B. LAING ASSOCIATES
A Woman-owned Business Enterprise
ENVIRONMENTAL CONSULTING
www.blaingassociates.com
103 Fort Salonga Road - Suite 5 Fort Salonga, NY 11768
(631) 261-7170, Fax: (631) 261-7454

March 15, 2024

Zachary Barner, Director of Planning
Brittany Carosello, Deputy Director of Planning & Development
Municipal Building - 209 Conestoga Road
Frazer, PA, 19355

CC: E. Carr Everbach, Ph.D.
Department of Engineering, Swarthmore College
Singer Hall, 500 College Avenue
Swarthmore, PA 19081

RE: Green Fig Land Company Proposed Data Center
800 Swedesford Road, Exton, East Whiteland Township, Chester County, PA

Dear Mr. Barner and Ms. Carosello,

Thank you for meeting with the project team on February 12, 2024, in regards to the above referenced project.

In short, B. Laing Associates, Inc. is the environmental consulting firm providing environmental sound/noise analysis services for the proposed data center facility located at 800 Swedesford Road, Exton, East Whiteland Township, Chester County, Pennsylvania. The proposed action includes the development of land to accommodate two (2) 750,000 square foot Data Center Facilities approximately 45 feet tall, with associated parking and a proposed PECO electrical service switchgear and substation. Cooling Towers, which provide the heat rejection for the Data Processing space, will be located on the west side of building 1 and the east side of building 2, at grade level. The proposed Evapco Cooling Tower sound power level (the acoustic energy emitted by a source) is listed as overall dB(A) of 108 (at full speed) and so was the main source of noise that was evaluated in the October 2023 Sound Level Analysis and Review for the Proposed Data Center.

As discussed in our February 12th meeting, the analysis report prepared by B. Laing Associates, Inc. reduced the speed of the operating cooling towers to obtain the necessary sound reductions at the northern property line to be in compliance with the Township regulations in Chapter 133 “Peace and Good Order” subsection Article I “Disorderly Conduct” and Article II “Noise and Nuisances.” When the northern first three (3) cooling towers run at 2/3 speed, the overall dB(A) is 102. This reduction in speed drops the overall sound power level of the cooling towers by 6 decibels from the full speed. This would reduce sound levels at the northern property boundary. This dataset was implemented into the SoundPLAN computer modeling to determine the noise emission dispersion analysis at the northern property

boundary.[1] The results of the modeling determined that sound levels at receptors immediately north of the proposed equipment would fall between 60.0 and 62.5 dB(A). The emission modeling showed that this reduction in equipment speed would ensure compliance with the Township regulations. These results were provided in the October 2023 Sound Level Analysis and Review Proposed Data Center.

During our February 12th discussion, it was suggested by Dr. Carr Everbach that a noise barrier be implemented to reduce sound transmission to the northern property line and areas north of the subject site to ensure that potential noise[2] levels would not exceed the Township regulations. A noise barrier would block a range of noise transmission propagating north to subject receptors. The sound barrier implementation was discussed at the public hearing on February 28th, 2024.

The proposed Evapco Cooling Tower Technical Data Sheet provides the sound power level (the acoustic energy emitted by a source) as overall dB(A) of 108, at full speed. Twenty (20) cooling towers are proposed; ten (10) on the western side of facility 1 and ten (10) on the eastern side of facility 2. The cooling towers will stand approximately 32 feet tall. This dataset was implemented into the SoundPLAN computer modeling to determine the noise emission dispersion analysis at the northern property boundary. The results of the modeling determined that sound levels at receptors immediately north of the proposed equipment would fall between 62.0 and 65.8 dB(A). Implementing a 40 foot high, 85 foot long sound barrier wall to the fore of the proposed cooling towers would result in sound levels between 48.5 and 59.3 dB(A). This is a noticeable reduction in sound levels. 50 dB(A) is considered quiet. Human conversations at two to three feet occurs between sound pressure levels (SPL) of 60 dB(A)- with a calm voice- to 75 dB(A) with a raised voice. At minimum, a 6 dB(A) reduction is approximately a 34% perceived volume reduction. In general terms, an effective barrier can reduce noise levels between 5 to 10 dB(A).[3]

An example of a sound barrier wall is KINETICS® NOISEBLOCK™ Modular Panel Sound Barrier Walls. Per Kinetics sound acoustical performance data, "enclosure systems offer typical noise reductions of 20-35 dBA." Specification sheets are provided in the rear of this report. Another example provided by Dr. Carr Everbach is SonaGuard® Perforated Fiberglass Sound-Absorptive Noise Barrier which specifies a Sound Transmission Class (STC) of 35 and a Noise Reduction Coefficient (NRC) of 1.05. STC is the most common sound reduction measurement currently in use and has been adopted by many cities and states as code standards. The noise reduction coefficient (NRC) of SonaGuard is cited as 1.05. This number reflects a very high sound absorption performance. Specification sheets are provided in the rear of this report. The project architect Michelle Drollette, AIA and engineer, BALA Consulting Engineers, will assist with the final design and structural components of the sound barrier.

As previously noted in the October 2023 analysis report, the northern property line abuts an open space recreational (former Malvern Hunt sewage treatment plant) lot with no receptors. These results exclude any estimation of any additional noise attenuation through "natural" methods of sound mitigation including soils, landscaping, topography, etc. The former Malvern Hunt sewage treatment plant will remain undeveloped and a reforestation plan is proposed to restore the property to a more native environment. During noise sampling, the existing ambient sound levels of Swedesford Road measured between 60 to 67 dB(A) in all scenarios. Swedesford Road separates former the Malvern Hunt sewage

[1] The SoundPLAN modeled result does NOT include any external factors/ambient conditions – e.g., Swedesford Road traffic.

[2] Blade pass frequency/resonance to also be considered. Equipment enabled with Variable Frequency Drive to prevent resonant frequencies.

[3] U.S. Department of Transportation Federal Highway Administration.

treatment plant property from the residential receptors to the north. The SoundPLAN computer modeling results of projected noise emission dispersion are for external locations. A building or house will provide significant attenuation for those who are indoors. Sound levels can be expected to be up to 27 dB(A) lower indoors with the windows closed. Even in homes with the windows open, indoor sound levels can be reduced by up to 17 dB(A) (USEPA 1978).

With the implementation of a sound barrier, the proposed data center operational sounds will be below the threshold limits within the East Whiteland Township regulations in Chapter 133 “Peace and Good Order” subsection Article I “Disorderly Conduct” and Article II “Noise and Nuisances” during operational use. The barrier will also screen and obstruct the view of the equipment to receptors to the north. The project architect Michelle Drollette, AIA and engineer, BALA Consulting Engineers, will assist with the final design and structural components of the sound barrier.

Thank you again for the suggestions and references to the project team. Please contact the office with any questions you may have regarding this information

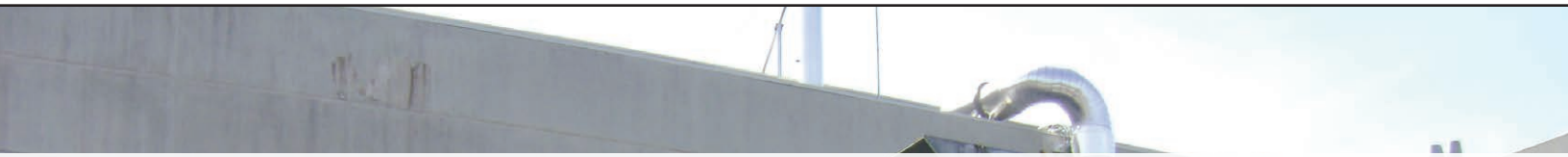
Sincerely,



Danna Cuneo
Principal

Attachment A
KINETICS® NOISEBLOCK™ Modular Panel Sound Barrier Walls

KINETICS Noise Control®



NOISEBLOCK™ Modular Panel Enclosure Systems

Commercial | Industrial | Environmental







NOISEBLOCK™ Panel Systems:
Commercial, Industrial, and Environmental Applications

Noise control in commercial, industrial, or environmental systems is an important element of the design process. Whether it is to comply with municipal ordinances, conform to OSHA standards or to achieve occupant comfort, designing a system to the required noise level takes knowledge and experience. For over 55 years **KINETICS NOISE CONTROL, INC.** has been delivering noise control solutions to meet the needs of many industries.

KINETICS designs and manufactures a complete line of modular engineered systems incorporating the **NOISEBLOCK™** acoustic panel. This double-walled acoustic panel can be quickly and easily assembled into a variety of plenum, equipment enclosure, or process enclosure configurations; and are designed to provide a high level of sound absorption and transmission loss.

KINETICS offers a complete design and engineering service, including acoustic, structural and ventilation provisions. This allows us to deliver custom, cost effective products and solutions that will fit your system and meet your needs.

Commercial Applications

The mitigation of noise from heating and cooling systems in modern commercial projects is an important aspect in any building design. **KINETICS** engineers and manufactures complete pressurized plenum enclosures for a wide array of HVAC installations. **NOISBLOCK™** pressurized plenums are designed to provide effective noise control, structural integrity, along with full access for maintenance and inspection.

Applications

- Built-up and Custom Air Handlers
- Double Wall Panel Duct
- Fan Enclosures
- HVAC Mixing Plenums
- Mechanical Equipment
- Relief / Outside Air Plenums
- Supply / Return Plenums



Field Assembled **NOISEBLOCK™** AHU Casing

Industrial Applications



In-Plant **NOISEBLOCK™** Equipment Enclosure

Worker safety has taken on increasing importance for industrial facilities, and as such, noise reduction initiatives have become an essential goal of the industry. Whether it is to comply with increasingly strict OSHA regulations, or to reduce hearing loss claims against an insurer, worker safety is now in the forefront. **NOISEBLOCK™** enclosures are a key design element in bringing industrial, process and manufacturing facilities to safer noise levels and to help make a better work environment for all involved.

Applications

- Backup/Constant Power Generators
- Compressors
- In-Plant Offices
- Manufacturing Equipment
- Paint Booths
- Positive Displacement Blowers
- Processes
- Test Chambers
- Vacuum Blowers
- Ventilation Fans
- Pumps
- Saws
- Punch Presses

Environmental Applications



Process Blower **NOISEBLOCK™** Enclosure

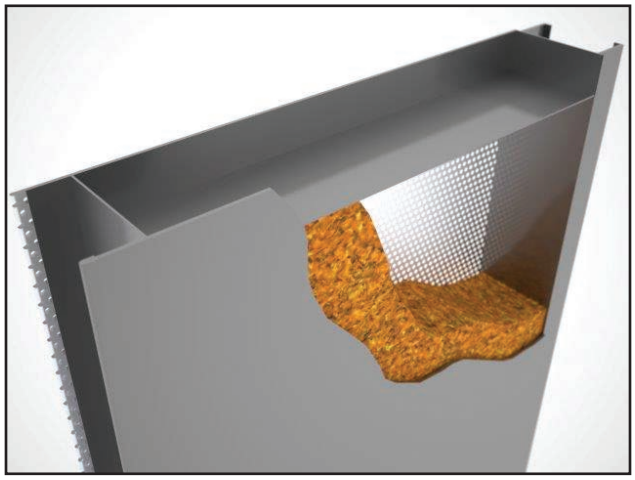
With residential areas encroaching on industrial and commercial areas, environmental noise is a main concern for communities. It is common for commercial and industrial facilities to have mechanical or process equipment located outside of the building, where the noise generated from this equipment was once not a concern, it is now. To mitigate outside noise sources a partial or complete **NOISEBLOCK™** panel enclosure can be used. **KINETICS** engineers their enclosures with special design considerations for outdoor use, such as wind and snow loading, weather protection, proper roof design to avoid water pooling, waterproofing, and the use of special materials. **KINETICS** can provide a complete engineered system to account for all acoustic, structural and ventilation aspects.

Applications

- Air-Cooled Chillers
- Cooling Towers
- LNG Terminal Process Equipment
- Wastewater Treatment Plant Process Blowers
- Generators
- Fans
- Blowers

NOISEBLOCK™ Panel Types

Type STL acoustic panels are fabricated of various thicknesses and materials depending on the level of noise control required for a particular application. Standard **KINETICS NOISEBLOCK™** type STL panels are fabricated with an outer solid shell of 18 gage and inner perforated shell of 22 gage steel. Panels are stiffened with 18 gage internal channels and edge rails. The acoustic grade fill is 2.5 to 6 pcf long strand fiberglass or mineral wool, depending on the application, are inert, mildew resistant, vermin proof and incombustible. Standard panels are 4" thick, but optional 2" and 6" panels are available to meet special requirements.



Typical STL panel detail: solid outer shell, media, and perforated inner shell.

Type HTL acoustic panels are designed for applications where a higher transmission loss is required. Standard **KINETICS** type HTL panels are fabricated with an outer solid shell of 16 gage and inner perforated shell of 22 gage steel with a high mass septum added for increased acoustic performance. Panels are stiffened with 18 gage internal channels and edge rails. The acoustic grade fill is 2.5 to 6 pcf long strand fiberglass or mineral wool depending on the application and are inert, mildew resistant, vermin proof and incombustible. Panels are available in 4" or 6" thickness.



Typical groove and tongue (GT) panel joint

Materials

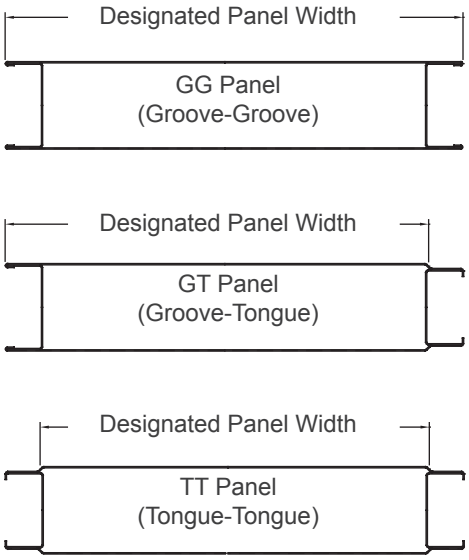
Outer and inner shell materials are available in standard galvanized steel, Type G90, mill phosphatized (satin) finish galvanized steel (readily paintable), stainless steel, Types 304 and 316, aluminum and aluminized steel. Standard material gages for solid outer shell are 18 ga. and 16 ga., perforated (23% open area) inner shell is 22 gage. Septum panels and panels with solid outer and inner shells are available. Factory applied powder-coat finish is available as an additional option.

All internal sound absorbing media used in **NOISEBLOCK™** panels meet the requirements of NFPA-90A and surface burning characteristics per ASTM E84, with maximum flame spread rating of 25 and smoke developed rating of 50. Other media are available offering more stringent flame spread index and smoke developed index. The media is available both unlined, lined or bagged using a specialized film or cloth barrier and acoustic spacer. The insulation is under compression so as not to allow settling of acoustic media within the panel.

Standard Panel Dimensions

NOISEBLOCK™ acoustic panels are available in standard designated widths of 21.625" and 45.625", and standard lengths up to 144". Other width and lengths are available by special order. Most **NOISEBLOCK™** enclosure and plenum systems incorporate as many standard panels as possible and then finished with non standard panels. For pressurized plenum systems the maximum panel width is determined by the internal operating static pressure (positive or negative), simply supported panel span and allowable panel deflection.

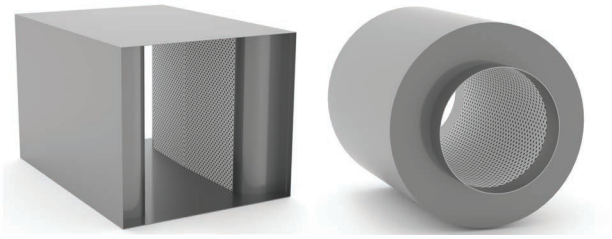
NOISEBLOCK™ Panel Joint



Panel connection style and width reference. Tongue and groove connections are standard for 16 gage shell and lighter. Heavier gages incorporate H-joiners.

Silenced Ventilation Systems

KINETICS engineers will work with you to properly design wall or roof mounted, silenced forced/passive ventilation systems. **KINETICS** ensures the enclosed equipment or process is properly ventilated as to prevent overheating. **KINETICS** does this by choosing from our expansive product line of circular (VCS), rectangular straight (VRS) and elbow (VES) absorptive



or reactive silencers and fixed-blade acoustic louvers (VAL/VAC/VPL). All are backed by independent testing per ASTM E477 and/or ASTM E90 in NVLAP accredited laboratories.



Accessories

NOISEBLOCK™ acoustic panel systems offer many accessory items: forced or passive silenced ventilation systems, windows, single and double leaf access doors, removable panel wall and roof sections, structural steel components, and factory painting.

Acoustic Performance Data

NOISEBLOCK panel acoustic performance is backed by independent testing in a NVLAP accredited laboratory. When tested in accordance with *ASTM C423, Standard Method of Test for Sound Absorption of Acoustic Materials in Reverberant Rooms,* the panel assembly shall have the following minimum airborne sound absorption:

Model	Construction[3]	Sound Absorption						NRC[4]
		125	250	500	1000	2000	4000	
STL-2[1]	18 ga. solid / 22 ga. perforated	0.15	0.66	1.07	1.06	0.97	0.86	0.95
STL-2[1]	16 ga. solid / 22 ga. perforated	0.15	0.66	1.07	1.06	0.97	0.86	0.95
STL-4[2]	18 ga. solid / 22 ga. perforated	0.60	1.13	1.12	1.09	1.03	0.91	1.00
STL-4[2]	16 ga. solid / 22 ga. perforated	0.60	1.13	1.12	1.09	1.03	0.91	1.00
HTL-4[2]	16 ga. solid / 22 ga. perforated + septum	0.60	1.13	1.12	1.09	1.03	0.91	1.00

When tested in accordance with *ASTM E90, Standard Recommended Practice for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*, the panel assembly shall have the following minimum airborne sound transmission loss:

Model	Construction[3]	Transmission Loss, dB						STC[5]
		125	250	500	1000	2000	4000	
STL-2[1]	18 ga. solid / 22 ga. perforated	17	23	34	47	55	57	37
STL-2[1]	16 ga. solid / 22 ga. perforated	19	25	35	48	56	60	39
STL-4[2]	18 ga. solid / 22 ga. perforated	21	28	39	48	56	58	40
STL-4[2]	16 ga. solid / 22 ga. perforated	24	32	41	51	60	66	43
HTL-4[2]	16 ga. solid / 22 ga. perforated + septum	27	34	48	61	66	70	48

The acoustic performance of **NOISEBLOCK** panel systems is not degraded through prolonged exposure to noise, vibration, pressure differential, dampness, wind, rain or snow.

[1] (2) = 2-inch thickness
[2] (4) = 4-inch thickness
[3] solid inner skin available
[4] Noise Reduction Coefficient (NRC) is the average of coefficients at 250, 500, 1K and 2K Hz, expressed in the nearest integral multiple of 0.05.
[4] Sound Transmission Class (STC) is determined by comparing test data with a set of standard STC contours as described in *ASTM E413, Standard Classification for Determination of Sound Transmission Class*.

Achievable Noise Reduction

NOISEBLOCK™ enclosure systems offer typical noise reductions of 20-35 dBA. Special custom systems incorporating heavier (thicker gage) panel shell, thicker panels or an enclosure within an enclosure are available to achieve higher levels of noise reduction.

Thermal Performance

The insulation materials used in **NOISEBLOCK™** panels at 75˚F have maximum thermal conductance values of 0.06 BTU/hr-ft^2-˚F (4" thick) and 0.12 BTU/hr-ft^2-˚F (2 inch thick). Thermal resistance values are R17 (4" thick) and R8 (2" thick). Other insulation materials yielding higher thermal performance values are available.

Windows

Observation windows are available as double-pane, wire reinforced, or tempered safety glass. The windows are held in place with a flexible acoustic, airtight seal and separated by an airspace of the same thickness as the **NOISEBLOCK™** panel. Depending on window size it can be factory installed or shipped and field installed. High STC rated windows are available were maximum noise control is required.

Doors

A complete line of single and double leaf **NOISEBLOCK™** access doors are available in various sizes and can be incorporated to meet a variety of needs such as personnel and machinery access. Single and double leaf access doors are available with industrial grade strap hinges (swing right/left, in/out) and panic/passage hardware (keyed locks or sliding hardware are available as an option). The maximum single leaf door size is 48" wide x 96" high and the maximum double leaf door size is 144" wide x 144" high. Door thicknesses match adjacent panel thickness, construction, and acoustic performace.

Pressurized plenum single leaf doors are available in various sizes and have acoustic edge and bottom seals, doors are factory pre-hung, insulated and equiped with 2 or 3 strap hinges with Ventlok latches. (zinc and aluminum non-corrosive alloy). Double-pane, wire reinforced view ports are an available option.

Removable Panels

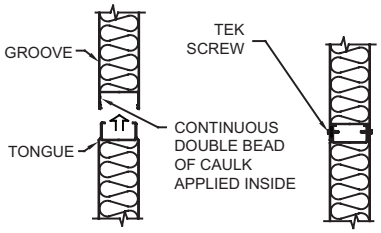
NOISEBLOCK™ removable access panels for walls and roofs can be located and sized as required for easy access to interior equipment for maintenance, service, or repair. The construction of removable panels is the same as the surrounding panels. Depending on the size and frequency of use, removable panels incorporate Ventlock latches or bolted connections. Roof access panels for outdoor applications can be designed for sloped roofs or can incorporate a rasied curb for flat roofs. Lifting lugs and special flashing are included as required.

Structural Steel Components

Structural steel components and welded assemblies are designed for either field welding or bolt together assembly. Standard structural items are shipped with one factory coat of primer for protection during shipping. **KINETICS** can supply structural items with hot-dip galvanized coated finish or factory painted with either a wet paint or powder-coat finish depending on size and specification.

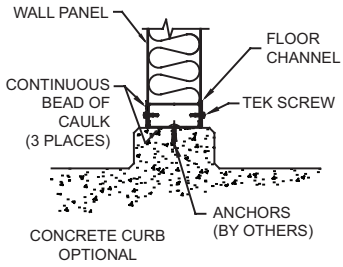
Standard Construction and Connection Details

DETAIL 1



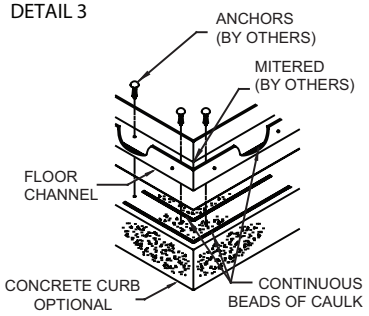
T & G PANEL ASSEMBLY DETAIL

DETAIL 2



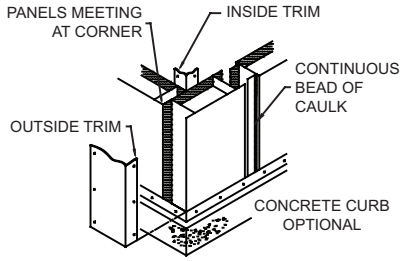
WALL TO CURB DETAIL

DETAIL 3



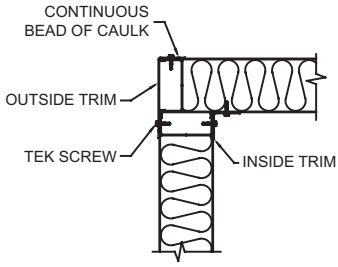
BASE CHANNEL CORNER DETAIL

DETAIL 4



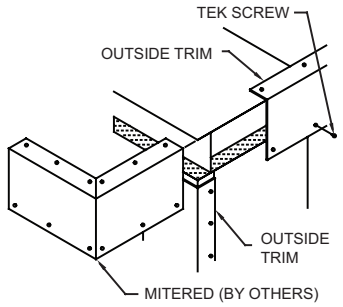
CORNER ASSEMBLY DETAIL

DETAIL 5



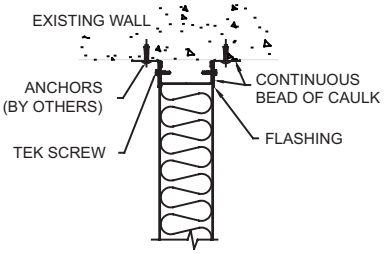
CORNER DETAIL

DETAIL 6



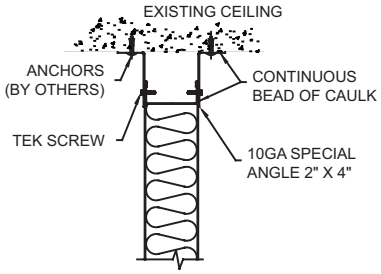
OUTSIDE TRIM CORNER DETAIL

DETAIL 7



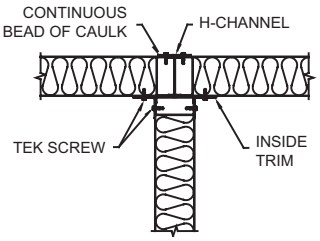
WALL PANEL TO BUILDING WALL

DETAIL 8



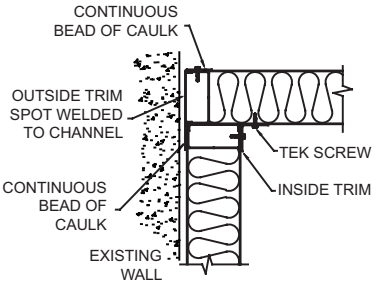
WALL PANEL TO BUILDING CEILING

DETAIL 9



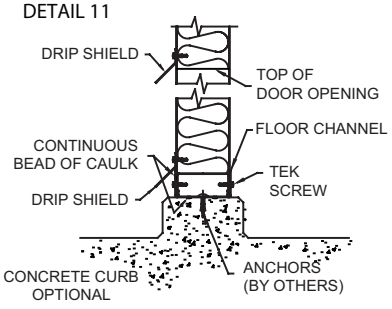
INTERIOR PANEL CONNECTION

DETAIL 10



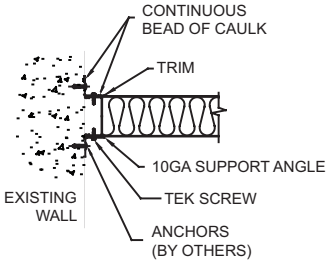
REDUCED CLEARANCE OUTSIDE TRIM DETAIL

DETAIL 11



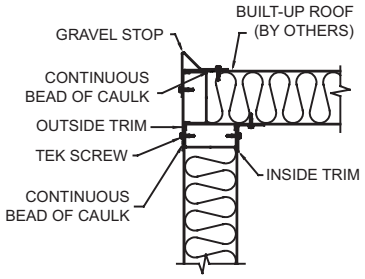
DRIP SHIELD DETAIL

DETAIL 12



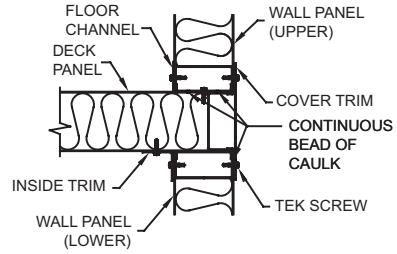
ROOF PANEL TO BUILDING CEILING

DETAIL 13



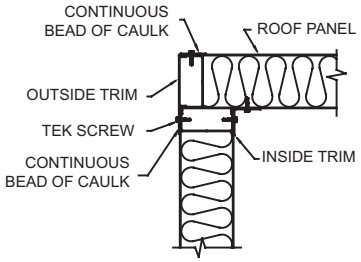
GRAVEL STOP (OUTDOOR) DETAIL

DETAIL 14



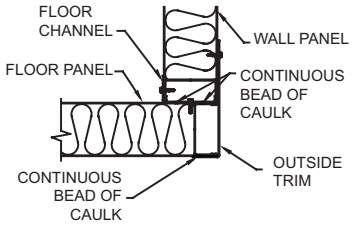
INTERMEDIATE DECK DETAIL

DETAIL 15



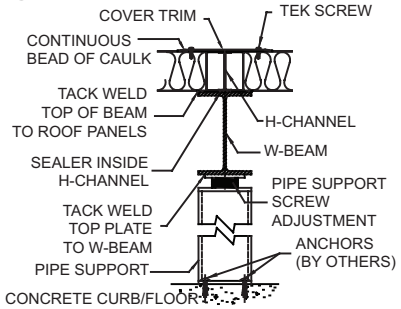
WALL TO ROOF JOINT

DETAIL 16



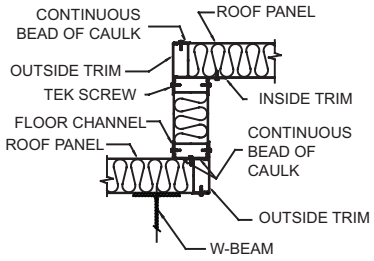
FLOOR PANELS

DETAIL 17



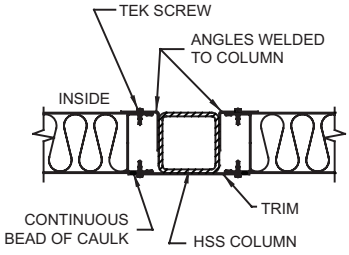
STRUCTURAL ROOF SUPPORT

DETAIL 18



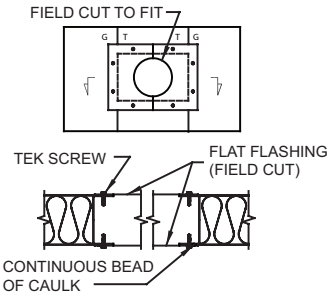
90° ROOF OFFSET WITH SUPPORT

DETAIL 19



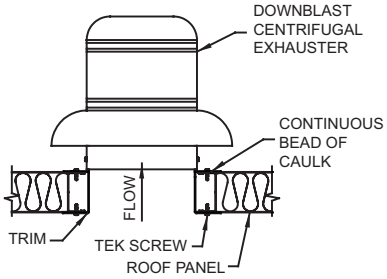
WALL PANEL TO HSS COLUMN

DETAIL 20



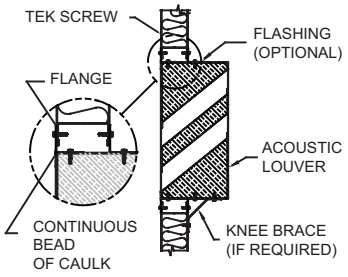
FIELD CUT FLASHING DETAIL

DETAIL 21



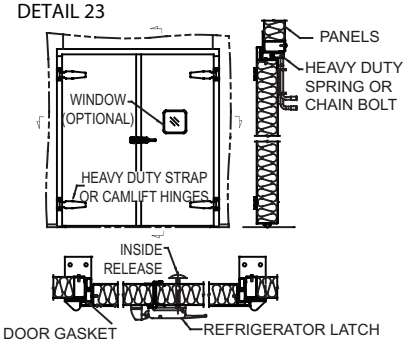
DOWNBLAST CENTRIFUGAL EXHAUSTER

DETAIL 22



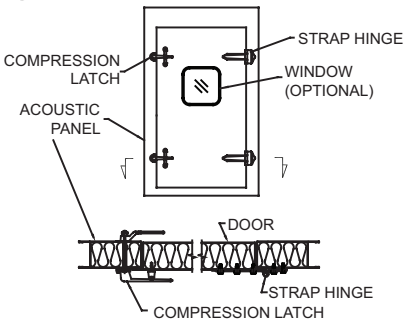
ACOUSTICAL LOUVER INSTALLATION

DETAIL 23



ACOUSTICAL DOUBLE DOOR

DETAIL 24



SINGLE DOOR IN PANEL

Engineering Services

Structural Performance

NOISEBLOCK™ acoustic panel enclosures and plenum systems are structurally designed for internal and external loading (± internal static pressure, wind loads, snow loads, live and dead loads as well as seismic) per industry standards following the applicable IBC building codes. Available options include copies of the structural steel calculations and PE stamp. **KINETICS** engineering group uses the latest AutoCAD software and can incorporate your equipment or system AutoCAD layout into our submittals to assure proper clearances and access locations.

Installation Guidelines

KINETICS supplies complete AutoCAD submittal, piece-marked installation drawings and bill of materials which correspond to the factory piece-marked panel system components. This piece-marking notation allows for easy installation of any system by referencing the numbers associated on the project specific assembly drawings and details. Typcial enclosure and plenum systems incorporate six standard components, **NOISEBLOCK™** tongue and groove panels, base channel, inside and outside trim pieces, fasteners, sealant and door(s).

Installation Planning Tips

1. Review the **KINETICS** supplied job specific, piece-marked, installation drawings and compare against the supplied bill of materials.

2. Prior to delivery of product, clear an area near where the panels are to be installed so they can be conveniently stored. To save time and labor move panels directly from the truck to this area. Make sure the necessary material handling equipment is available, including lifts for unloading and carts for moving panels across the floor to the installation site.

3. Near the installation area stack the panels on end and lengthwise with piece marks exposed. This will save time from moving and restacking panels as the enclosure is installed. If more than one enclosure is involved separate panels by drawing number as referenced on the bill of materials.

4. Typical tools and equipment required for successful installation are: ladder, extension cord, lifts, portable lighting, masonry and metal drill, metal cutting saw, tape measure, caulking gun, come a long.

5. Summary of Installation:
   - Locate base channel
   - Set corner panels
   - Install wall, partition and door panels
   - Add wall trim inside and outside
   - Install structural components (if required)
   - Add roof panels
   - Add roof trim inside and outside
   - Complete enclosure

Packaging

NOISEBLOCK™ panel systems are knocked-down (unassembled), standard palletized, banded and shrink wrapped before shipping. All panels, trim items including optional items are piece-marked to correspond to piece-marked installation drawings and details supplied with every order. Inside and outside trim are supplied in standard 10'-0" lengths to be field cut to required lengths. Standard shipments are sent in a closed trailer but flatbed shipments are available per special request.



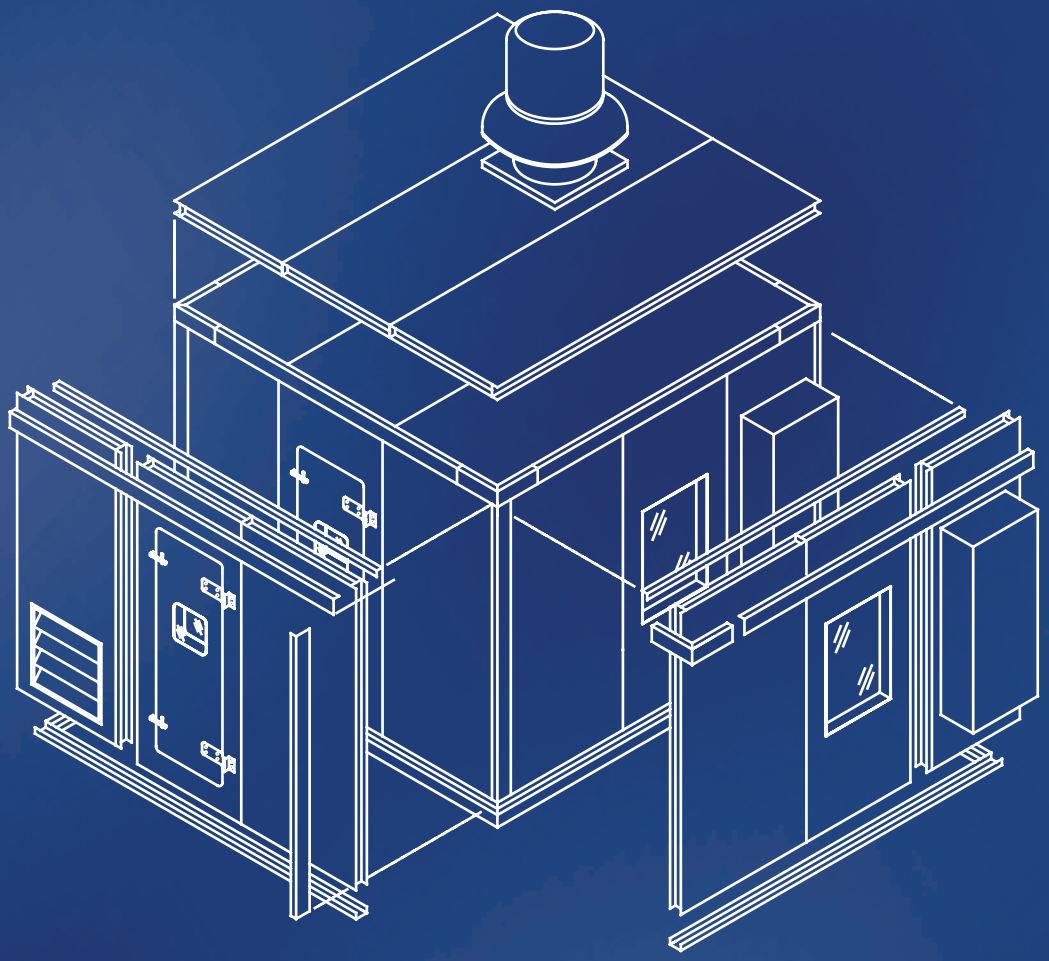
Standard Skid Packaging



Export Crate Packaging

Finish

NOISEBLOCK panel systems are available factory powder-coat finish per selection of POWDURA® RAL Series Super Durable TGIC FREE Polyester Powder Coatings, color matching or mill/unpainted.



KINETICS Noise Control®

kineticsnoise.com/noiseblock
sales@kineticsnoise.com
1-800-959-1229

Attachment B
SonaGuard® Perforated Fiberglass Sound-Absorptive Noise Barrier

SonaGuard® (US Patent D865,224)

Perforated Fiberglass Sound-Absorptive Noise Barrier System

Superior Acoustics — Wide Spans — High Strength





- **Exceptional Acoustical Performance: NRC 1.05 and STC 35**
- **Extreme Strength = Wider Spans = Fewer Foundations = Lower Turnkey Cost**
- **Lightweight: Less than 5 lbs per square foot**
- **Easy to Install and Easy Field Modification**
- **Aesthetic Shiplap Design Towards Receivers and Residents**
- **Non-Glare finish**
- **Non-Conductive**
- **Non-Corrosive**
- **Up to Class A Flame Rating**
- **DOT and FERC Approved**

The patented SonaGuard® Absorptive Noise Barrier is the highest quality reinforced fiberglass noise barrier on the market. Manufactured using the most advanced materials and processes, it has been designed with strength, noise reduction, and aesthetics in mind. SonaGuard® panels feature a tongue-and-groove design which provides superior deflection strength, and also eliminates any spaces or gaps that would allow unwanted noise to escape.

Sound Fighter® Systems L.L.C. and its Noise Barrier Systems are proudly 100% located, sourced and manufactured in the USA.

ACCREDITED BUSINESS BBB

Business Of the Year

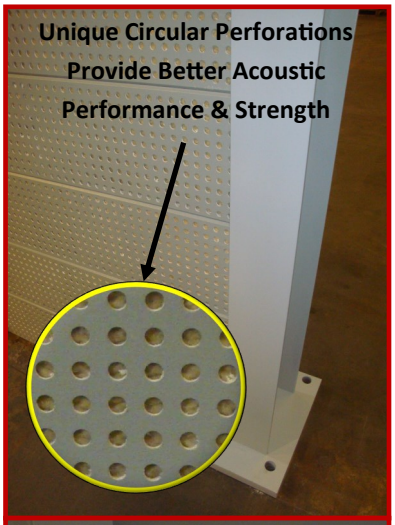
©Copyright 2020 #TX 7-064-172 Sound Fighter® Systems, L.L.C. All Rights Reserved

SOUND FIGHTER® SYSTEMS

America's Oldest Manufacturer of High-Performance Outdoor Noise Barrier Systems

SonaGuard® Noise Barrier Features:

- Noise Reduction Coefficient (NRC) of **1.05**
- Sound Transmission Class (STC) of **35**
- Wide Spans = fewer foundations = easier install = less $$
- Can meet any current North American wind load
- Lightweight and Modular – means quick installation in confined areas without the use of heavy equipment, minimizing traffic control issues and damage to surrounding landscaping
- Available in many colors
- UV resistant, continuous glass reinforced composite material that is resistant to corrosion, chemical abrasion and weathering
- Will not corrode, rust or rot
- Graffiti, moisture and freeze/thaw resistant
- Up to Class A Flame Rating





Effective Noise Reduction for:

> DOT and Highway	> Rail
> Oil & Gas	> Electrical Substations
> Recycling	> Commercial HVAC
> Military	> Bridges and Rooftops
> Water and Wastewater	> Big Box Development
> Industrial and Manufacturing	> LNG

SonaGuard® Specifications

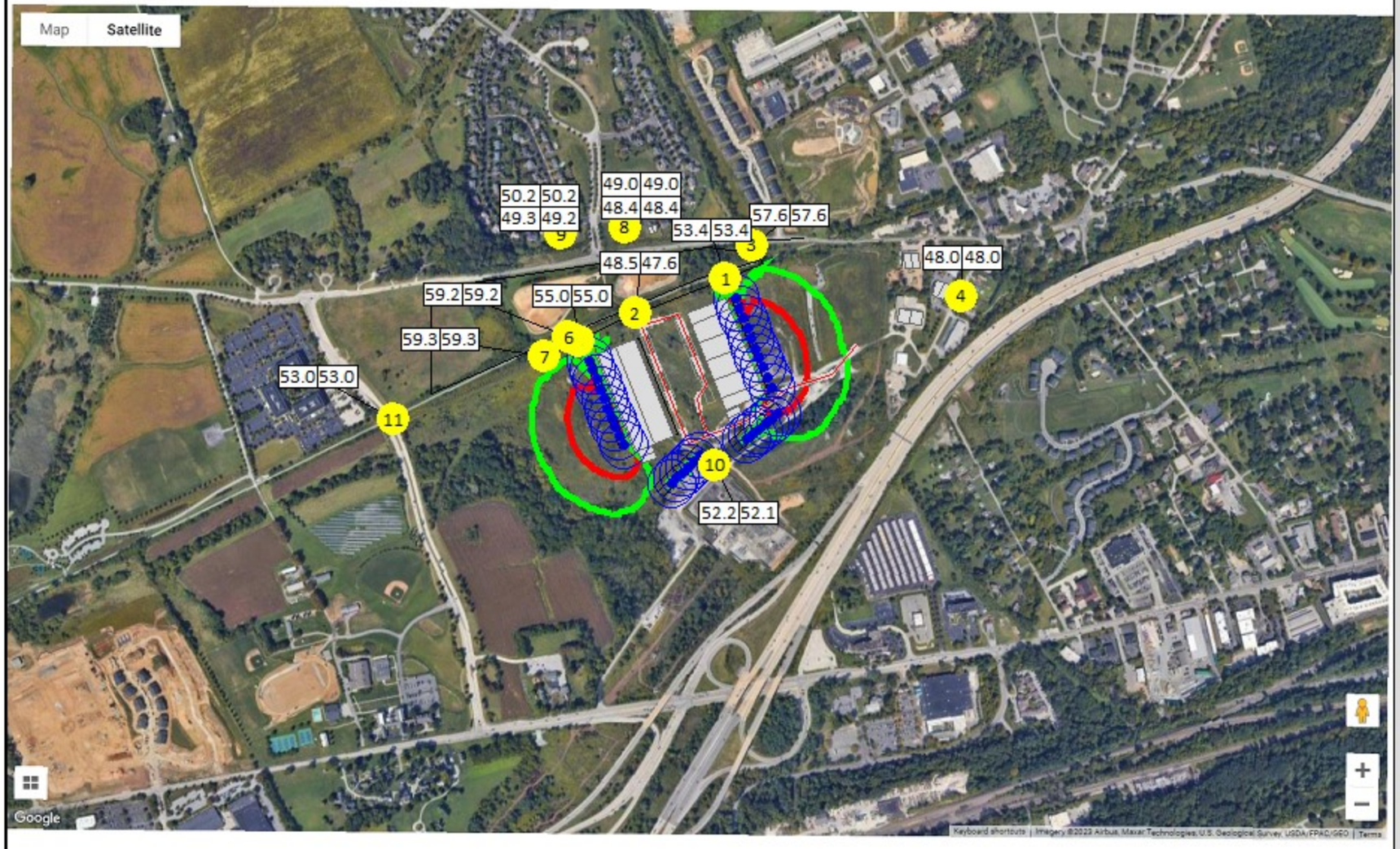
Length: up to 14 ft
Width: 2.75 inches
Height: 12 inches
Weight: 4.4 lb/sq ft
Tensile strength: 69,812 psi
Tensile mod.: 3,923,000 psi ASTM D-638
Compressive strength: 68,927 psi ASTM D-695
Compressive mod.: 3,960,000 psi ASTM D-695
Flex strength: 89,515 psi ASTM D-790
Flex mod.: 2,384,000 psi ASTM D-790
Specific Gravity: 1.88 ASTM D-792

For more information on Sound Fighter® Systems:

Call: 1-866-348-0833 **E-mail: info@soundfighter.com** **Visit: www.soundfighter.com**

Attachment C
SoundPLAN Modeling Results

Green Fig Data Center
Noise Propagation Modeling
with 40 by 85-foot Sound Barrier



Signs and symbols

- Line
- Ground effects
- Wall
- Receiver
- Emission line
- Surface
- Point source
- Parking lot
- Limit line Day: 65 dB(A)
- Limit line Night: 60 dB(A)

1 : 14828

0 50100 200 300 400 m

B. LAING ASSOCIATES
ENVIRONMENTAL CONSULTING
www.blaingassociates.com
103 Fort Salonga Road - Suite 5 Fort Salonga, NY 11768
(631) 261-7170, Fax: (631) 261-7454

				Frequency spectrum [dB(A)]										Corrections		
Source name	Reference		Level		63	125	250	500	1	2	4	8	Cwall	CI	CT	
	dB(A)	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	dB	dB	dB				
Transformer	Lw/unit	Day	83.0								-	-	-			
Transformer		Night	83.0								-	-	-			
Transformer1	Lw/unit	Day	83.0								-	-	-			
Transformer1		Night	83.0								-	-	-			
Transformer21	Lw/unit	Day	83.0								-	-	-			
Transformer21		Night	83.0								-	-	-			
Transformer22	Lw/unit	Day	83.0								-	-	-			
Transformer22		Night	83.0								-	-	-			
Transformer23	Lw/unit	Day	83.0								-	-	-			
Transformer23		Night	83.0								-	-	-			
Transformer24	Lw/unit	Day	83.0								-	-	-			
Transformer24		Night	83.0								-	-	-			
Transformer25	Lw/unit	Day	83.0								-	-	-			
Transformer25		Night	83.0								-	-	-			
Transformer26	Lw/unit	Day	83.0								-	-	-			
Transformer26		Night	83.0								-	-	-			
Transformer27	Lw/unit	Day	83.0								-	-	-			
Transformer27		Night	83.0								-	-	-			
Transformer28	Lw/unit	Day	83.0								-	-	-			
Transformer28		Night	83.0								-	-	-			
Transformer29	Lw/unit	Day	83.0								-	-	-			
Transformer29		Night	83.0								-	-	-			
Transformer30	Lw/unit	Day	83.0								-	-	-			
Transformer30		Night	83.0								-	-	-			
Cooling Tower17	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower17		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower18	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower18		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower19	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower19		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower20	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower20		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower21	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower21		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower22	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower22		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower27	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower27		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower28	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower28		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower29	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower29		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower30	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower30		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower31	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower31		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower32	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower32		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower33	Lw/unit	Day	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-
Cooling Tower33		Night	107.9		86.8	97.9	103.4		102.8		98.0	96.2	94.0	90.9	-	-

Name	Parking lot type	Size	Movements per hour Day	Night	Separated	Road surface	Lw,ref method dB(A)			
Eastern Buildin	Parking Lot 2	Visitors and staff	100		Parking bays	0.050	0.030	Asphaltic driving lanes	no	87.9
Western Building	Parking Lot 1	Visitors and staff	100		Parking bays	0.050	0.030	Asphaltic driving lanes	no	87.9

Cooling Tower32	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower32		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower30	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower30		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower31	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower31		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower32	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower32		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower31	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower31		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower32	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower32		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower33	Lw/unit	Day	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-
Cooling Tower33		Night	107.9	86.8	97.9	103.4	102.8	98.0	96.2	94.0	90.9	-	-	-

		Level w/o NP		Level w NP	
Source name	Traffic lane	Day	Night	Day	Night
		dB(A)		dB(A)	
North Property Line Rec 1 East	1.Fl	62.5	62.5	53.4	53.4
1	-	19.3	13.3	16.3	10.3
2	-	19.3	13.3	19.3	13.3
Cooling Tower17	-	26.4	26.4	26.4	26.4
Cooling Tower18	-	25.9	25.9	25.9	25.9
Cooling Tower19	-	25.4	25.4	25.4	25.4
Cooling Tower20	-	24.8	24.8	24.8	24.8
Cooling Tower21	-	24.3	24.3	24.3	24.3
Cooling Tower22	-	23.7	23.7	23.7	23.7
Cooling Tower27	-	47.7	47.7	40.2	40.2
Cooling Tower28	-	46.1	46.1	38.7	38.7
Cooling Tower29	-	44.9	44.9	37.7	37.7
Cooling Tower30	-	31.5	31.5	31.4	31.4
Cooling Tower30	-	43.8	43.8	36.7	36.7
Cooling Tower31	-	59.2	59.2	49.2	49.2
Cooling Tower31	-	42.8	42.8	35.9	35.9
Cooling Tower31	-	31.7	31.7	31.6	31.6
Cooling Tower32	-	33.7	33.7	32.6	32.6
Cooling Tower32	-	55.0	55.0	45.9	45.9
Cooling Tower32	-	52.2	52.2	43.2	43.2
Cooling Tower32	-	41.9	41.9	35.1	35.1
Cooling Tower33	-	54.3	54.3	45.2	45.2
Cooling Tower33	-	31.4	31.4	31.4	31.4
Eastern Buildin Parking Lot 2	-	7.3	5.1	7.3	5.1
Transformer	-	-0.7	-0.7	-0.7	-0.7
Transformer1	-	-0.8	-0.8	-0.8	-0.8
Transformer21	-	-0.8	-0.8	-0.8	-0.8
Transformer22	-	-1.0	-1.0	-1.0	-1.0
Transformer23	-	-1.1	-1.1	-1.1	-1.1
Transformer24	-	-0.9	-0.9	-0.9	-0.9
Transformer25	-	-0.3	-0.3	-1.0	-1.0
Transformer26	-	0.2	0.2	-1.1	-1.1
Transformer27	-	2.8	2.8	-0.5	-0.5
Transformer28	-	2.2	2.2	-0.3	-0.3
Transformer29	-	21.5	21.5	9.4	9.4
Transformer30	-	1.7	1.7	-1.0	-1.0
Western Building Parking Lot 1	-	8.7	6.5	8.7	6.5
North Property Line Rec 2 Central	1.Fl	49.8	49.2	48.5	47.6
1	-	41.3	35.3	41.3	35.3
2	-	34.2	28.2	34.2	28.2
Cooling Tower17	-	33.8	33.8	33.7	33.7
Cooling Tower18	-	33.1	33.1	33.0	33.0
Cooling Tower19	-	32.4	32.4	32.3	32.3
Cooling Tower20	-	31.8	31.8	31.7	31.7
Cooling Tower21	-	31.2	31.2	31.1	31.1
Cooling Tower22	-	30.6	30.6	30.5	30.5
Cooling Tower27	-	32.0	32.0	32.0	32.0
Cooling Tower28	-	31.8	31.8	31.8	31.8
Cooling Tower29	-	31.5	31.5	31.5	31.5
Cooling Tower30	-	35.7	35.7	35.5	35.5

Cooling Tower30 - 31.5 31.5 31.5 31.5
Cooling Tower31 - 38.1 38.1 35.8 35.8
Cooling Tower31 - 31.4 31.4 31.4 31.4
Cooling Tower31 - 37.6 37.6 37.1 37.1
Cooling Tower32 - 45.3 45.3 41.4 41.4
Cooling Tower32 - 33.3 33.3 33.1 33.1
Cooling Tower32 - 32.2 32.2 32.2 32.2
Cooling Tower32 - 31.4 31.4 31.4 31.4
Cooling Tower33 - 32.4 32.4 32.3 32.3
Cooling Tower33 - 34.5 34.5 34.3 34.3
Eastern Buildin Parking Lot 2 - 23.6 21.4 23.6 21.4
Transformer - 15.9 15.9 15.9 15.9
Transformer1 - 16.7 16.7 16.7 16.7
Transformer21 - 22.4 22.4 22.4 22.4
Transformer22 - 21.0 21.0 21.0 21.0
Transformer23 - 18.3 18.3 18.3 18.3
Transformer24 - 15.1 15.1 15.1 15.1
Transformer25 - 17.3 17.3 17.3 17.3
Transformer26 - 5.0 5.0 5.0 5.0
Transformer27 - 4.4 4.4 4.4 4.4
Transformer28 - 6.2 6.2 6.2 6.2
Transformer29 - 3.2 3.2 3.2 3.2
Transformer30 - 2.6 2.6 2.6 2.6
Western Building Parking Lot 1 - 27.5 25.3 27.5 25.3
Northeast Property Line Rec 2 1.Fl 58.7 58.7 57.6 57.6
1 - 17.9 11.9 18.0 12.0
2 - 14.9 8.8 14.9 8.8
Cooling Tower17 - 29.8 29.8 29.8 29.8
Cooling Tower18 - 26.5 26.5 26.5 26.5
Cooling Tower19 - 26.1 26.1 26.1 26.1
Cooling Tower20 - 25.6 25.6 25.6 25.6
Cooling Tower21 - 25.2 25.2 25.2 25.2
Cooling Tower22 - 24.7 24.7 24.7 24.7
Cooling Tower27 - 48.3 48.3 48.3 48.3
Cooling Tower28 - 47.3 47.3 47.3 47.3
Cooling Tower29 - 46.5 46.5 46.5 46.5
Cooling Tower30 - 30.3 30.3 30.3 30.3
Cooling Tower30 - 45.3 45.3 45.3 45.3
Cooling Tower31 - 51.3 51.3 46.6 46.6
Cooling Tower31 - 44.5 44.5 44.5 44.5
Cooling Tower31 - 30.6 30.6 30.5 30.5
Cooling Tower32 - 33.2 33.2 31.9 31.9
Cooling Tower32 - 51.7 51.7 50.3 50.3
Cooling Tower32 - 49.4 49.4 49.4 49.4
Cooling Tower32 - 43.7 43.7 43.7 43.7
Cooling Tower33 - 50.5 50.5 49.0 49.0
Cooling Tower33 - 30.3 30.3 30.3 30.3
Eastern Buildin Parking Lot 2 - 4.1 1.9 4.1 1.9
Transformer - 4.7 4.7 3.1 3.1
Transformer1 - 4.1 4.1 4.1 4.1
Transformer21 - 3.2 3.2 3.2 3.2
Transformer22 - 3.0 3.0 3.0 3.0
Transformer23 - 2.9 2.9 2.9 2.9
Transformer24 - 4.3 4.3 2.9 2.9

Transformer25 - 3.2 3.2 3.2 3.2
Transformer26 - 2.8 2.8 2.8 2.8
Transformer27 - 4.6 4.6 4.6 4.6
Transformer28 - 5.1 5.1 5.1 5.1
Transformer29 - 17.7 17.7 17.7 17.7
Transformer30 - 16.8 16.8 16.8 16.8
Western Building Parking Lot 1 - 7.3 5.1 7.2 5.0
Property BBCC 1.Fl 47.9 47.9 48.0 48.0
1 - 3.7 -2.3 3.7 -2.3
2 - -11.6 -17.6 -11.6 -17.6
Cooling Tower17 - 21.8 21.8 21.8 21.8
Cooling Tower18 - 22.0 22.0 22.0 22.0
Cooling Tower19 - 21.9 21.9 21.9 21.9
Cooling Tower20 - 21.6 21.6 21.6 21.6
Cooling Tower21 - 21.7 21.7 21.7 21.7
Cooling Tower22 - 21.5 21.5 21.5 21.5
Cooling Tower27 - 38.6 38.6 38.6 38.6
Cooling Tower28 - 38.6 38.6 38.6 38.6
Cooling Tower29 - 38.6 38.6 38.6 38.6
Cooling Tower30 - 22.4 22.4 22.4 22.4
Cooling Tower30 - 38.5 38.5 38.5 38.5
Cooling Tower31 - 34.1 34.1 36.3 36.3
Cooling Tower31 - 38.5 38.5 38.5 38.5
Cooling Tower31 - 22.6 22.6 22.6 22.6
Cooling Tower32 - 20.2 20.2 20.2 20.2
Cooling Tower32 - 36.5 36.5 36.5 36.5
Cooling Tower32 - 36.9 36.9 36.9 36.9
Cooling Tower32 - 38.6 38.6 38.6 38.6
Cooling Tower33 - 36.7 36.7 36.7 36.7
Cooling Tower33 - 22.3 22.3 22.3 22.3
Eastern Buildin Parking Lot 2 - -9.2 -11.5 -9.2 -11.5
Transformer - 8.6 8.6 8.6 8.6
Transformer1 - 8.3 8.3 8.3 8.3
Transformer21 - 8.0 8.0 8.0 8.0
Transformer22 - 7.7 7.7 7.7 7.7
Transformer23 - 7.5 7.5 7.5 7.5
Transformer24 - 8.3 8.3 8.3 8.3
Transformer25 - 8.1 8.1 8.1 8.1
Transformer26 - 4.0 4.0 4.0 4.0
Transformer27 - 8.2 8.2 8.2 8.2
Transformer28 - 8.9 8.9 8.9 8.9
Transformer29 - 8.1 8.1 8.1 8.1
Transformer30 - 6.8 6.8 6.8 6.8
Western Building Parking Lot 1 - -3.1 -5.3 -3.1 -5.3
Property Line Rec 3 West 1 1.Fl 65.6 65.6 55.0 55.0
1 - 20.9 14.9 20.9 14.9
2 - 21.0 15.0 21.0 15.0
Cooling Tower17 - 53.9 53.9 43.8 43.8
Cooling Tower18 - 52.4 52.4 43.0 43.0
Cooling Tower19 - 51.3 51.3 42.1 42.1
Cooling Tower20 - 47.4 47.4 37.5 37.5
Cooling Tower21 - 46.4 46.4 36.6 36.6
Cooling Tower22 - 45.6 45.6 35.9 35.9
Cooling Tower27 - 27.8 27.8 27.8 27.8

Cooling Tower28 - 27.0 27.0 27.0 27.0
Cooling Tower29 - 26.2 26.2 26.2 26.2
Cooling Tower30 - 57.6 57.6 47.1 47.1
Cooling Tower30 - 25.7 25.7 25.7 25.7
Cooling Tower31 - 33.5 33.5 31.6 31.6
Cooling Tower31 - 25.1 25.1 25.1 25.1
Cooling Tower31 - 58.1 58.1 47.7 47.7
Cooling Tower32 - 61.2 61.2 49.3 49.3
Cooling Tower32 - 30.8 30.8 30.6 30.6
Cooling Tower32 - 30.4 30.4 30.4 30.4
Cooling Tower32 - 24.6 24.6 24.6 24.6
Cooling Tower33 - 30.6 30.6 30.5 30.5
Cooling Tower33 - 55.6 55.6 45.6 45.6
Eastern Buildin Parking Lot 2 - 13.3 11.0 13.3 11.0
Transformer - 3.8 3.8 0.5 0.5
Transformer1 - 2.1 2.1 0.1 0.1
Transformer21 - 0.0 0.0 -0.1 -0.1
Transformer22 - -0.2 -0.2 -0.7 -0.7
Transformer23 - 0.3 0.3 -0.7 -0.7
Transformer24 - 4.3 4.3 0.2 0.2
Transformer25 - 0.2 0.2 0.2 0.2
Transformer26 - -1.1 -1.1 -1.1 -1.1
Transformer27 - -1.9 -1.9 -1.9 -1.9
Transformer28 - 0.8 0.8 0.8 0.8
Transformer29 - -2.1 -2.1 -2.1 -2.1
Transformer30 - -2.5 -2.5 -2.5 -2.5
Western Building Parking Lot 1 - 9.3 7.0 9.3 7.0
Property Line Rec West 2 1.Fl 63.1 63.1 59.2 59.2
1 - 19.5 13.5 19.5 13.5
2 - 17.5 11.5 17.5 11.5
Cooling Tower17 - 52.0 52.0 50.0 50.0
Cooling Tower18 - 50.3 50.3 48.5 48.5
Cooling Tower19 - 47.0 47.0 45.2 45.2
Cooling Tower20 - 46.1 46.1 44.3 44.3
Cooling Tower21 - 45.2 45.2 45.2 45.2
Cooling Tower22 - 44.4 44.4 44.4 44.4
Cooling Tower27 - 30.1 30.1 30.1 30.1
Cooling Tower28 - 27.2 27.2 27.2 27.2
Cooling Tower29 - 26.4 26.4 26.4 26.4
Cooling Tower30 - 55.0 55.0 53.2 53.2
Cooling Tower30 - 26.0 26.0 26.0 26.0
Cooling Tower31 - 33.2 33.2 31.6 31.6
Cooling Tower31 - 25.4 25.4 25.4 25.4
Cooling Tower31 - 57.0 57.0 51.0 51.0
Cooling Tower32 - 57.6 57.6 47.8 47.8
Cooling Tower32 - 30.3 30.3 30.2 30.2
Cooling Tower32 - 30.0 30.0 30.0 30.0
Cooling Tower32 - 24.9 24.9 24.9 24.9
Cooling Tower33 - 30.2 30.2 30.1 30.1
Cooling Tower33 - 53.3 53.3 51.3 51.3
Eastern Buildin Parking Lot 2 - 12.7 10.5 12.7 10.5
Transformer - 5.1 5.1 0.8 0.8
Transformer1 - 3.2 3.2 0.3 0.3
Transformer21 - 1.0 1.0 0.1 0.1

Transformer22 - 0.6 0.6 -0.6 -0.6
Transformer23 - 1.0 1.0 -0.7 -0.7
Transformer24 - 5.5 5.5 0.4 0.4
Transformer25 - 0.8 0.8 0.8 0.8
Transformer26 - -0.8 -0.8 -0.8 -0.8
Transformer27 - -1.6 -1.6 -1.6 -1.6
Transformer28 - 1.6 1.6 1.6 1.6
Transformer29 - -1.9 -1.9 -1.9 -1.9
Transformer30 - -2.3 -2.3 -2.3 -2.3
Western Building Parking Lot 1 - 6.8 4.6 6.8 4.6
Property Line Rec West 3 1.Fl 59.6 59.6 59.3 59.3
1 - 15.0 9.0 15.3 9.2
2 - 16.1 10.1 16.1 10.1
Cooling Tower17 - 49.3 49.3 49.3 49.3
Cooling Tower18 - 46.0 46.0 46.0 46.0
Cooling Tower19 - 45.1 45.1 45.1 45.1
Cooling Tower20 - 44.2 44.2 44.2 44.2
Cooling Tower21 - 43.4 43.4 43.4 43.4
Cooling Tower22 - 42.7 42.7 42.7 42.7
Cooling Tower27 - 26.2 26.2 26.2 26.2
Cooling Tower28 - 25.4 25.4 25.4 25.4
Cooling Tower29 - 25.2 25.2 25.1 25.1
Cooling Tower30 - 51.6 51.6 51.6 51.6
Cooling Tower30 - 25.3 25.3 24.7 24.7
Cooling Tower31 - 31.0 31.0 30.1 30.1
Cooling Tower31 - 25.2 25.2 25.2 25.2
Cooling Tower31 - 52.8 52.8 52.8 52.8
Cooling Tower32 - 53.8 53.8 52.7 52.7
Cooling Tower32 - 29.9 29.9 29.9 29.9
Cooling Tower32 - 27.1 27.1 27.1 27.1
Cooling Tower32 - 25.2 25.2 25.2 25.2
Cooling Tower33 - 28.3 28.3 28.2 28.2
Cooling Tower33 - 50.4 50.4 50.4 50.4
Eastern Buildin Parking Lot 2 - 8.8 6.6 8.8 6.6
Transformer - 4.9 4.9 4.9 4.9
Transformer1 - 3.4 3.4 3.4 3.4
Transformer21 - 3.6 3.6 3.6 3.6
Transformer22 - 3.6 3.6 3.6 3.6
Transformer23 - 3.8 3.8 3.8 3.8
Transformer24 - 4.4 4.4 4.4 4.4
Transformer25 - 5.2 5.2 5.2 5.2
Transformer26 - 4.9 4.9 4.9 4.9
Transformer27 - 2.1 2.1 2.1 2.1
Transformer28 - 5.8 5.8 5.8 5.8
Transformer29 - -0.1 -0.1 -0.1 -0.1
Transformer30 - -0.5 -0.5 -0.5 -0.5
Western Building Parking Lot 1 - 3.2 1.0 3.2 1.0
Residential Rec 1.Fl 50.9 50.9 48.4 48.4
1 - 18.3 12.3 18.2 12.2
2 - 20.0 14.0 20.0 14.0
Cooling Tower17 - 34.7 34.7 34.5 34.5
Cooling Tower18 - 34.8 34.8 34.7 34.7
Cooling Tower19 - 34.5 34.5 34.5 34.5
Cooling Tower20 - 34.1 34.1 34.1 34.1

Cooling Tower21	-	33.9	33.9	33.9	33.9
Cooling Tower22	-	33.4	33.4	33.4	33.4
Cooling Tower27	-	34.9	34.9	34.9	34.9
Cooling Tower28	-	34.4	34.4	34.4	34.4
Cooling Tower29	-	33.8	33.8	33.8	33.8
Cooling Tower30	-	36.2	36.2	35.7	35.7
Cooling Tower30	-	33.7	33.7	33.7	33.7
Cooling Tower31	-	44.8	44.8	38.0	38.0
Cooling Tower31	-	33.4	33.4	33.4	33.4
Cooling Tower31	-	39.9	39.9	37.5	37.5
Cooling Tower32	-	44.2	44.2	37.8	37.8
Cooling Tower32	-	40.2	40.2	37.6	37.6
Cooling Tower32	-	35.3	35.3	35.3	35.3
Cooling Tower32	-	33.2	33.2	33.2	33.2
Cooling Tower33	-	36.3	36.3	35.7	35.7
Cooling Tower33	-	35.5	35.5	35.2	35.2
Eastern Buildin Parking Lot 2	-	16.2	14.0	16.2	14.0
Transformer	-	11.2	11.2	11.2	11.2
Transformer1	-	13.5	13.5	13.5	13.5
Transformer21	-	14.5	14.5	14.5	14.5
Transformer22	-	14.3	14.3	14.3	14.3
Transformer23	-	14.1	14.1	14.1	14.1
Transformer24	-	9.5	9.5	9.5	9.5
Transformer25	-	4.6	4.6	4.6	4.6
Transformer26	-	2.4	2.4	2.4	2.4
Transformer27	-	1.7	1.7	1.7	1.7
Transformer28	-	3.7	3.7	3.7	3.7
Transformer29	-	0.9	0.9	0.9	0.9
Transformer30	-	-0.2	-0.2	-0.2	-0.2
Western Building Parking Lot 1	-	14.1	11.9	14.1	11.9
Residential Rec	2.Fl	52.0	52.0	49.0	49.0
1	-	20.2	14.2	20.1	14.1
2	-	21.6	15.6	21.6	15.6
Cooling Tower17	-	35.4	35.4	35.1	35.1
Cooling Tower18	-	35.4	35.4	35.4	35.4
Cooling Tower19	-	35.2	35.2	35.2	35.2
Cooling Tower20	-	34.9	34.9	34.9	34.9
Cooling Tower21	-	34.7	34.7	34.7	34.7
Cooling Tower22	-	34.2	34.2	34.2	34.2
Cooling Tower27	-	35.7	35.7	35.7	35.7
Cooling Tower28	-	35.3	35.3	35.3	35.3
Cooling Tower29	-	34.7	34.7	34.7	34.7
Cooling Tower30	-	36.9	36.9	36.2	36.2
Cooling Tower30	-	34.5	34.5	34.5	34.5
Cooling Tower31	-	46.2	46.2	38.2	38.2
Cooling Tower31	-	34.2	34.2	34.2	34.2
Cooling Tower31	-	40.9	40.9	37.9	37.9
Cooling Tower32	-	45.7	45.7	38.1	38.1
Cooling Tower32	-	41.2	41.2	38.0	38.0
Cooling Tower32	-	36.1	36.1	36.1	36.1
Cooling Tower32	-	34.1	34.1	34.1	34.1
Cooling Tower33	-	37.0	37.0	36.3	36.3
Cooling Tower33	-	36.2	36.2	35.8	35.8
Eastern Buildin Parking Lot 2	-	16.1	13.9	16.1	13.9

Transformer - 11.8 11.8 11.8 11.8
Transformer1 - 13.7 13.7 13.7 13.7
Transformer21 - 14.6 14.6 14.6 14.6
Transformer22 - 14.4 14.4 14.4 14.4
Transformer23 - 14.2 14.2 14.2 14.2
Transformer24 - 10.2 10.2 10.2 10.2
Transformer25 - 5.0 5.0 5.0 5.0
Transformer26 - 2.8 2.8 2.8 2.8
Transformer27 - 2.2 2.2 2.2 2.2
Transformer28 - 4.4 4.4 4.4 4.4
Transformer29 - 1.4 1.4 1.4 1.4
Transformer30 - 0.2 0.2 0.2 0.2
Western Building Parking Lot 1 - 15.5 13.3 15.5 13.3
Residential Rec 2 1.Fl 51.1 51.1 49.3 49.2
1 - 16.8 10.8 16.8 10.8
2 - 17.4 11.4 17.4 11.4
Cooling Tower17 - 40.1 40.1 38.5 38.5
Cooling Tower18 - 39.5 39.5 38.0 38.0
Cooling Tower19 - 38.9 38.9 37.5 37.5
Cooling Tower20 - 37.8 37.8 36.9 36.9
Cooling Tower21 - 37.1 37.1 36.4 36.4
Cooling Tower22 - 36.5 36.5 35.9 35.9
Cooling Tower27 - 32.5 32.5 32.5 32.5
Cooling Tower28 - 32.2 32.2 32.2 32.2
Cooling Tower29 - 31.6 31.6 31.6 31.6
Cooling Tower30 - 41.4 41.4 39.6 39.6
Cooling Tower30 - 31.9 31.9 31.9 31.9
Cooling Tower31 - 39.2 39.2 35.9 35.9
Cooling Tower31 - 31.8 31.8 31.8 31.8
Cooling Tower31 - 42.1 42.1 39.7 39.7
Cooling Tower32 - 42.8 42.8 37.8 37.8
Cooling Tower32 - 34.1 34.1 33.7 33.7
Cooling Tower32 - 32.7 32.7 32.7 32.7
Cooling Tower32 - 31.9 31.9 31.9 31.9
Cooling Tower33 - 33.1 33.1 33.0 33.0
Cooling Tower33 - 40.7 40.7 39.0 39.0
Eastern Buildin Parking Lot 2 - 12.7 10.5 12.7 10.5
Transformer - 8.9 8.9 8.9 8.9
Transformer1 - 6.4 6.4 6.4 6.4
Transformer21 - 12.0 12.0 12.0 12.0
Transformer22 - 8.7 8.7 8.7 8.7
Transformer23 - 3.1 3.1 3.1 3.1
Transformer24 - 7.8 7.8 7.8 7.8
Transformer25 - 13.0 13.0 13.0 13.0
Transformer26 - 3.8 3.8 3.8 3.8
Transformer27 - 3.1 3.1 3.1 3.1
Transformer28 - 5.3 5.3 5.3 5.3
Transformer29 - 1.6 1.6 1.6 1.6
Transformer30 - 0.7 0.7 0.7 0.7
Western Building Parking Lot 1 - 11.0 8.8 11.0 8.8
Residential Rec 2 2.Fl 53.9 53.9 50.2 50.2
1 - 18.9 12.9 18.9 12.9
2 - 19.6 13.5 19.6 13.5
Cooling Tower17 - 43.4 43.4 39.7 39.7

Cooling Tower18 - 42.8 42.8 39.1 39.1
Cooling Tower19 - 42.2 42.2 38.6 38.6
Cooling Tower20 - 40.4 40.4 38.1 38.1
Cooling Tower21 - 39.7 39.7 37.6 37.6
Cooling Tower22 - 38.8 38.8 37.2 37.2
Cooling Tower27 - 33.0 33.0 33.0 33.0
Cooling Tower28 - 32.7 32.7 32.7 32.7
Cooling Tower29 - 32.2 32.2 32.2 32.2
Cooling Tower30 - 44.6 44.6 40.7 40.7
Cooling Tower30 - 32.5 32.5 32.5 32.5
Cooling Tower31 - 42.5 42.5 36.2 36.2
Cooling Tower31 - 32.4 32.4 32.4 32.4
Cooling Tower31 - 45.3 45.3 40.7 40.7
Cooling Tower32 - 45.9 45.9 38.1 38.1
Cooling Tower32 - 34.7 34.7 34.1 34.1
Cooling Tower32 - 33.2 33.2 33.2 33.2
Cooling Tower32 - 32.5 32.5 32.5 32.5
Cooling Tower33 - 33.6 33.6 33.4 33.4
Cooling Tower33 - 43.9 43.9 40.2 40.2
Eastern Buildin Parking Lot 2 - 12.8 10.6 12.8 10.6
Transformer - 9.9 9.9 9.9 9.9
Transformer1 - 7.3 7.3 7.3 7.3
Transformer21 - 12.7 12.7 12.7 12.7
Transformer22 - 9.7 9.7 9.7 9.7
Transformer23 - 3.7 3.7 3.7 3.7
Transformer24 - 8.8 8.8 8.8 8.8
Transformer25 - 13.0 13.0 13.0 13.0
Transformer26 - 4.1 4.1 4.1 4.1
Transformer27 - 3.5 3.5 3.5 3.5
Transformer28 - 5.8 5.8 5.8 5.8
Transformer29 - 2.0 2.0 2.0 2.0
Transformer30 - 1.1 1.1 1.1 1.1
Western Building Parking Lot 1 - 11.8 9.6 11.8 9.6
South Property Line Rec 1.Fl 52.2 52.1 52.2 52.1
1 - 34.5 28.5 34.5 28.5
2 - 29.4 23.4 29.4 23.4
Cooling Tower17 - 33.3 33.3 33.3 33.3
Cooling Tower18 - 34.2 34.2 34.2 34.2
Cooling Tower19 - 34.9 34.9 34.9 34.9
Cooling Tower20 - 35.4 35.4 35.4 35.4
Cooling Tower21 - 36.3 36.3 36.3 36.3
Cooling Tower22 - 37.9 37.9 37.9 37.9
Cooling Tower27 - 32.9 32.9 32.9 32.9
Cooling Tower28 - 33.7 33.7 33.7 33.7
Cooling Tower29 - 34.1 34.1 34.1 34.1
Cooling Tower30 - 32.6 32.6 32.6 32.6
Cooling Tower30 - 35.2 35.2 35.2 35.2
Cooling Tower31 - 31.5 31.5 31.5 31.5
Cooling Tower31 - 36.7 36.7 36.7 36.7
Cooling Tower31 - 32.6 32.6 32.6 32.6
Cooling Tower32 - 32.5 32.5 32.5 32.5
Cooling Tower32 - 31.6 31.6 31.6 31.6
Cooling Tower32 - 32.1 32.1 32.1 32.1
Cooling Tower32 - 48.4 48.4 48.4 48.4

Cooling Tower33 - 31.7 31.7 31.7 31.7
Cooling Tower33 - 33.1 33.1 33.1 33.1
Eastern Buildin Parking Lot 2- 20.7 18.5 20.7 18.5
Transformer - 33.1 33.1 33.1 33.1
Transformer1 - 35.0 35.0 35.0 35.0
Transformer21- 42.4 42.4 42.4 42.4
Transformer22- 39.7 39.7 39.7 39.7
Transformer23- 36.6 36.6 36.6 36.6
Transformer24- 31.0 31.0 31.0 31.0
Transformer25- 32.1 32.1 32.1 32.1
Transformer26- 30.1 30.1 30.1 30.1
Transformer27- 28.2 28.2 28.2 28.2
Transformer28- 29.7 29.7 29.7 29.7
Transformer29- 26.6 26.6 26.6 26.6
Transformer30- 26.5 26.5 26.5 26.5
Western Building Parking Lot 1 - 22.6 20.4 22.6 20.4
West Property Valley 1 1.Fl 53.0 53.0 53.0 53.0
1 - 2.9 -3.2 2.9 -3.1
2 - 4.7 -1.3 4.7 -1.3
Cooling Tower17 - 43.6 43.6 43.6 43.6
Cooling Tower18 - 43.4 43.4 43.4 43.4
Cooling Tower19 - 43.2 43.2 43.2 43.2
Cooling Tower20 - 40.9 40.9 40.9 40.9
Cooling Tower21 - 40.7 40.7 40.7 40.7
Cooling Tower22 - 40.4 40.4 40.4 40.4
Cooling Tower27 - 26.6 26.6 26.6 26.6
Cooling Tower28 - 26.6 26.6 26.6 26.6
Cooling Tower29 - 26.2 26.2 26.2 26.2
Cooling Tower30 - 43.8 43.8 43.8 43.8
Cooling Tower30 - 26.6 26.6 26.6 26.6
Cooling Tower31 - 28.6 28.6 27.8 27.8
Cooling Tower31 - 26.5 26.5 26.5 26.5
Cooling Tower31 - 43.9 43.9 43.9 43.9
Cooling Tower32 - 43.9 43.9 43.9 43.9
Cooling Tower32 - 26.6 26.6 26.6 26.6
Cooling Tower32 - 26.5 26.5 26.5 26.5
Cooling Tower32 - 26.6 26.6 26.6 26.6
Cooling Tower33 - 26.5 26.5 26.5 26.5
Cooling Tower33 - 43.7 43.7 43.7 43.7
Eastern Buildin Parking Lot 2- 4.2 2.0 4.2 2.0
Transformer - 12.6 12.6 12.6 12.6
Transformer1 - 12.3 12.3 12.3 12.3
Transformer21- 8.8 8.8 8.8 8.8
Transformer22- 11.7 11.7 11.7 11.7
Transformer23- 12.1 12.1 12.1 12.1
Transformer24- 12.7 12.7 12.7 12.7
Transformer25- 8.9 8.9 8.9 8.9
Transformer26- 8.8 8.8 8.8 8.8
Transformer27- 9.3 9.3 9.3 9.3
Transformer28- 9.5 9.5 9.5 9.5
Transformer29- 9.1 9.1 9.1 9.1
Transformer30- 6.2 6.2 6.2 6.2
Western Building Parking Lot 1 - -5.7 -8.0 -5.7 -8.0

No.	Receiver name	Building side	Limit Floor	Day	Night	Level w/o NP Day	Level w/o NP Night	Level w NP Day	Level w NP Night	Difference Day	Difference Night	Conflict Day	Conflict Night
				dB(A)		dB(A)		dB(A)		dB			
1	North Property Line Rec 1	East	-	1.Fl	65	60	62.5	62.5	53.4	53.4	-9.1	-9.1	-	-
2	North Property Line Rec 2	Central	-	1.Fl	65	60	49.8	49.2	48.5	47.6	-1.3	-1.5	-	-
3	Northeast Property Line Rec 2		-	1.Fl	65	60	58.7	58.7	57.6	57.6	-1.1	-1.1	-	-
4	Property BBCC	-	1.Fl	65	60	47.9	47.9	48.0	48.0	0.1	0.1	-	-		
5	Property Line Rec 3	West	1	-	1.Fl	65	60	65.6	65.6	55.0	55.0	-10.6	-10.6	-	-
6	Property Line Rec	West	2	-	1.Fl	65	60	63.1	63.1	59.2	59.2	-3.9	-3.9	-	-
7	Property Line Rec	West	3	-	1.Fl	65	60	59.6	59.6	59.3	59.3	-0.3	-0.3	-	-
8	Residential Rec	-	1.Fl	65	60	50.9	50.9	48.4	48.4	-2.5	-2.5	-	-		
8	Residential Rec	-	2.Fl	65	60	52.0	52.0	49.0	49.0	-3.1	-3.1	-	-		
9	Residential Rec 2	-	1.Fl	65	60	51.1	51.1	49.3	49.2	-1.8	-1.8	-	-		
9	Residential Rec 2	-	2.Fl	65	60	53.9	53.9	50.2	50.2	-3.7	-3.7	-	-		
10	South Property Line Rec		-	1.Fl	65	60	52.2	52.1	52.2	52.1	0.0	0.0	-	-	
11	West Property Valley 1		-	1.Fl	65	60	53.0	53.0	53.0	53.0	0.0	0.0	-	-	