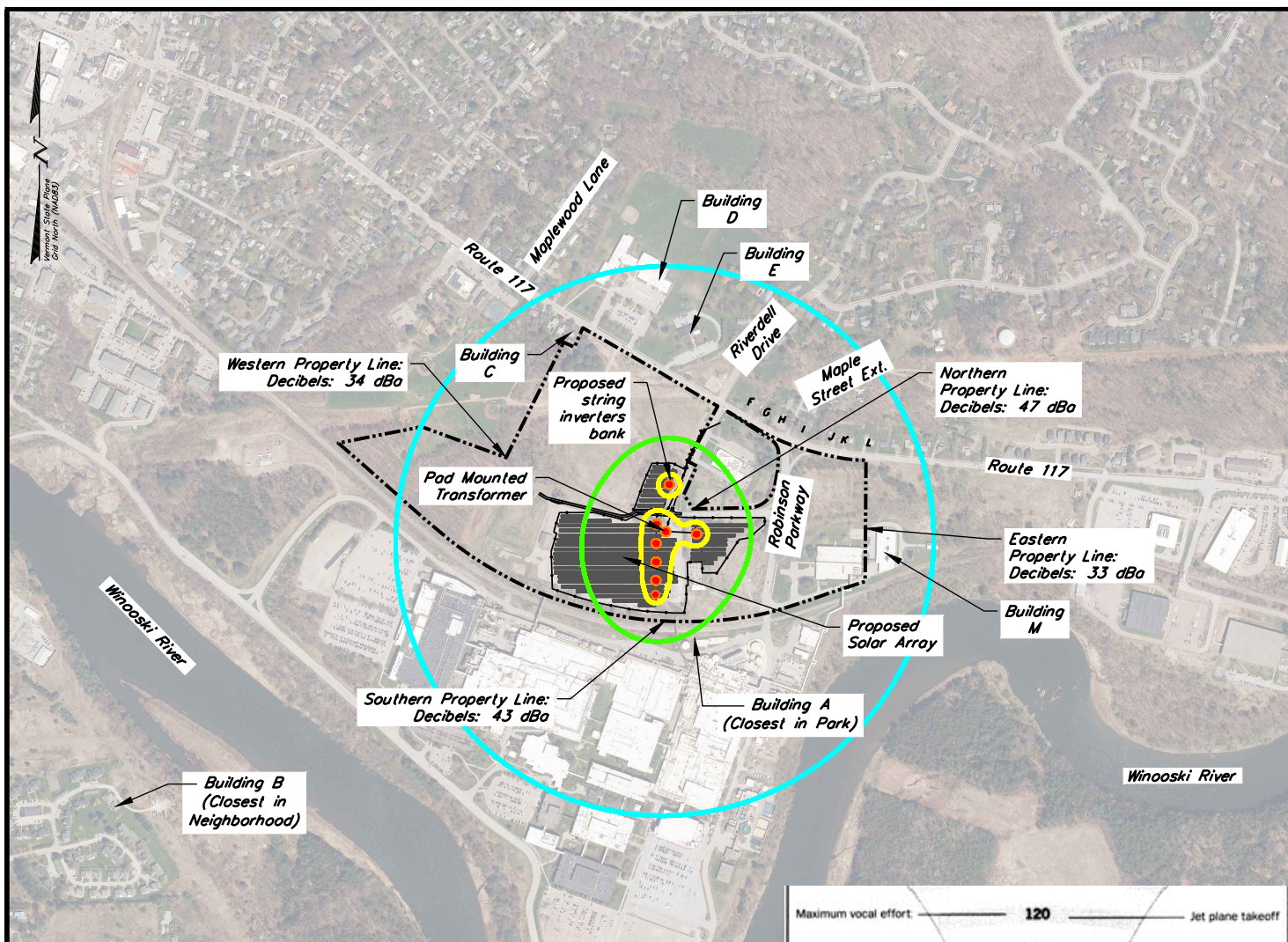


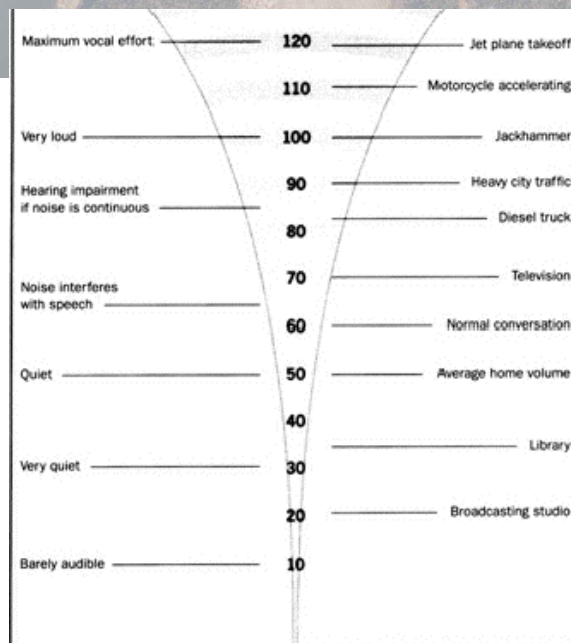
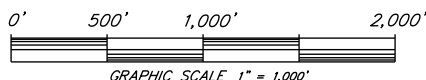


Notes:

1. Chint performed an updated sound study which specifies that the CPS SCH275KTL String Inverter creates less than 72 dBA at a distance of 1 meter from the unit, the calculated sound level at 3 meters is 62.5 dBA. Sound levels for the Cooper 4,200 kVA pad mounted transformer have sound levels of 65 dBA, assuming sound at 3 meters to be conservative.
2. Other decibel ranges were derived using the following distance damping equation [$L2 = L1 - 20 \cdot \log(d1/d2)$]. This damping equation was the only factor considered in decibel range attenuation estimates. Elevation, ambient noise, vegetation, proposed solar array and other structures which would further effect the attenuation of sound levels were not considered in this study. Sound levels depicted are for all (13) Chint CPS SCH275KTL string inverters and (1) 4,200 kVA Cooper pad mounted transformers for the solar array operating simultaneously at maximum noise level. See additional calculation information on Sound 2, Sound 3 and Sound 4.
3. Plans Sound 3 & Sound 4 run the calculations for nighttime operation. Site inverters make negligible noise when not loaded with power. For this calculation we assume they will make no noise. The site transformers do still make noise at night, to be conservative the nighttime calculation models the transformers running at maximum noise.
4. Sound levels reported do not account for any background noise. Local background noise may exceed sound created by project equipment.

Legend:

- +70 dBA range
- 60 dBA range
- 50 dBA range
- 40 dBA range
- 30 dBA range



Decibel Breakdown Compared to Everyday Noises

FULL OPERATION DAYTIME SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

DRAWN BY:

GTD

CHECKED BY:

GTD

Project: ER Global Foundries, Project A

Location: Robinson Parkway, Essex Junction, VT

Source Data:

Chart found at

www.soundinstitute.com/article_detail.cfm/ID/95

Revision Date: 08/29/24

Plan ID:

Sound 1

Scale:

1" = 1,000'

Date:

06/13/24

ER Global Foundries, Project A - Robinson Parkway, Essex Junction, Vermont - DAYTIME

Sound Source #	Easting (feet)	Northing (feet)	Noise Level (dBa @ 3 Meters)
Chint CPS SCH-275-KTL (13)	See Plan	See Plan	62.5
Cooper 4,200 kVA Pad Mounted Trans. (1)	See Plan	See Plan	65.0
Formulas used for Calculations			
Adding of Noise Levels			
$L_T = 10 \times \log_{10} (10^{L_1/10} + 10^{L_2/10} + \dots + 10^{L_n/10})$			
Where:			
L_T = Total noise level of all equipment			
L_n = Noise level for each piece of equipment			
Noise Level Changes with Distance			
$L_b = L_a - 20 \times \log_{10} (D_b/D_a)$			
Where:			
L_b = Noise level at new distance			
L_a = Noise level at original distance			
D_b = New distance from source of noise			
D_a = Original distance from source of noise			
Equipment:	1 Meter	3 Meter	
Chint CPS SCH 275 KTL - String Inverters	72.000	62.458	
Cooper 4,200 kVA Pad Mounted Transformer	-	65.000	
Points of Interest	Easting (feet)	Northing (feet)	Estimated Noise Level Based on Project Components (Sound Pressure, dBa)
Northern Property Line	1,484,506.25	723,363.73	47
Eastern Property Line	1,485,526.29	723,245.80	33
Southern Property Line	1,484,313.30	722,701.81	43
Western Property Line	1,483,399.67	723,667.56	34
Business Building A	1,484,504.43	722,605.67	39
Residential Building B	1,481,138.81	721,613.07	23
Residential Building C	1,483,796.96	724,371.27	32
School Building D	1,484,344.54	724,623.74	31
Business Building E	1,484,530.43	724,342.79	33
Residential Building F <i>Closest to Project</i>	1,484,843.82	723,950.20	35
Residential Building G	1,484,933.71	723,908.43	35
Residential Building H	1,485,031.86	723,865.17	34
Residential Building I	1,485,168.01	723,821.91	34
Residential Building J	1,485,301.19	723,777.54	33
Residential Building K	1,485,393.49	723,755.94	33
Residential Building L	1,485,538.82	723,734.68	32
Business Building M	1,485,588.21	723,182.61	32

Chint specifies that the CPS SCH275KTL String Inverter creates less than 72 dBa at a distance of 1 meter from the unit, the calculated sound level at 3 meters is 62.5 dBa.

Sound levels for the 4,200 kVA pad mounted transformers have sound levels of 65 dBA, assuming sound at 3 meters to be conservative.

Points of Interest were chosen based on close proximity to the proposed project.



FULL OPERATION DAYTIME
SOUND LEVEL PLAN

Basic Sound Level Estimates for
Noise Produced by Project Equipment

DRAWN BY: GTD

CHECKED BY: GTD

Project: ER Global Foundries, Project A

Location: Robinson Parkway, Essex Junction, VT

Source Data:

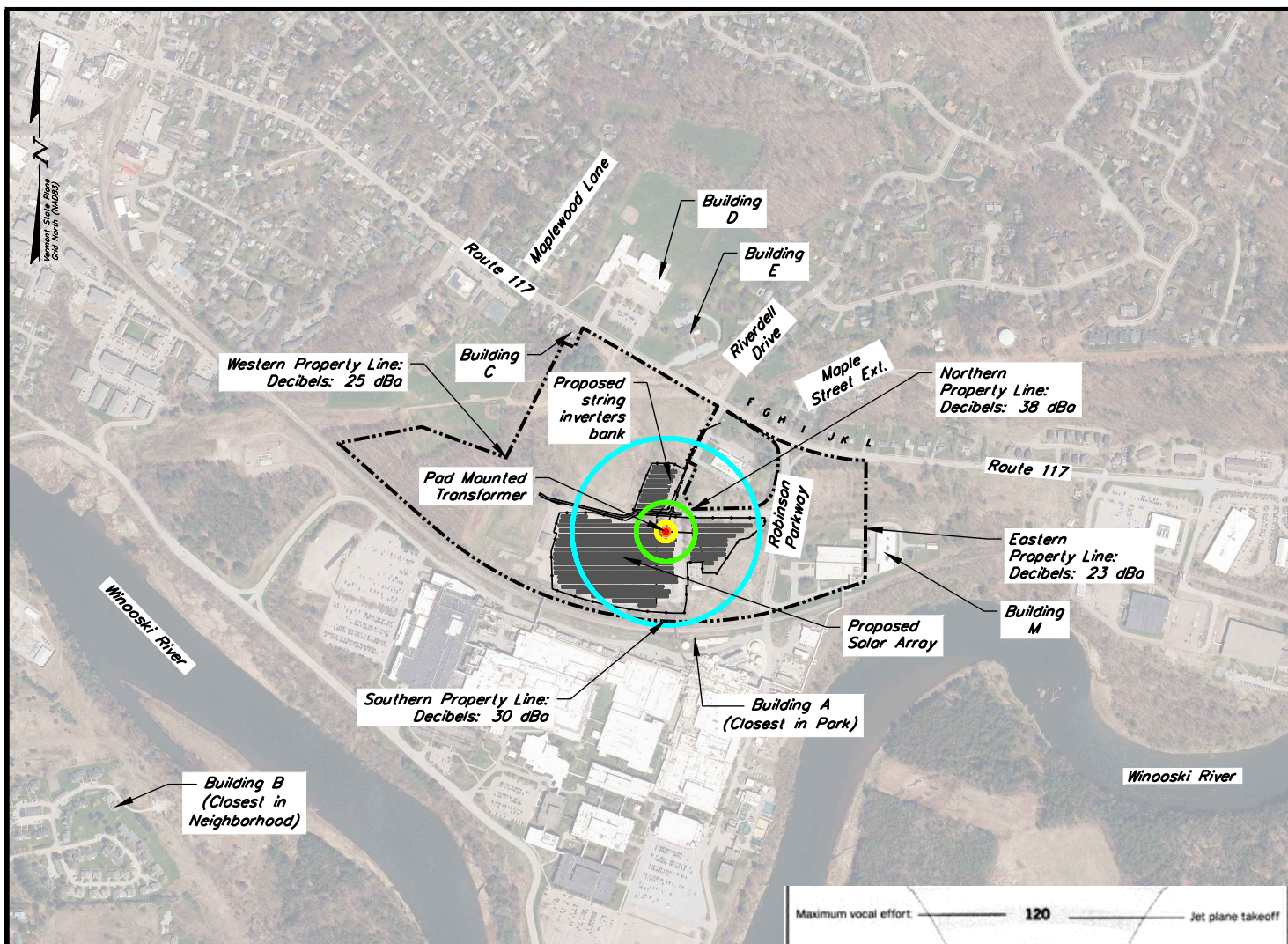
Revision Date: 08/29/24

Plan ID:

Sound 2

Scale:
N/A

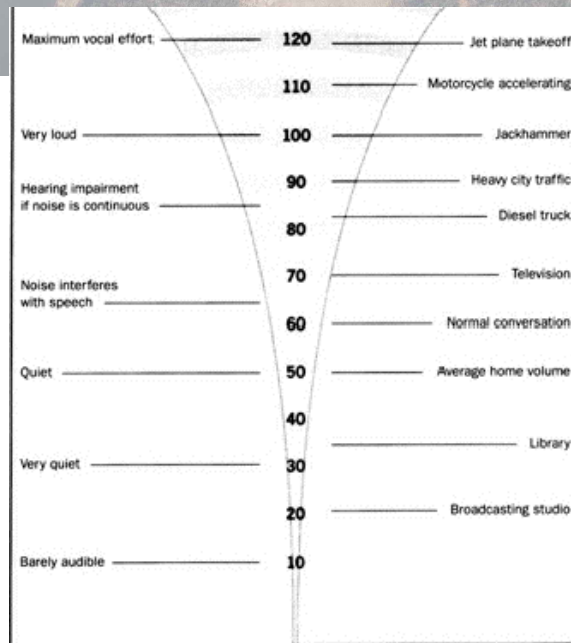
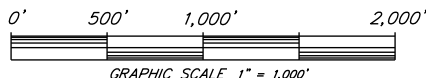
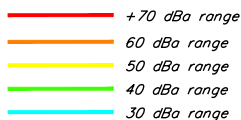
Date:
06/13/24



Notes:

1. Sound levels for the Cooper 4,200 kVA pad mounted transformer have sound levels of 65 dBA, assuming sound at 3 meters to be conservative.
2. Other decibel ranges were derived using the following distance damping equation $[L_2 = L_1 - 20 \log(d_1/d_2)]$. This damping equation was the only factor considered in decibel range attenuation estimates. Elevation, ambient noise, vegetation, proposed solar array and other structures which would further effect the attenuation of sound levels were not considered in this study. Sound levels depicted are for all (1) 4,200 kVA Cooper pad mounted transformers for the solar array operating simultaneously at maximum noise level.
3. Sound levels reported do not account for any background noise. Local background noise may exceed sound created by project equipment.

Legend:



Decibel Breakdown Compared to Everyday Noises

NIGHTTIME OPERATION SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

DRAWN BY:

GTD

CHECKED BY:

GTD

Project: ER Global Foundries, Project A

Location: Robinson Parkway, Essex Junction, VT

Source Data:

Chart found at
www.soundinstitute.com/article_detail.cfm/ID/95

Revision Date: 08/29/24

Plan ID:

Sound 3

Scale:

1" = 1,000'

Date:

06/13/24

ER Global Foundries, Project A - Robinson Parkway, Essex Junction, Vermont - NIGHTTIME

Sound Source #	Easting (feet)	Northing (feet)	Noise Level (dBA @ 3 Meters)
Cooper 4,200 kVA Pad Mounted Trans. (1)	See Plan	See Plan	65.0
Formulas used for Calculations			
Adding of Noise Levels			
$L_T = 10 \times \log_{10} (10^{L_1/10} + 10^{L_2/10} + \dots + 10^{L_n/10})$			
Where:			
L_T = Total noise level of all equipment			
L_n = Noise level for each piece of equipment			
Noise Level Changes with Distance			
$L_b = L_a - 20 \times \log_{10} (D_b/D_a)$			
Where:			
L_b = Noise level at new distance			
L_a = Noise level at original distance			
D_b = New distance from source of noise			
D_a = Original distance from source of noise			
Equipment:	1 Meter	3 Meter	
Cooper 4,200 kVA Pad Mounted Transformer	-	65.000	
Points of Interest	Easting (feet)	Northing (feet)	Estimated Noise Level Based on Project Components (Sound Pressure, dBA)
Northern Property Line	1,484,506.25	723,363.73	38
Eastern Property Line	1,485,526.29	723,245.80	23
Southern Property Line	1,484,313.30	722,701.81	30
Western Property Line	1,483,399.67	723,667.56	25
Business Building A	1,484,504.43	722,605.67	29
Residential Building B	1,481,138.81	721,613.07	14
Residential Building C	1,483,796.96	724,371.27	23
School Building D	1,484,344.54	724,623.74	22
Business Building E	1,484,530.43	724,342.79	24
Residential Building F <i>Closest to Project</i>	1,484,843.82	723,950.20	26
Residential Building G	1,484,933.71	723,908.43	26
Residential Building H	1,485,031.86	723,865.17	25
Residential Building I	1,485,168.01	723,821.91	25
Residential Building J	1,485,301.19	723,777.54	24
Residential Building K	1,485,393.49	723,755.94	23
Residential Building L	1,485,538.82	723,734.68	23
Business Building M	1,485,588.21	723,182.61	23

Sound levels for the 4,200 kVA pad mounted transformers have sound levels of 65 dBA, assuming sound at 3 meters to be conservative.

Points of Interest were chosen based on close proximity to the proposed project.

Site inverters make negligible noise when not loaded with power. For this calculation we assume they will make no noise.



NIGHTTIME OPERATION SOUND LEVEL PLAN		Project: ER Global Foundries, Project A	Plan ID:
Basic Sound Level Estimates for Noise Produced by Project Equipment		Location: Robinson Parkway, Essex Junction, VT	Sound 4
		Source Data:	
Drawn By: GTD	Checked By: GTD	Revision Date: 08/29/24	Scale: N/A
			Date: 06/13/24

From: Xiaofeng Xu <Xiaofeng.Xu@chintpower.com>
Sent: Friday, August 16, 2024 10:07 AM
To: Brian Baxter <brian.baxter@chintpower.com>; Zhehan Yi <Zhehan.yi@chintpower.com>
Subject: RE: CPS275kW dBA listing

Hi Brian,

Confirmed that the sound data is accurate, and the measurement was taken at 1 meter.

Thanks,
Xiaofeng

Chart that CPS provided in June:

Doug

Please see the updated table below.

I was informed there was a lower duty ratio on the fans per the previous data set that showed <65 dBA. Our firmware was updated and the duty ratio and therefore noise is now higher.

Table 6.6	Noise			
Measurement location	Environment noise(dB)	Inverter noise(dB)	Correction factor	Results (dB)
Front	49.6	69.3	0	69.3
Back	49.7	71.5	0	71.5
Left	49.7	70.7	0	70.7
Right	49.2	69.2	0	69.2
☐>80dB		☐<80dB		

Sorry for any confusion on the data but these values above are going to be more accurate. How will this affect your sound report?

Thanks
Brian

Three-phase pad-mounted PEAK™ transformer



General

Eaton's Cooper Power™ series PEAK™ transformers represent the next generation of transformer design, and with three distinct product offerings there is a PEAK transformer to fit your needs. The first PEAK transformer option is a 75 °C average winding rise (AWR) design that offers users a potentially smaller and lighter footprint than today's 65 °C AWR transformers. This design is ideal for applications with cost, weight, or dimensional constraints. The second PEAK transformer option is a 65/75 °C AWR design that offers users sustained overload capacity while maintaining IEEE Std C57.91™-2011 standard per unit life requirements. This design offers customers flexibility in transformer sizing by offering the ability to accommodate future load growth without oversizing relative to current load, or the ability to meet periods of peak demand without oversizing based on continuous load. The third PEAK transformer option is a 55/75 °C AWR design that provides up to 22% additional loading capacity when compared to traditional mineral oil-filled transformers.

With all PEAK product offerings utilizing thermally upgraded kraft paper and Envirotemp™ FR3™ dielectric fluid, PEAK transformers offer customers a solution that is fully compatible with the new IEEE® standard for transformers using high-temperature insulation systems, IEEE Std C57.154™-2012 standard. In addition, all PEAK transformers provide the high fire point and environmental benefits of Envirotemp™ FR3™ fluid. PEAK transformers are available in various designs and configurations to match almost every application.



Powering Business Worldwide

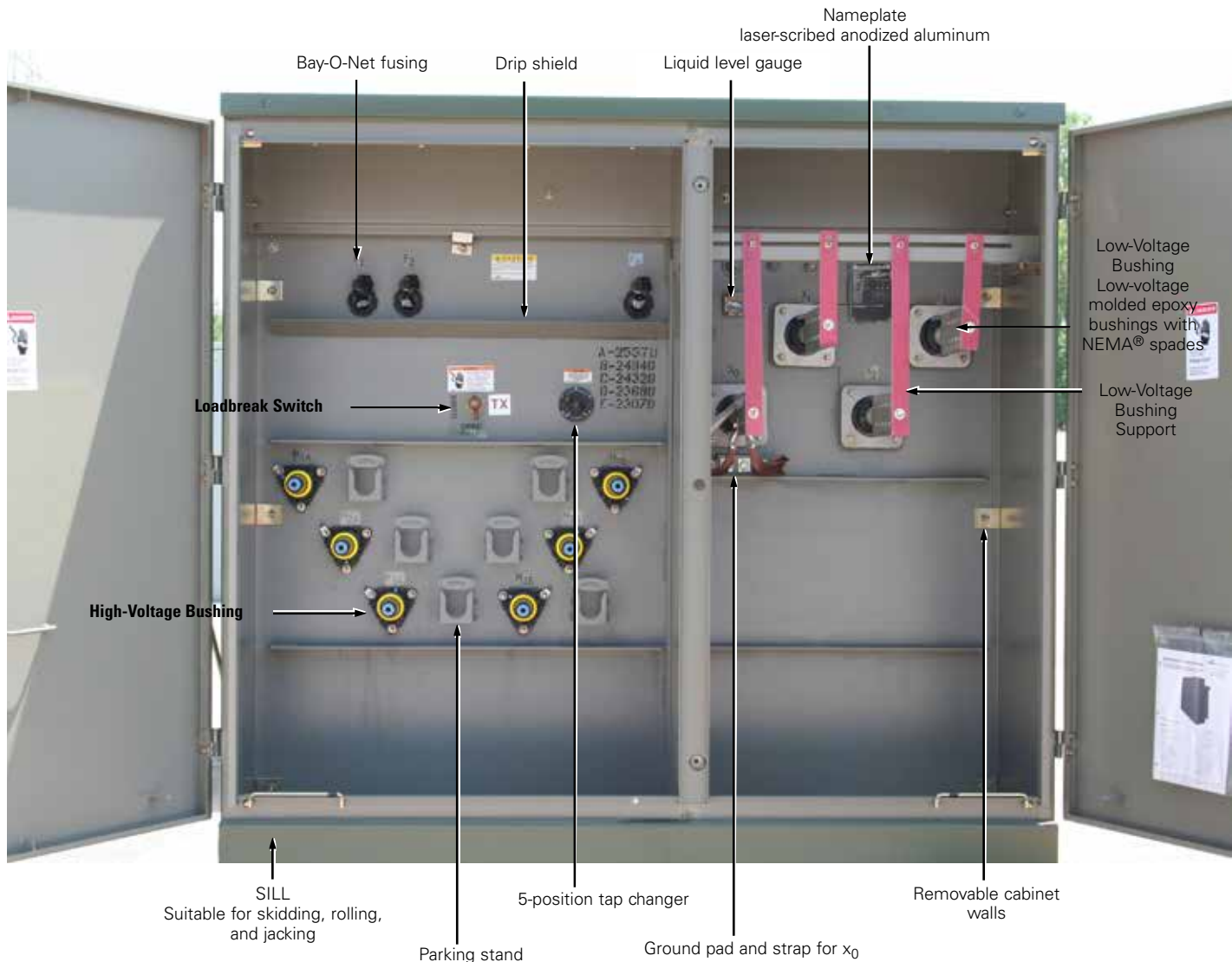


Figure 1. Three-phase pad-mounted PEAK transformer.

Table 1. Product scope

Type	Three-Phase, 50 or 60 Hz, 75 °C Rise and 65 °C/75 °C and 55/75 °C
Fluid Type	Only Envirotemp™ FR3™ fluid
Coil Configuration	2-winding or 4-winding or 3-winding (Low-High-Low), 3-winding (Low-Low-High)
Size	45 – 10,000 kVA
Primary Voltage	2,400 – 46,000 V
Secondary Voltage	208Y/120 V to 14,400 V
Specialty Designs	Inverter/Rectifier Bridge
	K-Factor (up to K-19)
	Solar/Wind Designs
	Differential Protection
	Seismic Applications (including OSHPD)
	Hardened Data Center
	UL® Listed & Label and Classified

Table 2. Three-Phase Ratings**Three-Phase 50 or 60 Hz**

kVA Available¹:
45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000, 7500, 10000

¹Transformers are available in the standard ratings and configurations shown or can be customized to meet specific needs.

Table 3. Impedance Voltage

Rating (kVA)	Low-voltage rating		
	≤ 600 V	2400 Δ through 4800 Δ	6900 Δ through 13800GY/7970 or 13800 Δ
45-75	2.70-5.75	2.70-5.75	2.70-5.75
112.5-300	3.10-5.75	3.10-5.75	3.10-5.75
500	4.35-5.75	4.35-5.75	4.35-5.75
750-2500	5.75	5.75	5.75
3750	5.75	5.75	6.00
5000		6.00	6.50

Note: The standard tolerance is ± 7.5%

Table 4. Audible Sound Levels

Self-Cooled, Two Winding kVA Rating	NEMA® TR-1 Average
	Decibels (dB)
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Table 5. Insulation Test Levels

KV Class	Induced Test 180 or 400 Hz 7200 Cycle	kV BIL Distribution	Applied Test 60 Hz (kV)
1.2	Twice Rated Voltage	30	10
2.5		45	15
5		60	19
8.7		75	26
15		95	34
25		125	40
34.5		150	50

Table 6. Temperature Rise Ratings 0-3300 Feet (0-1000 meters)

	Unit Rating (Temperature Rise Winding)
	75, 65/75, 55/75 °C
Ambient Temperature Max.	40 °C
Ambient Temperature 24 Hour Average	30 °C
Temperature Rise Hotspot	90 °C