



NOT TO BE USED FOR TITLE V APPLICATIONS

PERMIT APPLICATION

APC 20

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE. ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

1. ORGANIZATION'S LEGAL NAME American Tower Corporation - Providence TN2 #308915			/// FOR	APC COMPANY--POINT NO. 05-0328-01
2. MAILING ADDRESS (ST/RD/P.O. BOX) P.O. Box 63604			/// APC	APC LOG/PERMIT NO. 9167065
CITY Phoenix	STATE AZ	ZIP CODE 85082	PHONE WITH AREA CODE 602-284-0280	
3. PRINCIPAL TECHNICAL CONTACT Scot Sandefur			PHONE WITH AREA CODE 602-284-0280	
4. SITE ADDRESS (ST/RD/HWY) 5765 Sevierville Rd.			COUNTY NAME Blount	
CITY OR DISTANCE TO NEAREST TOWN Seymour		ZIP CODE 37865	PHONE WITH AREA CODE 602-284-0280	
5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE) E1		PERMIT RENEWAL YES () NO (✓)		
6. BRIEF DESCRIPTION OF EMISSION SOURCE				

Emergency Backup Generator Power - Industrial Generator set: 131 hp/80 Kw with 300 gallon diesel fuel belly tank.

7. TYPE OF PERMIT REQUESTED				
CONSTRUCTION (✓)	STARTING DATE 5/20/13	COMPLETION DATE 5/28/13	LAST PERMIT NUMBER	EMISSION SOURCE REFERENCE NUMBER
OPERATING ()	DATE CONSTRUCTION STARTED	DATE COMPLETED	LAST PERMIT NUMBER	EMISSION SOURCE REFERENCE NUMBER
LOCATION TRANSFER ()	TRANSFER DATE		LAST PERMIT NUMBER	EMISSION SOURCE REFERENCE NUMBER
ADDRESS OF LAST LOCATION				
8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION.				
9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) 			DATE 3/20/13	
10. SIGNER'S NAME (TYPE OR PRINT) Scot Sandefur		TITLE Director EH&S		PHONE WITH AREA CODE 602-284-0280

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AIR POLLUTION CONTROL



NOT TO BE USED FOR TITLE V APPLICATIONS

PROCESS OR FUEL BURNING SOURCE DESCRIPTION

APC21(& 24)

PLEASE TYPE OR PRINT, SUBMIT IN DUPLICATE AND ATTACH TO THE PERMIT APPLICATION.

1. ORGANIZATION NAME <i>American Tower Corporation - Providence TN2 # 308915</i>		/// FOR	APC COMPANY-POINT NO.
2. EMISSION SOURCE NO. (AS ON PERMIT APPLICATION) <i>E1</i>	SIC CODE	/// APC	APC PERMIT/LOG NO.

3. DESCRIPTION OF PROCESS OR FUEL BURNING UNIT
Emergency Backup Generator: Industrial Generator (Diesel); 131hp / 80kw with 300 gallon diesel fuel belly tank.

4. NORMAL OPERATION: → <i>Emergency</i>	HOURS/DAY <i>Varies</i>	DAYS/WEEK <i>Varies</i>	WEEKS/YEAR <i>Varies</i>	DAYS/YEAR <i>Varies</i>
5. PERCENT ANNUAL THROUGHPUT: →	DEC.-FEB. <i>25%</i>	MARCH-MAY <i>25%</i>	JUNE-AUG. <i>25%</i>	SEPT.-NOV. <i>25%</i>

6. TYPE OF PERMIT APPLICATION (CHECK BELOW ONE ONLY)

PROCESS SOURCE: APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. (CHECK AT RIGHT, AND COMPLETE LINES 7, 8, 13, AND 14).	(✓)
PROCESS SOURCE WITH IN-PROCESS FUEL: PRODUCTS OF COMBUSTION CONTACT MATERIALS HEATED. APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. (CHECK AT RIGHT, AND COMPLETE LINES 7, 8, AND 10 THROUGH 14)	()
NON-PROCESS FUEL BURNING SOURCE: PRODUCTS OF COMBUSTION DO NOT CONTACT MATERIALS HEATED. COMPLETE THIS FORM FOR EACH BOILER OR FUEL BURNER AND COMPLETE AN EMISSION POINT DESCRIPTION FORM (APC 22) FOR EACH STACK. (CHECK AT RIGHT, AND COMPLETE LINES 9 TO 14)	()

7. TYPE OF OPERATION: CONTINUOUS, BATCH, NORMAL BATCH TIME, NORMAL BATCHES/DAY

() () ()

8. PROCESS MATERIAL INPUTS AND IN-PROCESS SOLID FUELS	DIAGRAM* REFERENCE	INPUT RATES (POUNDS/HOUR)		/	(FOR APC USE ONLY) SCC CODE
		DESIGN	ACTUAL		
A.				/	
B.				/	
C.				/	
D.				/	
E.				/	
F.				/	
G.				/	
TOTALS				/	

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* A SIMPLE PROCESS FLOW DIAGRAM MUST BE ATTACHED.

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9. BOILER OR BURNER DATA: (COMPLETE LINES 9 TO 14 USING A SEPARATE FORM FOR EACH BOILER)

BOILER NUMBER	STACK NUMBER**	TYPE OF FIRING***	RATED BOILER HORSEPOWER	RATED INPUT CAPACITY (10 ⁶ BTU/HR)	OTHER BOILER RATING (SPECIFY CAPACITY AND UNITS)
NA	NA	NA	NA	NA	NA
BOILER SERIAL NO.		DATE CONSTRUCTED	DATE OF LAST MODIFICATION (EXPLAIN IN COMMENTS BELOW).		
NA		NA	NA		

** BOILERS WITH A COMMON STACK WILL HAVE THE SAME STACK NUMBER.

*** CYCLONE, SPREADER (WITH OR WITHOUT REINJECTION), PULVERIZED (WET OR DRY BOTTOM, WITH OR WITHOUT REINJECTION), OTHER STOKER (SPECIFY TYPE), HAND FIRED, AUTOMATIC, OR OTHER TYPE (DESCRIBE BELOW IN COMMENTS).

10. FUEL DATA: (COMPLETE FOR A PROCESS SOURCE WITH IN-PROCESS FUEL OR A NON-PROCESS FUEL BURNING SOURCE)

PRIMARY FUEL TYPE (SPECIFY)				STANDBY FUEL TYPE(S) (SPECIFY)			
FUELS USED	ANNUAL USAGE	HOURLY USAGE		% SULFUR	% ASH	BTU VALUE OF FUEL	(FOR APC ONLY) SCC CODE
		DESIGN	AVERAGE				
NATURAL GAS:	10 ⁶ CUFT	CUFT	CUFT	/// / /// /	/// / /	1,000	
#2 FUEL OIL:	10 ³ GAL	GAL	GAL	.0015% 15ppm	/// / /		
Diesel #2 #5 FUEL OIL:	10 ³ GAL	GAL	GAL		/// / /		
#6 FUEL OIL:	10 ³ GAL	GAL	GAL		/// / /		
COAL:	TONS	LBS	LBS				
WOOD:	TONS	LBS	LBS	/// / /// /	/// / /		
LIQUID PROPANE:	10 ³ GAL	GAL	GAL	/// / /// /	/// / /	85,000	
OTHER (SPECIFY TYPE & UNITS.):							

11. IF WOOD IS USED AS A FUEL, SPECIFY TYPES AND ESTIMATE PERCENT BY WEIGHT OF BARK

NA

12. IF WOOD IS USED WITH OTHER FUELS, SPECIFY PERCENT BY WEIGHT OF WOOD CHARGED TO THE BURNER.

NA

13. COMMENTS

14. SIGNATURE

DATE

3/10/13

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AIR POLLUTION CONTROL

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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL



9th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1531
Telephone: (615) 532-0554
FAX: (615) 532-0614

NOT TO BE USED FOR TITLE V APPLICATIONS

EMISSION POINT DESCRIPTION

APC 22

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH STACK OR EMISSION POINT.
ATTACH TO THE PERMIT APPLICATION.

1. ORGANIZATION NAME <i>American Tower Corporation - Providence TN2 # 3089-75</i>				///	APC COMPANY POINT NO.
2. EMISSION SOURCE NO. (FROM APPLICATION) <i>E1</i>		FLOW DIAGRAM POINT NUMBER		///	APC SEQUENCE NO.
3. LOCATION: <i>5765 Sevierville Rd Seymour</i>		LATITUDE <i>35.84969</i>	LONGITUDE <i>-83.78735</i>	UTM VERTICAL <i>248275</i>	UTM HORIZONTAL <i>3970865</i>
4. BRIEF EMISSION POINT DESCRIPTION (ATTACH A SKETCH IF APPROPRIATE):					DISTANCE TO NEAREST PROPERTY LINE (FT) <i>2'</i>

COMPLETE LINES 5 AND 6 IF DIFFERENT FROM THAT ON THE PROCESS OR FUEL BURNING SOURCE DESCRIPTION (APC 21)

5. NORMAL OPERATION: <i>Emergency</i>	HOURS/DAY <i>Varies</i>	DAYS/WEEK <i>Varies</i>	WEEK/YEAR <i>Varies</i>	DAYS/YEAR <i>Varies</i>		
6. PERCENT ANNUAL THROUGHPUT: <i>25%</i>	DEC.-FEB. <i>25%</i>	MARCH-MAY <i>25%</i>	JUNE-AUG. <i>25%</i>	SEPT.-NOV. <i>25%</i>		
7. STACK OR EMISSION POINT DATA: <i>4'</i>	HEIGHT ABOVE GRADE (FT)	DIAMETER (FT) <i>3"</i>	TEMPERATURE (°F) <i>887</i>	% OF TIME OVER 125°F		
DATA AT EXIT CONDITIONS: <i>UP</i>	FLOW (ACTUAL FT³/MIN.)	VELOCITY (FT/SEC)	MOISTURE (GRAINS/FT³)	DIRECTION OF EXIT (UP, DOWN OR HORIZONTAL)		
DATA AT STANDARD CONDITIONS: <i>UP</i>	FLOW (DRY STD. FT³/MIN)	VELOCITY (FT/SEC)	MOISTURE (GRAINS/FT³)	MOISTURE (PERCENT)		
8. AIR CONTAMINANTS	ACTUAL EMISSIONS			EMISSIONS* EST.	CONTROL DEVICES*	CONTROL EFFICIENCY%
	EMISSIONS (LBS/HR)		CONCENTRATION	AVG. EMISSIONS (TONS/YR)		
	AVERAGE	MAXIMUM				
PARTICULATES	<i>0.0346</i>		**	<i>0.0346</i>		
SULFUR DIOXIDE	<i>0.5</i>		***	<i>0.13</i>		
CARBON MONOXIDE	<i>0.202</i>		PPM <i>0.0805</i>			
ORGANIC COMPOUNDS			PPM			
NITROGEN OXIDES	<i>0.807</i>		PPM	<i>0.202</i>		
FLUORIDES						
OTHER(SPECIFY)	<i>0.75</i>			<i>0.19</i>		
OTHER(SPECIFY)						

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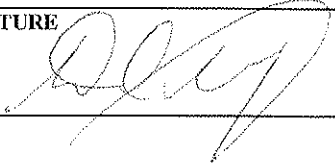
APC 22

9. CHECK TYPES OF MONITORING AND RECORDING INSTRUMENTS THAT ARE ATTACHED:

OPACITY MONITOR (), SO2 MONITOR (), NOX MONITOR (), OTHER (SPECIFY IN COMMENTS) ()

10. COMMENTS

11. SIGNATURE



DATE

3/20/13

* REFER TO THE BACK OF THE PERMIT APPLICATION FORM FOR ESTIMATION METHOD AND CONTROL DEVICE CODES.

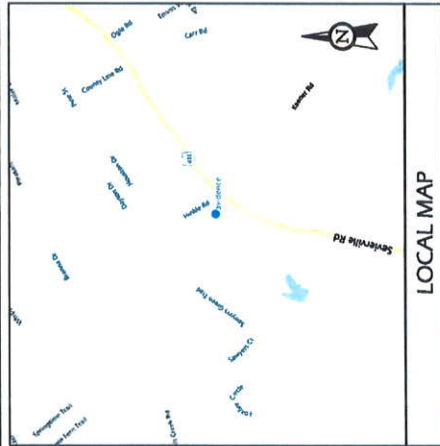
** EXIT GAS PARTICULATE CONCENTRATION UNITS: PROCESS — GRAINS/DRY STANDARD FT3 (70°F); WOOD FIRED BOILERS — GRAINS/DRY STANDARD FT3 (70°F); ALL OTHER BOILERS — LBS/MILLION BTU HEAT INPUT.

*** EXIT GAS SULFUR DIOXIDE CONCENTRATIONS UNITS: PROCESS — PPM BY VOLUME, DRY BASES; BOILERS — LBS/MILLION BTU HEAT INPUT.

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BACKUP POWER PROJECT

ATC SITE IDENTIFICATION:

SITE NUMBER: 308975

SITE NAME: PROVIDENCE TN 2

SITE ADDRESS: 5765 SEVIERVILLE ROAD

SEYMOUR, TN 37865

CUSTOMER SITE IDENTIFICATION:

SITE NUMBER: 10111001

SITE NAME: N/A

PROJECT DESCRIPTION:

THE PROPOSED PROJECT INCLUDES PLACING A 80 KW SHARED GENERATOR IN AN EXISTING CELLULAR TOWER COMPOUND.

THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.



Know what's below.
Call before you dig.

	AT&T TOWER SERVICES, INC. 8505 FREEPORT PARKWAY SUITE 135 IRVING, TX 75039 PHONE: (972) 999-8900 FAX: (972) 999-8940 NYSE: AMT
	ATC SITE NUMBER: 308975
ATC SITE NAME: PROVIDENCE TN 2	
SITE ADDRESS: 5765 SEVIERVILLE ROAD SEYMOUR, TN 37865	
STAMP HERE: DRAWN BY: AD CHECKED BY: SAE DATE DRAWN: 01-04-13 JOB NO: 50059403 SHEET TITLE: TITLE SHEET VICINITY MAP AND GENERAL INFORMATION	
SHEET NUMBER: T-1 REV. # 0	

PROJECT TEAM		PROJECT SUMMARY		PROJECT NOTES		SHEET INDEX			
ARCHITECT: ATC TOWER SERVICES, INC. 1898 LELAND DRIVE SUITE A MARIETTA, GA 30067 TEL: 678-265-6205 FAX: 678-265-6281 CONTACT: JAMES JUSTICE A & E MANAGER	LANDLORD: AMERICAN TOWERS, LLC 10 PRESIDENTIAL WAY WORLUM, MA 01801 TEL: 781-926-4500 FAX: 781-926-4555	GEOGRAPHIC COORDINATES: LATITUDE: 35° 50' 58.0" N LONGITUDE: 83° 47' 14.49" W GROUND ELEVATION: 1080 FT. CODE BLOCK: BUILDING CODE: 2006 INTERNATIONAL BUILDING CODE ATC FIELD OPS TECH: CLINTIS LUTZ TEL: 423-987-5678 AT&T OPS FOR POWER CUT OVER: NEED 24 HOUR NOTICE BRENT MEYERHOFF TEL: 678-564-5429 (OFFICE) 713-539-1547 (CELL)	PROJECT LOCATION DIRECTIONS FROM NASHVILLE: I-40 EAST TO EXIT 388 AND AT SPLIT BEAR LEFT ONTO US-441 FOR 12.6 MILES, TURN RIGHT ON US-411 FOR 2.2 MILES, TURN RIGHT ON HINKLE ST. FOR 125 YARDS AND SITE IS ON LEFT BEHIND CATTLE GATE.	1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.	SHT NO: T-1 A-1 A-2 E-1 E-2 G-1	DESCRIPTION: TITLE SHEET, VICINITY MAP AND GENERAL INFORMATION SITE PLAN PRECAST CONCRETE PAD DETAILS WIRING DIAGRAM & F-RAME LAYOUT ELECTRICAL DETAILS COMPOUND GROUNDING GENERATOR ASSEMBLY AND INSTALLATION SUPPLEMENT	REV: 0 0 0 0 0 0	DATE: 01-04-13 01-04-13 01-04-13 01-04-13 01-04-13 01-04-13	BY: AD AD AD AD AD AD

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AMERICAN TOWER
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

ATC SITE NUMBER:
308975

ATC SITE NAME:
PROVIDENCE
TN 2

SITE ADDRESS:
5765 SEVIERVILLE ROAD
SEYMOUR, TN 37865



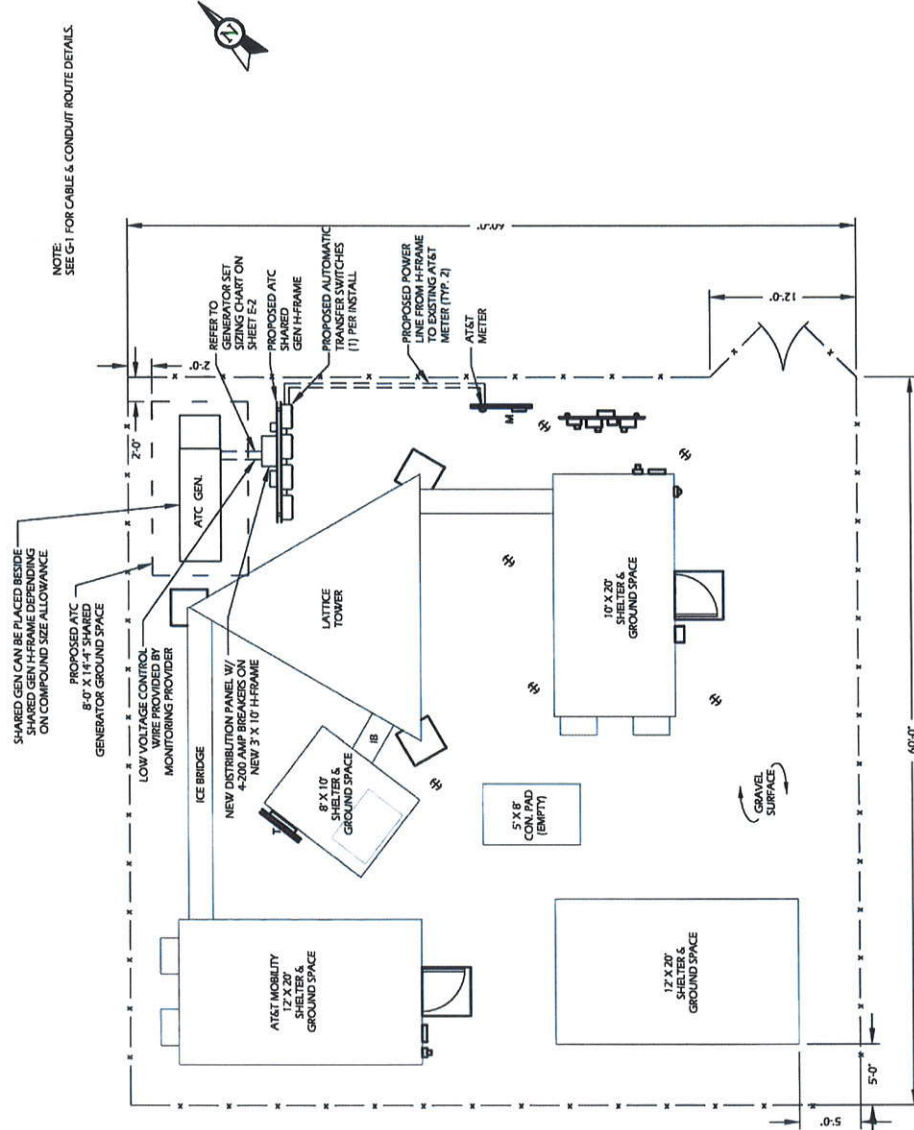
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DATE DRAWN:
JOB NO.:
SHEET TITLE:

SITE PLAN

SHEET NUMBER	A-1	REV. #	0
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ELECTRICAL CONTRACTOR SHALL MAINTAIN FACTORY RECOMMENDED CLEARANCES FOR GENERATOR, OR 48" CLEAR ON EACH SIDE OF GENERATOR AND 36" CLEAR ON EACH SIDE OF H-FRAME. CLEARANCES MAY OVERLAP.

NOTE:
SEE G-1 FOR CABLE & CONDUIT ROUTE DETAILS.



① SITE PLAN

SCALE
1" = 10'-0" (11' X 17")
1" = 5'-0" (24" X 36")

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AMERICAN TOWER
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75039
PHONE: (972) 992-8900
FAX: (972) 992-8940
NISE AMT

ATC SITE NUMBER
308975

ATC SITE NAME
PROVIDENCE
TN 2

SITE ADDRESS
5745 SEVERVILLE ROAD
SEYMOUR, TN 37865

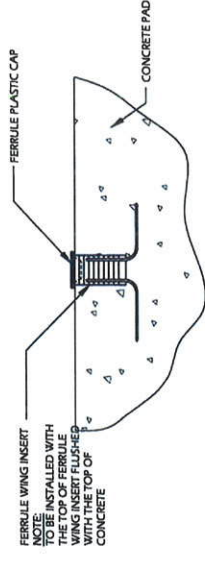


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CHECKED BY: SAE
DATE DRAWN: 01-04-13
JOB NO.: 500594KG
SHEET TITLE:

CONCRETE PAD
DETAILS

SHEET NUMBER: A-2
REV. # 0

QTY	SIZE	TOTAL LENGTH	TOTAL WEIGHT (LBS)	TYPE	DIMENSION	BENDING DIAGRAM
10	1/2"	0'-5"	-	FERRULE WING		
10	1/2"	FERRULE PLASTIC CAP	-			
6	#4	9'-2 9/16"	39		A=9'-2 9/16"	
22	#4	4'-1"	60		A=4'-1"	
4	#4	7'-9 3/8"	21	STRAIGHT	A=7'-9 3/8"	
6	#4	9 1/4"	3		A=9 1/4"	
STANDARD REBAR SIZES & WEIGHTS						
BAR NO.	LBS. PER FT.	DIA. INCHES	GRADE			
4	.4676	.500	60			



CONCRETE PAD CONSTRUCTION NOTES

- ALL REBAR (HORIZONTAL & VERTICAL) SHALL BE SECURELY WIRE TIED TO PREVENT DISPLACEMENT DURING POURING OF CONCRETE.
- CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
- REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
- MINIMUM CONCRETE COVER OVER REBAR IS 1 1/4".
- REINFORCING MATERIAL SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A615-BS.

CONCRETE PAD AND EMBEDMENT TOLERANCES

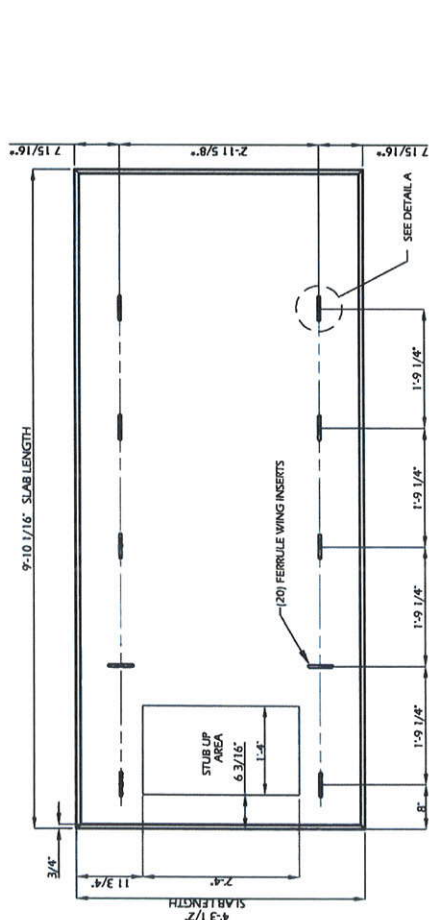
- EMBEDMENTS: PLUS OR MINUS 1/16".
- CONCRETE DIMENSIONS: PLUS OR MINUS 1/4".
- REINFORCING STEEL PLACEMENT: PLUS OR MINUS 1/4" INCLUDING CONCRETE COVER.

NOTES

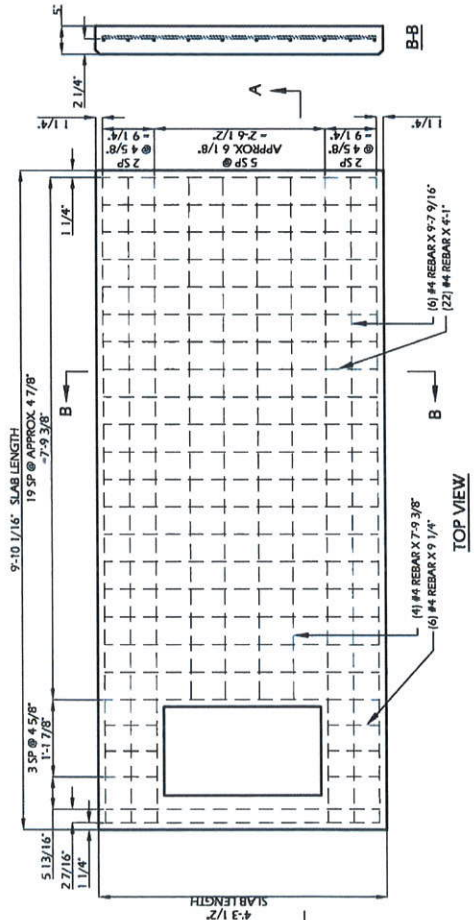
- FOUNDATION WAS DESIGNED BY ASSUMING ALLOWABLE SOIL BEARING CAPACITY OF 1000 PSI. THE SOIL BEARING CAPACITY FOR EACH SITE MUST BE VERIFIED USING THE SITE SPECIFIC GEOTECH REPORT. IF SHALLOW GROUNDWATER (3 FT.) WAS REPORTED, A FURTHER REVIEW OF THE DESIGN OR SPECIAL DESIGN MAY BE REQUIRED.
- THE SOIL UNDERNEATH THE CONCRETE PAD MUST BE FREE OF ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCES, AND SHOULD BE COMPACTED AND LEVELED BEFORE PLACING THE FOUNDATION. PAD SHALL BE INSTALLED LEVEL TO WITHIN +/- 1/8".
- CONCRETE SLUMPS: 1"-2".
- CONCRETE VOLUME: 0.78 CUBIC YARDS.

DESIGN

- MAXIMUM DESIGN BASIC WIND SPEED (3-SECOND GUST): 90 MPH FOR GENERATOR MODELS SD050 AND SD080



PLAN VIEW

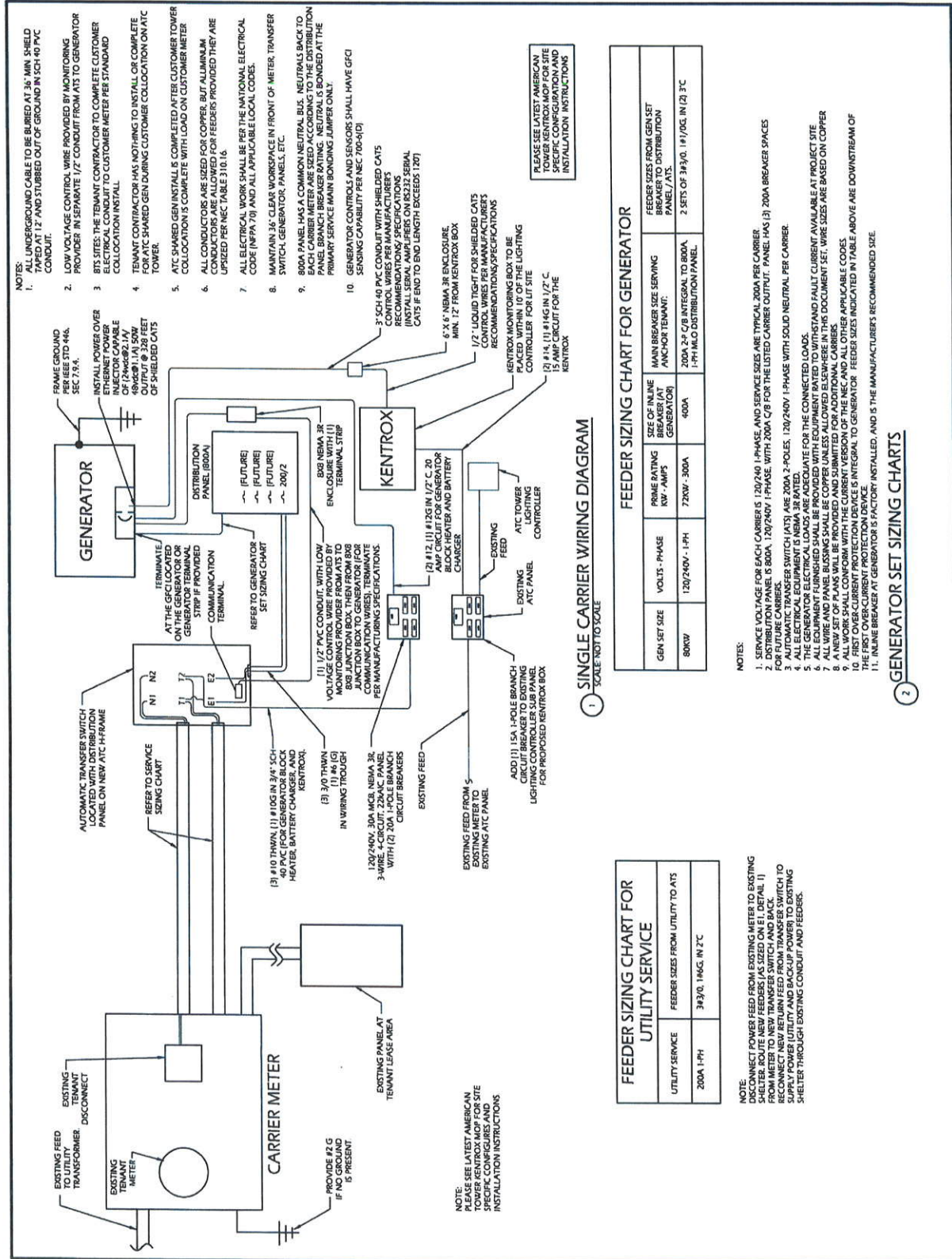


TOP VIEW

A-A

REBAR LAYOUT DETAIL

PREFACT GENERATOR PAD



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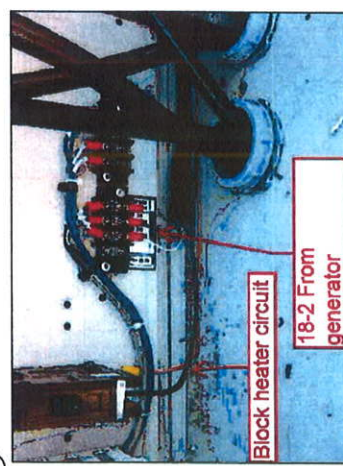
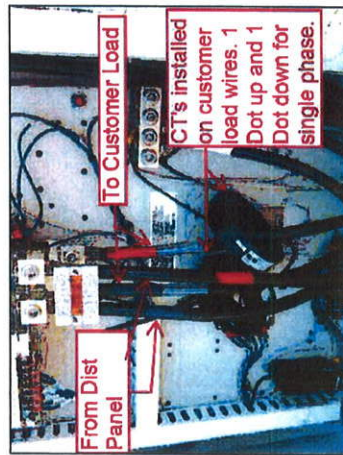
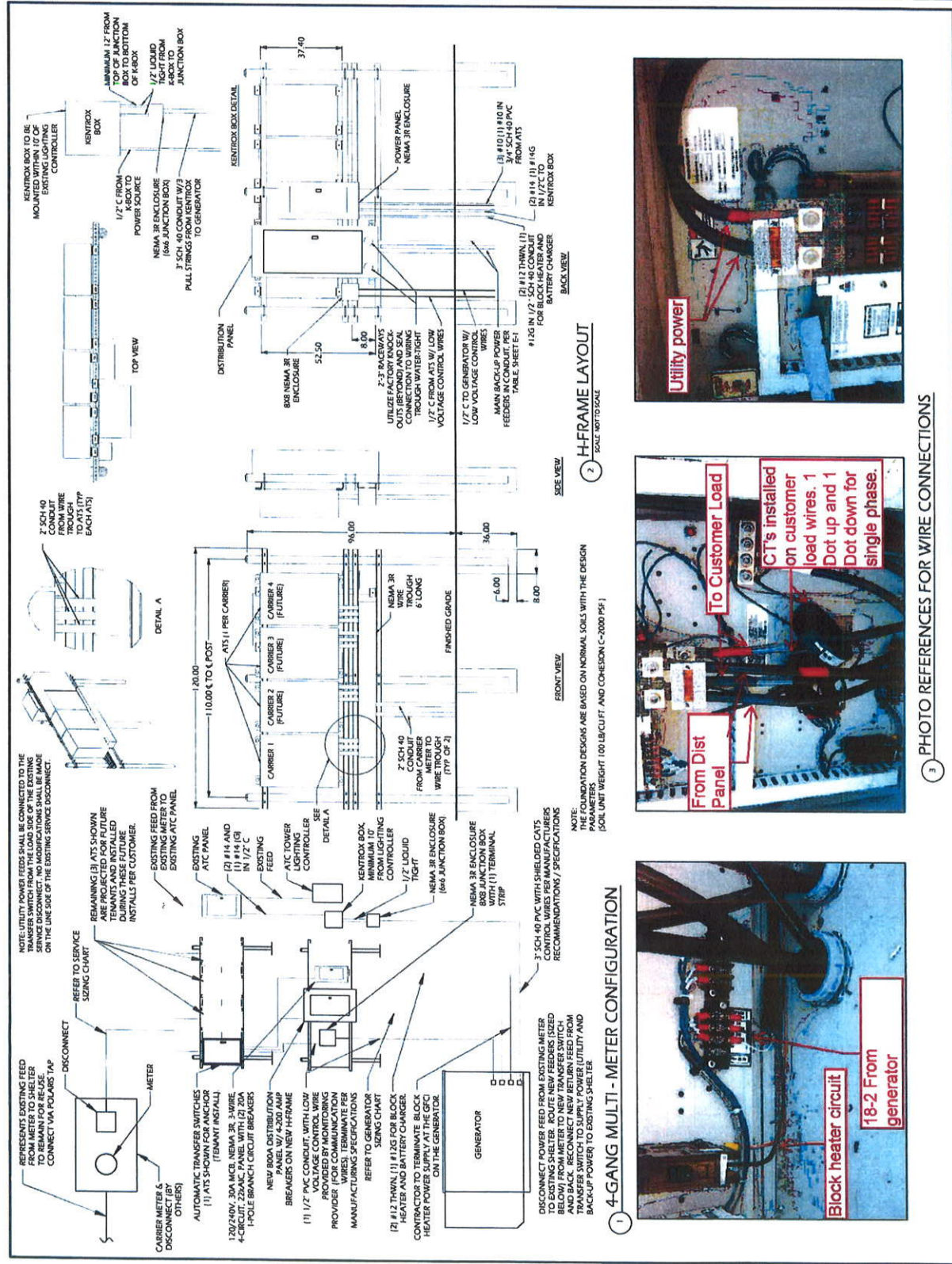
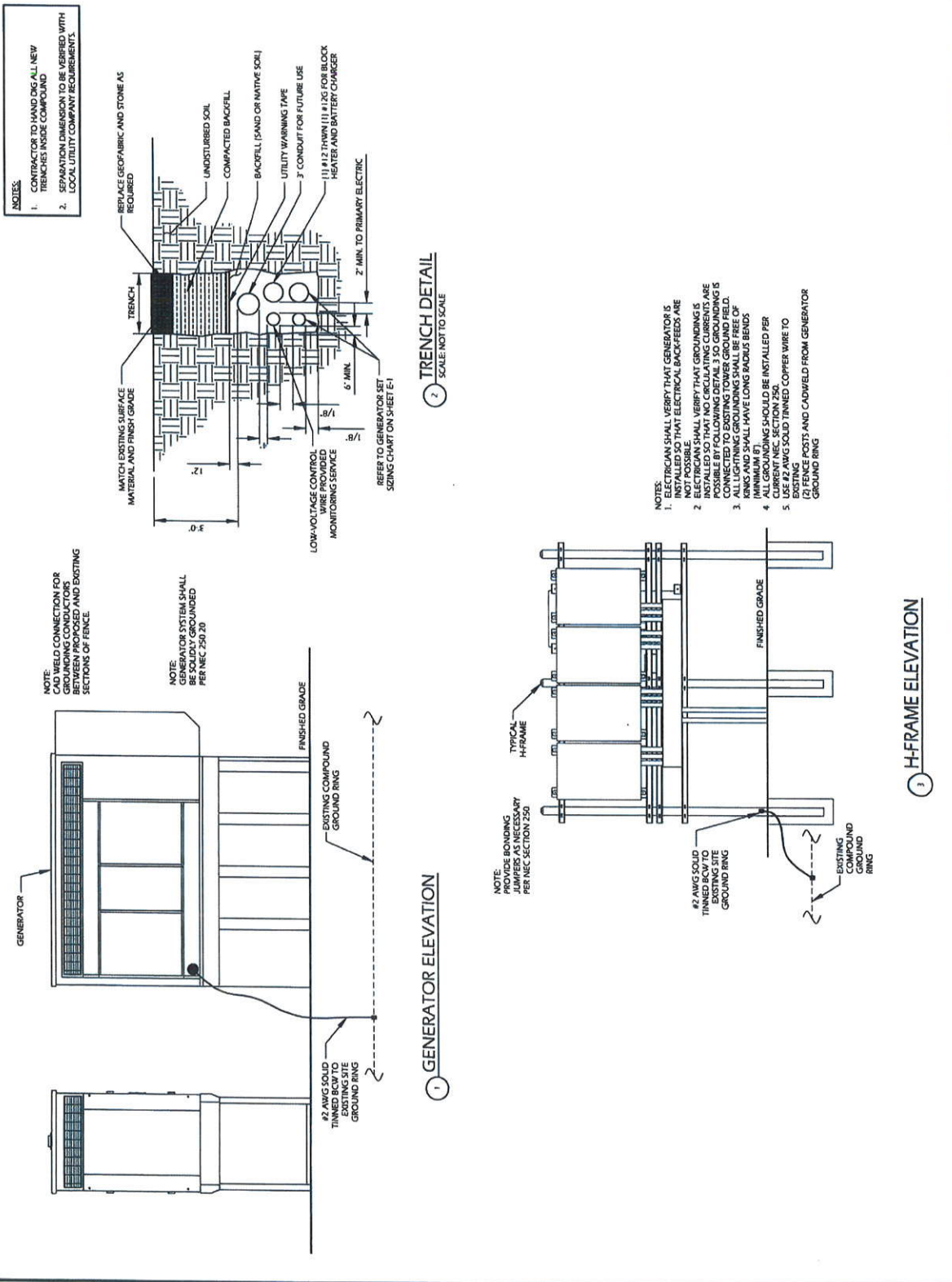


PHOTO REFERENCES FOR WIRE CONNECTIONS

	PLEASE EXAMINE DRAWINGS FOR ACCURACY AND COMPLETION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.	
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 AMERICAN TOWER ATC TOWER SERVICES, INC. 8505 FREIGHTWAY PARKWAY SUITE 1300 IRVING, TEXAS 75039 PHONE: (972) 999-8900 FAX: (972) 999-8900 NYSE: AIT	ATC SITE NUMBER: 308975 ATC SITE NAME: PROVIDENCE TN 2	SITE ADDRESS: 5155 SOUTH LAKESIDE SUITE 100 IRVING, TEXAS 75039
		
STAMP HERE DRAWN BY: AO CHECKED BY: SAE DATE DRAWN: 01/04/13 DATE: 1/4/13 JOB NO.: 502654K3 SHEET TITLE: COMPOUND GROUNDING	REV. # 0	

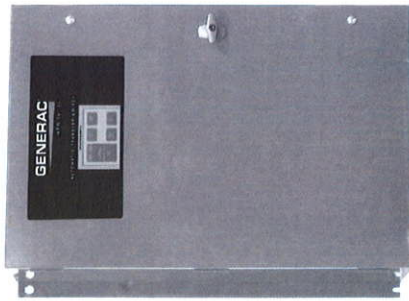


GENERAC 80KW

GENERAL ASSEMBLY AND INSTALLATION SUPPLEMENT

100 - 400 Amps,
600 VAC HTS

Automatic Transfer Switches



200 Amp HTS NEMA 1

Standard Features

- Single coil design, electrically operated and mechanically held
- Programmable exercise time
- SPDT aux contacts
- Main contacts are silver alloy
- Conformal coating protects the printed circuit board
- UL1008 Listed
- Indicating LED's for switch position, standby operating, utility available

Optional Accessories

- NEMA 12 enclosure (100-400 Amps)
- NEMA 3R enclosure (All)

Description

- The Generac HTS Transfer Switch is a "State of the Art" Smart Switch designed to operate in conjunction with the Generac H100 Series generator controller.
- The HTS Transfer Switch has a 2 wire RS485 communication link to the generator controller.
- The utility voltage is monitored by the HTS along with signal before transfer timing, time delay neutral and inphase transfer.
- Switch operation is instigated by the generator controller.
- All timers and voltage setpoints are programmable through GenLink® Communications Software.
- Time delay neutral and inphase monitor are included.

- 3 position test switch: Fast Test, Auto, Normal Test
- Arc shutes on main contacts
- Signal before transfer contacts
- Rated to all classes of loads
- Remote start, stop and transfer through GenLink® Communications Software
- Up to four transfer switches per generator
- 50/60 hertz operation

- NEMA 4 and 4x enclosure
- 4 pole for separately derived systems

100 - 400 Amps, 600 VAC
1 of 2

100 - 400 Amps, 600 VAC
2 of 2

Interconnections

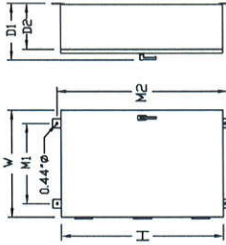
- Switches and Indicators:
 - System Ready LED
 - Utility Available LED
 - Fast Test Switch
 - Return to Normal Switch
 - Safety Disconnect Switch

Standby Accept Voltage	85-95%
Standby Accept Frequency	85-95%
Nominal Voltage	1 Volt Increments
Allowable Deviation of Utility	1-100%
Line Interruption Delay	1-10 Seconds
Engine Warmup Time	1-300 Seconds
Minimum Run Time	5-60 Minutes
Return to Utility Timer	1-30 Minutes
Engine Cutdown Timer	1-30 Minutes
Signal Before Transfer Timer	1-30 Seconds
Transfer Type	Inphase Time Delay Neutral
Phase Difference for Inphase Transfer	-7 +0 Degrees

Withstand Current - 600 Volt HTS Series

HTS RATED AMPS	100	150	200	300	400
FUSE PROTECTED					
Maximum RMS Symmetrical Fault Current - Amps	200,000	200,000	200,000	200,000	200,000
Maximum Fuse Size - Amps	400	400	400	600	600
Fuse Class	J.T	J.T	J.T	J.T	J.T
CIRCUIT BREAKER PROTECTED					
Maximum RMS Symmetrical Fault Current - Amps	14,000	25,000	25,000	35,000	35,000
Protective Device Continuous Rating (Max.) - Amps	150	300	300	600	600

- Tested in accordance with the withstand and closing requirements of UL 1008 and CSA Standards.
- Current ratings are listed @ 480 VAC.



Unit Dimensions

HTS RATED AMPS	VOLTAGE	ENCLOSURE HEIGHT H	ENCLOSURE WIDTH W	WALL MOUNT BOLT PATTERN	ENCLOSURE DEPTH	WEIGHT (lbs.)
100	ALL	36	24	M1	D1	180
150	120/240	36	24	M2	D2	180
200	120/240	36	24	M1	D1	185
300	120/240	48*	30*	M1	D1	265
400	120/240	36	24	M1	D1	245
600	120/240	36	24	M1	D1	245
800	120/240	48*	30*	M1	D1	325

Terminal Lug Wire Ranges

HTS RATED AMPS	CONTACTOR TERMINALS (1 LUG PER POLE)	NEUTRAL BAR*	GROUND LUG (1 PROVIDED)
100	2/0 - 14 AWG	4	2/0 - 14 AWG
150	400MCM - 4 AWG	4	350MCM - 6 AWG
200	400MCM - 4 AWG	4	350MCM - 6 AWG
300	600MCM - 4 AWG	4	350MCM - 6 AWG
400	600MCM - 4 AWG	4	350MCM - 6 AWG

* Not included in HTS with switched neutral. ** Allowable wire range in brackets is for 2 wires per lug.

Highway 59 & Hillside Rd.
Waukesha, WI 53188
Phone#262-344-4811



Ref. All Generac Power Systems fuel tank bases supplied from the factory are manufactured and labeled per U.L. 142 and are warranted through Generac Power Systems.

UL registration number: MH18459

U.L. 142 DOUBLE WALL FUEL TANK BASE SPECIFICATION

Fuel tank base construction:

- Be constructed in accordance with Underwriters Laboratories Standard UL-142. Be constructed in accordance with Flammable and Combustible Liquids Code, NFPA 30; The Standard for Installation and use of Stationary Combustible Engine and Gas Turbines, NFPA 37; and The Standard for Emergency and Standby Power Systems, NFPA 110. Include reinforced steel box channel for generator support, with load rating of 5,000 lbs. per gen-set mounting hole location. Full height gussets shall be provided at gen-set mounting holes. Be shipped with a certificate of Structural/Mechanical Integrity, certifying that it has met standards through rigorous testing and has demonstrated specified capabilities.

Sub Base Tank Testing:

Primary tank and secondary containment basin sections shall be pressurized at 3-5 psi and leak-checked to ensure integrity of sub base weld seams per UL-142 standards

Sub Base Tank Fittings:

The sub base tank shall include the following fittings:

- Appropriately sized NPT
- Fuel supply Fuel return fitting
- NPT for normal vent, sized as appropriate NPT for emergency vent, sized as appropriate
- 2" NPT for manual fill
- NPT for level gauge, sized as appropriate.
- 2" NPT for electronic fuel level; includes Low fuel alarm. High fuel level alarm
- NPT fitting for leak detection alarm

Fuel Level Gauge

The sub base tank shall include a direct-reading fuel level gauge.

Low Fuel Level

Factory Pre-set at 40% remaining for Alarm

Factory Pre-set at 20% remaining for Shut-down

High Fuel Level

Factory Pre-set at 90% full for Alarm

Fuel Containment Basin

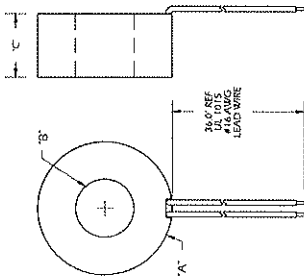
Sub base tank shall include a welded steel containment basin, sized at a minimum of 110% of the tank capacity to prevent escape of fuel into the environment in the event of a tank rupture. A fuel containment basin leak detector switch shall be provided.

Sub Base Tank Venting

Normal and Emergency Venting:

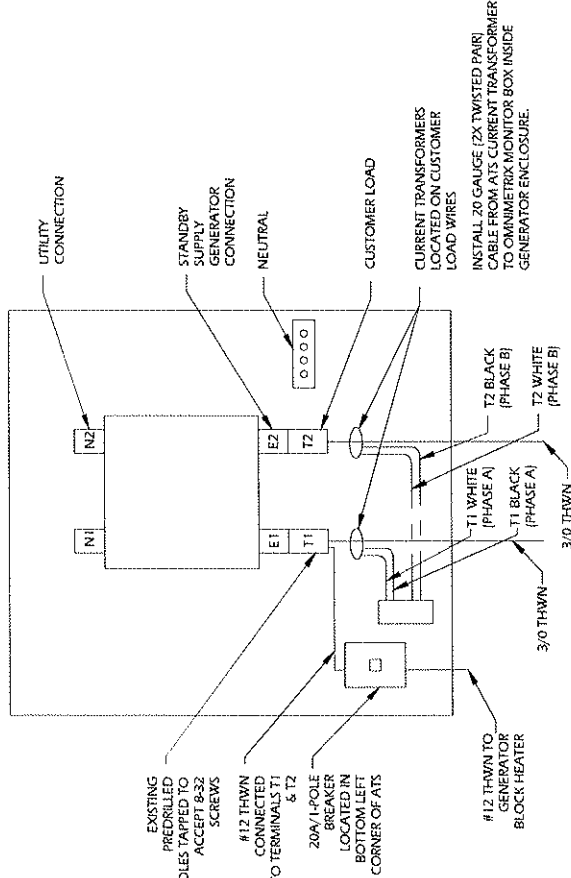
Normal and Emergency venting shall be sized per U.L. 142 specifications for wetted surface area of tank.

PART NO.	RATIO	MODEL NO.	#/IN	VA	OHMS	"A"	"B"	"C"
0F7784A	100:1A	635-1000-01-L36	1	1	31	65	28	30.5
0F7784B	200:1A	635-2000-01-L36	1	5	95	65	28	30.5
0F7784C	300:1A	A-3000-01-L36	1	4.5	66	112	57.1	27.4
0F7784D	400:1A	A-4000-01-L36	1	4	11	112	57.1	27.4
0F7784E	500:1A	A-5000-01-L36	1	6.5	13	112	57.1	27.4
0F7784F	600:1A	A-6000-01-L36	1	7.5	15	112	57.1	27.4
0F7784G	800:1A	MW-8000-01-L36	1	10	20	143.5	89	29.2
0F7784H	1000:1A	MW-10000-01-L36	1	12	22	143.5	89	29.2
0F7784J	1500:1A	MW-15000-01-L36	1	15	50	143.5	89	29.2
0F7784K	2000:1A	MW-20000-01-L36	1	12	67	143.5	89	29.2
0F7784L	3000:1A	MW-30000-01-L36	1	25	110	143.5	89	29.2



NOTE:
1. ORIGINAL CURRENT TRANSFORMERS.

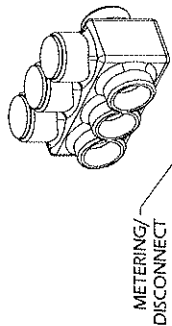
CURRENT FLOW METER IN ATS



NOTES:
1. CONNECT TO TENANT BREAKER AT METER.
2. CONNECT TO DISTRIBUTION CENTER BRANCH BREAKER



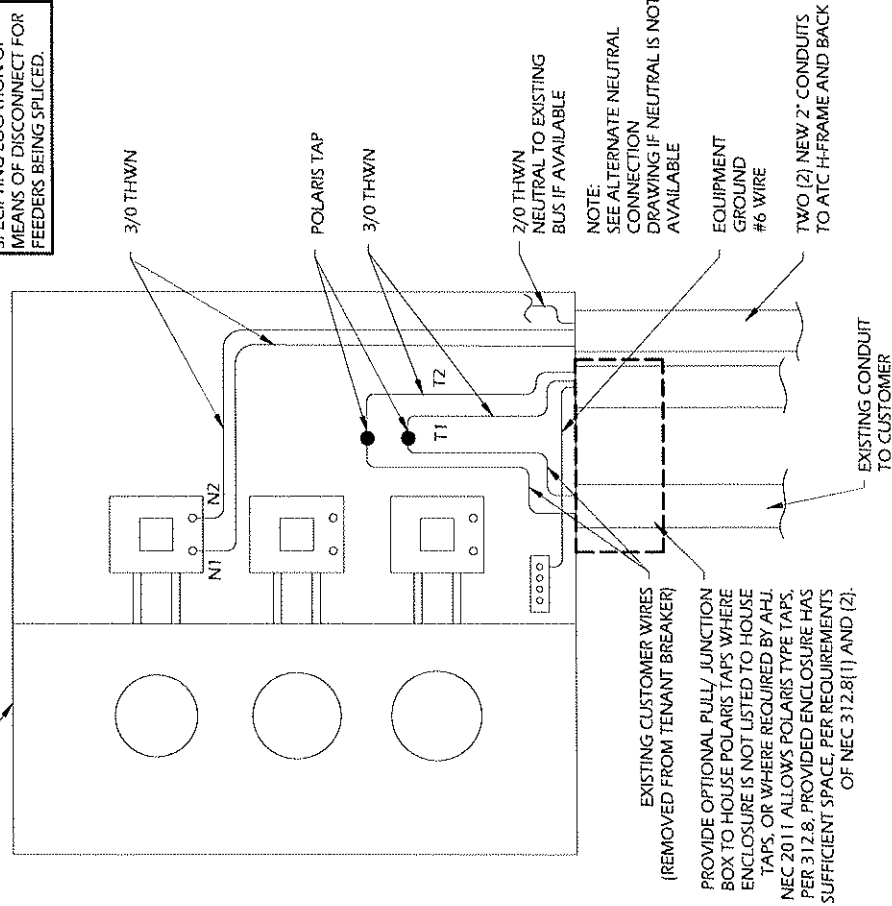
*SINGLE PHASE



NOTE: POLARIS TAP MUST BE SECURELY WRAPPED WITH COMMERCIAL GRADE NYLON ELECTRICAL TAPE AFTER INSTALLATION IS COMPLETE

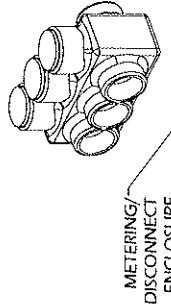
NOTE: BONDING JUMPER/ GROUNDING ELECTRODE CONDUCTOR SHALL BE #4 CU FOR 200A, PER NEC TABLE 250.66.

PER NEC 312.8(3), PROVIDE WARNING LABEL (PHENOLIC PLATE) ON ENCLOSURE CONTAINING POLARIS TAP SPECIFYING LOCATION OF MEANS OF DISCONNECT FOR FEEDERS BEING SPLICED.



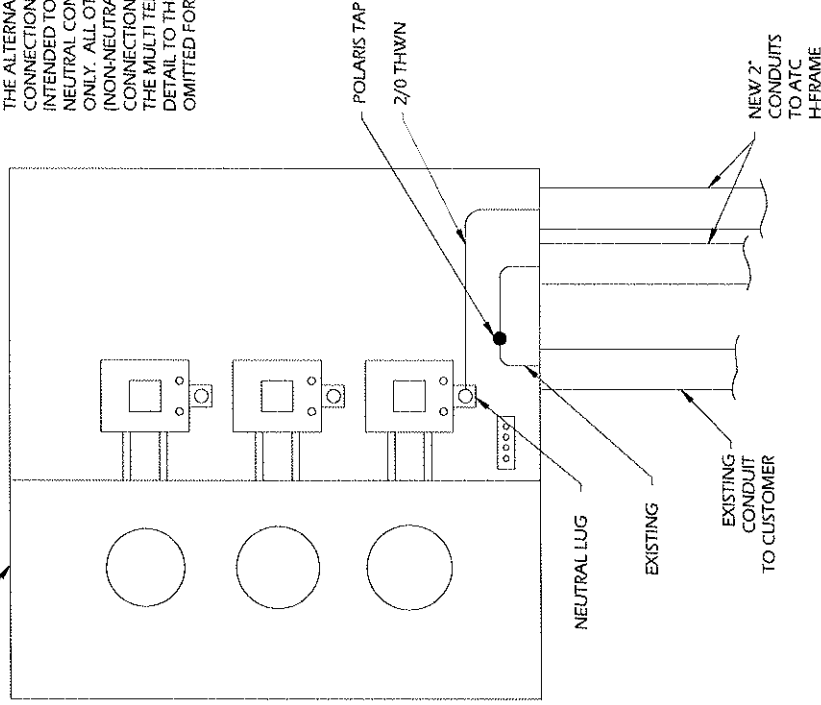
MULTI TENANT METER OPTION
SCALE: NOT TO SCALE

SINGLE PHASE, 200A

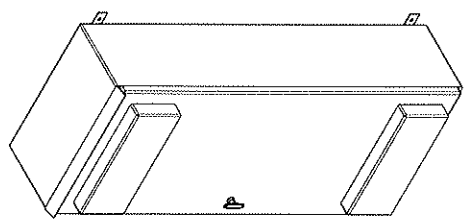
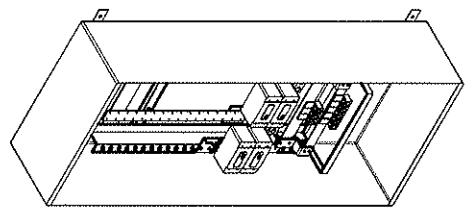
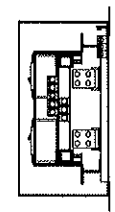
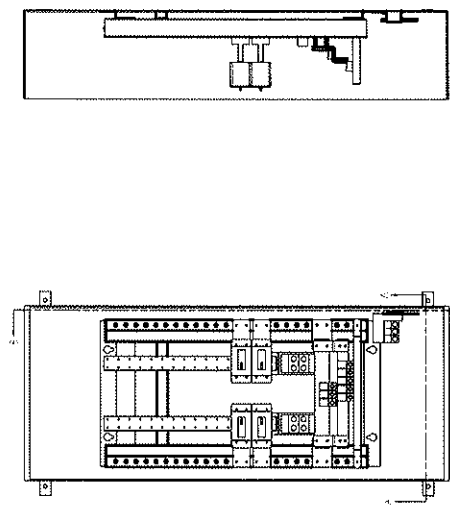
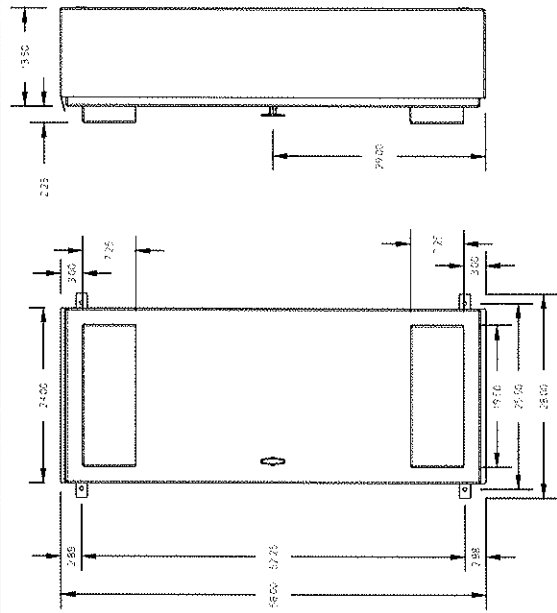


NOTE: POLARIS TAP MUST BE SECURELY WRAPPED WITH COMMERCIAL GRADE NYLON ELECTRICAL TAPE AFTER INSTALLATION IS COMPLETE

THE ALTERNATE NEUTRAL CONNECTION DETAIL IS INTENDED TO SHOW NEUTRAL CONNECTIONS ONLY. ALL OTHER (NON-NEUTRAL) CONNECTIONS SHOWN ON THE MULTI TENANT METER DETAIL TO THE LEFT ARE OMITTED FOR CLARITY.



ALTERNATE NEUTRAL CONNECTION
FOR MULTI-TENANT METER OPTION
SCALE: NOT TO SCALE



BUS COVER 12X		EDB2200 200A		2
1		EDB2200 200A	2	
3		EDB2200 200A	4	
5		EDB2200 200A	6	
7		EDB2200 200A	8	
MAIN LUGS ONLY 800A 10X				
NEUTRAL 0X				

ASAP INSPECTION
REF # 123456789

BELL TEST _____

H-POUT _____

S/T _____

GENERAL INFORMATION

(SECTION 1 OF 1)

SERVICE VOLTAGE: 120/240V / 1PH 3W
BUS RATINGS & TYPE: 800A ALUMINUM
GROUND BAR: SLD BOLTED ALUMINUM AL OR CU CABLE
S.C. RATING: 22K A.I.C. FULLY RATED

MAIN DEVICE TYPE: MAIN LUGS ONLY BOTTOM CABLE ENTRY
TERMINALS: 1/2" (12.7mm) (12.7mm)
NEUTRAL TERMINALS: MECHANICAL - [3] 42-500 kcmil [Cu/Al]
BOOK CATALOG NO: RFG457
COMPLETE ENCLOSURE (INCLUDES TRIM)

SURFACE MOUNTED

BOX DIMENSIONS: 57" (1447.8mm) H X 24" (609.6mm) W X 12.65" (326.6mm) D
MIN. GUTTER SIZE: TOP-10.625" (269.9mm) BOTTOM-10.625" (269.9mm)
LEFT-5" (127.0mm) RIGHT-5" (127.0mm)

FRONT ID NUMBER ATE: [1] 800A
TYPE: PLASTIC ADHESIVE PACKED [2] 120/240V / 1PH 3W
COLOR: WHITE WITH BLACK LETTERS [3]

UL SERVICE ENTRANCE LABEL

TRIM LOCK HANDLE LOCK ASSEMBLY
CIRCUT DIRECTORY PLASTIC SLEEVE WITH CAND
PRINTED BOOKS 61

PLANT INFORMATION

UL LABEL	PART NUMBER	QTY	PART NUMBER	QTY
BUS CLIPPING	7495A006401	1	EOB2200	4
NEUTRAL BAR AL CU	6563C00401	2		
GROUND BAR AL CU	6572C00603	1		
CHASSIS ASSEMBLY	6572C00603	1		
LUG ASSEMBLY	6572C02500A	1		
BREXNER ASSY	6572C02700A	2		
DEAD FRONT COVER	555HCL11801	2		
DEAD FRONT COVER ASSEMBLY	6574C02400	1		
PACKAGING	50C53J0501	1		

Spot _____ Final Inspection _____

NOTE:
PANEL SHOWN IS FOR SINGLE
PHASE. FOR 3-PHASE SITES, USE
CORRESPONDING 3-POLE
VERSION OF THIS PANEL.

DISTRIBUTION PANEL
SCALE: NOT TO SCALE

DISTRIBUTION PANEL DETAILS
SCALE: NOT TO SCALE

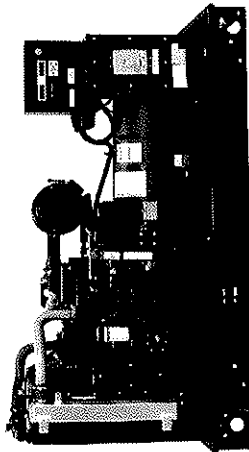
SD080

GENERAC INDUSTRIAL

Industrial Diesel Generator Set

EPA Emissions Certification: Tier III

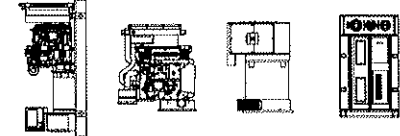
80 kW Diesel



Standby Power Rating
100 KVA 80 kW 60 Hz

Prime Power Rating
90 KVA 72 kW 60 Hz

features



- GENERATOR SET**
 - PROTOTYPE & TORQUEALLY TESTED
 - UL2230 TESTED
 - REINFORCED TANK SYSTEM
 - WIDE RANGE OF ENCLUSES AND TANKS
- ENGINE**
 - EPA TIER COMPLIANT
 - INDUSTRIAL TESTED, GENERAC APPROVED
 - POWERMANAGED OUTPUT
 - INDUSTRIAL GRADE
- ALTERNATOR**
 - TWO-PHASE PITCH
 - LAYER WOUND ROTOR & STATOR
 - CLASS H MATERIALS
 - DIGITAL 3-PHASE VOLTAGE CONTROL
- CONTROL**
 - ENCAPSULATED BOARD W/ LEADED WARE
 - 400VAC VOLTAGE-SENSITIVE FUSION
 - SURFACE MOUNT TECHNOLOGY
 - ADVANCED DIAGNOSTICS & COMMUNICATIONS

benefits

- PRODUCES A POWER UNIT
- ENSURES A QUALITY PRODUCT
- IMPROVES RESISTANCE TO ELEMENTS
- PROVIDES A SINGLE SOURCE SOLUTION
- ENVIRONMENTALLY FRIENDLY
- ENGINEERED FOR PERFORMANCE
- IMPROVES CONVENIENCE AND RELIABILITY
- ELIMINATES MAINTENANCE HARMONY
- IMPROVES COOLING
- HEAT TOLERANT DESIGN
- FAST AND ACCURATE RESPONSE
- EASY, AFFORDABLE REPLACEMENT
- NOISE RESISTANT R/T MONITORING
- PROVIDES VIBRATION RESISTANCE
- MAINTAINED RELIABILITY

primary codes and standards



SD080

ENGINE SPECIFICATIONS

General	
Model	SD080
Power / HP	80 kW / 107 HP
Rated Power	72 kW / 97.5 HP
Standby Power	100 kW / 134 HP
Engine Type	Diesel
Displacement - L (cu. in.)	4.5 (27.4)
Bore - mm (in.)	105 (4.1)
Stroke - mm (in.)	132 (5.2)
Compression Ratio	17.5:1
Injection Method	Turbocharged
Cylinder Head Type	Vertical
Valve Timing	Adjustable
Control Type	Engineered
Engine Block Type	Cast Iron / Wet Sleeve
Fuel System	
Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM D975
Fuel System	Common Rail
Fuel Injection Pump	Standalone
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	7/8 inch NPT
Fuel Return Line - mm (in.)	1/4 inch NPT
Exhaust System	
Exhaust System	1.3VDC
Battery Charging Alternator	30 Amp
Battery Size (d.c.)	95% CCA
Battery Group	31
Battery Voltage	12 Volt DC
Groundability	Negative
Oil System	
Oil Pump Type	Electronic
Frequency Regulation (Steady State)	+/- 0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (gal)(qt)	13.6 (3.6) (14.5)

application and engineering data

Cooling System	
Cooling System Type	Closed
Water Pump	SD080
Fan Type	SD080
Fan Blade Number	2538 (10)
Fan Diameter (in.)	26
Gradient Heater Wattage	1500
Gradient Heater Standard Voltage	120
Fuel System	
Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM D975
Fuel System	Common Rail
Fuel Injection Pump	Standalone
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	7/8 inch NPT
Fuel Return Line - mm (in.)	1/4 inch NPT
Exhaust System	
Exhaust System	1.3VDC
Battery Charging Alternator	30 Amp
Battery Size (d.c.)	95% CCA
Battery Group	31
Battery Voltage	12 Volt DC
Groundability	Negative

ALTERNATOR SPECIFICATIONS

Model	390 mm Genesee
Phase	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50
Alternator Type	Synchronous
Bearings	One-Piece Turbo-Loaded
Cooling	On-Cooler
Load Capacity - Standby	80
Load Capacity - Prime	72
Prototype Short Circuit Test	Y

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

- NFPA 99
- ISO 9001
- ISO 14001
- ISO 45001
- SAE J1349
- SAE J1349
- IEEE C62.41 TESTING
- NEMA ICS 1

Being Defective:
Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 60%) A 10% overload capacity is available for 1 out of every 12 hours.

080075

operating data (60Hz)

POWER RATINGS (kW)

STANDARD	PRIME
80 Amps 333	72 Amps 300
80 Amps 278	72 Amps 250
80 Amps 241	72 Amps 217
80 Amps 120	72 Amps 108
80 Amps 96	72 Amps 97

Single-Phase 120/240VAC @ 1.0pf
Three-Phase 120/208VAC @ 0.8pf
Three-Phase 120/240VAC @ 0.8pf
Three-Phase 277/480VAC @ 0.8pf
Three-Phase 356/600VAC @ 0.8pf

STARTING CAPABILITIES (SKVA)

Alternator Standard	480VAC						208/240VAC					
	100%	75%	50%	25%	30%	35%	100%	75%	50%	25%	30%	35%
80	59	88	117	141	176	205	44	59	88	117	141	176
Upset 1	79	118	157	197	236	275	59	79	118	148	177	206
Upset 2	125	116	174	232	290	348	86	87	116	174	218	261

Linearize: provides less than or equal to Cats A temperature rise.

Fuel Pump Let-in (in.) 36(1)	STANDARD			lph	Percent Load	PRIME PSH	lph
	Percent Load	gph	gph				
50%	2	7	7.9	25%	1.9	7.2	
75%	3	11	11.0	50%	3.4	12.9	
75%	5.2	19.7	19.7	75%	4.7	17.8	
100%	6.3	23.8	23.8	100%	5.8	22.0	

*Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes

COOLING

[illegible]

COMBUSTION AIR REQUIREMENTS

STANDBY	PRIME
306	275
(8.67)	(7.80)

2010

[illegible]

ENGINE

	STANDBY	PRIME
Rated Engine Speed	750 rpm	1800
Horsepower at Rated RPM***	727 hp	1727
Piston Speed	1559 (ft/min)	1559 (44.1)
BAUER	210 rpm	194

... refer to "Emissions Data Sheets" for maximum help for EPA and SCAMD permitting purposes

Decision - Operational characteristics consider maximum ambient conditions. Device Action may apply under typical site conditions. Please consult a Generic Power Systems Industrial Designer for additional details. All performing ratings in accordance with ISO 104, IEC 618 and DIN 6271 standards.

SD080

standard features and options

GENERATION

- GenSet Vibration Isolation
- IBC Seismic Certified/Seismic Rated Vibration
- Extended warranty
- Export boxing
- Gen-Link Communications Software
- Steel Enclosure
- Aluminum Enclosure

ENGINE SYSTEM

- | | |
|---------------------|--|
| General | Fuel System |
| Oil Drain Extension | Fuel Injected Sensors |
| Oil Make-Up System | Secondary Fuel Filter |
| Oil Heater | Surround steel flexible exhaust connection |
| | Industrial Exhaust Silencer |
| | Critical Exhaust Silencer |
| | Flexible Fuel Lines |
| | Primary Fuel Filter |
| | Single Wall Tank (Export Only) |
| | UL 142 Fuel Tank |

1005

- ❑ 120VAC Coolant Heater
 - ❑ 208VAC Coolant Heater
 - ❑ 240VAC Coolant Heater
 - ❑ Other Coolant Heater
 - ❑ Closed Coolant Recovery System
 - ❑ UNF/CO₂ Resistant Noises
 - ❑ Factory-installed Reducer
 - ❑ Reducer Drain Extension
- Engine Electrical System**
- ❑ Battery charging alternator
 - ❑ Battery cables
 - ❑ Battery tray
 - ❑ Battery box
 - ❑ Battery heater
 - ❑ Solenoid activated starter motor

ALTERNATOR SYSTEM

- UL2700 Generator
- Main Line Circuit Breaker
- 2nd Circuit Breaker
- 3rd Circuit Breaker
- Alternator Winding
- Anti-Condensation Heater
- Tropical coating
- Permanent Magnet Excitation

CONTROL SYSTEM

- General**
 Digital H Control Panel - Dual 4x20 Display
 Digital G-100 Control Panel - Touchscreen
 Digital G-200 Paralleling Control Panel - Touchscreen
 Programmable Crank Limiter
 2-1/2" Light Remote Annunciator
 Remote ready Panel (8 or 16)
 One-Day Programmable Ejector
 Special Applications Programmable M/C

MS-232

- Auxiliary Sensing DVR
- Fuel System Status
- Coolant Monitoring [Req. HiTransfer Swivel]
- Relative Start Computable
- Power Output [Ref.]
- Power Factor
- Reactive Power
- AS phase AC Voltage
- AS phase Current
- Dt Pressure
- Coolant Temperature
- Coolant Level
- Dt Temperature
- Fuel Pressure
- Engine Speed
- Battery Voltage

12700 Glenhurst
Darien, CT 06820

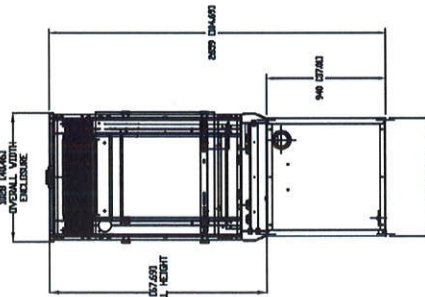
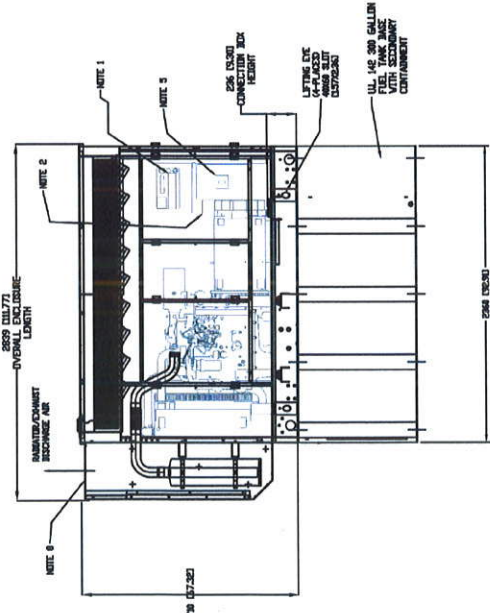
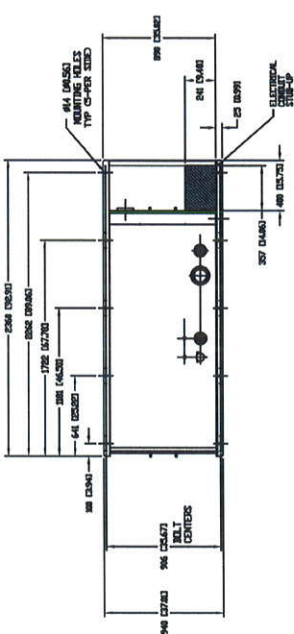
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Alumni Programable Tolerances, Problems and Solutions

- Low Fuel
Oil Pressure (Pre-programmed Low Pressure Shutdown)
Coolant Temperature (Pre-programmed High Temp Shutdown)
Coolant Level (Pre-programmed Low Level Shutdown)
Alternator Overload
Fuel Pressure
Engine Speed (Pre-programmed Overspeed Shutdown)
Voltage (Pre-programmed Overvoltage Shutdown)
Battery Voltage

Other Options

- Figure 1
- Figure 2

[illegible]

- [illegible]

WEIGHT DATA
APPROX. DRY WEIGHT WITHOUT FUEL. GROSS WT. PACKAGED 4032 LBS.

REFERENCE DRAWING 045302C FOR INSTALLATION
FUEL TANK DRAWING 044504A

GENEMAC POWER SYSTEMS OWNS THE COMPONENT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENEMAC POWER SYSTEMS.

**GENERAC POWER
SYSTEMS**
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

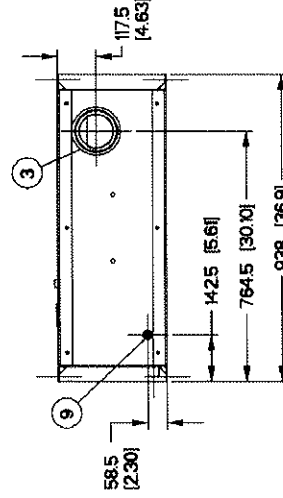
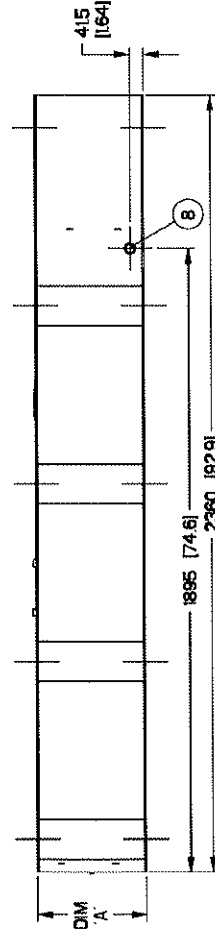
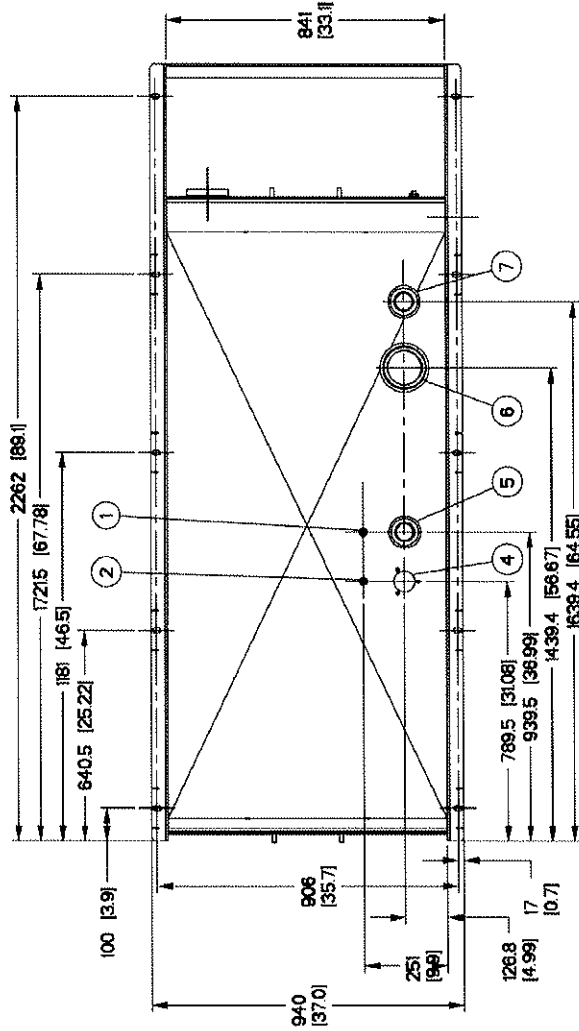
SD80
DIESEL 4.5L IVECO
TURBOCHARGED & AFTERCOOLED
SOUND ATTENUATED ENSL., LVL 2
W/ 300 GALLON FTB

INSTALLATION DRAWING

ITEM #	TANK FITTING	FUNCTION
1	3/8" NPT COUPLING	FUEL SUPPLY
2	3/8" NPT COUPLING	FUEL RETURN
3	4" NPT WELD FLANGE	EMERGENCY VENT (OUTER)
4		FUEL LEVEL
5	2" NPT WELD FLANGE	FUEL FILL
6	4" NPT WELD FLANGE	EMERGENCY VENT (INNER)
7	2" NPT WELD FLANGE	VENT
8	3/4" NPT COUPLING	DRAIN
9	Ø 22 HOLE	LEAK DETECTOR

TANK P/N	0148080ST03	0148080ST03	0148080ST03
DIM "A"	330 [13]	635 [25]	940 [37]
TOTAL TANK CAPACITY	318 [84]	734 [194]	1154 [305]
USABLE TANK CAPACITY	289 [79]	716 [189]	1134 [300]
DRY WEIGHT (EST)	237 [522]	344 [758]	445 [982]

NOTES:
 1) ALL DIMENSIONS ARE:
 LENGTH: mm [inch]
 WEIGHT: kg [lbs]
 CAPACITY: L [gal]
 2) UL #142 LISTED



GENERAC
 B-GROUP, DW TYPE 2 TANKS

DRAWING CREATED FROM PRO/ENGINEER
 3D FILE. ECO MODIFICATION TO BE
 APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

TITLE

B-GROUP, DW TYPE 2 TANKS

ISSUE DATE:	10/02/09
SIZE	B
CAGE NO	DWG NO
SCALE	0.075
WT-KG	..
SHEET	1 of 1
REV	D
	0H4610A