# Land Use Application

**Applicant(s)** Julia Crocker - Agent for American Tower  
**Mailing Address:** 2918 Clairmont Avenue South, Birmingham, AL 35205  
**Phone:** 205-933-0870  
**Email:** jcrocker@craftongroup.com  

**Property Owner(s)** American Tower Corporation - Tower Owner  
**Mailing Address:** 10 Presidential Way, Woburn, MA 01801  
**Phone:** 813-422-1080  
**Email:** ashley.walls@americantower.com

**Summary of Proposal**  
THE PROPOSED PROJECT INSTALLS AN OPTIONAL STANDBY GENERATOR SYSTEM, AUTOMATIC TRANSFER SWITCH, GENERATOR AUXILIARY POWER DISTRIBUTION, AND REMOTE MONITORING COMMUNICATIONS CIRCUITRY FOR A COMMUNICATION TOWER TENANT.

**Parcel Address** Unknown Situs Address, Dallesport, WA 98617  
**Township, Range, Section, Qtr. Section** TWP: 2  
RGE: 13  
SEC: 9  
**Tax Lot Number(s)** 02130900000000  
**Parcel Size (acres)** 640  
**Existing Use of Parcel** Use Code: 83  
**Use of Adjacent Parcels**
**Project Description:** Please describe all proposed development and use of the development, including size, height, exterior colors, construction materials of proposed structures (including access roads), areas of ground disturbance, and landscaping details. Please describe all aspects of your project in this description or the public notice and final decision may not include an element of your development, which could require a new notice and decision. You may attach additional pages if necessary.

The proposed project installs an optional standby generator system, automatic transfer switch, generator auxiliary power distribution, and remote monitoring communications circuitry for a communication tower tenant. See the construction drawings for additional details. There will be no work done on the cell tower itself nor will work take place outside of the existing compound area.

The property owner and holders of easements and partial interests indicate that they are aware that an application is being made on the subject property and the property owner authorizes the Gorge Commission and the Commission’s designees reasonable access to the site to evaluate the application.

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<th>Applicant(s) signature:</th>
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<td><strong>Julia Crocker</strong></td>
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UP THE ROAD TO THE SITE DRIVEWAY ON THE RIGHT.

before you dig.

Call CARY, NC 27518 5TH GATE WHERE ROAD BECOMES DIRT WITH ROCKS; CONTINUE

MILES TO THE LEFT HAIRPIN TURN AND PROCEED THROUGH THE ROCKY BLUFFS AND CONTINUE TO THE FIRST

THROUGH); ROAD VEERS RIGHT ALONG THE FENCE LINE; CROSS THE DALLES BRIDGE INTO WASHINGTON AND TURN LEFT

4 WHEEL DRIVE REQUIRED. PROCEED ON I-84 TO THE DALLES, PROJECT LOCATION DIRECTIONS

4 WHEEL DRIVE REQUIRED. PROCEED ON HWY 14; TURN RIGHT AT THE INTERSECTION ONTO HWY 14; TURN RIGHT AT THE

DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.

HANDICAP ACCESS IS NOT REQUIRED.

DISPOSAL IS REQUIRED.

THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.

NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.

THE FACILITY IS UNMANNED.

THE PROJECT IS UNMANNED.

A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.

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CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 317 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS". AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCING STEEL".

2. REINFORCING STEEL SHALL BE SPliced TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED INSTRUCTIONS.

3. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."

4. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5 %) WITH A SLUMP RANGE OF 3-5 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.

5. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND IF REQUIRED SHALL HAVE FIRE PROTECTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, AND FIRE PREVENTION.

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7. LOCATIONS OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT AND DRAWINGS ShOWN OR AS ACCORDING TO THE ACCEPTANCE AND THE ENGINEER. THE DRAWINGS SHOWING DETAIL OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED TO AMERICAN TOWER FOR STEEL PLACEMENT DRAWINGS.

8. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.

9. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVE, GROUT, AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.

10. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION PER ATC SPECIFICATIONS.

11. CONCRETE SHALL BE SPILED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN DRAWINGS OR AS ACCEPTED BY THE ENGINEER.

12. CONCRETE AND REINFORCING STEEL CONSTRUCTION MANAGER.


14. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3 INCHES.

15. REPAIR ALL WELDS AS NECESSARY.

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17. MINIMUM AIR ENTRAINED PERCENTAGE FOR REINFORCING STEEL: ASTM C 150, TYPE 2 6% AIR ENTRAINED. ASTM C 494/494M, TYPE F.

18. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUT, AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.

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1. **SITE PLAN NOTES:**

   - This site plan represents the present knowledge available to the engineer at the time of this design. The contractor shall visit the site prior to construction and verify all existing conditions related to the scope of work for this project.

   - Ice bridge, cable locker, man ports, and coax cable are shown for reference only. Contractor shall confirm the exact location of all proposed and existing equipment and structures depicted on this plan before utilizing existing cable supports, man ports, installing new ports, or any other equipment. Contractor shall verify all aspects of the components meet the ATC specifications.

   - It is the responsibility of the contractor to coordinate with the ATC construction manager and local utility company for the installation of conduits, conductors, breakers, disconnects, or any other equipment required for electrical service. All electrical work shall be performed in accordance with the latest edition of the state and national codes, ordinances, and regulations applicable to this project.

   - Contractor shall ensure that all working space requirements are met per applicable codes and manufacturer specifications.

   - Above ground conduits need to be supported/fastened per NEC 344, NEC 382, and per ATC construction specifications.

   - The following signs shall be installed at tenant service main disconnect per NEC 712.7.

     - **CAUTION: Two Sources of Supply Standby Generator Located Outdoors**

     - **Warning: Shock Hazard Exists If Grounding Electrode Conductor or Bonding Jumper Connection in this Equipment is Removed While Alternate Source is Energized**

   - **Rodent Control, Around Generator Envelope:**

     1. Install all provided seals, plugs, covers, etc. in generator and fuel tank envelope. Seal all remaining openings (except normal venting) with rodent foam sealant. No opening shall be larger than 1/4 inch in any dimension.

     2. Seal all conduits entering generator equipment, boxes, attachments, etc. with rodent foam sealant.

     3. Seal all conduit access openings through concrete pad with concrete.

     4. Slope gravel base at concrete pad perimeter from above pad base to existing grade level, typical all perimeter sides.

2. **PROPOSED UNDERGROUND POWER AND COMMUNICATIONS:**

   - **Conduits per electrical one-line diagram**

   - **PROPOSED GENERATOR SITES FOR BACKUP POWER**

     1. **PROPOSED GENERATOR 6-STOP**

     2. **PROPOSED H-FRAME**

     3. **PROPOSED MONITORING UNIT**

   - **NEMA 3R JUNCTION BOX SIZED PER NEC 314 TO SUPPLY FEEDER FROM PROPOSED ATS TO EXISTING TENANT PANEL**

     4. **PROPOSED JUNCTION BOX PREFERABLY MOUNTED ON BACK OF FRAME OR ALTERNATE HANDHOLE IN GROUND**

   - **PROPOSED GENERATOR PAD W/ 50 KW DIESSEL GEN. FOR BACKUP POWER (SEE SITE PLAN NOTE 4)**

3. **SITE PLAN:**

   - **EXISTING T-MOBILE PANEL**

   - **EXISTING MONOPOLE**

4. **REFERENCES ONLY:**

   - Mobility, Jeep Trail P. O. Box 449

5. **NOT FOR CONSTRUCTION:**

   - Detailed plans, specifications, equipment, and material lists are all subject to change due to changes in operational needs or design changes.

6. **SEAL:**

   - LYLE, WA 98635

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**ADDRESS:**

**NOTE:**

- Preliminary not for construction.

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**PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN.**

- This site plan represents the best present knowledge available to the contractor at the time of this design. The contractor shall verify all existing conditions related to the scope of work for this project.

- Ice bridge, cable locker, man ports, and coax cable are shown for reference only. Contractor shall confirm the exact location of all proposed and existing equipment and structures depicted on this plan before utilizing existing cable supports, man ports, installing new ports, or any other equipment. Contractor shall verify all aspects of the components meet the ATC specifications.

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**SITE PLAN NOTES:**

- The scope of work for this project.

- The following signs shall be installed at tenant service main disconnect per NEC 712.7.

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  - Seal all conduit access openings through concrete pad with concrete.

  - Slope gravel base at concrete pad perimeter from above pad base to existing grade level, typical all perimeter sides.
1. **PADS** shall be pre-cast matching this design where allowed by local jurisdiction.
2. PADS shall have a MN 28 day compressive strength as specified on G-02. Concrete and reinforcing steel notes #3.
4. Stub-up area shall be filled with Quikrete, or approved equal, prior to final set of generator on pad.
5. After final set of generator on pad, grub all exterior openings at pad interface so that finished maximum opening shall be 1/4 inch.
6. Grout shall be per ATC construction specification division 03. Concrete.
7. Placement of pad shall be such pads shall be placed such that a minimum of 2'-0" of pad shall be surrounded by backfilling. See ATC construction specifications 033000 Sections 1.3.

**CONTRACTOR’S NOTES:**

1. If type of organic or other deleterious material, excavated material may be used for backfill. If not, provide clean, compatible material.
2. Compact 4'-0" of U/F, using a mechanical plate tamper, 3/3 passes. Remove any large rocks prior to backfilling. Contractor to verify location of existing U/G utilities prior to digging. See ATC construction specification 033000 Section 1.3.
3. If current as-built drawings are not available contractor shall hand dig U/G trenching.
4. Confirm spacing and depth with NEC or local code requirements.
5. Compaction of the perimeter (2'-0" min) of footing with mechanical plate tamper.
6. Footings shall be one of the following: USS Polecrete Stabilizer System, Precast Concrete (where allowed by jurisdiction) or cast in place. For precast footings, contractors shall thoroughly compact the perimeter (2'-0") of footing with mechanical plate tamper.
7. Use galvanized HILT expansion anchors or approved equal, for equipment anchorage.
8. For size and location of anchors and other requirement, see equipment vendor drawings.
9. All items are proposed unless otherwise noted.

**H-FRAME:**

1. If it is necessary to extend the H-frame, an additional post shall be required.
2. Proposed anchors to be field cut and shall not extend more than 8" beyond the last post.
3. Spray ends of Unistrut with cold galvanizing spray paint. Allow to dry, then cover with rubber protective caps for safety.
4. Unistrut to be cut flush with no sharp or jagged edges.
5. All proposed hardware to be mounted and grounded per manufacturer’s specs.
6. All items are proposed unless otherwise noted.
7. Layout of H-frame & proposed equipment exactly as shown to allow for future equipment. Any deviations must be approved by ATC-CIL, in writing, no exceptions.
8. Footings shall be one of the following: USS Polecrete stabilizer system, Precast Concrete (where allowed by jurisdiction) or cast in place. For precast footings, contractors shall thoroughly compact the perimeter (2'-0") of footing with mechanical plate tamper.

**TRENCH NOTES:**

1. If type of organic or other deleterious material, excavated material may be used for backfill. If not, provide clean, compatible material.
2. Compact 4'-0" of U/F, using a mechanical plate tamper, 3/3 passes. Remove any large rocks prior to backfilling. Contractor to verify location of existing U/G utilities prior to digging. See ATC construction specification 033000 Section 1.3.
3. If current as-built drawings are not available contractor shall hand dig U/G trenching.
4. Confirm spacing and depth with NEC or local code requirements.

**SCALE:** N.T.S.
SD080 | 4.5L | 80 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

STANDBY POWER RATING
80 kW, 100 kVA, 60 Hz

PRIME POWER RATING
72 kW, 90 kVA, 60 Hz

POWERING AHEAD
For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac’s generators utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers’ service support continues after their generator purchase.

COCES AND STANDARDS
Generac products are designed to the following standards:

- UL 2000, UL 608, UL 142, UL 499
- NFPA 70, 99, 110, 37
- NEC 700, 701, 702, 709
- ISO 9001, 6678, 3046, 7037
- IEEE
- NEMA IC510, MS1, 250, IC56, AB1
- ANSI C62.41

OPEN SET

STANDARD ENCLOSURE

LEVEL 1 ACUSTIC ENCLOSURE

LEVEL 2 ACUSTIC ENCLOSURE

*All measurements are approximate and for estimation purposes only. Sound data can be found on the sound data sheet. Enclosure weight is added to Tank & Open Set weight to determine total weight.

Copyright © 2022 ATC IP LLC, All Rights Reserved.
STANDBY POWER RATING
80 kW, 100 kVA, 60 Hz

PRIME POWER RATING*
72 kW, 90 kVA, 60 Hz

*Built in the USA using domestic and foreign parts

**EPA Certified Prime ratings are not available in the U.S. or its Territories.

**Certain options or customization may not hold certification valid.

CODES AND STANDARDS
Generac products are designed to the following standards:

UL 2200, UL508, UL142, UL498

NFPA70, 99, 110, 37

NEC700, 701, 702, 708

ISO9001, 8528, 3046, 7637, Pluses #2b, 4

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

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STANDARD FEATURES

ENGINE SYSTEM
General
- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer (enclosed only)
- Factory Filled Oil
- Radiator Duct Adapter (open set only)

Fuel System
- Fuel lockoff solenoid
- Primary fuel filter

Cooling System
- Closed Coolant Recovery System
- UV/Ozone resistant hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene glycol antifreeze
- Closed Coolant Recovery System
- Factory Filled Oil
- Critical Exhaust Silencer (enclosed only)
- Stainless steel lift off door hinges
- Rhino Coat™- Textured polyester powder coat

Engine Electrical System
- Battery charging alternator
- Battery cables
- Battery tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

ALTERNATOR SYSTEM
- UL2200 GENprotect™
- 12 leads (3-phase, non 600 V)
- Class H insulation material
- Vented rotor
- 2/3 pitch
- Skewed stator
- Auxiliary voltage regulator power winding
- Amortisseur winding
- Brushless Excitation
- Sealed Bearings
- Automated manufacturing (winding, insertion, lacing, varnishing)
- Rotor dynamically spin balanced
- Full load capacity alternator
- Protective thermal switch

GENERATOR SET
- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Silencer Heat Shield
- Wrapped Exhaust Piping
- Silencer housed in discharge hood (enclosed only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby rated Units)
- 1 Year Limited Warranty (Prime rated Units)
- Silencer mounted in the discharge hood (enclosed only)

CONTROL SYSTEM
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection
- Single point ground
- 15 channel data logging
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

Alarms
- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

ENCLOSURE (IF SELECTED)
- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat™- Textured polyester powder coat

TANKS (IF SELECTED)
- UL 142
- Double wall
- Vents
- Sloped top
- Sloped bottom
- Factory pressure tested (2 psi)
- Rupture basin alarm
- Fuel level
- Check valve in supply and return lines
- Rhino Coat™- Textured polyester powder coat
- Stainless hardware
**ENGINE SYSTEM**

- **General**
  - Oil Heater
  - Industrial Exhaust Silencer

- **Fuel System**
  - Flexible fuel lines
  - Primary fuel filter

**Engine Electrical System**

- 10A UL battery charger
- 2.5A UL battery charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating
- Permanent Magnet Excitation

**ENGINEERED OPTIONS**

**ENGINE SYSTEM**

- Coolant heater ball valves
- Block Heaters
- Fluid containment pans

**ALTERNATOR SYSTEM**

- 3rd Breaker Systems

**CONTROL SYSTEM**

- Spare inputs (x4) / outputs (x4) - H Panel Only
- Battery Disconnect Switch

**CIRCUIT BREAKER OPTIONS**

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breaker

**GENERATOR SET**

- Gen-Link Communications Software (English Only)
- IBC Seismic Certification
- 8 Position Load Center
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty

**ENCLOSURE**

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- 150 MPH Wind Kit
- 12 VDC Enclosure Lighting Kit
- 120 VAC Enclosure Lighting Kit
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

**ENGINEERED OPTIONS**

**ENGINE SYSTEM**

- Coolant heater ball valves
- Block Heaters
- Fluid containment pans

**ALTERNATOR SYSTEM**

- 3rd Breaker Systems

**CONTROL SYSTEM**

- Spare inputs (x4) / outputs (x4) - H Panel Only
- Battery Disconnect Switch

**TANKS (Size on last page)**

- Electrical Fuel Level
- Mechanical Fuel Level
- 8" Fill Extension
- 13" Fill Extension
- 19" Fill Extension

**CONTROL SYSTEM**

- 21-Light Remote Annunciator
- Remote Relay Panel (8 or 16)
- Oil Temperature Sender with Indication Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- Remote Communication - Ethernet
- 10A Run Relay
- Ground Fault Indication and Protection Functions

**RATING DEFINITIONS**

**Standby** - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

**Prime** - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition
### ENGINE SPECIFICATIONS

#### General
- **Make**: Iveco/FPT
- **EPA Emissions Compliance**: Stationary Emergency
- **EPA Emissions Reference**: See Emissions Data Sheet
- **Cylinder #**: 4
- **Type**: In-Line
- **Displacement - L (cu In)**: 4.5 (274.6)
- **Bore - mm (in)**: 105 (4.1)
- **Stroke - mm (in)**: 132 (5.2)
- **Compression Ratio**: 17.5:1
- **Intake Air Method**: Turbocharged/Aftercooled
- **Cylinder Head Type**: 2 Valve
- **Piston Type**: Aluminium
- **Crankshaft Type**: Forged Steel

#### Engine Governing
- **Governor**: Electronic Isochronous
- **Frequency Regulation (Steady State)**: +/- 0.25%

#### Lubrication System
- **Oil Pump Type**: Gear
- **Oil Filter Type**: Full Flow
- **Crankcase Capacity - L (qts)**: 13.6 (14.4)

#### Cooling System
- **Cooling System Type**: Closed
- **Water Pump Type**: Belt Driven Centrifugal
- **Fan Type**: Pusher
- **Fan Speed (rpm)**: 2538
- **Fan Diameter mm (in)**: 660.4 (26)
- **Coolant Heater Wattage**: 1500
- **Coolant Heater Standard Voltage**: 120 V /240 V

#### Fuel System
- **Fuel Type**: Ultra Low Sulfur Diesel Fuel
- **Fuel Specifications**: ASTM
- **Fuel Filtering (microns)**: 5
- **Fuel Injection**: Stanadyne
- **Fuel Pump Type**: Engine Driven Gear
- **Injector Type**: Mechanical
- **Fuel Supply Line mm (in)**: 12.7 (0.5) NPT
- **Fuel Return Line mm (in)**: 12.7 (0.5) NPT

#### Engine Electrical System
- **System Voltage**: 12 VDC
- **Battery Charging Alternator**: 20 A
- **Battery Size**: See Battery Index 0161970SBY
- **Battery Voltage**: 12 VDC
- **Ground Polarity**: Negative

### ALTERNATOR SPECIFICATIONS

- **Standard Model**: 390
- **Poles**: 4
- **Field Type**: Revolving
- **Insulation Class - Rotor**: H
- **Insulation Class - Stator**: H
- **Total Harmonic Distortion**: <3%
- **Telephone Interference Factor (TIF)**: <50

- **Standard Excitation**: Synchronous Brushless
- **Bearings**: One-Pre Lubed & Sealed
- **Coupling**: Direct, Flexible Disc
- **Load Capacity - Standby**: 100%
- **Prototype Short Circuit Test**: Yes
- **Voltage Regulator Type**: Digital
- **Number of Sensed Phases**: 3
- **Regulation Accuracy (Steady State)**: ±0.25%
### POWER RATINGS

<table>
<thead>
<tr>
<th>Configuration</th>
<th>kW</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Phase 120/240 VAC @1.0pf</td>
<td>80</td>
<td>333</td>
</tr>
<tr>
<td>Three-Phase 120/208 VAC @0.8pf</td>
<td>80</td>
<td>278</td>
</tr>
<tr>
<td>Three-Phase 120/240 VAC @0.8pf</td>
<td>80</td>
<td>241</td>
</tr>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>Three-Phase 346/600 VAC @0.8pf</td>
<td>80</td>
<td>96</td>
</tr>
</tbody>
</table>

### STARTING CAPABILITIES (sKVA)

<table>
<thead>
<tr>
<th>Alternator</th>
<th>kW</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>80</td>
<td>59</td>
<td>88</td>
<td>117</td>
<td>147</td>
<td>176</td>
<td>205</td>
<td>44</td>
<td>66</td>
<td>88</td>
<td>110</td>
<td>132</td>
<td>154</td>
</tr>
<tr>
<td>Upsize 1</td>
<td>100</td>
<td>79</td>
<td>118</td>
<td>157</td>
<td>197</td>
<td>236</td>
<td>275</td>
<td>59</td>
<td>89</td>
<td>118</td>
<td>148</td>
<td>177</td>
<td>206</td>
</tr>
<tr>
<td>Upsize 2</td>
<td>130</td>
<td>116</td>
<td>174</td>
<td>232</td>
<td>290</td>
<td>348</td>
<td>406</td>
<td>87</td>
<td>131</td>
<td>174</td>
<td>218</td>
<td>261</td>
<td>305</td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES*

<table>
<thead>
<tr>
<th>Fuel Pump Lift - ft (m)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (1)</td>
<td>2.1 (7.9)</td>
</tr>
<tr>
<td>Total Fuel Pump Flow (Combustion + Return)</td>
<td>13.6 gal/hr</td>
</tr>
</tbody>
</table>

### COOLING

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kW</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coolant Flow per Minute gal/min (l/min)</td>
<td></td>
<td>4.5 (17.44)</td>
<td>3.7 (14.0)</td>
<td>5.2 (19.7)</td>
<td>6.3 (23.8)</td>
</tr>
<tr>
<td>Coolant System Capacity gal (L)</td>
<td></td>
<td>4.5</td>
<td>3.7</td>
<td>5.2</td>
<td>6.3</td>
</tr>
<tr>
<td>Heat Rejection to Coolant BTU/hr</td>
<td></td>
<td>323270</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inlet Air cfm (m³/hr)</td>
<td></td>
<td>6360</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Operating Radiator Air Temp Fº (°C)</td>
<td></td>
<td>122 (50)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Ambient Temperature (before derate) Fº (°C)</td>
<td></td>
<td>104 (40)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Radiator Backpressure in H₂O</td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### COMBUSTION AIR REQUIREMENTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kW</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow at Rated Power cfm (m³/min)</td>
<td>306 (8.67)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kW</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Engine Speed rpm</td>
<td>1800</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horsepower at Rated kW** hp</td>
<td>131</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piston Speed ft/min (m/min)</td>
<td>1559 (475)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMEP psi</td>
<td>210</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kW</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust Flow (Rated Output) cfm (m³/min)</td>
<td>782 (22.14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Backpressure (Post Silencer) inHg (Kpa)</td>
<td>1.5 (5.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust Temp (Rated Output) °F (°C)</td>
<td>887 (475)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust Outlet Size (Open Set) mm (in)</td>
<td>76.2 (3.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Refer to “Emissions Data Sheet” for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.
**DIMENSIONS AND WEIGHTS***

### OPEN SET

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY (GAL (L))</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Tank &amp; Open Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>93 (2362.2) x 40 (1016) x 49 (1244.6)</td>
<td>2425 (1100)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>93 (2362.2) x 40 (1016) x 62 (1574.8)</td>
<td>2947 (1201)</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>93 (2362.2) x 40 (1016) x 74 (1879.6)</td>
<td>3183 (1444)</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>93 (2362.2) x 40 (1016) x 86 (2184.4)</td>
<td>3407 (1545)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>110 (2794) x 40 (1016) x 86 (2184.4)</td>
<td>NA</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 86 (2184.4)</td>
<td>3790 (1719)</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 86 (2184.4)</td>
<td>4269 (1936)</td>
</tr>
</tbody>
</table>

### STANDARD ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY (GAL (L))</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>112 (2844.8) x 41 (1041.4) x 56 (1422.4)</td>
<td>Steel 425 (193) Aluminum 155 (70)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>112 (2844.8) x 41 (1041.4) x 69 (1752.6)</td>
<td>Steel</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>112 (2844.8) x 41 (1041.4) x 81 (2057.4)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>112 (2844.8) x 41 (1041.4) x 93 (2362.2)</td>
<td>Steel 450 (204) Aluminum 285 (129)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>112 (2844.8) x 41 (1041.4) x 93 (2362.2)</td>
<td>Steel</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 93 (2362.2)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 93 (2362.2)</td>
<td>Steel</td>
</tr>
</tbody>
</table>

### LEVEL 1 ACOUSTIC ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY (GAL (L))</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>130 (3302) x 41 (1041.4) x 56 (1422.4)</td>
<td>Steel 450 (204) Aluminum 285 (129)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>130 (3302) x 41 (1041.4) x 69 (1752.6)</td>
<td>Steel</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>130 (3302) x 41 (1041.4) x 81 (2057.4)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>130 (3302) x 41 (1041.4) x 93 (2362.2)</td>
<td>Steel 625 (284) Aluminum 395 (180)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>130 (3302) x 41 (1041.4) x 93 (2362.2)</td>
<td>Steel</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>130 (3302) x 47 (1193.8) x 93 (2362.2)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>130 (3302) x 49 (1244.6) x 93 (2362.2)</td>
<td>Steel</td>
</tr>
</tbody>
</table>

### LEVEL 2 ACOUSTIC ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY (GAL (L))</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>112 (2844.8) x 41 (1041.4) x 69 (1752.6)</td>
<td>Steel 625 (284) Aluminum 395 (180)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>112 (2844.8) x 41 (1041.4) x 82 (2082.8)</td>
<td>Steel</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>112 (2844.8) x 41 (1041.4) x 94 (2387.6)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>112 (2844.8) x 41 (1041.4) x 106 (2692.4)</td>
<td>Steel 625 (284) Aluminum 395 (180)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>112 (2844.8) x 41 (1041.4) x 106 (2692.4)</td>
<td>Steel</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 106 (2692.4)</td>
<td>Aluminum</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 106 (2692.4)</td>
<td>Steel</td>
</tr>
</tbody>
</table>

*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.