

# Morgan Goudeau & Associates, Inc.

CONSULTING ENGINEERS AND LAND SURVEYORS  
1703 West Landry Street  
Opelousas, Louisiana 70570  
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ESTABLISHED 1898

MORGAN GOUDEAU, JR.  
1905-1984

ROBERT WOLFE, SR.  
1926-1976

ROBERT WOLFE, JR., P.E., P.L.S.  
WILLIAM H. JARRELL, III, P.E.  
KENNETH BOAGNI, III, P.E., P.L.S.  
JACOB L. JARRELL, P.L.S., E.I.  
DAVID H. JARRELL, P.L.S., E.I.

December 13, 2021

<CONTRACTOR>

Re: South Grant Sewer Collection System  
MGA Project SC#245A

Dear <CONTRACTOR>:

Enclosed you will find one (1) set of plans, technical specifications and insurance for the furnishing and installation of a standby generator to be installed at the Martin Acres Pump Station, 108 Jill Ct, Prospect, Grant Parish, Louisiana. These plans and specifications are being sent to you inviting you to provide a bid for this project. Bids must be submitted on the bid form included with this invitation to bid. Bids will be received at the office of Morgan Goudeau & Associates, Inc., Consulting Engineers, 1703 West Landry Street, Opelousas, Louisiana, up to the date of Thursday, January 6, 2022 at 10:00 a.m.

Should you have any questions concerning this matter, please feel free to call me at your convenience.

Sincerely,

MORGAN GOUDEAU & ASSOCIATES, INC.



William H. Jarrell, III, P.E.

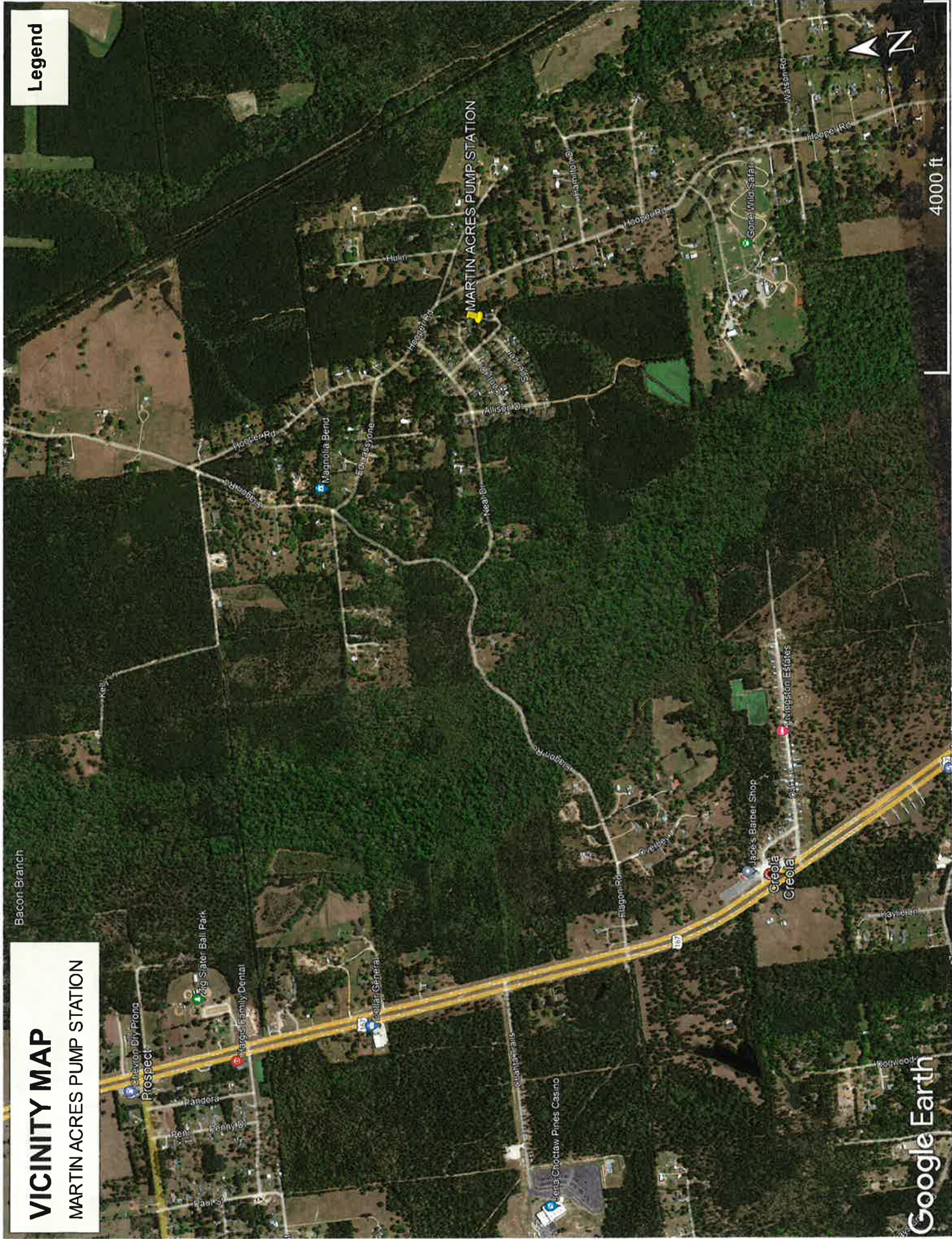
**Legend**

**VICINITY MAP**  
MARTIN ACRES PUMP STATION

MARTIN ACRES PUMP STATION

4000 ft

Google Earth



**LOUISIANA UNIFORM PUBLIC WORK BID FORM**

To: Grant Parish Police Jury  
200 Main Street  
Colfax, LA 71417  
*(Owner to provide name and address of owner)*

Bid For: South Grant Sewer Collection System  
MGA Project SC#245-A  
*(Owner to provide name of project and other identifying information)*

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Morgan Goudeau & Associates, Inc., Opelousas, Louisiana and dated: December 2021  
*(Owner to provide name of entity preparing bidding documents.)*

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA**:  
(Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging).

\_\_\_\_\_.

**TOTAL BASE BID:** For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" \*but not alternates) the sum of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

**ALTERNATES:** For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

**Alternate No. 1** *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

**Alternate No. 2** *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

**Alternate No. 3** *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

**NAME OF BIDDER:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_

**LOUISIANA CONTRACTOR'S LICENSE NUMBER:** \_\_\_\_\_

**NAME OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**TITLE OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER\*\*:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:**

\* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

\*\* **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

**BID SECURITY** in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

## LOUISIANA UNIFORM PUBLIC WORK BID FORM

To: Grant Parish Police Jury  
200 Main Street  
Colfax, LA 71417  
*(Owner to provide name and address of owner)*

Bid For: South Grant Sewer Collection System  
MGA Project SC#245-A  
\_\_\_\_\_  
*(Owner to provide name of project and other identifying)*

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION		<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt # _____		Furnish and install generator and ATS, complete in every respect, including all civil, mechanical, and electrical work for a complete and operating system.	
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>	
1	1	Lump Sum			

DESCRIPTION		<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt # _____		N/A	
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>	
N/A	N/A	N/A	N/A	N/A	

DESCRIPTION		<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt # _____		N/A	
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>	
N/A	N/A	N/A	N/A	N/A	

DESCRIPTION		<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt # _____		N/A	
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>	
N/A	N/A	N/A	N/A	N/A	

DESCRIPTION		<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt # _____		N/A	
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>	
N/A	N/A	N/A	N/A	N/A	

Wording for "DESCRIPTION" is to be provided by the Owner.  
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

## INSURANCE REQUIREMENTS

A. The limits of liability for the insurance required by the Grant Parish Police Jury shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages:
  - a. State: Statutory
  - b. Applicable Federal  
(E.g., Longshoreman's): Statutory
  - c. Employer's Liability: \$1,000,000.00
  
2. Contractor's General Liability which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:
  - a. General Aggregate \$2,000,000.00
  - b. Products - Completed Operations Aggregate \$2,000,000.00
  - c. Personal and Advertising Injury \$1,000,000.00
  - d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000.00
  - e. Property Damage Liability Insurance will provide Explosion, Collapse, and Underground coverages where applicable
  - f. Excess or Umbrella Liability
    1. General Aggregate \$1,000,000.00
    2. Each Occurrence \$1,000,000.00
  
3. Automobile Liability:
  - a. Bodily Injury:
    - Each Person \$1,000,000.00
    - Each Accident \$1,000,000.00
  - b. Property Damage:
    - Each Accident \$ 500,000.00
  - c. Combined Single Limit of: \$1,000,000.00
  
4. The Contractual Liability coverage required by the Town shall provide coverage for not less than the following amounts:
  - a. Bodily Injury:
    - Each Accident \$1,000,000.00
    - Annual Aggregate \$1,000,000.00
  - b. Property Damage:
    - Each Accident \$1,000,000.00
    - Annual Aggregate \$1,000,000.00

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

**PART – 1 GENERAL**

1.01 Scope:

A. The work covered by this section shall include furnishing and/or installation of all electrical equipment and necessary wiring systems required to provide the owner with a complete and operating system and shall consist of the following basic items of work:

1. Low voltage wire, conduit and fittings
2. Duct lines and pull boxes
3. Grounding systems
4. Mounting racks and materials
5. Generators
6. Automatic transfer switches
7. Generator foundations
8. Other equipment and work as shown on the drawings and as required for a complete and working installation

The above list is basic and general in nature. Refer to drawings and other sections and articles of the specifications.

**PART – 2 PRODUCTS**

2.01 Conduit:

A. The contractor shall furnish and install all conduit as shown on the drawings and as required. All conduit on this project shall be of the following types:

1. Underground - Schedule 40 PVC. Install 2'0" below ground with electrical warning tape 12" above conduit.
2. Aboveground - Schedule 40 rigid aluminum. Coat with coal tar epoxy where it is embedded in concrete.

2.02 600 Volt Wire:

A. The Contractor shall furnish and install all wire as shown on the drawings and as required. Wire is specified in the General Specifications for Electrical Installation.

2.03 Electric Generating Sets :

A. Scope: The Contractor shall furnish and deliver skid mounted standby emergency generating systems rated for continuous standby service at pump stations as listed in Table 1. Each system shall be a package of new equipment and shall consist of a diesel fueled electric plant complete with engine, generator, exhaust and engine mounted radiator coolant system. The complete system shall be furnished by one supplier. Provide a factory document to verify instantaneous voltage dip. Sustained dip will not be acceptable. The required outputs are as stated. No exception or reduced outputs will be allowed. Approved manufacturers are Blue Star Power Systems by KDM Sales and Service or approved equal.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

**TABLE 1**

	MARTIN ACRES
KW	40
KVA @ .8 POWER FACTOR	50
MIN. PEAK STARTING KVA @ 20% INSTANTANEOUS VOLTAGE DIP	41
POWER	120/240V, SINGLE PHASE, 4 WIRE, 60 HZ

- B. General: The engine-generator set supplier shall be an authorized service organization of the manufacturer. The generator supplier shall have his own and maintain a permanent parts and service facility within a two hundred (200) mile radius of the jobsite. Service and parts shall be available on a twenty-four hour a day, seven days a week basis. The generator suppliers must meet this parts and service requirement and installation contractor shall submit certification and documentation with the submittal drawings to the satisfaction of the owner and engineer that this requirement is met. The electric generator set and components shall be produced by a manufacturer who is regularly engaged in manufacturing this product. The manufacturer shall have printed literature & brochures describing the standard series offered (not a one of a kind fabrication). The manufacturer shall furnish schematic & wiring diagrams for the engine-alternator sets. Sets not factory assembled, as a standard model with all controls, alternator, & engine tested together will not be acceptable. The manufacturer shall furnish (with submittals) a list of, at least, five successful installations in operation in the local area for a minimum of five years, with the same type & rating of equipment including the ATS. Provide the ratings if not the same as that specified. The performance test of the generating set series shall be in accordance with procedures certified by an independent testing laboratory. The manufacturer shall have successfully tested a prototype of the generating set series offered, per NFPA-110, which will include: Maximum power level, maximum motor starting capacity, structural soundness torsion graph analysis per MIL-STD-705B, method 504.2 fuel consumption, engine alternator temperature rise per NEMA MG1-22.40, single step load pick up, harmonic analysis and voltage waveform deviation per MIL-STD-705B, method 601.4, 3 phase short circuit test for mechanical and electrical strength.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

- C. Engine: The engine shall be **diesel fueled**, turbocharged, four cycle, water-cooled with mounted radiator, fan, and water pump. It shall have replaceable wet liners and an engine and alternator operating speed of 1800 RPM. Intake and exhaust valves shall be heat resisting alloy steel, free rotating. Exhaust valve seat inserts shall be provided. Full pressure lubrication shall be supplied by a positive displacement lube oil pump. The engine shall have air cleaner, fuel and oil filters with replaceable elements and lube oil cooler. Engine speed shall be governed by an electronic isochronous governor to maintain alternator frequency within 0.5% from no-load to full-load alternator output. The engine shall have a minimum 45 AMP battery charging DC alternator with a transistorized voltage regulator. Remote, 2 wire starting shall be by a solenoid shift electric starter. Governor to be electronic – isochronous.
- D. Engine Instruments: The engine instrument panel shall contain an oil pressure gauge, coolant temperature gauge, battery charge rate ammeter, engine monitoring system and on diesel fueled units, and an **electronic fuel gage**, if diesel fired.
- E. Engine Controls: The generating set shall contain a complete engine start-stop control system which starts engine on closing contact and stops engine on opening contact. A cranking limiter shall be provided to open the starting circuit in approximately 45 to 90 seconds if the engine is not started within that time. The engine controls shall also include a 3-position selector switch with the following positions: RUN-STOP-REMOTE. The engine shall have the following additional equipment: single phase, 120/240V, single phase water jacket heater, safety shutdown system including low oil pressure, high engine temperature, low coolant level, over-speed, and over crank.
- F. Brushless Alternator: The alternator shall be a **PMG** 4 pole, revolving field design with temperature compensated solid state voltage regulator and brushless rotating rectifier exciter system. No brushes shall be allowed. The stator shall be directly connected to the engine flywheel housing, and the rotor shall be driven through a semi-flexible driving flange to insure permanent alignment. The insulation shall be Class H defined by NEMA MG1.65. The maximum hot spot temperature rise shall not exceed **105** degrees Celsius at 40 degrees Celsius ambient. Generator design shall prevent potentially damaging shaft currents. **Provide manufacturers certified motor starting capability curves to substantiate specified starting capabilities and manufacturers verifications of temperature rise compliance.** Furnish a 120 volt, generator space heater.
- G. Alternator Instrument Panel: The alternator instrument panel shall be wired, tested, and shock mounted on the generating set by the manufacturer of the alternator. It shall be microprocessor based, password protected and NFPA 110 compliant. It shall contain panel lighting, manual reset field circuit breaker, **main breaker**, frequency meter, running time meter, voltage adjusting rheostat, AC voltmeter, AC ammeter, volt/ammeter phase selector with OFF position, and fine speed control potentiometer. Alternator main breaker (s) shall be supplied with an interrupting rating suitable for alternator maximum fault currents. Main breaker shall be rated for continuous operation at maximum generator output. **The generator shall have 80% rated main breaker selected to protect the wiring and ATS.** Digital metering is acceptable.



**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

- H. Safety Shutdown monitoring System: The electric generating plant shall be provided with automatic safety shutdowns including individual alarm terminals plus individual indicating lights revealing which safety caused shutdown. This monitoring system shall include safeties and indications as follows:
1. Run
  2. Pre-warning low oil pressure
  3. Low oil pressure
  4. Pre-warning high engine temperature
  5. High engine temperature
  6. Over speed
  7. Low engine temperature
  8. Plant failed to start (over crank)
  9. Switch off
  10. High engine temperature, pre-warning
  11. Temperature
  12. One (1) extra fault lights
- I. Unit Performance: Frequency regulation shall not exceed 0.3 hertz from no load to rated load. Voltage regulation shall be within plus or minus 2% of rated voltage, from no load to full rated load. Recovery testable operation shall occur within 2 seconds. Stable or steady state operation is defined as operation with terminal voltage remaining constant within plus or minus 1% of rated voltage. A rheostat shall be provided with a minimum of plus or minus 5% voltage adjustment from rated value. Temperature rise shall be within NEMA MG1-22.40 definition. The generator set & regulator must sustain at least 90% of no load voltage for ten seconds with 250% of rated load at near zero power factor connected to its terminals. The alternator, exciter and voltage regulator shall be designed & manufactured by the generator set manufacturer so that the characteristics shall be matched to the torque curve of the prime mover. This design allows the prime mover to utilize its fullest power producing capacity.
- J. Electric Plant Mounting: The electric plant shall be mounted on a rigid base. Isolation isolators shall be provided for installation beneath skid.
- K. Housing: The complete generating set shall be enclosed in a weather protected welded and bolted reinforced metal housing with removable side panels and hinged\_lockable metal panel doors. It shall have louvered air openings as required. Housing should be constructed of powder-coated steel painted in accordance with **UL 2200 paint standard** with hinged doors. House to have a louvered air intake. Provide a minimum of two (2) battery-powered lights inside of the outdoor enclosure. The lights shall consist of vapor proof D.C. incandescent lights on a 2 hour timer switch operable from the normal point of entry into the enclosure. Special lighting, indicated above, shall apply to units 180 KW and above. Provide a breaker panel of sufficient size to connect to the various auxiliary devices such as block heater, generator space heater, battery charger etc. such that only one single phase 120/240 volt auxiliary power circuit to the gen-set will be required. Provide a GFI receptacle for the battery heater. The entire system shall be wired at the factory. If heaters are other than the specified voltage, provide a buck boost or other type of transformer mounted in the enclosure of sufficient capacity to obtain the correct voltage. Housing shall be designed for a wind load of 120 MPH. Provide factory documentation.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

- L. Silencer: A critical exhaust silencer shall be insulated and factory mounted internal to the unit. It shall be terminated by the vendor with an outlet extension pipe having a flapper to protect against rain entry.
- M. Batteries: Starting batteries with cables and racks inside of housing shall be furnished along with manufacturers recommended battery float charger with a minimum 10 amp output. Provide battery heaters that will maintain batteries at a minimum of 50 degrees F and a maximum of 90 degrees F per NFPA 110 article 3-3.1.
- N. Fuel Storage Tank: A double wall sub-base diesel storage tank of 24 hour full generator set rated load minimum capacity shall be furnished and mounted under the generator set unless an exact fuel capacity is indicated elsewhere. It shall have the structural integrity to support the generator set with it's accessories and be furnished with all mounting hardware and fuel connections. Furnish with a low fuel level alarm switch, and leak detection alarm switch, both wired to annunciator lights on the generator control panel and remote annunciator alarm panel (if the remote panel is specified). **Tank to be U.L. labeled with required emergency vent and lockable fill cap. After the unit has been tested, the contractor shall fill the tank with fuel.**
- O. Warranty: The engine generating set shall be warranted for a period of five (5) years from the date of initial start-up. **Warranty to cover 100% parts, labor and travel of all parts and equipment supplied.**
- P. Supervisory Engineer: The unit shall be started and placed in operation at the job site at full load using a portable load bank for two hours in the presence of the Owner or his representatives. The supplier of the electric plant shall furnish the necessary engine lubricating oil, load bank and optimum solution of ethylene glycol engine coolant and test run the unit. The supplier of the plant shall provide the services of a factory trained technician to assist in the testing and to instruct Owner's personnel in proper maintenance and operation of the unit. Four (4) full Operation & Maintenance Manuals (including full engine manuals) and parts lists shall be provided unless more than 4 is required in other sections of these specifications.
- Q. Shop Drawing Submittal: The engine/generator supplier shall refer and include with his submittal an engineered drawing showing the proper interconnection of his equipment with that of others specific to this project. Terminal numbers of his equipment is to be included on this interconnection drawing. Standard drawings showing various options that may or may not be included in the supplied equipment will not be considered as the drawing specified above but may be submitted in addition to that specified. Submittals that are unclear and/or causes the engineer to ponder will be rejected.
- R. Access Steps: The generator set manufacturer/vendor shall provide access steps as required to allow the operator to easily access the control panel and instruments.
- 2.04 Automatic Transfer Switch:
- A. The Contractor shall furnish and install one (1) automatic transfer switch as described below. The automatic transfer switch shall be warranted for a period of five (5) years from the date of initial start-up. **Warranty to cover 100% parts, labor and travel of all parts and equipment supplied.** Switch shall be as follows:

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

Switch shall have the following ratings:

1. 200 amps continuous current
2. 240 volts
3. 2 pole double throw
4. 22,000 amps interrupting rating minimum
5. NEMA 4X stainless steel enclosure

The Automatic Transfer switch will be a non-fused fully rated enclosed switch which complies to NEMA ICS2-447, NFPA 70, NFPA 99, NFPA 110, and UL 1008. It shall have front access to all control panels and contacts. Main contact material shall consist of silver (87% min) and cadmium. Plexiglas covers shall shield electronic controls and main contact connections. Wiring shall be numbered for easy identification. The Break before Make transfer action shall be required no more than 3 cycles and the mechanism shall incorporate lifetime lubrication within a temperature range of -29 degrees C to 60 degrees C (-20 degrees F to 140 degrees F). It shall incorporate solid state programmable logic, be assembled and tested, and include:  
NOTE: Circuit breaker type switches are not acceptable.

1. 1- Sheet steel enclosure with hinged, gasketed, key lockable door.
2. 1- Operating transfer switch consisting of single solenoid, electrically operated, mechanically held.
3. Solderless connectors for normal source cables, emergency source cables, load cables, and solid neutral bar.
4. 1-High fault withstanding capacity.
5. 1- Voltage monitoring of each phase of normal source (full protection), adjustable 70 to 90 percent
6. 1-Voltage of emergency at transfer, 70 to 90 percent (factory set 90 percent).
7. 1- Frequency of emergency at transfer, 70 to 90 percent (factory set 90 percent).
8. 1- Voltage and frequency monitoring of one phase of emergency source.
9. 1-Time delay, engine starting, adjustable 0.1 to 10 seconds, set at 3 seconds.
10. 1-Engine minimum run (5 to 30 minutes) (factory set 20 minutes).
11. 1-Engine Cool down timer factory set 5 minutes.
12. 1-Time delay, normal to emergency (0.1 to 6 second adjustable).
13. 1-Time delay emergency to normal (1 to 30 minutes) (factory set 5 minutes).
14. 1-In phase monitor. Monitors the normal and emergency sources and permits transfer in either direction only when the phase angles of both sources are in phase and have a frequency difference within  $\pm$ two cycles. Programmed transition is acceptable.
15. 1-Three position mode selector switch in the face of the enclosure, marked auto, test, and fast test.
16. 1-Exerciser (7 days from initial command).
17. 1- Transfer when exercising (on/off switch)
18. 1-Pilot lights in face of enclosure which the ATS is connected.
19. 1-Auxiliary C-form contacts for normal and emergency.
20. Furnish all lugs as required to receive the incoming and outgoing.
21. 1-Internal cabling, terminal boards, fuses, fuse nameplates, and miscellaneous hardware as needed.
22. Software consisting of: dimensional drawing, drawing, electrical schematic, and parts list.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

**PART 3 – EXECUTION**

3.01 Coordination with Factory Servicemen:

- A. The contractor shall coordinate his work with the factory serviceman of the various vendors and shall provide whatever assistance is necessary to place the entire system in operation.

3.02 Coordination with the Power Company:

- A. All work on the service entrance from weather head or pad mounted transformer to utilization equipment shall be per local power company requirements. Where there is conflict with plans and specifications with the power company requirements, the power company requirements shall govern. The contractor shall notify the engineer in advance of making a change for the engineer's approval. In some instances, larger wire and conduit sizes may be required. The contractor shall anticipate this requirement and include it in the bid price.
- B. The contractor shall coordinate all work with the local power company including scheduling and applying for service, furnishing, and/or installing all metering equipment and installing all service entrance weather heads at elevation as required by power company and NEC.
- C. Seal all conduits entering panels with duct seal where it is possible that water or moisture shown on drawings or indicated in these specifications). Utilize weather heads for all overhead service wire entering conduit. Where service conduit is installed by power company, the contractor shall furnish a properly sized weather head to the power company to prevent water from entering any panel in which it terminates.

3.03 Electrical Technicians:

- A. The contractor shall employ and pay for electrical technicians as necessary to insure proper installation, connection, testing, and placing into proper service electrical equipment. Utilize experienced personnel only. Coordinate all work with other vendor's technicians and service personnel.

3.04 Grounding:

- A. The contractor shall furnish and install a complete grounding system to provide a safe operating environment. Additional wires for grounding may be required in certain conduit runs. Install as required per NEC. Additional ground rods may also be required to obtain the minimum ground resistance required by NEC. Furnish and install as required to meet the requirements of NEC.

3.05 Submittals:

- A. Submittal data shall include, but not be limited to the following requirements:
  - 1. Complete materials list and items proposed to be furnished and installed.
  - 2. Enclosure dimensions materials of construction and NEMA ratings.
  - 3. Circuit Breaker Interrupting Ratings

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

4. All electrical drawings so that the system can be checked for compatibility with other systems to which it interfaces.
- B. Any submittals that are not complete, causes the engineer to ponder, or where it is obvious that no effort was made to properly prepare them for easy checking by the engineer will be rejected in their entirety.
- C. Submittals sent to engineer for processing that require information on equipment has not been previously submitted for approval may or may not be reviewed before dependent submittals are sent.

3.06 Substitutions:

- A. On any proposed substitute to the specified item, it shall be the responsibility of the contractor to show proof to the engineer, that the proposed substitute is equal to the specified item by making written evaluation comparisons on material, performance, workmanship, maintenance features, energy use, durability, appearance, and the effect on compatibility with the other elements of the system which the item will be used. All changes required in the wiring and other electrical modifications shall be the responsibility of the contractor.

3.07 Guarantee:

- A. All equipment shall be guaranteed against defects in material and workmanship for a period of one year from date of owner's final inspection and acceptance, except equipment specifically indicated in these specifications as having an extended warranty period, to the effect that any defective equipment shall be repaired or replaced without cost or obligation to the owner.

3.08 Other Provisions:

- A. Where there are conflicts between various sections of the electrical specifications and/or drawings and/or other sections of the specifications, then the more stringent wording for a particular product, material, or item of work shall apply unless approved otherwise by the engineer. Should a discrepancy occur, notify the engineer before proceeding. The electrical drawings show the general locations of the equipment. The contractor shall refer to the mechanical and civil drawings to obtain more accurate and the latest location of the equipment as well as to scale the drawings for distances. Equipment shown shall be mounted and placed so as not to violate any OSHA or NEC rules as to working space and obstruction clearance. Seal all conduits entering panels with duct seal where it is possible that water or moisture can enter the conduit due to its location or in case of damage to the conduit (use silicon where shown on drawings or indicated in these specifications).

**TECHNICAL SPECIFICATIONS**  
**DIVISION 16 - ELECTRICAL**

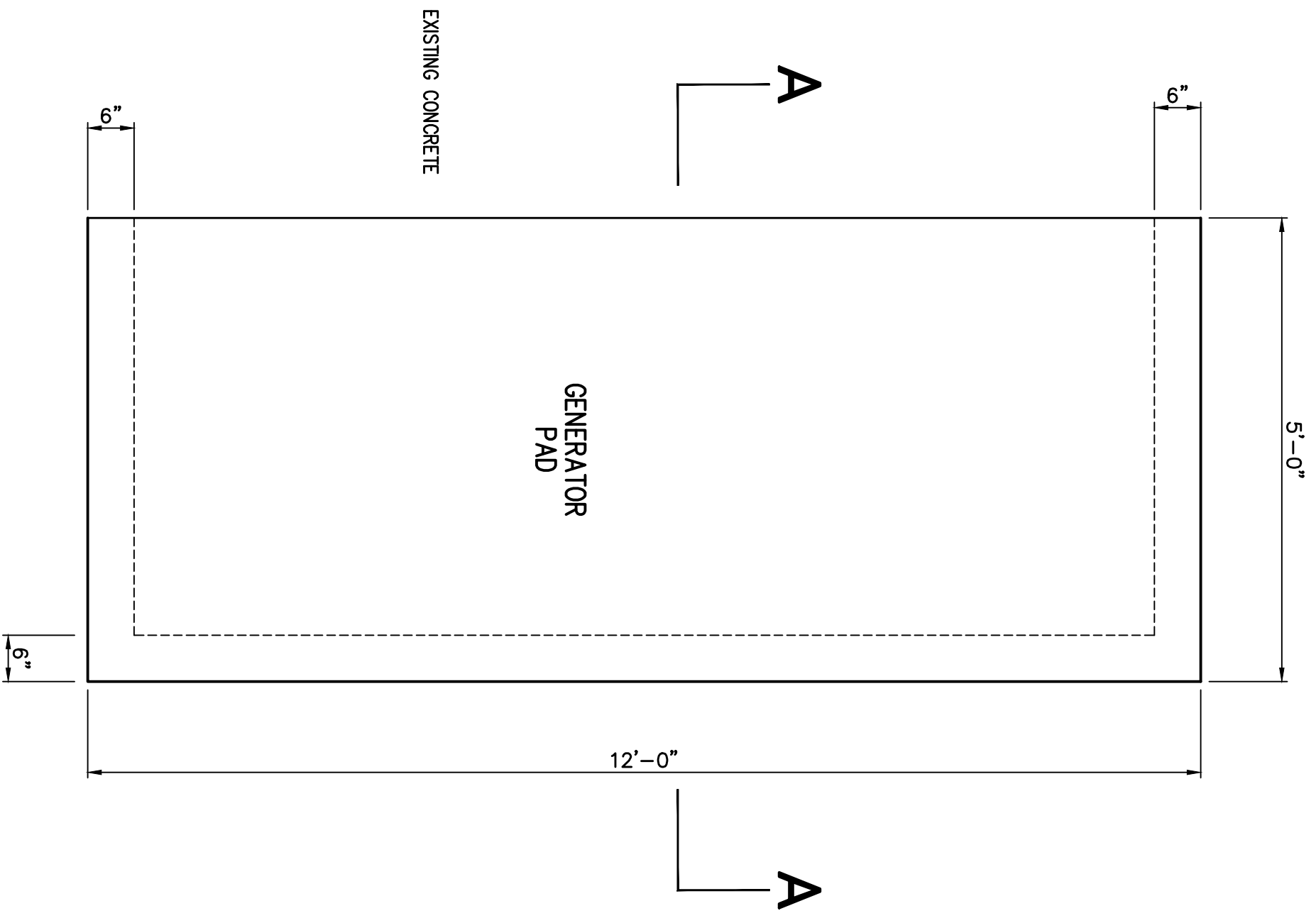
**SECTION 16200 – DETAIL SPECIFICATIONS FOR ELECTRICAL INSTALLATION**

3.09 List of Submittals:

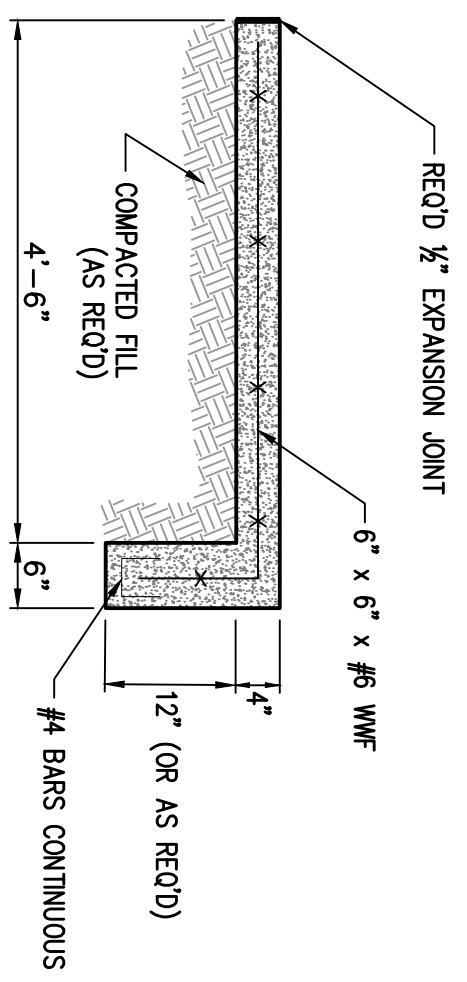
A. The following items shall be submitted for approval and /or records:

1. Circuit breakers
2. Low voltage wire, conduit and fittings
3. Generator
4. Automatic transfer switch
5. Any other items that require electrical connection or as requested by the Engineer

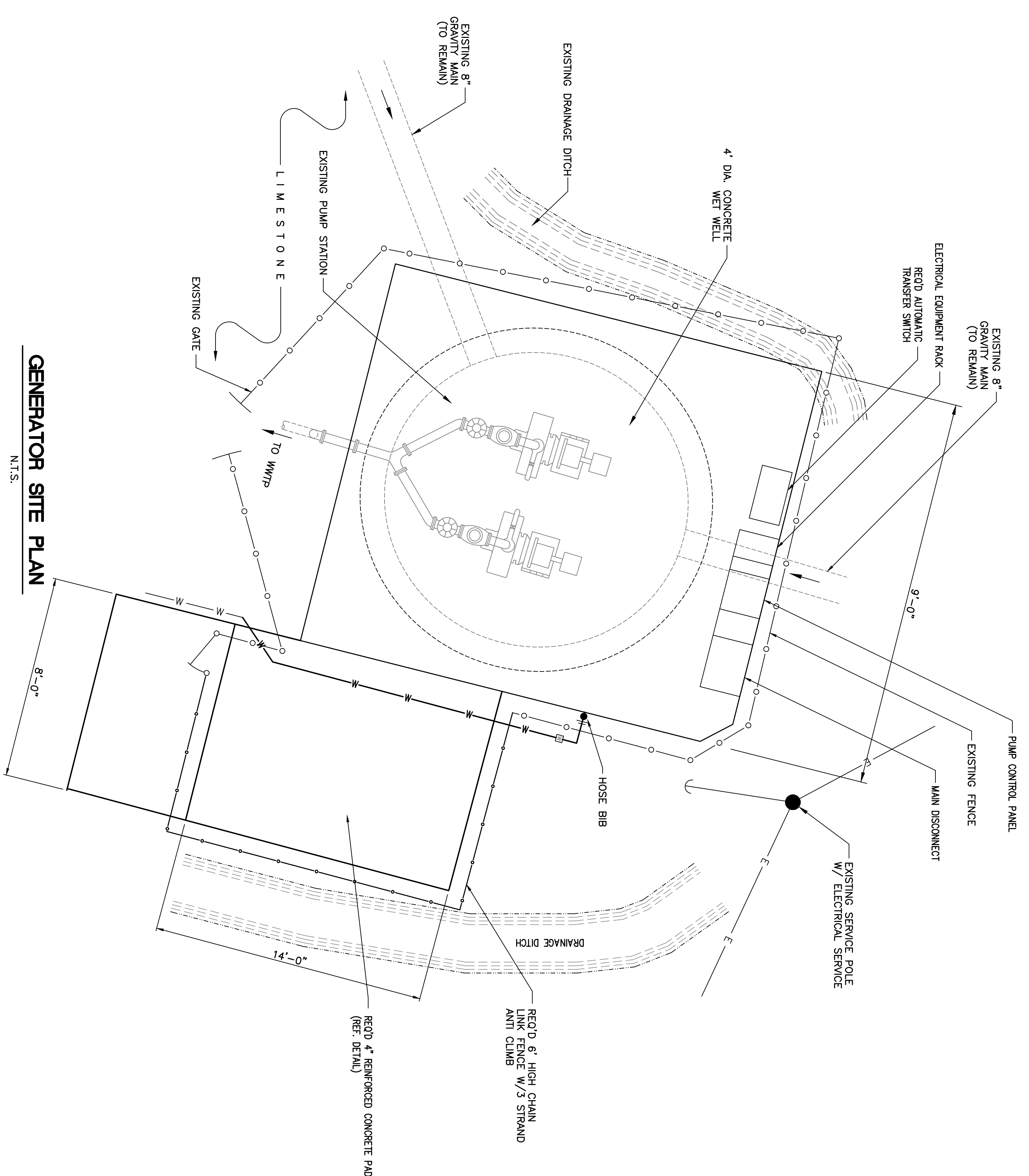
***END OF SECTION***



**GENERATOR PAD**  
N.T.S.



**SECTION A-A**  
N.T.S.



**GENERATOR SITE PLAN**  
N.T.S.



*Morgan Goudeau*  
11-17-21

**MORGAN GOUDEAU & ASSOCIATES**  
CONSULTING ENGINEERS  
1703 West Landry Street  
OPELOUSAS LOUISIANA

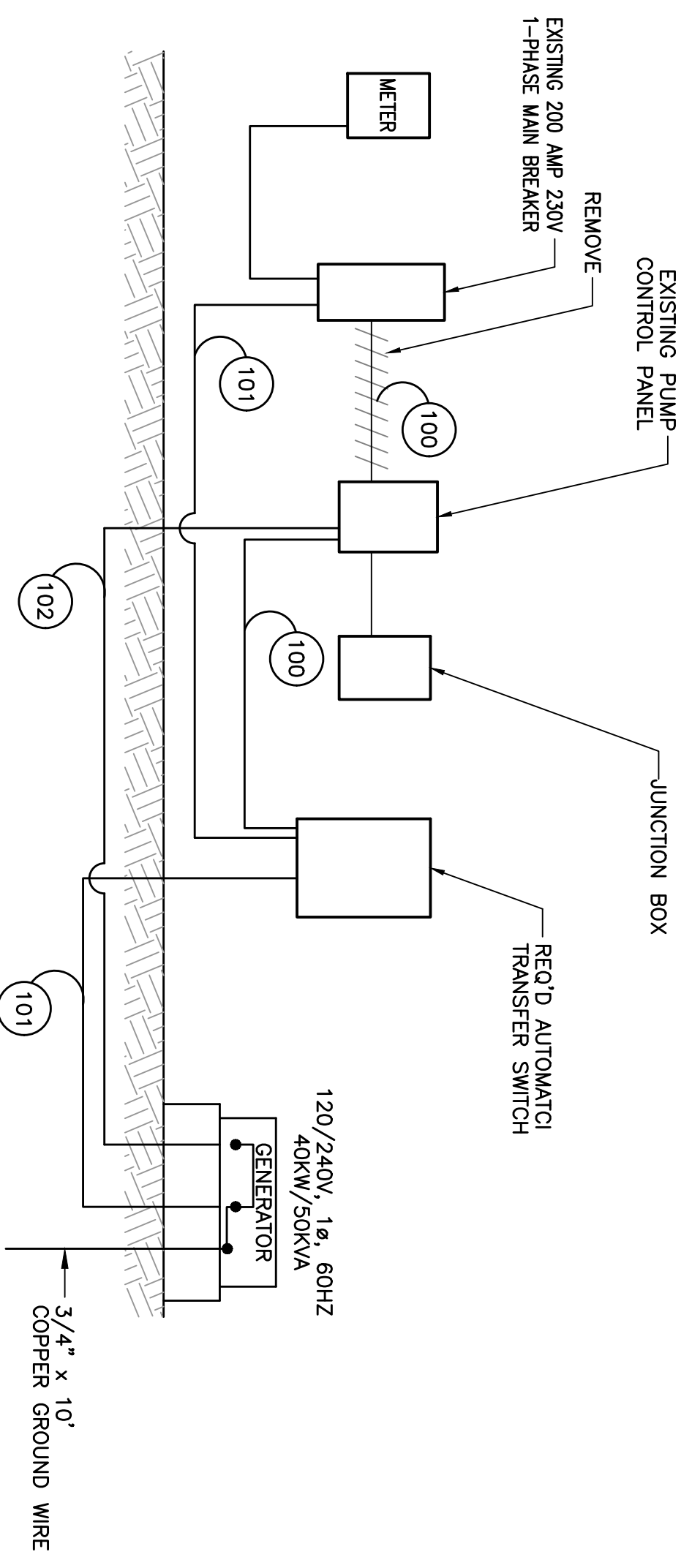
NO.	DATE	REVISION DESCRIPTION	BY

SCALE: AS SHOWN  
DATE: 11-17-21  
DESIGNED BY: WHJ  
CHECKED BY: WHJ  
DRAWN BY: DLS

**PUMP STATION GENERATOR PLAN AND DETAILS (MARTIN ACRES)**  
SOUTH GRANT SEWER COLLECTION SYSTEM  
GRANT PARISH, LOUISIANA

SHEET NUMBER  
**16A**

PROJECT NO.  
**SC#245**



**ELECTRICAL SERVICE PLAN**  
N.T.S.

RUN #	FROM	TO	CONDUIT SIZE	WIRE	REMARKS
100	PCP	ATS	2"	3-3/0, 1#4G	
101	ATS	GENERATOR	2"	3-3/0, 1#4G	
102	PCP	GENERATOR	1"	3#10, 1#12 (OR AS REQ'D)	AUX. POWER

**RUN SCHEDULE**



PHOTO No. 1



PHOTO No. 2



PHOTO No. 3



PHOTO No. 4



PHOTO No. 5



PHOTO No. 6



PHOTO No. 7



PHOTO No. 8



*William H. Jurell, III*  
11-17-21

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PROJECT NO.:  
**SC#245A**

NO.	DATE	REVISION DESCRIPTION	BY

SCALE: AS SHOWN  
DATE: 11-17-21  
DESIGNED BY: WHJ  
CHECKED BY: WHJ  
DRAWN BY: DLS

**GENERATOR ELECTRICAL PLAN**  
**MARTIN ACRES PUMP STATION**  
SOUTH GRANT SEWER COLLECTION SYSTEM  
GRANT PARISH, LOUISIANA

SHEET NUMBER  
**24A**