PROJECT NAME:
LANSSLIL RESIDENCE
PROJECT LOCATION:
15 SADDLE WOOD DR, NOVATO, CA 94945
(N) FLEXIBLE CONNECTOR

(N) GENERAC 22kW

(N) SHUT OFF VALVE

(E) NATURAL GAS METER

(E) APPROXIMATELY 24 FT. SCHED 40 METAL PIPE LINE (1.25" Ø) BETWEEN GENERAC TO EXISTING GAS LINE

(E) GENERATOR PIPE SIZES AND TYPES: 1.25'' Ø SCHED 40 METALLIC PIPE
Fuel Conversion / Gas Connections

Natural Gas Pipe Sizing
To determine correct gas pipe size, find the kW rating of the generator in the left column, and trace to the right. The number to the right is the maximum length (measured in meters / feet) allowed for the pipe sizes on top. Pipe sizes are measured by inside diameter (ID) to include any fittings, valves (must be full flow), elbows, tees, or angles.

**NOTE:** Add 2.5 ft (0.76 m) per any bend, tee, or angle in the pipe to the overall distance. Tables based on schedule 40 black pipe. If installing any other piping system, follow the pipe sizing charts for the selected piping system.

<table>
<thead>
<tr>
<th>Pipe Size (in / mm)</th>
<th>For 5-7 in of water column (9-13 mmhg)</th>
<th>For 3.5-6 in of water column (7-9 mmhg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allowable Pipe Distances (ft / meters)</td>
<td>Allowable Pipe Distances (ft / meters)</td>
</tr>
<tr>
<td>9 kW</td>
<td>0.75 / 19</td>
<td>1 / 25</td>
</tr>
<tr>
<td>22KW GENERATOR PIPE LENGTH = 125&quot; PIPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 kW</td>
<td>20 / 6.1</td>
<td>85 / 26.1</td>
</tr>
<tr>
<td>16-22 kW</td>
<td>130 / 39.82</td>
<td>305 / 93.36</td>
</tr>
</tbody>
</table>

LP Vapor Pipe Sizing
To determine correct LP vapor pipe size, find the kW rating of the generator in the left column, and trace to the right. The number to the right is the maximum length (measured in meters / feet) allowed for the pipe sizes on top. Pipe sizes are measured by inside diameter (ID) to include any fittings, valves (must be full flow), elbows, tees, or angles. Add 2.5 ft (0.76 m) per any bend, tee, or angle in the pipe to the overall distance.

**NOTE:** Pipe sizes are using a second stage regulator.

<table>
<thead>
<tr>
<th>Pipe Size (in / mm)</th>
<th>Allowable Pipe Distances (ft / meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 kW</td>
<td>165 / 50.29</td>
</tr>
<tr>
<td>11 kW</td>
<td>70 / 21.33</td>
</tr>
<tr>
<td>16 kW</td>
<td>25 / 7.62</td>
</tr>
<tr>
<td>20-22 kW</td>
<td>16 / 4.87</td>
</tr>
</tbody>
</table>

Installation Guidelines For 60 Hz Air-Cooled Generators

<table>
<thead>
<tr>
<th>Generator Pipe Sizing</th>
<th>Gas Line to Generator Pipe Length = 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Refer to Table)</td>
<td>22KW GENERATOR PIPE LENGTH = 125&quot; PIPE</td>
</tr>
</tbody>
</table>

Project Details
- Project Name: LANSILL RESIDENCE
- Customer Name/Phone Number: CLAY, 415-902-0186
- Contractor: GOLD RUSH ENERGY SOLUTIONS
- Project Location: 4911 WINDPLAY, EL DORADO HILLS, CA 95762
**Generator Details (Front)**

**Generator Details (Side)**

**Generator Brand/Model/KW/HZ:**
- GENERAC G7042 22KW 60HZ

**Service Upgrade Size:**
- N/A

**ATS Brand/Model/Rating:**
- 200A, 240VAC GENERAC SMART SWITCH

**Generator Dimensions:**
- 48" X 25" X 29"

**Generator Location:**
- OUTDOOR

**Generator Pipe Sizes and Types:**
- 1.25'' Ø SCHED 40 METALLIC PIPE

**AC Disconnect Specifications:**
- 60A 240V, NEMA-3R

**Utility:**
- PG&E

**Generator Fuel Type:**
- NATURAL GAS

**Project Details**

- **Lot Size:** 1 Acres
- **Dwelling:** 3,214 SQFT
- **APN:** 17-11-2020

**Project Name:**
- JBB

**Contractor:**
- GOLD RUSH ENERGY SOLUTIONS
  - JORDAN LYKINS
  - CSLB LIC# 1014971
  - 4911 WINDPLAY, EL DORADO HILLS, CA 95762

**Customer Name/Phone Number:**
- CLAY LANSILL
  - 415-902-0186

**Project Location:**
- 75 SADDLE WOOD DR, NOVATO, CA 94945

**System Information**

- **Residence:**
- **Clay Lansill**
- **CLAY LANSILL**
  - **415-902-0186**

- **Project Details**
  - **LOC**
  - **LOT SIZE:** 1 Acres
  - **Dwelling:** 3,214 SQFT
  - **DRAWN BY:**
  - **CHECKED BY:**
  - **DATE:** 11-11-2020

**Sheet Name:** EQUIPMENT PLAN

**Sheet Number:** P-5

**Scale:** AS SHOWN
1. All modules will be grounded in accordance with code and the manufacturer's installation instructions.

2. All PV equipment shall be listed by a recognized tested lab.

3. Notify serving utility before activation of PV system.

4. When a backfed breaker is the method of utility interconnection, breaker shall not read line and load.

5. When a backfed breaker is the method of utility interconnection, the breaker shall be installed at the opposite end of the bus bar of the main breaker.

6. Work clearances around electrical equipment will be maintained per NEC / CEC 110.26(A)(1), 110.26(A)(2) & 110.26(A)(3).

7. All exterior conduits, fittings and boxes shall be rain-tight and approved for use in wet locations per NEC / CEC 314.15.

8. All metallic raceways and equipment shall be bonded and electrically continuous.

9. All PV equipment, systems and all associated wiring and interconnections shall be installed by qualified persons.

10. The photovoltaic system conductors shall be identified and grouped. The means of identification shall be permitted by separated color coding, marking tape, tagging or other approved means. NEC/CEC 690.4(B).

11. Adequate spacing must be maintained between any plumbing sewer vents extending through the roof and the underside of the photovoltaic panels (6” minimum recommended).

12. PV equipment, systems and all associated wiring and interconnections shall only be installed by qualified persons (NEC / CEC 690.4 E).

13. Photovoltaic system conductors shall be identified and grouped. The means of identification shall be permitted separate color coding, marking tape, tagging or other approved means (NEC / CEC 690.4B).

14. Externally operated knife blade type AC disconnect switch which is lockable in the open position and "ON" and "OFF" visible designations which is directly accessible to PGE utility department employees at all times 60AMP, 250VAC utility lockable (AC) disconnect (NEMA 3R).

15. Photovoltaic meter socket will be provided within 5' to 7' (center to center of meters) from the existing service meter and that it will be installed between 48" to 75" above the floor or grade level.

16. The sum of 125 percent of the inverter(s) output circuit current and the rating of the overcurrent device protecting the busbar shall not exceed the ampacity of the busbar (NEC 705.12(D)(2)(A)).

17. A connection at either end, but not both ends, of a center-fed panel board in dwellings shall be permitted where the sum of 125 percent of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar does not exceed 120 percent of the current.
CONDUCTOR AND CONDUCT OR SCHEDULE

<table>
<thead>
<tr>
<th>ID</th>
<th>CONDUCTOR</th>
<th>Kducture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(3) 3 AWG Thin Thhn-2 (Gnd)</td>
<td>1/4&quot; EMT CONDUIT</td>
</tr>
<tr>
<td>2</td>
<td>(1) 4 AWG Thin Thhn-2</td>
<td>1/4&quot; EMT CONDUIT</td>
</tr>
<tr>
<td>3</td>
<td>(1) 4 AWG Thin Thhn-2 (Gnd)</td>
<td>1/4&quot; EMT CONDUIT</td>
</tr>
<tr>
<td>4</td>
<td>EXISTING WIRES</td>
<td>EXISTING WIRES</td>
</tr>
</tbody>
</table>
WARNING: AUTOMATIC STANDBY GENERATOR LOCATED ON THE PREMISES.
GENERATOR LOCATED: ____________________________

WARNING: DUAL POWER SOURCE
POWER IS BEING SUPPLIED TO THIS PANEL FROM THE UTILITY AND A BACKUP GENERATOR

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AT SHOWN:

- RED SIGNAGE W/ WHITE 1/4" FONT
- RED SIGNAGE W/ WHITE 1/8" FONT

MAIN SERVICE PANEL
NEC 705.12(D)(6) 690/56(B) - ON PANEL COVER

SYSTEM INFORMATION
- CUSTOMER NAME/PHONE NUMBER:
  CLAY LANSILL
  415-902-0186

- PROJECT LOCATION:
  15 SADDLE WOOD DR, NOVATO, CA 94945

- RESIDENCE
  CLAY LANSILL
  415-902-0186

- PROJECT NAME:
  LANSILL RESIDENCE

- CONTRACTOR:
  GOLD RUSH ENERGY SOLUTIONS
  JORDAN LYKINS
  CSLB LIC# 1014971
  4911 WINDPLAY, EL DORADO HILLS
  CA 95762

- SYSTEM INFORMATION
  - GENERATOR BRAND/MODEL/KW/HZ:
    GENERATOR BRAND/MODEL:
    GENERATOR SPECIFICATIONS:
    GENERATOR LOCATION:
    "RED SIGNAGE W/ WHITE 1/4" FONT"
    "RED SIGNAGE W/ WHITE 1/8" FONT"
    "DESCRIPTION CONS 24 X 24"
    "CONCRETE SLAB"
    "(E)MSP, 200 BUSH, 240V"
    "METER NO: 1007928171"
    "(N) 200A, 240VAC GENERAC SMART SWITCH"
    "CAUTION"
    "GENERAC G7042 22KW 60HZ"
    "3"" GENPAD CONCRETE SLAB"
    "GENERATOR FUEL TYPE:
      NATURAL GAS"
## BILL OF MATERIALS GENERATOR SYSTEM

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>MAKE</th>
<th>MODEL NUMBER</th>
<th>QUANTITY</th>
<th>UNIT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERATOR</td>
<td>GENERAC</td>
<td>G7042</td>
<td>1.0000</td>
<td>PIECES</td>
<td>22KW, 240 VAC GENERAC GUARDIAN SERIES</td>
</tr>
<tr>
<td>CONCRETE SLAB</td>
<td>GENERAC</td>
<td>G4K678</td>
<td>1.0000</td>
<td>PIECES</td>
<td>3&quot; GENERAC CONCRETE SLAB, 54&quot; X 31&quot; X 3&quot;</td>
</tr>
<tr>
<td>AUTOMATIC TRANSFER SWITCH</td>
<td>GENERAC</td>
<td>GENERAC 200A, 240V, SMART SWITCH</td>
<td>1.0000</td>
<td>PIECES</td>
<td>200A, 240 VAC, GENERAC SMART SWITCH</td>
</tr>
<tr>
<td>WIRING</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-3-AWG-THWN-2-CU-RD</td>
<td>24</td>
<td>FT</td>
<td>#3 AWG THWN-2, COPPER, RED (LINE 1)</td>
</tr>
<tr>
<td>WIRING</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-3-AWG-THWN-2-CU-BLK</td>
<td>24</td>
<td>FT</td>
<td>#3 AWG THWN-2, COPPER, BLACK (LINE 2)</td>
</tr>
<tr>
<td>WIRING</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-3-AWG-THWN-2-CU-WH</td>
<td>24</td>
<td>FT</td>
<td>#3 AWG THWN-2, COPPER, WHITE (NEUTRAL)</td>
</tr>
<tr>
<td>WIRING</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-8-AWG-THWN-2-CU-GRN</td>
<td>24</td>
<td>FT</td>
<td>#8 AWG THWN-2, COPPER, GREEN (GROUND)</td>
</tr>
<tr>
<td>WIREWAY</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-SCHED PVC-1 1/4&quot; DIA</td>
<td>24</td>
<td>FT</td>
<td>SCHED 40 PVC CONDUIT, 1 1/4&quot; DIA</td>
</tr>
<tr>
<td>FUEL PIPE</td>
<td>GENERIC MANUFACTURER</td>
<td>GEN-EMT-1 1/4&quot; DIA</td>
<td>24</td>
<td>FT</td>
<td>EMT CONDUIT 1/4&quot; DIA</td>
</tr>
<tr>
<td>FUEL PIPE</td>
<td>GENERIC MANUFACTURER</td>
<td>1.25&quot;</td>
<td>24</td>
<td>FT</td>
<td>METAL FUEL PIPE 1.25&quot;</td>
</tr>
<tr>
<td>FITTING</td>
<td>GENERIC MANUFACTURER</td>
<td>SHUT OFF VALVE 1&quot; DIA</td>
<td>1.0000</td>
<td>PIECES</td>
<td>NATURAL GAS SHUT OFF VALVE, 1&quot; DIA</td>
</tr>
<tr>
<td>FITTING</td>
<td>GENERIC MANUFACTURER</td>
<td>SHUT OFF VALVE 1&quot; DIA W/ PRESSURE PORT</td>
<td>1.0000</td>
<td>PIECES</td>
<td>NATURAL GAS SHUT OFF VALVE WITH PRESSURE PORT, 1&quot; DIA</td>
</tr>
</tbody>
</table>

### PROJECT DETAILS

- **APN:** 17-11-2020
- **LOT SIZE:** 3,214 SQFT
- **Dwelling:** 1 ACRES
- **PROJECT LOCATION:** 14355012
- **ATM BRAND/MODEL/RATING:** GENERAC 200A, 240V, SMART SWITCH
- **GENERATOR DIMENSIONS:** 48" X 25" X 29" OUTDOOR
- **GENERATOR LOCATION:** OUTDOOR
- **GENERATOR PIPE SIZES AND TYPES:** 1.25'' Ø SCHED 40 METALLIC PIPE 1.25''
- **AC DISCONNECT SPECIFICATIONS:** 60A 240V, NEMA-3R
- **UTILITY:** PG&E
- **GENERATOR FUEL TYPE:** NATURAL GAS
- **FUEL PIPE:** METAL FUEL PIPE 1.25''
- **FITTING:** SHUT OFF VALVE 1" DIA W/ PRESSURE PORT
- **FITTING:** NATURAL GAS SHUT OFF VALVE WITH PRESSURE PORT, 1" DIA
Choose the #1 selling home standby generator brand

Generac’s Guardian Series generators provide the automatic backup power you need to protect your home and family during a power outage. Connected to your existing LP or natural gas fuel supply, it kicks in within seconds of sensing power loss—automatically—and runs for as long as necessary until utility power returns. Choose from Generac’s industry-leading lineup to power just the essentials or Generac’s 22kW, the largest air-cooled generator in the market, for whole-house coverage.

**Features & Benefits:**

**GENERAC’S G-FORCE ENGINE**
Are purpose-built, pressure-lubricated engines capable of handling the rigors of generator use, resulting in power that’s more reliable and requires less routine maintenance than any competitive engine. Generac’s G-Force engine features hydraulic lifters—improving engine performance and extending the life of the product. (*Hydraulic lifters only available on the 10 & 16 kW*)

**TRUPOWER® TECHNOLOGY**
Delivers best-in-class performance with less than 5% total harmonic distortion for clean, smooth operation of sensitive electronics and appliances.

**QUIET-TEST® SELF-TEST MODE**
Runs at a lower RPM for a five or twelve-minute test, making generator significantly quieter than other brands while consuming less fuel.

**GENERAC’S EVOLUTION® CONTROLLER**
Features a multilingual LCD display that allows you to monitor battery status and track maintenance intervals to ensure your generator is always in top operating condition.

**TOUGH, DURABLE ENCLOSURES**
Our RinoCoat® powder-coated finish helps make corrosion-resistant aluminum perfect for all weather conditions.
A Solid Foundation for You and Your Customers

The new GenPad™ is the answer for dealers who need a professional looking pad that will provide a lifetime base for their Generac® home backup generator installations.

Each GenPad is made from a composite of high strength fibers and cement and is warranted for the life of the generator. These pads provide a sturdy, permanent base with a professional appearance for the generator. Give your customers even more peace of mind with their Generac generator purchase when you add the reliable GenPad.

GenPads are much lighter weight than a poured concrete pad and take less time and effort to install. GenPads are made specifically to fit Generac 8-22kw home standby units. GenPads were specifically designed to meet the engineering specifications of Generac units. All GenPads are purchased directly from Generac and include these features:

- Extremely Impact and Breakage Resistant
- Fiber reinforced concrete that is further reinforced with rebar
- Flat bottom to facilitate easy leveling of the pad and generator
- Virtually eliminates sinking of the unit into the ground
- Easy to install
- 1/3 the weight of poured concrete
- Meets national gas code NFPA 37

Two models to meet any need

GenPad™
Designed for residential installation.

GenPad Hurricane™
Thicker, heavier 4” pad designed to meet wind load requirements in hurricane prone areas.

800.888.2069
www.genpads.com
GenPad Program

Available in pallets of 2, 5 or 10 - volume discounts available

Dealers and distributors: Call today for pricing: 800-888-2069

GenPads are now available in pallet quantities of ten, five and two!

GenPads are the answer for dealers who want a professional looking pad that provides a firmer base for Generac home standby generators.

• Pallets of ten pads can be mixed with both sizes (ex: quantity 8 GS5399 and quantity 2 GS5340 to make up one pallet of ten).

Due to weight limitations, all shipments of 100 or more pads in multiple sizes will be reviewed by Generac prior to shipment.

FAQ:

Q: Is the GenPad approved by Generac for use with its generators?
A: The GenPad is not only approved by Generac, but is only available for purchase from Generac!

Q: Why would you want to install a GenPad under a Generac unit?
A: The GenPad provides a solid, sturdy foundation for all 8-22 kW Generac® produced generators and eliminates the risk of uneven mounting surfaces. Many local area codes may also require a concrete base for the generator. The GenPad also provides extra height off the ground for the generator.

Q: Can I install my Generac generator on the GenPad without removing the black composite mounting pad?
A: Yes, by leaving the black composite mounting pad attached to the generator with the back two bolts and by removing the front two bolts. Please the generator with the black composite mounting pad in place, on top of the already placed and leveled GenPad. Align the bolt holes of any 8-22 kW Generac® produced generator with the inserts in the GenPad and attach together by using 3" long 3/8" bolts. Retaining with the black composite pad between the generator and the GenPad also elevates the generator so that the plastic flaps (standard with 22kw and available in kits for other sizes) can be used.

Q: What do I need to put underneath the GenPad?
A: The GenPad can be placed directly onto leveled ground. There is no need to place anything below it to provide a stable platform with professional appearance.

Q: Why should I sell my customers a GenPad?
A: The GenPad provides a sturdy base for the Generac® generator and helps protect it and keep it level to maximize its performance and life. The GenPad is faster and easier to install than pouring a concrete pad and makes an excellent accessory add-on when selling a new generator.

Q: Where is the GenPad Hurricane used?
A: The 4-Inch GenPad Hurricane is a heavier, thicker pad that is ideal for high wind zone areas: Florida, the Gulf Coast and the Tidewater region. They are also used for installations that require more ground clearance. To view the wind load tables please visit: genpads.com/resources.html

Q: If I have product related questions whom can I contact?
A: Please contact DiversTech via email genpads@diversitech.com or call 1-800-888-2069

Other Info:
Warranted for the life of the generator (through DiversTech). 25% recycled material, Rebar reinforced.