	3.9	-1.5	0.0	0.0	0.0	0.0	0.0	16.2
66	453175.96	5024658.10	0.60	0	N	32	31.5	4.2	0.0	0.0	0.0	41.4	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	-2.7
66	453175.96	5024658.10	0.60	0	N	63	45.7	4.2	0.0	0.0	0.0	41.4	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	11.5
66	453175.96	5024658.10	0.60	0	N	125	45.8	4.2	0.0	0.0	0.0	41.4	0.0	-0.7	0.0	0.0	0.0	0.0	0.0	9.3
66	453175.96	5024658.10	0.60	0	N	250	52.3	4.2	0.0	0.0	0.0	41.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	14.2
66	453175.96	5024658.10	0.60	0	N	500	55.7	4.2	0.0	0.0	0.0	41.4	0.1	1.4	0.0	0.0	0.0	0.0	0.0	17.1
66	453175.96	5024658.10	0.60</																	

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
66	453175.96	5024658.10	0.60	0	E	2000	-54.3	4.2	0.0	0.0	0.0	41.4	0.3	-1.5	0.0	0.0	0.0	0.0	0.0	-90.4
66	453175.96	5024658.10	0.60	0	E	4000	-54.5	4.2	0.0	0.0	0.0	41.4	1.1	-1.5	0.0	0.0	0.0	0.0	0.0	-91.3
66	453175.96	5024658.10	0.60	0	E	8000	-59.6	4.2	0.0	0.0	0.0	41.4	3.9	-1.5	0.0	0.0	0.0	0.0	0.0	-99.2
68	453165.38	5024696.82	0.60	0	D	32	31.5	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-4.0
68	453165.38	5024696.82	0.60	0	D	63	45.7	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	10.1
68	453165.38	5024696.82	0.60	0	D	125	45.8	7.9	0.0	0.0	0.0	41.5	0.0	-0.7	0.0	0.0	5.2	0.0	0.0	7.7
68	453165.38	5024696.82	0.60	0	D	250	52.3	7.9	0.0	0.0	0.0	41.5	0.0	0.9	0.0	0.0	4.7	0.0	0.0	13.1
68	453165.38	5024696.82	0.60	0	D	500	55.7	7.9	0.0	0.0	0.0	41.5	0.1	1.4	0.0	0.0	4.9	0.0	0.0	15.8
68	453165.38	5024696.82	0.60	0	D	1000	60.9	7.9	0.0	0.0	0.0	41.5	0.1	-0.6	0.0	0.0	7.4	0.0	0.0	20.4
68	453165.38	5024696.82	0.60	0	D	2000	61.1	7.9	0.0	0.0	0.0	41.5	0.3	-1.5	0.0	0.0	9.0	0.0	0.0	19.7
68	453165.38	5024696.82	0.60	0	D	4000	60.9	7.9	0.0	0.0	0.0	41.5	1.1	-1.5	0.0	0.0	11.1	0.0	0.0	16.6
68	453165.38	5024696.82	0.60	0	D	8000	55.8	7.9	0.0	0.0	0.0	41.5	3.9	-1.5	0.0	0.0	13.5	0.0	0.0	6.2
68	453165.38	5024696.82	0.60	0	N	32	31.5	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-4.0
68	453165.38	5024696.82	0.60	0	N	63	45.7	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	10.1
68	453165.38	5024696.82	0.60	0	N	125	45.8	7.9	0.0	0.0	0.0	41.5	0.0	-0.7	0.0	0.0	5.2	0.0	0.0	7.7
68	453165.38	5024696.82	0.60	0	N	250	52.3	7.9	0.0	0.0	0.0	41.5	0.0	0.9	0.0	0.0	4.7	0.0	0.0	13.1
68	453165.38	5024696.82	0.60	0	N	500	55.7	7.9	0.0	0.0	0.0	41.5	0.1	1.4	0.0	0.0	4.9	0.0	0.0	15.8
68	453165.38	5024696.82	0.60	0	N	1000	60.9	7.9	0.0	0.0	0.0	41.5	0.1	-0.6	0.0	0.0	7.4	0.0	0.0	20.4
68	453165.38	5024696.82	0.60	0	N	2000	61.1	7.9	0.0	0.0	0.0	41.5	0.3	-1.5	0.0	0.0	9.0	0.0	0.0	19.7
68	453165.38	5024696.82	0.60	0	N	4000	60.9	7.9	0.0	0.0	0.0	41.5	1.1	-1.5	0.0	0.0	11.1	0.0	0.0	16.6
68	453165.38	5024696.82	0.60	0	N	8000	55.8	7.9	0.0	0.0	0.0	41.5	3.9	-1.5	0.0	0.0	13.5	0.0	0.0	6.2
68	453165.38	5024696.82	0.60	0	E	32	-83.9	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-119.4
68	453165.38	5024696.82	0.60	0	E	63	-69.7	7.9	0.0	0.0	0.0	41.5	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-105.4
68	453165.38	5024696.82	0.60	0	E	125	-69.6	7.9	0.0	0.0	0.0	41.5	0.0	-0.7	0.0	0.0	5.2	0.0	0.0	-107.8
68	453165.38	5024696.82	0.60	0	E	250	-63.1	7.9	0.0	0.0	0.0	41.5	0.0	0.9	0.0	0.0	4.7	0.0	0.0	-102.4
68	453165.38	5024696.82	0.60	0	E	500	-59.7	7.9	0.0	0.0	0.0	41.5	0.1	1.4	0.0	0.0	4.9	0.0	0.0	-99.7
68	453165.38	5024696.82	0.60	0	E	1000	-54.5	7.9	0.0	0.0	0.0	41.5	0.1	-0.6	0.0	0.0	7.4	0.0	0.0	-95.0
68	453165.38	5024696.82	0.60	0	E	2000	-54.3	7.9	0.0	0.0	0.0	41.5	0.3	-1.5	0.0	0.0	9.0	0.0	0.0	-95.8
68	453165.38	5024696.82	0.60	0	E	4000	-54.5	7.9	0.0	0.0	0.0	41.5	1.1	-1.5	0.0	0.0	11.1	0.0	0.0	-98.8
68	453165.38	5024696.82	0.60	0	E	8000	-59.6	7.9	0.0	0.0	0.0	41.5	3.9	-1.5	0.0	0.0	13.5	0.0	0.0	-109.2
74	453156.26	5024726.01	0.60	0	D	32	31.5	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-9.3
74	453156.26	5024726.01	0.60	0	D	63	45.7	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	4.1
74	453156.26	5024726.01	0.60	0	D	125	45.8	6.3	0.0	0.0	0.0	46.1	0.0	-0.4	0.0	0.0	5.9	0.0	0.0	0.5
74	453156.26	5024726.01	0.60	0	D	250	52.3	6.3	0.0	0.0	0.0	46.1	0.1	1.8	0.0	0.0	5.6	0.0	0.0	5.0
74	453156.26	5024726.01	0.60	0	D	500	55.7	6.3	0.0	0.0	0.0	46.1	0.1	2.5	0.0	0.0	6.7	0.0	0.0	6.6
74	453156.26	5024726.01	0.60	0	D	1000	60.9	6.3	0.0	0.0	0.0	46.1	0.2	-0.3	0.0	0.0	11.3	0.0	0.0	9.8
74	453156.26	5024726.01	0.60	0	D	2000	61.1	6.3	0.0	0.0	0.0	46.1	0.6	-1.5	0.0	0.0	13.9	0.0	0.0	8.4
74	453156.26	5024726.01	0.60	0	D	4000	60.9	6.3	0.0	0.0	0.0	46.1	1.9	-1.5	0.0	0.0	16.6	0.0	0.0	4.1
74	453156.26	5024726.01	0.60	0	D	8000	55.8	6.3	0.0	0.0	0.0	46.1	6.7	-1.5	0.0	0.0	19.5	0.0	0.0	-8.7
74	453156.26	5024726.01	0.60	0	N	32	31.5	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-9.3
74	453156.26	5024726.01	0.60	0	N	63	45.7	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	4.1
74	453156.26	5024726.01	0.60	0	N	125	45.8	6.3	0.0	0.0	0.0	46.1	0.0	-0.4	0.0	0.0	5.9	0.0	0.0	0.5
74	453156.26	5024726.01	0.60	0	N	250	52.3	6.3	0.0	0.0	0.0	46.1	0.1	1.8	0.0	0.0	5.6	0.0	0.0	5.0
74	453156.26	5024726.01	0.60	0	N	500	55.7	6.3	0.0	0.0	0.0	46.1	0.1	2.5	0.0	0.0	6.7	0.0	0.0	6.6
74	453156.26	5024726.01	0.60	0	N	1000	60.9	6.3	0.0	0.0	0.0	46.1	0.2	-0.3	0.0	0.0	11.3	0.0	0.0	9.8
74	453156.26	5024726.01	0.60	0	N	2000	61.1	6.3	0.0	0.0	0.0	46.1	0.6	-1.5	0.0	0.0	13.9	0.0	0.0	8.4
74	453156.26	5024726.01	0.60	0	N	4000	60.9	6.3	0.0	0.0	0.0	46.1	1.9	-1.5	0.0	0.0	16.6	0.0	0.0	4.1
74	453156.26	5024726.01	0.60	0	N	8000	55.8	6.3	0.0	0.0	0.0	46.1	6.7	-1.5	0.0	0.0	19.5	0.0	0.0	-8.7
74	453156.26	5024726.01	0.60	0	E	32	-83.9	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-124.7
74	453156.26	5024726.01	0.60	0	E	63	-69.7	6.3	0.0	0.0	0.0	46.1	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-111.4
74	453156.26	5024726.01	0.60	0	E	125	-69.6	6.3	0.0	0.0	0.0	46.1	0.0	-0.4	0.0	0.0	5.9	0.0	0.0	-114.9
74	453156.26	5024726.01	0.60	0	E	250	-63.1	6.3	0.0	0.0	0.0	46.1	0.1	1.8	0.0	0.0	5.6	0.0	0.0	-110.4
74	453156.26	5024726.01	0.60	0	E	500	-59.7	6.3	0.0	0.0	0.0	46.1	0.1	2.5	0.0	0.0	6.7	0.0	0.0	-108.9
74	453156.26	5024726.01	0.60	0	E	1000														

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
84	453157.23	5024721.84	0.60	0	D	2000	61.1	6.4	0.0	0.0	0.0	45.5	0.5	-1.5	0.0	0.0	14.5	0.0	0.0	8.5
84	453157.23	5024721.84	0.60	0	D	4000	60.9	6.4	0.0	0.0	0.0	45.5	1.7	-1.5	0.0	0.0	17.3	0.0	0.0	4.2
84	453157.23	5024721.84	0.60	0	D	8000	55.8	6.4	0.0	0.0	0.0	45.5	6.2	-1.5	0.0	0.0	19.7	0.0	0.0	-7.7
84	453157.23	5024721.84	0.60	0	N	32	31.5	6.4	0.0	0.0	0.0	45.5	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-8.5
84	453157.23	5024721.84	0.60	0	N	63	45.7	6.4	0.0	0.0	0.0	45.5	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	4.7
84	453157.23	5024721.84	0.60	0	N	125	45.8	6.4	0.0	0.0	0.0	45.5	0.0	-0.4	0.0	0.0	6.0	0.0	0.0	1.1
84	453157.23	5024721.84	0.60	0	N	250	52.3	6.4	0.0	0.0	0.0	45.5	0.1	1.7	0.0	0.0	6.1	0.0	0.0	5.4
84	453157.23	5024721.84	0.60	0	N	500	55.7	6.4	0.0	0.0	0.0	45.5	0.1	2.4	0.0	0.0	7.3	0.0	0.0	6.8
84	453157.23	5024721.84	0.60	0	N	1000	60.9	6.4	0.0	0.0	0.0	45.5	0.2	-0.3	0.0	0.0	11.9	0.0	0.0	10.0
84	453157.23	5024721.84	0.60	0	N	2000	61.1	6.4	0.0	0.0	0.0	45.5	0.5	-1.5	0.0	0.0	14.5	0.0	0.0	8.5
84	453157.23	5024721.84	0.60	0	N	4000	60.9	6.4	0.0	0.0	0.0	45.5	1.7	-1.5	0.0	0.0	17.3	0.0	0.0	4.2
84	453157.23	5024721.84	0.60	0	N	8000	55.8	6.4	0.0	0.0	0.0	45.5	6.2	-1.5	0.0	0.0	19.7	0.0	0.0	-7.7
84	453157.23	5024721.84	0.60	0	E	32	-83.9	6.4	0.0	0.0	0.0	45.5	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-124.0
84	453157.23	5024721.84	0.60	0	E	63	-69.7	6.4	0.0	0.0	0.0	45.5	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-110.7
84	453157.23	5024721.84	0.60	0	E	125	-69.6	6.4	0.0	0.0	0.0	45.5	0.0	-0.4	0.0	0.0	6.0	0.0	0.0	-114.4
84	453157.23	5024721.84	0.60	0	E	250	-63.1	6.4	0.0	0.0	0.0	45.5	0.1	1.7	0.0	0.0	6.1	0.0	0.0	-110.0
84	453157.23	5024721.84	0.60	0	E	500	-59.7	6.4	0.0	0.0	0.0	45.5	0.1	2.4	0.0	0.0	7.3	0.0	0.0	-108.7
84	453157.23	5024721.84	0.60	0	E	1000	-54.5	6.4	0.0	0.0	0.0	45.5	0.2	-0.3	0.0	0.0	11.9	0.0	0.0	-105.4
84	453157.23	5024721.84	0.60	0	E	2000	-54.3	6.4	0.0	0.0	0.0	45.5	0.5	-1.5	0.0	0.0	14.5	0.0	0.0	-107.0
84	453157.23	5024721.84	0.60	0	E	4000	-54.5	6.4	0.0	0.0	0.0	45.5	1.7	-1.5	0.0	0.0	17.3	0.0	0.0	-111.2
84	453157.23	5024721.84	0.60	0	E	8000	-59.6	6.4	0.0	0.0	0.0	45.5	6.2	-1.5	0.0	0.0	19.7	0.0	0.0	-123.2
93	453163.56	5024702.01	0.60	0	D	32	31.5	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-7.7
93	453163.56	5024702.01	0.60	0	D	63	45.7	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	5.4
93	453163.56	5024702.01	0.60	0	D	125	45.8	4.3	0.0	0.0	0.0	42.3	0.0	-0.7	0.0	0.0	6.8	0.0	0.0	1.6
93	453163.56	5024702.01	0.60	0	D	250	52.3	4.3	0.0	0.0	0.0	42.3	0.0	1.0	0.0	0.0	7.8	0.0	0.0	5.4
93	453163.56	5024702.01	0.60	0	D	500	55.7	4.3	0.0	0.0	0.0	42.3	0.1	1.6	0.0	0.0	9.6	0.0	0.0	6.4
93	453163.56	5024702.01	0.60	0	D	1000	60.9	4.3	0.0	0.0	0.0	42.3	0.1	-0.6	0.0	0.0	13.6	0.0	0.0	9.7
93	453163.56	5024702.01	0.60	0	D	2000	61.1	4.3	0.0	0.0	0.0	42.3	0.4	-1.5	0.0	0.0	16.4	0.0	0.0	7.9
93	453163.56	5024702.01	0.60	0	D	4000	60.9	4.3	0.0	0.0	0.0	42.3	1.2	-1.5	0.0	0.0	19.3	0.0	0.0	3.9
93	453163.56	5024702.01	0.60	0	D	8000	55.8	4.3	0.0	0.0	0.0	42.3	4.3	-1.5	0.0	0.0	19.7	0.0	0.0	-4.7
93	453163.56	5024702.01	0.60	0	N	32	31.5	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-7.7
93	453163.56	5024702.01	0.60	0	N	63	45.7	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	5.4
93	453163.56	5024702.01	0.60	0	N	125	45.8	4.3	0.0	0.0	0.0	42.3	0.0	-0.7	0.0	0.0	6.8	0.0	0.0	1.6
93	453163.56	5024702.01	0.60	0	N	250	52.3	4.3	0.0	0.0	0.0	42.3	0.0	1.0	0.0	0.0	7.8	0.0	0.0	5.4
93	453163.56	5024702.01	0.60	0	N	500	55.7	4.3	0.0	0.0	0.0	42.3	0.1	1.6	0.0	0.0	9.6	0.0	0.0	6.4
93	453163.56	5024702.01	0.60	0	N	1000	60.9	4.3	0.0	0.0	0.0	42.3	0.1	-0.6	0.0	0.0	13.6	0.0	0.0	9.7
93	453163.56	5024702.01	0.60	0	N	2000	61.1	4.3	0.0	0.0	0.0	42.3	0.4	-1.5	0.0	0.0	16.4	0.0	0.0	7.9
93	453163.56	5024702.01	0.60	0	N	4000	60.9	4.3	0.0	0.0	0.0	42.3	1.2	-1.5	0.0	0.0	19.3	0.0	0.0	3.9
93	453163.56	5024702.01	0.60	0	N	8000	55.8	4.3	0.0	0.0	0.0	42.3	4.3	-1.5	0.0	0.0	19.7	0.0	0.0	-4.7
93	453163.56	5024702.01	0.60	0	E	32	-83.9	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-123.1
93	453163.56	5024702.01	0.60	0	E	63	-69.7	4.3	0.0	0.0	0.0	42.3	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	-110.1
93	453163.56	5024702.01	0.60	0	E	125	-69.6	4.3	0.0	0.0	0.0	42.3	0.0	-0.7	0.0	0.0	6.8	0.0	0.0	-113.8
93	453163.56	5024702.01	0.60	0	E	250	-63.1	4.3	0.0	0.0	0.0	42.3	0.0	1.0	0.0	0.0	7.8	0.0	0.0	-110.0
93	453163.56	5024702.01	0.60	0	E	500	-59.7	4.3	0.0	0.0	0.0	42.3	0.1	1.6	0.0	0.0	9.6	0.0	0.0	-109.0
93	453163.56	5024702.01	0.60	0	E	1000	-54.5	4.3	0.0	0.0	0.0	42.3	0.1	-0.6	0.0	0.0	13.6	0.0	0.0	-105.7
93	453163.56	5024702.01	0.60	0	E	2000	-54.3	4.3	0.0	0.0	0.0	42.3	0.4	-1.5	0.0	0.0	16.4	0.0	0.0	-107.6
93	453163.56	5024702.01	0.60	0	E	4000	-54.5	4.3	0.0	0.0	0.0	42.3	1.2	-1.5	0.0	0.0	19.3	0.0	0.0	-111.5
93	453163.56	5024702.01	0.60	0	E	8000	-59.6	4.3	0.0	0.0	0.0	42.3	4.3	-1.5	0.0	0.0	19.7	0.0	0.0	-120.2
102	453164.22	5024700.23	0.60	0	D	32	31.5	0.5	0.0	0.0	0.0	42.0	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-11.9
102	453164.22	5024700.23	0.60	0	D	63	45.7	0.5	0.0	0.0	0.0	42.0	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	2.2
102	453164.22	5024700.23	0.60	0	D	125	45.8	0.5	0.0	0.0	0.0	42.0	0.0	-0.7	0.0	0.0	5.2	0.0	0.0	-0.2
102	453164.22	5024700.23	0.60	0	D	250	52.3	0.5	0.0	0.0	0.0	42.0	0.0	1.0	0.0	0.0	4.5	0.0	0.0	5.2
102	453164.22	5024700.23	0.60	0	D	500	55.7	0.5	0.0	0.0	0.0	42.0	0.1	1.5	0.0	0.0	4.6	0.0	0.0	7.9
102	453164.22	5024700.23																		

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
102	453164.22	5024700.23	0.60	0	N	2000	61.1	0.5	0.0	0.0	0.0	42.0	0.3	-1.5	0.0	0.0	8.7	0.0	0.0	12.0
102	453164.22	5024700.23	0.60	0	N	4000	60.9	0.5	0.0	0.0	0.0	42.0	1.2	-1.5	0.0	0.0	10.7	0.0	0.0	8.9
102	453164.22	5024700.23	0.60	0	N	8000	55.8	0.5	0.0	0.0	0.0	42.0	4.2	-1.5	0.0	0.0	13.1	0.0	0.0	-1.6
102	453164.22	5024700.23	0.60	0	E	32	-83.9	0.5	0.0	0.0	0.0	42.0	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-127.4
102	453164.22	5024700.23	0.60	0	E	63	-69.7	0.5	0.0	0.0	0.0	42.0	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-113.3
102	453164.22	5024700.23	0.60	0	E	125	-69.6	0.5	0.0	0.0	0.0	42.0	0.0	-0.7	0.0	0.0	5.2	0.0	0.0	-115.7
102	453164.22	5024700.23	0.60	0	E	250	-63.1	0.5	0.0	0.0	0.0	42.0	0.0	1.0	0.0	0.0	4.5	0.0	0.0	-110.2
102	453164.22	5024700.23	0.60	0	E	500	-59.7	0.5	0.0	0.0	0.0	42.0	0.1	1.5	0.0	0.0	4.6	0.0	0.0	-107.5
102	453164.22	5024700.23	0.60	0	E	1000	-54.5	0.5	0.0	0.0	0.0	42.0	0.1	-0.6	0.0	0.0	7.2	0.0	0.0	-102.8
102	453164.22	5024700.23	0.60	0	E	2000	-54.3	0.5	0.0	0.0	0.0	42.0	0.3	-1.5	0.0	0.0	8.7	0.0	0.0	-103.4
102	453164.22	5024700.23	0.60	0	E	4000	-54.5	0.5	0.0	0.0	0.0	42.0	1.2	-1.5	0.0	0.0	10.7	0.0	0.0	-106.5
102	453164.22	5024700.23	0.60	0	E	8000	-59.6	0.5	0.0	0.0	0.0	42.0	4.2	-1.5	0.0	0.0	13.1	0.0	0.0	-117.0
104	453153.24	5024739.08	0.60	0	D	32	31.5	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-6.5
104	453153.24	5024739.08	0.60	0	D	63	45.7	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	7.0
104	453153.24	5024739.08	0.60	0	D	125	45.8	10.7	0.0	0.0	0.0	47.8	0.0	-0.3	0.0	0.0	5.4	0.0	0.0	3.6
104	453153.24	5024739.08	0.60	0	D	250	52.3	10.7	0.0	0.0	0.0	47.8	0.1	2.1	0.0	0.0	4.3	0.0	0.0	8.7
104	453153.24	5024739.08	0.60	0	D	500	55.7	10.7	0.0	0.0	0.0	47.8	0.1	2.9	0.0	0.0	4.9	0.0	0.0	10.6
104	453153.24	5024739.08	0.60	0	D	1000	60.9	10.7	0.0	0.0	0.0	47.8	0.3	-0.1	0.0	0.0	9.7	0.0	0.0	14.1
104	453153.24	5024739.08	0.60	0	D	2000	61.1	10.7	0.0	0.0	0.0	47.8	0.7	-1.5	0.0	0.0	11.9	0.0	0.0	12.9
104	453153.24	5024739.08	0.60	0	D	4000	60.9	10.7	0.0	0.0	0.0	47.8	2.3	-1.5	0.0	0.0	14.5	0.0	0.0	8.5
104	453153.24	5024739.08	0.60	0	D	8000	55.8	10.7	0.0	0.0	0.0	47.8	8.1	-1.5	0.0	0.0	17.3	0.0	0.0	-5.2
104	453153.24	5024739.08	0.60	0	N	32	31.5	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-6.5
104	453153.24	5024739.08	0.60	0	N	63	45.7	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	7.0
104	453153.24	5024739.08	0.60	0	N	125	45.8	10.7	0.0	0.0	0.0	47.8	0.0	-0.3	0.0	0.0	5.4	0.0	0.0	3.6
104	453153.24	5024739.08	0.60	0	N	250	52.3	10.7	0.0	0.0	0.0	47.8	0.1	2.1	0.0	0.0	4.3	0.0	0.0	8.7
104	453153.24	5024739.08	0.60	0	N	500	55.7	10.7	0.0	0.0	0.0	47.8	0.1	2.9	0.0	0.0	4.9	0.0	0.0	10.6
104	453153.24	5024739.08	0.60	0	N	1000	60.9	10.7	0.0	0.0	0.0	47.8	0.3	-0.1	0.0	0.0	9.7	0.0	0.0	14.1
104	453153.24	5024739.08	0.60	0	N	2000	61.1	10.7	0.0	0.0	0.0	47.8	0.7	-1.5	0.0	0.0	11.9	0.0	0.0	12.9
104	453153.24	5024739.08	0.60	0	N	4000	60.9	10.7	0.0	0.0	0.0	47.8	2.3	-1.5	0.0	0.0	14.5	0.0	0.0	8.5
104	453153.24	5024739.08	0.60	0	N	8000	55.8	10.7	0.0	0.0	0.0	47.8	8.1	-1.5	0.0	0.0	17.3	0.0	0.0	-5.2
104	453153.24	5024739.08	0.60	0	E	32	-83.9	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-121.9
104	453153.24	5024739.08	0.60	0	E	63	-69.7	10.7	0.0	0.0	0.0	47.8	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-108.4
104	453153.24	5024739.08	0.60	0	E	125	-69.6	10.7	0.0	0.0	0.0	47.8	0.0	-0.3	0.0	0.0	5.4	0.0	0.0	-111.8
104	453153.24	5024739.08	0.60	0	E	250	-63.1	10.7	0.0	0.0	0.0	47.8	0.1	2.1	0.0	0.0	4.3	0.0	0.0	-106.8
104	453153.24	5024739.08	0.60	0	E	500	-59.7	10.7	0.0	0.0	0.0	47.8	0.1	2.9	0.0	0.0	4.9	0.0	0.0	-104.8
104	453153.24	5024739.08	0.60	0	E	1000	-54.5	10.7	0.0	0.0	0.0	47.8	0.3	-0.1	0.0	0.0	9.7	0.0	0.0	-101.4
104	453153.24	5024739.08	0.60	0	E	2000	-54.3	10.7	0.0	0.0	0.0	47.8	0.7	-1.5	0.0	0.0	11.9	0.0	0.0	-102.5
104	453153.24	5024739.08	0.60	0	E	4000	-54.5	10.7	0.0	0.0	0.0	47.8	2.3	-1.5	0.0	0.0	14.5	0.0	0.0	-106.9
104	453153.24	5024739.08	0.60	0	E	8000	-59.6	10.7	0.0	0.0	0.0	47.8	8.1	-1.5	0.0	0.0	17.3	0.0	0.0	-120.6
125	453155.45	5024730.76	0.60	0	D	32	31.5	7.3	0.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-8.8
125	453155.45	5024730.76	0.60	0	D	63	45.7	7.3	0.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	4.6
125	453155.45	5024730.76	0.60	0	D	125	45.8	7.3	0.0	0.0	0.0	46.8	0.0	-0.3	0.0	0.0	5.6	0.0	0.0	1.1
125	453155.45	5024730.76	0.60	0	D	250	52.3	7.3	0.0	0.0	0.0	46.8	0.1	1.9	0.0	0.0	5.0	0.0	0.0	5.9
125	453155.45	5024730.76	0.60	0	D	500	55.7	7.3	0.0	0.0	0.0	46.8	0.1	2.7	0.0	0.0	5.9	0.0	0.0	7.6
125	453155.45	5024730.76	0.60	0	D	1000	60.9	7.3	0.0	0.0	0.0	46.8	0.2	-0.2	0.0	0.0	10.5	0.0	0.0	11.0
125	453155.45	5024730.76	0.60	0	D	2000	61.1	7.3	0.0	0.0	0.0	46.8	0.6	-1.5	0.0	0.0	13.0	0.0	0.0	9.7
125	453155.45	5024730.76	0.60	0	D	4000	60.9	7.3	0.0	0.0	0.0	46.8	2.0	-1.5	0.0	0.0	15.7	0.0	0.0	5.3
125	453155.45	5024730.76	0.60	0	D	8000	55.8	7.3	0.0	0.0	0.0	46.8	7.2	-1.5	0.0	0.0	18.5	0.0	0.0	-7.8
125	453155.45	5024730.76	0.60	0	N	32	31.5	7.3	0.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-8.8
125	453155.45	5024730.76	0.60	0	N	63	45.7	7.3	0.0	0.0	0.0	46.8	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	4.6
125	453155.45	5024730.76	0.60	0	N	125	45.8	7.3	0.0	0.0	0.0	46.8	0.0	-0.3	0.0	0.0	5.6	0.0	0.0	1.1
125	453155.45	5024730.76	0.60	0	N	250	52.3	7.3	0.0	0.0	0.0	46.8	0.1	1.9	0.0	0.0	5.0	0.0	0.0	5.9
125	453155.45	5024730.76	0.60	0	N															

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
125	453155.45	5024730.76	0.60	0	E	2000	-54.3	7.3	0.0	0.0	0.0	46.8	0.6	-1.5	0.0	0.0	13.0	0.0	0.0	-105.8
125	453155.45	5024730.76	0.60	0	E	4000	-54.5	7.3	0.0	0.0	0.0	46.8	2.0	-1.5	0.0	0.0	15.7	0.0	0.0	-110.1
125	453155.45	5024730.76	0.60	0	E	8000	-59.6	7.3	0.0	0.0	0.0	46.8	7.2	-1.5	0.0	0.0	18.5	0.0	0.0	-123.2
167	453152.53	5024747.58	0.60	0	D	32	31.5	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-11.1
167	453152.53	5024747.58	0.60	0	D	63	45.7	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	2.5
167	453152.53	5024747.58	0.60	0	D	125	45.8	7.0	0.0	0.0	0.0	48.8	0.0	-0.2	0.0	0.0	5.0	0.0	0.0	-0.8
167	453152.53	5024747.58	0.60	0	D	250	52.3	7.0	0.0	0.0	0.0	48.8	0.1	2.3	0.0	0.0	3.5	0.0	0.0	4.6
167	453152.53	5024747.58	0.60	0	D	500	55.7	7.0	0.0	0.0	0.0	48.8	0.1	3.2	0.0	0.0	3.6	0.0	0.0	7.0
167	453152.53	5024747.58	0.60	0	D	1000	60.9	7.0	0.0	0.0	0.0	48.8	0.3	-0.1	0.0	0.0	8.2	0.0	0.0	10.7
167	453152.53	5024747.58	0.60	0	D	2000	61.1	7.0	0.0	0.0	0.0	48.8	0.8	-1.5	0.0	0.0	10.1	0.0	0.0	10.0
167	453152.53	5024747.58	0.60	0	D	4000	60.9	7.0	0.0	0.0	0.0	48.8	2.5	-1.5	0.0	0.0	12.5	0.0	0.0	5.6
167	453152.53	5024747.58	0.60	0	D	8000	55.8	7.0	0.0	0.0	0.0	48.8	9.1	-1.5	0.0	0.0	15.1	0.0	0.0	-8.7
167	453152.53	5024747.58	0.60	0	N	32	31.5	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-11.1
167	453152.53	5024747.58	0.60	0	N	63	45.7	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	2.5
167	453152.53	5024747.58	0.60	0	N	125	45.8	7.0	0.0	0.0	0.0	48.8	0.0	-0.2	0.0	0.0	5.0	0.0	0.0	-0.8
167	453152.53	5024747.58	0.60	0	N	250	52.3	7.0	0.0	0.0	0.0	48.8	0.1	2.3	0.0	0.0	3.5	0.0	0.0	4.6
167	453152.53	5024747.58	0.60	0	N	500	55.7	7.0	0.0	0.0	0.0	48.8	0.1	3.2	0.0	0.0	3.6	0.0	0.0	7.0
167	453152.53	5024747.58	0.60	0	N	1000	60.9	7.0	0.0	0.0	0.0	48.8	0.3	-0.1	0.0	0.0	8.2	0.0	0.0	10.7
167	453152.53	5024747.58	0.60	0	N	2000	61.1	7.0	0.0	0.0	0.0	48.8	0.8	-1.5	0.0	0.0	10.1	0.0	0.0	10.0
167	453152.53	5024747.58	0.60	0	N	4000	60.9	7.0	0.0	0.0	0.0	48.8	2.5	-1.5	0.0	0.0	12.5	0.0	0.0	5.6
167	453152.53	5024747.58	0.60	0	N	8000	55.8	7.0	0.0	0.0	0.0	48.8	9.1	-1.5	0.0	0.0	15.1	0.0	0.0	-8.7
167	453152.53	5024747.58	0.60	0	E	32	-83.9	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	3.9	0.0	0.0	-126.6
167	453152.53	5024747.58	0.60	0	E	63	-69.7	7.0	0.0	0.0	0.0	48.8	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-112.9
167	453152.53	5024747.58	0.60	0	E	125	-69.6	7.0	0.0	0.0	0.0	48.8	0.0	-0.2	0.0	0.0	5.0	0.0	0.0	-116.3
167	453152.53	5024747.58	0.60	0	E	250	-63.1	7.0	0.0	0.0	0.0	48.8	0.1	2.3	0.0	0.0	3.5	0.0	0.0	-110.8
167	453152.53	5024747.58	0.60	0	E	500	-59.7	7.0	0.0	0.0	0.0	48.8	0.1	3.2	0.0	0.0	3.6	0.0	0.0	-108.5
167	453152.53	5024747.58	0.60	0	E	1000	-54.5	7.0	0.0	0.0	0.0	48.8	0.3	-0.1	0.0	0.0	8.2	0.0	0.0	-104.7
167	453152.53	5024747.58	0.60	0	E	2000	-54.3	7.0	0.0	0.0	0.0	48.8	0.8	-1.5	0.0	0.0	10.1	0.0	0.0	-105.5
167	453152.53	5024747.58	0.60	0	E	4000	-54.5	7.0	0.0	0.0	0.0	48.8	2.5	-1.5	0.0	0.0	12.5	0.0	0.0	-109.8
167	453152.53	5024747.58	0.60	0	E	8000	-59.6	7.0	0.0	0.0	0.0	48.8	9.1	-1.5	0.0	0.0	15.1	0.0	0.0	-124.1
169	453169.82	5024755.60	0.60	0	D	32	31.5	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-17.1
169	453169.82	5024755.60	0.60	0	D	63	45.7	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	5.3	0.0	0.0	-3.6
169	453169.82	5024755.60	0.60	0	D	125	45.8	3.0	0.0	0.0	0.0	50.0	0.0	-0.1	0.0	0.0	6.3	0.0	0.0	-7.4
169	453169.82	5024755.60	0.60	0	D	250	52.3	3.0	0.0	0.0	0.0	50.0	0.1	2.5	0.0	0.0	5.2	0.0	0.0	-2.5
169	453169.82	5024755.60	0.60	0	D	500	55.7	3.0	0.0	0.0	0.0	50.0	0.2	3.4	0.0	0.0	6.2	0.0	0.0	-1.0
169	453169.82	5024755.60	0.60	0	D	1000	60.9	3.0	0.0	0.0	0.0	50.0	0.3	0.0	0.0	0.0	11.8	0.0	0.0	1.8
169	453169.82	5024755.60	0.60	0	D	2000	61.1	3.0	0.0	0.0	0.0	50.0	0.9	-1.5	0.0	0.0	14.4	0.0	0.0	0.4
169	453169.82	5024755.60	0.60	0	D	4000	60.9	3.0	0.0	0.0	0.0	50.0	2.9	-1.5	0.0	0.0	17.1	0.0	0.0	-4.6
169	453169.82	5024755.60	0.60	0	D	8000	55.8	3.0	0.0	0.0	0.0	50.0	10.4	-1.5	0.0	0.0	19.9	0.0	0.0	-20.0
169	453169.82	5024755.60	0.60	0	N	32	31.5	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-17.1
169	453169.82	5024755.60	0.60	0	N	63	45.7	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	5.3	0.0	0.0	-3.6
169	453169.82	5024755.60	0.60	0	N	125	45.8	3.0	0.0	0.0	0.0	50.0	0.0	-0.1	0.0	0.0	6.3	0.0	0.0	-7.4
169	453169.82	5024755.60	0.60	0	N	250	52.3	3.0	0.0	0.0	0.0	50.0	0.1	2.5	0.0	0.0	5.2	0.0	0.0	-2.5
169	453169.82	5024755.60	0.60	0	N	500	55.7	3.0	0.0	0.0	0.0	50.0	0.2	3.4	0.0	0.0	6.2	0.0	0.0	-1.0
169	453169.82	5024755.60	0.60	0	N	1000	60.9	3.0	0.0	0.0	0.0	50.0	0.3	0.0	0.0	0.0	11.8	0.0	0.0	1.8
169	453169.82	5024755.60	0.60	0	N	2000	61.1	3.0	0.0	0.0	0.0	50.0	0.9	-1.5	0.0	0.0	14.4	0.0	0.0	0.4
169	453169.82	5024755.60	0.60	0	N	4000	60.9	3.0	0.0	0.0	0.0	50.0	2.9	-1.5	0.0	0.0	17.1	0.0	0.0	-4.6
169	453169.82	5024755.60	0.60	0	N	8000	55.8	3.0	0.0	0.0	0.0	50.0	10.4	-1.5	0.0	0.0	19.9	0.0	0.0	-20.0
169	453169.82	5024755.60	0.60	0	E	32	-83.9	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-132.5
169	453169.82	5024755.60	0.60	0	E	63	-69.7	3.0	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	5.3	0.0	0.0	-119.1
169	453169.82	5024755.60	0.60	0	E	125	-69.6	3.0	0.0	0.0	0.0	50.0	0.0	-0.1	0.0	0.0	6.3	0.0	0.0	-122.9
169	453169.82	5024755.60	0.60	0	E	250	-63.1	3.0	0.0	0.0	0.0	50.0	0.1	2.5	0.0	0.0	5.2	0.0	0.0	-118.0
169	453169.82	5024755.60	0.60	0	E	500	-59.7	3.0	0.0	0.0	0.0									

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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)
171	453167.02	5024754.95	0.60	0	D	2000	61.1	5.8	0.0	0.0	0.0	49.8	0.8	-1.5	0.0	0.0	5.5	0.0	0.0	12.2
171	453167.02	5024754.95	0.60	0	D	4000	60.9	5.8	0.0	0.0	0.0	49.8	2.9	-1.5	0.0	0.0	6.2	0.0	0.0	9.3
171	453167.02	5024754.95	0.60	0	D	8000	55.8	5.8	0.0	0.0	0.0	49.8	10.2	-1.5	0.0	0.0	7.3	0.0	0.0	-4.2
171	453167.02	5024754.95	0.60	0	N	32	31.5	5.8	0.0	0.0	0.0	49.8	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-14.3
171	453167.02	5024754.95	0.60	0	N	63	45.7	5.8	0.0	0.0	0.0	49.8	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-0.1
171	453167.02	5024754.95	0.60	0	N	125	45.8	5.8	0.0	0.0	0.0	49.8	0.0	-0.1	0.0	0.0	4.8	0.0	0.0	-3.0
171	453167.02	5024754.95	0.60	0	N	250	52.3	5.8	0.0	0.0	0.0	49.8	0.1	2.5	0.0	0.0	2.4	0.0	0.0	3.3
171	453167.02	5024754.95	0.60	0	N	500	55.7	5.8	0.0	0.0	0.0	49.8	0.2	3.4	0.0	0.0	1.6	0.0	0.0	6.5
171	453167.02	5024754.95	0.60	0	N	1000	60.9	5.8	0.0	0.0	0.0	49.8	0.3	-0.0	0.0	0.0	5.2	0.0	0.0	11.4
171	453167.02	5024754.95	0.60	0	N	2000	61.1	5.8	0.0	0.0	0.0	49.8	0.8	-1.5	0.0	0.0	5.5	0.0	0.0	12.2
171	453167.02	5024754.95	0.60	0	N	4000	60.9	5.8	0.0	0.0	0.0	49.8	2.9	-1.5	0.0	0.0	6.2	0.0	0.0	9.3
171	453167.02	5024754.95	0.60	0	N	8000	55.8	5.8	0.0	0.0	0.0	49.8	10.2	-1.5	0.0	0.0	7.3	0.0	0.0	-4.2
171	453167.02	5024754.95	0.60	0	E	32	-83.9	5.8	0.0	0.0	0.0	49.8	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-129.8
171	453167.02	5024754.95	0.60	0	E	63	-69.7	5.8	0.0	0.0	0.0	49.8	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-115.6
171	453167.02	5024754.95	0.60	0	E	125	-69.6	5.8	0.0	0.0	0.0	49.8	0.0	-0.1	0.0	0.0	4.8	0.0	0.0	-118.4
171	453167.02	5024754.95	0.60	0	E	250	-63.1	5.8	0.0	0.0	0.0	49.8	0.1	2.5	0.0	0.0	2.4	0.0	0.0	-112.1
171	453167.02	5024754.95	0.60	0	E	500	-59.7	5.8	0.0	0.0	0.0	49.8	0.2	3.4	0.0	0.0	1.6	0.0	0.0	-108.9
171	453167.02	5024754.95	0.60	0	E	1000	-54.5	5.8	0.0	0.0	0.0	49.8	0.3	-0.0	0.0	0.0	5.2	0.0	0.0	-104.1
171	453167.02	5024754.95	0.60	0	E	2000	-54.3	5.8	0.0	0.0	0.0	49.8	0.8	-1.5	0.0	0.0	5.5	0.0	0.0	-103.3
171	453167.02	5024754.95	0.60	0	E	4000	-54.5	5.8	0.0	0.0	0.0	49.8	2.9	-1.5	0.0	0.0	6.2	0.0	0.0	-106.1
171	453167.02	5024754.95	0.60	0	E	8000	-59.6	5.8	0.0	0.0	0.0	49.8	10.2	-1.5	0.0	0.0	7.3	0.0	0.0	-119.7
181	453164.16	5024754.20	0.60	0	D	32	31.5	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-16.7
181	453164.16	5024754.20	0.60	0	D	63	45.7	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-2.5
181	453164.16	5024754.20	0.60	0	D	125	45.8	3.3	0.0	0.0	0.0	49.7	0.0	-0.1	0.0	0.0	4.9	0.0	0.0	-5.4
181	453164.16	5024754.20	0.60	0	D	250	52.3	3.3	0.0	0.0	0.0	49.7	0.1	2.5	0.0	0.0	2.4	0.0	0.0	0.9
181	453164.16	5024754.20	0.60	0	D	500	55.7	3.3	0.0	0.0	0.0	49.7	0.2	3.4	0.0	0.0	1.7	0.0	0.0	4.1
181	453164.16	5024754.20	0.60	0	D	1000	60.9	3.3	0.0	0.0	0.0	49.7	0.3	-0.0	0.0	0.0	5.4	0.0	0.0	8.8
181	453164.16	5024754.20	0.60	0	D	2000	61.1	3.3	0.0	0.0	0.0	49.7	0.8	-1.5	0.0	0.0	5.9	0.0	0.0	9.5
181	453164.16	5024754.20	0.60	0	D	4000	60.9	3.3	0.0	0.0	0.0	49.7	2.8	-1.5	0.0	0.0	6.8	0.0	0.0	6.4
181	453164.16	5024754.20	0.60	0	D	8000	55.8	3.3	0.0	0.0	0.0	49.7	10.1	-1.5	0.0	0.0	8.2	0.0	0.0	-7.4
181	453164.16	5024754.20	0.60	0	N	32	31.5	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-16.7
181	453164.16	5024754.20	0.60	0	N	63	45.7	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-2.5
181	453164.16	5024754.20	0.60	0	N	125	45.8	3.3	0.0	0.0	0.0	49.7	0.0	-0.1	0.0	0.0	4.9	0.0	0.0	-5.4
181	453164.16	5024754.20	0.60	0	N	250	52.3	3.3	0.0	0.0	0.0	49.7	0.1	2.5	0.0	0.0	2.4	0.0	0.0	0.9
181	453164.16	5024754.20	0.60	0	N	500	55.7	3.3	0.0	0.0	0.0	49.7	0.2	3.4	0.0	0.0	1.7	0.0	0.0	4.1
181	453164.16	5024754.20	0.60	0	N	1000	60.9	3.3	0.0	0.0	0.0	49.7	0.3	-0.0	0.0	0.0	5.4	0.0	0.0	8.8
181	453164.16	5024754.20	0.60	0	N	2000	61.1	3.3	0.0	0.0	0.0	49.7	0.8	-1.5	0.0	0.0	5.9	0.0	0.0	9.5
181	453164.16	5024754.20	0.60	0	N	4000	60.9	3.3	0.0	0.0	0.0	49.7	2.8	-1.5	0.0	0.0	6.8	0.0	0.0	6.4
181	453164.16	5024754.20	0.60	0	N	8000	55.8	3.3	0.0	0.0	0.0	49.7	10.1	-1.5	0.0	0.0	8.2	0.0	0.0	-7.4
181	453164.16	5024754.20	0.60	0	E	32	-83.9	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-132.1
181	453164.16	5024754.20	0.60	0	E	63	-69.7	3.3	0.0	0.0	0.0	49.7	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-117.9
181	453164.16	5024754.20	0.60	0	E	125	-69.6	3.3	0.0	0.0	0.0	49.7	0.0	-0.1	0.0	0.0	4.9	0.0	0.0	-120.8
181	453164.16	5024754.20	0.60	0	E	250	-63.1	3.3	0.0	0.0	0.0	49.7	0.1	2.5	0.0	0.0	2.4	0.0	0.0	-114.5
181	453164.16	5024754.20	0.60	0	E	500	-59.7	3.3	0.0	0.0	0.0	49.7	0.2	3.4	0.0	0.0	1.7	0.0	0.0	-111.4
181	453164.16	5024754.20	0.60	0	E	1000	-54.5	3.3	0.0	0.0	0.0	49.7	0.3	-0.0	0.0	0.0	5.4	0.0	0.0	-106.6
181	453164.16	5024754.20	0.60	0	E	2000	-54.3	3.3	0.0	0.0	0.0	49.7	0.8	-1.5	0.0	0.0	5.9	0.0	0.0	-106.0
181	453164.16	5024754.20	0.60	0	E	4000	-54.5	3.3	0.0	0.0	0.0	49.7	2.8	-1.5	0.0	0.0	6.8	0.0	0.0	-109.1
181	453164.16	5024754.20	0.60	0	E	8000	-59.6	3.3	0.0	0.0	0.0	49.7	10.1	-1.5	0.0	0.0	8.2	0.0	0.0	-122.8
192	453161.61	5024753.41	0.60	0	D	32	31.5	5.1	0.0	0.0	0.0	49.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-14.8
192	453161.61	5024753.41	0.60	0	D	63	45.7	5.1	0.0	0.0	0.0	49.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-0.6
192	453161.61	5024753.41	0.60	0	D	125	45.8	5.1	0.0	0.0	0.0	49.6	0.0	-0.1	0.0	0.0	4.9	0.0	0.0	-3.5
192	453161.61	5024753.41	0.60	0	D	250	52.3	5.1	0.0	0.0	0.0	49.6	0.1	2.5	0.0	0.0	2.5	0.0	0.0	2.7
192	453161.61	5024753.41	0.60	0	D	500	55.7	5.1	0.0	0.0	0.0	49.6	0.2	3.3	0.0	0.0	1			

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
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(A)
192	453161.61	5024753.41	0.60	0	N	2000	61.1	5.1	0.0	0.0	0.0	49.6	0.8	-1.5	0.0	0.0	6.4	0.0	0.0	10.9
192	453161.61	5024753.41	0.60	0	N	4000	60.9	5.1	0.0	0.0	0.0	49.6	2.8	-1.5	0.0	0.0	7.6	0.0	0.0	7.6
192	453161.61	5024753.41	0.60	0	N	8000	55.8	5.1	0.0	0.0	0.0	49.6	9.9	-1.5	0.0	0.0	9.3	0.0	0.0	-6.3
192	453161.61	5024753.41	0.60	0	E	32	-83.9	5.1	0.0	0.0	0.0	49.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-130.2
192	453161.61	5024753.41	0.60	0	E	63	-69.7	5.1	0.0	0.0	0.0	49.6	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-116.0
192	453161.61	5024753.41	0.60	0	E	125	-69.6	5.1	0.0	0.0	0.0	49.6	0.0	-0.1	0.0	0.0	4.9	0.0	0.0	-118.9
192	453161.61	5024753.41	0.60	0	E	250	-63.1	5.1	0.0	0.0	0.0	49.6	0.1	2.5	0.0	0.0	2.5	0.0	0.0	-112.7
192	453161.61	5024753.41	0.60	0	E	500	-59.7	5.1	0.0	0.0	0.0	49.6	0.2	3.3	0.0	0.0	1.9	0.0	0.0	-109.6
192	453161.61	5024753.41	0.60	0	E	1000	-54.5	5.1	0.0	0.0	0.0	49.6	0.3	-0.0	0.0	0.0	5.7	0.0	0.0	-104.9
192	453161.61	5024753.41	0.60	0	E	2000	-54.3	5.1	0.0	0.0	0.0	49.6	0.8	-1.5	0.0	0.0	6.4	0.0	0.0	-104.5
192	453161.61	5024753.41	0.60	0	E	4000	-54.5	5.1	0.0	0.0	0.0	49.6	2.8	-1.5	0.0	0.0	7.6	0.0	0.0	-107.9
192	453161.61	5024753.41	0.60	0	E	8000	-59.6	5.1	0.0	0.0	0.0	49.6	9.9	-1.5	0.0	0.0	9.3	0.0	0.0	-121.8
202	453155.73	5024751.37	0.60	0	D	32	31.5	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-15.5
202	453155.73	5024751.37	0.60	0	D	63	45.7	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-1.4
202	453155.73	5024751.37	0.60	0	D	125	45.8	4.1	0.0	0.0	0.0	49.3	0.0	-0.1	0.0	0.0	5.1	0.0	0.0	-4.3
202	453155.73	5024751.37	0.60	0	D	250	52.3	4.1	0.0	0.0	0.0	49.3	0.1	2.4	0.0	0.0	2.9	0.0	0.0	1.7
202	453155.73	5024751.37	0.60	0	D	500	55.7	4.1	0.0	0.0	0.0	49.3	0.2	3.3	0.0	0.0	2.6	0.0	0.0	4.5
202	453155.73	5024751.37	0.60	0	D	1000	60.9	4.1	0.0	0.0	0.0	49.3	0.3	-0.0	0.0	0.0	6.8	0.0	0.0	8.7
202	453155.73	5024751.37	0.60	0	D	2000	61.1	4.1	0.0	0.0	0.0	49.3	0.8	-1.5	0.0	0.0	8.1	0.0	0.0	8.5
202	453155.73	5024751.37	0.60	0	D	4000	60.9	4.1	0.0	0.0	0.0	49.3	2.7	-1.5	0.0	0.0	10.0	0.0	0.0	4.6
202	453155.73	5024751.37	0.60	0	D	8000	55.8	4.1	0.0	0.0	0.0	49.3	9.6	-1.5	0.0	0.0	12.3	0.0	0.0	-9.7
202	453155.73	5024751.37	0.60	0	N	32	31.5	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-15.5
202	453155.73	5024751.37	0.60	0	N	63	45.7	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-1.4
202	453155.73	5024751.37	0.60	0	N	125	45.8	4.1	0.0	0.0	0.0	49.3	0.0	-0.1	0.0	0.0	5.1	0.0	0.0	-4.3
202	453155.73	5024751.37	0.60	0	N	250	52.3	4.1	0.0	0.0	0.0	49.3	0.1	2.4	0.0	0.0	2.9	0.0	0.0	1.7
202	453155.73	5024751.37	0.60	0	N	500	55.7	4.1	0.0	0.0	0.0	49.3	0.2	3.3	0.0	0.0	2.6	0.0	0.0	4.5
202	453155.73	5024751.37	0.60	0	N	1000	60.9	4.1	0.0	0.0	0.0	49.3	0.3	-0.0	0.0	0.0	6.8	0.0	0.0	8.7
202	453155.73	5024751.37	0.60	0	N	2000	61.1	4.1	0.0	0.0	0.0	49.3	0.8	-1.5	0.0	0.0	8.1	0.0	0.0	8.5
202	453155.73	5024751.37	0.60	0	N	4000	60.9	4.1	0.0	0.0	0.0	49.3	2.7	-1.5	0.0	0.0	10.0	0.0	0.0	4.6
202	453155.73	5024751.37	0.60	0	N	8000	55.8	4.1	0.0	0.0	0.0	49.3	9.6	-1.5	0.0	0.0	12.3	0.0	0.0	-9.7
202	453155.73	5024751.37	0.60	0	E	32	-83.9	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-130.9
202	453155.73	5024751.37	0.60	0	E	63	-69.7	4.1	0.0	0.0	0.0	49.3	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-116.8
202	453155.73	5024751.37	0.60	0	E	125	-69.6	4.1	0.0	0.0	0.0	49.3	0.0	-0.1	0.0	0.0	5.1	0.0	0.0	-119.7
202	453155.73	5024751.37	0.60	0	E	250	-63.1	4.1	0.0	0.0	0.0	49.3	0.1	2.4	0.0	0.0	2.9	0.0	0.0	-113.7
202	453155.73	5024751.37	0.60	0	E	500	-59.7	4.1	0.0	0.0	0.0	49.3	0.2	3.3	0.0	0.0	2.6	0.0	0.0	-110.9
202	453155.73	5024751.37	0.60	0	E	1000	-54.5	4.1	0.0	0.0	0.0	49.3	0.3	-0.0	0.0	0.0	6.8	0.0	0.0	-106.7
202	453155.73	5024751.37	0.60	0	E	2000	-54.3	4.1	0.0	0.0	0.0	49.3	0.8	-1.5	0.0	0.0	8.1	0.0	0.0	-106.9
202	453155.73	5024751.37	0.60	0	E	4000	-54.5	4.1	0.0	0.0	0.0	49.3	2.7	-1.5	0.0	0.0	10.0	0.0	0.0	-110.9
202	453155.73	5024751.37	0.60	0	E	8000	-59.6	4.1	0.0	0.0	0.0	49.3	9.6	-1.5	0.0	0.0	12.3	0.0	0.0	-125.1
204	453154.10	5024750.27	0.60	0	D	32	31.5	1.4	0.0	0.0	0.0	49.1	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-18.1
204	453154.10	5024750.27	0.60	0	D	63	45.7	1.4	0.0	0.0	0.0	49.1	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-4.0
204	453154.10	5024750.27	0.60	0	D	125	45.8	1.4	0.0	0.0	0.0	49.1	0.0	-0.2	0.0	0.0	5.2	0.0	0.0	-7.0
204	453154.10	5024750.27	0.60	0	D	250	52.3	1.4	0.0	0.0	0.0	49.1	0.1	2.4	0.0	0.0	3.2	0.0	0.0	-1.1
204	453154.10	5024750.27	0.60	0	D	500	55.7	1.4	0.0	0.0	0.0	49.1	0.2	3.2	0.0	0.0	3.0	0.0	0.0	1.6
204	453154.10	5024750.27	0.60	0	D	1000	60.9	1.4	0.0	0.0	0.0	49.1	0.3	-0.1	0.0	0.0	7.3	0.0	0.0	5.6
204	453154.10	5024750.27	0.60	0	D	2000	61.1	1.4	0.0	0.0	0.0	49.1	0.8	-1.5	0.0	0.0	8.9	0.0	0.0	5.2
204	453154.10	5024750.27	0.60	0	D	4000	60.9	1.4	0.0	0.0	0.0	49.1	2.6	-1.5	0.0	0.0	11.0	0.0	0.0	1.1
204	453154.10	5024750.27	0.60	0	D	8000	55.8	1.4	0.0	0.0	0.0	49.1	9.4	-1.5	0.0	0.0	13.4	0.0	0.0	-13.3
204	453154.10	5024750.27	0.60	0	N	32	31.5	1.4	0.0	0.0	0.0	49.1	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-18.1
204	453154.10	5024750.27	0.60	0	N	63	45.7	1.4	0.0	0.0	0.0	49.1	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-4.0
204	453154.10	5024750.27	0.60	0	N	125	45.8	1.4	0.0	0.0	0.0	49.1	0.0	-0.2	0.0	0.0	5.2	0.0	0.0	-7.0
204	453154.10	5024750.27	0.60	0	N	250	52.3	1.4	0.0	0.0	0.0	49.1	0.1	2.4	0.0	0.0	3.2	0.0	0.0	-1.1
204	453154.10	5024750.27	0.60	0	N	500	55.7	1.4	0.0	0.0	0.0	49.1	0.2	3.2	0.0</					

Line Source, ISO 9613, Name: "Drive Thru Cars", ID: "DTC"																				
Nr.	X	Y	Z	Ref.	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)
204	453154.10	5024750.27	0.60	0	E	2000	-54.3	1.4	0.0	0.0	0.0	49.1	0.8	-1.5	0.0	0.0	8.9	0.0	0.0	-110.2
204	453154.10	5024750.27	0.60	0	E	4000	-54.5	1.4	0.0	0.0	0.0	49.1	2.6	-1.5	0.0	0.0	11.0	0.0	0.0	-114.4
204	453154.10	5024750.27	0.60	0	E	8000	-59.6	1.4	0.0	0.0	0.0	49.1	9.4	-1.5	0.0	0.0	13.4	0.0	0.0	-128.7
206	453158.43	5024752.51	0.60	0	D	32	31.5	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-14.4
206	453158.43	5024752.51	0.60	0	D	63	45.7	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-0.3
206	453158.43	5024752.51	0.60	0	D	125	45.8	5.3	0.0	0.0	0.0	49.4	0.0	-0.1	0.0	0.0	5.0	0.0	0.0	-3.2
206	453158.43	5024752.51	0.60	0	D	250	52.3	5.3	0.0	0.0	0.0	49.4	0.1	2.4	0.0	0.0	2.7	0.0	0.0	3.0
206	453158.43	5024752.51	0.60	0	D	500	55.7	5.3	0.0	0.0	0.0	49.4	0.2	3.3	0.0	0.0	2.2	0.0	0.0	5.9
206	453158.43	5024752.51	0.60	0	D	1000	60.9	5.3	0.0	0.0	0.0	49.4	0.3	-0.0	0.0	0.0	6.1	0.0	0.0	10.4
206	453158.43	5024752.51	0.60	0	D	2000	61.1	5.3	0.0	0.0	0.0	49.4	0.8	-1.5	0.0	0.0	7.2	0.0	0.0	10.5
206	453158.43	5024752.51	0.60	0	D	4000	60.9	5.3	0.0	0.0	0.0	49.4	2.7	-1.5	0.0	0.0	8.7	0.0	0.0	6.9
206	453158.43	5024752.51	0.60	0	D	8000	55.8	5.3	0.0	0.0	0.0	49.4	9.7	-1.5	0.0	0.0	10.7	0.0	0.0	-7.3
206	453158.43	5024752.51	0.60	0	N	32	31.5	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-14.4
206	453158.43	5024752.51	0.60	0	N	63	45.7	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-0.3
206	453158.43	5024752.51	0.60	0	N	125	45.8	5.3	0.0	0.0	0.0	49.4	0.0	-0.1	0.0	0.0	5.0	0.0	0.0	-3.2
206	453158.43	5024752.51	0.60	0	N	250	52.3	5.3	0.0	0.0	0.0	49.4	0.1	2.4	0.0	0.0	2.7	0.0	0.0	3.0
206	453158.43	5024752.51	0.60	0	N	500	55.7	5.3	0.0	0.0	0.0	49.4	0.2	3.3	0.0	0.0	2.2	0.0	0.0	5.9
206	453158.43	5024752.51	0.60	0	N	1000	60.9	5.3	0.0	0.0	0.0	49.4	0.3	-0.0	0.0	0.0	6.1	0.0	0.0	10.4
206	453158.43	5024752.51	0.60	0	N	2000	61.1	5.3	0.0	0.0	0.0	49.4	0.8	-1.5	0.0	0.0	7.2	0.0	0.0	10.5
206	453158.43	5024752.51	0.60	0	N	4000	60.9	5.3	0.0	0.0	0.0	49.4	2.7	-1.5	0.0	0.0	8.7	0.0	0.0	6.9
206	453158.43	5024752.51	0.60	0	N	8000	55.8	5.3	0.0	0.0	0.0	49.4	9.7	-1.5	0.0	0.0	10.7	0.0	0.0	-7.3
206	453158.43	5024752.51	0.60	0	E	32	-83.9	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-129.9
206	453158.43	5024752.51	0.60	0	E	63	-69.7	5.3	0.0	0.0	0.0	49.4	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	-115.7
206	453158.43	5024752.51	0.60	0	E	125	-69.6	5.3	0.0	0.0	0.0	49.4	0.0	-0.1	0.0	0.0	5.0	0.0	0.0	-118.6
206	453158.43	5024752.51	0.60	0	E	250	-63.1	5.3	0.0	0.0	0.0	49.4	0.1	2.4	0.0	0.0	2.7	0.0	0.0	-112.5
206	453158.43	5024752.51	0.60	0	E	500	-59.7	5.3	0.0	0.0	0.0	49.4	0.2	3.3	0.0	0.0	2.2	0.0	0.0	-109.5
206	453158.43	5024752.51	0.60	0	E	1000	-54.5	5.3	0.0	0.0	0.0	49.4	0.3	-0.0	0.0	0.0	6.1	0.0	0.0	-105.0
206	453158.43	5024752.51	0.60	0	E	2000	-54.3	5.3	0.0	0.0	0.0	49.4	0.8	-1.5	0.0	0.0	7.2	0.0	0.0	-104.9
206	453158.43	5024752.51	0.60	0	E	4000	-54.5	5.3	0.0	0.0	0.0	49.4	2.7	-1.5	0.0	0.0	8.7	0.0	0.0	-108.6
206	453158.43	5024752.51	0.60	0	E	8000	-59.6	5.3	0.0	0.0	0.0	49.4	9.7	-1.5	0.0	0.0	10.7	0.0	0.0	-122.7
208	453151.44	5024744.98	0.60	0	D	32	31.5	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-20.2
208	453151.44	5024744.98	0.60	0	D	63	45.7	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-6.6
208	453151.44	5024744.98	0.60	0	D	125	45.8	-2.2	0.0	0.0	0.0	48.5	0.0	-0.2	0.0	0.0	5.3	0.0	0.0	-10.0
208	453151.44	5024744.98	0.60	0	D	250	52.3	-2.2	0.0	0.0	0.0	48.5	0.1	2.3	0.0	0.0	4.0	0.0	0.0	-4.8
208	453151.44	5024744.98	0.60	0	D	500	55.7	-2.2	0.0	0.0	0.0	48.5	0.1	3.1	0.0	0.0	4.4	0.0	0.0	-2.7
208	453151.44	5024744.98	0.60	0	D	1000	60.9	-2.2	0.0	0.0	0.0	48.5	0.3	-0.1	0.0	0.0	9.2	0.0	0.0	0.8
208	453151.44	5024744.98	0.60	0	D	2000	61.1	-2.2	0.0	0.0	0.0	48.5	0.7	-1.5	0.0	0.0	11.4	0.0	0.0	-0.2
208	453151.44	5024744.98	0.60	0	D	4000	60.9	-2.2	0.0	0.0	0.0	48.5	2.5	-1.5	0.0	0.0	13.9	0.0	0.0	-4.7
208	453151.44	5024744.98	0.60	0	D	8000	55.8	-2.2	0.0	0.0	0.0	48.5	8.8	-1.5	0.0	0.0	16.7	0.0	0.0	-18.9
208	453151.44	5024744.98	0.60	0	N	32	31.5	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-20.2
208	453151.44	5024744.98	0.60	0	N	63	45.7	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-6.6
208	453151.44	5024744.98	0.60	0	N	125	45.8	-2.2	0.0	0.0	0.0	48.5	0.0	-0.2	0.0	0.0	5.3	0.0	0.0	-10.0
208	453151.44	5024744.98	0.60	0	N	250	52.3	-2.2	0.0	0.0	0.0	48.5	0.1	2.3	0.0	0.0	4.0	0.0	0.0	-4.8
208	453151.44	5024744.98	0.60	0	N	500	55.7	-2.2	0.0	0.0	0.0	48.5	0.1	3.1	0.0	0.0	4.4	0.0	0.0	-2.7
208	453151.44	5024744.98	0.60	0	N	1000	60.9	-2.2	0.0	0.0	0.0	48.5	0.3	-0.1	0.0	0.0	9.2	0.0	0.0	0.8
208	453151.44	5024744.98	0.60	0	N	2000	61.1	-2.2	0.0	0.0	0.0	48.5	0.7	-1.5	0.0	0.0	11.4	0.0	0.0	-0.2
208	453151.44	5024744.98	0.60	0	N	4000	60.9	-2.2	0.0	0.0	0.0	48.5	2.5	-1.5	0.0	0.0	13.9	0.0	0.0	-4.7
208	453151.44	5024744.98	0.60	0	N	8000	55.8	-2.2	0.0	0.0	0.0	48.5	8.8	-1.5	0.0	0.0	16.7	0.0	0.0	-18.9
208	453151.44	5024744.98	0.60	0	E	32	-83.9	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.0	0.0	0.0	-135.6
208	453151.44	5024744.98	0.60	0	E	63	-69.7	-2.2	0.0	0.0	0.0	48.5	0.0	-3.0	0.0	0.0	4.6	0.0	0.0	-122.1
208	453151.44	5024744.98	0.60	0	E	125	-69.6	-2.2	0.0	0.0	0.0	48.5	0.0	-0.2	0.0	0.0	5.3	0.0	0.0	-125.5
208	453151.44	5024744.98	0.60	0	E	250	-63.1	-2.2	0.0	0.0	0.0	48.5	0.1	2.3	0.0	0.0	4.0	0.0	0.0	-120.2
208	453151.44	5024744.98	0.60	0	E	500	-59.7	-2.2	0.0	0.0	0.0	48.5	0.1	3.1	0.0	0.0	4.4	0.0	0.0	-118.1
208	453151.44	5024744.98	0.60	0	E	1000	-54.5	-2.2	0.0	0.0	0.0	48.5	0.3	-0.1	0.0	0.0	9.2	0.0	0.0	-114.6
208	453151.44	5024744.98	0.60	0	E	2000	-54.3	-2.2	0.0	0.0	0.0	48.5	0.7	-1.5	0.0	0.0	11.4	0.0	0.0	-115.7
208	453151.44	5024744.98	0.60	0	E	4000	-54.5	-2.2	0.0	0.0	0.0	48.5	2.5	-1.5	0.0	0.0	13.9	0.0	0.0	-120.1
208	453151.44	5024744.98	0.60	0	E	8000	-59.6	-2.2	0.0	0.0	0.0	48.5	8.8	-1.5	0.0	0.0	16.7	0.0	0.0	-134.3