



DEVELOPMENT APPLICATION

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

STAFF USE ONLY

PLANNING & ZONING CASE NO. _____

NOTE: THE APPLICATION IS NOT CONSIDERED ACCEPTED BY THE CITY UNTIL THE PLANNING DIRECTOR AND CITY ENGINEER HAVE SIGNED BELOW.

DIRECTOR OF PLANNING: _____

CITY ENGINEER: _____

PLEASE CHECK THE APPROPRIATE BOX BELOW TO INDICATE THE TYPE OF DEVELOPMENT REQUEST [SELECT ONLY ONE BOX]:

<p>PLATTING APPLICATION FEES:</p> <p><input type="checkbox"/> MASTER PLAT (\$100.00 + \$15.00 ACRE) ¹</p> <p><input type="checkbox"/> PRELIMINARY PLAT (\$200.00 + \$15.00 ACRE) ¹</p> <p><input type="checkbox"/> FINAL PLAT (\$300.00 + \$20.00 ACRE) ¹</p> <p><input type="checkbox"/> REPLAT (\$300.00 + \$20.00 ACRE) ¹</p> <p><input type="checkbox"/> AMENDING OR MINOR PLAT (\$150.00)</p> <p><input type="checkbox"/> PLAT REINSTATEMENT REQUEST (\$100.00)</p> <p>SITE PLAN APPLICATION FEES:</p> <p><input checked="" type="checkbox"/> SITE PLAN (\$250.00 + \$20.00 ACRE) ¹</p> <p><input type="checkbox"/> AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING PLAN (\$100.00)</p>	<p>ZONING APPLICATION FEES:</p> <p><input type="checkbox"/> ZONING CHANGE (\$200.00 + \$15.00 ACRE) ¹</p> <p><input type="checkbox"/> SPECIFIC USE PERMIT (\$200.00 + \$15.00 ACRE) ^{1 & 2}</p> <p><input type="checkbox"/> PD DEVELOPMENT PLANS (\$200.00 + \$15.00 ACRE) ¹</p> <p>OTHER APPLICATION FEES:</p> <p><input type="checkbox"/> TREE REMOVAL (\$75.00)</p> <p><input type="checkbox"/> VARIANCE REQUEST/SPECIAL EXCEPTIONS (\$100.00) ²</p> <p>NOTES:</p> <p>¹: IN DETERMINING THE FEE, PLEASE USE THE EXACT ACREAGE WHEN MULTIPLYING BY THE PER ACRE AMOUNT. FOR REQUESTS ON LESS THAN ONE ACRE, ROUND UP TO ONE (1) ACRE.</p> <p>²: A \$1,000.00 FEE WILL BE ADDED TO THE APPLICATION FEE FOR ANY REQUEST THAT INVOLVES CONSTRUCTION WITHOUT OR NOT IN COMPLIANCE TO AN APPROVED BUILDING PERMIT.</p>
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PROPERTY INFORMATION [PLEASE PRINT]

ADDRESS: Northwest Corner of SH276 & John King Boulevard

SUBDIVISION: Mansions Family Addition LOT: 1 BLOCK: A

GENERAL LOCATION: Central City

ZONING, SITE PLAN AND PLATTING INFORMATION [PLEASE PRINT]

CURRENT ZONING	Commercial, PD-10	CURRENT USE	Vacant Land, Zoned Commercial PD-10
PROPOSED ZONING	Commercial, PD-10 (same as current)	PROPOSED USE	Express Auto Spa (Car Wash)
ACREAGE	6.37	LOTS [CURRENT]	1
		LOTS [PROPOSED]	1

SITE PLANS AND PLATS: BY CHECKING THIS BOX YOU ACKNOWLEDGE THAT DUE TO THE PASSAGE OF HB316Z THE CITY NO LONGER HAS FLEXIBILITY WITH REGARD TO ITS APPROVAL PROCESS, AND FAILURE TO ADDRESS ANY OF STAFF'S COMMENTS BY THE DATE PROVIDED ON THE DEVELOPMENT CALENDAR WILL RESULT IN THE DENIAL OF YOUR CASE.

OWNER/APPLICANT/AGENT INFORMATION [PLEASE PRINT/CHECK THE PRIMARY CONTACT/ORIGINAL SIGNATURES ARE REQUIRED]

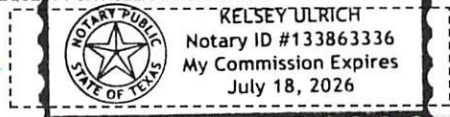
<input checked="" type="checkbox"/> OWNER	The Cambridge Companies, Inc.	<input checked="" type="checkbox"/> APPLICANT	Delayne Reamsbottom
CONTACT PERSON	Jim Melino	CONTACT PERSON	Alan Jacob (CWPD)
ADDRESS	8750 N. Central Expressway Suite 1735	ADDRESS	1837 Trail Drive
CITY, STATE & ZIP	Dallas, Texas 75231	CITY, STATE & ZIP	Rockwall, Texas 75087
PHONE	(214)532-3924	PHONE	(801)815-2741
E-MAIL	jim@cambridgecos.com	E-MAIL	delaynereamsbottom@gmail.com

NOTARY VERIFICATION [REQUIRED]

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED James Melino [OWNER] THE UNDERSIGNED, WHO STATED THE INFORMATION ON THIS APPLICATION TO BE TRUE AND CERTIFIED THE FOLLOWING:

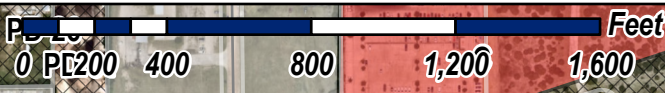
"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF \$ \$250+\$20/AC TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE 10th DAY OF October, 2022 BY SIGNING THIS APPLICATION, I AGREE THAT THE CITY OF ROCKWALL (I.E. "CITY") IS AUTHORIZED AND PERMITTED TO PROVIDE INFORMATION CONTAINED WITHIN THIS APPLICATION TO THE PUBLIC. THE CITY IS ALSO AUTHORIZED AND PERMITTED TO REPRODUCE ANY COPYRIGHTED INFORMATION SUBMITTED IN CONJUNCTION WITH THIS APPLICATION, IF SUCH REPRODUCTION IS ASSOCIATED OR IN RESPONSE TO A REQUEST FOR PUBLIC INFORMATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE 10th DAY OF October, 2022.
OWNER'S SIGNATURE: Jim Melino, President

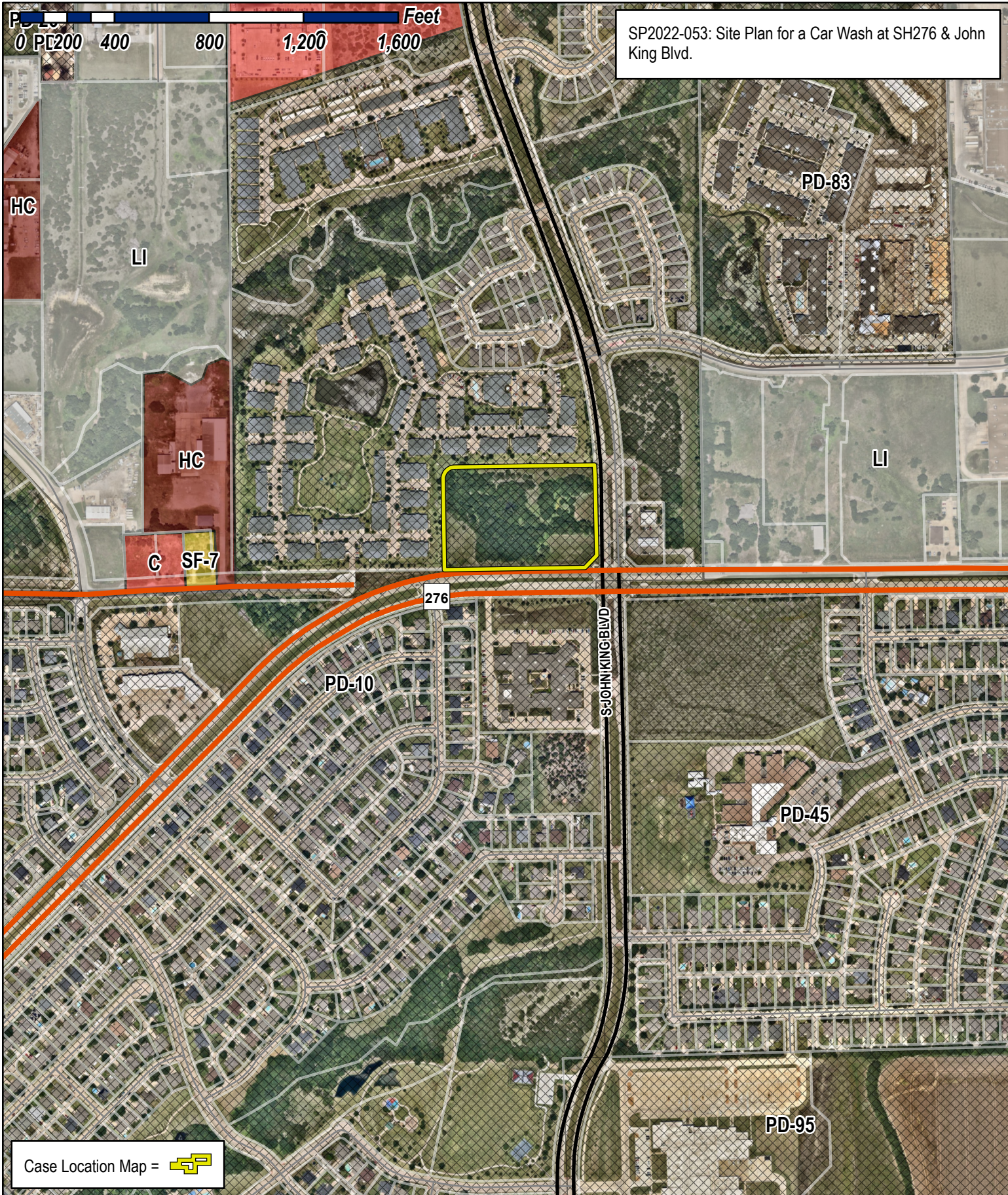



NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS: Kelsey Ulrich

MY COMMISSION EXPIRES July 18, 2026



SP2022-053: Site Plan for a Car Wash at SH276 & John King Blvd.



Case Location Map = 



City of Rockwall

Planning & Zoning Department
 385 S. Goliad Street
 Rockwall, Texas 75032
 (P): (972) 771-7745
 (W): www.rockwall.com

The City of Rockwall GIS maps are continually under development and therefore subject to change without notice. While we endeavor to provide timely and accurate information, we make no guarantees. The City of Rockwall makes no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. Use of the information is the sole responsibility of the user.





2034

01/17/22

Z-1

1 VIEW LOOKING NORTHWEST
Z-1 SCALE: 12" = 1'-0"

NERI
ARCHITECTS

6400 N NORTHWEST HWY SUITE 4
CHICAGO, IL 60631
TEL 847 826 9400



2034
01/17/22
Z-2

① VIEW LOOKING NORTHEAST
Z-2 SCALE: 1/2" = 1'-0"

NERI
ARCHITECTS

6400 N NORTHWEST HWY SUITE 4
CHICAGO, IL 60631
TEL 847.826.9400



2034
01/17/22
Z-3

1
Z-3 VIEW LOOKING SOUTHWEST
SCALE: 1/2" = 1'-0"

NERI
ARCHITECTS
6400 N NORTHWEST HWY SUITE 4
CHICAGO, IL 60631
TEL 847.826.9400



2034
01/17/22
Z-4

1
Z-4 VIEW LOOKING SOUTHEAST
SCALE: 1/2" = 1'-0"





2034

01/17/22

Z-5

1 VIEW LOOKING NORTHEAST w/ SIGN
Z-5 SCALE: 1/2" = 1'-0"

NERI
ARCHITECTS

6400 N NORTHWEST HWY SUITE 4
CHICAGO, IL 60631
TEL 847.826.9400



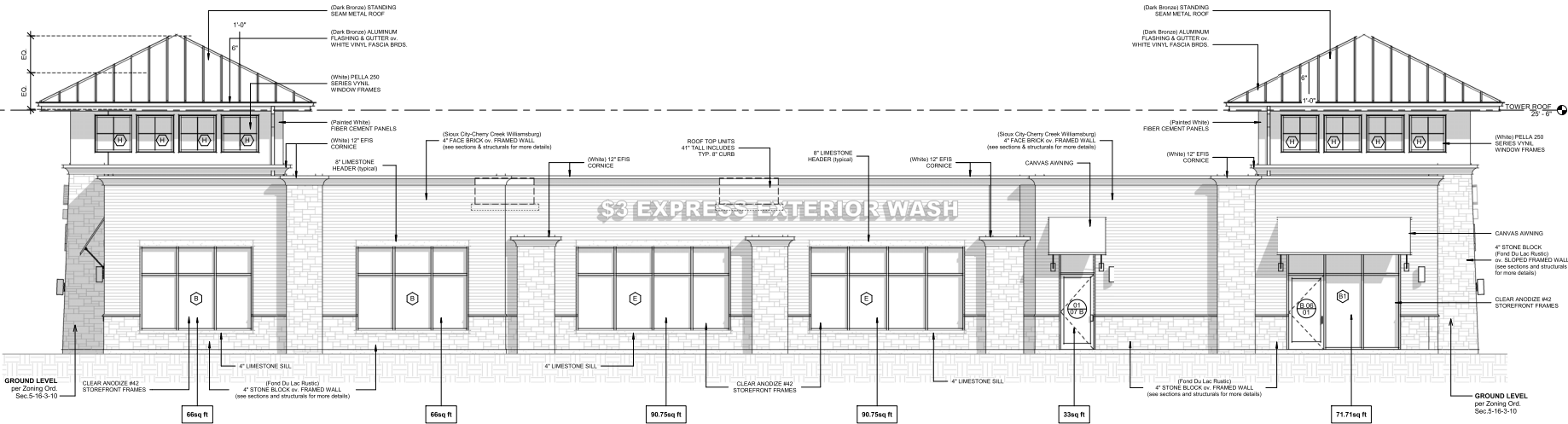
2034
01/17/22
Z-6

1
Z-6 AERIAL VIEW LOOKING SOUTH
SCALE: 12" = 1'-0"

NERI
ARCHITECTS

6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847.826.9400

10/07/22	ZONING REVIEW
▲ DRAWN BY:	RAM
APPROVED BY:	GCM / MAM
SCALE:	AS NOTED
DESCRIPTION:	MAIN ELEVATIONS
SHEET NO.	A-5.0



1 Main Elevation-South
 SCALE: 3/16" = 1'-0"

Primary Materials
 Face Brick & Stone Block (64%)

Accent Material
 Fiber Cement Panels (8.6%)

A minimum of 35% shall be transparent Ground Level :
 Ground level shall be defined to be between
 2'-0" & 8'-0" measured vertically from the adjacent grade.

Proposed Transparent = 45% (of Ground Level)
 Ground Level Zone = 903.94 sq. ft.
 Transparent Elements = 408.21 sq. ft.

- **Tower Roofs**
 Metal-(Dark Bronze)

- **Main Body of Building**
 4" Face Brick - (Sioux City-Cherry Creek Williamsburg)
 4"- 5" Stone Block (Fond Du Lac Rustic)

- **Accent Walls - Upper Tower Walls**
 Fiber Cement Panels (White)



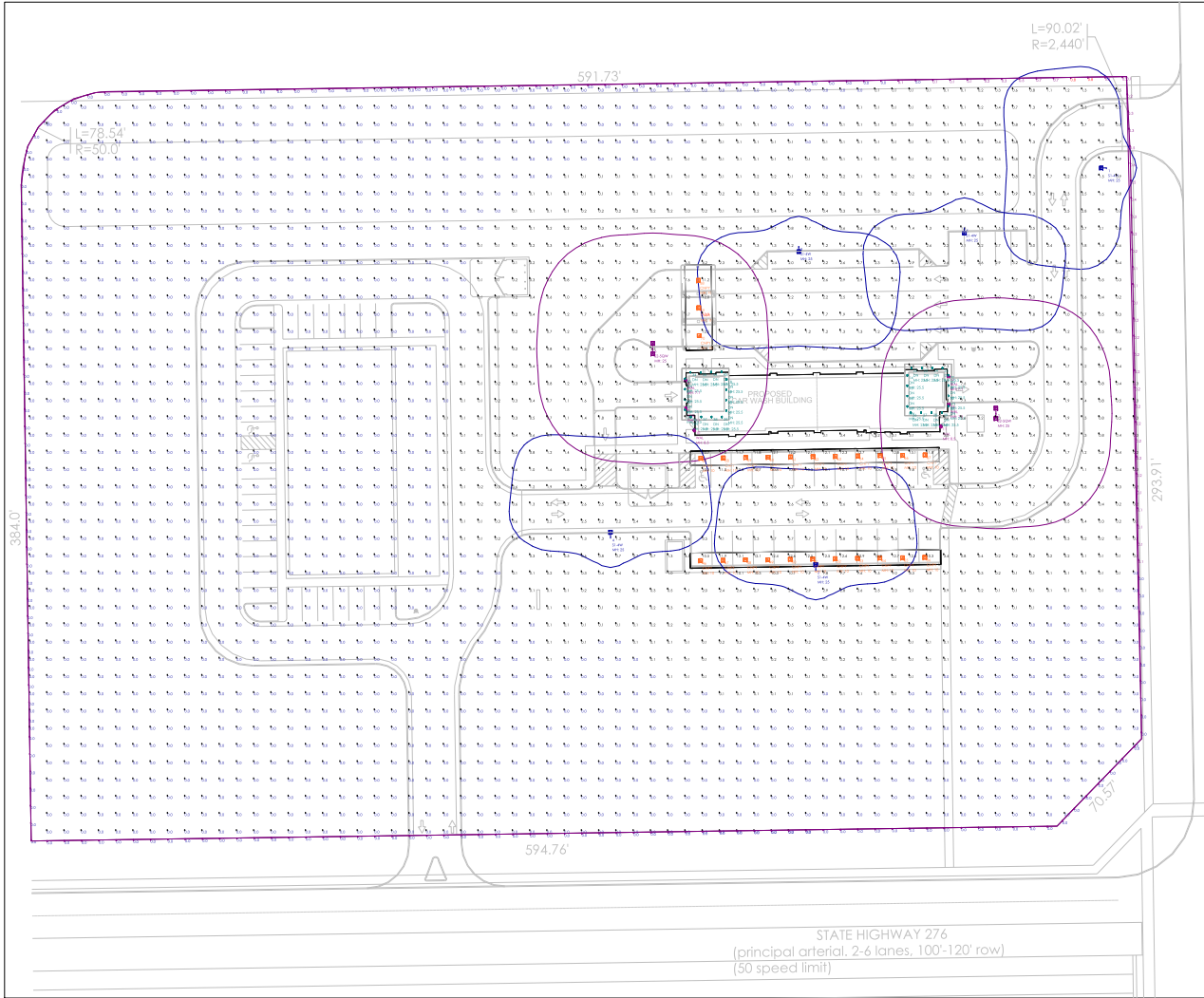
1 Side Elevation-North
 SCALE: 3/16" = 1'-0"

Primary Materials
 Face Brick & Stone Block (57.4%)

Accent Material
 Fiber Cement Panels (8.6%)

Luminaire Schedule - Part numbers are provided by the manufacturer and are only intended to be used as a reference to output and optics used.										
Symbol	Qty	Tag	Arrangement	Luminaire Lumens	Arr. Lum. Lumens	Luminaire Waits	Arr. Waits	LLF	Manufacturer	Description
□	25	CNPY	Single	4450	4450	38	38	0.900	HUBBELL	VSH-30-4K7-UNV
⊕	32	DN	Single	996	996	14.4	14.4	0.900	DALS Lighting Inc.	RGR4-CC-XX
□	5	S1-4W	SINGLE	15232	15232	109.7	109.7	0.900	HUBBELL OUTDOOR	ASL1-160L-115-4K7-4W-UNV-AX-X
□	2	S2-5QW	Back-Back	15632	31264	109.7	219.4	0.900	HUBBELL OUTDOOR	ASL1-160L-115-4K7-5QW-UNV-AX-X (2@180)
⊙	6	WAL	GROUP	N.A.	2240	N.A.	14	0.450	FC Lighting	FCC612W-UNV-940-05-05L-X-D40-U40-LD

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Max/Min	Avg/Min	Description	
PROPERTY LINES	Illuminance	Fc	0.05	0.8	0.0	N.A.	N.A.	READINGS @ GRADE	
PROPERTY PLANNING	Illuminance	Fc	0.78	13.3	0.0	N.A.	N.A.	READINGS @ GRADE	
CAR WASH PARKING & DRIVES	Illuminance	Fc	2.83	11.0	0.6	18.33	4.72	READINGS @ GRADE	



NOTES

PG-ENLIGHTEN IS NEITHER LICENSED NOR INSURED TO DETERMINE CODE COMPLIANCE. CODE COMPLIANCE REVIEW BY OTHERS.

ANY VARIANCE FROM REFLECTANCE VALUES, OBSTRUCTIONS, LIGHT LOSS FACTORS OR DIMENSIONAL DATA WILL AFFECT THE ACTUAL LIGHT LEVELS OBTAINED.

THIS ANALYSIS IS A MATHEMATICAL MODEL AND CAN BE ONLY AS ACCURATE AS IS PERMITTED BY THE THIRD-PARTY SOFTWARE AND THE IES STANDARDS USED.

FIXTURE TYPES AND QUANTITIES MAY CHANGE BASED ON UNKNOWN OBSTRUCTIONS OR FIELD CONDITIONS. THESE CHANGES MAY RESULT IN AN INCREASED QUANTITY OF FIXTURES.

FIXTURE TYPES AND QUANTITIES BASED ON PROVIDED LAYOUT AND DRAWINGS ARE FOR REFERENCE ONLY. TYPES AND QUANTITIES MAY CHANGE WITH FUTURE REVISIONS.

CALCULATION GRID VALUES 10'-0" O.C.

APPLICATION AND TASK	MAINTAINED HORIZONTAL		MAINTAINED VERTICAL		MAXIMUM	
	AVERAGE (FC)	RANGE (FC)	AVERAGE (FC)	RANGE (FC)	AVG:MIN	MAX:MIN
PARKING (UNCOVERED) ZONE 3 (URBAN)	1.5	0.75 - 3	0.8	0.4 - 1.6	4:1	15:1
PARKING (UNCOVERED) ZONE 2 (SUBURBAN)	1	0.5 - 2	0.6	0.3 - 1.2	4:1	15:1
SAFETY (BUILDING EXTERIOR)	1	0.5 - 2	-	-	FOR SECURITY ISSUES, RAISE AVG. TO 3	

SIMPLIFIED RECOMMENDATIONS BASED ON IES' THE LIGHTING HANDBOOK, 10TH EDITION AND IES RP-30-14. INDIVIDUAL APPLICATIONS WILL DETERMINE SPECIFIC RECOMMENDATIONS. PLEASE REFER TO THE MOST RECENT HANDBOOK FOR A MORE DETAILED EVALUATION AND ADDITIONAL APPLICATIONS. THESE RECOMMENDATIONS DO NOT SUPERCEDE ANY APPLICABLE CODES.



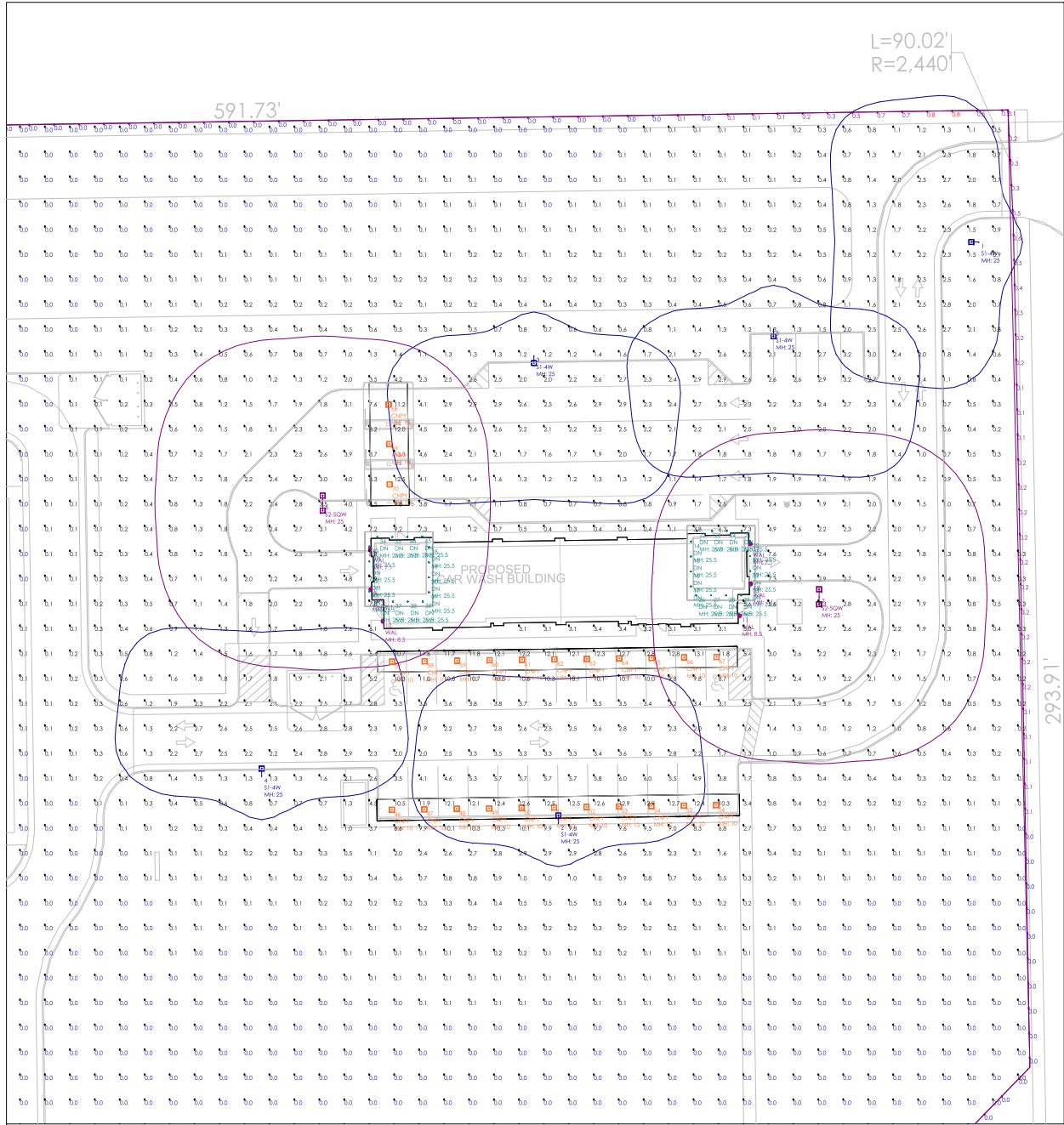
PROJECT NAME: ROCKWALL TX CAR WASH- NW STATE HWY 276 & JOHN KING RD

CLIENT NAME: NERI ARCHITECTS

DRAWN BY: Joel Collins
 PG CONTACT: Patti Geier
 Patti.Geier@pg-enlighten.com
 817.228.1199

REVISIONS
1
2
3

Luminaire Location Summary					
LumNo	Tag (Qty)	Label	Mtg Ht	Orient	Tilt
1	S1-4W (1)	ASL1-160L-115-4K7-4W	25	180	0
2	S1-4W (1)	ASL1-160L-115-4K7-4W	25	90	0
3	S1-4W (1)	ASL1-160L-115-4K7-4W	25	270	0
4	S1-4W (1)	ASL1-160L-115-4K7-4W	25	90	0
5	S1-4W (1)	ASL1-160L-115-4K7-4W	25	270	0
6	S2-SQW (2)	ASL1-160L-115-4K7-SQW 2	25	90	0
7	S2-SQW (2)	ASL1-160L-115-4K7-SQW 2	25	90	0
8		FCC612W-940-05-05L-D40-U40	7.1	90	0
9		FCC612W-940-05-05L-D40-U40	7.1	90	0
10		FCC612W-940-05-05L-D40-U40	8.5	90	0
11		FCC612W-940-05-05L-D40-U40	8.5	90	0
12		FCC612W-940-05-05L-D40-U40	7.1	90	0
13		FCC612W-940-05-05L-D40-U40	7.1	90	0
14	DN (1)	RGR4	25.5	90	0
15	DN (1)	RGR4	25.5	90	0
16	DN (1)	RGR4	25.5	90	0
17	DN (1)	RGR4	25.5	90	0
18	DN (1)	RGR4	25.5	90	0
19	DN (1)	RGR4	25.5	90	0
20	DN (1)	RGR4	25.5	90	0
21	DN (1)	RGR4	25.5	90	0
22	DN (1)	RGR4	25.5	90	0
23	DN (1)	RGR4	25.5	90	0
24	DN (1)	RGR4	25.5	90	0
25	DN (1)	RGR4	25.5	90	0
26	DN (1)	RGR4	25.5	90	0
27	DN (1)	RGR4	25.5	90	0
28	DN (1)	RGR4	25.5	90	0
29	DN (1)	RGR4	25.5	90	0
30	DN (1)	RGR4	25.5	90	0
31	DN (1)	RGR4	25.5	90	0
32	DN (1)	RGR4	25.5	90	0
33	DN (1)	RGR4	25.5	90	0
34	DN (1)	RGR4	25.5	90	0
35	DN (1)	RGR4	25.5	90	0
36	DN (1)	RGR4	25.5	90	0
37	DN (1)	RGR4	25.5	90	0
38	DN (1)	RGR4	25.5	90	0
39	DN (1)	RGR4	25.5	90	0
40	DN (1)	RGR4	25.5	90	0
41	DN (1)	RGR4	25.5	90	0
42	DN (1)	RGR4	25.5	90	0
43	DN (1)	RGR4	25.5	90	0
44	DN (1)	RGR4	25.5	90	0
45	DN (1)	RGR4	25.5	90	0
46	CNPY (1)	VSH-30-4K7	10	90	0
47	CNPY (1)	VSH-30-4K7	10	90	0
48	CNPY (1)	VSH-30-4K7	10	90	0
49	CNPY (1)	VSH-30-4K7	10	90	0
50	CNPY (1)	VSH-30-4K7	10	90	0
51	CNPY (1)	VSH-30-4K7	10	90	0
52	CNPY (1)	VSH-30-4K7	10	90	0
53	CNPY (1)	VSH-30-4K7	10	90	0
54	CNPY (1)	VSH-30-4K7	10	90	0
55	CNPY (1)	VSH-30-4K7	10	90	0
56	CNPY (1)	VSH-30-4K7	10	90	0
57	CNPY (1)	VSH-30-4K7	10	90	0
58	CNPY (1)	VSH-30-4K7	10	90	0
59	CNPY (1)	VSH-30-4K7	10	90	0
60	CNPY (1)	VSH-30-4K7	10	90	0
61	CNPY (1)	VSH-30-4K7	10	90	0
62	CNPY (1)	VSH-30-4K7	10	90	0
63	CNPY (1)	VSH-30-4K7	10	90	0
64	CNPY (1)	VSH-30-4K7	10	90	0
65	CNPY (1)	VSH-30-4K7	10	90	0
66	CNPY (1)	VSH-30-4K7	10	90	0
67	CNPY (1)	VSH-30-4K7	10	90	0
68	CNPY (1)	VSH-30-4K7	10	0	0
69	CNPY (1)	VSH-30-4K7	10	0	0
70	CNPY (1)	VSH-30-4K7	10	0	0



Scale: 1 inch= 20 FT.



PROJECT NAME:
ROCKWALL TX CAR WASH- NW STATE HWY 276 & JOHN KING RD

CLIENT NAME:
NERI ARCHITECTS

DATE: 10/5/2022

REVISIONS

1	
2	
3	

DRAWN BY:
 Joel Collins
 joel.collins@enlighten.com
 847.228.1199

PG CONTACT:
 Patti Geier
 patti.geier@enlighten.com
 847.228.1199

enlighten

Vanish

EDGE-LIT CANOPY



FEATURES

- Edge-Lit technology for even illumination
- Low profile 2.1" depth design virtually disappears into the canopy
- Illuminates without distraction and glare
- Pendant or surface mounted with 3/4" conduit
- Universal retrofit solution for HID replacements for various sizes
- IP65 rating to keep water and insects out
- Cast Aluminum with integral heat sink to maintain optimal thermal performance for long LED life Cast aluminum



SPECIFICATIONS

CONSTRUCTION

- Die-cast aluminum, low profile housing
- New construction or retrofit solution
- Canopy and soffit applications
- Easy installation
- Driver and optical chamber serviceable from below canopy
- Powder coat finish
- Heat sink design to disperse heat away from fixture
- Suitable for wet locations

OPTICS

- Acrylic Lens
- Type V distribution
- Comfort lens for low glare
- Light Guide Edge-Lit technology

INSTALLATION

- Surface or pendant mounted
- Easy installation and serviceable below the canopy deck
- Hinge for hanging during service

ELECTRICAL

- Universal 120-277 , 347, 480 Input Voltage
- Power Factor > 0.9 at full load
- Total Harmonic Distortion < 20% at full load
- 10 kV Surge Protection
- 0-10 Volt Dimmable Driver
- Operating temperature: -40°C to +40°C

CERTIFICATIONS

- UL Certified
- DesignLights Consortium™ 5.1 qualified
- Wet Location Listed
- IP66
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year warranty



ORDERING GUIDE

Example: VSH-85-5K7-UNV-WHS

CATALOG #

VSH					
Series	Size	Color Temp	Voltage	Finish	
VSH Vanish	30'	4K7	UNV Universal	BLT	Black Matte Textured
	55	5K7	347 347V	BLS	Black Gloss Smooth
	85		480 480V	DBT	Dark Bronze Matte Textured
	140			DBS	Dark Bronze Gloss Smooth
				GTT	Graphite Matte Textured
				LGS	Light Grey Gloss Smooth
				LGT	Light Grey Matte Textured
				PSS	Platinum Silver Smooth
				WHT	White Matte Textured
				WHS	White Gloss Smooth
				VGT	Verde Green Textured
				Color Option	
				CC	Custom Color

Notes:

- 1 Only available in Universal Voltage

KEY DATA	
Lumen Range	4,500 – 20,200
Wattage Range	30 – 140 Watts
Efficacy Range (LPW)	138 – 157
Reported Life (Hours)	>60,000

PERFORMANCE DATA

Product	Lumens	B	U	G	LPW	CRI	CCT
VSH-30-4K7	4564	2	0	1	150	70	4000K
VSH-30-5K7	4793	2	0	1	157	70	5000K
VSH-55-4K7	8846	3	0	2	153	70	4000K
VSH-55-5K7	9069	3	0	2	157	70	5000K
VSH-85-4K7	13296	3	0	2	152	70	4000K
VSH-85-5K7	13666	3	0	2	157	70	5000K
VSH-140-4K7	19649	4	0	3	138	70	4000K
VSH-140-5K7	20196	4	0	3	142	70	5000K

Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment application and inherent performance balances of the electrical components.

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	50,000	TM-21-11' L96 60,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.94	0.92	0.90	0.81	>170,000
40°C / 104°F	0.99	0.94	0.92	0.89	0.80	>160,000

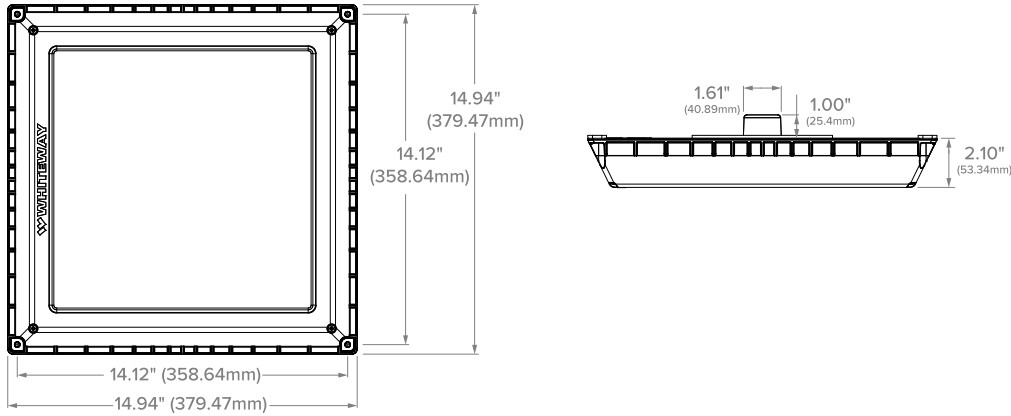
LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.97

Vanish

EDGE-LIT CANOPY

DIMENSIONS

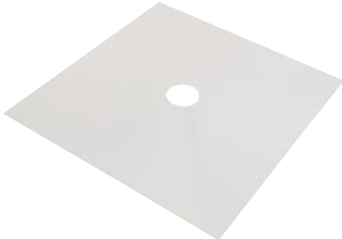


MOUNTING ACCESSORIES

Accessories (order separately)

- 93133148** WHITEWAY 15 IN CVR PLT WHT VSH/GSY Retrofit cover plate for LSI Encore 15" square-replacement for 10" opening
- 93133149** WHITEWAY DECORATIVE CVR PLT VSH/GSY 26" Decorative Beauty Plate for Canopy Retrofits
- 93133151** WHITEWAY HID RETRFT KIT WHT VSH/GSY Universal HID retrofit kit
(fits any square HID housing between 21" & 23" square.)
- 93133177** WHITEWAY STEM AND JUNCTION BOX

93133148



93133149



93133151

• Measure outside dimension of existing housing



93133177



SLING Micro Strike

AREA/SITE/ROAD LIGHTER

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a universal mounting block for easy pole installation or mast arm option for 2-3/8 ft OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 1.5G rated for high vibration applications including bridges and overpasses



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4W and 5QW distributions
- Lens distributions are field rotatable (in 90° increments) or exchangeable for job site fine-tuning
- 3000K, 4000K, or 5000K (70 CRI) CCT
- 80, 160, or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Universal mounting block works with #2 drill pattern
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities
- Mast arm fitter accessory or option available for 2-3/8" OD brackets with vertical tilt of +3°, 0° or -3°

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is consumed

CONTROLS

- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6
- NX Lighting Controls™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor via 7-pin
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application

CERTIFICATIONS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- DLC (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- 1.5G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY

- 5 Year warranty

KEY DATA	
Lumen Range	3,200–36,000
Wattage Range	25–255
Efficacy Range (LPW)	118–148
Weight lbs. (kg)	14.5–17.5 (6.6–8.0)

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

ORDERING GUIDE

Example: ASL1-80L-50-3K7-2-UNV-ASQU-BLT-7PRMD-40F

CATALOG #

ORDERING INFORMATION

Series	# LEDs	CCT/CRI	Distribution	Rotation/Orientation	Voltage	Mounting
ASL1 ASL Microstrike Series	80L-25 3,000 lm	3K7 3000K, 70 CRI	2 Type II	L Optic rotation left	UNV Universal 120-277V	ASQU Arm Square w/ Universal Mount
	80L-39 4,500 lm	4K7 4000K, 70 CRI	3 Type III	R Optic rotation right	120 120V	A3 AS with 3.5-4.13" OD RPA3 & UM
	80L-50 6,000 lm	5K7 5000K, 70 CRI	4W Type 4W		208 208V	A4 AS with 4.18-5.25" OD RPA4 & U
	160L-70 9,000 lm		5QW Type 5QW		240 240V	A5 AS with 5.5-6.5" OD RPA5 & UM
	160L-100 12,000 lm				277 277V	MAF Mast Arm Fitter for 2-3/8" OD
	160L-115 15,000 lm				347 347V	
	160L-135 18,000 lm				480 480V	
ASL2 ASL Microstrike Series	320L-145 21,000 lm					
	320L-170 24,000 lm					
	320L-185 27,000 lm					
	320L-210 30,000 lm					
	320L-235 33,000 lm					
	320L-255 35,000 lm					

Control Options Network	Options	Color
NXSPW30F¹ NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' (use white for WH, black for DB, GT, TT, gray for LG, PS)	F³ Fusing	BLT Black Matte Textured
NXSP30F¹ NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' (use white for WH, black for DB, GT, TT, gray for LG, PS)	BC Backlight Control	BLS Black Gloss Smooth
NXWE¹ NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	TB⁴ Terminal Block	DBT Dark Bronze Matte Textured
Stand Alone Sensors	TE Toolless Entry	DBS Dark Bronze Gloss Smooth
SCP-8F^{5,6} Remote control programmable line voltage sensor	SSF Stainless Steel Fasteners	GTT Graphite Matte Textured
SCP-40F^{5,6} Remote control programmable line voltage sensor		LGS Light Grey Gloss Smooth
Control Options Other		LGT Light Grey Matte Textured
7PR 7 Pin Receptacle		PSS Platinum Silver Smooth
7PR-SC 7 Pin Receptacle with shorting cap		WHT White Matte Textured
7PR-MD8F 7 pin receptacle with low voltage sensor at 8' mounting for external control accessory		WHS White Gloss Smooth
7PR-MD40F 7 pin receptacle with low voltage sensor at 40' mounting for external control accessory		VGT Verde Green Textured
7PR-TL 7 Pin Receptacle with Photocontrol		Color Option
ADD AutoDim timer based dimming		CC Custom Color
ADT AutoDim time of day dimming		
Sensors		
BTS_F Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens ⁷		
BTSO_F Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens, up to 12' mounting height ⁸		

- Notes:
- Not compatible with 80L configurations
 - Not compatible with 480V configurations
 - Must specify voltage
 - Not available with a combination or 347/480 and fusing
 - Must specify voltage, 120V or 277V only
 - Order at least one SPC-REMOTE per project location to program and control the occupancy sensor
 - Replace "_" with "14" for up to 14' mounting height, "40F" for 15-40' mounting height
 - Replace "_" with "12" for up to 12' mounting height

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

CONTROL ACCESSORIES (ORDERED SEPARATELY)

Catalog Number	Description
<input type="checkbox"/> SCP-Remote	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
<input type="checkbox"/> WIR-RME-L	wiSCAPE External Fixture Module
<input type="checkbox"/> NXOFM-1R1D-UNV	NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming

ACCESSORIES (ORDERED SEPARATELY)

Catalog Number	Description
<input type="checkbox"/> ASL1-HSS-90-B-XXX ¹	House Side Shield Back 90 deg
<input type="checkbox"/> ASL1-HSS-90-F-XXX ¹	House Side Shield Front 90 deg
<input type="checkbox"/> ASL1-HSS-90-S-XXX ¹	House Side Shield Side 90 deg
<input type="checkbox"/> ASL1-HSS-270-BSS-XXX ¹	House Side Shield Back, Side & Side 270 deg
<input type="checkbox"/> ASL1-HSS-270-FSS-XXX ¹	House Side Shield Front, Side & Side 270 deg
<input type="checkbox"/> ASL1-HSS-270-FSB-XXX ¹	House Side Shield Front, Side & Back 270 deg
<input type="checkbox"/> ASL1-HSS-360-XXX ¹	House Side Shield 360 deg
<input type="checkbox"/> ASL2-HSS-90-B-XXX ¹	House Side Shield Back 90 deg
<input type="checkbox"/> ASL2-HSS-90-F-XXX ¹	House Side Shield Front 90 deg
<input type="checkbox"/> ASL2-HSS-90-S-XXX ¹	House Side Shield Side 90 deg
<input type="checkbox"/> ASL2-HSS-270-BSS-XXX ¹	House Side Shield Back, Side & Side 270 deg
<input type="checkbox"/> ASL2-HSS-270-FSS-XXX ¹	House Side Shield Front, Side & Side 270 deg
<input type="checkbox"/> ASL2-HSS-270-FSB-XXX ¹	House Side Shield Front, Side & Back 270 deg
<input type="checkbox"/> ASL2-HSS-360-XXX ¹	House Side Shield 360 deg
<input type="checkbox"/> ASL-MAF	Mast arm kit with wildlife shield for mounting on 2 3/8" OD arms
<input type="checkbox"/> SETA2-XX ¹	Square pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon)
<input type="checkbox"/> RETA2-XX ¹	Round pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon), requires CL1S-RPA4-ACC-XX for each luminaire
<input type="checkbox"/> RARBC80L	Backlight Control 80L
<input type="checkbox"/> RARBC160L	Backlight Control 160L
<input type="checkbox"/> RARBC320L	Backlight Control 320L
<input type="checkbox"/> RARBC480L	Backlight Control 480L
<input type="checkbox"/> CL1S-RPA4-ACC-XX ¹	Round Pole Adapter (* denotes pole diameter; 3 = 3 1/4" -3 3/4"; 4* = 3 7/8" – 6")
<input type="checkbox"/> ASL-ARMMTG-XX ¹	Arm mounting kit for side of pole attachment
<input type="checkbox"/> WB-AREA-XX ¹	Wall bracket, Compatible with standard arm mount option
<input type="checkbox"/> ASL-MAF	Mast arm kit with wildlife shield for mounting on 2 3/8" OD arms

¹ Replace XX or XXX with color choice, eg.: DB for Dark Bronze or BLT for Black Matte Textured

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G
ASL1	25	25.4	2	3430	135	2	0	2	3413	134	2	0	2	3225	127	2	0	2
			3	3465	136	2	0	2	3448	136	2	0	2	3259	128	2	0	2
			4W	3401	134	2	0	3	3384	133	2	0	3	3198	126	2	0	3
			5QW	3483	137	4	0	2	3466	136	4	0	2	3274	129	4	0	2
	39	38.0	2	5237	138	3	0	3	5211	137	3	0	3	4924	130	3	0	3
			3	5292	139	2	0	2	5265	139	2	0	2	4976	131	2	0	2
			4W	5193	137	2	0	3	5168	136	2	0	3	4883	129	2	0	3
			5QW	5318	140	4	0	2	5292	139	4	0	2	4999	132	4	0	2
	50	49.7	2	6294	127	2	0	2	6263	126	2	0	2	5918	119	2	0	2
			3	6360	128	2	0	2	6328	127	2	0	2	5980	120	2	0	2
			4W	6242	126	2	0	3	6211	125	2	0	3	5869	118	2	0	3
			5QW	6392	129	4	0	2	6360	128	4	0	2	6008	121	4	0	2
	70	68.4	2	9461	138	3	0	3	9414	138	3	0	3	8897	130	3	0	3
			3	9560	140	2	0	2	9513	139	2	0	2	8989	131	2	0	2
			4W	9383	137	2	0	3	9336	136	2	0	3	8822	129	2	0	3
			5QW	9608	140	4	0	2	9560	140	4	0	2	9032	132	4	0	2
	100	88.0	2	11945	136	2	0	2	11886	135	2	0	2	11232	128	2	0	2
			3	12070	137	2	0	2	12010	136	2	0	2	11349	129	2	0	2
			4W	11846	135	2	0	3	11787	134	2	0	3	11139	127	2	0	3
			5QW	12131	138	4	0	2	12070	137	4	0	2	11403	130	4	0	2
	115	109.7	2	15683	143	2	0	2	15605	142	2	0	2	14977	137	2	0	2
			3	15486	141	2	0	2	15411	140	2	0	2	14819	135	2	0	2
			4W	15305	140	2	0	3	15232	139	2	0	3	14646	134	2	0	3
			5QW	15732	143	4	0	2	15653	143	4	0	2	15024	137	4	0	2
	135	133.3	2	18089	136	3	0	3	17999	135	3	0	3	17275	130	3	0	3
			3	17861	134	2	0	2	17776	133	2	0	2	17092	128	2	0	2
			4W	17653	132	2	0	3	17569	132	2	0	3	16893	127	2	0	3
			5QW	18155	136	4	0	2	18064	136	4	0	2	17338	130	4	0	2

ASL2 Performance Data on next page

¹ VAC input Lumen values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations. Actual performance may differ as a result of end-user environment and application.

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G
ASL2	145	143.0	2	21007	147	3	0	4	20902	146	3	0	4	20061	140	3	0	4
			3	20842	146	3	0	4	20738	145	3	0	4	19904	139	3	0	4
			4W	20595	144	3	0	5	20492	143	3	0	5	19668	138	3	0	5
			5QW	21130	148	5	0	4	21024	147	5	0	4	20179	141	5	0	4
	170	168.0	2	24447	146	3	0	4	24325	145	3	0	4	23347	139	3	0	4
			3	24256	144	3	0	4	24134	144	3	0	4	23164	138	3	0	4
			4W	23968	143	3	0	5	23848	142	3	0	5	22889	136	3	0	5
			5QW	24591	146	5	0	4	24468	146	5	0	4	23484	140	5	0	4
	185	185.0	2	26651	144	4	0	5	26518	143	4	0	5	25452	138	4	0	5
			3	26442	143	3	0	4	26310	142	3	0	4	25252	136	3	0	4
			4W	26129	141	4	0	5	25998	141	4	0	5	24953	135	4	0	5
			5QW	26808	145	5	0	5	26674	144	5	0	5	25602	138	5	0	5
	210	210.0	2	29880	142	3	0	4	29731	142	3	0	4	28535	136	3	0	4
			3	29646	141	3	0	4	29497	140	3	0	4	28312	135	3	0	4
			4W	29294	139	3	0	5	29148	139	3	0	5	27976	133	3	0	5
			5QW	30056	143	5	0	4	29905	142	5	0	4	28703	137	5	0	4
	235	235.0	2	32959	140	3	0	4	32794	140	3	0	4	31475	134	3	0	4
			3	32700	139	3	0	4	32537	138	3	0	4	31229	133	3	0	4
			4W	32312	137	3	0	5	32151	137	3	0	5	30858	131	3	0	5
			5QW	33152	141	5	0	4	32987	140	5	0	4	31661	135	5	0	4
255	261.2	2	36218	139	4	0	5	36037	138	4	0	5	34588	132	4	0	5	
		3	35934	138	3	0	4	35754	137	3	0	4	34317	131	3	0	4	
		4W	35508	136	4	0	5	35330	135	4	0	5	33910	130	4	0	5	
		5QW	36431	139	5	0	5	36249	139	5	0	5	34792	133	5	0	5	

¹ VAC input Lumen values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations. Actual performance may differ as a result of end-user environment and application.

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

ELECTRICAL DATA

Family	Nominal Wattage	Input Voltage (Volts)	Current (AMPS)	System Power (Watts)
SLING (ASL1)	25	120	0.21	25.4
		208	0.12	
		240	0.11	
		277	0.09	
		347	0.07	
		480	0.05	
	39	120	0.32	38
		208	0.18	
		240	0.16	
		277	0.14	
		347	0.11	
		480	0.08	
	50	120	0.41	49.7
		208	0.24	
		240	0.21	
		277	0.18	
		347	0.14	
		480	0.10	
	70	120	0.57	68.4
		208	0.33	
		240	0.29	
		277	0.25	
		347	0.20	
		480	0.14	
	100	120	0.73	88
		208	0.42	
		240	0.37	
		277	0.32	
		347	0.25	
		480	0.18	
115	120	0.91	109.7	
	208	0.53		
	240	0.46		
	277	0.40		
	347	0.32		
	480	0.23		
135	120	1.11	133.3	
	208	0.64		
	240	0.56		
	277	0.48		
	347	0.38		
	480	0.28		
SLING (ASL2) Next Page				

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

ELECTRICAL DATA (CONT'D)

Family	Nominal Wattage	Input Voltage (Volts)	Current (AMPS)	System Power (Watts)
SLING (ASL2)	145	120	1.19	143.0
		208	0.69	
		240	0.60	
		277	0.52	
		347	0.41	
		480	0.30	
	170	120	1.40	168.0
		208	0.81	
		240	0.70	
		277	0.61	
		347	0.48	
		480	0.35	
	185	120	1.54	185.0
		208	0.89	
		240	0.77	
		277	0.67	
		347	0.53	
		480	0.39	
	210	120	1.75	210.0
		208	1.01	
		240	0.88	
		277	0.76	
		347	0.61	
		480	0.44	
	235	120	1.96	235.0
		208	1.13	
		240	0.98	
		277	0.85	
		347	0.68	
		480	0.49	
255	120	2.18	261.2	
	208	1.26		
	240	1.09		
	277	0.94		
	347	0.75		
	480	0.54		

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	TM-21-11' L96 60,000	50,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.97	0.96	0.95	0.91	408,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.89	356,000

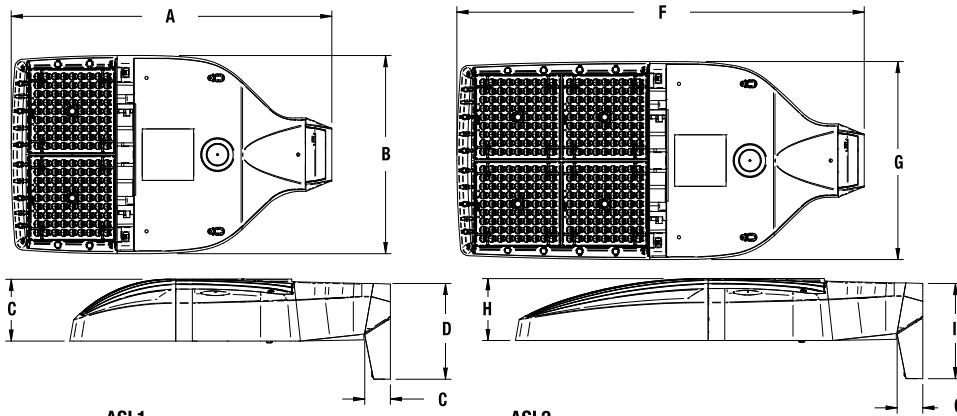
1. Projected per IESNA TM-21-11 (* Cree XP-L, 2100mA, 105°C Ts, 6,000hrs)

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0° C	32° F	1.06
10° C	50° F	1.03
20° C	68° F	1.01
25° C	77° F	1.00
30° C	86° F	0.99
40° C	104° F	0.97
50° C	122° F	0.94

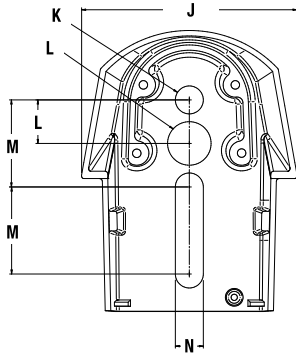
Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

DIMENSIONS



Weight	
ASL1	14.47 lbs (6.56 kgs)
ASL2	17.47 lbs (7.92 kgs)

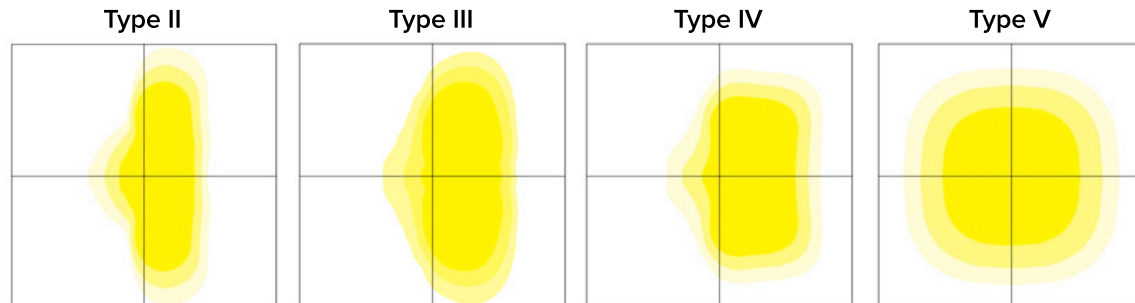
A	B	C	D	E	F	G	H	I	ASL1 EPA@0°	ASL2 EPA@0°	ASL1 w/ HSS	ASL2 w/ HSS
18.9"	11.7"	3.7"	5.65"	1.5"	24.0"	11.7"	3.7"	5.62"	.46 ft. ²	.56 ft. ²	.73 ft. ²	1.01 ft. ²
480mm	297mm	94mm	144mm	38mm	610mm	297mm	94mm	143mm	.14 m ²	.17 m ²	.22 m ²	.31 m ²



J	K	L	M	N
4.33"	.562"	.875"	1.75"	.562"
480mm	297mm	94mm	610mm	297mm

PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see [website photometric test reports](#).



SLING Micro Strike

AREA/SITE/ROAD LIGHTER

ADDITIONAL INFORMATION (CONT'D)

OCCUPANCY SENSOR

- Individual fixture control
- Dims product when space is not occupied



7-PIN RECEPTACLE

- Compatible with 3-pin, 5-pin or 7-pin photocontrols
 - Turns fixture on when sun sets, off when sun rises
 - Wireless networked solution
 - For use with a variety of control platforms
- *Additional accessories required.



NX



NX Lighting Controls™ platform delivers a lighting control solution capable of seamlessly connecting exterior and interior applications.

- Standalone or networked fixture control
- Astronomical time schedules
- BACnet building networking
- Connects with indoor wired, wireless or hybrid networks
- Wireless setup via app
- Occupancy Sensor option dims product when space is not occupied



SLING Micro Strike

AREA/SITE/ROAD LIGHTER

ADDITIONAL INFORMATION (CONT'D)

PROGRAMMED CONTROLS

ADD-AutoDim Timer Based Options

- Light delay options from 1-9 hours after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1-9 hours after the light has been dimmed previously.

EX: ADD-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	1-9 Hours	6
Auto-Dim Brightness	0-9% Brightness	5
Auto-Dim Return	Delay 0-9 Hours	R6

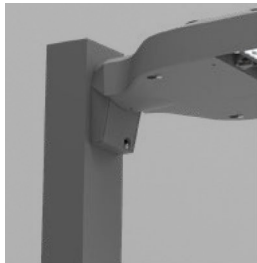
ADT-AutoDim Time of Day Based Option

- Light delay options from 1AM-9PM after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1AM-9PM after the light has been dimmed previously.

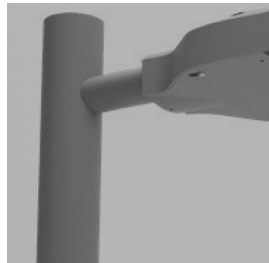
EX: ADT-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	12-3 AM and 6-11 PM	6
Auto-Dim Brightness	0-9% Brightness	5
Auto-Dim Return	12-6 AM and 9-11P	R6

MOUNTING



Arm Mount – Fixture ships with integral arm for ease of installation. Compatible with Outdoor S2 drill pattern.



MAF – Fits 2-3/8" OD arms Roadway applications.



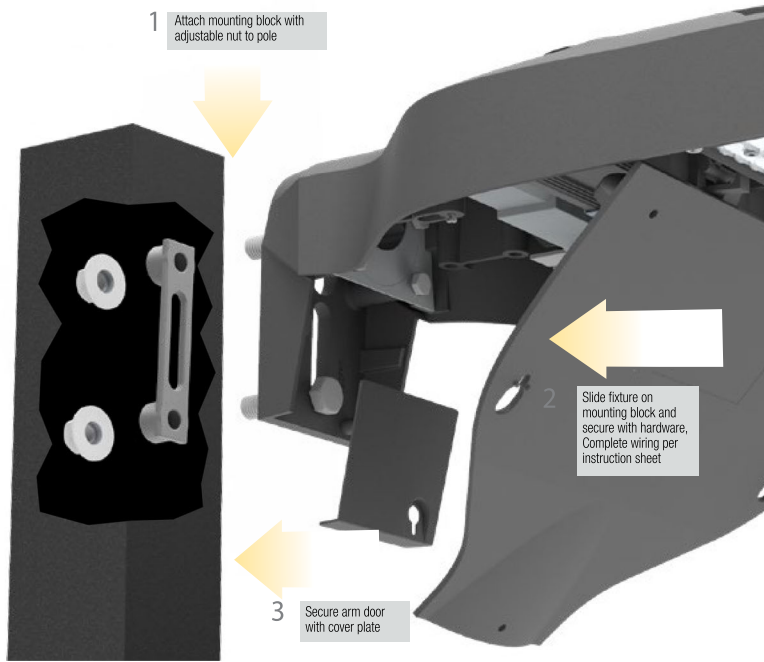
Wall Mount – Wall mount bracket designed for building mount applications.

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

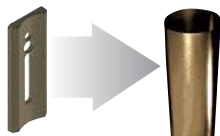
ADDITIONAL INFORMATION (CONT'D)

MOUNTING (CONT'D)



Universal Mount – Universal mounting block for ease of installation. Compatible with drill patterns from 2.5" to 4.5"

ACCESSORY



ROUND POLE ADAPTER



WB-AREA-XX



SPOKE BRACKET (single arm shown)
Horizontal round arm tenon adapters for use with MAF mounting type or accessory kit. Reference SH Spoke Pole Top Brackets for ordering information.

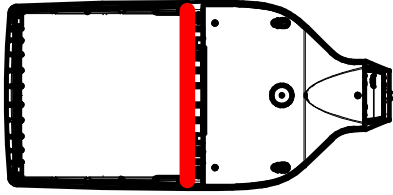
SLING Micro Strike

AREA/SITE/ROAD LIGHTER

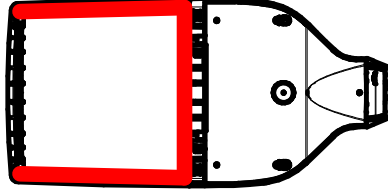
ADDITIONAL INFORMATION (CONT'D)

CONFIGURATIONS

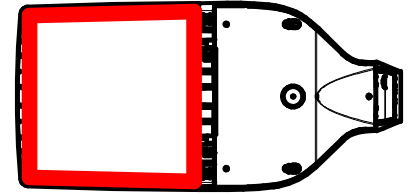
ASLx HSS-90-B-xx



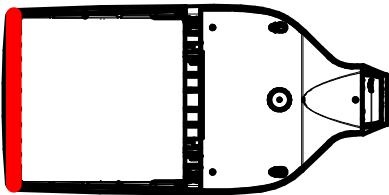
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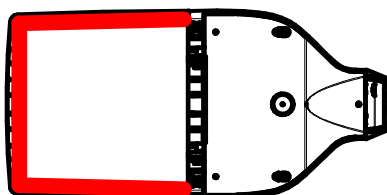
ASLx HSS-360-xx



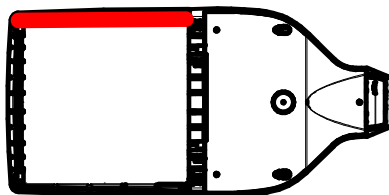
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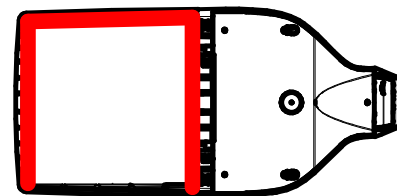
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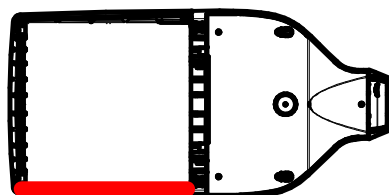
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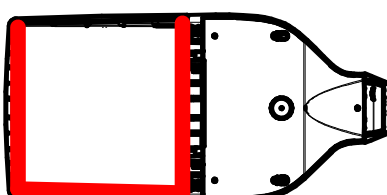
ASLx HSS-270-FSB-xx



ASLx HSS-90-S-xx



ASLx HSS-270-FSB-xx



USE OF TRADEMARKS AND TRADE NAMES

All product and company names, logos and product identifies are trademarks [™] or registered trademarks [®] of Current or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

Smooth baffle, round

When choosing a recessed fixture, eliminating glare is a priority. The unique positioning of the LED module in this series of downlights will meet that important need.



WET



LOW-GLARE



ENERGY STAR



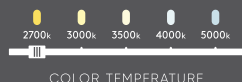
Intertek



IC RATED



JA8 CERTIFIED



Model	Size	Watts	Delivered lumens	LED lumens	CRI	Color °T	Voltage
RGR2-CC	2"	8 W	600 lm	750 lm	90	2700, 3000, 3500, 4000, 5000 K	120 V
RGR4-CC	4"	14 W	990 lm	1200 lm	90		120 V
RGR6-CC	6"	20 W	1600 lm	1900 lm	90		120 V

Specifications

Every fixture includes a junction box with integrated dimmable driver
 Can be daisy chained
 Superior LED performance and lifespan
 Regressed light source
 Minimal heat emission
 Aluminum construction
 Switch-selectable CCT: 2700K/3000 K/3500 K/4000 K/5000 K
 IC certification (suitable for direct contact with insulation)
 Air-tight certified as per ASTM E283-04
 40° beam angle
 Suitable for wet locations
 JA8 Certified
 Refer to website for dimmer compatibility
 Ideal operating temperature: -20° to 40° C
 5-year warranty

Finish

- **BK** Black
- **SN** Satin Nickel
- **WH** White

Accessories

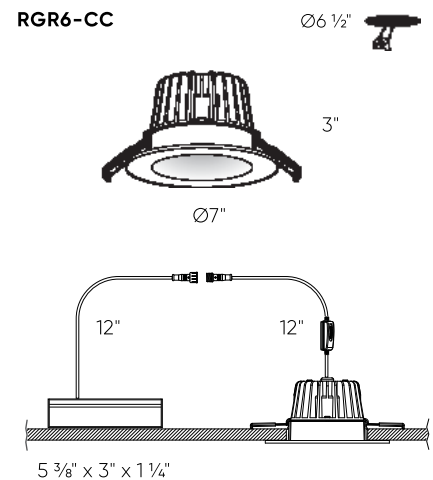
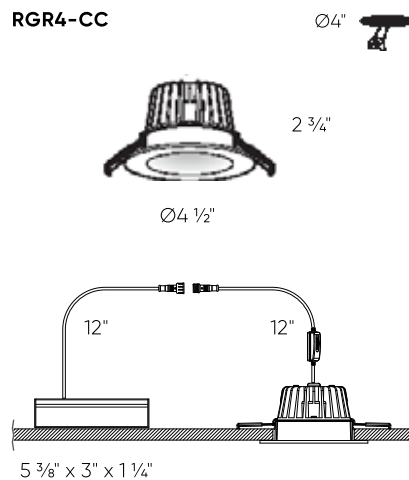
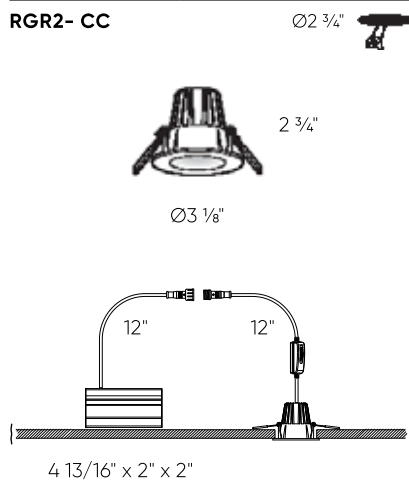
- RFP-UNI**
Universal rough-in plate
- RFP-23**
Rough-in plate for 2" and 3" models
- RFP-46**
Rough-in plate for 4" and 6" models

Order example

RGR4-CC-BK
 Dimmable RGR4-CC 4" round regressed LED fixture in a black finish

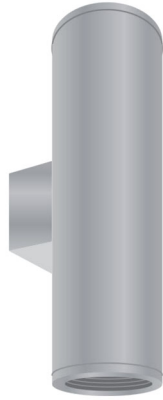
Note

Other Color °T and Finishes available, but may require MOQ's and longer lead times. Please contact your DALI representative for more information.



FCC600 Up/Down or Up, Standard Drivers without Battery Backup

6" Round wall mount up/down or up only cylinder outdoor



FEATURES

- Up to 5000 lm, Up to 100 LPW
- Numerous mounting capabilities
- Clear anti-glare tempered glass lens (IK09)
- Multiple color finishes with AAMA 2605 option (10 yr. paint warranty)
- 0-10V 1% Dimming (Standard)
- 1.5G Vibration Tested
- 95 CRI with 2 SDCM

PERFORMANCE

Beam Spread: 15° | 25° | 40° | 50° | 72°
CCT Options: 2700K | 3000K | 3500K | 4000K
CRI: 93 CRI
Consistency: 2 SDCM (Fixture to Fixture)
Lumens: 5000 lm
Lifetime: > 70,000 hours / L70 or better

PHYSICAL

Mounting: Mounts directly to standard recessed junction box with wall mount or twist-lock canopy. Additional holes allow unit to be attached directly to mounting surface.

Ingress Protection: Continuous silicone gasket to seal out contaminants, IP65 rated for dry, damp or wet locations

Finish: Six stage chemical iron phosphate conversion pre-treatment. Polyester powder coat finish, 18 µm Min., 5000hr salt spray test (ASTM B117) compliant with Florida / AAMA 2604 specification. AAMA 2605 optional w/ 10 yr. paint warranty.

Warranty: 5-Year limited warranty (refer to website for details)

Housing: Heavy-walled, extruded aluminum housing with high pressure die-cast lens ring and cap with stainless steel hardware.

Lens: IK09 impact compliant, clear anti-glare tempered glass

Vibration Resistance: Compliant with 1.5G ANSI C136.31, Seismic rated AC-156

Weight: 8-12 lbs (Depending on Length)

Operating Temperature: -22°F to 122°F (-30°C to 50°C)

ELECTRICAL

Voltage: Universal 120–277V AC standard, 347V optional

Power Supply: Integral Class II, electronic high-power factor >.90, THD < 20%, FCC Title 47 Part 15 Class A. EldoLED & Lutron optional

Power Consumption: Up to 53W (5000 lm)

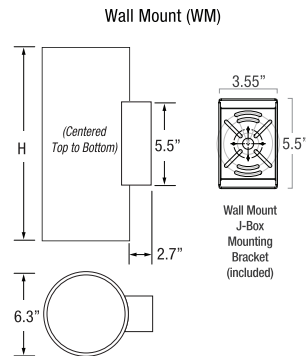
Dimming: Standard: 0-10V, 1% Dimming, Optional: ELV, TRIAC, dim to off, DMX, DALI

Certification: CEC Title 24 - JA8 Compliant (93 CRI Only)

Standards: cETLus Listed, CE, NOM, and RoHS Compliant. Wet location listed for wall or ceiling mount IP65 Ingress protection. 1.5G (ANSI C136.31) Vibration resistance rated. IK09 (IEC6226) Impact resistance rated. IESNA LM79 Photometric testing by NVLAP accredited test lab. IESNA LM80 LED testing by NVLAP accredited test lab. IESNA TM21 Luminaire lumen depreciation projection to >70,000hrs.

PHYSICAL DIMENSIONS

Fixture	Height (H)
FCC610W	10.95" Height (1 Integral Driver Only)
FCC612W	12.95" Height (1 Integral Driver Only)
FCC614W	14.95" Height (1 Integral Driver Only)
FCC616W	16.95" Height (1 Integral Driver Only)
FCC618W	18.95" Height
FCC620W	20.95" Height
	(All above are Wall Mount Standard)



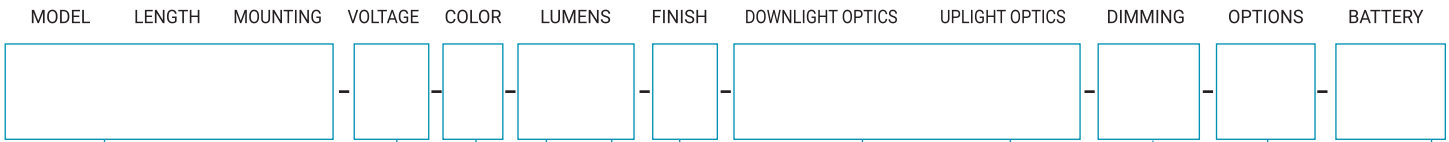
Date: _____
 Type: _____
 Fixture: _____
 Project: _____

Approved: _____

FCC600 Up/Down or Up, Standard Drivers without Battery Backup

PRODUCT CODE

EXAMPLE: FCC610W-UNV-927-0505L-BKE-D15U15-ET



MODEL	LENGTH
FCC610W	10.95" Height (1 Integral Driver Only)
FCC612W	12.95" Height (1 Integral Driver Only)
FCC614W	14.95" Height (1 Integral Driver Only)
FCC616W	16.95" Height (1 Integral Driver Only)
FCC618W	18.95" Height
FCC620W	20.95" Height
(All above are Wall Mount Standard)	

DOWN LUMENS (nominal) UP LUMENS		
NO	No Light Option	
05	500 lm	05L
10	1000 lm	10L
15	1500 lm	15L
20	2000 lm	20L
25	2500 lm	25L
30	3000 lm	30L
35	3500 lm	35L
40	4000 lm	40L
45	4500 lm	45L
50	5000 lm	50L

DOWN LIGHT OPTICS (nominal)	UPLIGHT OPTICS
D15	Spot (15°) (15L Max)
D25	Narrow Flood (25°)
D40	Mid Flood (40°)
D50	Flood (50°)
D72	Wide Flood (72°)

WITH SOFT FIELD LENS (Below)		
D15S	Spot (15°) (15L Max)	U15S
D25S	Narrow Flood (25°)	U25S
D40S	Mid Flood (40°)	U40S
D50S	Flood (50°)	U50S
D72S	Wide Flood (72°)	U72S

DIMMING	
ET	ELV or TRIAC Driver (120V Phase Dimming w/ UNV Driver) (20L-45L Only)
LD	0-10V Dimming, 1% (Standard)
ET2	ELV or TRIAC Drivers (Qty. 2) (120V Phase Dimming w/ UNV Drivers) (20L-45L Only)
LD2	0-10V Dimming, 1% (Qty. 2)

OPTIONS	
CV	Cut-Off Visor (Down Only)

BATTERY	
N/A	(Leave Blank)

VOLTAGE	
UNV	Universal 120-277 Volt AC
347V	347 Volt AC

COLOR	
927	(93CRI) 2700K
930	(93CRI) 3000K
935	(93CRI) 3500K
940	(93CRI) 4000K

FINISH	
BKE	Black (AAMA 2604)
BRE	Bronze (AAMA 2604)
SLE	Silver (AAMA 2604)
WHE	White (AAMA 2604)
CCE	Custom Color (AAMA 2604)
BKED	Black (AAMA 2605)
BRED	Bronze (AAMA 2605)
SLED	Silver (AAMA 2605)
WHED	White (AAMA 2605)
CCED	Custom Color (AAMA 2605)

(50L Max Total output) (Standard Lumen Output Split 50% Up / 50% Down) (Additional driver needed for unequal output selections)

FCC600 Up/Down or Up, Standard Drivers without Battery Backup

LUMENS nominal

Model	Watts	940
FCC6	5W (Min)	500 lm (Min)
	53W (Max)	5000 lm (Max)

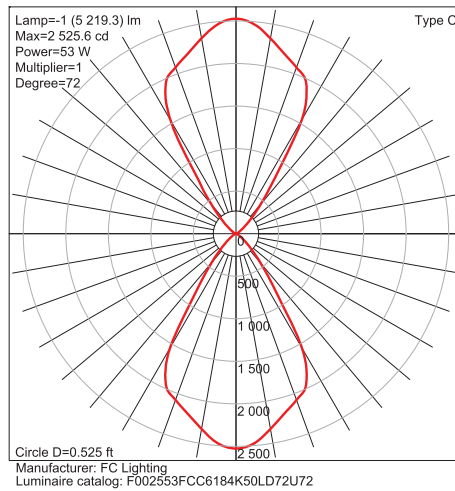
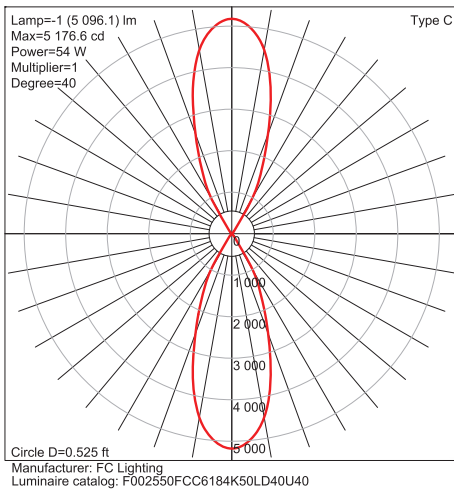
IES Multiplier	
Color	Multiplier
927	0.93
930	0.97
935	0.99
940	1.00

*83CRI@1.15 Consult factory.

TRIAC & ELV Approved Dimmer List	
Manufacturer	Manufacturer Part Number
Lutron	Glyder GLV-600
	Diva DVLV-600P
	Diva DV-600P
	Diva DVELV-600P(303)
	Maestro MALV-600
	Nova T NT-1000
	Nova T NTELV-600
Leviton	Skylark SLV-600P
	RadioRA2-10ND
	SureSlide 6633
	Illumatech IPE04

0-10V Approved Dimmer List	
Manufacturer	Manufacturer Part Number
Lutron	Diva DVSTV-XX
	Diva DVSTV-453PH-WH1
Leviton	Illumatech 010-IP710-DLZ

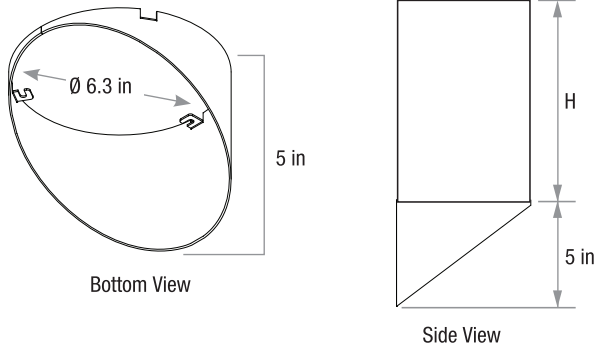
PHOTOMETRICS



FCC600 Up/Down or Up, Standard Drivers without Battery Backup

MORE DIMENSIONS

Cutt-Off Visor (CV) (Down Only)



September 14, 2022

Mr. Nick Spallone
 Car Wash Pro Designers (CWPD)
 6400 N Northwest Hwy, Unit 4
 Chicago, IL 60631

Subject: S John King Blvd Car Wash Facility–Noise Impact Study–Rockwall, TX

Dear Mr. Spallone:

MD Acoustics, LLC (MD) has completed a noise assessment for the proposed car wash located near the northwest corner of S John King Blvd and TX 276 in the City of Rockwall, TX. This assessment reviews the projected car wash operational noise levels and compares them to the City’s noise ordinance. The project proposes a covered car wash tunnel with 24 vacuum stations on approximately 3.02 acres.

1.0 Assessment Overview

This assessment evaluates the projections of operational noise and compares them to the relevant noise ordinance for informational purposes. The project location map is located in Exhibit A. The site plan utilized for the project is indicated in Exhibit B.

2.0 Local Acoustical Requirements

The Code of Ordinances of Rockwall, Texas Chapter 16 Section 16-183 states the following:

It shall be a violation of this article for any person to operate or permit to be operated any stationary source of sound which creates a unit percentile sound level (L_1) greater than 15 dBA above the ambient sound pressure level (L_{90}) as set forth in the table below in any residential use zone, or creates a tenth percentile sound level (L_{10}) or a 90th percentile sound level (L_{90}) which exceeds the limits set forth in the table below for the receiving land use districts when measured at the property boundary. For the purpose of enforcing these provisions, a measurement period shall not be less than ten minutes or more than 30 minutes.

Table 1: Rockwall Noise Limits

<i>Land Use District</i>	<i>Tenth Percentile (L_{10})</i>	<i>Ambient, or 90th Percentile (L_{90})</i>
<i>Residential:</i>		
<i>7:00 a.m.—10:00 p.m.</i>	<i>65 dBA</i>	<i>55 dBA</i>
<i>10:00 p.m.—7:00 a.m.</i>	<i>60 dBA</i>	<i>50 dBA</i>
<i>Commercial/Agriculture:</i>		
<i>7:00 a.m.—10:00 p.m.</i>	<i>72 dBA</i>	<i>62 dBA</i>
<i>10:00 p.m.—7:00 a.m.</i>	<i>67 dBA</i>	<i>57 dBA</i>
<i>Industrial:</i>		
<i>7:00 a.m.—10:00 p.m.</i>	<i>85 dBA</i>	<i>75 dBA</i>
<i>10:00 p.m.—7:00 a.m.</i>	<i>85 dBA</i>	<i>75 dBA</i>

Exhibit A
Location Map



3.0 Study Method and Procedure

SoundPLAN Acoustic Model

SoundPLAN (SP) acoustical modeling software was utilized to model future worst-case stationary noise impacts to the adjacent land uses. SP is capable of evaluating multiple stationary noise source impacts at various receiver locations. SP’s software utilizes algorithms (based on the inverse square law and reference equipment noise level data) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

The model assumes that the car wash tunnel has an 8-foot-tall by 10-foot-wide exit opening and is covered by a solid roof. The blowers (120 HP IDC Predator system or equivalent) were modeled at 7 to 10 feet high as point sources. The blowers are modeled approximately 5 feet inside the exit of the tunnel. The reference equipment sound level data is provided in Appendix B.

The SP model assumes a total of 24 vacuums and the dryer system are operating simultaneously (worst-case scenario) when in actuality, the noise will be intermittent and lower in noise level. The project proposes to house all other equipment (e.g., compressors, pumps, vacuum turbine motors) inside equipment rooms. The reference vacuum equipment sound level data is provided in Appendix B. Appendix C contains the model’s inputs and outputs.

4.0 Existing Ambient Noise Levels

Five short-term (11 to 15-min) ambient noise measurements were performed on September 9 to September 10, 2022, to determine the existing ambient noise levels at the project site. Appendix A contains the locations of each measurement and the recorded data. The results of the short-term noise measurements are presented in Table 2.

Table 2: Short-Term Measurement Ambient Noise Data (dBA)¹

Location	Date	Start Time	Leq	Lmax	Lmin	L1	L10	L25	L50	L90
ST1	9/9/2022	3:56 PM	60.9	75.6	48.2	71.2	64.3	60.1	57.0	52.6
ST2	9/9/2022	4:18 PM	54.0	62.9	45.8	60.8	57.3	55.0	52.1	48.9
ST3	9/9/2022	4:42 PM	52.7	64.9	46.1	59.2	54.7	53.1	51.5	48.7
ST4	9/10/2022	2:02 PM	66.0	85.5	49.3	75.0	68.6	64.9	61.6	54.3

Notes:

1. Measurement locations are indicated in Appendix A.

These locations represent the levels at the adjacent properties. ST1 represents the residential properties to the south. ST2 represents the residential properties to the west. ST3 represents the residential properties to the north. ST4 represents the commercial property to the east.

The data indicates the ambient noise levels at nearby land uses range between 53 to 66 dBA Leq during operational hours. The measured noise levels and field notes indicate that traffic noise along SR-276 is the main source of noise impacting the project site.

A long-term measurement was also performed to determine the overall trend in the area throughout the day.

Table 3: Long-Term Measurement Ambient Noise Data (dBA)¹

Time	dB(A)							
	L _{EQ}	L _{MAX}	L _{MIN}	L ₁	L ₅	L ₁₀	L ₅₀	L ₉₀
5PM-6PM	60.3	74.6	50.6	64.2	63.5	62.6	59.7	57.5
6PM-7PM	60.0	74.7	49.8	63.6	62.9	62.5	59.1	57.4
7PM-8PM	62.1	76.3	51.1	68.8	67.4	66.2	60.1	56.4
8PM-9PM	58.1	63.7	56.3	63.6	62.8	61.4	56.5	54.3
9PM-10PM	60.0	82.9	49.6	68.4	65.1	62.0	57.0	53.8
10PM-11PM	58.1	76.2	48.4	66.0	63.8	60.3	55.9	53.4
11PM-12AM	56.1	74.8	47.0	63.5	59.6	56.6	54.0	52.1
12AM-1AM	55.3	75.8	46.6	63.7	58.5	56.5	53.4	51.8
1AM-2AM	52.8	75.8	43.5	63.4	55.7	53.6	50.3	46.8
2AM-3AM	51.7	76.7	40.4	62.7	55.9	51.9	47.4	43.7
3AM-4AM	52.4	72.3	39.1	62.2	59.4	55.8	46.5	42.2
4AM-5AM	53.4	78.0	39.4	64.8	57.4	55.5	47.5	43.9
5AM-6AM	56.1	74.4	41.9	63.9	62.0	60.2	52.7	49.2
6AM-7AM	58.3	77.8	47.8	64.8	63.3	61.3	56.1	52.4
7AM-8AM	61.0	79.9	51.1	67.2	65.9	62.6	59.9	56.9
8AM-9AM	61.1	76.3	48.7	66.3	65.5	64.6	60.0	56.4
9AM-10AM	58.9	80.4	45.4	65.9	62.8	61.3	57.3	54.6
10AM-11AM	59.8	78.7	46.1	67.1	64.1	63.9	57.7	55.2
11AM-12PM	59.7	83.5	47.0	68.3	63.7	61.7	56.7	54.3
12PM-1PM	57.7	74.7	45.3	62.8	60.9	60.6	57.0	53.3
1PM-2PM	57.4	77.1	45.0	64.8	61.0	58.8	55.9	53.4
CNEL	64.7							
Notes: ¹ . Appendix A for measured noise data.								

The long-term data indicate that the afternoon is the quietest time of day during operational hours.

5.0 Findings and Recommendations

A total of four (4) receptors were modeled to accurately evaluate the future operational noise levels near the project site. In Exhibit C, a yellow dot denotes a receptor. Receptors 1, 2, and 4 represent areas that must meet the residential noise standard, and receptor 3 must meet the commercial noise standard. All yellow dots represent the property line of the project site.

Table 4 presents the project’s predicted noise levels and the project plus ambient noise levels. Table 4 compares both sets of noise levels to the maximum permitted L₉₀ noise level. The model assumes that the car wash is operating continuously as a worst-case scenario. With this assumption, the L₉₀ levels would

have the potential to increase the most due to the project. Therefore, if increases to the L₉₀ levels are within code and insignificant, increases to L₁₀ and L₁ levels will be as well.

Table 4: Worst-Case Predicted Operational Noise Levels (dBA, L₉₀)¹

Receptor ¹	Existing Ambient Noise Level ²	Project Noise Level ³	Rockwell Texas Ambient Limit 7 AM to 10 PM	Total Combined Noise Level	Change in Noise Level as Result of Project
1	49	41	55	50	1
2	49	39	55	49	0
3	54	50	62	55	1
4	53	46	55	54	1

Exhibit C shows the future noise level projections and contours based on the proposed project design. The project noise level at the residential properties is 39-46 dBA and meets the residential standard of 55 dBA L₉₀. The project noise level at the nonresidential properties is 50 dBA L₉₀ and meets the nonresidential standard of 62 dBA Leq.

The L₁₀ and L₁ levels will therefore change by less than 1 dB as a result of the project, as the project levels are at least 10 dB quieter than the existing levels.

The overall noise level will increase by 0-1 dB as a result of the project. Table 5 provides the characteristics associated with changes in noise levels.

Table 5: Change in Noise Level Characteristics¹

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

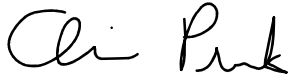
The noise level increase due to the project would fall within the “not perceptible” noise level characteristics at the receptors.

6.0 Conclusions

MD has reviewed the applicable noise ordinances and modeled the noise levels for the proposed car wash. The proposed car wash does not exceed the maximum permitted noise levels and does not perceptibly increase the overall ambient noise level.

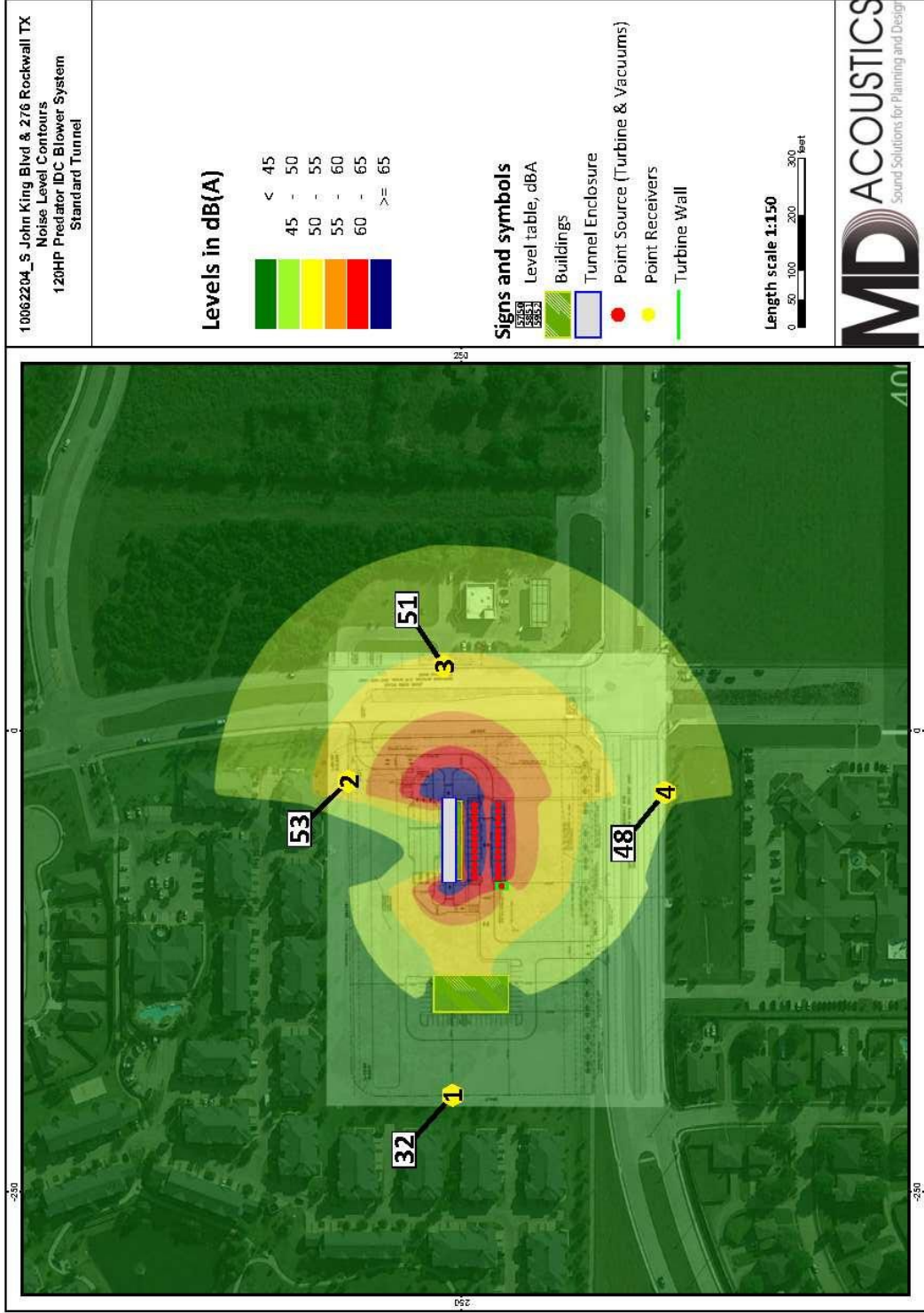
MD is pleased to provide this noise review for the car wash project. If you have any questions regarding this analysis, please call our office at (602) 774-1950.

Sincerely,
MD Acoustics, LLC



Claire Pincock, INCE-USA
Acoustical Consultant

Exhibit C
Operational Noise Levels



15-Minute Continuous Noise Measurement Datasheet

Project: S John King Blvd Car Wash **Site Observations:** Medium traffic. Load insects at location 2. Location 4 contains trucks, motorcycles, horns, and birds.

Site Address/Location: S John King Blvd & TX 276

Date: 9/9/22-9/10/22

Field Tech/Engineer: Brandon Skinner

General Location: Piccolo **SN:** A2A-05967-E0

Sound Meter: A-weighted, slow, 1-sec, 15-minute interval

Site ID: ST-1 thru ST-4

Site Topo: Flat

Ground Type: Soft site conditions

Noise Source(s) w/ Distance:

1 - 35' north of 276 at midpoint of small railing

2 - 20' west of east PL

3 - near middle of north PL

4 - 12' from John King curb

Figure 1: Monitoring Locations



10-Minute Continuous Noise Measurement Datasheet - Cont.

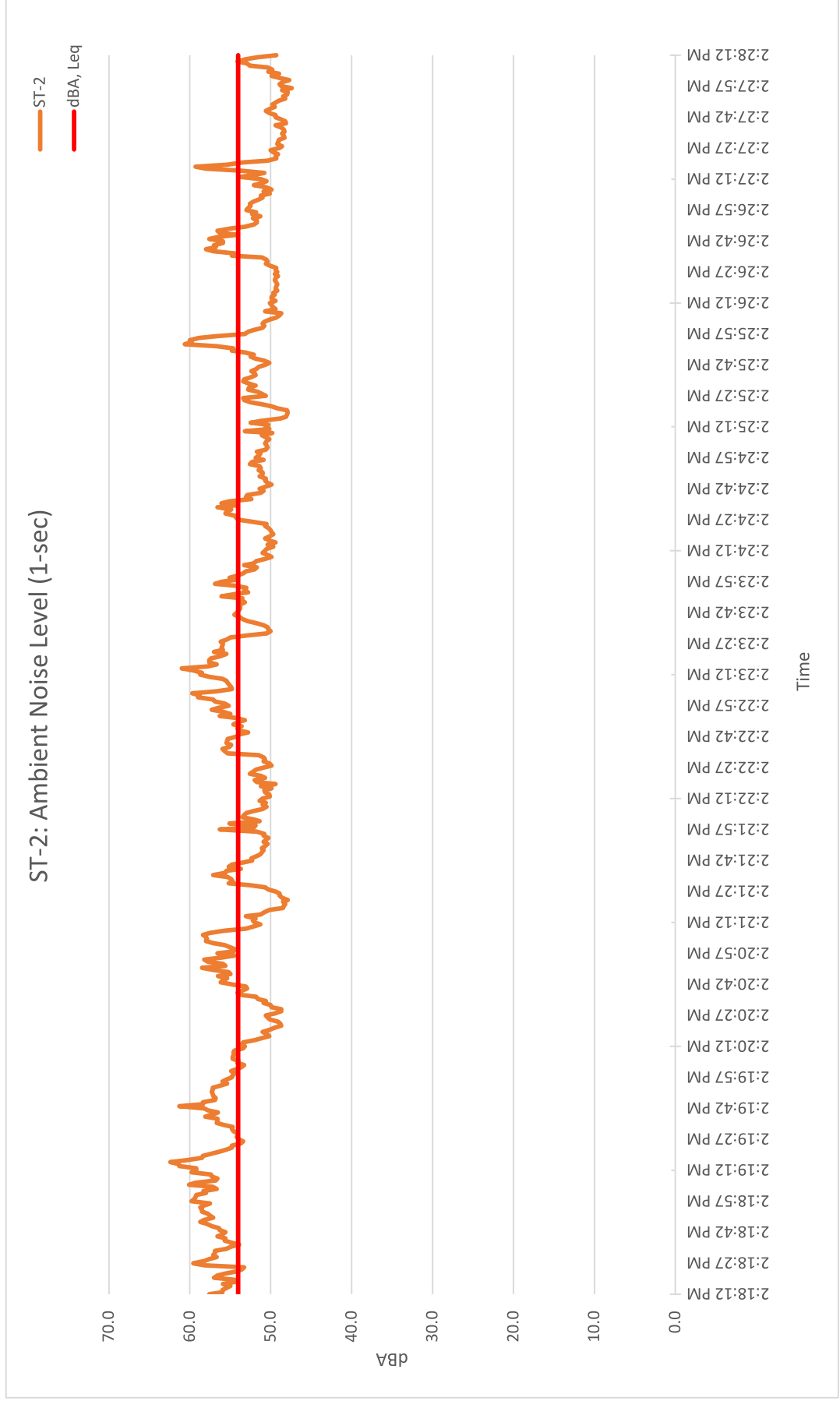
Project: S John King Blvd Car Wash
Site Address/Location: S John King Blvd & TX 276
Site ID: ST-1 thru ST-4

Table 1: Morning - Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L1	L10	L25	L50	L90
1	1:56 PM	2:11 PM	60.9	75.6	48.2	71.2	64.3	60.1	57.0	52.6
2	2:18 PM	2:33 PM	54.0	62.9	45.8	60.8	57.3	55.0	52.1	48.9
3	2:42 PM	2:56 PM	52.7	64.9	46.1	59.2	54.7	53.1	51.5	48.7
4	12:02 PM	12:13 PM	66.0	85.5	49.3	75.0	68.6	64.9	61.6	54.3

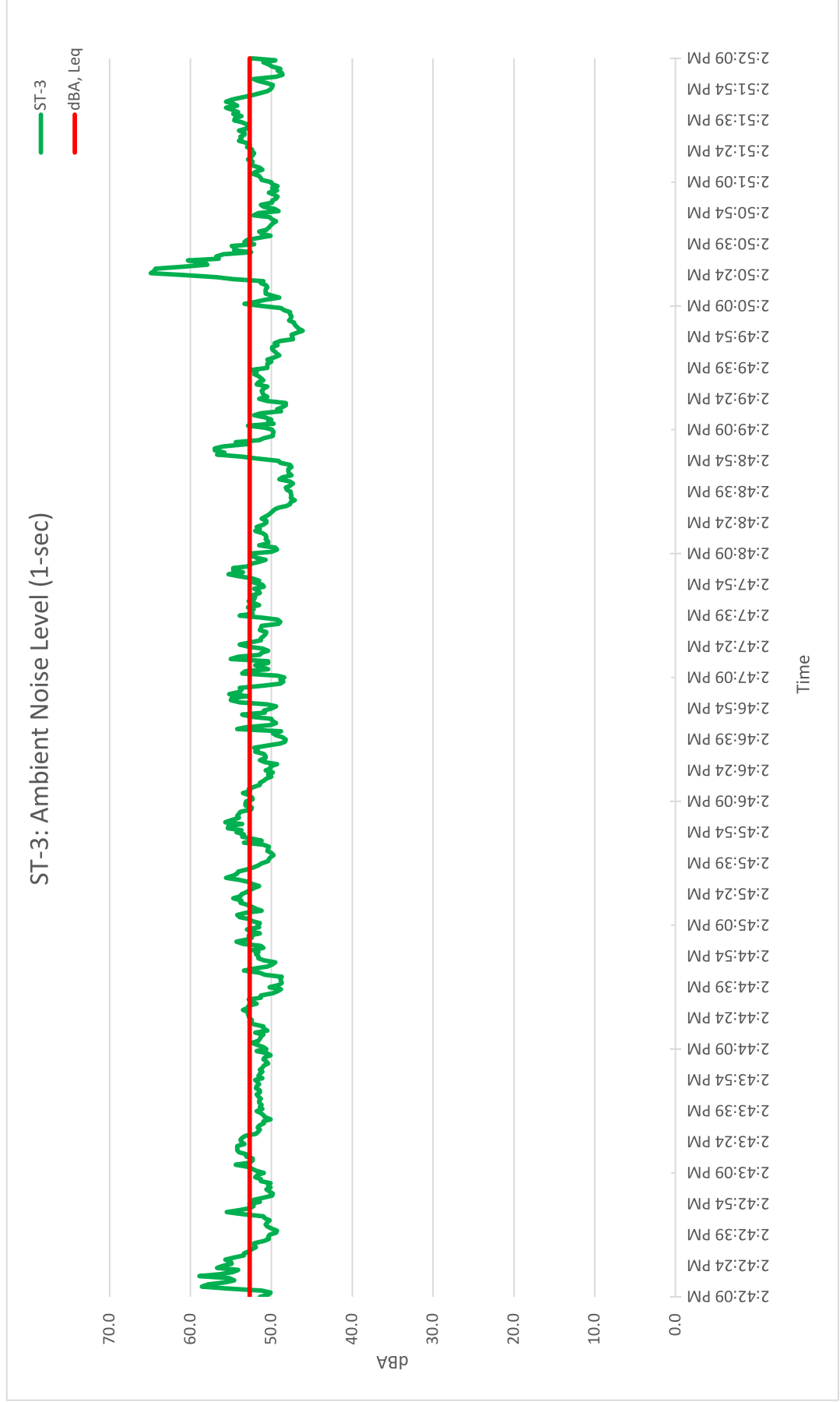
10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: S John King Blvd Car Wash
Site Address/Location: S John King Blvd & TX 276
Site ID: ST-2



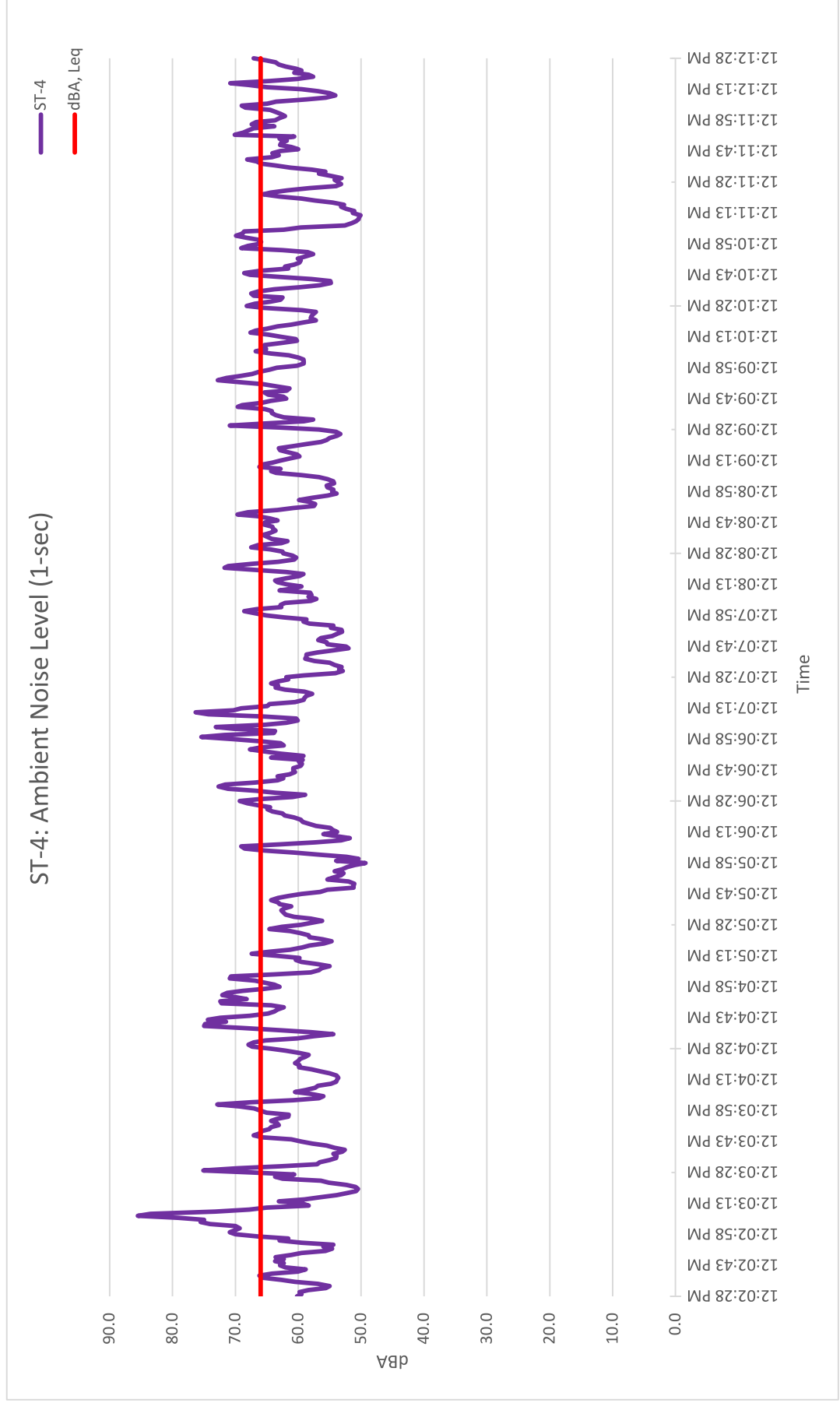
10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: S John King Blvd Car Wash
Site Address/Location: S John King Blvd & TX 276
Site ID: ST-3



10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: S John King Blvd Car Wash
Site Address/Location: S John King Blvd & TX 276
Site ID: ST-4



Appendix A
Noise Measurement Field Sheets

24-Hour Continuous Noise Measurement Datasheet

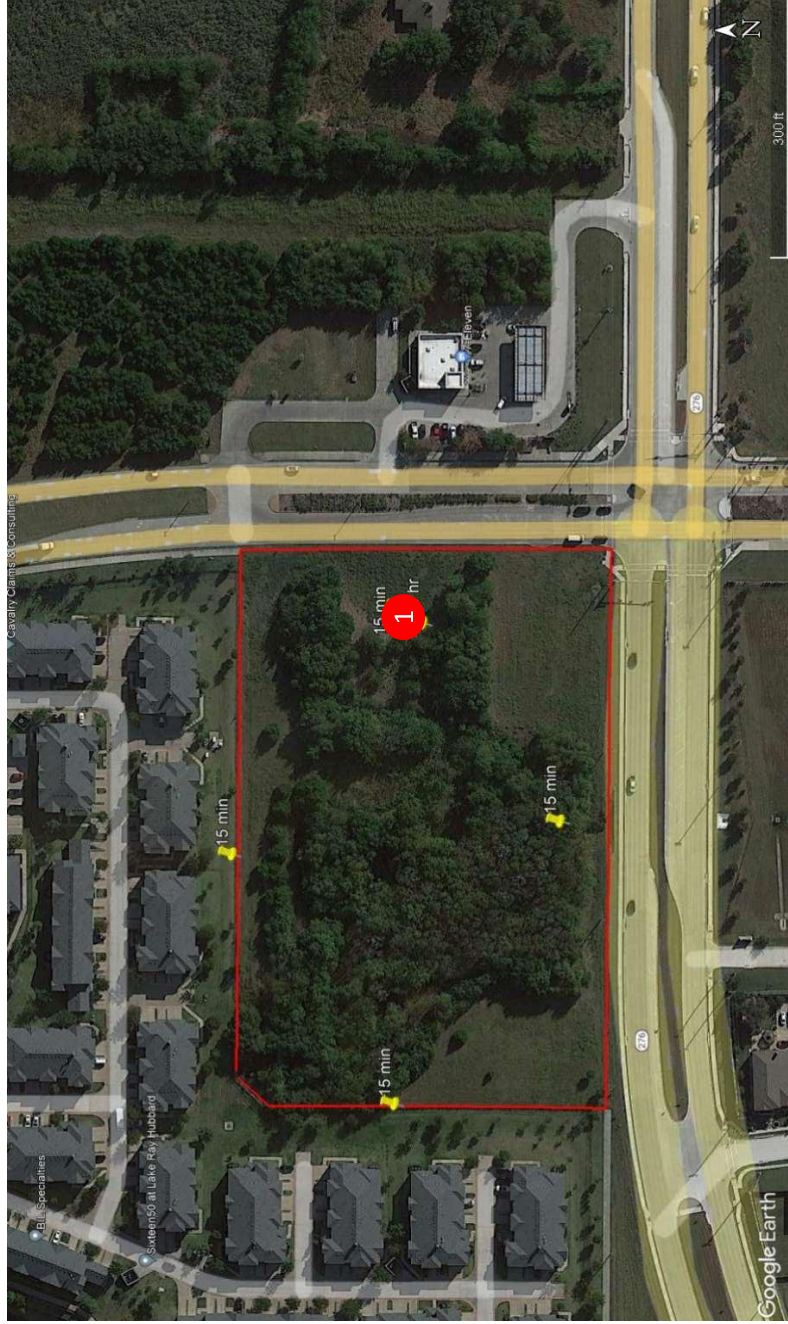
Project: S John King Blvd Car Wash
Site Observations: Heavy traffic southbound King when measurement started. Trucks, motorcycles, horns, crows.
Site Address/Location: S John King Blvd & TX 276
Date: 9/9/22-9/10/22
Field Tech/Engineer: Brandon Skinner

General Location: _____
Sound Meter: Piccolo **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 15-minute interval
Site ID: LT-1

Site Topo: Flat
Ground Type: Soft site, Open raw ground with a road

Noise Source(s) w/ Distance:
 75' from John King

Figure 1: LT-1 Monitoring Location



24-Hour Noise Measurement Datasheet - Cont.

Project: S John King Blvd Car Wash Day: 1 of 1

Site Address/Location: S John King Blvd & TX 276

Site ID: LT-1

Date	Start	Stop	Leq	Lmax	Lmin	L1	L5	L10	L50	L90
9/9/2022	3:00 PM	4:00 PM	60.3	74.6	50.6	64.2	63.5	62.6	59.7	57.5
9/9/2022	4:00 PM	5:00 PM	60.0	74.7	49.8	63.6	62.9	62.5	59.1	57.4
9/9/2022	5:00 PM	6:00 PM	62.1	76.3	51.1	68.8	67.4	66.2	60.1	56.4
9/9/2022	6:00 PM	7:00 PM	58.1	63.7	56.3	63.6	62.8	61.4	56.5	54.3
9/9/2022	7:00 PM	8:00 PM	60.0	82.9	49.6	68.4	65.1	62.0	57.0	53.8
9/9/2022	8:00 PM	9:00 PM	58.1	76.2	48.4	66.0	63.8	60.3	55.9	53.4
9/9/2022	9:00 PM	10:00 PM	56.1	74.8	47.0	63.5	59.6	56.6	54.0	52.1
9/9/2022	10:00 PM	11:00 PM	55.3	75.8	46.6	63.7	58.5	56.5	53.4	51.8
9/9/2022	11:00 PM	12:00 AM	52.8	75.8	43.5	63.4	55.7	53.6	50.3	46.8
9/10/2022	12:00 AM	1:00 AM	51.7	76.7	40.4	62.7	55.9	51.9	47.4	43.7
9/10/2022	1:00 AM	2:00 AM	52.4	72.3	39.1	62.2	59.4	55.8	46.5	42.2
9/10/2022	2:00 AM	3:00 AM	53.4	78.0	39.4	64.8	57.4	55.5	47.5	43.9
9/10/2022	3:00 AM	4:00 AM	56.1	74.4	41.9	63.9	62.0	60.2	52.7	49.2
9/10/2022	4:00 AM	5:00 AM	58.3	77.8	47.8	64.8	63.3	61.3	56.1	52.4
9/10/2022	5:00 AM	6:00 AM	61.0	79.9	51.1	67.2	65.9	62.6	59.9	56.9
9/10/2022	6:00 AM	7:00 AM	61.1	76.3	48.7	66.3	65.5	64.6	60.0	56.4
9/10/2022	7:00 AM	8:00 AM	58.9	80.4	45.4	65.9	62.8	61.3	57.3	54.6
9/10/2022	8:00 AM	9:00 AM	59.8	78.7	46.1	67.1	64.1	63.9	57.7	55.2
9/10/2022	9:00 AM	10:00 AM	59.7	83.5	47.0	68.3	63.7	61.7	56.7	54.3
9/10/2022	10:00 AM	11:00 AM	57.7	74.7	45.3	62.8	60.9	60.6	57.0	53.3
9/10/2022	11:00 AM	12:00 PM	57.4	77.1	45.0	64.8	61.0	58.8	55.9	53.4

CNEL: 64.7

24-Hour Continuous Noise Measurement Datasheet - Cont.

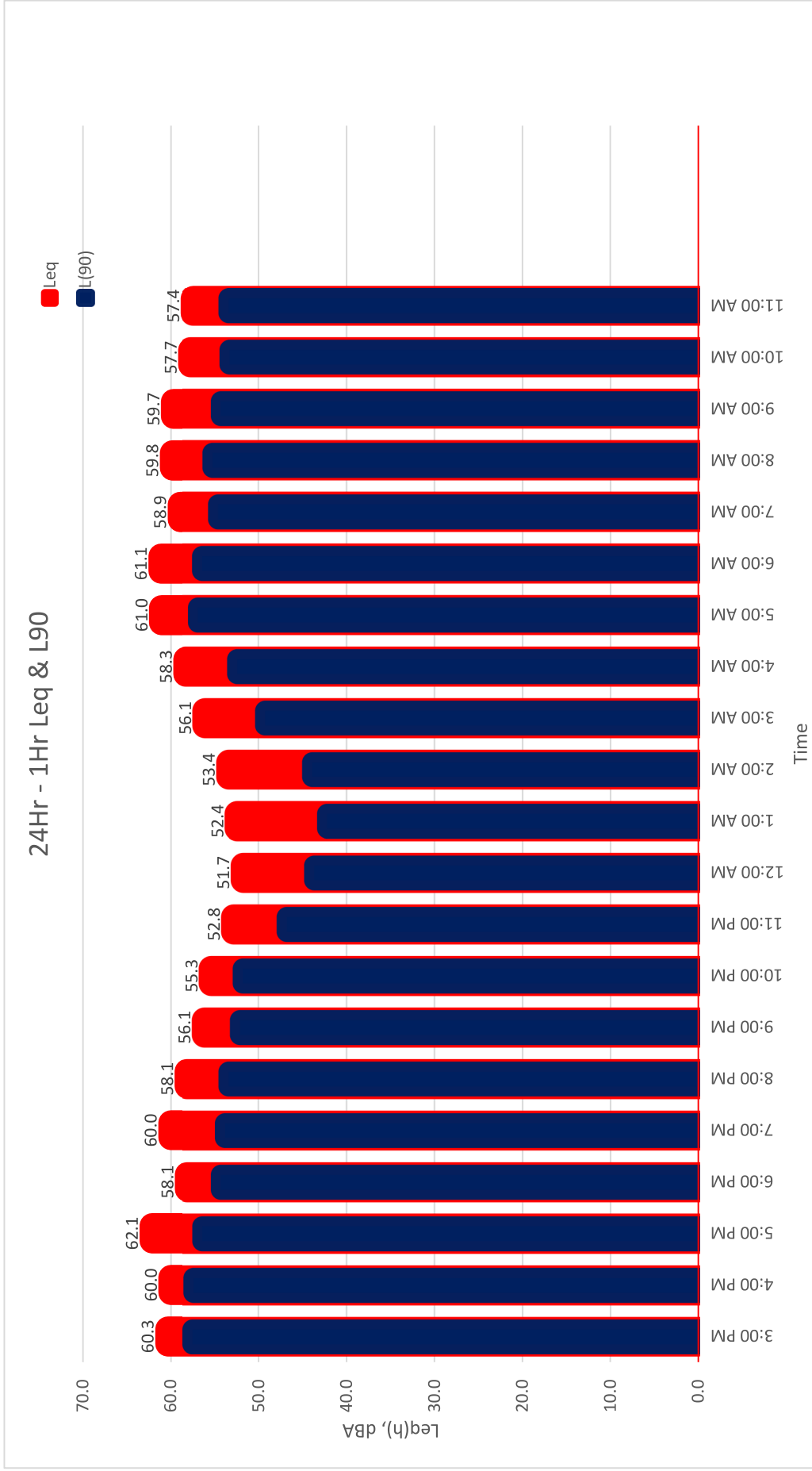
www.mdacoustics.com

Project: S John King Blvd Car Wash

Site Address/Location: S John King Blvd & TX 276

Site ID: LT-1

Day: 1 of 1



www.mdacoustics.com

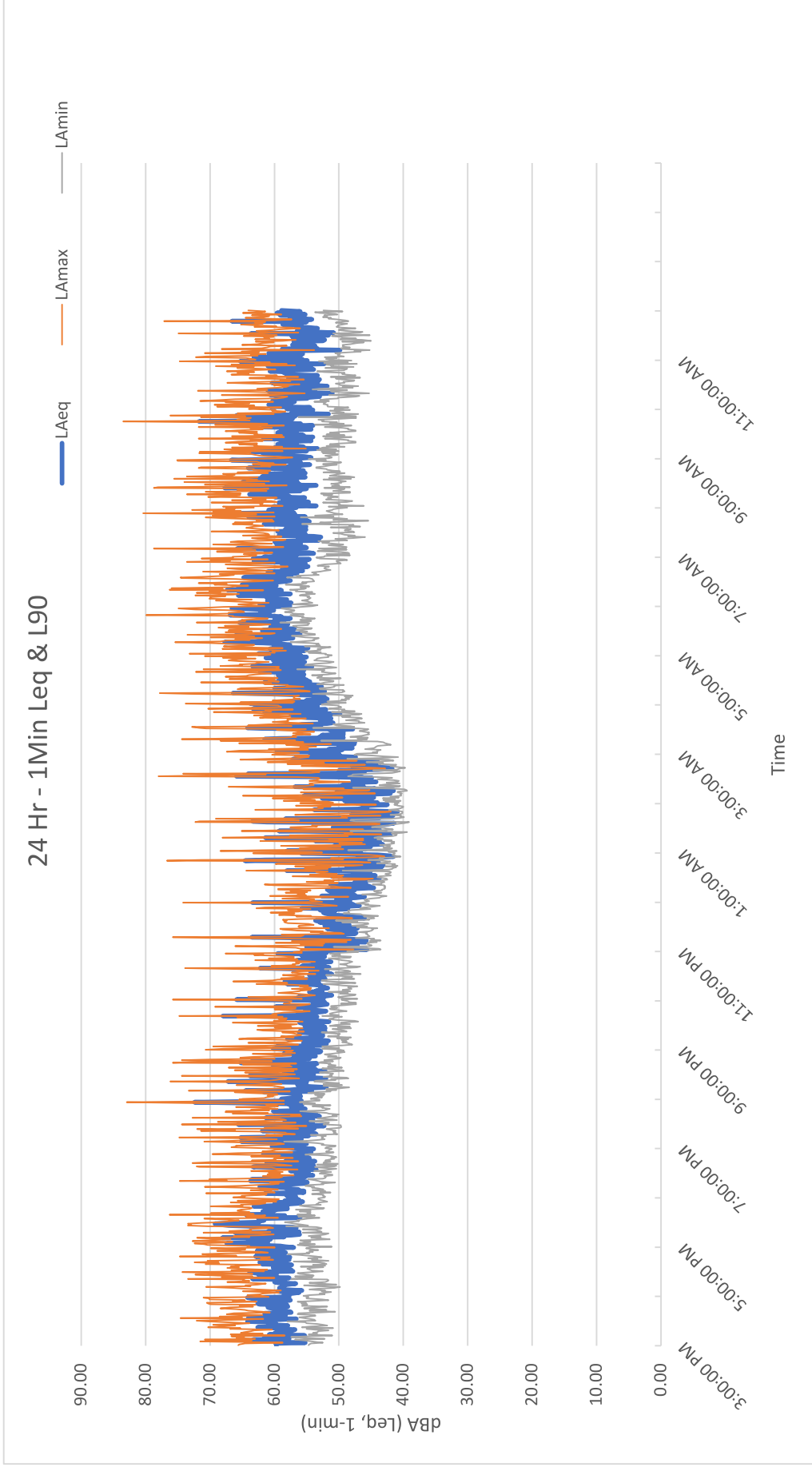
24-Hour Continuous Noise Measurement Datasheet - Cont.

Project: S John King Blvd Car Wash

Site Address/Location: S John King Blvd & TX 276

Site ID: LT-1

Day: 1 of 1



Appendix B
Sound Reference Data

80hp Predator Quiet Dryer System Specifications

Center Band Sound Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1,000 Hz	2,000 Hz	4,000 Hz	8,000 Hz
Final Sound Pressure Level	49.6	58.4	71.5	73.2	70.7	69.2	63.1	53.0
Final Sound Pressure Level	47.0	55.5	68.6	70.1	67.6	66.2	60.1	49.6
Final Sound Pressure Level	45.4	53.8	66.9	68.2	65.8	64.4	58.4	47.6
Final Sound Pressure Level	44.0	52.3	65.5	66.7	64.3	62.9	56.9	46.0
Final Sound Pressure Level	42.8	51.1	64.2	65.4	63.0	61.6	55.6	44.6
Final Sound Pressure Level	41.6	49.9	63.0	64.3	61.8	60.4	54.4	43.5
Final Sound Pressure Level	40.6	48.9	62.0	63.2	60.8	59.4	53.4	42.4
Final Sound Pressure Level	39.7	48.0	61.1	62.3	59.9	58.5	52.5	41.5
Final Sound Pressure Level	38.9	47.2	60.3	61.5	59.0	57.6	51.6	40.6
Final Sound Pressure Level	38.1	46.4	59.5	60.7	58.3	56.9	50.9	39.8
Final Sound Pressure Level	37.4	45.7	58.8	60.0	57.6	56.2	50.2	39.1
Final Sound Pressure Level	36.8	45.0	58.2	59.3	56.9	55.5	49.5	38.5
Final Sound Pressure Level	36.2	44.4	57.5	58.7	56.3	54.9	48.9	37.9
Final Sound Pressure Level	35.6	43.8	57.0	58.2	55.7	54.3	48.3	37.3
Final Sound Pressure Level	35.1	43.3	56.4	57.6	55.2	53.8	47.8	36.7
Final Sound Pressure Level	34.6	42.8	55.9	57.1	54.7	53.3	47.3	36.2

Total Sound 60 Hz Results

77.6	dBa at Q=1, 5 feet
74.6	dBa at Q=1, 10 feet
72.8	dBa at Q=1, 15 feet
71.3	dBa at Q=1, 20 feet
70.0	dBa at Q=1, 25 feet
68.9	dBa at Q=1, 30 feet
67.9	dBa at Q=1, 35 feet
66.9	dBa at Q=1, 40 feet
66.1	dBa at Q=1, 45 feet
65.3	dBa at Q=1, 50 feet
64.6	dBa at Q=1, 55 feet
64.0	dBa at Q=1, 60 feet
63.4	dBa at Q=1, 65 feet
62.8	dBa at Q=1, 70 feet
62.2	dBa at Q=1, 75 feet
61.7	dBa at Q=1, 80 feet

Sound pressure values are approximated from outdoor propagation equation for planes waves given the sound power values.

* All information provided by MD Acoustics, LLC via tests performed in Cary, IL IDC facilities.

Sound Power Values

Predator Side Column	55.6	66.9	79.7	82.9	80.2	78.6	72.4	64.0
Predator Hogger Single	67.8	75.8	88.9	89.8	87.4	86.1	80.1	68.3

Lw_eq	86.9
	94.5



STEALTH PREDATOR DRYING SYSTEM



THE FIRST "ULTRA QUIET" DRYING SYSTEM

- ✓ Patent pending Reverse flow technology
- ✓ Producers constructed from 304 surgical stainless steel
- ✓ Over 11,000 cubic feet per minute (CFM) per 10HP motor
- ✓ Meets or exceeds most U.S. and International sound regulations
- ✓ Sound & Performance studies done in reverberant sound room ISO 3741:2010, 3747:2010



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Cary, IL 60013

Stealth Predator Ultra-Quiet Drying System Specifications

30HP System - Total Sound 60Hz

80HP System - Total Sound 60Hz

Q = sound source

65 dBA at Q=1, 30 feet

69.4 dBA at Q=1, 30 feet

61.8 dBA at Q=1, 45 feet

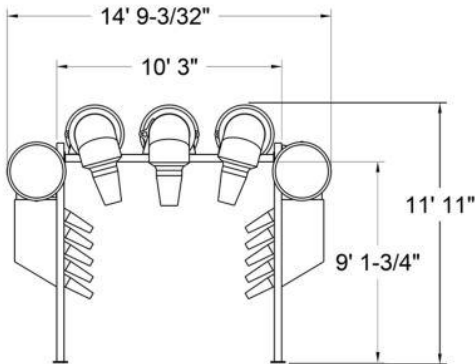
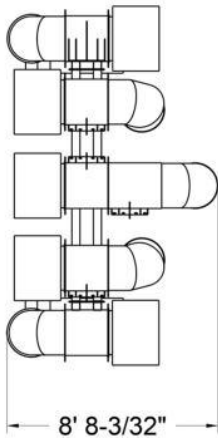
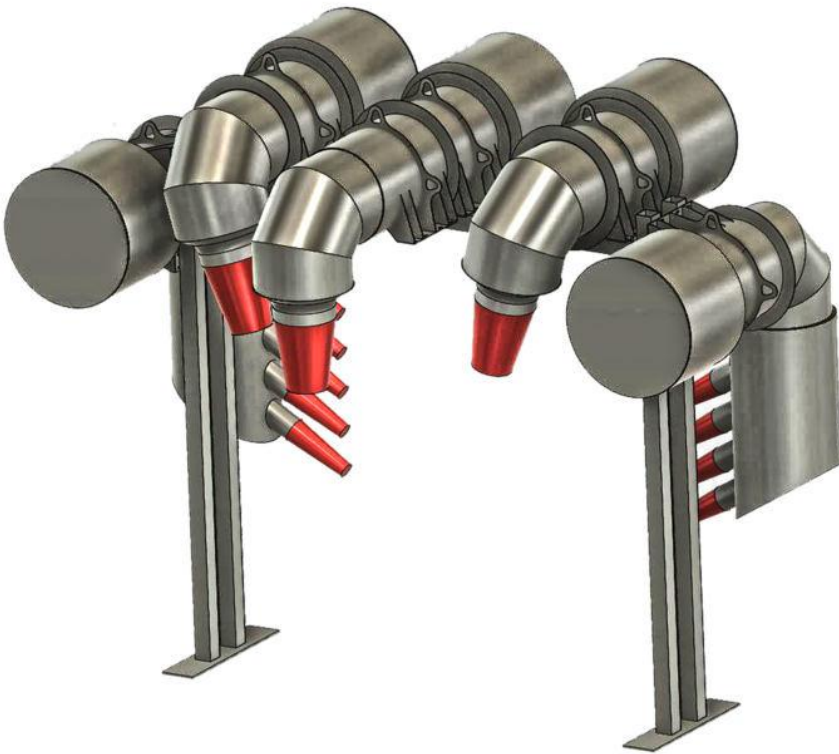
66.5 dBA at Q=1, 45 feet

60.2 dBA at Q=1, 55 feet

64.9 dBA at Q=1, 55 feet

Meets OSHA Sound Exposure Requirements

✓ The Stealth Predator features patent pending "Reverse flow air technology" which creates the first "Ultra-Quiet Dryer" and is the most powerful Ultra Quiet Dryer ever designed.



SPECIFICATIONS

15' 2" Bay Width
 12' 0" Ceiling Height
 96" Standard Clearance

Ducts-Stainless Steel
 Molded Aluminum Impellers
 Stainless Steel Motor Housings

Closed cell foam nozzles available in red, blue, black

Slotted flanges for adjustability of air outlet and air intake direction



SOUND LEVEL METER READINGS

MODEL: FT-DD-T340HP4 (40hp VACSTAR TURBINE VACUUM PRODUCER)

READING ONE: 73 DB-A, 3 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING TWO: 69 DB-A, 10 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING THREE: 54 DB-A, 20 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING FOUR: 38 DB-A, 30 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

NOTE: THESE READINGS WERE TAKEN OUTSIDE IN THE OPEN ON A CONCRETE SLAB.

SOUND LEVEL METER USED:

SIMPSON MODEL #40003 – MSHA APPROVED.
MEETS OSHA & WALSH-HEALY REQUIREMENTS FOR NOISE CONTROL.
CONFORMS TO ANSI S1.4-1983, IEC 651 SPECS FOR METER TYPE.

Vacutech
1350 Hi-Tech Drive, Sheridan WY, 82801
PHONE: (800) 917-9444 FAX: (303) 675-1988
EMAIL: info@vacutechllc
WEB SITE: vacutechllc.com

Project: SuperStar Car Wash Chulia Vista
Site Location: 1555 W Warner Rd, Gilbert, AZ 85233
Date: 4/5/2018
Field Tech/Engineer: Robert Pearson
Source/System: Vacutec System

Location: Vac Bay 1
Sound Meter: NTI XL2
Settings: A-weighted, slow, 1-sec, 10-sec duration
Meteorological Cond.: 80 degrees F, 2 mph wind

Site Observations:

Clear sky, measurements were performed within 1.5ft of source. Measurements were performed while the vacuum was positioned at three (3) different positions. Holstered, unholstered and inside a car. This data is utilized for acoustic modeling purposes and represents an average sound level at a vacuum station.

Table 1: Summary Measurement Data

Source	System	Overall dB(A)	3rd Octave Band Data (dB)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
Vacutec (Holstered)	Vacuum	63.3	9	17	22	29	31	35	40	41	44	43	46	48	47	49	51	51	51	52	53	52	52	50	52	53	50	47	48	45	39	30	30
Vacutec (Unholstered)	Vacuum	80.7	6	19	22	28	34	37	40	43	47	46	48	48	48	49	54	55	58	62	65	68	70	74	75	73	69	67	65	60	55	55	
Vacutec (Inside Car)	Vacuum	69.6	16	28	31	38	42	45	49	51	52	55	60	61	57	55	59	53	55	56	54	57	57	57	57	55	54	51	48	46	42	36	36
Average Level*	Vacuum	76.3	13	24	28	34	38	41	45	47	49	51	56	57	53	52	56	54	56	56	54	61	64	66	69	70	68	64	62	60	58	55	50

* Refers to the logarithmic average of all measurements. This measurement represents an average of the multiple vacuum positions.

Figure 1: Example Measurement Position



Figure 1: Holstered



Figure 2: Unholstered

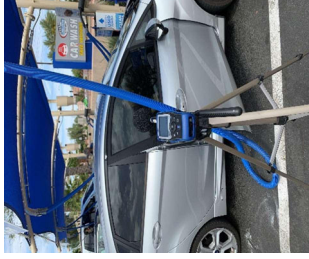
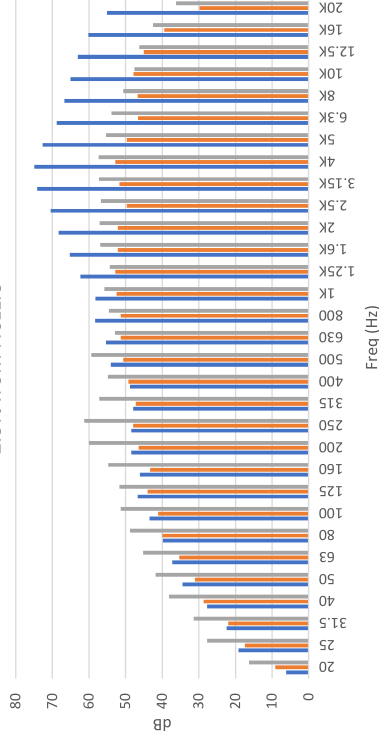


Figure 3: Inside Car

1.5ft from Nozzle



Appendix C
SoundPLAN Inputs/Outputs

S John King Blvd & 276 Rockwall TX
Contribution level - 001 - 120HP IDC - Standard: Outdoor SP

9

Source	Source group	Source type	Er. lane	Leq,d dB(A)	A dB	
Receiver R1 FIG Lr,lim dB(A) Leq,d 32.1 dB(A) Sigma(Leq,d) 0.0 dB(A)						
Vac	Default industrial noise	Point		15.4	0.0	
Vac	Default industrial noise	Point		15.4	0.0	
Vac	Default industrial noise	Point		15.3	0.0	
Vac	Default industrial noise	Point		15.2	0.0	
Vac	Default industrial noise	Point		15.1	0.0	
Vac	Default industrial noise	Point		15.0	0.0	
Vac	Default industrial noise	Point		14.9	0.0	
Vac	Default industrial noise	Point		14.8	0.0	
Vac	Default industrial noise	Point		14.6	0.0	
Vac	Default industrial noise	Point		14.5	0.0	
Vac	Default industrial noise	Point		14.4	0.0	
Vac	Default industrial noise	Point		14.3	0.0	
Vac	Default industrial noise	Point		12.4	0.0	
Vac	Default industrial noise	Point		15.2	0.0	
Vac	Default industrial noise	Point		15.1	0.0	
Vac	Default industrial noise	Point		15.0	0.0	
Vac	Default industrial noise	Point		14.9	0.0	
Vac	Default industrial noise	Point		14.8	0.0	
Vac	Default industrial noise	Point		14.7	0.0	
Vac	Default industrial noise	Point		14.6	0.0	
Vac	Default industrial noise	Point		14.5	0.0	
Vac	Default industrial noise	Point		14.4	0.0	
Vac	Default industrial noise	Point		14.3	0.0	
Vac	Default industrial noise	Point		14.2	0.0	
Turbine	Default industrial noise	Point		-0.9	0.0	
001 - 120HP IDC Standard Tunnel-Roof 01	Default industrial noise	Area		2.1	0.0	
001 - 120HP IDC Standard Tunnel-Facade 01	Default industrial noise	Area		-2.2	0.0	
001 - 120HP IDC Standard Tunnel-Facade 02	Default industrial noise	Area		-10.8	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		22.7	0.0	
001 - 120HP IDC Standard Tunnel-Facade 03	Default industrial noise	Area		0.3	0.0	
001 - 120HP IDC Standard Tunnel-Facade 04	Default industrial noise	Area		-7.1	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		28.4	0.0	
Receiver R2 FIG Lr,lim dB(A) Leq,d 52.9 dB(A) Sigma(Leq,d) 0.0 dB(A)						
Vac	Default industrial noise	Point		14.5	0.0	
Vac	Default industrial noise	Point		14.4	0.0	
Vac	Default industrial noise	Point		14.4	0.0	
Vac	Default industrial noise	Point		14.6	0.0	

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S John King Blvd & 276 Rockwall TX
Contribution level - 001 - 120HP IDC - Standard: Outdoor SP

9

Source	Source group	Source type	Per. lane	Leq,d dB(A)	A dB	
Vac	Default industrial noise	Point		14.7	0.0	
Vac	Default industrial noise	Point		14.9	0.0	
Vac	Default industrial noise	Point		15.1	0.0	
Vac	Default industrial noise	Point		15.4	0.0	
Vac	Default industrial noise	Point		15.8	0.0	
Vac	Default industrial noise	Point		16.4	0.0	
Vac	Default industrial noise	Point		17.8	0.0	
Vac	Default industrial noise	Point		21.9	0.0	
Vac	Default industrial noise	Point		21.0	0.0	
Vac	Default industrial noise	Point		20.9	0.0	
Vac	Default industrial noise	Point		20.5	0.0	
Vac	Default industrial noise	Point		20.4	0.0	
Vac	Default industrial noise	Point		20.4	0.0	
Vac	Default industrial noise	Point		20.3	0.0	
Vac	Default industrial noise	Point		20.4	0.0	
Vac	Default industrial noise	Point		20.4	0.0	
Vac	Default industrial noise	Point		20.4	0.0	
Vac	Default industrial noise	Point		17.9	0.0	
Vac	Default industrial noise	Point		19.3	0.0	
Vac	Default industrial noise	Point		21.4	0.0	
Vac	Default industrial noise	Point		29.7	0.0	
Turbine	Default industrial noise	Point		3.3	0.0	
001 - 120HP IDC Standard Tunnel-Roof 01	Default industrial noise	Area		12.9	0.0	
001 - 120HP IDC Standard Tunnel-Facade 01	Default industrial noise	Area		8.2	0.0	
001 - 120HP IDC Standard Tunnel-Facade 02	Default industrial noise	Area		11.3	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		52.9	0.0	
001 - 120HP IDC Standard Tunnel-Facade 03	Default industrial noise	Area		17.0	0.0	
001 - 120HP IDC Standard Tunnel-Facade 04	Default industrial noise	Area		-5.0	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		28.9	0.0	
Receiver R3 FI G Lr,lim dB(A) Leq,d 50.9 dB(A) Sigma(Leq,d) 0.0 dB(A)						
Vac	Default industrial noise	Point		26.6	0.0	
Vac	Default industrial noise	Point		26.8	0.0	
Vac	Default industrial noise	Point		27.1	0.0	
Vac	Default industrial noise	Point		27.4	0.0	
Vac	Default industrial noise	Point		27.7	0.0	
Vac	Default industrial noise	Point		28.1	0.0	
Vac	Default industrial noise	Point		28.4	0.0	
Vac	Default industrial noise	Point		28.7	0.0	
Vac	Default industrial noise	Point		29.1	0.0	

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S John King Blvd & 276 Rockwall TX
Contribution level - 001 - 120HP IDC - Standard: Outdoor SP

9

Source	Source group	Source type	Per. lane	Leq,d dB(A)	A dB	
Vac	Default industrial noise	Point		29.5	0.0	
Vac	Default industrial noise	Point		29.9	0.0	
Vac	Default industrial noise	Point		30.3	0.0	
Vac	Default industrial noise	Point		28.0	0.0	
Vac	Default industrial noise	Point		26.6	0.0	
Vac	Default industrial noise	Point		26.9	0.0	
Vac	Default industrial noise	Point		27.2	0.0	
Vac	Default industrial noise	Point		27.5	0.0	
Vac	Default industrial noise	Point		27.8	0.0	
Vac	Default industrial noise	Point		28.1	0.0	
Vac	Default industrial noise	Point		28.5	0.0	
Vac	Default industrial noise	Point		28.8	0.0	
Vac	Default industrial noise	Point		29.2	0.0	
Vac	Default industrial noise	Point		29.5	0.0	
Vac	Default industrial noise	Point		29.9	0.0	
Turbine	Default industrial noise	Point		8.2	0.0	
001 - 120HP IDC Standard Tunnel-Roof 01	Default industrial noise	Area		8.0	0.0	
001 - 120HP IDC Standard Tunnel-Facade 01	Default industrial noise	Area		9.1	0.0	
001 - 120HP IDC Standard Tunnel-Facade 02	Default industrial noise	Area		8.8	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		50.3	0.0	
001 - 120HP IDC Standard Tunnel-Facade 03	Default industrial noise	Area		9.6	0.0	
001 - 120HP IDC Standard Tunnel-Facade 04	Default industrial noise	Area		-11.7	0.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		20.3	0.0	
Receiver R3 FIG Lr,lim dB(A) Leq,d 47.6 dB(A) Sigma(Leq,d) 0.0 dB(A)						
Vac	Default industrial noise	Point		28.6	0.0	
Vac	Default industrial noise	Point		29.6	0.0	
Vac	Default industrial noise	Point		29.5	0.0	
Vac	Default industrial noise	Point		28.9	0.0	
Vac	Default industrial noise	Point		29.3	0.0	
Vac	Default industrial noise	Point		29.2	0.0	
Vac	Default industrial noise	Point		29.2	0.0	
Vac	Default industrial noise	Point		29.3	0.0	
Vac	Default industrial noise	Point		29.4	0.0	
Vac	Default industrial noise	Point		29.4	0.0	
Vac	Default industrial noise	Point		29.4	0.0	
Vac	Default industrial noise	Point		29.5	0.0	
Vac	Default industrial noise	Point		28.8	0.0	
Vac	Default industrial noise	Point		28.9	0.0	

S John King Blvd & 276 Rockwall TX
Contribution level - 001 - 120HP IDC - Standard: Outdoor SP

9

Source	Source group	Source type	Per. lane	Leq,d dB(A)	A dB
Vac	Default industrial noise	Point		29.1	0.0
Vac	Default industrial noise	Point		29.2	0.0
Vac	Default industrial noise	Point		29.3	0.0
Vac	Default industrial noise	Point		29.5	0.0
Vac	Default industrial noise	Point		29.5	0.0
Vac	Default industrial noise	Point		29.6	0.0
Vac	Default industrial noise	Point		29.7	0.0
Vac	Default industrial noise	Point		29.7	0.0
Vac	Default industrial noise	Point		29.8	0.0
Vac	Default industrial noise	Point		29.8	0.0
Turbine	Default industrial noise	Point		11.2	0.0
001 - 120HP IDC Standard Tunnel-Roof 01	Default industrial noise	Area		4.9	0.0
001 - 120HP IDC Standard Tunnel-Facade 01	Default industrial noise	Area		3.2	0.0
001 - 120HP IDC Standard Tunnel-Facade 02	Default industrial noise	Area		4.3	0.0
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		45.6	0.0
001 - 120HP IDC Standard Tunnel-Facade 03	Default industrial noise	Area		0.2	0.0
001 - 120HP IDC Standard Tunnel-Facade 04	Default industrial noise	Area		-7.9	0.0
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Default industrial noise	Area		26.7	0.0

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	MD Acoustics 1197 E Los Angeles Ave, Unit C 256 Simi Valley, CA 93065 USA	4
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S John King Blvd & 276 Rockwall TX
 Octave spectra of the sources in dB(A) - 001 - 120HP IDC - Standard: Outdoor SP

Name	Source type	I or A m _r ,m ²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Time histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
001 - 120HP IDC Standard Tunnel-Facade 01	Area	251.57	86.1	57.0	37.5	61.5	0.0	0.0		3	100%/24h	17_Facade 01_	54.1	48.2	59.2	53.9	41.1	34.6	24.3	11.7	
001 - 120HP IDC Standard Tunnel-Facade 02	Area	32.63	88.7	57.0	39.6	54.7	0.0	0.0		3	100%/24h	18_Facade 02_	47.7	41.9	52.1	47.5	35.7	29.6	19.5	7.8	
001 - 120HP IDC Standard Tunnel-Facade 03	Area	251.57	86.1	57.0	37.5	61.5	0.0	0.0		3	100%/24h	19_Facade 03_	54.1	48.2	59.2	53.9	41.1	34.6	24.3	11.7	
001 - 120HP IDC Standard Tunnel-Facade 04	Area	32.63	81.7	57.0	34.5	49.6	0.0	0.0		3	100%/24h	20_Facade 04_	40.8	34.5	48.1	40.9	22.5	6.5	-13.6		
001 - 120HP IDC Standard Tunnel-Roof 01	Area	333.18	85.7	57.0	37.2	62.4	0.0	0.0		0	100%/24h	15_Roof 01_	54.9	49.1	60.1	54.8	42.0	35.4	25.2	12.7	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Area	7.43	88.9	0.0	88.9	97.6	0.0	0.0		3	100%/24h	53_Transmissive area 01_	71.4	79.7	91.9	93.3	90.5	88.4	81.4	68.0	
001 - 120HP IDC Standard Tunnel-Transmissive area 01	Area	7.43	81.6	0.0	81.6	90.3	0.0	0.0		3	100%/24h	54_Transmissive area 01_	64.2	71.9	87.6	86.4	77.0	65.1	48.0	26.7	
Turbine	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech Turbine	47.3	57.5	54.5	51.9	55.8	59.5	66.1	69.3	65.0
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0											

S John King Blvd & 276 Rockwall TX

Octave spectra of the sources in dB(A) - 001 - 120HP IDC - Standard: Outdoor SP

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Name	Source type	I or A m,m ²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Time histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0		0	100%/24h	Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2

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S John King Blvd & 276 Rockwall TX
 Contribution spectra - 001 - 120HP IDC - Standard: Outdoor SP

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz		
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)		
Receiver: R1		FIG LrLim: dB(A) Leq,d 32.1 dB(A) Sigma(Leq,d) 0.0 dB(A)																													
001 - 120HP IDC Standard	Leq,d	-2.2																													
Tunnel-Facade 01	Leq,d	14.6	-13.9	-11.3	-4.7	-1.2	1.3	4.7	12.2	22.4	4.4	7.2	7.2	2.2	-15.5	-18.5	-21.0	-17.9	-16.7	-14.2	-13.5	-14.0	-16.9	-13.3	-13.3	-15.0	-16.6	-22.4	-31.7	-43.3	-28.8
001 - 120HP IDC Standard	Leq,d	14.7	-13.8	-11.1	-4.6	-1.0	1.4	4.8	2.4	2.5	4.5	7.3	7.3	2.3	-0.8	-0.8	2.1	-4.9	-3.6	-3.6	-6.8	-3.3	-4.7	-6.4	-8.4	-11.0	-16.6	-22.4	-31.7	-43.3	-28.8
Tunnel-Facade 02	Leq,d	0.3																													
001 - 120HP IDC Standard	Leq,d	14.8	-13.6	-11.0	-4.4	-0.9	1.5	4.9	2.5	2.6	4.6	7.4	7.4	2.4	-0.7	-0.7	2.3	-4.7	-3.4	-3.5	-6.6	-3.2	-4.6	-6.2	-8.2	-10.7	-16.1	-21.8	-30.5	-41.6	-30.5
Tunnel-Facade 03	Leq,d	14.9	-13.5	-10.9	-4.3	-0.8	1.7	5.0	2.7	2.8	4.8	7.5	7.5	2.4	-0.6	-0.6	2.4	-4.6	-3.3	-3.4	-6.6	-3.1	-4.5	-6.1	-8.0	-10.6	-15.9	-21.4	-29.9	-40.8	-30.5
001 - 120HP IDC Standard	Leq,d	14.2	-14.5	-11.8	-5.2	-1.7	0.8	4.2	1.7	1.8	3.9	6.8	6.8	1.8	-1.2	-1.2	1.8	-5.2	-3.8	-3.9	-7.1	-3.6	-5.0	-6.8	-8.9	-11.7	-17.5	-23.7	-34.1	-46.5	-40.8
Tunnel-Facade 04	Leq,d	14.3	-14.3	-11.7	-5.1	-1.6	0.9	4.3	1.8	2.0	4.1	6.9	6.9	1.9	-1.1	-1.1	1.9	-5.1	-3.8	-3.8	-7.0	-3.5	-5.0	-6.7	-8.8	-11.5	-17.2	-23.4	-33.6	-45.7	-40.8
001 - 120HP IDC Standard	Leq,d	14.4	-14.2	-11.6	-5.0	-1.4	1.0	4.4	1.9	2.1	4.2	7.0	7.0	2.0	-1.0	-1.0	2.0	-5.0	-3.7	-3.8	-6.9	-3.5	-4.9	-6.6	-8.7	-11.4	-17.0	-23.1	-33.0	-44.9	-40.8
Tunnel-Transmissive area 01	Leq,d	14.5	-14.0	-11.4	-4.8	-1.3	1.2	4.5	2.1	2.2	4.3	7.1	7.1	2.1	-0.9	-0.9	2.1	-5.0	-3.6	-3.7	-6.9	-3.4	-4.8	-6.5	-8.5	-11.2	-16.8	-22.7	-32.4	-44.1	-40.8
001 - 120HP IDC Standard	Leq,d	15.1	-13.2	-10.6	-4.1	-0.6	1.9	5.2	2.9	2.9	4.9	7.6	7.6	2.5	-0.5	-0.5	2.4	-4.6	-3.2	-3.3	-6.5	-3.0	-4.4	-6.0	-7.9	-10.4	-15.7	-21.1	-29.5	-40.3	-40.3
Tunnel-Transmissive area 01	Leq,d	15.0	-13.4	-10.8	-4.2	-0.7	1.7	5.1	2.7	2.8	4.8	7.5	7.5	2.4	-0.6	-0.6	2.4	-4.7	-3.3	-3.4	-6.5	-3.1	-4.5	-6.1	-8.0	-10.6	-15.9	-21.6	-30.1	-41.1	-40.3
001 - 120HP IDC Standard	Leq,d	14.9	-13.5	-10.9	-4.3	-0.8	1.6	5.0	2.6	2.7	4.7	7.4	7.4	2.3	-0.7	-0.7	2.3	-4.7	-3.4	-3.5	-6.6	-3.2	-4.5	-6.2	-8.2	-10.7	-16.2	-21.9	-30.7	-42.0	-40.3
Tunnel-Transmissive area 01	Leq,d	14.8	-13.6	-11.0	-4.4	-0.9	1.5	4.9	2.5	2.6	4.6	7.3	7.3	2.2	-0.8	-0.8	2.2	-4.8	-3.4	-3.5	-6.7	-3.2	-4.6	-6.3	-8.3	-10.9	-16.4	-22.2	-31.3	-42.8	-40.3
001 - 120HP IDC Standard	Leq,d	15.4	-12.7	-10.1	-3.6	-0.1	2.3	5.6	3.4	3.4	5.3	8.0	7.9	2.8	-0.2	-0.2	2.7	-4.3	-3.0	-3.1	-6.2	-2.8	-4.1	-5.7	-7.5	-9.9	-14.9	-19.2	-27.0	-37.0	-42.8
001 - 120HP IDC Standard	Leq,d	15.4	-12.8	-10.2	-3.7	-0.2	2.2	5.5	3.3	3.3	5.3	7.9	7.8	2.7	-0.3	-0.3	2.7	-4.4	-3.1	-3.1	-6.3	-2.8	-4.2	-5.7	-7.6	-10.0	-15.1	-19.7	-27.6	-37.8	-42.8
001 - 120HP IDC Standard	Leq,d	15.3	-12.9	-10.3	-3.8	-0.3	2.1	5.4	3.1	3.2	5.2	7.8	7.7	2.7	-0.4	-0.4	2.6	-4.5	-3.1	-3.2	-6.3	-2.9	-4.2	-5.8	-7.7	-10.1	-15.3	-20.1	-28.2	-38.6	-42.8
001 - 120HP IDC Standard	Leq,d	15.2	-13.1	-10.5	-3.9	-0.4	2.0	5.3	3.0	3.1	5.0	7.7	7.7	2.6	-0.4	-0.4	2.5	-4.5	-3.2	-3.3	-6.4	-3.0	-4.3	-5.9	-7.8	-10.3	-15.5	-20.6	-28.9	-39.5	-42.8
001 - 120HP IDC Standard	Leq,d	12.4	-14.0	-11.7	-5.6	-2.5	-0.5	2.5	0.1	0.1	2.1	4.7	4.7	-0.3	-3.2	-0.2	-7.3	-5.8	-5.9	-9.0	-5.6	-2.9	-4.2	-5.8	-7.7	-10.1	-15.3	-19.5	-27.4	-37.5	-42.8
001 - 120HP IDC Standard	Leq,d	15.2	-13.0	-10.4	-3.9	-0.4	2.0	5.3	3.1	3.1	5.1	7.8	7.7	2.7	-0.4	-0.4	2.6	-4.5	-3.2	-3.2	-6.4	-2.9	-4.3	-5.8	-7.7	-10.1	-15.3	-20.0	-28.0	-38.3	-42.8
001 - 120HP IDC Standard	Leq,d	15.1	-13.1	-10.6	-4.0	-0.5	1.9	5.2	3.0	3.0	5.0	7.7	7.7	2.6	-0.4	-0.4	2.5	-4.5	-3.2	-3.3	-6.4	-3.0	-4.3	-5.9	-7.8	-10.2	-15.5	-20.4	-28.6	-39.1	-42.8
001 - 120HP IDC Standard	Leq,d	15.0	-13.3	-10.7	-4.1	-0.6	1.8	5.1	2.8	2.9	4.9	7.6	7.6	2.5	-0.5	-0.5	2.5	-4.6	-3.3	-3.4	-6.5	-3.1	-4.4	-6.0	-7.9	-10.4	-15.7	-20.9	-29.3	-39.9	-42.8
001 - 120HP IDC Standard	Leq,d	14.6	-13.8	-11.2	-4.6	-1.1	1.4	4.7	2.3	2.4	4.5	7.2	7.2	2.2	-0.9	-0.9	2.1	-4.9	-3.5	-3.6	-6.7	-3.3	-4.7	-6.4	-8.4	-11.0	-16.6	-22.5	-32.0	-43.6	-42.8

MD Acoustics 1197 E Los Angeles Ave, Unit C 256 Simi Valley, CA 93065 USA

S John King Blvd & 276 Rockwall TX
 Contribution spectra - 001 - 120HP IDC - Standard: Outdoor SP

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz								
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)								
Vac	Leq,d	20.5	-11.8	-9.3	-2.7	0.7	3.1	6.4	4.7	4.7	6.6	9.0	8.7	3.4	0.2	3.0	-4.2	-3.0	9.9	7.6	12.0	11.4	10.5	9.2	7.2	2.0	-3.8	-13.8	-26.2								
Vac	Leq,d	20.4	-11.7	-9.2	-2.6	0.8	3.2	6.5	4.8	4.8	6.7	9.2	8.9	3.6	0.3	3.1	-4.1	-2.9	9.7	7.4	11.8	11.2	10.3	9.0	6.9	1.7	-4.1	-14.2	-26.5								
Vac	Leq,d	15.8	-11.1	-8.7	-2.4	0.8	3.0	6.1	4.7	4.6	6.3	8.0	7.6	2.2	-1.1	1.6	-5.7	-3.8	-4.0	-6.8	-3.0	-3.4	-3.9	-4.6	-5.5	-8.9	-11.9	-17.8	-25.1								
Vac	Leq,d	16.4	-10.5	-8.1	-1.7	1.6	3.8	6.9	5.5	5.4	7.2	8.5	8.1	2.7	-0.6	2.0	-5.3	-2.9	-3.2	-6.0	-2.3	-2.8	-3.4	-4.2	-5.1	-8.5	-11.5	-17.5	-24.7								
Vac	Leq,d	17.8	-9.6	-7.0	-0.6	2.8	5.1	8.3	7.1	7.1	9.1	9.5	9.2	3.8	0.5	3.2	-4.1	-0.8	-1.2	-4.2	-0.7	-1.5	-2.3	-3.2	-4.3	-7.8	-10.9	-16.8	-24.1								
Vac	Leq,d	21.9	-8.5	-5.8	0.9	4.6	7.2	10.8	10.0	10.5	13.0	12.5	12.7	7.9	5.4	8.6	1.8	7.6	7.8	4.9	8.3	7.3	6.2	4.9	3.3	-0.8	-4.4	-11.0	-18.8								
Receiver R3	Leq,d 50.9 dB(A)																																				
001 - 120HP IDC Standard	Leq,d	9.1					6.2																														
Tunnel-Facade 01	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	8.8					5.6																														
Tunnel-Facade 02	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	9.6					6.7																														
Tunnel-Facade 03	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	-11.7					-13.4																														
Tunnel-Facade 04	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	8.0					3.0																														
Tunnel-Roof 01	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	50.3					29.5																														
Tunnel-Transmissive area 01	Leq,d																																				
001 - 120HP IDC Standard	Leq,d	20.3					8.5																														
Tunnel-Transmissive area 01	Leq,d																																				
Turbine	Leq,d	8.2																																			
Vac	Leq,d	28.5	-7.4	-4.4	2.6	6.6	9.6	13.6	12.7	13.7	16.7	14.8	15.7	11.7	10.0	13.9	7.9	15.6	16.6	14.5	18.8	18.5	18.1	17.4	16.4	12.7	9.2	2.5	-6.0	-20.9							
Vac	Leq,d	28.1	-7.6	-4.6	2.4	6.4	9.4	13.4	12.4	13.4	16.4	14.4	15.4	11.3	9.6	13.6	7.5	15.3	16.3	14.2	18.5	18.2	17.8	17.1	16.0	12.3	8.7	1.8	-6.9	-20.9							
Vac	Leq,d	27.8	-7.8	-4.8	2.2	6.2	9.2	13.2	12.1	13.1	16.1	14.0	15.0	11.0	9.3	13.2	7.2	15.0	16.0	13.9	18.2	17.9	17.5	16.7	15.6	11.8	8.1	1.1	-7.8	-20.9							
Vac	Leq,d	27.5	-8.0	-5.1	1.9	5.9	8.9	12.9	11.8	12.8	15.8	13.7	14.6	10.6	8.9	12.9	6.8	14.7	15.7	13.6	17.9	17.6	17.1	16.4	15.2	11.4	7.6	0.4	-8.7	-20.9							
Vac	Leq,d	29.9	-6.4	-3.4	3.6	7.6	10.6	14.6	14.0	15.0	18.0	16.4	17.4	13.4	11.6	15.6	9.6	17.0	17.9	15.8	20.1	19.9	19.5	18.9	18.0	14.6	11.5	5.3	-2.4	-20.9							
Vac	Leq,d	29.5	-6.7	-3.7	3.3	7.3	10.3	14.3	13.6	14.6	17.6	16.0	16.9	12.9	11.2	15.1	9.1	16.6	17.6	15.5	19.8	19.5	19.1	18.5	17.6	14.1	10.9	4.5	-3.3	-20.9							
Vac	Leq,d	29.2	-6.9	-3.9	3.1	7.1	10.1	14.1	13.3	14.3	17.3	15.6	16.5	12.5	10.8	14.8	8.7	16.3	17.2	15.2	19.5	19.2	18.8	18.2	17.2	13.7	10.3	3.9	-4.2	-20.9							
Vac	Leq,d	28.8	-7.1	-4.1	2.9	6.9	9.9	13.9	13.0	14.0	17.0	15.1	16.1	12.1	10.4	14.3	8.3	16.0	16.9	14.8	19.1	18.9	18.4	17.8	16.8	13.2	9.8	3.2	-5.1	-20.9							
Vac	Leq,d	27.7	-7.9	-4.9	2.1	6.1	9.1	13.1	12.1	13.0	16.0	14.0	14.9	10.9	9.2	13.2	7.1	15.0	15.9	13.8	18.2	17.9	17.4	16.7	15.5	11.7	8.0	1.0	-7.9	-20.9							
Vac	Leq,d	28.1	-7.6	-4.6	2.4	6.4	9.3	13.3	12.3	13.3	16.3	14.3	15.3	11.3	9.5	13.5	7.5	15.3	16.2	14.1	18.5	18.2	17.7	17.0	15.9	12.2	8.6	1.6	-7.1	-20.9							
Vac	Leq,d	28.4	-7.4	-4.4	2.6	6.6	9.6	13.6	12.6	13.6	16.6	14.6	15.6	11.6	9.9	13.9	7.8	15.6	16.6	14.4	18.8	18.5	18.0	17.4	16.3	12.6	9.1	2.3	-6.2	-20.9							
Vac	Leq,d	28.7	-7.2	-4.2	2.8	6.8	9.8	13.8	12.9	13.9	16.9	15.1	16.0	12.0	10.3	14.3	8.2	15.9	16.9	14.7	19.1	18.8	18.4	17.7	16.7	13.1	9.7	3.0	-5.3	-20.9							
Vac	Leq,d	26.6	-8.7	-5.7	1.3	5.3	8.3	12.3	11.0	12.0	14.9	12.9	13.6	9.6	7.9	11.8	5.8	13.9	14.8	12.7	17.1	16.7	16.2	15.4	14.1	10.0	6.0	-1.7	-11.4								
Vac	Leq,d	26.8	-8.5	-5.5	1.5	5.5	8.5	12.5	11.2	12.2	15.2	12.9	13.9	9.9	8.2	12.1	6.1	14.2	15.1	12.9	17.3	17.0	16.5	15.6	14.4	10.4	6.4	-1.1	-10.6								
Vac	Leq,d	27.1	-8.3	-5.3	1.7	5.7	8.7	12.7	11.5	12.5	15.4	13.2	14.2	10.2	8.5	12.4	6.4	14.4	15.3	13.2	17.6	17.3	16.7	16.0	14.7	10.8	6.9	-0.4	-9.8								

S John King Blvd & 276 Rockwall TX
 Contribution spectra - 001 - 120HP IDC - Standard: Outdoor SP

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz		
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)		
Vac	Leq,d	27.4	-8.1	-5.1	1.9	5.9	8.9	12.9	11.8	12.7	15.7	13.6	14.6	10.5	8.8	12.8	6.7	14.7	15.6	13.5	17.9	17.6	17.1	16.3	15.1	11.3	7.5	0.3	-8.8		
Vac	Leq,d	28.0	-8.9	-5.9	1.1	5.1	8.1	12.1	10.8	11.7	14.7	12.4	13.4	9.3	10.0	13.9	7.9	16.0	16.9	14.8	19.2	18.8	18.3	17.4	16.1	11.9	7.7	-0.1	-10.1		
Vac	Leq,d	26.6	-8.7	-5.7	1.3	5.3	8.3	12.3	11.0	12.0	15.0	12.7	13.7	9.6	7.9	11.9	5.9	13.9	14.9	12.7	17.1	16.8	16.2	15.4	14.1	10.1	6.1	-1.5	-11.2		
Vac	Leq,d	26.9	-8.5	-5.5	1.5	5.5	8.5	12.5	11.3	12.2	15.2	13.0	14.0	9.9	8.2	12.2	6.1	14.2	15.2	13.0	17.4	17.0	16.5	15.7	14.4	10.5	6.5	-1.0	-10.4		
Vac	Leq,d	27.2	-8.3	-5.3	1.7	5.7	8.7	12.7	11.5	12.5	15.5	13.3	14.3	10.3	8.6	12.5	6.5	14.5	15.4	13.3	17.7	17.3	16.8	16.0	14.8	10.9	7.1	-0.3	-9.5		
Vac	Leq,d	29.1	-6.9	-3.9	3.1	7.1	10.1	14.1	13.3	14.3	17.3	15.5	16.5	12.5	10.7	14.7	8.7	16.3	17.2	15.1	19.4	19.2	18.8	18.1	17.1	13.6	10.3	3.8	-4.3		
Vac	Leq,d	29.5	-6.7	-3.7	3.3	7.3	10.3	14.3	13.6	14.6	17.6	15.9	16.9	12.9	11.2	15.1	9.1	16.6	17.5	15.5	19.7	19.5	19.1	18.5	17.5	14.1	10.8	4.5	-3.4		
Vac	Leq,d	29.9	-6.4	-3.4	3.6	7.6	10.6	14.6	14.0	14.9	17.9	16.4	17.3	13.3	11.6	15.6	9.5	17.0	17.9	15.8	20.1	19.8	19.5	18.9	18.0	14.6	11.4	5.2	-2.5		
Vac	Leq,d	30.3	-6.2	-3.2	3.8	7.8	10.8	14.8	14.3	15.3	18.3	16.8	17.8	13.8	12.1	16.0	10.0	17.3	18.3	16.2	20.4	20.2	19.9	19.3	18.4	15.1	12.0	6.0	-1.5		
Receiver R3 FIG Lr,lim dB(A) Sigma(Leq,d) 0.0 dB(A)		Leq,d	47.6																												
001 - 120HP IDC Standard	Leq,d	3.2					1.2			-9.7			-2.7			-8.8			-20.7			-27.9			-41.0			-63.3			
Tunnel-Facade 01	Leq,d									-7.7			-1.9			-4.3			-13.3			-19.6			-32.4			-53.8			
001 - 120HP IDC Standard	Leq,d	4.3					1.6																								
Tunnel-Facade 02	Leq,d									-13.1			-6.6			-15.1			-29.4			-37.9			-52.1			-75.7			
001 - 120HP IDC Standard	Leq,d	0.2					-1.3																								
Tunnel-Facade 03	Leq,d									-21.4			-12.6			-20.3			-38.2			-56.3			-81.3						
001 - 120HP IDC Standard	Leq,d	-7.9					-10.4																								
Tunnel-Facade 04	Leq,d									-8.7			1.6			-4.8			-19.0			-28.4			-43.6						
001 - 120HP IDC Standard	Leq,d	4.9					0.6			30.9			36.2			39.2			40.9			39.5			29.8			6.5			
Tunnel-Roof 01	Leq,d						26.0																								
001 - 120HP IDC Standard	Leq,d	45.6								15.9			23.8			21.5			14.3			0.5			-21.9			-56.2			
Tunnel-Transmissive area 01	Leq,d																														
001 - 120HP IDC Standard	Leq,d	26.7					13.0			15.9																					
Tunnel-Transmissive area 01	Leq,d																														
Turbine	Leq,d	11.2					-15.9	-13.0	-6.0	-5.7	-3.0	-2.1	-7.3	-8.2	-9.0	-5.8	-7.3	-5.1	-4.5	-3.1	-0.2	1.0	0.8	-1.8	2.1	0.2	-1.8	-5.9	-15.1		
Vac	Leq,d	29.6	-7.3	-4.3	2.7	6.7	9.7	13.7	12.8	13.8	16.8	14.9	15.9	11.9	11.4	15.4	9.4	17.2	18.1	16.0	20.4	20.1	19.6	18.8	17.7	13.9	10.3	3.3	-5.3		
Vac	Leq,d	29.5	-7.3	-4.3	2.7	6.7	9.7	13.6	12.7	13.7	16.7	14.8	15.8	11.8	11.3	15.3	9.3	17.2	18.1	15.9	20.3	20.0	19.5	18.8	18.2	14.3	10.5	3.4	-5.4		
Vac	Leq,d	29.5	-7.4	-4.4	2.6	6.6	9.6	13.6	12.6	13.6	16.6	14.7	15.7	11.6	11.3	15.2	9.2	17.1	18.0	15.9	20.2	19.9	19.4	18.7	18.1	14.2	10.4	3.2	-5.6		
Vac	Leq,d	29.3	-7.5	-4.5	2.5	6.5	9.5	13.5	12.5	13.5	16.5	14.6	15.6	11.5	11.1	15.1	9.1	17.0	17.9	15.8	20.1	19.8	19.3	18.6	17.4	13.6	9.8	2.7	-6.1		
Vac	Leq,d	29.8	-7.1	-4.1	2.9	6.9	9.9	13.9	13.0	14.0	17.0	15.1	16.1	13.4	11.6	15.6	9.6	17.4	18.3	16.2	20.5	20.2	19.8	19.0	17.9	14.2	10.6	3.7	-4.8		
Vac	Leq,d	29.8	-7.2	-4.2	2.8	6.8	9.8	13.8	13.0	14.0	16.9	15.1	16.1	13.3	11.6	15.6	9.5	17.4	18.3	16.2	20.5	20.2	19.7	19.0	17.9	14.1	10.5	3.7	-4.9		
Vac	Leq,d	29.7	-7.2	-4.2	2.8	6.8	9.8	13.8	12.9	13.9	16.9	15.1	16.0	13.3	11.6	15.5	9.5	17.3	18.2	16.1	20.5	20.2	19.7	19.0	17.8	14.1	10.5	3.6	-5.0		
Vac	Leq,d	29.7	-7.2	-4.2	2.8	6.8	9.8	13.8	12.9	13.9	16.9	15.0	16.0	13.2	11.5	15.5	9.4	17.3	18.2	16.1	20.4	20.1	19.7	18.9	17.8	14.0	10.4	3.5	-5.1		
Vac	Leq,d	29.3	-8.3	-5.3	1.7	5.7	8.7	12.7	11.5	14.7	17.6	15.4	16.4	12.3	10.6	14.6	8.5	16.6	17.5	15.4	19.7	19.4	18.9	19.0	17.7	13.6	9.5	1.9	-7.7		
Vac	Leq,d	29.2	-8.2	-5.2	1.8	5.8	8.8	12.8	11.6	14.7	17.7	15.5	16.5	12.4	10.7	14.7	8.6	16.7	17.6	15.4	19.8	19.5	19.0	18.2	16.9	13.0	9.0	1.5	-7.9		
Vac	Leq,d	29.2	-8.2	-5.2	1.8	5.8	8.8	12.8	11.7	14.8	17.8	15.5	16.5	12.5	10.8	14.7	8.7	16.7	17.6	15.5	19.9	19.6	19.0	18.2	16.9	13.1	9.1	1.7	-7.7		
Vac	Leq,d	29.3	-8.1	-5.1	1.9	5.9	8.9	12.9	11.7	14.8	17.8	15.6	16.6	12.6	10.8	14.8	8.8	16.8	17.7	15.6	19.9	19.6	19.1	18.3	17.1	13.1	9.2	1.8	-7.5		

S John King Blvd & 276 Rockwall TX

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Contribution spectra - 001 - 120HP IDC - Standard: Outdoor SP

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac	Leq,d	28.6	-8.6	-5.6	1.4	5.4	8.4	12.4	11.2	12.1	17.3	15.0	15.9	11.9	10.2	14.2	8.1	16.2	17.1	15.0	19.4	19.0	18.5	17.7	16.3	12.3	8.2	0.5	-9.3
Vac	Leq,d	29.6	-8.5	-5.5	1.5	5.5	8.5	12.5	11.3	12.2	17.4	15.1	16.0	12.0	10.3	14.3	8.2	16.3	17.2	15.1	21.1	20.7	20.2	19.3	18.0	14.0	9.9	2.2	-7.5
Vac	Leq,d	29.5	-8.4	-5.4	1.6	5.6	8.6	12.6	11.4	12.3	17.5	15.2	16.2	12.1	10.4	14.4	8.3	16.4	17.3	15.2	19.6	20.7	20.2	19.4	18.1	14.0	9.9	2.3	-7.4
Vac	Leq,d	28.9	-8.3	-5.3	1.7	5.7	8.6	12.6	11.5	12.4	17.6	15.3	16.3	12.2	10.5	14.5	8.4	16.5	17.4	15.3	19.7	19.3	18.8	18.0	16.7	12.7	8.7	1.2	-8.4
Vac	Leq,d	28.8	-7.9	-4.9	2.1	6.1	9.1	13.1	12.1	13.1	16.0	14.0	14.9	10.9	10.6	14.6	8.5	16.6	17.5	15.3	19.7	19.4	18.9	18.1	16.8	12.9	9.0	1.7	-7.5
Vac	Leq,d	28.9	-7.8	-4.8	2.2	6.2	9.2	13.2	12.2	13.2	16.2	14.1	15.1	11.1	10.8	14.7	8.7	16.7	17.6	15.5	19.8	19.5	19.0	18.2	17.0	13.1	9.2	2.0	-7.1
Vac	Leq,d	29.1	-7.7	-4.7	2.3	6.3	9.3	13.3	12.3	13.3	16.3	14.3	15.2	11.2	10.9	14.9	8.8	16.8	17.7	15.6	19.9	19.6	19.1	18.3	17.1	13.2	9.4	2.2	-6.7
Vac	Leq,d	29.2	-7.6	-4.6	2.4	6.4	9.4	13.4	12.4	13.4	16.4	14.4	15.4	11.4	11.0	15.0	8.9	16.9	17.8	15.7	20.0	19.7	19.2	18.4	17.2	13.4	9.6	2.5	-6.4
Vac	Leq,d	29.4	-8.1	-5.1	1.9	5.9	8.9	12.9	11.8	14.9	17.9	15.7	16.7	12.6	10.9	14.9	8.8	16.8	17.7	15.6	20.0	19.7	19.2	18.4	17.1	13.2	9.3	2.0	-7.4
Vac	Leq,d	29.4	-8.0	-5.0	2.0	6.0	9.0	13.0	11.8	14.9	17.9	15.7	16.7	12.7	11.0	14.9	8.9	16.9	17.8	15.7	20.0	19.7	19.2	18.4	17.2	13.3	9.4	2.1	-7.2
Vac	Leq,d	29.4	-8.0	-5.0	2.0	6.0	9.0	13.0	11.9	15.0	18.0	15.8	16.7	12.7	11.0	15.0	8.9	16.9	17.8	15.7	20.1	19.7	19.2	18.5	17.2	13.3	9.5	2.1	-7.1
Vac	Leq,d	29.5	-8.0	-5.0	2.0	6.0	9.0	13.0	11.9	15.0	18.0	15.8	16.8	12.7	11.0	15.0	8.9	16.9	17.8	15.7	20.1	19.8	19.3	18.5	17.3	13.4	9.5	2.2	-7.1

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