

COLLIER COUNTY WATER-SEWER DISTRICT TAMIAMI WELLFIELD WELLHOUSE-18 STANDBY GENERATOR REPLACEMENT



BOARD OF COUNTY COMMISSIONERS

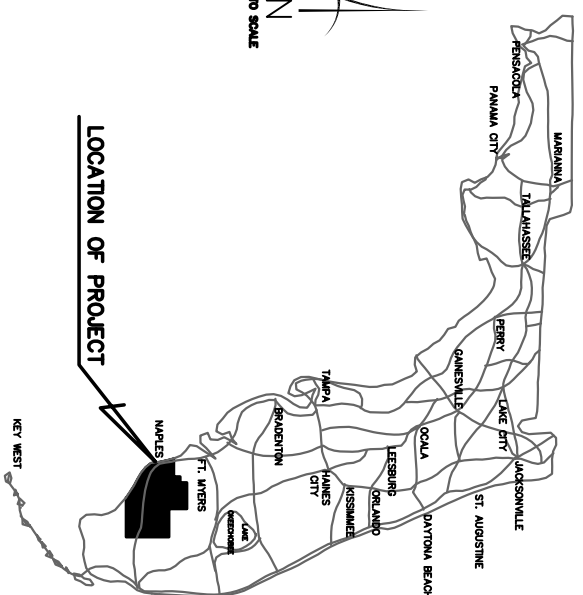
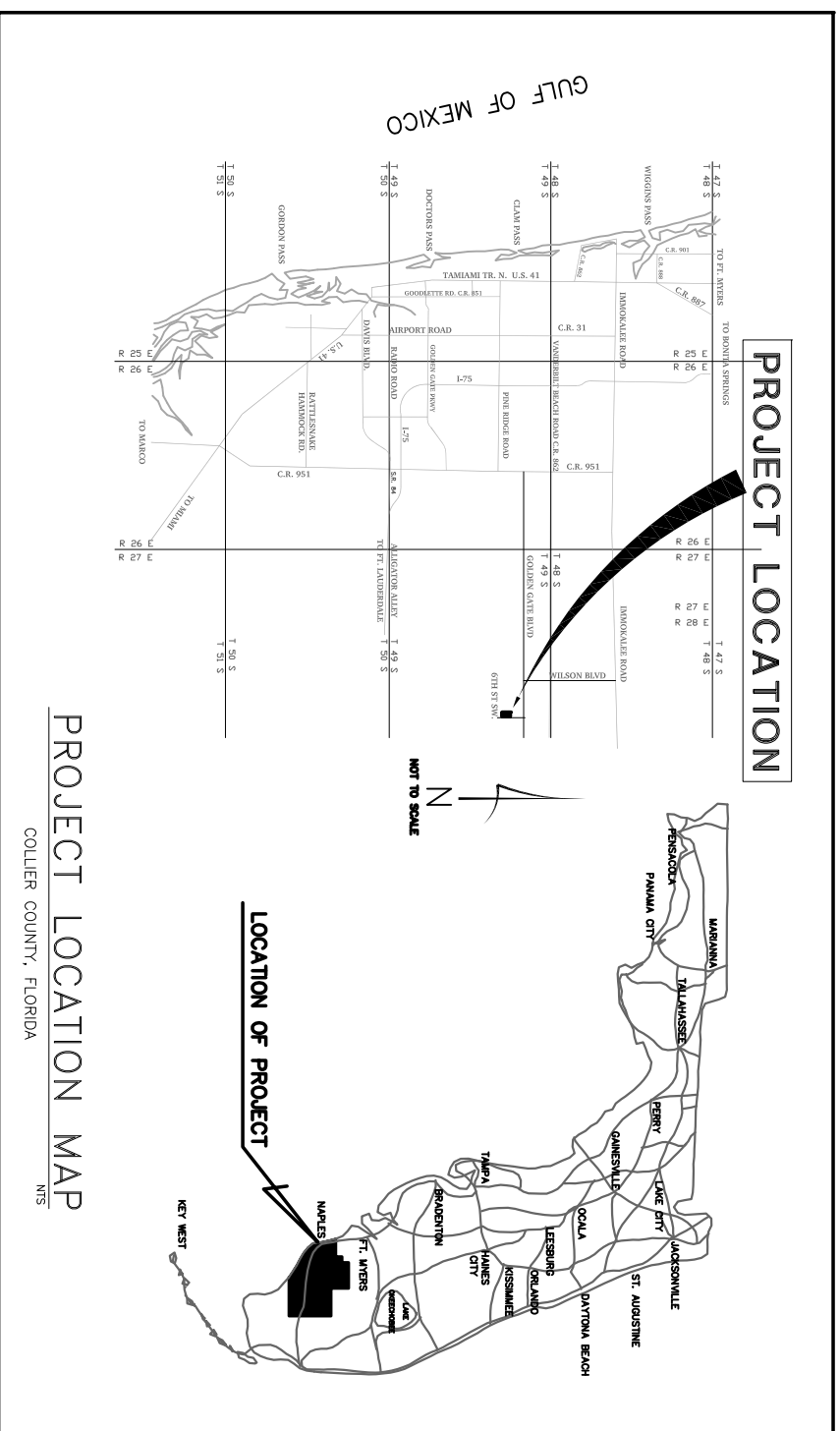
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Collier County Project No. 70196.1



PROJECT LOCATION MAP
COLLIER COUNTY, FLORIDA
NTS

RKS Consulting Engineers
Electrical, Instrumentation & Control Design
12651 McGregor Blvd, Suite 4-402 Fort Myers, FL 33919
phone: (239) 481-6775 email: rks@rksengineers.com
Certificate of Authorization #8212

KEYNOTES

- 250KW GENSET. REMOVE & REPLACE WITH NEW UNIT. PROVIDE COMPLETE WITH NEW BATTERIES, MUFFLER, EXHAUST SYSTEM, EXHAUST INSULATION, VIBRATION DAMPENERS.
- EXISTING UNIT FOOTPRINT APPROX 50'X108'. NEW UNIT FOOTPRINT BASED ON CUMMINS 50"X119". MAKE ADJUSTMENTS FOR ALTERNATE VENDORS.
- EXISTING 400A ATS TO BE REUSED. PROVIDE NEW CABLE FROM UNIT TO ATS.
- NOTE EXISTING FUEL TANK TOP STRUCTURAL I-BEAMS FOR MOUNTING NEW UNIT & VIBRATION DAMPENERS. COORDINATE WITH NEW UNIT VENDOR FOR NECESSARY STRUCTURAL RELOCATION, MODIFICATIONS, ENHANCEMENTS AS REQUIRED. THE CONTRACTOR SHALL PROVIDE STRUCTURAL PLANS OF THE PROPOSED STRUCTURAL TANK MODIFICATIONS
- EXISTING EXHAUST DUCTWORK: REMOVE TO FACILITATE UNIT INSTALLATION. REBUILD EXHAUST DUCTWORK AFTER NEW GENSET INSTALLATION. PROVIDE NEW DUCTWORK FLEX CONNECTION TO UNIT. PROVIDE & INSTALL NEW EXHAUST DUCTWORK AS REQUIRED TO ACCOMMODATE THE NEW GENSET. DUCTWORK MATERIAL, GAUGE AND FINISH SHALL MATCH EXISTING AND CONFORM TO INDUSTRY STANDARDS FOR THE APPLICATION. PROVIDE MATERIAL SUBMITTALS TO THE OWNER FOR APPROVAL. WORK SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THE INDUSTRY FOR THE TYPE OF APPLICATION. REPLACE EXISTING LOUVER OPENING FRAMING WITH PRESSURE TREATED LUMBER, PAINT & CAULK AS REQUIRED TO MATCH EXISTING.
- EXISTING ACOUSTIC LOUVER: 8'W X 6'H. REMOVE TO FACILITATE INSTALLATION OF GENSET UNIT. PROVIDE WATER & BIOLOGICAL DEBRIS REMOVAL FROM FUEL TANK. PROVIDE A ONE MICRON FUEL FILTER WITH POLISHING WATER SEPARATOR UNTIL TANK CLEANING IS COMPLETE. THEN REMOVE FUEL. PROVIDE FUEL ANALYSIS PRIOR TO CLEANING. PROVIDE CLEANED EXISTING & FUEL FILTER DEBRIS ANALYSIS AFTER CLEANING IS COMPLETE. REMOVE CLEANED EXISTING FUEL FROM MAIN FUEL TANK. PROVIDE INNER & OUTER FUEL TANK PRESSURE TEST PER F.A.C. & NFPA. BOROSCOPE EMPTY FUEL TANK & PROVIDE A REPORT OF CONDITION BY A CERTIFIED FUEL TANK SYSTEM CONTRACTOR.
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DEMOLITION SEQUENCE

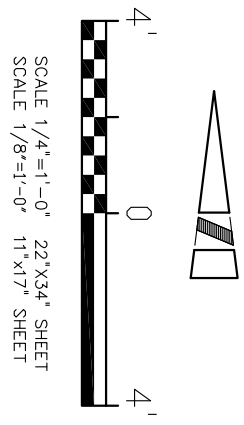
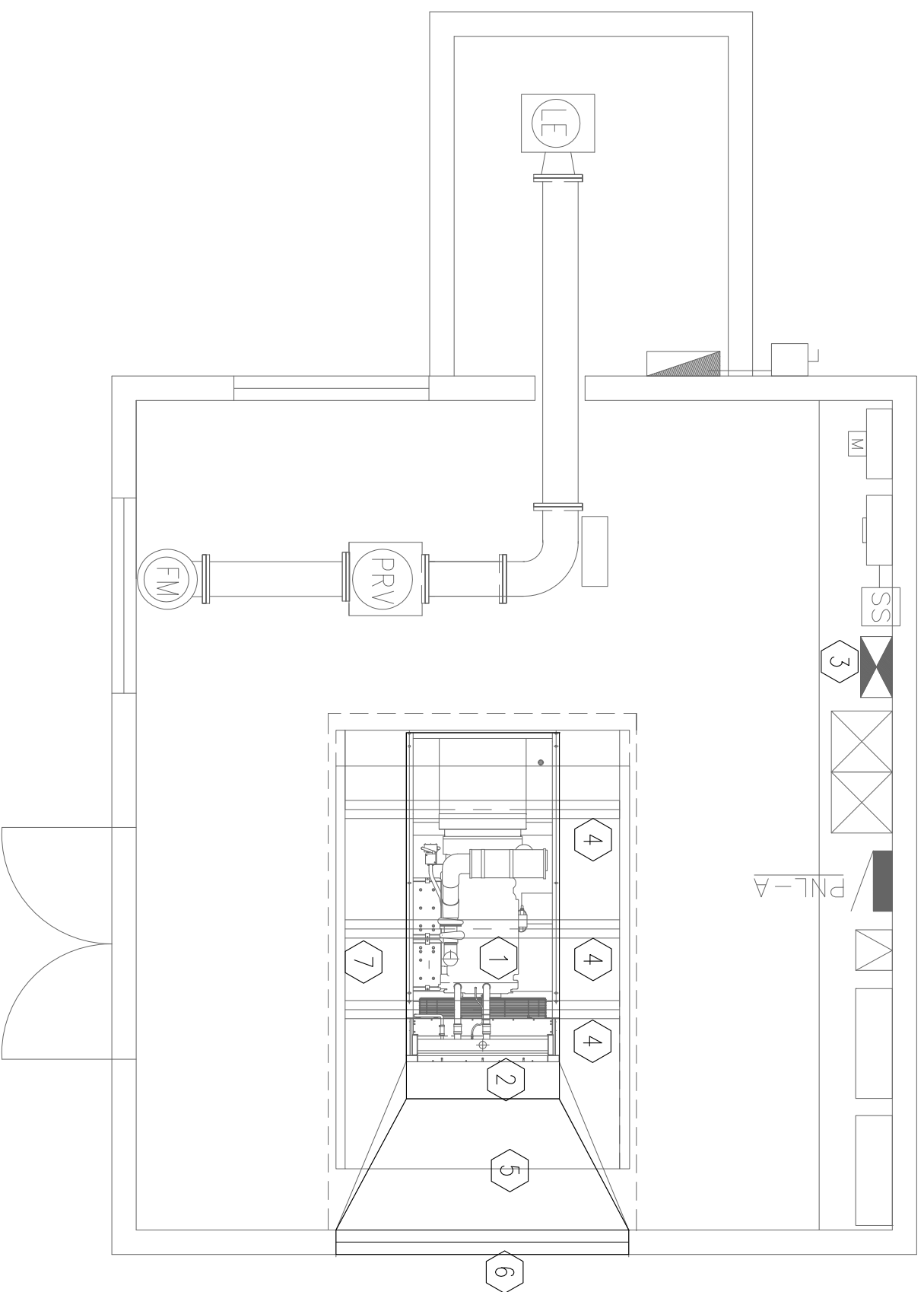
- EXISTING 250KW GENSET. REMOVE FLUIDS & DISPOSE. REMOVE EXHAUST SYSTEM, POWER & CONTROL WIRING. FUEL LINES. ATTACHMENT TO TANK STRUCTURE.
- REMOVE EXHAUST DUCTWORK. REMOVE EXHAUST AIR LOUVER.
- INSTALL A-FRAME SUPPORT & LIFT GENSET UNIT ABOVE FUEL TANK.
- REMOVE FUEL TANK THROUGH LOUVER OPENING.
- DROP GENSET DOWN & REMOVE THROUGH LOUVER OPENING.

CONSTRUCTION SEQUENCE

- INSTALL NEW 250KW GENSET. LIFT GENSET UNIT APPROXIMATELY 3' TO FACILITATE FUEL TANK INSTALL. APPROXIMATE NEW UNIT WEIGHT 4900LB BASED ON CUMMINS.
- REINSTALL FUEL TANK.
- INSTALL VIBRATION DAMPENERS AT I-BEAM LOCATIONS: VERIFY PLACEMENT WITH GENSET VENDOR. MODIFY AS REQUIRED. LOWER NEW GENSET UNIT TO TANK TOP I-BEAM VIBRATION DAMPENERS & SECURE.
- REBUILD/REINSTALL EXHAUST DUCTWORK, LOUVER & NEW FLEX CONNECTION. NOTE INCREASED NEW UNIT LENGTH & RADIATOR FLANGE CONFIGURATION SUBSTANTIALLY AFFECTS EXHAUST DUCTWORK
- INSTALL MUFFLER/EXHAUST SYSTEM COMPLETE.
- INSTALL NEW POWER & CONTROL WIRING.
- PROVIDE NORMAL GENSET STARTUP & TESTING.
- REPAIR ANY CONSTRUCTION WORK DAMAGE TO BUILDING, FLOORS, PIPING, ELECTRICAL OR EQUIPMENT; INTERIOR OR EXTERIOR TO THE BUILDING.

GENERAL CONDITIONS NOTES:

- CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO PREPARING THE BID. FOR THE PURPOSE OF BECOMING FAMILIAR WITH THE NATURE AND THE EXTENT OF THE WORK AND SITE CONDITIONS, WHICH MAY AFFECT THE WORK TO BE PERFORMED AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONTRACT. THE PRICES ESTABLISHED FOR THE WORK TO BE COMPLETED WILL REFLECT ALL COSTS PERTAINING TO THE WORK.
- EASEMENTS: THE SITE PLAN SHOWN IN THE GENERAL CONDITIONS SECTION 01520 APPENDIX A-01520 INDICATES THE EXISTING UTILITY AND CONSTRUCTION EASEMENTS AVAILABLE TO PERFORM THE WORK. ANY VEGETATION OR SITE IMPROVEMENTS DISTURBED DURING THE PROJECT SHALL BE RESTORED TO PRE-EXISTING CONDITIONS. IN NO CASE SHALL THE CONTRACTOR ENTER OR DISTURB PRIVATE PROPERTY IN THE VICINITY OF THE PROJECT LOCATION. ROW/MOT PERMITS: THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A MAINTENANCE OF TRAFFIC PLAN AND RIGHT-OF-WAY PERMIT AS APPLICABLE FOR ALL WORK IN THE ROAD RIGHT-OF-WAY.
- BUILDING MODIFICATIONS: ANY BUILDING STRUCTURAL MODIFICATIONS NECESSARY TO FACILITATE THE CONTRACTOR'S MEANS AND METHODS FOR THE PROPOSED WORK SHALL REQUIRE SUBMISSION OF THE PROPOSED MODIFICATIONS TO THE OWNER FOR APPROVAL. SUCH MODIFICATIONS SHALL BE CERTIFIED BY A FLORIDA PROFESSIONAL ENGINEER IN THE SERVICE AND EXPENSE OF THE CONTRACTOR. IF REQUIRED, PERMITS ISSUED BY COLLIER COUNTY SHALL BE PAID BY THE OWNER.
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RYS Consulting Electrical, Instrumentation & Control Design 12651 Macgregor Blvd Unit 4-402 Fort Myers, FL 33919	DON WILLIAMS PE #29504	NO.	DATE	REVISIONS	BY
	DESIGN BY: D.W. DRAWN BY: J.A.C. CHECKED BY: D.W. CAD FILE:	TAMAMI WELLHOUSE '18 REPLACEMENT OF STANDBY GENERATOR ELECTRICAL PLAN BASE BID OPTION	PRODUCT NO.: 70196.3 DATE: 3/18 SHEET NO.: E1		

KEYNOTES

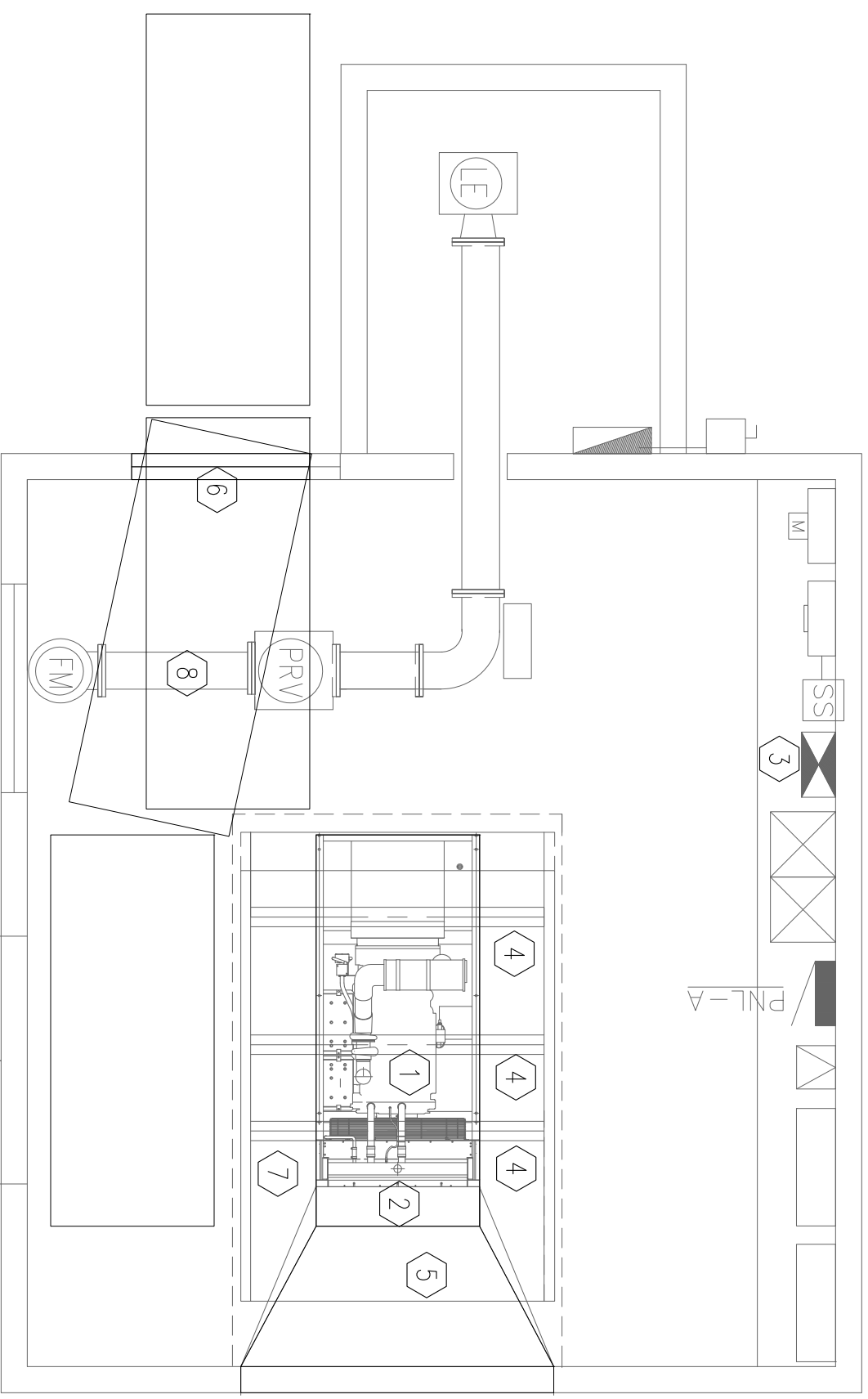
- 250KW GENSET. REMOVE & REPLACE WITH NEW UNIT. PROVIDE COMPLETE WITH NEW BATTERIES, MUFFLER, EXHAUST SYSTEM, EXHAUST INSULATION, VIBRATION DAMPERS. APPROX WEIGHT OF NEW UNIT 5000LB BASED ON CUMMINS. EXISTING UNIT FOOTPRINT APPROX 50'X108'; NEW UNIT FOOTPRINT BASED ON CUMMINS 50'X119". MAKE ADJUSTMENTS FOR ALTERNATE VENDORS.
- EXISTING 400A ATS TO BE REUSED. PROVIDE NEW CABLE FROM UNIT TO ATS.
- NOTE EXISTING FUEL TANK TOP STRUCTURAL I-BEAMS FOR MOUNTING NEW UNIT & VIBRATION DAMPERS. COORDINATE WITH NEW UNIT VENDOR FOR NECESSARY STRUCTURAL RELOCATION, MODIFICATIONS, ENHANCEMENTS AS REQUIRED. THE CONTRACTOR SHALL PROVIDE STRUCTURAL PLANS OF THE PROPOSED STRUCTURAL TANK MODIFICATIONS.
- EXISTING EXHAUST DUCTWORK. REMOVE TO FACILITATE UNIT INSTALLATION. REBUILD EXHAUST DUCTWORK AFTER NEW GENSET INSTALLATION. PROVIDE NEW DUCTWORK FLEX CONNECTION TO UNIT. PROVIDE & INSTALL NEW EXHAUST DUCTWORK AS REQUIRED TO ACCOMMODATE THE NEW GENSET. DUCTWORK MATERIAL, GAUGE AND FINISH SHALL MATCH EXISTING AND CONFORM TO INDUSTRY STANDARDS FOR THE APPLICATION. PROVIDE MATERIAL SUBMITTALS TO THE OWNER FOR APPROVAL. WORK SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THE INDUSTRY FOR THE TYPE OF APPLICATION. REPLACE EXISTING LOUVER OPENING FRAMING WITH PRESSURE TREATED LUMBER, PAINT & CAULK AS REQUIRED TO MATCH EXISTING.
- REMOVE COOLING AIR INTAKE LOUVER TO FACILITATE GENSET INSTALLATION. REPLACE LOUVER AFTER INSTALL.
- PROVIDE WATER & BIOLOGICAL DEBRIS REMOVAL FROM FUEL TANK. PROVIDE A ONE MICRON FUEL FILTER WITH POLISHING WATER SEPARATOR UNTIL TANK CLEANING IS COMPLETE THEN REMOVE FUEL. PROVIDE FUEL ANALYSIS PRIOR TO CLEANING. PROVIDE FUEL ANALYSIS & FUEL FILTER DEBRIS ANALYSIS AFTER CLEANING IS COMPLETE. REMOVE CLEANED EXISTING FUEL FROM MAIN FUEL TANK. PROVIDE INNER & OUTER FUEL TANK PRESSURE TEST PER F.A.C. & NFPA. BOROSCOPE EMPTY FUEL TANK & PROVIDE A REPORT OF CONDITION BY A CERTIFIED FUEL TANK SYSTEM CONTRACTOR.
- REMOVE WELL 18 PIPING, FLOWMETER, PRV, ELECTRICAL, ETC TO FACILITATE GENSET REPLACEMENT.

DEMOLITION SEQUENCE

- EXISTING 250KW GENSET. REMOVE FLUIDS & DISPOSE. REMOVE EXHAUST SYSTEM, POWER & CONTROL WIRING, FUEL LINES, ATTACHMENT TO TANK STRUCTURE.
- REMOVE EXHAUST DUCTWORK AS NECESSARY.
- INSTALL A-FRAME OR I-BEAM TROLLEY LIFTING SUPPORT & MOVE GENSET UNIT TO FLOOR.
- REMOVE PIPING & PRESSURE VALVE. REMOVE FLOWMETER. PROVIDE BLANK FLANGE AS NECESSARY. REMOVE CONCRETE PEDESTAL UNDER PRV. GROUT FLUSH TO FLOOR. WELL 18 OUTAGE REQUIRED.
- REMOVE 67"W X 88"H AIR INTAKE LOUVER.
- REMOVE GENSET THROUGH AIR INTAKE LOUVER OPENING. STEPS SHOWN.

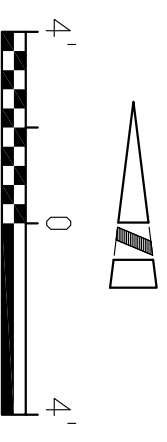
CONSTRUCTION SEQUENCE

- INSTALL NEW 250KW GENSET THROUGH AIR INTAKE LOUVER IN REVERSE ORDER.
- INSTALL VIBRATION DAMPERS AT TANK TOP I-BEAM LOCATIONS. VERIFY I-BEAM SIZING & PLACEMENT WITH GENSET VENDOR. MODIFY AS REQUIRED.
- LIFT NEW GENSET & SET ON FUEL TANK. LOWER NEW GENSET UNIT TO TANK TOP I-BEAM VIBRATION DAMPERS & SECURE.
- REBUILD/REINSTALL EXHAUST DUCTWORK WITH NEW FLEX CONNECTION. REINSTALL LOUVER. NOTE INCREASED NEW UNIT LENGTH & RADIATOR FLANGE CONFIGURATION SUBSTANTIALLY AFFECTS EXHAUST DUCTWORK.
- INSTALL NEW ENGINE EXHAUST SYSTEM COMPLETE. INSTALL INSULATION.
- INSTALL NEW POWER & CONTROL WIRING.
- INSTALL FLOWMETER, PIPING & PRESSURE VALVE. PROVIDE STAINLESS STEEL PIPING PEDESTAL SUPPORT WHERE CONCRETE PEDESTAL REMOVED.
- PROVIDE NORMAL GENSET STARTUP & TESTING.
- REPAIR ANY DAMAGE TO BUILDING, FLOORS, PIPING, ELECTRICAL OR EQUIPMENT; INTERIOR OR EXTERIOR TO THE BUILDING.



GENERAL CONDITIONS NOTES:

- CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO PREPARING THE BID, FOR THE PURPOSE OF BECOMING FAMILIAR WITH THE NATURE AND THE EXTENT OF THE WORK AND SITE CONDITIONS, WHICH MAY AFFECT THE WORK TO BE PERFORMED AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONTRACT. THE PRICES ESTABLISHED FOR THE WORK TO BE COMPLETED WILL REFLECT ALL COSTS PERTAINING TO THE WORK.
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- ROW/MOT PERMITS: THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A MAINTENANCE OF TRAFFIC PLAN AND RIGHT-OF-WAY PERMIT AS APPLICABLE FOR ALL WORK IN THE ROAD RIGHT-OF-WAY.
- BUILDING MODIFICATIONS: ANY BUILDING STRUCTURAL MODIFICATIONS NECESSARY TO FACILITATE THE CONTRACTOR'S MEANS AND METHODS FOR THE PROPOSED WORK SHALL REQUIRE SUBMISSION OF THE PROPOSED MODIFICATIONS TO THE OWNER FOR APPROVAL. SUCH MODIFICATIONS SHALL BE CERTIFIED BY A FLORIDA PROFESSIONAL ENGINEER IN THE SERVICE AND EXPENSE OF THE CONTRACTOR, IF REQUIRED. PERMITS ISSUED BY COLLIER COUNTY SHALL BE PAID BY THE OWNER.



RYS Consulting Engineers Electrical, Instrumentation & Control Design 12691 Midcopper Blvd Unit 4-402 Fort Myers, FL 33919 Certificate of Authorization #8212	DON WILLIAMS PE #62904	NO.	DATE	REVISIONS	BY
	DESIGN BY: D.W. DRAWN BY: J.A.C. CHECKED BY: D.W. CAD FILE:	TAMIAMI WELLHOUSE '18 REPLACEMENT OF STANDBY GENERATOR ELECTRICAL PLAN ALTERNATE BID OPTION	PROJECT NO.: 70196.3 DATE: 3/18 SHEET NO.: E2		

