

DRAWING INDEX	
SHEET NO.	CONTENTS
GENERAL	
E0-01	DRAWING INDEX, GENERAL NOTES, ABBREVIATIONS AND LEGEND & SYMBOLS
FLOOR PLAN - POWER LAYOUT	
E1-01	ELECTRICAL POWER LAYOUT
SCHEMATIC DIAGRAMS - ELECTRICAL SERVICES	
E2-01	POWER SINGLE LINE DIAGRAM & MOTOR CONTROL CENTER SCHEMATIC DIAGRAM
MISCELLANEOUS DETAILS	
E3-01	MISCELLANEOUS DETAILS 1
E3-02	ELECTRICAL LOAD SCHEDULE

**GENERAL NOTES:**

- GROUNDING INSTALLATION SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC) AND OTHER RELEVANT REFERENCES FOR ALL WIRING SYSTEMS. WIRINGS SHALL BE IN CONCEALED CONDUIT/ TRUNKING UNLESS OTHERWISE SPECIFIED.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL LOAD BALANCING AND LABELING OF ALL EQUIPMENT AND SWITCHBOARDS THROUGHOUT THE INSTALLATION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO LIAISE WITH THE LOCAL GOVERNMENT FOR ALL CLEARANCES, CABLE JOINTING, TESTING AND ELECTRICITY METERING FOR THE INSTALLATION.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING OF ALL CABLE/BUSDUCT PENETRATION OPENINGS BETWEEN FLOOR SLAB AND WALLS ETC. WITH APPROVED FIRE RATING MATERIAL/SEALANT.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE GROUND FAULT AND OVER CURRENT TRIPPING DISCRIMINATION BETWEEN THE SWITCHBOARD AND THE INCOMING FEEDER TO COMPLY WITH THE LOCAL POWER UTILITY COMPANY REQUIREMENTS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPOTENTIAL GROUNDING/ALL METAL PARTS COMPLETED BY THE OTHER NOMINATED TO THE NEAREST BONDING TO ELECTRICAL PANEL.
- THE GENERAL CONTRACTOR SHALL FURNISH ALL NECESSARY LABOUR/MATERIALS AND EQUIPMENT FOR SATISFACTORY COMPLETION OF THE ENTIRE ELECTRICAL INSTALLATION AS GENERALLY DESCRIBED IN THE SPECIFICATION AND/OR SHOWN ON DRAWINGS.
- ALL CONDUITS SHALL BE G.I. CONDUITS AND SHALL COMPLY WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE. ALL THREADS IN CONDUITS SHALL BE TREATED WITH ALUMINUM PAINT OR SIMILAR ANTI-RUST PAINT TO PREVENT CORROSION AT JOINTS AND PHASE SEGREGATION SHALL COMPLY WITH THE LATEST REQUIREMENTS OF THE PHILIPPINE ELECTRICAL CODE. SEPARATE CONTAINMENT SHALL BE USED FOR CABLES OF DIFFERENT CIRCUIT CATEGORIES.
- THE GENERAL CONTRACTOR SHALL LIAISE WITH OTHER NOMINATED GENERAL CONTRACTOR TO ENSURE THAT POWER SUPPLIES FOR ALL EQUIPMENT ARE ADEQUATELY PROVIDED TO SUIT THE SYSTEM REQUIREMENTS.
- THE GENERAL CONTRACTOR SHALL INCLUDE ALL NECESSARY INTERFACING FACILITIES TO ACHIEVE ALL THE MONITORING AND CONTROL FUNCTIONS AS DEFINED ELSE WHERE IN THE CONTRACT DOCUMENT.
- ALL DISCONNECT SWITCH FOR PUMPS (SANITARY, PLUMBING AND FIRE PROTECTION ; ETC.) MECHANICAL EQUIPMENT IN DAMP LOCATIONS SHALL BE METAL CLAD, NEMA 3R RATED, FOR PLANT ROOM, PROVIDE METAL CLAD, ANTI CORROSION, NEMA 3R RATED ISOLATOR DISCONNECT SWITCH.
- THE GENERAL CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEERS FOR PENETRATION THROUGH RC. BEAMS AND FLOOR SLABS PRIOR TO CONSTRUCTION.
- ALL CONDUITS LAYOUT AND INSTALLATION METHODS SHALL BE IDENTICAL IN ALL ROOMS AS MUCH AS POSSIBLE.
- MCCBs/MCBs IN THE MAIN SWITCHBOARDS, SUB-SWITCHBOARDS, PANELBOARDS SHOWN HEREIN OF THE TYPE SUITABLE FOR MOTOR PROTECTION INCORPORATING OVERLOAD AND SHORT CIRCUIT AND OTHER DRAWINGS PROTECTING MOTOR CIRCUITS FOR PUMPS, FANS, AHU'S, ETC. SHALL BE SO SELECTED SO THAT THEY ARE ABLE TO COORDINATE WITH BOTH THE UPSTREAM PROTECTIVE DEVICE (ALSO EARTH FAULT PROTECTION WHERE SHOWN IN THE DRAWINGS) AND DOWNSTREAM PROTECTION DEVICES.
- ALL PROTECTION CTs SHALL BE OF CLASS 5P10 15VA OR BETTER.
- ALL METERING CTs SHALL BE OF 15VA CLASS 0.3 OR BETTER.
- ALL ELECTRICAL BOARDS BUSBARS SHALL BE OF HARD DRAWN TINNED COPPER AND SHALL HAVE A CURRENT DENSITY OF NOT LESS THAN 1.55A/SQ.MM. WHEN MORE THAN ONE SET OF BUSBARS ARE USED PER PHASE. APPROPRIATE DERATING FACTOR SHALL APPLY.
- ALL NON-CURRENT CARRYING METALLIC PARTS OF THE DISTRIBUTION BOARDS SHALL BE BONDED TO SYSTEM GROUND.
- THERE SHALL BE A COMMON GROUND BAR IN EACH DISTRIBUTION BOARD.
- ALL ELECTRICAL EQUIPMENT AND ACCESSORIES THAT ARE EXPOSED TO WEATHER SHALL BE OF WEATHERPROOF TYPE TO NEMA 3R, UNLESS OTHERWISE STATED.
- THE GENERAL CONTRACTOR IS REQUIRED TO SUBMIT DETAILS OF FINAL ARRANGEMENT AND DIMENSIONAL LAYOUT OF ALL THE ITEMS OF EQUIPMENT IN RESPECTIVE ROOMS TO SUIT SITE CONDITIONS, ETC FOR REVIEW BY THE MEEPF CONSULTANTS BEFORE COMMENCEMENT OF INSTALLATION.
- THE GENERAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES THE LAYOUT OF THE CABLE CONTAINMENT/TRUNKING PRIOR TO INSTALLATION.

ABBREVIATIONS	
	DESCRIPTION OF ITEM
AWG	AMERICAN WIRE GAUGE
DP	DISTRIBUTION PANEL
DOT	DRAW-OUT TYPE
EE	ELECTRICAL
FR	FIRE RATED
GB	GROUND BUSBAR
IMC	INTERMEDIATE METALLIC CONDUIT
LVSG	LOW VOLTAGE SWITCHGEAR
MC	METAL CLAD
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MCS	MOULDED CASE SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
THHN	THERMOPLASTIC HEAT RESISTANT W/ NYLON
WP	WEATHER PROOF

LEGEND & SYMBOLS	
SYMBOLS	DESCRIPTION OF ITEM
POWER	
	POWER TRANSFORMER
	DIGITAL KWHR METER
	MOULDED CASE CIRCUIT BREAKER
	AIR CIRCUIT BREAKER (DRAW-OUT TYPE)
	VACUUM CIRCUIT BREAKER
	ELECTRICAL AND MECHANICAL INTERLOCK
	POWER CABLE TRAY
	DISCONNECT SWITCH
	GROUND BAR
	FOR LIGHTING EMBEDDED IN WALL/FLOOR
	FOR POWER EMBEDDED IN FLOOR/WALL
	CIRCUIT HOMERUN
	MAGNETIC STARTER
	ELECTRIC MOTOR BY OTHERS
	VSD - VARIABLE SPEED DRIVE

UNITED STATES EMBASSY  
MANILA, PHILIPPINES



FACILITIES MANAGEMENT

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DISCIPLINE	INITIAL	SIGNATURE	DATE
SFM	PLS		
DFM	RLW		
CIVIL/STRL			
ELECTL			
MECHL			

RevNo	Revision note	Date	Sign.

Project Title  
**US EMBASSY  
MAIN CHILLER  
PLANT ADDITION**

Location  
ROXAS BOULEVARD, PHILIPPINES

Release For Construction:  
FMM FMS

SHEET CONTENT  
**ELECTRICAL SERVICES  
DRAWING INDEX, GENERAL NOTES,  
ABBREVIATIONS, LEGEND & SYMBOLS**

Phase  
 CONCEPT  35%  60%  90%  100%  FINAL

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