

DRAWING LIST	
DRAWING NO.	TITLE
EE-E1-01	DRAWING LIST, SYMBOL AND ABBREVIATION
EE-E2-01	SINGLE LINE DIAGRAM FOR DB , RISER DIAGRAM
EE-E2-02	TELEPHONE ,DATA ,CCTV ,FIRE ALARM SYSTEM RISER DIAGRAM
EE-E2-03	LOAD SCHEDULE
EE-E3-01	LIGHTING, EMERGENCY LIGHT AND EXIT SIGN SYSTEM FOR ZONE A
EE-E3-02	LIGHTING, EMERGENCY LIGHT AND EXIT SIGN SYSTEM FOR ZONE B
EE-E4-01	RECEPTACLE,TELEPHONE,COMPUTER,AND MATV SYSTEM FOR ZONE A
EE-E4-02	RECEPTACLE,TELEPHONE,COMPUTER,AND MATV SYSTEM FOR ZONE B
EE-E5-01	FIRE ALARM ,ACCESS CONTROL ,SOUND AND CCTV SYSTEM FOR ZONE A
EE-E5-02	FIRE ALARM ,ACCESS CONTROL ,SOUND AND CCTV SYSTEM FOR ZONE B
EE-E6-01	TYPICAL DETAIL 1
EE-E6-02	TYPICAL DETAIL 2
EE-E6-03	TYPICAL DETAIL 3

INSTALLATION PROTECTION AND COORDINATION	
SYMBOLS	DESCRIPTION
	GROUND ROD, COPPER CLAD STEEL #5/8" x 3m.
	AIR TERMINAL, 60cm. HEIGHT
	TEST BOX
	INSPECTION PIT
	COPPER TAPE 25x3 mm.
	BALE COPPER TO Sq.mm. IN PVC 1"
	GROUND BAR
	EXOTHERMIC CONNECTION
	GROUNDING CONDUCTOR RUN TO GROUNDING SYSTEM

ACCESS CONTROL SYSTEM	
SYMBOLS	DESCRIPTION
	MAGNETIC DOOR STATUS
	ACCESS CONTROL POINT TYPE 1 (Stand alone)
	ACCESS CONTROL POINT TYPE 2 (Stand alone)
	Push button

GENERAL SYMBOLS	
SYMBOLS	DESCRIPTION
A	AMPERE
AF	FRAME SIZE OF CIRCUIT BREAKER IN AMPERE
AT	SETTING OF OVERLOAD TRIP OF CIRCUIT BREAKER IN AMPERE
CCP	CENTRAL CONTROL PANEL
CKT	CIRCUIT
DB	DISTRIBUTION BOARD
DEG. C	DEGREE CELSIUS
DA	DIAMETER
E OR EMT	ELECTRICAL METALLIC TUBING
F	FEEDER
FCU	FAN COIL UNIT
HV	HIGH VOLTAGE
I OR IMC	INTERMEDIATE METALLIC CONDUIT
IC	INTERRUPTING CAPACITY (BREAKING CAPACITY)
LC	LOAD CENTER
LB	LOAD BREAK SWITCH
LP	LOAD PANEL
LV	LOW VOLTAGE
MCC	MOTOR CONTROL CENTER
MDB	MAIN DISTRIBUTION BOARD
PP	POWER PANELBOARD
PBX	PRIVATE AUTOMATIC BRANCH EXCHANGE
PVC	RIGID PVC CONDUIT, THICK WALL TYPE
RSC	RIGID STEEL CONDUIT
TC	TERMINAL CABINET FOR TELEPHONE, SIGNAL, ETC.
V	VOLT
VA	VOLT-AMPERE
W	WATT
WP	WEATHERPROOF
*	PHASE

SWITCH	
SYMBOLS	DESCRIPTION
S, S	1 GANG SWITCH
2S, S	2 GANG SWITCH
nS, S	n GANG SWITCH (n > 2)
2S, S	2 WAY SWITCH
K	KEY-OPERATED SWITCH
DM	DIMMER SWITCH
SP	SWITCH AND PILOT LAMP
So, Sg	SWITCH FOR FIXTURE MARKED "o"
So-d, Sg-d	SWITCH FOR FIXTURE MARKED "o" TO "d"
	ALL OF SWITCH SHALL BE RATE ≥ 10 A.

CCTV SYSTEM	
SYMBOLS	DESCRIPTION
	DOME CAMERA
	COLOUR CAMERA, x = NUMBER OF CAMERA, y = NUMBER OF FLOOR
	COLOUR CAMERA WITH HOUSING (WATER PROOF)
	P/1/2 DOME COLOUR CAMERA
	DIGITAL VIDEO RECORDER BACKUP 15 DAY
	MULTIPLEXER/SWITCHER
D/N	DAY/NIGHT FUNCTION
WP	WATER PROOF HOUSING

TELEPHONE SYSTEM	
SYMBOLS	DESCRIPTION
	MAIN DISTRIBUTION FRAME
	PRIVATE EXCHANGE
	TELEPHONE TERMINAL BOX
	TELEPHONE OUTLET
	FLOOR TELEPHONE OUTLET
	THE 0.65-4C IN UPVC 1/2"
	n x THE 0.65-4C, n < 6 IN EMT 3/4", 6 < n < 10 IN EMT 1"

SYMBOLS & ABBREVIATION	
SYMBOLS	DESCRIPTION
	WIRING CONCEALED IN CEILING OR WALL
	WIRING CONCEALED IN FLOOR
	WIRING EXPOSED
	BRANCH CIRCUIT HOME RUN TO PANELBOARD,NUMBER OF ARROWS INDICATES NUMBER OF CIRCUIT
	3 WIRES
	n WIRES (n > 3) WIRING HAVE NO IDENTIFY MEANS 2 WIRES
	CONDUIT ONLY (EMPTY RACEWAY)
	WIRING TURNED UP
	WIRING TURNED DOWN
	CROSSING OF PATHS OR CONDUCTORS NOT CONNECTED (NOT NECESSARY AT EACH 90° ANGLE)
	JUNCTION OF CONNECTED PATHS, CONDUCTORS
	CABLE TERMINATION

FIRE ALARM	
SYMBOLS	DESCRIPTION
	FIRE ALARM CONTROL PANEL, MULTIPLEX SIGNAL LOOP, PRESIGNAL, NON-CODED, TWO-WAYS FIRE PHONE.
	GRAPHIC ANUNCIATOR PANEL FOR FIRE ALARM SYSTEM AND ANOTHER GAN PANEL FOR
	REMOVED MULTIPLEX (ADDRESSED MODULE) PANEL
	REMOTE FIRE ALARM/FIRE SUPERVISORY ANUNCIATOR PANEL
	REMOTE GRAPHIC PANEL
	ADDRESSABLE MONITOR MODULE
	ADDRESSABLE CONTROL MODULE
	ADDRESSABLE SUPERVISORY MONITOR MODULE
	ADDRESSABLE FLOW SWITCH MONITOR MODULE
	PHOTO-ELECTRIC (OPTICAL) SMOKE DETECTOR UNIT (ZONE UNIT)
	ADDRESSABLE PHOTO SMOKE DETECTOR
	ADDRESSABLE PHOTO SMOKE DETECTOR WITH SOUND BASE UNIT
	MANUAL FIRE ALARM PULL STATION AND KEY GENERAL ALARM
	ALARM BELL
	RATE-OF-RISE HEAT DETECTOR
	FIXED TEMPERATURE (200°F) HEAT DETECTOR
	ADDRESSABLE (SMART) HEAT DETECTOR
	ADDRESSABLE (SMART) HEAT DETECTOR WITH SOUND BASE UNIT
	NOTIFICATION ALARM SPEAKER UNIT
	NOTIFICATION STROBE (FLASHING) LIGHT UNIT
	FIRE PHONE COMMUNICATION JACK (SOCKET) STATION
	DUCT TYPE COMPLETE FLANGE AND SAMPLING TUBE PHOTO-ELECTRIC SMOKE DETECTOR
	DUCT SENSOR AND MAGNETIC DOOR HOLDER, UL-LISTED
	CENTER UNITS EMERGENCY LIGHT, x = CENTER UNITS EMERGENCY LIGHT NUMBER

MATV SYSTEM	
SYMBOLS	DESCRIPTION
	TV AND FM ANTENNA JACK
	SPLITTER 2 WAY
	SPLITTER 4 WAY
	TAP OFF 2 WAY
	TAP OFF 4 WAY
	SATELLITE DISH

RECEPTACLE	
SYMBOLS	DESCRIPTION
	SIMPLEX RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET (WATER PROOF)
	CEILING DUPLEX RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET WITH SAFETY SHUTTER
	HAND DRYER UNIT
	FLOOR SIMPLEX RECEPTACLE OUTLET
	FLOOR DUPLEX RECEPTACLE OUTLET
	LOUDSPEAKER OUTLET
	TIME RECORDER OUTLET
	EMERGENCY SIMPLEX RECEPTACLE OUTLET
	EMERGENCY DUPLEX RECEPTACLE OUTLET
	RECEPTACLE OUTLET FOR CORNER HOSE
	RECEPTACLE OUTLET FOR REFRIGERATOR
	RECEPTACLE OUTLET FOR WASHER-DRYER
	JUNCTION BOX ON FLOOR
	JUNCTION BOX FOR AUTOMATIC CURTAIN
	JUNCTION BOX FOR AIR CONDITIONER
	JUNCTION BOX FOR SENSOR SINKS
	JUNCTION BOX FOR WATER HEATER
	THERMOSTAT
	3P+N+E Power outlet 32A 400VAC
	3P+E Power outlet 20A 230VAC
	DUPLEX RECEPTACLE, TELEPHONE AND DATA OUTLET IN FLOOR BOX

SELECTING CLOCK	
SYMBOLS	DESCRIPTION
	MASTER CLOCK MAIN CONTROLLER
	SINGLE FACED SLAVE CLOCK, 310mm. SIZE, SURFACE MOUNTED
	DOUBLE FACED SLAVE CLOCK, 310mm. SIZE
	DC-TO-AC INVERTER
AP	ALARM POWER SUPPLY

SOUND	
SYMBOLS	DESCRIPTION
	PUBLIC ADDRESS AMPLIFIER
	SOUND DISTRIBUTION FRAME
	CEILING SPEAKER
	HORN SPEAKER
	VOLUME CONTROL
	MICROPHONE

DATA AND COMPUTER SYSTEM	
SYMBOLS	DESCRIPTION
	COMPUTER OUTLET (RJ45)
	CEILING COMPUTER OUTLET (RJ45)
	FLOOR COMPUTER OUTLET (RJ45)
	DATA RACK
	WIRELESS LAN ACCESS POINT
	WIRELESS LAN ACCESS POINT (CEILING)
	LAN SWITCH
	UTP CAT 6 IN EMT 1/2"
	n x UTP CAT 6, n < 3 IN EMT 3/4", 3 < n < 5 IN EMT 1"

LIGHTING	
SYMBOLS	DESCRIPTION
	1x RECESSED DOWNLIGHT FROSTED DIFFUSER
	2x RECESSED DOWNLIGHT FROSTED DIFFUSER
	1x RECESSED FLUORESCENT ACRYLIC DIFFUSER OPAL
	2x RECESSED FLUORESCENT ACRYLIC DIFFUSER OPAL
	1x RECESSED FLUORESCENT ACRYLIC DIFFUSER OPAL
	2x RECESSED FLUORESCENT ACRYLIC DIFFUSER OPAL
	RECESSED LINEAR LIGHT ACRYLIC DIFFUSER
	EMERGENCY LIGHT (SELF BATT) 2-50w.
	EXIT SIGN DOUBLE FACE LIGHTING WITH BATTERY BACKUP 2 Hrs.
	EXIT SIGN & SINGLE DIRECTION DOUBLE FACE LIGHTING WITH BATTERY BACKUP 2 Hrs.
	EXIT SIGN & DOUBLE DIRECTION DOUBLE FACE LIGHTING WITH BATTERY BACKUP 2 Hrs.
	EMERGENCY DOWNLIGHT
	CENTER UNITS EMERGENCY LIGHT, x = CENTER UNITS EMERGENCY LIGHT NUMBER

PANELBOARD, SWITCHGEAR & DEVICES	
SYMBOLS	DESCRIPTION
	FLUSH MOUNTED PANEL
	SURFACE MOUNTED PANEL
	DISTRIBUTION PANEL BOARD
	PANEL BOARD
	LIGHTING CONTROL PANEL (LCP)
	TELEPHONE CABINET
	DISCONNECTION SWITCH
	MOTOR CONTROLLER
	COMBINATION CONTROLLER DISCONNECTION SWITCH
	WYE-DELTA STARTER MOTOR CONTROLLER
	DIRECT-ON-LINE STARTER MOTOR CONTROLLER
	SHUNT CAPACITOR
	BATTERY
	THERMAL ELEMENT
	GROUND ROD
	GROUND BAR
	NORMALLY OPEN AUXILIARY CONTACT (NO.)
	NORMALLY CLOSE AUXILIARY CONTACT (NC.)
	TRANSFER SWITCH
	CONTACTOR CONTACT
	PUSH BUTTON NC.
	TIME-DELAY CONTACT
	FUSE
	CURRENT TRANSFORMER
	AMMETER
	VOLTMETER
	KILOWATT-HOUR METER
	VOLTMETER SELECTOR SWITCH
	AMMETER SELECTOR SWITCH
	GROUND-FAULT CIRCUIT INTERRUPTER IN LIGHTING PANEL
	GROUND-FAULT SENSOR AND RELAY USING WINDOW TYPE
	MONITOR COMPONENT OF GROUND-FAULT SENSOR
	SHUNT TRIP
	PILOT LAMP
	ASYMMETRICAL RELAY
	UNDERVOLTAGE RELAY
	CIRCUIT BREAKER (CB) 1P, 2P, 3P RESPECTIVE
	CIRCUIT BREAKER, DRAW OUT TYPE, MOTOR OPERATED
	SURGE ARRESTER

REVISION	
NO.	DESCRIPTION
1.	04/12/2563
2.	01/02/2564
3.	
4.	
5.	
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9.	

S2 all co.,ltd.

PROJECT :
โครงการพัฒนาระบบไฟฟ้า
พื้นที่ห้องประชุม 89
และพื้นที่ห้องประชุม 89
(ชั้น 8-9)

LOCATION :
สถานีขนส่งผู้โดยสารกรุงเทพ (จตุจักร)
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DRAWN : 999

CHECK : 999

JOB No : 999

DATE : 99/99/9999

SCALE : 1 : 100

SHOWING :
DRAWING LIST, SYMBOL
AND ABBREVIATION

EE-E1-01

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