STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF JULY 29, 2020

FILE NO: LU-2020-0020 **AGENDA ITEM: E.2**

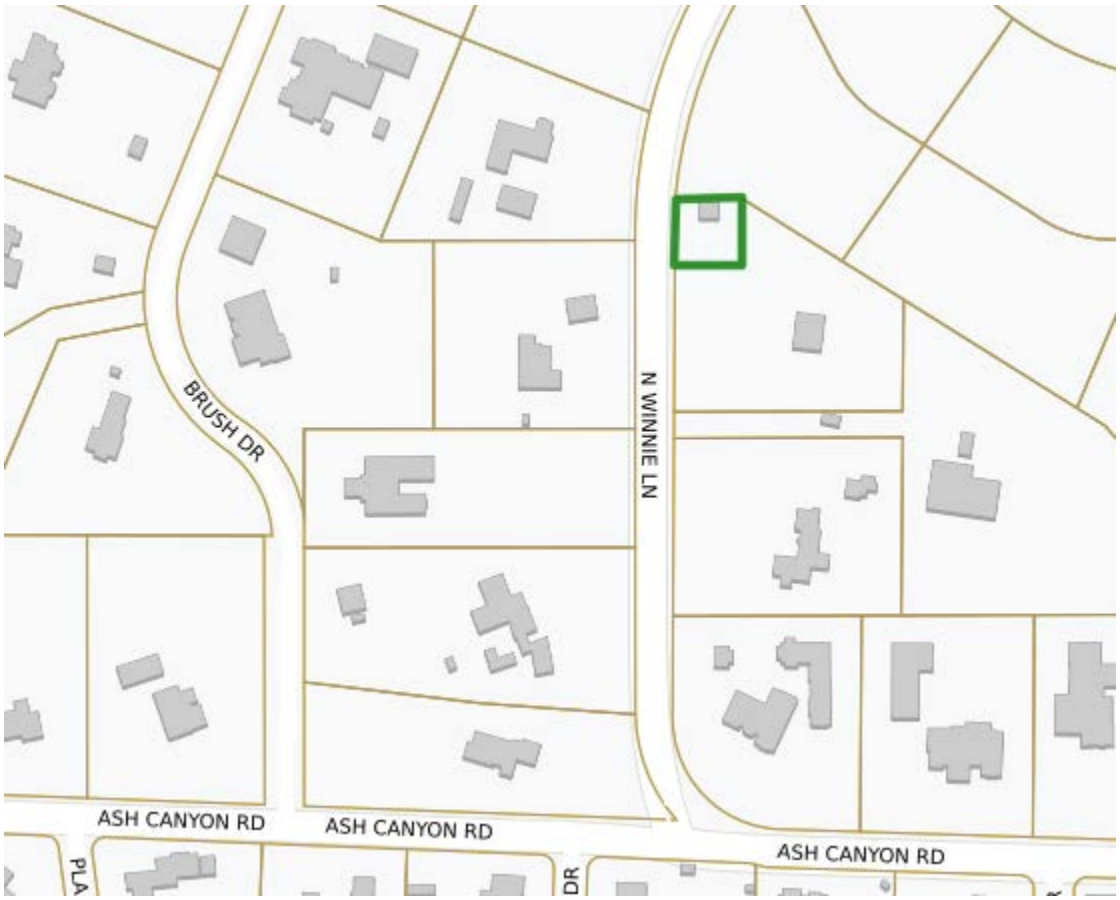
STAFF AUTHOR: Hope Sullivan, Planning Manager

AGENDA TITLE: For Possible Action: Discussion and possible action regarding a request for a Special Use Permit for a modification to a municipal well facility on property zoned Single Family 2 Acre (SF2A), located at 1881 North Winnie Lane, APN 007-572-99. (Hope Sullivan, hsullivan@carson.org)

SUMMARY: Carson City Public Works is proposing to modify the existing Municipal Well 3 site to add a new 144 square foot well house, a 102 square foot emergency backup generator and associated site improvements to provide access to the new building and generator. The existing building will remain and house the electrical and control equipment to operate the well. The Planning Commission is authorized to approve a Special Use Permit.

RECOMMENDED MOTION: "I move to approve LU-2020-0020 based on the ability to make the required findings and subject to the conditions of approval included in the staff report."

VICINITY MAP:



RECOMMENDED CONDITIONS OF APPROVAL:

1. All development shall be substantially in accordance with the approved site plan.

2. All on and off-site improvements shall conform to City standards and requirements.

3. Building materials shall be consistent with the approved plans. All exposed metal surfaces shall be painted in flat, non-glossy paint to complement or match the color of the exterior.

4. The applicant shall submit exterior light fixture details for any proposed fixtures with the building permit application. Lights must be shielded with a 90-degree full cutoff so that light is projected downward and not horizontally or upward. Light sources or refractors shall not extend below the bottom of the shield.

5. The use for which this permit is approved shall commence within twelve (12) months of the date of final approval. A single, one (1) year extension of time must be requested in writing to the Planning and Community Development Department thirty (30) days prior to the one (1) year expiration date. Should this permit not be initiated within one (1) year and no extension granted, the permit shall become null and void.

6. The applicant must sign and return the Notice of Decision for conditions of approval within ten (10) days of receipt of notification. If the Notice of Decision is not signed and returned within ten (10) days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.

7. The driveway must be gravel as stated in the application.

8. The applicant must install landscaping consistent with Division 3 of the Development Standards. The landscape plan must be submitted with the application for a building permit and installed prior to completion of the building. Landscaping shall be designed to create a visual screen of the generator cabinet from the right-of-way.

LEGAL REQUIREMENTS: CCMC 18.02.050 (Review); 18.02.080 (Special Use Permit); 18.04.050 (Single-family 2 Acre)

MASTER PLAN DESIGNATION: Low Density Residential (LDR)

ZONING DISTRICT: Single-family 2 Acre (SF2A)

KEY ISSUES: Will the use be compatible with the surrounding neighborhood and be in keeping with the standards of the Carson City Municipal Code?

SURROUNDING ZONING AND LAND USE INFORMATION:
NORTH: Single-Family-2 acre / vacant
EAST: Single-Family 2 acre / barn
WEST: Single-Family 2 acre / single family residences
SOUTH: Single-Family 2 acre / barn

ENVIRONMENTAL INFORMATION:
FLOOD ZONE: Zone X shaded (0.2% Annual Chance Flood Hazard) & Zone AE
EARTHQUAKE FAULT: Zone II (Moderate)
SLOPE/DRAINAGE: Site is flat

SITE DEVELOPMENT INFORMATION:
LOT SIZE: 10,000 square feet (lease area)
STRUCTURE SIZE: existing: 475 square feet, proposed: 144 square feet
VARIANCES REQUESTED: None

PREVIOUS REVIEWS:

- U-90/91-12: Special use permit for a well

DISCUSSION:

The subject property is a 10,000 square foot lease area zoned Single Family Two Acre (SF2A). Per CCMC 18.04.050, a municipal well facility is a conditional use in the SF2A zoning district. Therefore, the use may only be established or modified subject to a Special Use Permit. The Planning Commission is authorized to approve a Special Use Permit.

The subject property currently serves as a well site with an existing 475 square foot building on the site. The applicant is proposing to re-drill Well 3, and to house the new well equipment in a 144 square foot building. The new well building will utilize the same materials as the existing well building, specifically split faced CMU wall with a standing seam metal roof to match. A generator is also proposed, which will be housed in a level 2 sound enclosure (cabinet). Existing chain linked fencing will remain.

PUBLIC COMMENTS:

Public notices were mailed to 30 property owners within 850 feet of the subject site on July 9, 2020. As of the writing of this report, staff has not received any written comments. Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on July 29, 2020 depending on the date of submission of the comments to the Planning Division.

OTHER CITY DEPARTMENTS OR OUTSIDE AGENCY COMMENTS:

Plans were routed to commenting agencies, and the following comments were received. Comments have been incorporated into the conditions of approval, as appropriate.

Engineering Division

The Engineering Division has no preference or objection to the special use request provided that the following conditions are met:
- The driveway must be gravel as stated in the application.

The Engineering Division has reviewed the application within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 18.02.080, Conditional Uses.

The Engineering Division offers the following discussion:

C.C.M.C. 18.02.080 (5a) - Master Plan
The request is not in conflict with any Engineering Master Plans.

C.C.M.C. 18.02.080 (5b&g) – Use, Peaceful Enjoyment, Economic Value, Compatibility, Material

Damage or Prejudice to Other Property
Well 3B was tested by AquA Hydrogeologic Consulting in 2019. The study showed high levels of transmissivity values that indicate that the well can produce water at 2,500 gpm without a detrimental impact to the aquifer. The proposal is to install a pump that would operate at only 2,000 gpm. Also, the City is actively recharging the aquifer at Vicee Canyon, Wells 10B, 51 and 55 which are near well 3. Due to these factors Development Engineering concludes that the well upgrade will have no detrimental impact to peaceful enjoyment, economic value, or material damage of the surrounding properties.

C.C.M.C. 18.02.080 (5c) - Traffic/Pedestrians
The proposed improvements will have a negligible impact on traffic.

C.C.M.C. 18.02.080 (5d) - Public Services
The proposed improvements will improve the City's water service and will have no impact on other City services.

C.C.M.C. 18.02.080 (5e) – Title 18 Standards
Development Engineering has no comment on this finding.

C.C.M.C. 18.02.080 (5f) – Public health, Safety, Convenience, and Welfare
The project meets engineering standards for health and safety.

C.C.M.C. 18.02.080 (5h) – Adequate Information
The plans and reports provided were adequate for this analysis.

Fire Department Comments

1. Project must comply with the International Fire Code and northern Nevada fire code amendments as adopted by Carson City.

2. Diesel tank must be at least 10 feet from any buildings. Plans show it as 9 feet from the proposed well house.

FINDINGS:

Staff's recommendation is based upon the findings as required by CCMC Section 18.02.080 (Special Use Permits) enumerated below and substantiated in the public record for the project.

1. *Will be consistent with the objectives of the Master Plan elements.*

The Water Supply and Storage Update section of the Water Master Plan Update dated December 18, 2015 identifies Well 3 as the first well which should be redrilled, followed by Wells 5 and 4, located farther to the east. The building and generator are necessary to house the new well equipment.

2. *Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity.*

The subject leased area is currently improved with a 475 square foot well building, drainage

improvements, a driveway, and fencing. The applicant proposes adding a 144 square foot building to house the new well equipment, and a 102 square foot generator, which will be housed in a noise attenuating cabinet.

The use does not create vibrations, fumes, odors, dust, glare or physical activity. The equipment, in particular the generator, does create noise. The well equipment will be housed in a building utilizing CMU walls, and the generator will be housed in a cabinet that provides for a level 2 sound enclosure, the highest sound attenuation enclosure available. Per the specification, when the generator is running, the sound will be 70 dBA at 23 feet away. This is the equivalent of the sound of a vacuum cleaner. Staff would note that the existing well building located to the north of the generator will serve as noise mitigation, as will the proposed building located southeast of the generator.

The emergency generator will be installed to provide back-up power during power outages and natural disasters. As such, it should run infrequently.

3. ***Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public improvements.***

The new well building and associated improvements will improve the reliability of the municipal water system. It will not overburden schools, police, fire, sanitary sewer, roads, storm drainage, or other public improvements.

4. ***Meets the definition and specific standards set forth elsewhere in this Title for such particular use and meets the purpose statement of that district.***

As the subject property is zoned SF2A, the required setbacks are:

Front:	50 feet
Rear:	30 feet
Side:	20 feet

Of note, the 10,000 square foot well area is a leased easement that is a part of 1821 N Winnie Lane, a 2.15 acre parcel. The setbacks are measured from the property line as opposed to the boundaries of the easement.

The site plan indicates that the proposed building is in excess of 60 feet from the front property line, and all other property lines. Therefore, meets the setback requirements.

The maximum building height allowed is 32 feet. The proposed building is approximately 12 feet tall.

The site has limited landscaping on-site. Staff has included a condition of approval that at the time of building permit application, the applicant must submit a landscape plan demonstrating compliance with Division 3 of the Development Standards. Staff has included in the recommendation that the application design the landscaping to create a visual screen between the generator and the right-of-way.

As conditioned, staff finds that the request will meeting the standards of Title 18.

5. ***Will not be detrimental to the public health, safety, convenience and welfare.***

The proposed improvements will allow the City to continue to use this site as a municipal well site. As designed, the site will not be detrimental to public health, safety, convenience or welfare.

6. ***Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.***

The 144 square foot well house designed to house the new well equipment, and associated generator will not result in material damage or prejudice to other property in the vicinity. The use of a municipal well is an established use. The proposed improvement will allow for a new well to be drilled and equipped at this site.

Attachments:

Application LU-2020-0020

Carson City Planning Division
108 E. Proctor Street · Carson City NV 89701
Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 18.02.080

SPECIAL USE PERMIT

FEE*: $2,450.00 MAJOR
$2,200.00 MINOR (Residential zoning districts)
+ noticing fee
***Due after application is deemed complete by staff**

FILE # LU-2020-0020

APPLICANT	PHONE #
Carson City Public Works	283-7584
MAILING ADDRESS, CITY, STATE, ZIP	
3505 Butti Way, Carson City, NV, 89701	
EMAIL ADDRESS	
danderson@carson.org	
PROPERTY OWNER	**PHONE #**
Carson City	887-2000
MAILING ADDRESS, CITY, STATE, ZIP	
201 N. Carson St., Carson City, NV, 89701	
EMAIL ADDRESS	
danderson@carson.org	283-7584
APPLICANT AGENT/REPRESENTATIVE	**PHONE #**
Darren Anderson	283-7584
MAILING ADRESS, CITY STATE, ZIP	
3505 Butti Way, Carson City, NV, 89701	
EMAIL ADDRESS	
danderson@carson.org	

☐ **SUBMITTAL PACKET – 4 Complete Packets (1 Unbound Original and 3 Copies) including:**
- ☐ Application Form
- ☐ Detailed Written Project Description
- ☐ Site Plan
- ☐ Building Elevation Drawings and Floor Plans
- ☐ Special Use Permit Findings
- ☐ Master Plan Policy Checklist
- ☐ Applicant's Acknowledgment Statement
- ☐ Documentation of Taxes Paid-to-Date
- ☐ Project Impact Reports (Engineering)

☐ **CD or USB DRIVE with complete application in PDF**

Application Received and Reviewed By:

_____

Submittal Deadline: Planning Commission application submittal schedule.

Note: Submittals must be of sufficient clarity and detail for all departments to adequately review the request. Additional information may be required.

Project's Assessor Parcel Number(s):	Street Address	
00757299	1881 North Winnie Lane	
Project's Master Plan Designation	**Project's Current Zoning**	**Nearest Major Cross Street(s)**
Low Density Residential	SF2A	Ash Canyon Road

Please provide a brief description of your proposed project and/or proposed use below. Provide additional pages to describe your request in more detail.
Carson City Public Works is proposing to build a new 144 square foot single story CMU well house, place a 102 square foot generator, and complete associated site improvements in order to put a new well into operation at the City's Well 3 site.

PROPERTY OWNER'S AFFIDAVIT

I, Edmund Quaglieri, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application.

Signature	Address	Date
[signature]	3505 Butti Carson	6/25/20

Use additional page(s) if necessary for additional owners.

STATE OF NEVADA)
COUNTY)

On June 25, 2020, Edmund Quaglieri, personally appeared before me, a notary public, personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she executed the foregoing document.

Lena E Reseck
Notary Public

LENA E. RESECK
NOTARY PUBLIC
STATE OF NEVADA
No. 14-12732-5 My Appt. Exp. March 28, 2022

NOTE: If your project is located within the Historic District or airport area, it may need to be scheduled before the Historic Resources Commission or the Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

STATEMENT OF FINDINGS

APPLICATION FOR SPECIAL USE PERMIT

WELL 3 RE-DRILL PROJECT

<u>Question 1</u>: Will be consistent with the objectives of the Master Plan elements.

The proposed improvements and completion of the re-drilling of Well 3 will be in accordance with Carson City's water master plan. Well 3 has regularly been identified in water planning documents listing Well 3 as a well to be re-drilled at its present location. For example, the Water Supply and Storage Update section of the Water Master Plan Update dated December 18, 2015 identifies Well 3 as the first well which should be replaced, followed by Wells 5 and 4 located farther to the east.

Additionally, Carson City Water Resources Report dated June 30, 2018 states:

> Well No. 3, which is within the West Side cluster of groundwater wells and was re-drilled in 1990, needs to be reconstructed using current well design and construction methods. Records indicate that this well was capable of 1,000 GPM and drilled to a depth of 480 feet. The water quality of the existing well is good, with levels of Arsenic and Uranium well below the regulatory limits.

The City was granted an easement for the construction, maintenance, and operation of Well #3 and appurtenances on January 5, 1972. All of the proposed improvements for the replacement well are within the existing easement area. The new building will be constructed of durable, low maintenance, and long-lasting materials which will match the materials and colors of the existing well house at the site. The emergency backup generator will be housed in a level 2 sound enclosure which it the highest sound attenuation enclosure available.

Completion of the project will allow the City to continue to provide a satisfactory level of service to those connected to the City's water system and help to maintain good quality of life for residents. The completion of the re-drilling of Well 3 adds to the sustainability of our community by adding reliable additional capacity to the water system.

<u>Question 2</u>: Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhood or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise vibrations, fumes, odors, dust, glare or physical activity.

Well 3 has historically been one of the City's best producing well sites. Anecdotally, residents in the area have said Well 3 has some of the best tasting water in the City. Production of the existing Well 3 has

been declining over time due to a number of factors. The recently drilled well will be the third well drilled at this site, and once equipped, will be Carson City's best producing well.

In order to complete the Well 3 re-drill project, an additional building will need to be constructed to house the new well pump. The new building will be a single story, 12' wide by 12' long structure with a gable roof which matches the character of the adjacent residential properties. The building will match the existing well house at the site in color and material type.

Repair to existing fencing, removal of existing brush, and placement of a gravel driveway will help with an improved curb appeal and preserve the character and integrity of adjacent development. The emergency backup generator will be housed inside a level 2 sound enclosure to provide maximum sound attenuation in consideration to adjacent residences.

The City applied for and was awarded a FEMA grant to install permanent emergency generators at four municipal well sites in the City. Being one of the four sites selected, a generator will be installed at the site to provide backup power and resiliency against power outages and natural disasters. These improvements will provide improved reliability to municipal water users in the area.

Adjacent properties:

Single Family 2 acres (SF2A) in all directions

Question 3: Will have little or no detrimental effect on vehicular traffic or pedestrian traffic.

The project will have no effect on vehicular or pedestrian traffic.

Question 4: Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.

The project will help improve the public water system and service. Completion of Well 3 will enhance the water system by increasing the production of one of Carson City's best well sites both in terms of quality as well as quantity.

Question 5: Meets the definition and specific standards set forth elsewhere in Carson City Municipal Code, Title 18 for such particular use and meets the purpose statement of that district.

A municipal well facility is a conditional use in the SF2A district and meets the definition of the district the well site is located within. The proposed improvements will help the City to continue to use the site as a municipal well facility.

<u>Question 6</u>: Will not be detrimental to the public health, safety, convenience and welfare.

This project will help to improve public health, safety, convenience and welfare by providing improved reliability of water and additional flow capacity from the Well 3 site.

<u>Question 7</u>: Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.

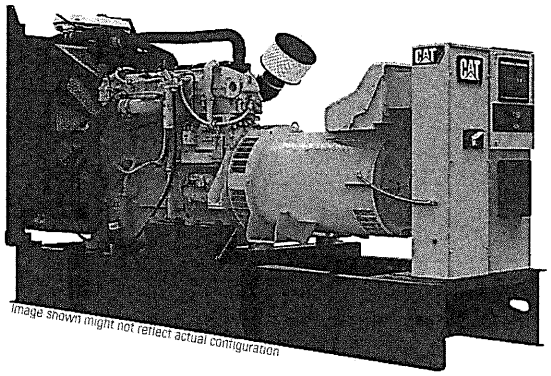
The use of the land will not vary as it has been previously used as a municipal well facility and will continue to be used in the same manner. The existing drainage culvert and ditch at the south end of the property will be maintained and will not negatively impact adjacent properties as a result of the project. Stormwater runoff from the site will drain to the existing ditch as it does currently. The proposed improvements will match existing improvements at the site and will not hinder value to adjacent properties.

ACKNOWLEDGMENT OF APPLICANT

I certify that the forgoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission. I am aware that this permit becomes null and void if the use is not initiated within one-year of the date of the Planning Commission's approval; and I understand that this permit may be revoked for violation of any of the conditions of approval. I further understand that approval of this application does not exempt me from all City code requirements.

Applicant's Signature	Print Name	Date
Darren Anderson	Darren Anderson	7/1/2020

Cat® C13 DIESEL GENERATOR SETS



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350 ekW- 400 ekW

60 Hz

Standby	Prime
350 ekW	320 ekW
400 ekW	365 ekW

BENEFITS & FEATURES

CAT® GENERATOR SET PACKAGE

Cat generator set packages have been fully prototype tested and certified torsional vibration analysis reports are available. The packages are designed to meet the NFPA 110 requirement for loading, conform to the ISO 8528-5 steady state and fill transient response requirements.

CAT DIESEL ENGINES

The four-cycle Cat diesel engine combines consistent performance with excellent fuel economy and transient response that meets or exceeds ISO 8528-5. The engines feature a reliable, rugged, and durable design that has been field proven in thousands of applications worldwide in emergency standby installations.

COOLING SYSTEM

The cooling system has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

GENERATORS

The generators used on Cat packages have been designed and tested to work with the Cat engine. The generators are built with robust Class H insulation and provide industry-leading motor starting capability and altitude capabilities.

EMCP CONTROL PANELS

The EMCP controller features the reliability and durability you have to come to expect from your Cat equipment. The EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

SPECIFICATIONS

ENGINE SPECIFICATIONS

Engine Model	Cat® C13 ACERT In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1in x 6.2in)
Displacement	12.5 L (763 in^3)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4
Emission Certifications	EPA TIER III

GENERATOR SET SPECIFICATIONS

Alternator Design	Brushless Single Bearing, 4 Pole
Stator	2/3 Pitch
No. of Leads	12
Available Voltage Options	600/480/440/240/220V
Frequency	60Hz
Alternator Voltage	24V
Alternator Insulation & IP	Class H; IP23
Standard Temperature Rise	125/130 Deg C
Available Excitation Options	Self-Excited, PMG
Voltage Regulation, Steady State +/-	≤1%

Cat® C13 DIESEL GENERATOR SETS

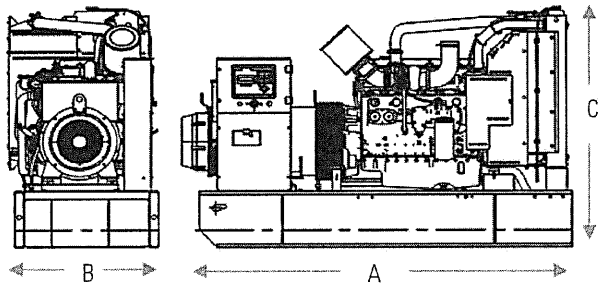
STANDARD EQUIPMENT

Air inlet system	Aftercooler core. Turbocharger
Control panels	EMCP4.2 control panel.
Cooling system	Coolant drain line with valve; terminated on edge of base. Fan and belt guards. Coolant Level Sensor Thermostats and housing, full open temperature 92 deg C (198 deg F). Coolant level sight gauge. Jacket water pump, gear driven, centrifugal. Caterpillar Extended Life Coolant.
Exhaust system	Exhaust manifold; dry.
Fuel system	Primary fuel filter w/integral water separator & secondary filter. Fuel cooler. Fuel priming pump. Flexible fuel lines. Engine fuel transfer pump
Generators and generator attachments	Brushless, self-excited 2/3 pitch, random wound. IP23 Protection. Insulation Class H and temperature rise Power centre, IP22 bottom cable entry Segregated low voltage wiring pane
Governing system	Cat Electronic Governor (ADEM A4).
Protection System	Safety Shutoff – High Water Temperature Safety Shutoff – Low Oil Pressure Safety Shutoff – Overspeed Coolant Level Sensor
Base / Fuel Tank	Narrow Skid Wide / Standard Sub Tank Base – UL & ULC Listed Integral Tank Base – UL & ULC Listed Spill Containment Overfill Prevention Valve
Starting/charging system	24-Volt Electric Starting Motor Charging Alternator
Certifications	EPA Stationary Emergency Use

OPTIONAL EQUIPMENT

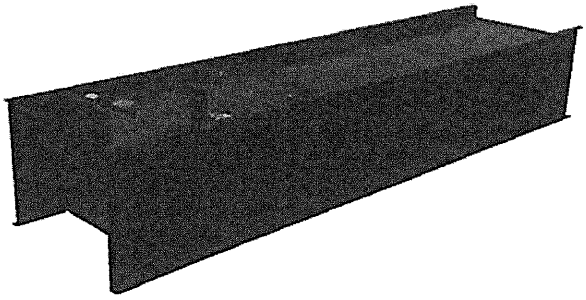
Air inlet system	Single/Dual Element Air Cleaner Heavy Duty Air Cleaner
Control panels	EMCP 4.4 Local Annunciator Remote Annunciators Discrete I/O Module Device Server Volt Free Contact Earth (Ground) Fault Relay
Circuit Breakers	3-Pole 100% Rated – Single (Manual & Motorized). 3-Pole 100% Rated – Dual & Third (Manual). External Paralleling Auxiliary Contacts Neutral Bar
Enclosures	Sound Attenuated (SA). Weather Protective
Cooling system	Stone guards.
Mufflers	Industrial grade (10 dBA) Residential and Critical grade (25 dBA)
Base / Fuel Tank	Audio & Visual Fuel Alarm
Fuel System	Integral 670 Gal Tank Base Sub Tank Bases:660, 1000, 1900, 2200 Gal
Generators and generator attachments	Excitation – Self Excitation – Internal / AREP / PMG Oversize Coastal Protection (CIP) Space Heater Control
Starting/charging system	Standard Battery Set Oversize Battery Set.
Certifications	UL2200 Listed CSA 22.2 Certification of Compliance – IBC Seismic Certification of Compliance – IBC Seismic and OSHPD
General	Tool Set.

WEIGHTS & DIMENSIONS



Standby Ratings	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Generator Set Weight kg (lb)
350 ekW	3505 (138)	1652 (65)	2069 (82)	3696 (8147)
400 ekW	3505 (138)	1652 (65)	2069 (82)	3823 (8427)

Cat® C13 INTEGRAL & SUB BASE FUEL TANKS



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INTEGRAL & SUB BASE FUEL TANKS

FEATURES

- UL Listed for United States (UL 142) and Canada (CAN/ULC S601)
- Facilitates compliance with NFPA 30 code, NFPA 37 and 110 standards and CSA C282 code
- Dual wall
- Lockable fuel fill cap, 4" (101.6 mm) NPT
- Low fuel level warning standard, customer configurable warning or shutdown
- Primary tank leak detection switch in containment basin
- Tank design provides capacity for thermal expansion of fuel
- Fuel supply dip tube is positioned so as not to pick up fuel sediment.
- Fuel return and supply dip tube is separated by an internal baffle to prevent immediate re-supply of heated return fuel
- Pressure washed with an iron phosphate solution
- Interior tank surfaces coated with a solvent-based thin-film rust preventative
- Heavy gauge steel gussets with internal lifting rings
- Primary and secondary tanks are leak tested at 20.7 kPa (3 psi) minimum
- Compatible with open packages and enclosures
- Gloss black polyester alkyd enamel exterior paint
- Welded steel containment basin (minimum of 110% of primary tank capacity)
- Direct reading fuel gauge with variable electrical output
- Emergency vents on primary and secondary tanks are sized in accordance with NFPA 30
- Rear stub-up access

SUB BASE

- The sub-base fuel tank mounts below the generator set wide base

INTEGRAL

- Integral diesel fuel tank is incorporated into the generator set base frame
- Robust base design includes linear vibration isolators between tank base and engine generator.

OPTIONS

- Audio/visual fuel level alarm panel
- 5gal (18.9 L) spill containment
- 5gal (18.9 L) spill containment with fuel fill drop tube with in 6" (152 mm) from bottom of tank
- 5gal (18.9 L) spill containment with overfill prevention valve and fuel fill drop tube with in 6" (152 mm) from bottom of tank
- ULC Listed 7.5gal (28.4 L) spill containment with vent extensions, vent whistle, and drop tube facilitating compliance with CSA B139-09
- ULC Listed 7.5gal (28.4 L) spill containment with overfill prevention valve, vent extensions, vent whistle and drop tube facilitating compliance with CSA B139-09

Cat® C13 INTEGRAL & SUB BASE FUEL TANKS

Integral & Sub-Base Fuel Tank Base Useable Capacities with Fuel Tank Dimensions & Weights

Integral – Width (W) 2014 mm (79.3 in)

Sub-base – Width (W) 2056 mm (81.0 in)

A. Open Set & Weather Protective Enclosure

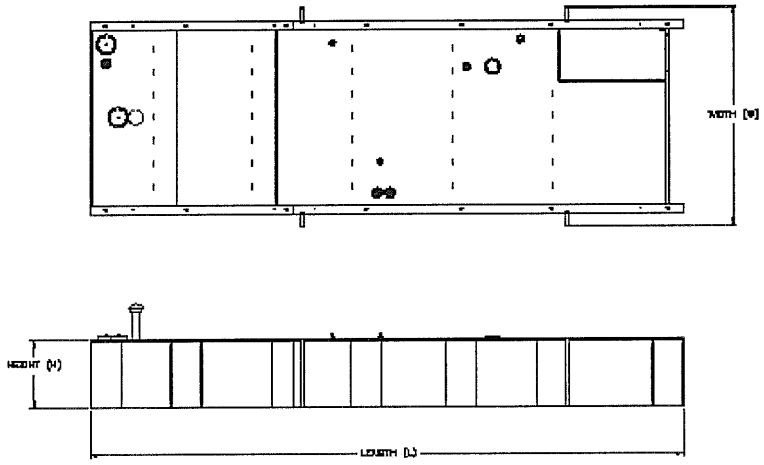
C13 Tank Design	Feature Code	Total Capacity		Useable Capacity		Tank Only						Overall Package Height with Tank			
						Dry Weight		Height 'H'		Length 'L'		Open		Enclosure	
		Litre	Gallon	litre	Gallon	kg	lb	mm	in	mm	in	mm	in	mm	in
Integral	FTDW013	2646	699	2540	671	1569	3450	762	30	5461	215	2552	100.5	2743	108
Sub-Base	FTDW005	3941	1041	3876	1024	1659	3657	635	25	5550	218.5	2763	108.8	2955	116.3
Sub-Base	FTDW006	7643	2019	7556	1996	2228	4912	889	35	6184	243.5	3017	118.8	3209	126.3
Sub-Base	FTDW007	8339	2203	8244	2178	2150	4134	889	35	7074	278.5	2291	117.8	3789	149.2
Sub-Base	FTDW011	2476	654	2435	643	1468	3236	635	25	3810	150	2763	108.8	2955	116.3

B. Sound Attenuated Enclosure

C13 Tank Design	Feature Code	Total Capacity		Useable Capacity		Tank Only						Overall Package Height with Tank			
						Dry Weight		Height 'H'		Length 'L'		Open		Enclosure	
		litre	Gallon	litre	Gallon	kg	lb	mm	in	mm	in	mm	in	mm	in
Integral	FTDW013	2646	699	2540	671	1569	3450	762	30.0	5461	215.0	NA	NA	2743	108.0
Sub-Base	FTDW005	3941	1041	3876	1024	1659	3657	635	25.0	5550	218.5	NA	NA	2955	116.3
Sub-Base	FTDW006	7643	2019	7556	1996	2033	4483	889	35.0	6184	243.5	NA	NA	3209	126.3
Sub-Base	FTDW007	8339	2203	8244	2178	2292	5052	889	35.0	7074	278.5	NA	NA	3209	126.3
Sub-Base	FTDW011	2476	654	2435	643	1468	3236	635	25.0	3810	150.0	NA	NA	2955	116.3

C. Estimated Run Time (Hours) at 100% Load

C13 Tank Design	Feature Code	Standby Ratings (ekW)		Prime Ratings (ekW)	
		400	350	350	320
Integral Tank	FTDW013	24	27	25	29
Sub-Base	FTDW005	36	41	38	43
Sub-Base	FTDW006	71	80	74	85
Sub-Base	FTDW007	77	87	81	93
Sub-Base	FTDW011	23	25	24	27



The heights listed above do not include lumber used during manufacturing and shipping

Tanks with full electrical stub-up area include removable end channel. Tanks with RH stub-up include stubup area directly below the circuit breaker or power terminal strips. Dimensions include weather-protective enclosure exhaust system.

Dual wall sub-base tanks are UL Listed and constructed in accordance with UL Standard for Safety UL 142, Steel Aboveground Tanks for Flammable and Combustible Liquids and Canada CAN/ULC S601, Standard for Shop Fabricated Steel Aboveground Horizontal Tanks for Flammable and Combustible Liquids.

Fuel tanks and applicable options facilitate compliance with the following United States NFPA Code and Standards:

NFPA 30: Flammable and Combustible Liquids Code

NFPA 37: Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines

NFPA 110: Standard for Emergency and Standby Power Systems

Fuel tanks and applicable options facilitate compliance with the following Canadian Standard and Code:

CSA C282 – Emergency Electrical Power Supply for Buildings

CSA B139-09 – Installation Code for Oil-Burning Equipment

The following sub-base fuel tanks meet Chicago code for containment and labelling:

FTDW005

FTDW008

FTDW011

Cat® C13 ENCLOSURES

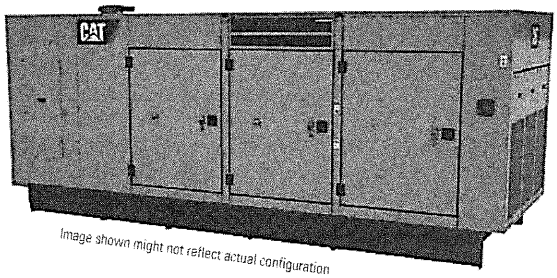


Image shown might not reflect actual configuration

SOUND ATTENUATED & WEATHER PROTECTIVE ENCLOSURES

60 Hz

FEATURES

Robust / Highly Corrosion Resistant Construction

- Factory installed on skid base
- Environmentally friendly, polyester powder baked paint
- 14 gauge steel
- Interior zinc plated fasteners
- Exterior stainless steel fasteners
- Internally mounted exhaust silencing system
- Designed and tested to comply with UL 2200 Listed generator set package
- Compression door latches providing solid door seal

Excellent Access

- Large cable entry area for installation ease
- Accommodates side mounted single or multiple breakers
- Three doors on both sides
- Vertically hinged allow 180° opening rotation and retention with door stays
- Lube oil and coolant drains piped to the exterior of the enclosure base
- Radiator fill cover

Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader bar lifting to ensure safety
- Stub-up area is rodent proof

Transportability

- These enclosures are of extremely rugged construction to withstand outdoor exposure and rough handling common on many construction sites.

Options (Sound Attenuated)

- Enclosure constructed with 14 gauge steel
- Enclosure constructed with 12 gauge aluminum (5052 grade)
- Caterpillar yellow or white paint
- Control panel viewing window
- UL Listed integral fuel tank with 670, 400, and 300 gallon capacities
- UL Listed sub base fuel tank with 660, 1000, 1900, and 2200 gallon capacities.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
- IBC Certification for 150 mph wind loading
- AC/DC lighting package
- 5 kW Canopy space heater to facilitate compliance with NFPA 110
- Motorized louvers and gravity discharge damper
- 125A Load Center
- GFCI outlets

Options (Weather Protective)

- Caterpillar Yellow or white paint
- UL Listed integral fuel tank with 680, 400, and 300 gallon capacities
- UL Listed sub-base fuel tank with 660, 1000, 1900, and 2200 gallon capacities.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010.
- IBC Certification for 150 mph wind loading
- Anchoring details are site specific and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a professional engineer.
- AC/DC lighting package

Cat® C13 ENCLOSURES

Enclosure Package Operating Characteristics

Enclosure Type	Standby ekW	Cooling Air Flow Rate		Ambient Capability*		Sound Pressure Levels (dBA) at 7m (23 ft)
		m^3/s	cfm	°C	°F	100% Load
Level 1 Sound Attenuated Enclosure (Steel)	350	8.5	18010	57	135	74
	400	8.5	18010	56	133	75
Level 2 Sound Attenuated Enclosure (Steel)	350	7.2	15256	50	122	70
	400	7.2	15256	50	122	70
Sound Attenuated Enclosure (Aluminum)	350	8.5	–	57	135	75
	400	8.5	–	56	133	75
Weather Protective Enclosure	350	8.5	–	54	129	87
	400	8.5	–	53	127	88

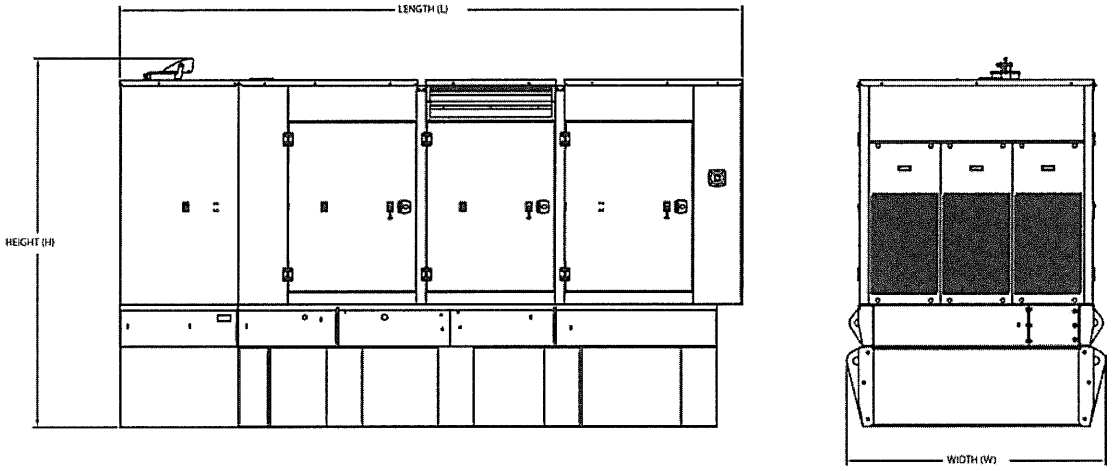
Note: Sound level measurements are subject to instrumentation, installation and manufacturing variability, as well as ambient site conditions.

DIMENSIONS

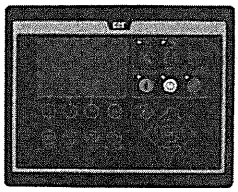
Enclosure Type	Standby Ratings, ekW	Length, L		Width, W		Height, H	
		mm	in	mm	in	mm	in
Sound Attenuated Enclosure on Skid Base	350	4948	194.8	2014	79.3	2320	91.3
	400						
Sound Attenuated Enclosure on a UL Listed Integral Fuel Tank Base	350	5461	215.0	2014	79.3	2743	108.0
	400						
Sound Attenuated Enclosure on a UL Listed 660 Gallon Sub-Base Fuel Tank Base	350	4948	194.8	2056	80.9	2955	116.3
	400						
Sound Attenuated Enclosure on a UL Listed 1000 Gallon Sub-Base Fuel Tank Base	350	5751	226.4	2056	80.9	2955	116.3
	400						
Sound Attenuated Enclosure on a UL Listed 1900 Gallon Sub-Base Fuel Tank Base	350	6382	251.2	2056	80.9	3209	126.3
	400						
Sound Attenuated Enclosure on a UL Listed 2200 Gallon Sub-Base Fuel Tank Base	350	7074	278.5	2056	80.9	3209	126.3
	400						
Weather Protective Enclosure on Skid Base	350	4948	194.8	2014	79.3	2320	91.3
	400						
Weather Protective Enclosure on a UL Listed Integral Fuel Tank Base	350	5461	215.0	2014	79.3	2743	108.0
	400						

Component Weights to Calculate Package Weight

Standby ekW	Narrow Skid Base		Wide Skid Base		Sound Attenuated Enclosure (Steel)		Sound Attenuated Enclosure (Aluminum)		Weather Protective Enclosure	
	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
350 400	253	578	579	1276	1245	2745	765	1687	1166	2570



EMCP 4 CONTROL KEY FEATURES



EMCP 4 control features

- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

Digital indication for:

- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF (4.2 only)

Warning/shutdown with common LED indication of:

- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency Stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level

Programmable protective relaying functions:

- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under Frequency (81 o/u)
- Reverse Power (kW) (32) (4.2 only)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:

- 4 digital inputs & 4 relay outputs (4.1)
- 6 digital inputs & 8 relay outputs (4.2)
- 12 digital inputs & 8 relay outputs (4.4)
- Customer data link (Modbus RTU) (4.2 only)
- Accessory module data link (4.2 only)
- Serial annunciator module data link (4.2 only)
- Emergency stop pushbutton

Compatible with the following:

- Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator

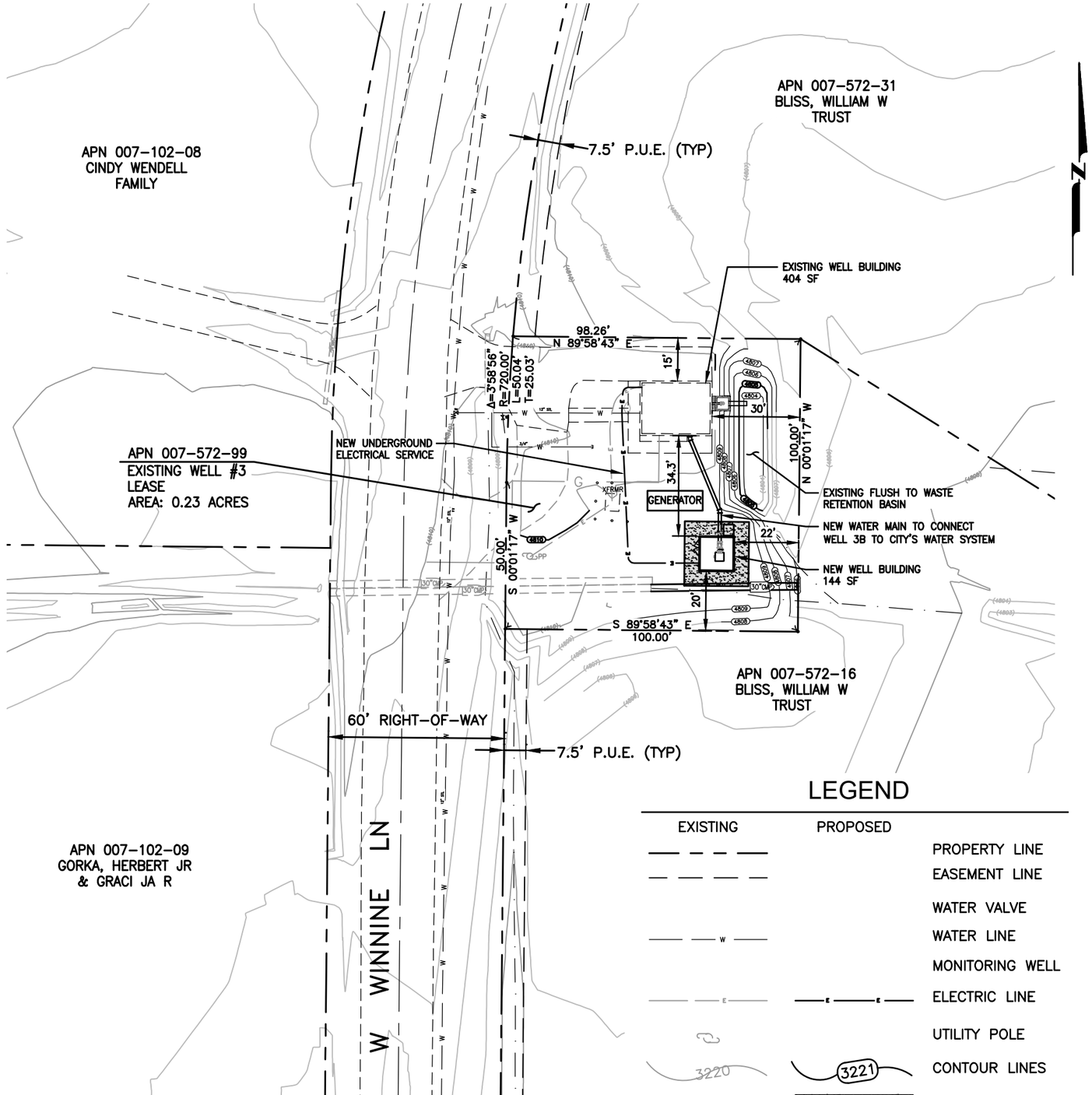
FINANCING

Caterpillar offers an array of financial products to help you succeed through financial service excellence. Options include loans, finance lease, operating lease, working capital, and revolving line of credit. Contact your local Cat dealer for availability in your region.

WORLDWIDE PRODUCT SUPPORT

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Caterpillar® SOS℠ program effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

LEHE1571-01 (01/19)



SITE PLAN

SCALE: 1"=40'

SCALE
40 0 20 40
HORIZ: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		EASEMENT LINE
		WATER VALVE
W		WATER LINE
		MONITORING WELL
E	E E	ELECTRIC LINE
		UTILITY POLE
3220	3221	CONTOUR LINES
		PCC PAVEMENT
		DRAINAGE SWALE
30"CMP	30"CMP	STORMDRAIN PIPE

OWNER:	CARSON CITY 201 N. CARSON ST. CARSON CITY, NV 89701 (775) 887-2000
APPLICANT:	CARSON CITY PUBLIC WORKS DEPT. 3505 BUTTI WY CARSON CITY, NV 89701 (775) 283-7584
REQUEST:	CONSTRUCTION OF NEW WELL BUILDING AND GENERATOR
LOCATION:	APN 007-572-99
ZONING:	SF2A
MASTER PLAN LAND USE DESIGNATION:	LOW DENSITY RESIDENTIAL
SITE PLAN PREPARED BY:	CARSON CITY PUBLIC WORKS DEPT.

VICINITY MAP

NO SCALE

CARSON CITY
PUBLIC WORKS DEPARTMENT
3505 BUTTI WAY CARSON CITY, NEVADA 89701
PH: 887-2355 FAX; 887-2112

DESIGNED BY: DSA/DLF
DRAWN BY: DLF
CHECKED BY: DSA/DGR
DWG NO.:041601 well 3 sup.dwg
SCALE (HORIZ):AS SHOWN
SCALE (VERT): N/A
DATE: 6/26/20

REV.	DATE	DESCRIPTION	BY	APP'D

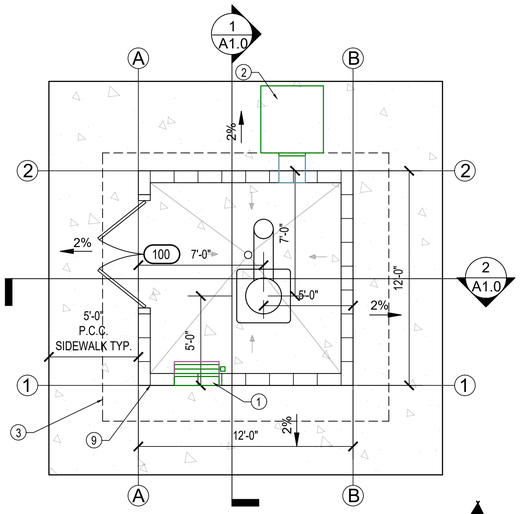
PRODUCTION WELL 3B WELL HOUSE AND EQUIPPING PROJECT

PROJECT No. P350516015

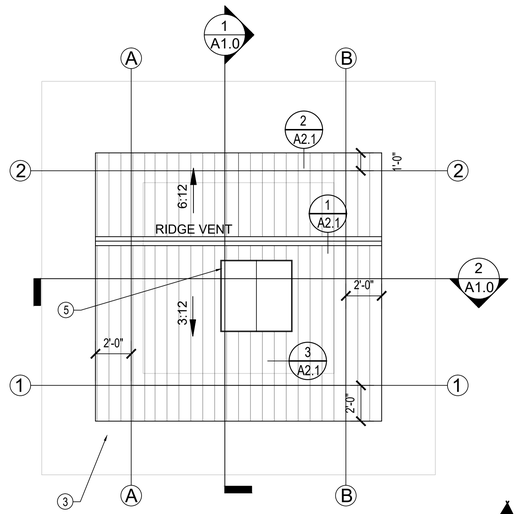
SPECIAL USE PERMIT PLAN

SHEET 1 OF 1

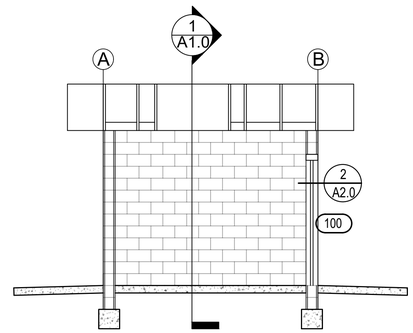
I:\CAPITAL PROJECTS\Projects\041601-Re-DrillWell3\02.Design\DWG\041601 WELL 3 SUP.dwg; 6/26/20



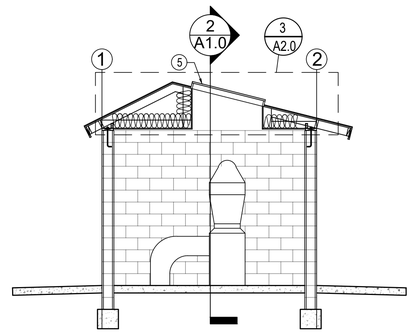
NEW FLOOR PLAN
SCALE: 1/4" = 1'–0"



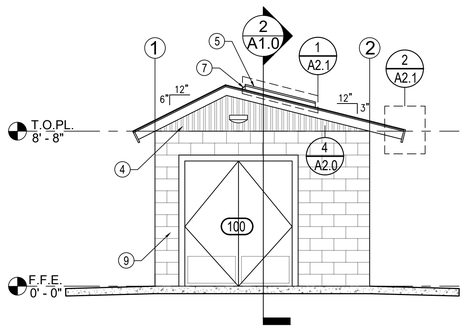
ROOF PLAN
SCALE: 1/4" = 1'–0"



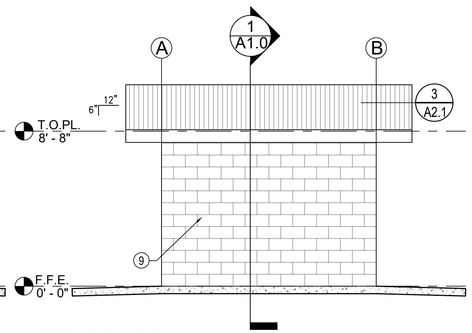
1 SECTIONS
SCALE: 1/4" = 1'–0"



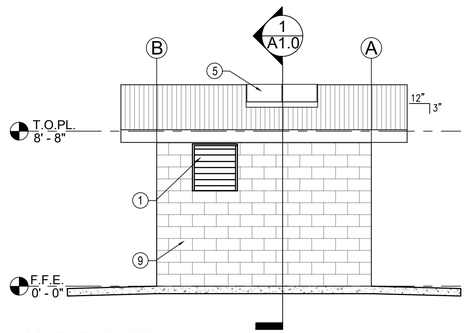
2 SECTIONS
SCALE: 1/4" = 1'–0"



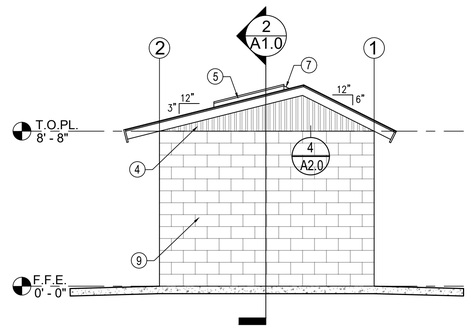
WEST ELEVATION
SCALE: 1/2" = 1'–0"



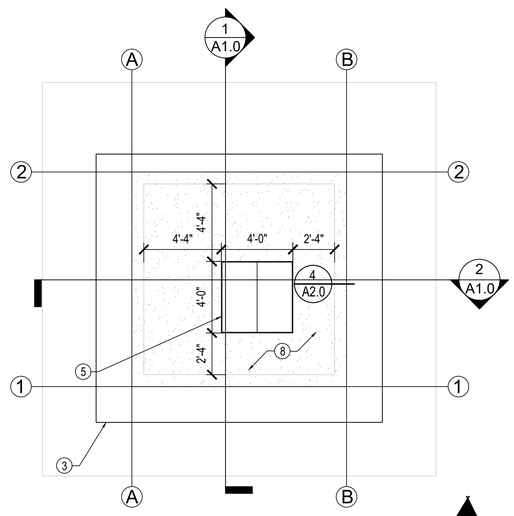
NORTH ELEVATION
SCALE: 1/2" = 1'–0"



SOUTH ELEVATION
SCALE: 1/2" = 1'–0"



EAST ELEVATION
SCALE: 1/2" = 1'–0"



REFLECTED CEILING PLAN
SCALE: 1/4" = 1'–0"

DOOR SCHEDULE

DOOR NUMBER	LABEL	FRAME MAT'L	FRAME ELEV.	FRAME DEPTH	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS JAMB	FRAME DETAILS SILL	DOOR MAT'L	DOOR ELEV.	DOOR GLAZING	DOOR SIZE PR.	DOOR SIZE WIDTH	DOOR SIZE HT.	HARDWARE PUSH	HARDWARE PULL	HARDWARE LOCKSET	HARDWARE DEADBOLT	HARDWARE CLOSERS	HARDWARE STOPS	HARDWARE THRESH	HARDWARE SWEEP	HARDWARE WEATHER STRIP	HARDWARE PROTECTION PLATE	HARDWARE EXIT DEVICE	HARDWARE LOUVER	HARDWARE ASTRAGAL	HARDWARE HARDWARE GROUP	REMARKS
100	N/A	H.M.			2/A2.0	2/A2.0	2/A2.0	5/A2.0	H.M.			X	3'–0"	7'–0"			●	●		●	●		●	●			●	H1	

H1: 195F/26D–G3 (S3) STOREROOM; (1) EA.
D26D–20*200V1 US26D–KEY IN KNOB CYLINDER; (1) EA.
TAILPIECE CT–V01; (1) EA. B663P–US26D

GENERAL NOTES

A. SEE STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.

KEY NOTES

1. (N) LOUVER, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION
2. (N) EVAP COOLER THROUGH CMU WALL, PROVIDE FLASHING AROUND OPENING
3. LINE OF ROOF OVERHAND ABOVE, PAINT ALL EXPOSED WOOD TRUSSES, FASCIA, AND SHEATHING
4. (N) SIDING, TYP EA. GABLE, SEE DETAIL 4/A2.0
5. (N) NYSTROM 4'X4' DOUBLE LEAF EQUIPMENT HATCH (W/ RIGID INSULATION) CENTER OVER WELL HEAD 1/A2.0
6. (N) STANDING SEAM METAL ROOF TO MATCH (E) , SEE DETAILS 1/A2.1 2/A2.1 3/A2.1
7. ADD FLASHING TO DRAIN WATER FROM ACCESS HATCH EDGE
8. (N) 5/8" TYPE X GYP. BD. TAPED, PAINTED, TYP. ENTIRE CEILING- SEE DETAIL 4/A2.0
9. (N) SPLIT FACE CMU WALL, COLOR TO MATCH (E) SPLIT FACE

dubé group
ARCHITECTURE

458 court street | reno, nevada 89501
http://twitter.com/DubeGrpArchitek
http://www.thedubegroup.com

p | 775.323.1001
f | 775.323.2220

PETER R. DUBÉ
REGISTERED
No. 2443
12.3.2019
ARCHITECT
STATE OF NEVADA

project title:
Carson City Well #3

job number:	19-1000
date:	December 4, 2019
drawn by:	AMM
checked by:	prd
revisions:	

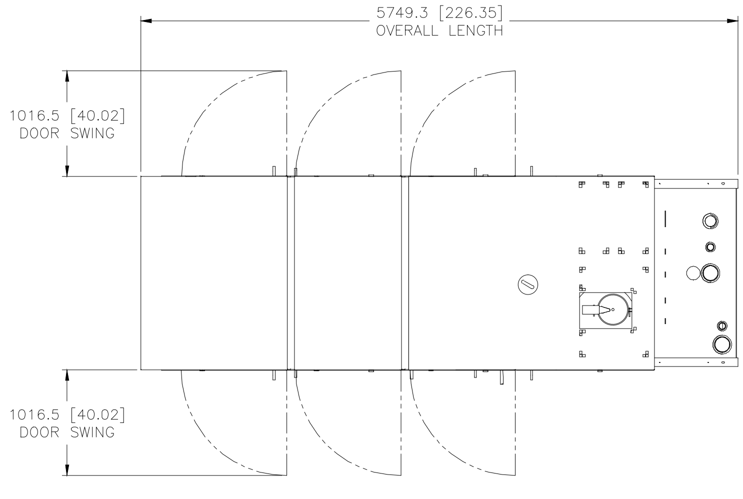
sheet description:
FLOOR PLAN, ROOF PLAN ELEVATIONS, SECTIONS

sheet number:
A1.0

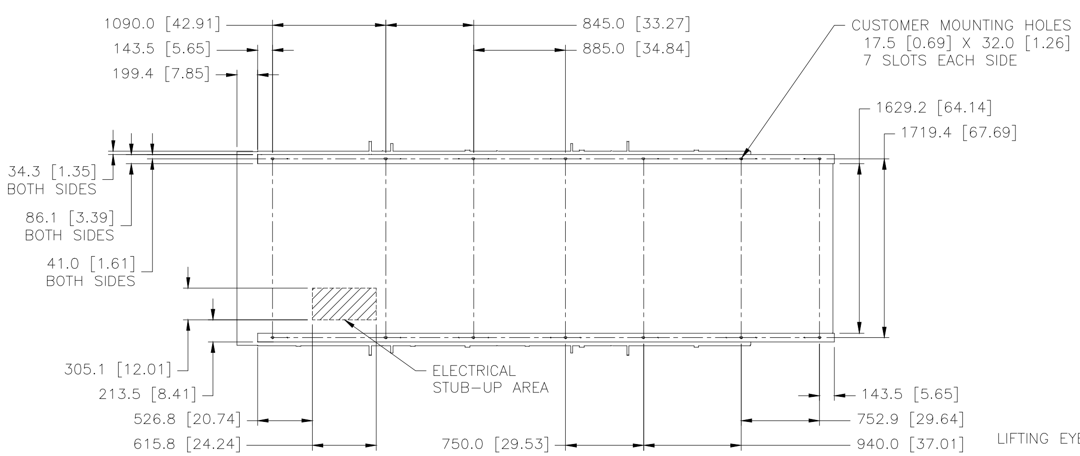
METRIC 540-3128

QTY	ENGINE CONNECTIONS	SIZE	SHEET
1	COOLANT DRAIN	ø19.1 [0.75] ID	2
1	EXHAUST	ø254.0 [ø10.00] OD	2
1	OIL DRAIN	ø19.1 [0.75] ID	2

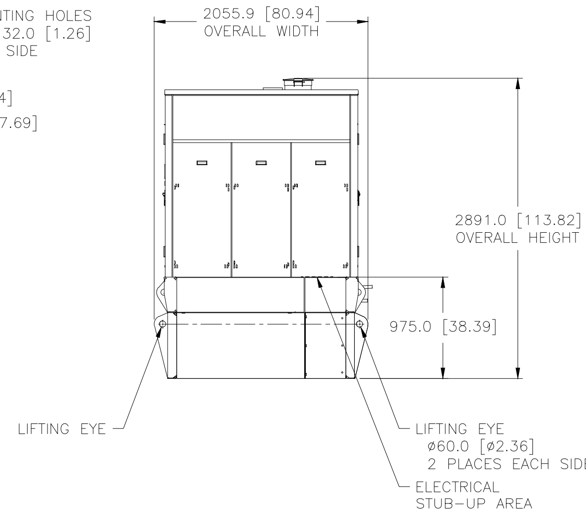
QTY	POSSIBLE TANK CONNECTIONS	SIZE	SHEET
1	BASIN TANK EMERGENCY VENT	5" NPTF THD	2
2	CUSTOMER CONNECTIONS	2" NPTF THD	2
1	FUEL FILLER	4" NPTF THD	2
1	MAIN TANK EMERGENCY VENT	5" NPTF THD	2
1	SPARE	2" NPT	2



TOP VIEW



FOOTPRINT
(DIMENSIONED OUTLINE VIEW FROM ABOVE)



REAR VIEW

PACKAGE LIFTED IN 4 PLACES

PACKAGE SHOWN WITH MORE DETAIL ON SHEET 2

MODEL	TYPE	PRICING AR	ENCLOSURE	FUEL TANK
C13	Y	LS-1553 CHG 00 LS-1554 CHG 00	LS-1515 CHG 01 LS-1516 CHG 01 LS-1517 CHG 00 LS-1518 CHG 00	LS-1524 CHG 00

SPEC NO.	NAME
1E2966B	IDENT
1E2733	DRAWING-AUTOCAD
1E0198W	BRAND MARKINGS
1E0013G	CONFIDENTIALITY
1E0012A	INTERPRETATION
1E0011	INTPR & TOL

DRN M.J. SWIFT
CHK M.J. SWIFT
APPD N.P. MOUNTJOY
CON-CEPT EXP PRE PROD. PROD.
OTHER RECORDS X

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM [INCH] DIMENSIONS W/O TOL ARE BASIC

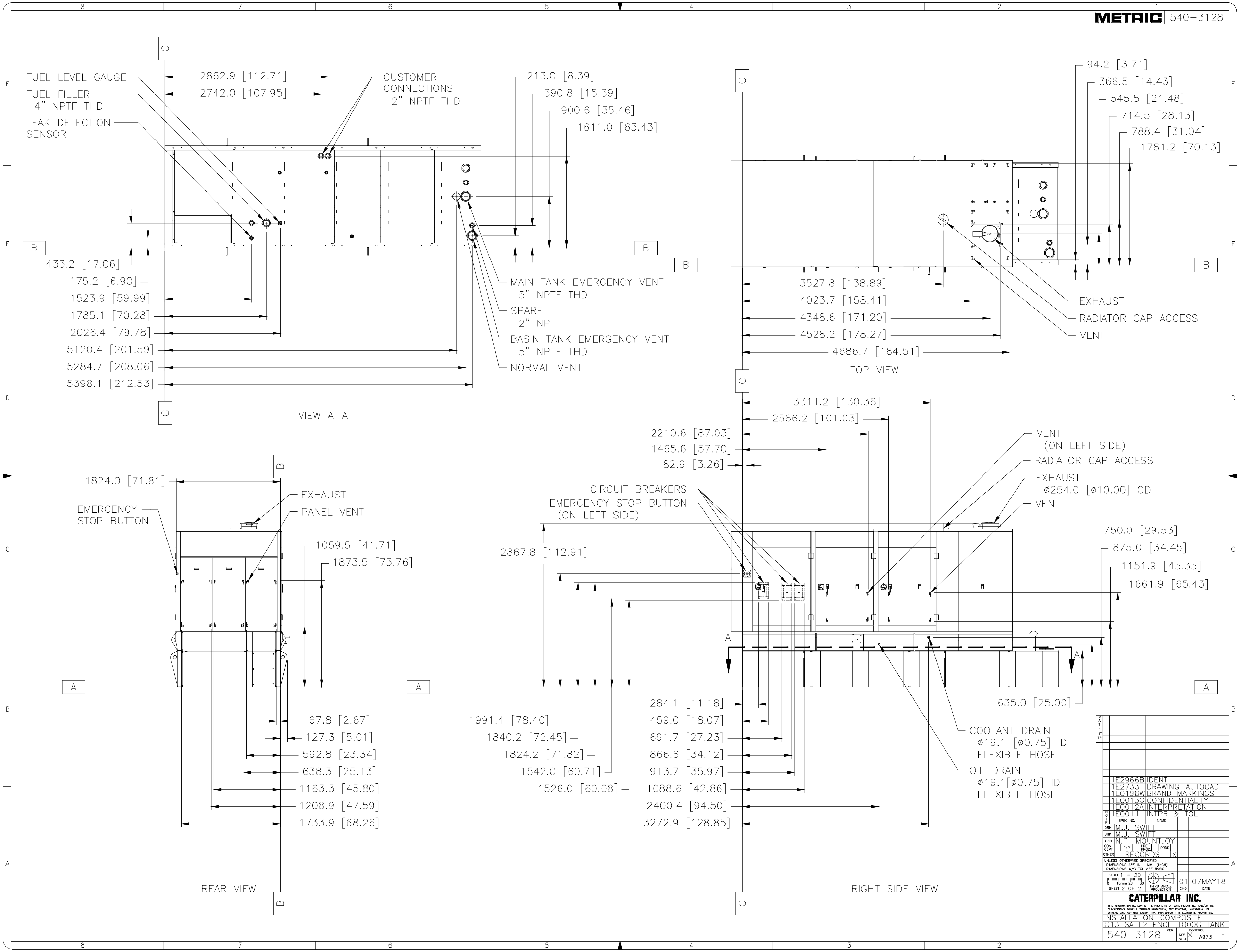
SCALE 1 = 16
0 10mm 20 30
SHEET 1 OF 2
THIRD ANGLE PROJECTION

CHG	DATE
01	07MAY18

CATERPILLAR INC.

INSTALLATION-COMPOSITE
C13 SA L2 ENCL 1000G TANK

540-3128 VER - CONTROL DES ☒ SUB W973 E


METRIC 540-3128
FUEL LEVEL GAUGE
FUEL FILLER 4" NPTF THD
LEAK DETECTION SENSOR
2862.9 [112.71]
2742.0 [107.95]
CUSTOMER CONNECTIONS 2" NPTF THD
213.0 [8.39]
390.8 [15.39]
900.6 [35.46]
1611.0 [63.43]
433.2 [17.06]
175.2 [6.90]
1523.9 [59.99]
1785.1 [70.28]
2026.4 [79.78]
5120.4 [201.59]
5284.7 [208.06]
5398.1 [212.53]
MAIN TANK EMERGENCY VENT 5" NPTF THD
SPARE 2" NPT
BASIN TANK EMERGENCY VENT 5" NPTF THD
NORMAL VENT
VIEW A-A
94.2 [3.71]
366.5 [14.43]
545.5 [21.48]
714.5 [28.13]
788.4 [31.04]
1781.2 [70.13]
3527.8 [138.89]
4023.7 [158.41]
4348.6 [171.20]
4528.2 [178.27]
4686.7 [184.51]
EXHAUST
RADIATOR CAP ACCESS
VENT
TOP VIEW
1824.0 [71.81]
EMERGENCY STOP BUTTON
EXHAUST
PANEL VENT
1059.5 [41.71]
1873.5 [73.76]
67.8 [2.67]
127.3 [5.01]
592.8 [23.34]
638.3 [25.13]
1163.3 [45.80]
1208.9 [47.59]
1733.9 [68.26]
REAR VIEW
3311.2 [130.36]
2566.2 [101.03]
2210.6 [87.03]
1465.6 [57.70]
82.9 [3.26]
VENT (ON LEFT SIDE)
RADIATOR CAP ACCESS
EXHAUST ø254.0 [ø10.00] OD
VENT
CIRCUIT BREAKERS
EMERGENCY STOP BUTTON (ON LEFT SIDE)
2867.8 [112.91]
750.0 [29.53]
875.0 [34.45]
1151.9 [45.35]
1661.9 [65.43]
635.0 [25.00]
1991.4 [78.40]
1840.2 [72.45]
1824.2 [71.82]
1542.0 [60.71]
1526.0 [60.08]
284.1 [11.18]
459.0 [18.07]
691.7 [27.23]
866.6 [34.12]
913.7 [35.97]
1088.6 [42.86]
2400.4 [94.50]
3272.9 [128.85]
COOLANT DRAIN ø19.1 [ø0.75] ID FLEXIBLE HOSE
OIL DRAIN ø19.1 [ø0.75] ID FLEXIBLE HOSE
RIGHT SIDE VIEW
1E2966B IDENT
1E2733 DRAWING-AUTOCAD
1E0198W BRAND MARKINGS
1E0013G CONFIDENTIALITY
1E0012A INTERPRETATION
1E0011 INTPR & TOL
DRN M.J. SWIFT
CHK M.J. SWIFT
APPD N.P. MOUNTJOY
RECORDS
SCALE 1 = 20
SHEET 2 OF 2
01 07MAY18
CATERPILLAR INC.
INSTALLATION-COMPOSITE
C13 SA L2 ENCL 1000G TANK
540-3128
W973 E