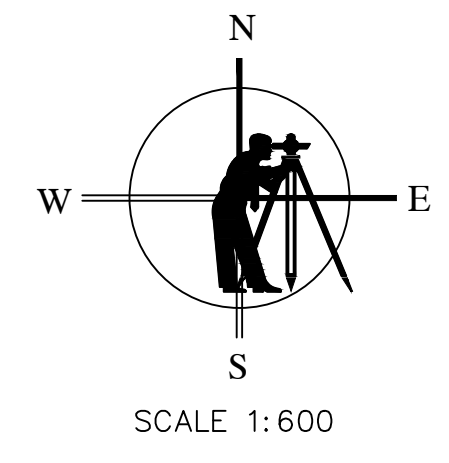
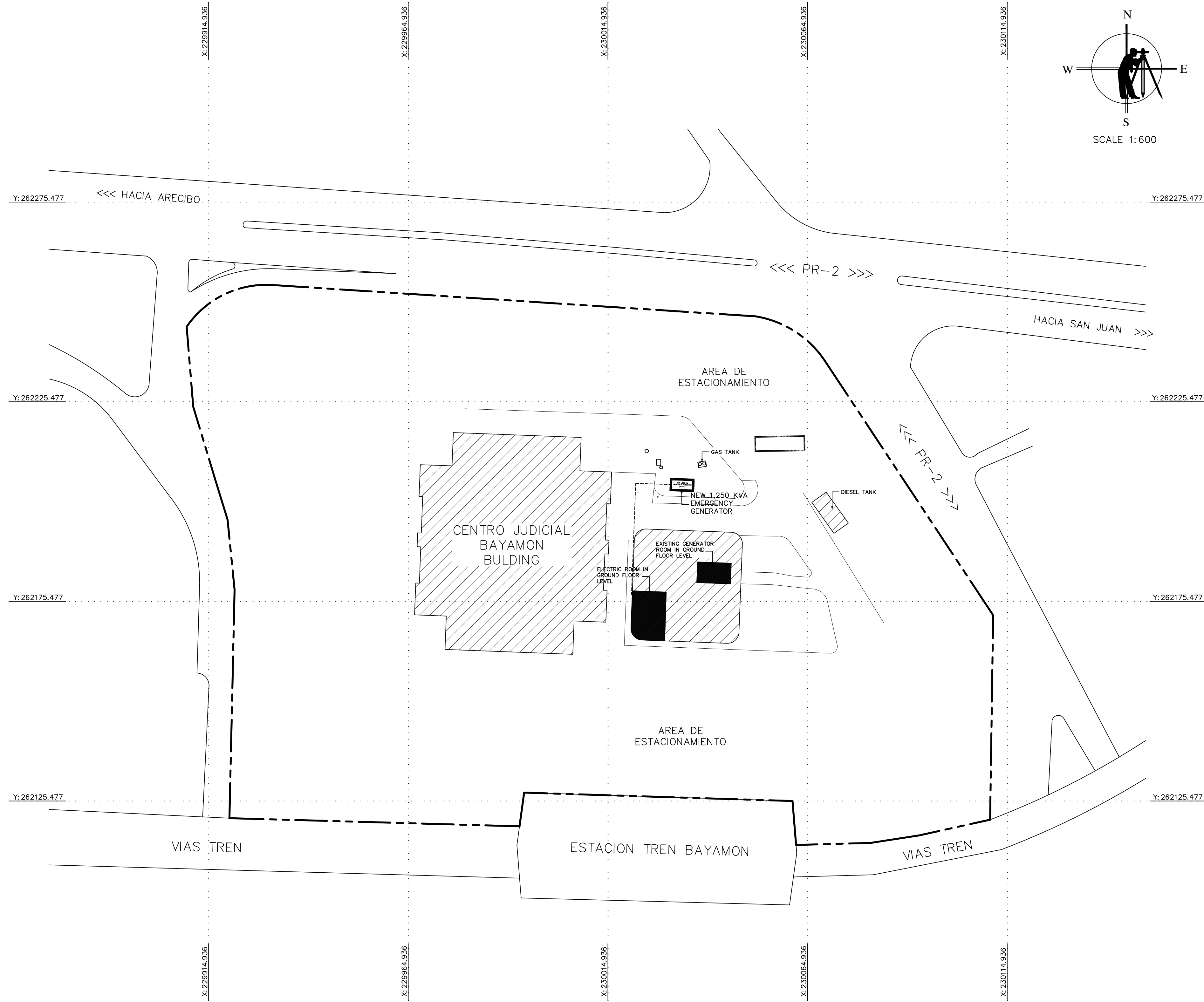
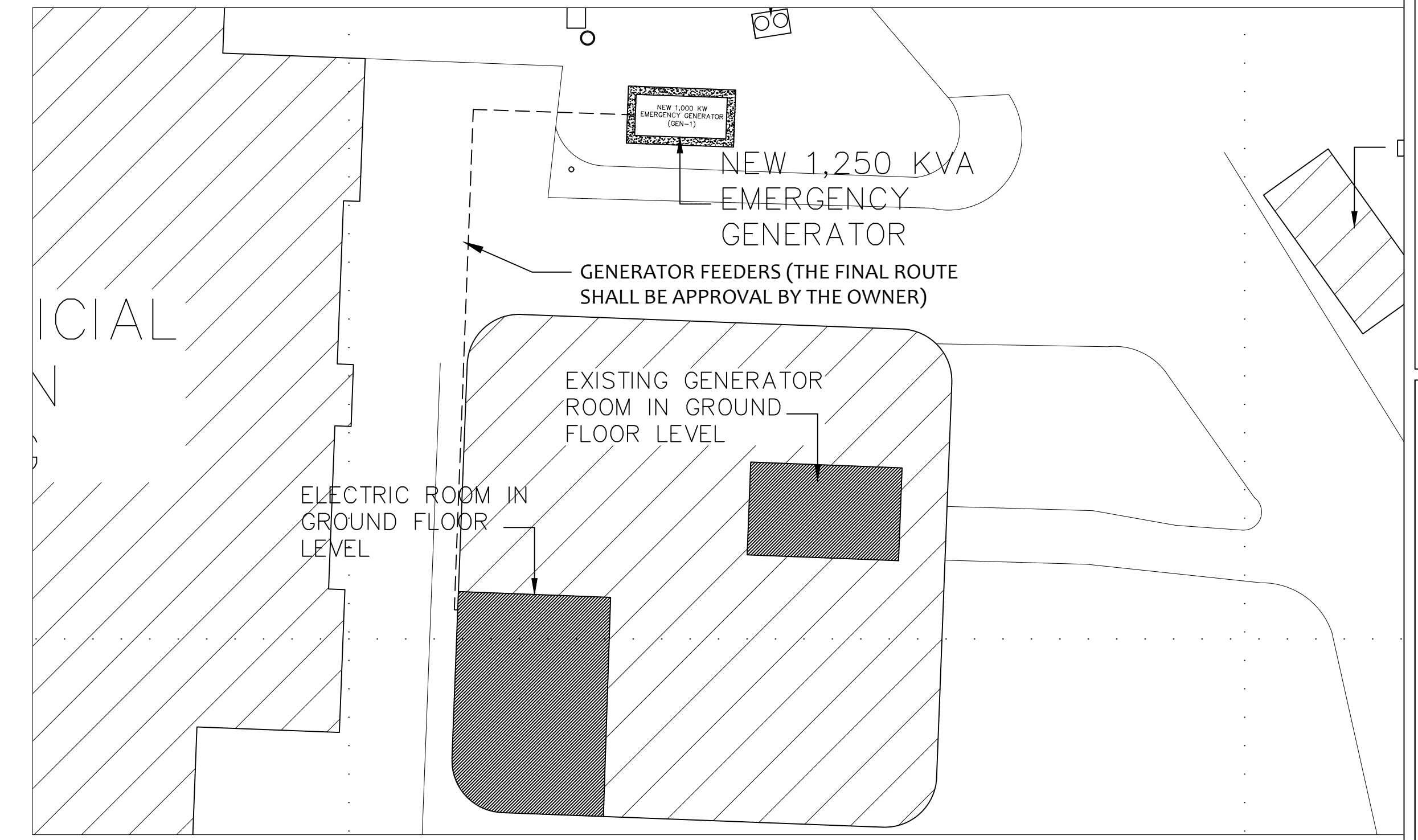
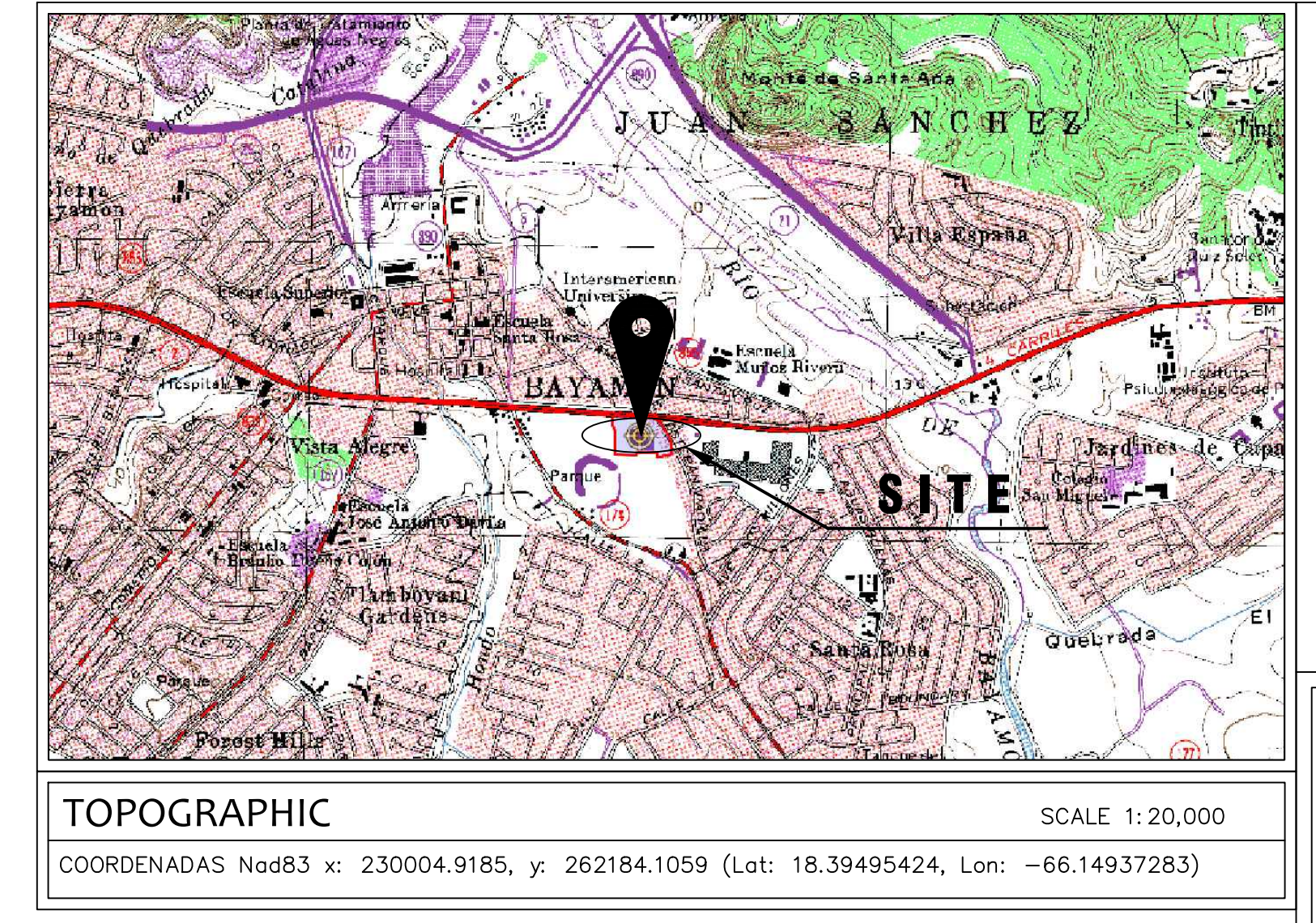


NEW 1,000 KW EMERGENCY GENERATOR CENTRO JUDICIAL DE BAYAMÓN, BAYAMÓN, PUERTO RICO.



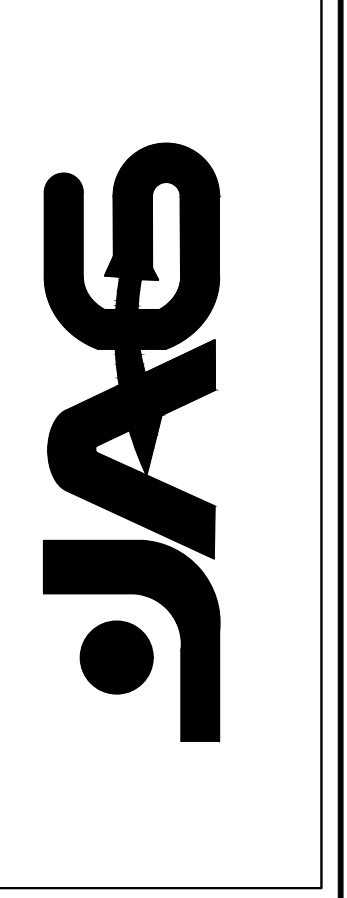
ELECTRICAL SITE PLAN
SCALE 1:600



ELECTRICAL SITE PLAN- ZOOM IN
NTS

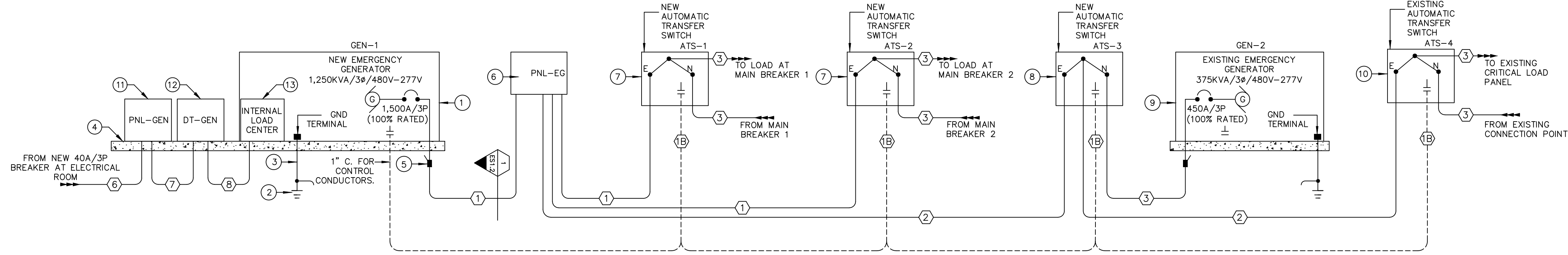
REVISIONS	DATE	BY

ELECTRICAL SITE PLAN



Project Name and Address
NEW 1,000 KW EMERGENCY GENERATOR
CENTRO JUDICIAL DE BAYAMÓN
CARR. 2 KM. 10.4
ESQUINA CALLE ESTEBAN PADILLA,
BAYAMÓN, P.R.

STAMP:
Date
OCTOBER/2023
Scale
INDICADA
Sheet
1/5
Sheet number
ES1.1



ELECTRICAL ONE LINE DIAGRAM
NOT TO SCALE

ELECTRICAL DIAGRAM LEGEND:

- ① NEW 1,250 KVA, 277/480V, 3PH, GENERATOR EQUAL OR SIMILAR TO MTU MODEL NO. 16V2000 DS1000 DIESEL GENERATOR SET. REFER TO GENERATOR AND TRANSFER SWITCH SPEC. SHEET ES1.3.
- ② COPPER GROUND ROD, 3/4" X 10'-0" WITH BRONZE CLAMP, 12" BELOW FINISHED GRADE.
- ③ 1#1/0 (XHHW-2)-GND CABLE.
- ④ CONCRETE PAD. REFER TO DETAIL AT SHEET ES1.3.
- ⑤ CONDUIT ADAPTER.
- ⑥ NEW EMERGENCY DISTRIBUTION PANEL (PNL-EG). SEE PANEL SCHEDULE FOR DETAILS ON THIS SHEET.
- ⑦ NEW 3,000A, 277/480V, 3PH, 4W, AUTOMATIC TRANSFER SWITCH (ATS-1, & ATS-2). REFER TO GENERATOR AND TRANSFER SWITCH SPEC. SHEET ES1.3.
- ⑧ NEW 600A, 277/480V, 3PH, 4W, AUTOMATIC TRANSFER SWITCH (ATS-3). REFER TO GENERATOR AND TRANSFER SWITCH SPEC. SHEET ES1.3.
- ⑨ EXISTING 375 KW, 277/480V, 3PH, DIESEL GENERATOR SET. THE GENERATOR SHALL BE DEDICATED TO CRITICAL LOAD PANEL AT GENERATOR ROOM. THE GENERATOR WILL BE USE AS REDUNDANT BACK UP OF GENERATOR 1.
- ⑩ EXISTING 600A, 277/480V, 3PH, 4W, AUTOMATIC TRANSFER SWITCH (ATS-4). A.T.S AT GENERATOR ROOM.
- ⑪ NEW GENERATOR'S ACCESSORIES DISTRIBUTION PANEL (PNL-GEN). SEE PANEL SCHEDULE FOR DETAILS ON THIS SHEET.
- ⑫ NEW 15 KVA DRY TRANSFORMER, DT-GEN, 480V - 208Y/120V, 4W, 3PH, NEMA 3R. SHALL BE USED EXCLUSIVELY FOR GENERATOR'S INTERNAL LOAD CENTER 208/120V.
- ⑬ GENERATOR'S INTERNAL LOAD CENTER 208/120V.

FEEDER SCHEDULE:

- ① FEEDER CONSISTING OF FOUR (4) SETS EACH CONSISTING OF 4-500 KCMILL-(XHHW-2) AND 1#2 AWG (GND)-XHHW-2 IN A 4" CONDUIT AND ONE (1) 4" SPARE CONDUIT.
- ② ONE (1) 1" SPARE CONDUIT FOR CONTROL SIGNALS.
- ③ FEEDER CONSISTING OF TWO (2) SETS EACH CONSISTING OF 4-4/0 AWG-(XHHW-2) AND 1#4 AWG (GND)-XHHW-2 IN A 2-1/2" CONDUIT AND ONE (1) 2-1/2" SPARE CONDUIT.
- ④ EXISTING FEEDER TO BE EXTENDED TO NEW CONNECTION POINT USING SAME EXISTING FEEDER SIZE AND INSULATION.

PANEL NAME		PANEL LOCATION		PANEL SCHEDULE			CIRCUIT BREAKER REMARKS			
PNL-EG		CONCRETE WALL (ELECTRICAL PATIO)		BUS RATING	1,500 A	VOLTAGES		S = SHUNT TRIP H = HACR G = GFCI L = C/B LOCK TC = TIME CLK		
FEED	MOUNTING/ NEMA TYPE	MAIN C/B OR MAIN LUG RATING & TYPE		AIC RATING	65,000	L-L	480	NB = NEW CIRCUIT BREAKER Sx = SWITCH CONTROL Cx = CONTACTOR CONTROL		
BOTTOM	SURFACE/NEMA 3R	1,500 A MAIN BREAKER		BUS MATERIAL	COPPER	L-N	277	EX = EXISTING LOAD TO REMAIN NL = NEW LOAD ON EXISTING		
CKT NO.	BREAKER (REMARKS)	LOAD DESCRIPTION	LOAD TYPE	PHASING			LOAD TYPE	LOAD DESCRIPTION	BREAKER (REMARKS)	CKT NO.
1				L1	L2	L3				2
3	1500/3	-	NEW ATS-1				-	NEW ATS-2	1500/3	4
5										6
7								SPACE		8
9	450/3	-	NEW ATS-3				-	SPACE		10
11							-	SPACE		12

PANEL SCHEDULE - PNL-EG
NOT TO SCALE

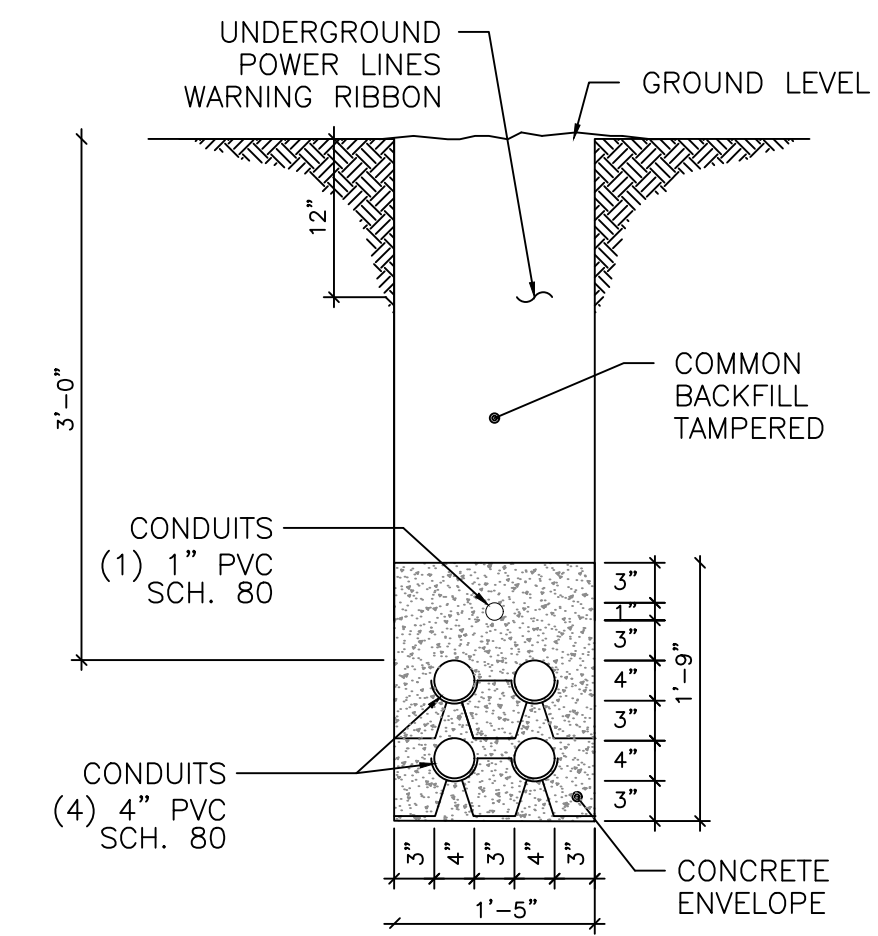
PANEL NAME		PANEL LOCATION		PANEL SCHEDULE			CIRCUIT BREAKER REMARKS			
PNL-GEN		CONCRETE WALL (ELECTRICAL PATIO)		BUS RATING	100 A	VOLTAGES		S = SHUNT TRIP H = HACR G = GFCI L = C/B LOCK TC = TIME CLK		
FEED	MOUNTING/ NEMA TYPE	MAIN C/B OR MAIN LUG RATING & TYPE		AIC RATING	22,000	L-L	480	NB = NEW CIRCUIT BREAKER Sx = SWITCH CONTROL Cx = CONTACTOR CONTROL		
BOTTOM	SURFACE/NEMA 3R	40 A MAIN BREAKER		BUS MATERIAL	COPPER	L-N	277	EX = EXISTING LOAD TO REMAIN NL = NEW LOAD ON EXISTING		
CKT NO.	BREAKER (REMARKS)	LOAD DESCRIPTION	LOAD TYPE	PHASING			LOAD TYPE	LOAD DESCRIPTION	BREAKER (REMARKS)	CKT NO.
1				L1	L2	L3				2
3	20/3	-	JACKET WATER HEATER				-	NEW 15 KVA DRY TRANSFORMER (DT-GEN)	20/3	4
5										6
7								SPACE		8
9								SPACE		10
11								SPACE		12

PANEL SCHEDULE - PNL-GEN
NOT TO SCALE

NAME	CAPACITY				CONDITION	
	VOLTAGE	CURRENT	PHASES	NEMA	EXISTING	NEW
ATS-1	277/480V	3,000 A	3	1		X
ATS-2	277/480V	3,000 A	3	1		X
ATS-3	277/480V	600 A	3	1		X
ATS-4	277/480V	600 A	3	1	X	

PROGRAMMING OF ATS' OPERATION:
 1 AT UTILITY FAIL
 RESPONSE: ATS-1, ATS-2 AND ATS-3
 2 AT UTILITY AND GENERATOR 1 FAIL
 RESPONSE: ATS-4*
 *NOTE: ATS-4 SHALL BE PROGRAM WITH ADDITION TIME DELAY IN ORDER TO COMPLY.

AUTOMATIC TRANSFERS SWITCHES SUMMARY
NOT TO SCALE



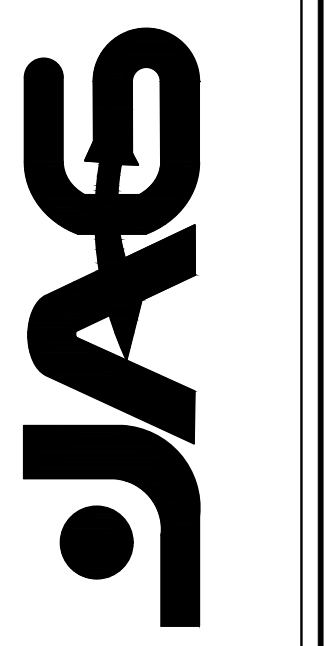
SECTION 1: UNDERGROUND SECONDARY FEEDER

IMPORTANT NOTES: (FOR PROJECTS LESS THAN ONE (1) MILE FROM SEASHORE)

1. ALL ELECTRICAL EQUIPMENT ENCLOSURES NOT RELATED TO PREPA, LOCATED OUTDOORS SHALL BE RAIN-TIGHT AND STAINLESS STEEL OR APPROVED UV LIGHT RESISTANT PLASTIC.
2. SUPPORTS CHANNELS UNISTRUTS SHALL BE OF STAINLESS STEEL OR ALUMINUM MATERIALS.
3. CONDUITS STRAPS SHALL BE OF ALUMINUM OR STAINLESS STEEL MATERIAL.
4. DISSIMILAR METALS SHALL BE SEPARATED BY A DIELECTRIC GASKET.
5. EXPOSED CONDUITS SHALL BE PVC SCH. 80 OR PAINTED RGS CONDUITS.
6. SUB-STATION TRANSOSCLOSURES, TRANSFORMERS AND PREPA EQUIPMENT CABINET SHALL BE STAINLESS STEEL AS PER PREPA SPECIFICATIONS.
7. OUTDOOR HIGH VOLTAGE CABLE TERMINATIONS SHALL BE RATED 27 KV.
8. SUB-STATION LOUVERS WINDOWS SHALL BE STAINLESS STEEL.

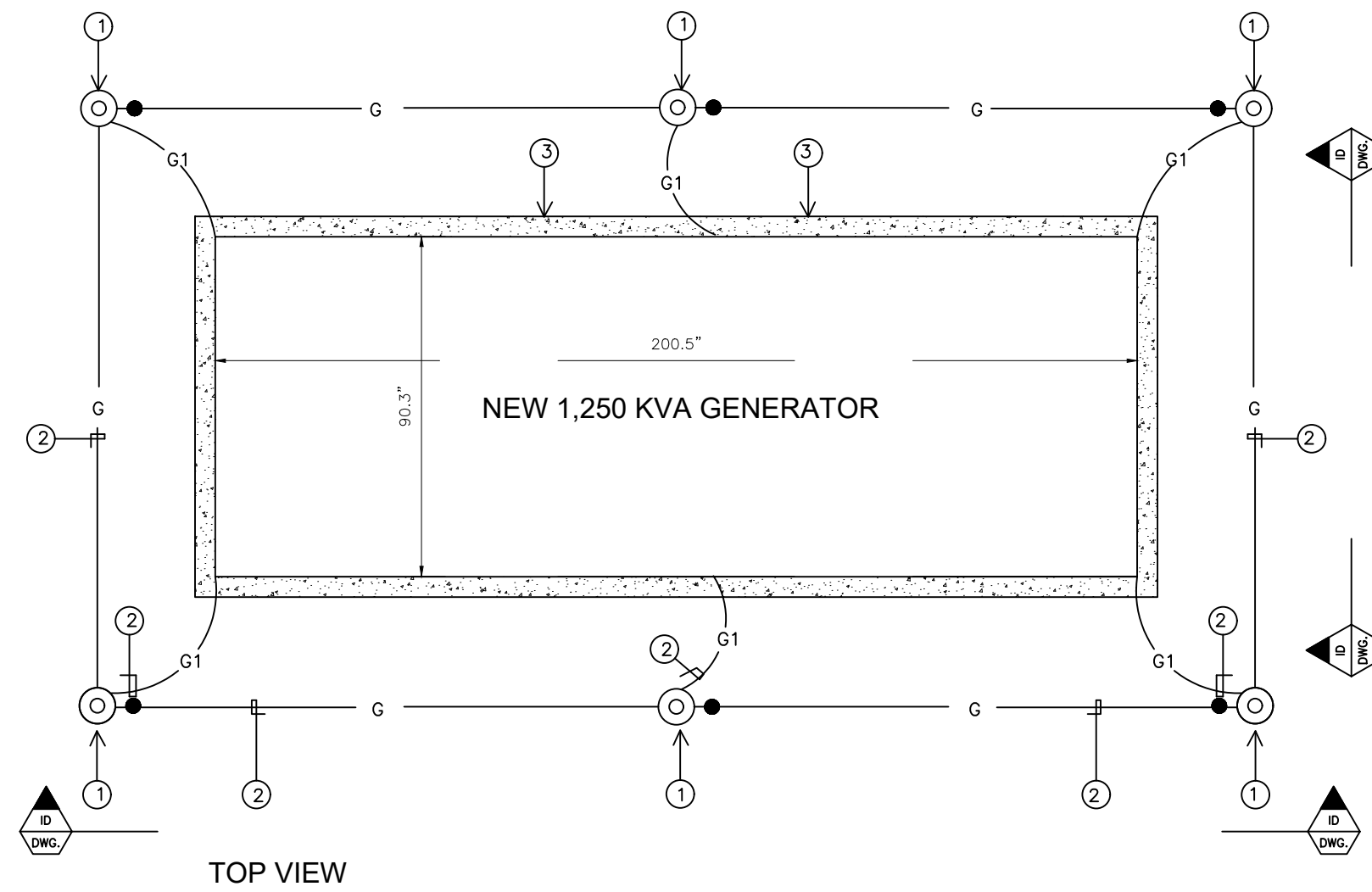
REVISIONS	DATE	BY

Sheet Title :
SINGLE LINE DIAGRAM AND PANEL SCHEDULES

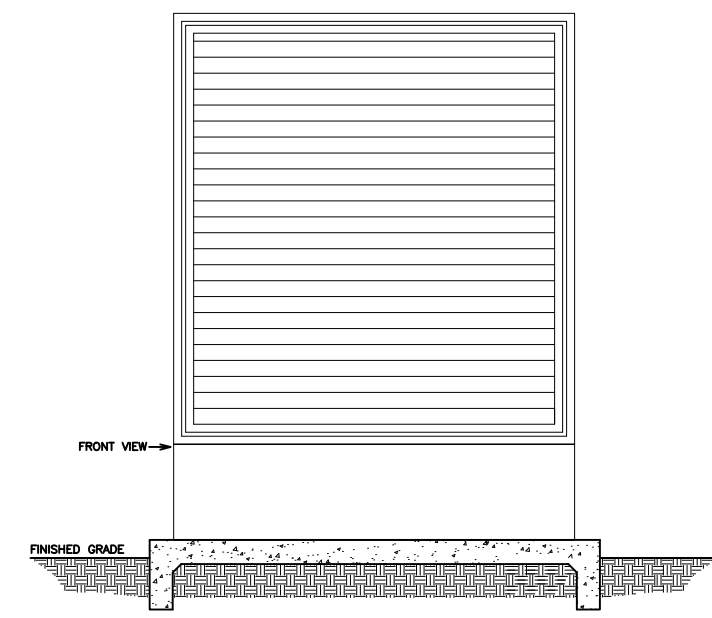


Project Name and Address
NEW 1,000 KW EMERGENCY GENERATOR
CENTRO JUDICIAL DE BAYAMÓN
CARR. 2 KM. 10.4
ESQUINA CALLE ESTEBAN PADILLA,
BAYAMÓN, P.R.

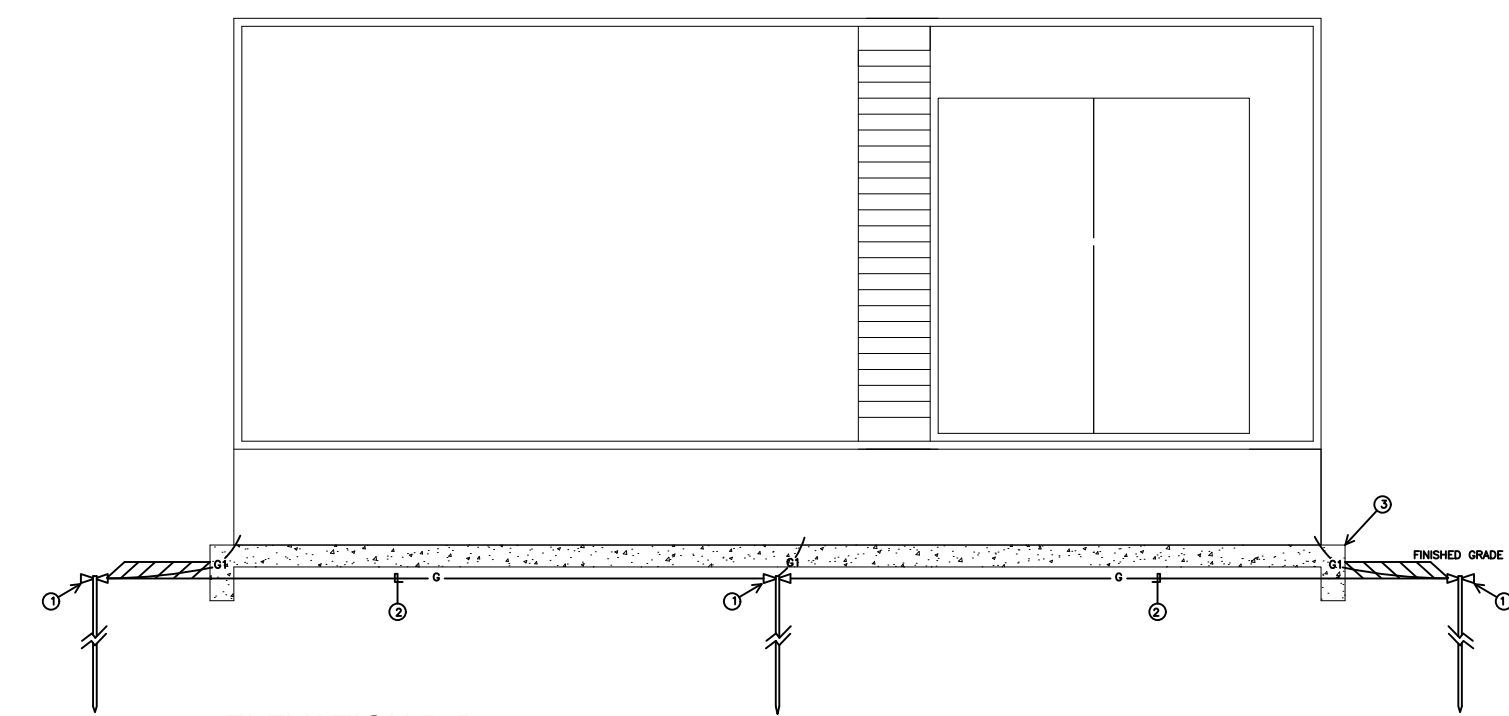
STAMP:
 Date **OCTOBER/2023**
 Scale **INDICADA**
 Sheet **2/5**
 Sheet number **ES1.2**



TOP VIEW

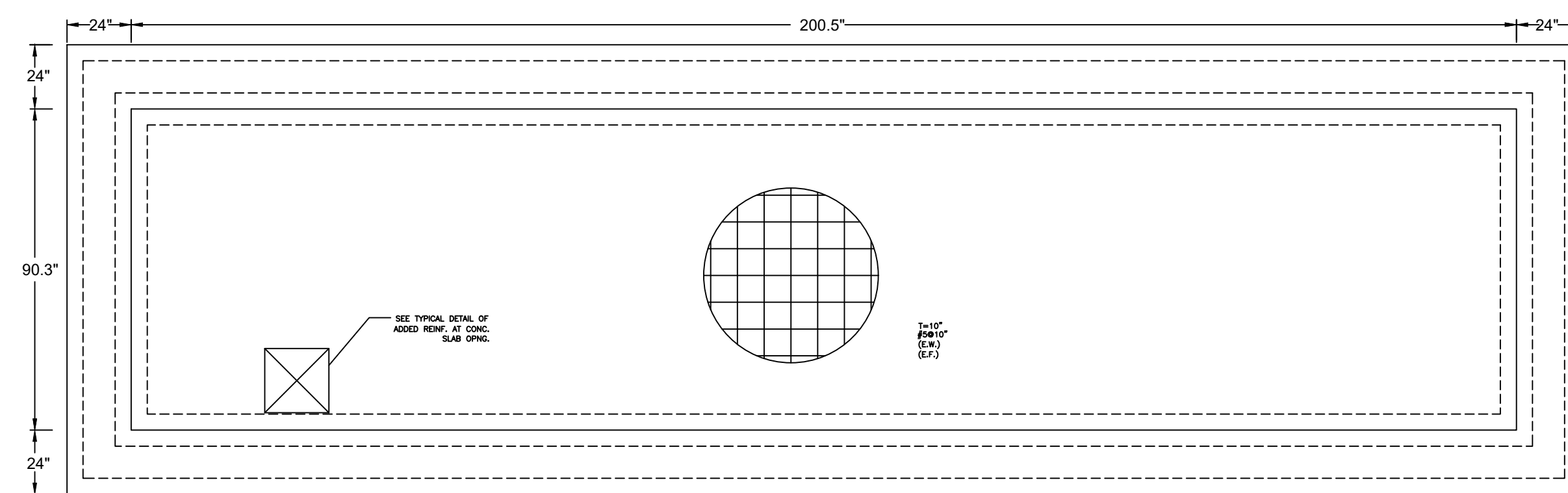


ELEVATION E-E



ELEVATION D-D

GENERATOR GROUND INSTALLATION DETAIL
NOT TO SCALE



NOTE: STRUCTURAL DETAIL AT SHEET S1.0

GENERATOR CONCRETE PAD DETAIL
NOT TO SCALE

GENERATOR AND TRANSFER SWITCH SPEC.

- 1- THE GENERATOR SHALL BE FURNISHED COMPLETE WITH A FUEL (DIESEL) TANK, WITH THE REQUIRED ACCESSORIES FOR NORMAL OPERATION.
- 2- THE GENERATOR SHALL BE RATED AS FOLLOWS:
 KW : 1000 KW
 KVA : 1250 KVA
 PHASES : 3Ø
 WIRES : 4W
 VOLTS : 480V/277V
 HERTZ : 60 HZ
 R.P.M. : 1800
 MAIN CIRCUIT BREAKER = 1500A/3P (100% RATED)
 AT 0.8 POWER FACTOR
 PROVIDED WITH SOUND ATTENUATED, WEATHERPROOF, ALUMINUM ENCLOSURE, 75 dBA AT 23 FT.(SEE REMARK NOTE G)

EQUAL OR SIMILAR TO MODEL 16V2000 DS1000
MANUFACTURED BY MTU

THE UNIT SHALL BE SKID MOUNTED

- 3- THE GENERATOR MUST COMPLY WITH THE CURRENT EPA REQUIREMENTS. THE CONTRACTOR MUST PROVIDE ALL OF THE CERTIFICATIONS OF THE GENERATOR, SUCH AS THE CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT OF THE YEAR 1990.
- 4- THE UNIT SHALL ALSO INCLUDE THE FOLLOWING EQUIPMENT AND ACCESSORIES:
 A. NICKEL CADMIUM BATTERIES AND BATTERY CHARGER.
 B. AUTOMATIC VOLTAGE REGULATOR.
 C. AC ENTRANCE BOX.
 D. WATER COOLED RADIATOR.
 E. ONE (1) DUAL WALL SUB-BASE DIESEL FUEL (4,865 GALS.) WITH ALL FUEL SUPPLY, RETURN AND VENTILATION LINES AND
 F. ONE 24 VOLTS, HEAVY DUTY BATTERY WITH RACK AND CABLES.
 G. EXHAUST CRITICAL TYPE MUFFLER WITH STEEL CONNECTIONS AND FITTINGS, INCLUDING FLEXIBLE SECTION AND RAIN CAP FOR EXHAUST.
 H. VIBRATION ISOLATORS OF THE SIZE, NUMBER AND TYPE REQUIRED BY THE PLANT MANUFACTURER.
 I. SCREEN, BAFFLED, LOUVERED AIR INTAKE.
 J. DUCTED, BAFFLED, LOUVERED AND SCREENED HOT AIR DISCHARGE.
 K. PUMPS AND FILTERS AS REQUIRED.
 L. RELAYS AND CONTACTORS AS REQUIRED FOR REMOTE CONTROL FROM TRANSFER SWITCH.
 M. INSTRUMENTS AND CONTROL PANEL INCLUDING THE FOLLOWING:
 a. FUEL LEVEL GAUGE (LEVELOMETER)
 b. LOW FUEL LEVEL ALARM PILOT LIGHT AND GENERATOR STARTING INTERRUPTION CONTACT MECHANISM
 c. VOLTMETER
 d. AMMETER
 e. WATTMETER
 f. FREQUENCY METER
 g. RUNNING TIME METER.
 h. FIELD CIRCUIT BREAKER(S).
 i. VOLTAGE REGULATOR WITH A TWO (2) POSITION (OFF AND AUTOMATIC) SWITCH.
 j. WATER TEMPERATURE GAUGE.
 k. OIL PRESSURE GAUGE.
 I. AUTOMATIC SHUTDOWN DVICE WITH INDICATOR LIGHTS FOR:
 1- OVER CRANKING PROTECTION.
 2- HIGH WATER TEMPERATURE.
 3- LOW OIL PRESSURE.
 k. START/STOP SWITCH.
 I. REMOTE START/ STOP TERMINALS.

5- AUTOMATIC TRANSFER SWITCHES RATED AS FOLLOWS:

DESIGNATION:	ATS-1	ATS-2	ATS-3
AMPS:	3,000	3,000	600
VOLTS:	480V/277V	480V/277V	480V/277V
PHASES:	3Ø	3Ø	3Ø
WIRES:	4W	4W	4W
NEMA TYPE:	NEMA 1	NEMA 1	NEMA 1
POLES:	3P	3P	3P

THE TRANSFER SWITCH(ES) SHALL BE FOR OPERATION AT 60 HERTZ AND SHALL BE PROVIDED WITH THE REQUIRED PILOT LIGHTS ON THE DOOR AND WITH THE FOLLOWING ACCESSORIES:

- a. SELECTOR SWITCH WITH OFF AUTOMATIC CHECK POSITIONS.
- b. TIME DELAY IN TRANSFER TO EMERGENCY ENGINE START, ADJUSTABLE FROM 1/16 TO 180 SECONDS.
- c. TIME DELAY ON RESTORATION TO NORMAL POWER, ADJUSTABLE FROM 30 SECOND AND TO MINUTES.
- d. CLOCK EXERCISER TO START GENERATOR SET AUTOMATICALLY. IT SHALL OPERATE EVERY WEEK AND RUN THE GENERATOR SET FOR ONE (1) HOUR AND THEN, STOP THE GENERATOR SET AUTOMATICALLY.
- e. ALL OTHER ACCESSORIES REQUIRED FOR NORMAL OPERATION.
- f. TIME DELAY RELAYS AND CONTACTORS (IF SO REQUIRED) TO ACHIEVE THE FOLLOWING STARTING SEQUENCE TO OPERATE UNDER EMERGENCY CONDITIONS:

6- REMARKS:

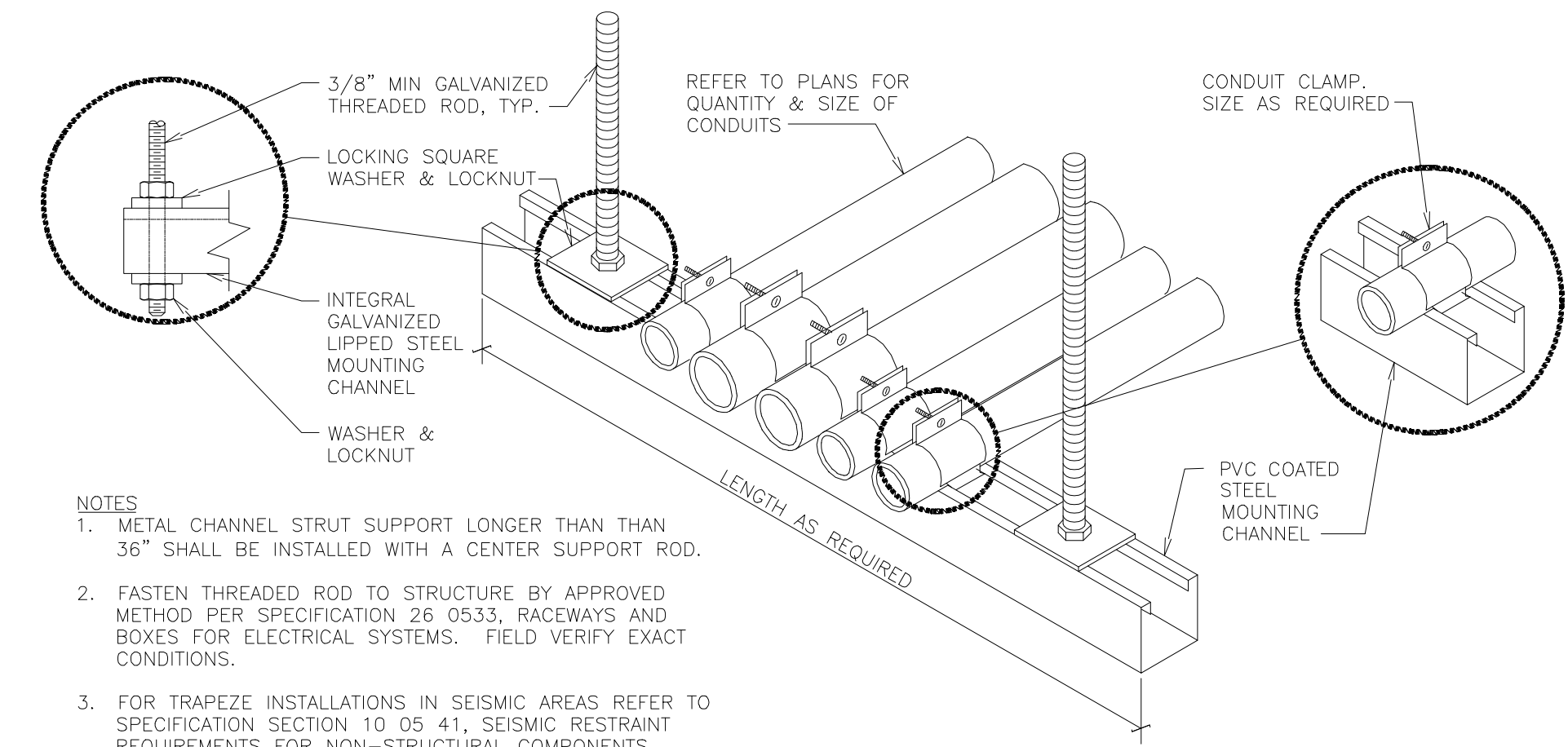
- A. ALL ELBOWS SHALL BE OF THE LONG RADIUS TYPE.
- B. THE DIAMETER OF THE EXHAUST PIPE MUST BE INCREASED 1" FOR EACH 10 FEET OF VERTICAL RUN AFTER THE FIRST 10 FEET.
- C. THE CONTRACTOR SHALL LEAVE THE TANK FULL OF DIESEL FUEL OF THE TYPE REQUIRED FOR OPERATION OF THE EMERGENCY GENERATOR.
- D. THE CONTRACTOR SHALL MAKE SURE THAT THE CONNECTIONS AT THE DIESEL FUEL TANK ARE TIGHT BEFORE PROCEEDING WITH THE FINAL INSTALLATION OF THE TANK.
- E. EXHAUST PIPE SHALL NOT BE CLOSE TO THE NEW OR EXISTING STRUCTURES. THE INSTALLATION SHALL BE MADE IN ORDER TO PREVENT GASES TO PENETRATE INSIDE THE STRUCTURE.
- F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE COMPLETE INSTALLATION OF THE EMERGENCY GENERATOR WITH ALL ITS NECESSARY FITTINGS AND APPURTENANCES. THIS SHALL BE DONE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONA. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR LEAVING THE EMERGENCY POWER GENERATING SYSTEM IN PERFECT OPERATING CONDITIONS.

EXTERNAL TANK (OPTIONAL TO SUB-BASE TANK) NOTES:

1. ALL FITTINGS TO BE CARBON STEEL WELD FLANGES (UNLESS OTHERWISE NOTED)
2. DOUBLE WALL STORAGE TANK
3. INNER TANK DIMENSIONS: 180"L x 91" DIA.
4. ACTUAL TANK VOLUME (100%): 4,000 GALLONS
5. APPROXIMATE TANK WEIGHT: 8,300 LBS

SUMMARY:

1. GENERATOR, MTU 16V2000 DS1000 1000KW
 DIMENSIONS: 200.5"L x 90.3"W x 97.5"H
 WEIGHT: 18,795 LBS
2. TOTAL AIRFLOW REQUIRED: 60,350 CFM
3. SOUND ATTENUATION LEVEL: 75 dBA @ 23FT
4. INSULATION: 2" MAT-FACED MICRO-AIRE DUCT BOARD
5. LINING: MILL-FINISH PERFORATED ALUMINUM
6. ENCLOSURE WALLS: 4" ALUMINUM TUBE WELDED FRAME
7. ENCLOSURE ROOF: 2" ALUMINUM TUBE WELDED FRAME
8. ENCLOSURE DIMENSIONS: 210"L X 100"W X 100"H
9. ENCLOSURE WEIGHT (APPROX.): TBD LBS
10. ENCLOSURE COLOR: WHITE
11. ENCLOSURE SHALL BE PROVIDED w / 4-POINT LIFTING LUGS



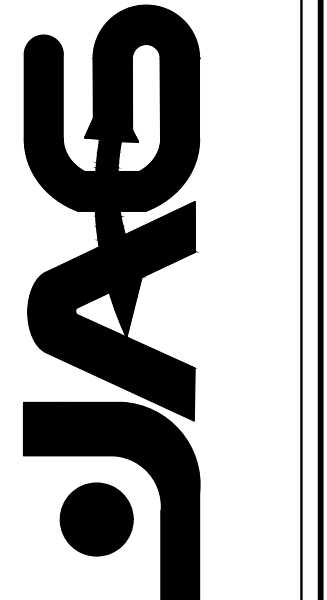
NOTES

1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 36" SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 0533, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO SPECIFICATION SECTION 10 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

INSIDE ELECTRICAL ROOM: CONDUIT TRAPEZE MOUNTING DETAIL

SYMBOL	DATE	BY

Sheet Title :
GENERATOR/ATS DETAIL



Project Name and Address
NEW 1,000 KW EMERGENCY GENERATOR
CENTRO JUDICIAL DE BAYAMÓN
CARR. 2 KM. 10.4
ESQUINA CALLE ESTEBAN PADILLA,
BAYAMÓN, P.R.

STAMP:
 Date
OCTOBER/2023
 Scale
INDICADA
 Sheet
3/5
 Sheet number
ES1.3

LUMA/P.R.E.P.A. GENERAL NOTES:

- THIS DRAWINGS ARE AN EXACT COPY OF THE DRAWINGS SUBMITTED TO THE OGPE.
- BEFORE STARTING DATE OF THE PROJECT THE OWNER IS RESPONSIBLE IN OBTAINING ALL THE NECESSARY ENDORSEMENTS AND PERMITS FROM ALL THE STATE, MUNICIPALITY AND FEDERAL GOVERNMENT AGENCIES THAT COULD BE REQUIRED FOR THIS TYPE OF PROJECT.
- THE OWNER SHALL CONTRACT THE SERVICES OF A LICENSE ENGINEER TO INSPECT ALL THE ELECTRICAL WORKS IN ACCORDANCE WITH THE CERTIFIED LAW (LAW NO. 7, JULY 19, 1995) AND THE P.R.E.P.A. MANUAL "REGLAMENTOS DE CERTIFICACION DE PLANOS DE PROYECTOS DE CONSTRUCCION ELECTRICA" THE OWNER IS RESPONSIBLE OF NOTIFYING THE P.R.E.P.A. THE ASSIGNED PRIVATE INSPECTOR BEFORE STARTING ANY WORKS.
- ALL CONSTRUCTION SHALL BE DONE IN A THOROUGH AND WORKMANLIKE MANNER, IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS. THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, NESC, IEEE, NEMA AND ANSI STANDARDS. SHALL BE FOLLOWED, EXCEPT WHERE LOCAL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN.
- THE CONTRACTOR IS NOT AUTHORIZED TO MAKE CHANGES FROM THE ELECTRICAL DESIGN. IT SHOULD BE RESPONSIBLE TO CONSULT THE ELECTRICAL DESIGNER OR THE PROJECT INSPECTOR ANY DOUBTS OF INTERPRETATIONS OF THE DRAWINGS, EXECUTION OF THE WORK, TECHNICAL SPECIFICATIONS OR ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THE PROPOSED DESIGN.
- THE OWNER OF ELECTRIC CONTRACTOR WILL NOTIFY THE PREPA THE BEGINNING OF THE WORKS OF THE PROJECT, BY MEANS OF THE DELIVERY A START NOTIFICATION DOCUMENT TO THE CORRESPONDING REGION'S DISTRIBUTION ENGINEERING DEPARTMENT.
- THE PRIVATE INSPECTOR AND THE CONTRACTOR ARE RESPONSIBLE IN ASSISTING TO A PRE-CONSTRUCTION MEETING TO COORDINATE ALL THE WORKS WITH THE ENGINEERING DISTRIBUTION DEPARTMENT OF THE CORRESPONDING REGION.
- ALL WORKS NEEDED TO BE DONE IN THE EXISTING ENERGIZED P.R.E.P.A. LINES INCLUDING CONNECTING THE PROJECT HAS TO BE DONE BY P.R.E.P.A. THE OWNER WILL BE RESPONSIBLE OF ALL THE EQUIPMENT COST, MATERIALS AND LABOR. THE OWNER SHALL REQUEST TO THE P.R.E.P.A. AN ESTIMATE OF THE NECESSARY WORKS. THE ESTIMATE WILL BE VALID FOR A PERIOD OF THREE (3) MONTHS AFTER BEING EXPEDITED.
- IT WILL BE PROHIBIT TO DO ANY WORK IN THE EXISTING P.R.E.P.A. RIGHT-OF-WAY WITH OUT A WRITTEN AUTHORIZATION LETTER FROM THE P.R.E.P.A.
- THE P.R.E.P.A. WILL NOT AUTHORIZE ANY CONNECTION IF THERE IS A RIGHT-OF-WAY INVASION CONDITION OR IF THE LINES DOES NOT COMPLY WITH THE SECURITY CLEARANCES.

SPECIAL LUMA/P.R.E.P.A. NOTES:

- THE OWNER OF THE PROJECT MUST CONTRIBUTE:
 - THE AMOUNT OF \$ 0.00 FOR IMPROVEMENTS IN THE EXISTING ELECTRICAL INFRASTRUCTURE.
 - REQUIRED WORKS SPECIFIED IN THE EVALUATION OF THIS PROJECT DATE ON XXXX
 THIS CONTRIBUTION ARE DONE ACCORDING TO THE PROPOSED AGREEMENT WITH THE "REGLAMENTO PARA DETERMINAR Y COBRAR LAS APORTACIONES DE PERSONAS O INSTITUCIONES EN PROYECTOS DE DESARROLLO VIGENTE".
- P.R.E.P.A. WILL NOT ENERGIZE THE SYSTEM UNTIL ALL THE CORRESPONDING RIGHTS-OF-WAY, ON THE PROJECT AND/OR OFF-SITE, HAVE BEEN GRANTED AS REQUIRED IN THE "REGLAMENTO DE SERVIDUMBRE PARA LA AUTORIDAD DE ENERGIA ELECTRICA". THIS REQUIREMENT AND NOTES APPLIES TO ALL REQUIRED RIGHT-OF-WAYS, INSIDE OR OUTSIDE OF THE PROJECT LIMITS.
- THE INSTALLATION OF THE METERING EQUIPMENT MUST BE CONSULTED AND COORDINATED WITH METERING OFFICE OF THE CORRESPONDING REGION. THE DESIGNER OR THE ELECTRICAL CONTRACTOR MUST MAKE SURE TO CONSULT WITH THE METERING OFFICE THE EQUIPMENT AND MATERIALS TO BE USED AND THE LOCATION OF THE PROPOSED EQUIPMENTS.
- IT IS NOT PERMITTED TO INSTALL TRANSFORMERS, SUBSTATION OR ANY ELECTRICAL EQUIPMENT ABOVE SEWER OR WATER INFRASTRUCTURE.

LUMA/P.R.E.P.A. MATERIAL NOTES:

- ALL THE EQUIPMENT TO BE USED SHALL COMPLY WITH THE IEEE, ANSI, NEMA AND ASTM STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE OF VERIFYING THAT ALL THE MATERIALS OR EQUIPMENTS ARE APPROVED BY THE P.R.E.P.A. BEFORE ANY PURCHASE AND INSTALLATION. THE P.R.E.P.A. RESERVES THE RIGHT OF ACCEPTING ANY EQUIPMENT.
- WITHIN (1) MILE OF THE SEASHORE, ALL ENCLOSURES, EQUIPMENT AND MATERIALS SHALL BE STAINLESS STEEL, EXCEPT THE METERING BASES.
- ALL UNDERGROUND P.R.E.P.A. ELECTRICAL LINES SHALL USE PRIMARY CABLES WITH 15 KV TERMINATIONS FOR DISTRIBUTION SYSTEMS AND 46 KV TERMINATIONS FOR 38 KV ELECTRICAL LINES.
- AERIAL P.R.E.P.A. ELECTRICAL LINES SHALL USE 15 KV POLYMER INSULATION TERMINALS FOR DISTRIBUTION LINES AND 46 KV TERMINALS FOR 38 KV ELECTRICAL LINES.
- THE CONTRACTOR IS RESPONSIBLE TO PRINT IN ALL THE TRANSFORMERS THE PROPERTY NUMBER ASSIGNED BY THE CORRESPONDING ENGINEERING DISTRIBUTION DEPARTMENT.

LUMA/P.R.E.P.A. SYSTEM NOTES:

- THE OWNER IS RESPONSIBLE FOR TESTING ALL THE PRIMARY AND SECONDARY CABLES WITH THEIR CORRESPONDING TERMINATIONS. THE TEST RESULTS SHALL BE IN ACCORDANCE WITH THE PARAMETERS ESTABLISHED BY THE P.R.E.P.A. THIS TEST MUST BE PERFORMED IN COORDINATION WITH A REPRESENTANT FROM P.R.E.P.A. INSPECTION OFFICE OF THE CORRESPONDING REGION.
- DURING THE CABLE INSTALLATION, THIS MUST BE PROTECTED FROM MOISTURE AND ABRASIONS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CABLE USING RECOMMENDED PRACTICES TO NOT EXCEED THE TENSIONS SPECIFIED FOR THE CABLE.
- ALL THE COVERS OF ANY MANHOLE INSTALLED IN THE PLANTING AREA SHALL BE PROTECTED WITH REINFORCED CONCRETE ACCORDING TO THE P.R.E.P.A. STANDARD URD-52.
- WHERE THE PROJECT IS LOCATED WITHIN ONE (1) MILE OF THE SEASHORE THE RISER SHALL BE PVC SCH. 80 OR FIBERGLASS APPROVED BY THE P.R.E.P.A.
- ALL UNDERGROUND TRENCHES SHALL BE INSPECTED BY THE P.R.E.P.A. BEFORE IT IS COVERED AND COMPACTED.
- ALL UNDERGROUND ELECTRICAL LINES UNDER OR EXPOSED VEHICULAR TRAFFIC AREA SHALL BE PROTECTED WITH CONCRETE. WHERE OTHER UTILITIES ARE PRESENT IT MUST MAINTAIN A MINIMUM CLEARANCE OF 13".
- THE CONTRACTOR SHALL PROVIDE SPARES FUSES EQUAL TO THE AMOUNT USED IN THE SUB-STATION.
- ALL THE GROUND CONNECTION SHALL BE COMPRESSION OR THERMO-WELD TYPE.
- THE CONTRACTOR SHALL PROVIDE A FISHWIRE FOR ALL SPARE CONDUITS.
- MAXIMUM RESISTANCE TO GROUND SHALL BE 10 OHMS OR LESS. A GROUND ROD SHALL BE INSTALLED TO CONNECT THE NEUTRAL EVERY FOUR (4) POLES OR EVERY 1,000 FEET AND IN ALL THE TRANSFORMERS.
- EACH POLE CONCRETE BASE SHALL INCLUDE TWO (2) SPARE CONDUITS FOR FUTURE USE, AS REQUIRED BY THE P.R.E.P.A.
- EACH POLE CONCRETE BASE SHALL INSPECTED BY THE P.R.E.P.A. IN THE CONSTRUCTION STAGE.

IMPORTANT NOTES: (FOR PROJECTS LESS THAN ONE (1) MILE FROM SEASHORE)

- ALL ELECTRICAL EQUIPMENT ENCLOSURES NOT RELATED TO PREPA, LOCATED OUTDOORS SHALL BE RAINIGHT AND STAINLESS STEEL OR APPROVED UV LIGHT RESISTANT PLASTIC.
- SUPPORTS CHANNELS UNISTRUTS SHALL BE OF STAINLESS STEEL OR ALUMINUM MATERIALS.
- CONDUITS STRAPS SHALL BE OF ALUMINUM OR STAINLESS STEEL MATERIAL.
- DISSIMILAR METALS SHALL BE SEPARATED BY A DIELECTRICS GASKET.
- EXPOSED CONDUITS SHALL BE PVC SCH. 80 OR PAINTED RGS CONDUITS.
- SUB-STATION TRANSCLOSURES, TRANSFORMERS AND PREPA EQUIPMENT CABINET SHALL BE STAINLESS STEEL AS PER PREPA SPECIFICATIONS.
- OUTDOOR HIGH VOLTAGE CABLE TERMINATIONS SHALL BE RATED 27 KV.
- SUB-STATION LOUVERS WINDOWS SHALL BE STAINLESS STEEL.

METERING NOTE:

- "ESTE PROYECTO REQUIRE CONTRATO DE CUENTAS AL POR MAYOR, EL CUAL ES REQUISITO QUE SE FIRME PREVIO A LA ENERGIZACION DEL PROYECTO. EL TIPO DE MEDICION, LOS EQUIPOS A UTILIZARSE Y LA UBICACION DEL EQUIPO DE MEDICION FUE COORDINADA CON EL GERENTE DE ESTANDARES Y PROCEDIMIENTOS."

ELECTRICAL CERTIFICATION NOTE:

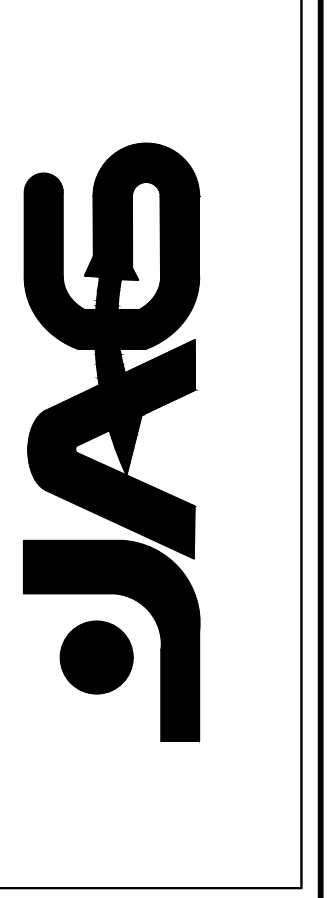
- THE ELECTRICAL CERTIFICATION FOR THE GENERATORS INSTALLATIONS MUST SPECIFY THE TYPE OF DOUBLE-THROW SWITCH USED, BE IT MANUAL OR AUTOMATIC. THIS CERTIFICATION MUST BE ACCOMPANIED WITH THE FORM "REGISTRATION OF THE EMERGENCY PLANT". THE ELECTRICAL INSTALLATION CERTIFICATION AS WELL AS THE REGISTRATION OF THE ELECTRICAL PLANT WILL BE DELIVERED BY CONTRACTOR DURING THE INSPECTION STAGE OF THE PROJECT. OTHERS WILL PRESENT THE TECHNICAL SPECIFICATIONS OF THE DOUBLE THROW SWITCH IF YOU USE AN AUTOMATIC ONE, ACCORDING TO TECHNICAL COMMUNICATION 05-02.

SPECIAL OAT NOTES:

- THE NEW GENERATOR SHALL BE CONNECTED TO EXISTING DIESEL TANK.
- THE CONTRACTOR SHALL UPDATED ALL ELECTRICAL ROOM LABELING.
- THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND QUANTITIES.
- ALL EQUIPMENT WILL BE BUILT TO ANSI, NEMA, AND P.R.E.P.A STANDARDS.
- ALL CONSTRUCTION WORK MUST BE CARRIED OUT CONSCIENTIOUSLY AND PROFESSIONALLY IN ACCORDANCE WITH CONSTRUCTION PLANS, SPECIFICATIONS AND DRAWINGS. THE LATEST EDITION OF THE NEC WILL BE FOLLOWED, EXCEPT WHERE LOCAL STANDARDS ARE MORE STRINGENT, IN WHICH CASE, LOCAL REGULATIONS SHALL GOVERN.
- THE OWNER SHALL PROVIDE ACCESS TO ALL AREAS RELATED TO THE PROJECT. THE CONTRACTOR MUST SUBMIT A FORMAL APPLICATION TO THE OWNER.
- THE ROUTE OF THE FEEDERS THAT IS PRESENTED IS PRELIMINARY. THE CONTRACTOR MAY PRESENT AN ALTERNATIVE FOR THE OWNER'S APPROVAL.

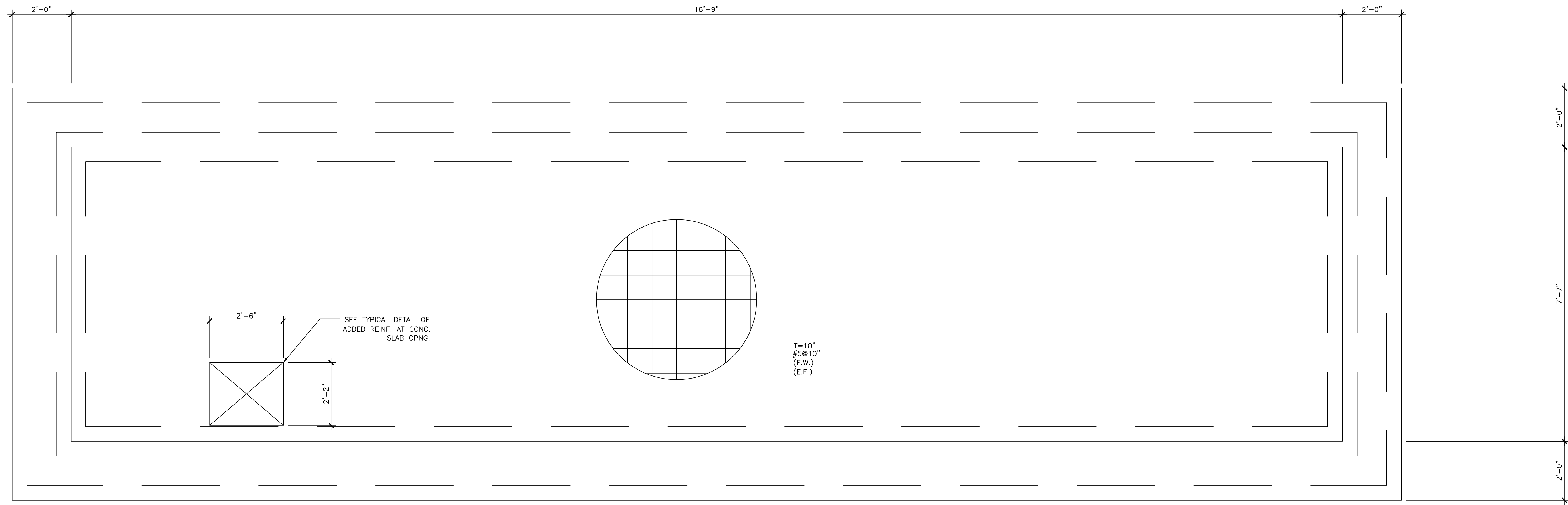
SYMBOL	BY	
	DATE	
R E V I S I O N S		

Sheet Title :
GENERAL NOTES

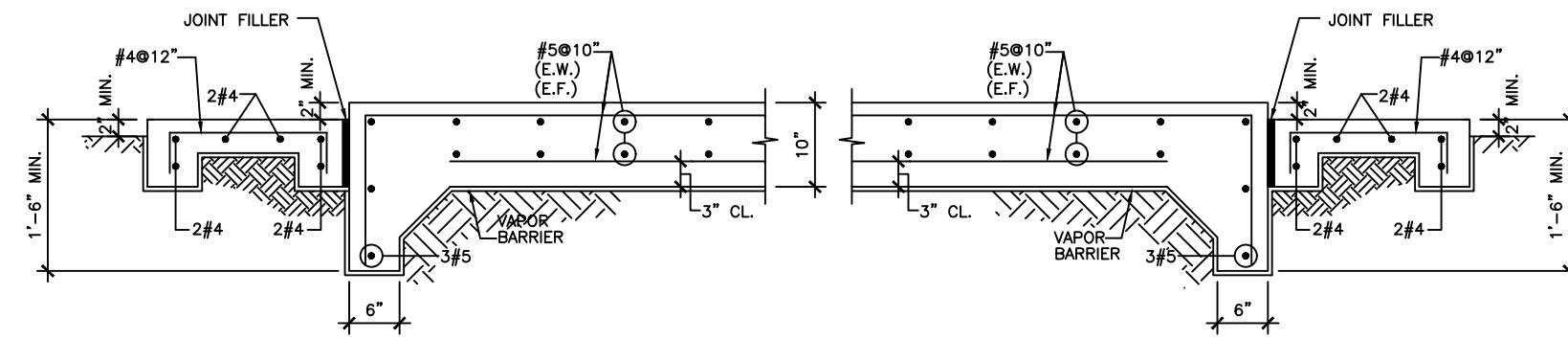


Project Name and Address
NEW 1,000 KW EMERGENCY GENERATOR
CENTRO JUDICIAL DE BAYANÓN
CARR. 2 KM. 10.4
ESQUINA CALLE ESTEBAN PADILLA,
BAYAMÓN, P.R.

STAMP:
 Date **OCTOBER/2023**
 Scale **INDICADA**
 Sheet **4/5**
 Sheet number **ES1.4**



ELECTRICAL GENERATOR STRUCTURAL PAD PLAN
SCALE: 1/2"=1'-0"



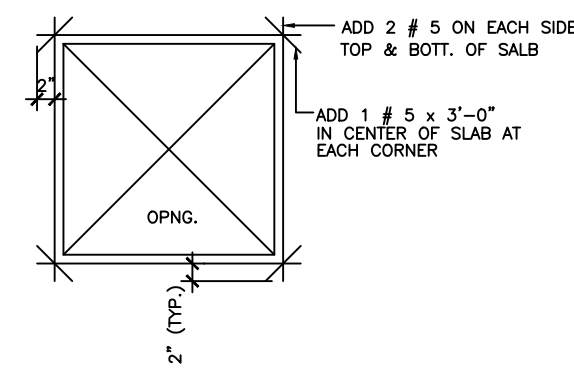
TYP. ELECTRICAL GENERATOR STRUCTURAL PAD
SCALE: 3/4"=1'-0"

NOTES:

FOR SLAB USE STRUCTURAL CONCRETE 28-DAYS STRENGTH 3500 PSI, TYPE HARDROCK AND W/C RATIO OF 0.60

LEGEND:

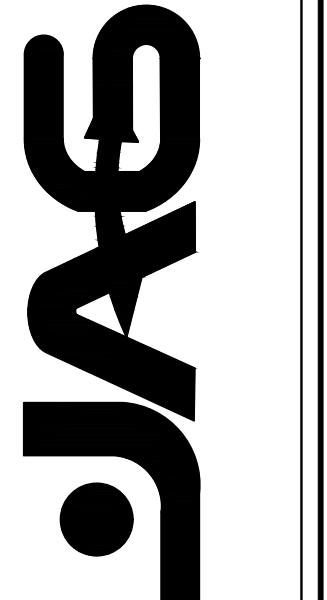
E.W. EACH WAY
E.F. EACH FACE



TYPICAL DETAIL OF ADDED REINF. AT CONC. SLAB OPNG.
SCALE: 3/4"=1'-0"

REVISIONS	DATE	BY

Sheet Title :
CONCRETE PAD DETAILS



Project Name and Address
NEW 1,000 KW EMERGENCY GENERATOR
CENTRO JUDICIAL DE BAYAMÓN
CARR. 2 KM. 10.4
ESQUINA CALLE ESTERAN PADILLA,
BAYAMÓN, P.R.

STAMP:
Date
OCTOBER/2023
Scale
INDICADA
Sheet
5/5
Sheet number
S1.1