TOWN OF TIBURON
1505 Tiburon Boulevard
Tiburon, CA 94920

Design Review Board Meeting
June 16, 2016
Agenda Item: 2

STAFF REPORT

To: **Members of the Design Review Board**

From: **Community Development Department**

Subject: **168 Antonette Drive; File No. DR2016057; Site Plan and Architectural Review Application for Installation of Two (2) Exterior HVAC Units and One (1) Generator for an Existing Single-Family Dwelling**

PROJECT DATA

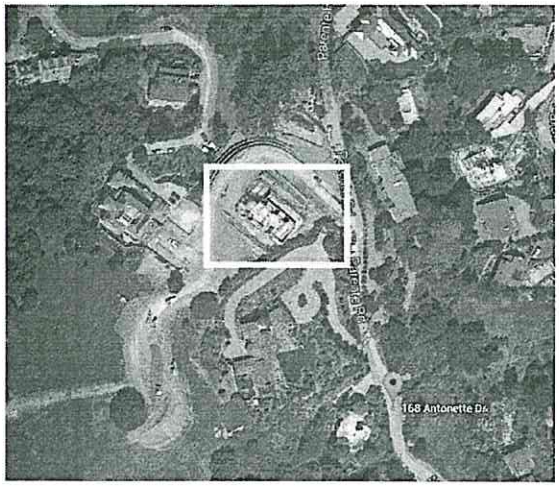
ADDRESS:	**168 ANTONETTE DRIVE**
OWNER:	**JULIE AND ENGLEBERT BANGAYAN**
APPLICANT:	**DAVID HOLSCHER (ARCHITECT)**
ASSESSOR'S PARCEL:	**038-111-35**
FILE NUMBER:	**DR2016057**
LOT SIZE:	**90,421 SQUARE FEET**
ZONING:	**RPD (RESIDENTIAL PLANNED DEVELOPMENT)**
PRECISE PLAN:	**PARENTE VISTA PRECISE DEVELOPMENT PLAN**
GENERAL PLAN:	**PD-R (PLANNED DEVELOPMENT RESIDENTIAL**
FLOOD ZONE:	**X**
DATE COMPLETE:	**MAY 24, 2016**

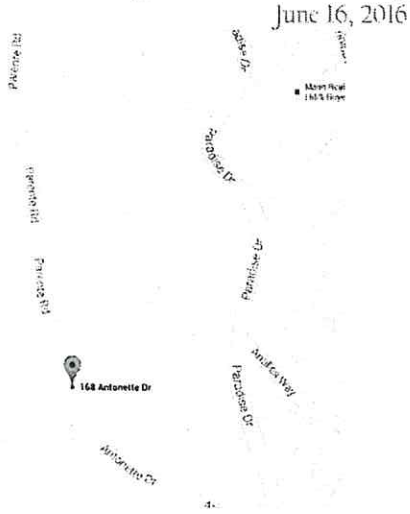
PROJECT DESCRIPTION

The applicant is requesting to install two (2) exterior air conditioning units and one (1) generator for the newly constructed single-family dwelling located at 168 Antonette Drive. All of the mechanical equipment would be screened by a new 5 foot tall retaining wall on the northwest side of the existing home. This application is being referred to the Design Review Board as the number of mechanical equipment exceeds the maximum permitted for a single-family dwelling, as stated in the Tiburon Policy and Procedure for Standards for Air Conditioning Units and Similar Mechanical Equipment.

PROJECT SETTING

The subject property slopes up from Antonette Drive. The site is bordered by homes on either sides at 140 Antonette Drive, 4885 Paradise Drive, and uphill from 145 Antonette Drive. The subject property is part of the Parente Vista Precise Development Plan, which was approved by the Town Council in 2010. The Precise Development Plan established building envelopes for the two lots.





ANALYSIS

Design Issues

The proposed location of the mechanical equipment would be on the northwest side of the dwelling and would be adjacent to trash enclosure, garage, and driveway. The mechanical equipment would be screened by a 5 foot tall retaining wall and would not be visible from the adjacent neighbors at 4885 Paradise or from 140 Antonette Drive. Both of these neighboring homes are equipped with an exterior generator.

Zoning

The Town's policy for air conditioning and similar mechanical equipment (**Exhibit 3**) states that "the proposed equipment should not exceed a total of two (2) such units if exclusively serving residential uses." The subject application proposes to install two (2) exterior air conditioning units on the property and one (1) generator.

In addition, the policy establishes a maximum sound rating for proposed equipment (in aggregate) of 65 dB at a distance of 5 feet from the property line or 55 dB at the property line for residential properties. The applicant submitted the manufacturer's specification as part of the submittal, but the specifications showed the generator noise level was 66 dB and the noise levels for the other two units were 75 dB and 76 dB, which would not meet the Town's policy for air conditioning and similar mechanical equipment.

For any mechanical equipment which does not comply with the Town's policy, the applicant must provide a letter from a qualified professional, which states that certain noise measures would be completed to reduce the noise level and to comply with the Town's policy. The applicant provided a letter (**Exhibit 4**) from an acoustical consultant stating that with a 5 foot retaining wall situated between the equipment and property line would reduce the noise from the mechanical equipment in aggregate sufficiently to comply with the 55 dB limit at the property line.

PUBLIC COMMENT

As of the date of this report, no letters have been received regarding the application.

PRELIMINARY ENVIRONMENTAL DETERMINATION

Town Planning Division Staff has made a preliminary determination that this proposal would be exempt from the provisions of the California Environmental Quality Act (CEQA) as specified in Section 15303.

RECOMMENDATION

Staff recommends that the Board:

The Board should review this project with respect to Zoning Ordinance Sections 16-52.020 (H) [Guiding Principles], Standards for Air Conditioning Units and Similar Mechanical Equipment, and determine that the project is exempt from the provisions of the California Environmental Quality Act (CEQA) as specified in Sections 15303. If the Board wishes to approve the application, it is recommended that the attached conditions of approved be applied.

EXHIBITS

1. Conditions of Approval
2. Application and Supplemental Materials
3. Town of Tiburon Administrative Policy & Procedure, Standards for Air Conditioning Units and Similar Mechanical Equipment
4. Letter from RGD Acoustics dated November 25, 2015
5. Submitted Plans

Exhibit 1

CONDITIONS OF APPROVAL
168 ANTONETTE DRIVE
FILE NO. DR2016057

1. This approval shall be used within three (3) years of the approval date, and shall become null and void unless a building permit has been issued.

2. Construction shall conform with the application and plans dated by the Town of Tiburon on May 12, 2016, or as amended by these conditions. Any modifications to the plans dated June 8, 2016 must receive Design Review approval.

3. Project elements shown on construction drawings submitted to the Building Division for plan check shall be essentially identical to those project elements shown on drawings approved by the Design Review Board. The permit holder is responsible for clearly identifying on construction drawings any and all changes to project elements. Such changes must be clearly highlighted (with a "bubble" or "cloud") on the construction drawings. A list describing in detail all such changes shall be submitted and attached to the construction drawings, with a signature block to be signed by the Planning Division Staff member indicating whether these changes have been reviewed and are approved, or will require additional Design Review approval. All such changes that have not been explicitly approved by the Town are not "deemed approved" if not highlighted and listed on construction drawings. Construction of any such unapproved project elements is in violation of permit approvals and shall be subject to Stop Work Orders and removal.

4. The applicant must meet all requirements of other agencies prior to the issuance of a building permit for this project.

5. The project shall comply with the recommendations by the acoustical consultant, RGD Acoustics, dated November 25, 2015, regarding the installation of a 5 foot tall retaining wall between the equipment and property line.

6. If this approval is challenged by a third party, the property owner/applicant will be responsible for defending against this challenge, with defense counsel subject to the Town's approval. The property owner/applicant agrees to defend, indemnify and hold the Town of Tiburon harmless from any costs, claims or liabilities arising from the approval, including, without limitations, any award of attorney's fees that might result from the third party challenge.

7. A copy of the Planning Division's "Notice of Action" including the attached "Conditions of Approval" for this project shall be copied onto a plan sheet at the beginning of the plan set(s) submitted for building permits.

8. All previous conditions of approval of Site Plan and Architectural review Application File #713138 shall remain in effect.

RECEIVED
MAY 12 2016
PLANNING DIVISION

TOWN OF TIBURON

LAND DEVELOPMENT APPLICATION

TYPE OF APPLICATION

- o Conditional Use Permit
- o Precise Development Plan
- o Secondary Dwelling Unit
- o Zoning Text Amendment
- o Rezoning or Prezoning
- o General Plan Amendment
- o Temporary Use Permit
- ✓ Design Review (DRB)
- o Design Review (Staff Level)
- o Variance(s)_____#
- o Floor Area Exception
- o Tidelands Permit
- o Sign Permit
- o Tree Permit
- o Tentative Subdivision Map
- o Final Subdivision Map
- o Parcel Map
- o Lot Line Adjustment
- o Condominium Use Permit
- o Seasonal Rental Unit Permit
- o Other_____

APPLICANT REQUIRED INFORMATION

SITE ADDRESS: 168 Antonette Dr. **PROPERTY SIZE:** 90,421
PARCEL NUMBER: 038-111-35 ~~039-222-19~~ **ZONING:** R0-2

PROPERTY OWNER: Julie & Englebert Bangayan
MAILING ADDRESS: 355 1st Street, unit S907
San Francisco, CA. 94105
PHONE/FAX NUMBER: _____ E-MAIL: _____

APPLICANT (Other than Property Owner): _____
MAILING ADDRESS: _____
_____
PHONE/FAX NUMBER: _____ E-MAIL: _____

ARCHITECT/DESIGNER/ENGINEER David Holscher - Holscher Architecture, Inc.
MAILING ADDRESS: 1550 Tiburon Blvd. #V
Belvedere, CA. 94920
PHONE/FAX NUMBER: 415-435-5219 E-MAIL: david@harch.com

Please indicate with an asterisk (*) persons to whom Town correspondence should be sent.

BRIEF DESCRIPTION OF PROPOSED PROJECT (*attach separate sheet if needed):*
- (N) AC #1 & AC. #2
- (N) 20kw generator

I, the undersigned owner (or authorized agent) of the property herein described, hereby make application for approval of the plans submitted and made a part of this application in accordance with the provisions of the Town Municipal Code, and I hereby certify that the information given is true and correct to the best of my knowledge and belief.

I understand that the requested approval is for my benefit (or that of my principal). Therefore, if the Town grants the approval, with or without conditions, and that action is challenged by a third party, I will be responsible for defending against this challenge. I therefore agree to accept this responsibility for defense at the request of the Town and also agree to defend, indemnify and hold the Town harmless from any costs, claims or liabilities arising from the approval, including, without limitation, any award of attorney's fees that might result from the third party challenge.

Signature:* _____ Date: 01/11/2016

The property involving this permit request may be subject to deed restrictions called Covenants, Conditions and Restrictions (CC&Rs), which may restrict the property's use and development. These deed restrictions are private agreements and are NOT enforced by the Town of Tiburon. Consequently, development standards specified in such restrictions are NOT considered by the Town when granting permits.

You are advised to determine if the property is subject to deed restrictions and, if so, contact the appropriate homeowners association and adjacent neighbors about your project prior to proceeding with construction. Following this procedure will minimize the potential for disagreement among neighbors and possible litigation.

Signature:* _____ Date: 01/11/2016

If other than owner, must have an authorization letter from the owner or evidence of de facto control of the property or premises for purposes of filing this application

NOTICE TO APPLICANTS

Pursuant to California Government Code Section 65945, applicants may request to receive notice from the Town of Tiburon of any general (non-parcel-specific), proposals to adopt or amend the General Plan, Zoning Ordinance, Specific Plans, or an ordinance affecting building or grading permits.

If you wish to receive such notice, then you may make a written request to the Director of Community Development to be included on a mailing list for such purposes, and must specify which types of proposals you wish to receive notice upon. The written request must also specify the length of time you wish to receive such notices (s), and you must provide to the Town a supply of stamped, self-addressed envelopes to facilitate notification. Applicants shall be responsible for maintaining the supply of such envelopes to the Town for the duration of the time period requested for receiving such notices.

The notice will also provide the status of the proposal and the date of any public hearings thereon which have been set. The Town will determine whether a proposal is reasonably related to your pending application, and send the notice on that basis. Such notice shall be updated at least every six weeks unless there is no change to the contents of the notice that would reasonably affect your application. Requests should be mailed to:

Town of Tiburon
Community Development Department
Planning Division
1505 Tiburon Boulevard
Tiburon, CA 94920
(415) 435-7390 (Tel) (415) 435-2438(Fax)
www.townoftiburon.org

RECEIVED
MAY 12 2016
PLANNING DIVISION

DO NOT WRITE BELOW THIS LINE

DEPARTMENTAL PROCESSING INFORMATION

Application No.: DR2016057 **GP Designation:** **Fee Deposit:** $485
Date Received: 5/12/2016 **Received By:** LS **Receipt #:** R1170
Date Deemed Complete: 5/24/16 **By:** DW
Acting Body: **Action:** **Date:**
Conditions of Approval or Comments: _____ **Resolution or Ordinance #** _____

MINOR ALTERATION SUPPLEMENT

Please fill in the information requested below:

1. Briefly describe the proposed project (attach separate sheet as needed):
   - (N) AC. #1 & A.C #2
   - (N) 20kw generator

2. Lot area in square feet (Section 16-100.020(L))*: 90,421 Zoning: RO-2

3. Square footage of Landscape Area: NO CHANGE

4. Proposed use of site (example: single family residential, commercial, etc.):
   Existing Single family residential
   Proposed Single family residential

5. Describe any changes to parking areas including number of parking spaces, turnaround or maneuvering areas.
   No change

TO BE COMPLETED BY APPLICANT				STAFF USE ONLY	
ITEM	**EXISTING**	**PROPOSED ADDITION AND/OR ALTERATION**	**PROPOSED**	**CAL-CULATED**	**PER ZONE**
Yards (Setbacks from property line) (Section 16-100.020(Y))* **Front**	N/A ft.	ft.	N/A ft.	ft.	ft.
Rear	N/A ft.	ft.	N/A ft.	ft.	ft.
Right Side	N/A ft.	ft.	N/A ft.	ft.	ft.
Left Side	N/A ft.	ft.	N/A ft.	ft.	ft.
Maximum Height (Section 16-30.050)*	N/A ft.	ft.	N/A ft.	ft.	ft.
Lot Coverage (Section 16-30.120(B))*	N/A sq.ft.	NO CHANGE sq.ft	5427 sq.ft.	sq.ft.	sq.ft.
Lot Coverage as Percent of Lot Area	N/A %	NO CHANGE %	6.0 %	%	%
Gross Floor Area (Section 16-100.020(F))*	N/A sq.ft.	NO CHANGE sq.ft.	6000 sq.ft.	sq.ft.	sq.ft.

*Section numbers refer to specific provisions or definitions in the Tiburon Municipal Code, Title IV, Chapter 16 (Zoning)

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[redacted]

16/20/22 kW

[redacted]

GENERAC®

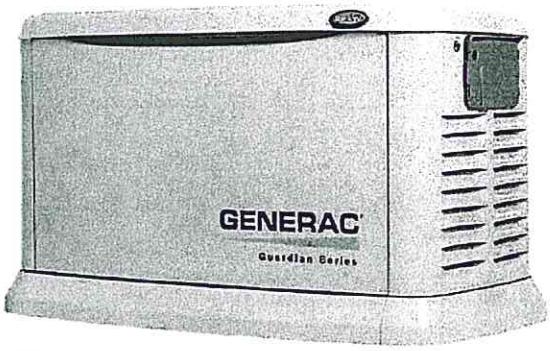
GUARDIAN® SERIES
Residential Standby Generators
Air-Cooled Gas Engine

INCLUDES:

- True Power™ Electrical Technology
- Two Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/ French/Portuguese)
- Two Transfer Switch Options Available: 100 Amp Pre-Wired Switch or 200 Amp Service Rated Switch. See Page 4 for Details.
- Electronic Governor
- External Main Circuit Breaker, System Status & Maintenance Interval LED Indicators
- GFCI Duplex Outlet
- Sound Attenuated Enclosure
- Flexible Fuel Line Connector
- Composite Mounting Pad
- Natural Gas or LP Gas Operation
- 5 Year Limited Warranty
- Capability to be installed within 18" (457 mm) of a building*

Standby Power Rating

Models 006459-2, 006461-1, 006462-2 (Steel - Bisque) - 16 kW 60 Hz
Model 006721-1 (Aluminum - Gray) - 16 kW 60 Hz
Models 006729-2, 006730-1 (Steel - Bisque) - 20 kW 60 Hz
Models 006551-2, 006552-1 (Aluminum - Gray) - 22 kW 60 Hz



c UL us LISTED

~~QUIET TEST~~

Note: CUL certification only applies to unbundled units and units packaged with pre-wired switches. Units packaged with the Smart Switch are UL certified in the USA only.

*Only if located away from doors, windows and fresh air intakes, and unless otherwise directed by local codes.

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TRUE POWER™ ELECTRICAL TECHNOLOGY:** Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power. This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC systems.
- **TEST CRITERIA:**
  - ✓ **PROTOTYPE TESTED**
  - ✓ **SYSTEM TORSIONAL TESTED**
  - ✓ **NEMA MG1-22 EVALUATION**
  - ✓ **MOTOR STARTING ABILITY**
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

THE GENERAC PROMISE

USA ENGINEERED & BUILT* · 24/7 • 365 CUSTOMER CARE · FIVE YEAR LIMITED 5 WARRANTY · Mobile Link™ · ISO 9001:2008

*Built in the USA using domestic and foreign parts.

GENERAC®

16/20/22 kW

features and benefits

Engine	
• Generac (OHVI) design	Maximizes engine "breathing" for increased fuel efficiency. Plateau honed cylinder walls and plasma moly rings helps the engine run cooler, reducing oil consumption resulting in longer engine life.
• Quiet-Test™	Greatly reduces sound output and fuel consumption during bi-weekly exercise, compared to other brands.
• "Spiny-lok" cast iron cylinder walls	Rigid construction and added durability provide long engine life.
• Electronic ignition/spark advance	These features combine to assure smooth, quick starting every time.
• Full pressure lubrication system	Pressurized lubrication to all vital bearings means better performance, less maintenance and longer engine life. Now featuring up to a 2 year/200 hour oil change interval.
• Low oil pressure shutdown system	Shutdown protection prevents catastrophic engine damage due to low oil.
• High temperature shutdown	Prevents damage due to overheating.
Generator	
• Revolving field	Allows for a smaller, light weight unit that operates 25% more efficiently than a revolving armature generator.
• Skewed stator	Produces a smooth output waveform for compatibility with electronic equipment.
• Displaced phase excitation	Maximizes motor starting capability.
• Automatic voltage regulation	Regulates the output voltage to ±1% prevents damaging voltage spikes.
• UL 2200 listed	For your safety.
Transfer Switch	
• Fully automatic	Transfers your vital electrical loads to the energized source of power.
• Pre-wired, color-coded conduits (Pre-wired switches only)	Ensures the easiest, trouble-free installation.
• Remote mounting	Mounts near your existing distribution panel for simple, low-cost installation.
Evolution™ Controls	
• Auto/Manual/Off illuminated buttons	Selects the operating mode and provides easy, at-a-glance status indication in any condition.
• Two-line LCD multilingual display	Provides homeowners easily visible logs of history, maintenance and events up to 50 occurrences.
• Sealed, raised buttons	Smooth, weather-resistant user interface for programming and operations.
• Utility voltage sensing	Constantly monitors utility voltage, setpoints 60% dropout, 80% pick-up, of standard voltage.
• Generator voltage sensing	Constantly monitors generator voltage to ensure the cleanest power delivered to the home.
• Utility interrupt delay	Prevents nuisance start-ups of the engine, adjustable 2-1500 seconds from the factory default setting of 5 seconds by a qualified dealer.
• Engine warm-up	Ensures engine is ready to assume the load, setpoint approximately 5 seconds.
• Engine cool-down	Allows engine to cool prior to shutdown, setpoint approximately 1 minute.
• Programmable exerciser	Operates engine to prevent oil seal drying and damage between power outages by running the generator for 5 minutes every other week. Also offers a selectable setting for weekly or monthly operation providing flexibility and potentially lower fuel costs to the owner.
• Smart battery charger	Delivers charge to the battery only when needed at varying rates depending on outdoor air temperature.
• Electronic governor	Maintains constant 60 Hz frequency.
Unit	
• SAE weather protective enclosure	Sound attenuated enclosure ensures quiet operation and protection against mother nature, withstanding winds up to 150 mph. Hinged key locking roof panel for security. Lift-out front for easy access to all routine maintenance items. Electrostatically applied textured epoxy paint for added durability.
• Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
• Small, compact, attractive	Makes for an easy, eye appealing installation, as close as 18" away from a building.*
Installation System	
• 1 ft (305 mm) flexible fuel line connector	Absorbs any generator vibration when connected to rigid pipe.
• Composite mounting pad	Eliminates the need to pour a concrete pad unless required by local municipalities.

GENERAC

16/20/22 kW

specifications

Generator

Model	006459-2, 006461-1, 006462-2, 006721-1 (16 kW)	006729-2, 006730-1, (20 kW)	006551-2, 006552-1 (22 kW)
Rated Maximum Continuous Power Capacity (LP)	16,000 Watts*	20,000 Watts*	22,000 Watts*
Rated Maximum Continuous Power Capacity (NG)	16,000 Watts*	18,000 Watts*	19,500 Watts*
Rated Voltage	240	240	240
Rated Maximum Continuous Load Current – 240 Volts (LP/NG)	66.6/66.6	83.3/75	91.6/81.3
Total Harmonic Distortion	Less than 5%	Less than 5%	Less than 5%
Main Line Circuit Breaker	65 Amp	90 Amp	100 Amp
Phase	1	1	1
Number of Rotor Poles	2	2	2
Rated AC Frequency	60 Hz	60 Hz	60 Hz
Power Factor	1.0	1.0	1.0
Battery Requirement (not included)	Group 26R, 12 Volts and 525 CCA Minimum		
Unit Weight (lb/kg)	455/206.4 (Steel) 419/190 (Aluminum)	505/229	476/216
Dimensions (L x W x H) in/mm	48 x 25 x 29/1218 x 638 x 732		
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load**	66	66	67
Sound output in dB(A) at 23 ft (7 m) with generator in Quiet-Test™ low-speed exercise mode**	60	60	58
Exercise duration	5 min	5 min	5 min

Engine

Type of Engine		GENERAC OHVI V-TWIN	GENERAC OHVI V-TWIN	GENERAC OHVI V-TWIN
Number of Cylinders		2	2	2
Displacement		992 cc	999 cc	999 cc
Cylinder Block		Aluminum w/ Cast Iron Sleeve		
Valve Arrangement		Overhead Valve	Overhead Valve	Overhead Valve
Ignition System		Solid-state w/ Magneto	Solid-state w/ Magneto	Solid-state w/ Magneto
Governor System		Electronic	Electronic	Electronic
Compression Ratio		9.5:1	9.5:1	9.5:1
Starter		12 Vdc	12 Vdc	12 Vdc
Oil Capacity Including Filter		Approx. 1.9 qt/1.8 L	Approx. 1.9 qt/1.8 L	Approx. 1.9 qt/1.8 L
Operating rpm		3,600	3,600	3,600
Fuel Consumption				
Natural Gas	ft^3/hr (m^3/hr)			
	1/2 Load	193 (5.47)	205 (5.8)	184 (5.21)
	Full Load	312 (8.83)	308 (8.72)	281 (7.96)
Liquid Propane	ft^3/hr (gal/hr) [l/hr]			
	1/2 Load	72.4 (1.9) [7.2]	75.6 (2.08) [7.87]	83 (2.16) [8.16]
	Full Load	130 (3.19) [12.07]	140 (3.85) [14.57]	127 (3.68) [13.94]

Note: **Fuel pipe must be sized for full load.** Required fuel pressure to generator fuel inlet at all load ranges - 3.5-7" water column (7-13 mm mercury) for natural gas, 10-12" water column (19-22 mm mercury) for LP gas. For Btu content, multiply ft^3/hr x 2500 (LP) or ft^3/hr x 1000 (NG). For Megajoule content, multiply m^3/hr x 93.15 (LP) or m^3/hr x 37.26 (NG)

Controls

2-Line Plain Text Multilingual LCD Display		Simple user interface for ease of operation.
Mode Buttons:	Auto	Automatic Start on Utility failure. 7 day exerciser.
	Manual	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
	Off	Stops unit. Power is removed. Control and charger still operate.
Ready to Run/Maintenance Messages		Standard
Engine Run Hours Indication		Standard
Programmable start delay between 2-1500 seconds		Standard (programmable by dealer only)
Utility Voltage Loss/Return to Utility Adjustable (Brownout Setting)		From 140-171 V/190-216 V
Future Set Capable Exerciser/Exercise Set Error Warning		Standard
Run/Alarm/Maintenance Logs		50 Events Each
Engine Start Sequence		Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration).
Starter Lock-out		Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger		Standard
Charger Fault/Missing AC Warning		Standard
Low Battery/Battery Problem Protection and Battery Condition Indication		Standard
Automatic Voltage Regulation with Over and Under Voltage Protection		Standard
Under-Frequency/Overload/Stepper Overcurrent Protection		Standard
Safety Fused/Fuse Problem Protection		Standard
Automatic Low Oil Pressure/High Oil Temperature Shutdown		Standard
Overcrank/Overspeed (@ 72 Hz)/rpm Sense Loss Shutdown		Standard
High Engine Temperature Shutdown		Standard
Internal Fault/Incorrect Wiring Protection		Standard
Common External Fault Capability		Standard
Field Upgradable Firmware		Standard

**Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters. Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). * Maximum wattage and current are subject to and limited by such factors as fuel Btu/megajoule content, ambient temperature, altitude, engine power and condition, etc. Maximum power decreases about 3.5 percent for each 1,000 feet (304.8 meters) above sea level; and also will decrease about 1 percent for each 6 °C (10 °F) above 16 °C (60 °F).

GENERAC

16/20/22 kW

switch options

Pre-wired Features

available on Steel 16 kW models only

- Electrically operated, mechanically-held contacts for fast, positive connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- 2 pole, 250 VAC contactors.
- 30 millisecond transfer time.
- Dual coil design.
- Main contacts are silver plated or silver alloy to resist welding and sticking.
- NEMA 1 (indoor rated) enclosure is standard on the pre-wired switch.
- Multi listed for use with 1" standard, tandem, GFCI and AFCI breakers from Siemens, Murray, Eaton and Square D for the most flexible and cost effective install.
- Pre-wired 30 foot (9.1 meter) whip to connect to the provided 5 foot pre-wired whip and external connection box.
- Pre-wired 2 foot (0.61 meter) whip, color coded to connect into the existing electrical panel.

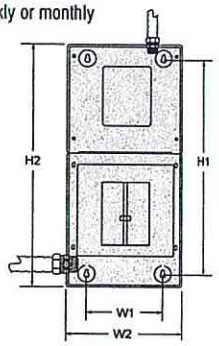
Model	006461-1 (16 kW)
No. of Poles	2
Current Rating (Amps)	100
Voltage Rating (VAC)	120/240, 1Ø
Utility Voltage Monitor (Fixed)*	
-Pick-up	80%
-Dropout	60%
Return to Utility*	approx. 15 sec.
Exercise bi-weekly for 12 minutes*	Standard
UL Listed	Standard
Total of Pre-wired Circuits	16
No. 15 A 120 V	5
No. 20 A 120 V	5
No. 20 A 240 V	1
No. 30 A 240 V	-
No. 40 A 240 V	1
No. 50 A 240 V	1
Circuit Breaker Protected Available RMS Symmetrical Fault Current @ 250 Volts	10,000

*Function of Evolution Controller
Exercise can be set to weekly or monthly

Dimensions

Mechanical Dimensions					
	Height		Width		Depth
	H1	H2	W1	W2	
in	23.5	26.4	8.3	12.6	6.3
mm	597	671.7	211	320.7	159.6

Wire Ranges		
Conductor Lug	Neutral Lug	Ground Lug
2/0 - #14	2/0 - #14	2/0 - #14



Service Rated Switch Features

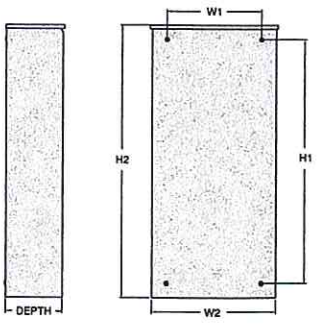
- Electrically operated, mechanically-held contacts for fast, clean connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- 2 pole, 250 VAC contactors.
- Service equipment rated, dual coil design.
- Rated for both aluminum and copper conductors.
- NEMA/UL 3R aluminum outdoor enclosure.
- Main contacts are silver plated or silver alloy to resist welding and sticking.

Model	006462-2 (16 kW)/006729-2 (20 kW)/006551-2 (22 kW)
No. of Poles	2
Current Rating (Amps)	200
Voltage Rating (VAC)	120/240, 1Ø
Utility Voltage Monitor (Fixed)*	
-Pick-up	80%
-Dropout	60%
Return to Utility*	approx. 13 sec.
Exercise weekly for 12 minutes*	Standard
UL Listed	Standard
Enclosure Type	NEMA/UL 3R
Withstand Rating (Amps)	22,000
Lug Range	250 MCM - #6

*Function of Evolution Controller

Dimensions

	200 Amps 120/240, 1ø Open Transition Service Rated				
	Height		Width		Depth
	H1	H2	W1	W2	
in	27.24	30.0	11.4	13.5	7.09
mm	692.0	762.4	289.0	343.0	180.0



GENERAC®

16/20/22 kW

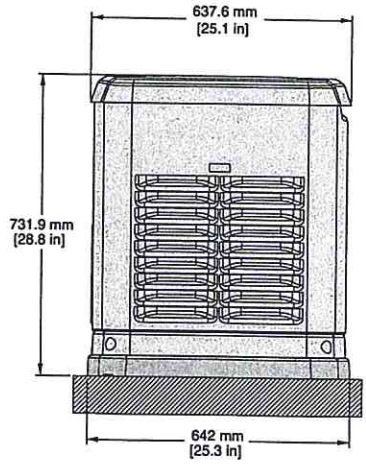
available accessories

Model #	Product	Description
006463-3	Mobile Link™	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Available in the U.S. only.
005819-0	26R Wet Cell Battery	Every standby generator requires a battery to start the system. Generac offers the recommended 26R wet cell battery for use with all air-cooled standby product (excluding PowerPact®).
006212-0	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), a cold weather kit is required to maintain optimal battery and oil temperatures. Kit consists of a battery warmer and oil filter heater with built-in thermostats.
005621-0	Auxiliary Transfer Switch Contact Kit	The auxiliary transfer switch contact kit allows the transfer switch to lock out a single large electrical load you may not need. Not compatible with 50 amp pre-wired switches.
005839-0 - Bisque 005666-0 - Gray	Fascia Base Wrap Kit* (Standard on 22 kW)	The fascia base wrap snaps together around the bottom of the new air cooled generators. This offers a sleek, contoured appearance as well as offering protection from rodents and insects by covering the lifting holes located in the base.
005703-0 - Bisque 005704-0 - Gray	Paint Kit*	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
006484-0 - 16 kW 006485-0 - 20 & 22 kW	Scheduled Maintenance Kit	Generac's scheduled maintenance kits provide all the hardware necessary to perform complete routine maintenance on a Generac automatic standby generator.
006664-0	Wireless Remote Monitor	Completely wireless and battery powered, Generac's wireless remote monitor provides you with instant status information without ever leaving the house. Not compatible with CorePower or EcoGen systems.
006873-0	Smart Management Module (50 Amps)	Smart Management Modules are used in conjunction with the Automatic Transfer Switch to increase its power management capabilities. It provides additional power management flexibility not found in any other power management system.

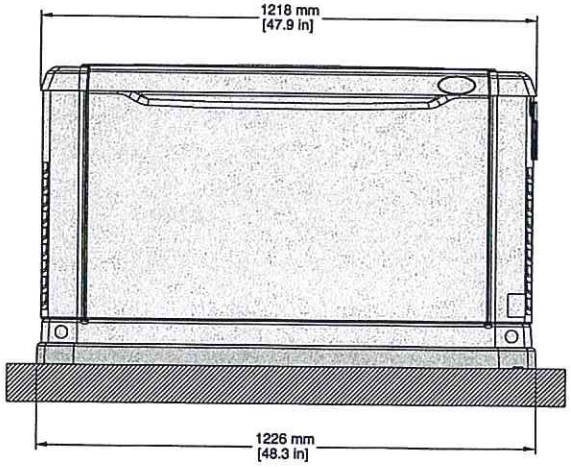
* Note: Bisque kits are used in conjunction with steel enclosures. Gray kits are used in conjunction with aluminum enclosures.

dimensions & UPCs

Dimensions shown are approximate. Refer to installation manual for exact dimensions. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



LEFT SIDE VIEW



FRONT VIEW

Model	UPC
006459-2	696471064599
006461-1	696471064612
006721-1	696471067217
006729-2	696471067293
006730-1	696471067309
006551-2	696471065510
006552-1	696471065527
006462-2	696471064629

GENERAC®

Generac Power Systems, Inc. • S45 W29290 HWY. 59, Waukesha, WI 53189 • generac.com

 Bulletin 0K8458-G Printed in U.S.A. 08/03/15

Trane TruComfort™ Variable Speed Systems

Our quietest and most precise comfort experience.

TRANE

It's Hard To Stop A Trane.®

Put your comfort on cruise control.

Trane TruComfort™ Variable Speed systems maintain a consistent temperature with maximum efficiency by automatically making minor, continuous adjustments in output all day long, all night long. The result is efficient, affordable and reliable comfort, like you have never seen before.

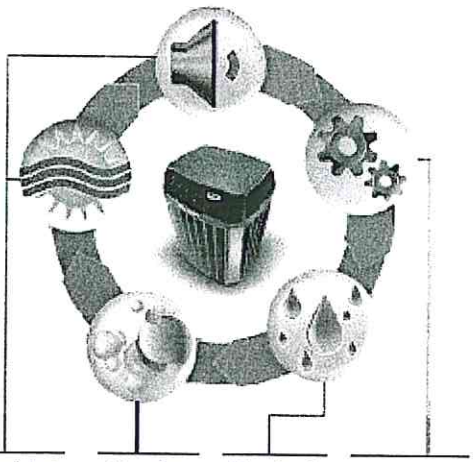
XV20i
Heat Pump or
Air Conditioner

XV18
Heat Pump or
Air Conditioner

Variable Speed. We started it, then perfected it.

Variable speed is not new technology for Trane. It's technology perfected. Trane was the first in the industry to apply variable speed technology to residential air conditioning. Now Trane brings variable speed technology to the next level, with a system that intuitively adjusts to changing heating and cooling needs, working only as hard as it has to and often at lower, more efficient and quieter speeds.

Trane TruComfort™ technology builds on our tradition of reliability and innovation.



Consistent, efficient, precise comfort at very low sound levels.

Superior whole-house air filtration when used with Trane CleanEffects™ (See back page)

Next level humidity control for ultimate comfort and efficiency.

Tortured and tested to our reliability standards, unrivaled in the industry today.

Consistent, Quiet Comfort

Trane TruComfort™ systems deliver precise comfort by running at the exact speed necessary to keep your home comfortable. By lowering output capacity and operating speed, they provide efficient and consistent comfort. Additionally, TruComfort™ heat pumps are able to slow fan speeds down as outdoor temperatures drop to reduce cold spots and use of supplemental heat. What's more, sound levels at the lowest speed are an impressive 55 dB on an air conditioner and 54 dB on a heat pump. For sound comparison, a typical home refrigerator operates at 45 dB.

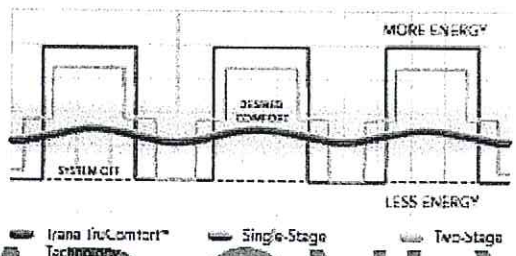
Enhanced Humidity Control

Trane TruComfort™ systems efficiently circulate air around-the-clock to keep your home's humidity levels at a minimum. Longer run times at lower speeds consistently remove more moisture from the air, reducing humidity. These reduced humidity levels will allow you to adjust your system to a more efficient setting, while you enjoy improved comfort and efficiency.

Trane Reliability

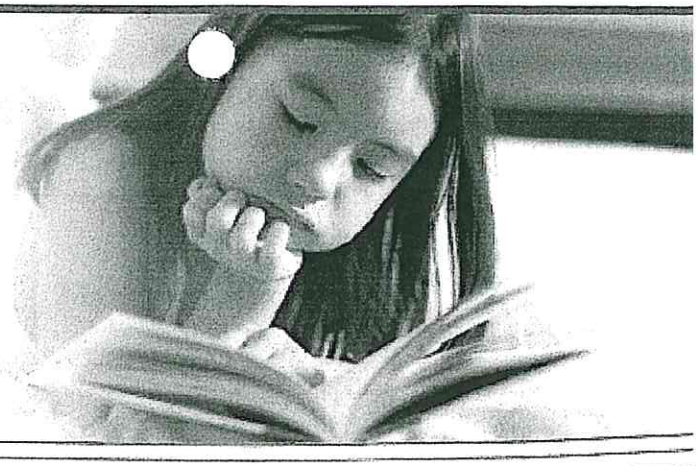
For over 100 years, Trane has built a legacy of providing comfort systems like no other, featuring uncompromising quality, innovation and reliability. When it comes to heating and cooling homes, people view Trane equipment as the most reliable and the longest lasting in the industry.* The legacy lives on today with Trane's TruComfort™ Variable Speed systems. The XV20i or XV18, when matched with an indoor variable speed product, creates a whole new level of Trane reliability and consistency that you feel in the air around you and see in month to month energy savings.

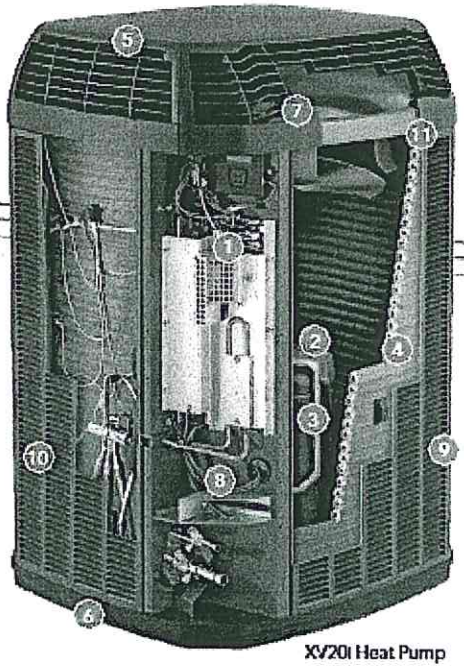
* Independent 2012 HVAC Claim Study, funded by Ingersoll Rand



Trane TruComfort™ systems eliminate uncomfortable temperature swings by staying within 1/2° degree of your setting.

By automatically reducing its output capacity and through longer run times, Trane TruComfort™ systems operate at more efficient, quieter speeds rather than cycling on and off to maintain your desired comfort settings. The graphic shows output capacity compared to airflow on conventional single and two-stage systems.





XV20i Heat Pump

1. **ComfortLink™ II Communicating Control Board and Unique Refrigerant Cooled Inverter Drive**
Powers the compressor and controls communication between components to optimize your comfort and efficiency.

2. **Climatuff® Variable Speed Compressor**
The heart of Trane TruComfort™ technology automatically adjusts itself while maintaining constant and consistent speeds that avoid temperature swings in the home. Trane tested, tried and true.

3. **Compressor Sound Insulator**
Reduces operating sound for a quieter home environment.

4. **All-Aluminum Spine Fin™ Coil**
Designed to enhance airflow and heat transfer while resisting corrosion and leaks, far better than traditional copper and aluminum coils.

5. **WeatherGuard™ II Top**
Attractive, durable polycarbonate for lasting protection and unique quality design.

6. **DuraTuff™ Rustproof Basepan**
Won't crack, corrode, rust or warp.

7. **Integrated Fan System**
Unique blade-down design improves airflow, enhances performance and reduces sound levels.

8. **Simplified Two-Wire Connection**
Allows for easier installation while reducing the need for structural modifications.

9. **Full-Sided Louvered Panels**
Galvanized steel panels protect internal components while preserving airflow efficiency.

10. **Powder-Paint Finish**
Virtually indestructible for maximum protection against corrosion and rust, and years of reliable protection.

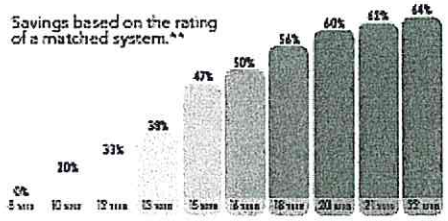
11. **WeatherGuard™ Fasteners**
Zinc-coated for corrosion resistance and longer life.

Features and components may vary by model and are shown for illustration purposes only. As part of our continuous product improvement, Trane reserves the right to change specifications and design without notice.

Save an average of up to $576 on energy costs each year.*

System efficiency is measured in SEER, (Seasonal Energy Efficiency Ratio) and HSPF (Heating Seasonal Performance Factor). The higher the SEER and HSPF, the greater the system's energy efficiency, and the lower the overall carbon footprint of your household.

System	Type	Efficiency Rating
XV20i	Air Conditioner	up to 22 SEER
XV20i	Heat Pump	up to 21 SEER/10 HSPF
XV18	Air Conditioner	up to 18 SEER
XV18	Heat Pump	up to 18 SEER/10 HSPF



* Based on Energy Star's Savings Calculator for a 3-ton 21 SEER/10HSPF heat pump and programmable thermostat versus the industry standard 13 SEER/7.7 HSPF 3-ton heat pump and standard thermostat in St. Louis, MO.

** The majority of systems installed prior to 2006 are 10 SEER or lower. Potential energy savings may vary depending on your lifestyle, system settings, equipment maintenance, local climate, home construction and installation of equipment and duct system.

Trane TruComfort™ systems work seamlessly with Trane's smart controls and Nexia™ Home Intelligence, allowing you to manage your home's heating and cooling remotely via any web-enabled smartphone, tablet or computer. In addition to climate control, Nexia™ Home Intelligence can be expanded to include remote management of locks, video surveillance, lights, shades, garage doors, energy usage, and more, from wherever life takes you.*

See www.nexiahome.com for the latest information.

NEXIA™ HOME INTELLIGENCE

* Subscription required with certain security features.

Independent Trane dealers value reliability as much as you do.

Your independent Trane dealer knows his or her reputation is made at every sale, and with every installation. Therefore, they are as personally invested in your comfort as you are, and take great pride in creating your perfect indoor environment. Trane dealers are some of the most highly trained in the business, with advanced technical skills to optimize every installation and solve any issue. They have an extensive understanding of the movement and conditioning of air, and the expertise to create a perfectly balanced, ultra-efficient system for every home. Trane dealers believe in doing the job right, every time. Otherwise, they wouldn't be Trane dealers.

Take comfort in our warranties.

The Trane TruComfort™ systems Registered Limited Warranty terms* include: 12 year limited warranty on compressor, 10 year limited warranty on outdoor coil, and 10 year limited warranty on internal functional parts. An option to purchase transferability of your Registered Limited Warranty is available. For all coverage options, check with your independent Trane dealer.

*Registered Limited Warranty terms are available when you register within 60 days of installation. You can register online at Trane.com or by phone at 800-554-6413, otherwise Trane's Base Limited Warranty terms will apply. Base Limited Warranty information on specific products can be found on Trane.com. Ask your dealer for full warranty information at time of purchase. Warranties are for residential and multi-family use only, some exclusions may apply.

Because Trane's Communicating systems match up perfectly, you get even more comfort for your family.

When you choose a Trane Communicating Variable Speed system, you get a family of communicating components that are designed to work seamlessly with each other. The result is not only your ideal home environment, but also the most reliable, clean and comfortable home possible.

INSIDE AND OUT. The real benefits of variable speed happen when your outdoor air conditioner or heat pump and your indoor furnace or air handler both use Trane TruComfort™ technology. Ask your dealer for the right match for your home and comfort expectations.

THE CLEANEST AIR ON THE PLANET. Trane CleanEffects™ is the most effective whole-house air filtration system available, removing up to 99.98% of allergens from filtered air. The more consistent and constant airflow of a Trane TruComfort™ Variable Speed system maximizes the advantage of Trane CleanEffects™ technology for the ultimate whole-house air cleaning solution.

SMART CONNECTED CONTROL. A powerful indoor comfort system requires a powerful user control. The Trane ComfortLink™ II XL950 is a home energy management tool that you can control from wherever you go via your smart phone or mobile device. It can even do the little things like remind you and/or your dealer to change or clean the filter.

Ingersoll Rand.

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results.

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 72-1305-04 01/15

TOWN OF TIBURON

Administrative Policy and Procedure

Number: 2006-03
Effective: July 26, 2006
Authority: Director of Community Development

Standards for Air Conditioning Units and Similar Mechanical Equipment

PURPOSE:

To provide guidance for Site Plan and Architectural Review of air conditioning units and similar mechanical equipment.

BACKGROUND:

Many properties in Tiburon contain windows and/or outdoor living or outdoor use areas that are in close proximity to adjoining properties. Commercial uses are also occasionally located near residential properties. The installation of air conditioning units or other similar mechanical equipment may potentially have adverse noise and aesthetic impacts on neighboring properties. For these reasons, Site Plan and Architectural Review approval is required for installation or relocation of exterior air conditioning or heating (HVAC) units, generators, or similar noise-generating mechanical equipment, pursuant to Title IV, Chapter 16, Section 16-52.020(B)(3) of the Tiburon Municipal Code.

POLICY:

In determining the completeness of, and in reviewing the merits of, Site Plan and Architectural Review applications involving air conditioning units or similar noise-generating mechanical equipment, the Director or his designee shall require sufficient information to find the following prior to approval:

1. For residential properties, the proposed equipment (in aggregate) would not generate more than 65 decibels according to the manufacturer's specifications. If the specifications exceed 65 decibels, noise baffles or other sound reduction methods shall be required to reduce the noise output to 65 decibels at a distance of five (5) feet, or would reduce the decibel level to 55 at the nearest property line. The burden shall be on the applicant to demonstrate compliance.

2. For non-residential properties, the proposed equipment (in aggregate) would (according to the manufacturer's specifications) comply with the "Normally Acceptable" noise exposure limits contained in the Noise and Land Use Compatibility Guidelines (below) of the Tiburon General Plan for the designated land use category. If the specifications exceed the "Normally Acceptable" limits, noise baffles or other sound reduction methods shall be required to reduce the noise levels to comply with these limits. The burden shall be on the applicant to demonstrate compliance.

3. The proposed equipment (if ground-mounted) has adequate screening to substantially conceal it from view from adjacent properties and public right-of ways by means of landscaping and/or fencing.

4. The proposed equipment does not exceed a total of two (2) such units if exclusively serving residential uses.

5. The location of the proposed equipment minimizes the noise and aesthetic impacts upon adjoining properties. If this criterion is not met, then a qualified heating, ventilation, and air conditioning (HVAC) professional shall certify in writing that the proposed equipment cannot feasibly be placed in another location that would minimize noise and aesthetic impacts on adjoining properties.

APPROVED:

Scott Anderson
Director of Community Development

July 26, 2006
Date

NOISE AND LAND USE COMPATIBILITY GUIDELINES

	Community Noise Exposure, Ldn or CNEL, in dB						
Land Use Category	55	60	65	70	75	80	85
Residential (interior noise levels not to exceed 45 dBA Ldn)							
Transient Lodging, Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks, Tennis Courts, Outdoor Recreation							
Water Recreation, Riding Stables, Golf Courses, Cemeteries							
Office Buildings, Business, Commercial & Professional							
Industrial, Manufacturing, Utilities, Agriculture							

	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.
	Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Cleary Unacceptable: New construction or development clearly should not be undertaken.

Source: *Tiburon 2020* (General Plan Noise Element, p. 7-2)

RGD
ACOUSTICS

Acoustical & Audiovisual Consultants

25 November 2015

David Holscher
Holscher Architecture
1550 Tiburon Boulevard
Belvedere, California 94920

Subject: Generator and Air-Conditioner Noise
Project: 168 Antonette Drive, Tiburon
RGD #: 15-062

Dear David:

We have completed our analysis of the noise level associated with the proposed equipment to be installed at the subject residence. This letter summarizes our analysis and presents our findings.

The project includes a generator and two air-conditioners along the west side of the residence. The proposed generator is a 20 kW Generac Guardian and has a sound level rating of 66 dBA at 23 feet operating at normal load. The air-conditioners are Day & Night Model N4A5 (one unit has a cooling capacity of 3 tons and the other 4 tons). The sound ratings of these units are a sound power level of 75 dBA and 76 dBA (per ARI 270).

The Town of Tiburon has a document entitled "Standards for Air conditioning Units and Similar Mechanical Equipment." The noise performance standard is as follows:

> *For residential properties, the proposed equipment (in aggregate) would not generate more than 65 decibels according to the manufacturer's specification. If the specifications exceed 65 decibels, noise baffles or other sound reduction methods shall be required to reduce the noise output to 65 decibels at a distance of five (5) feet, or would reduce the decibel level to 55 at the nearest property line.*

The nearest residential property line is 66 feet to the west of the proposed equipment location. There project includes a 5 foot high retaining wall between the equipment and the property line. The noise level at the property line was calculated based on a standard attenuation rate of 6 dBA per doubling of distance. The attenuation provided by the retaining wall walls calculated using published methodology[1]. A factor was also included in the calculation to account for the acoustical reflection from the house.

Based on these calculations the property line noise level is 52 dBA with all the equipment operating. This sound level is dominated by the generator (without the generator, the two air-conditioners generate a property line noise level of 39 dBA). Since the property line noise level is less than 55 dBA, the equipment satisfies the Town of Tiburon's equipment noise performance standard.

This concludes our analysis. Please call if you have any questions or comments.

* * *

Sincerely,

Harold S. Goldberg, P.E.
Principal
RGD Acoustics, Inc.

File Name: Document3

[1] *Noise Control for Buildings and Manufacturing Plants*, Laymon Miller, 1981