

## ผนวก ง

### การกรอกรายละเอียดข้อมูลของอาคารในโปรแกรม DOE2

ผนวก ง เป็นการแสดงรายละเอียดข้อมูลนำเข้า (input) ของอาคาร จากการติดตั้งแบบ  
 บังแดดรูปแบบพื้นฐานรูปแบบที่ 1 (overhang) ภายนอกอาคารที่ตำแหน่งช่องแสงด้านข้าง  
 ส่วนบน ซึ่งมีรายละเอียดดังนี้

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| INPUT LOADS                                  | SHEET-METAL =MATERIAL                       |
| INPUT-UNITS = ENGLISH                        | THICKNESS = 0.0050                          |
| OUTPUT-UNITS = ENGLISH ..                    | CONDUCTIVITY = 26                           |
| TITLE LINE-1 *SUCHART ANANSIRIVATTANA*       | DENSITY = 480                               |
| LINE-2 *SIMPLE BUILDING*                     | SPECIFIC-HEAT= 0.10 ..                      |
| LINE-3 *BANGKOK, THAILAND* ..                | CONCRETE-FLOOR =MATERIAL                    |
| RUN-PERIOD JAN 1 1999 THRU DEC 31 1999 ..    | THICKNESS = 0.5                             |
| ABORT ERRORS ..                              | CONDUCTIVITY = 1.0417                       |
| DIAGNOSTIC WARNINGS ..                       | DENSITY = 140.0                             |
| LOADS-REPORT SUMMARY= (ALL-SUMMARY)          | SPECIFIC-HEAT= 0.2 ..                       |
| VERIFICATION= (LV-A) ..                      | GYPSUM-BOARD =MATERIAL                      |
| BUILDING-LOCATION LATITUDE= 13.9             | THICKNESS = 0.0417                          |
| LONGITUDE= -100.6                            | CONDUCTIVITY = 0.0926                       |
| ALTITUDE= 39 TIME-ZONE= -7                   | DENSITY = 50                                |
| HOLIDAY= NO                                  | SPECIFIC-HEAT= 0.2 ..                       |
| GROSS-AREA= 17222 AZIMUTH= 0.0               | WA-1 = LAYERS MATERIAL= (BRICK-WALL)        |
| DAYLIGHT-SAVINGS= NO                         | INSIDE-FILM-RES = 0.68 ..                   |
| GROUND-T = (82.3,82.6,85.5,85.7,85.9,85.6    | RF-1 = LAYERS MATERIAL= (SHEET-METAL,IN72)  |
| ,85.3,84.9,85.1,83.8,82.6,78.9)              | INSIDE-FILM-RES = 0.62 ..                   |
| SURF-TEMP-CALC = NO ..                       | FL-1 = LAYERS MATERIAL= (CONCRETE-FLOOR)    |
| \$ CONSTRUCTION                              | INSIDE-FILM-RES = 0.92 ..                   |
| \$ WALLS: 4-INCH BRICK WALLS & CEMENT MORTAR | CL-1 = LAYERS MATERIAL= (AL33,GYPSUM-BOARD) |
| SURFACE                                      | INSIDE-FILM-RES = 0.92 ..                   |
| \$ ROOF : SHEET METAL WITH INSULATION        |                                             |
| \$ FLOOR: 6-INCH HEAVY WEIGHT CONCRETE       | WALL-1 =CONSTRUCTION LAYERS=WA-1            |
| SLAB-ON-GRADE                                | ABSORPTANCE=0.90 ..                         |
| \$ CEILING: 1/2-INCH GYPSUM BOARD            | ROOF-1 =CONSTRUCTION LAYERS=RF-1            |
| \$ DOORS & WINDOWS: DOUBLE-PANE CLEAR GLASS  | ABSORPTANCE=0.30 ..                         |
| (U=0.5)                                      | FLOOR =CONSTRUCTION LAYERS=FL-1             |
| BRICK-WALL =MATERIAL                         | ABSORPTANCE=0.90 ..                         |
| THICKNESS = 0.34                             | CEIL-1 =CONSTRUCTION LAYERS=CL-1            |
| CONDUCTIVITY = 0.4167                        | ABSORPTANCE=0.90 ..                         |
| DENSITY = 120.0                              | W-1 =GLASS-TYPE PANES=2                     |
| SPECIFIC-HEAT= 0.2 ..                        | SHADING-COEF= 0.91                          |

GLASS-CONDUCTANCE=0.574 ..

\$ OCCUPANCY SCHEDULE

OC-1 =DAY-SCHEDULE (1,8)(0.0)(9,12)(1.0)  
(13,17)(1.0)(18,24)(0.0) ..

OC-2 =DAY-SCHEDULE (1,8)(0.0)(9,12)(0.0)  
(13,17)(0.0)(18,24)(0.0) ..

OC-WEEK =WEEK-SCHEDULE (WD) OC-1 (WEH) OC-2 ..

OCCUPY-1 =SCHEDULE THRU DEC 31 OC-WEEK ..

\$ LIGHTING SCHEDULE

LT-1 =DAY-SCHEDULE (1,8)(0.05)(9,12)(1.0)  
(13,17)(1.0)(18,24)(0.05) ..

LT-2 =DAY-SCHEDULE (1,8)(0.05)(9,12)(0.05)  
(13,17)(0.05)(18,24)(0.05) ..

LT-WEEK =WEEK-SCHEDULE (WD) LT-1 (WEH) LT-2 ..

LIGHTS-1 =SCHEDULE THRU DEC 31 LT-WEEK ..

\$ EQUIPMENT SCHEDULE

EQ-1 =DAY-SCHEDULE (1,8)(0.02)(9,12)(1.0)  
(13,17)(1.0)(18,24)(0.02) ..

EQ-2 =DAY-SCHEDULE (1,8)(0.02)(9,12)(0.02)  
(13,17)(0.02)(18,24)(0.02) ..

EQ-WEEK =WEEK-SCHEDULE (WD) EQ-1 (WEH) EQ-2 ..

EQUIP-1 =SCHEDULE THRU DEC 31 EQ-WEEK ..

\$ INFILTRATION SCHEDULE

ALLVENT-T =SCHEDULE THRU DEC 31 (ALL)  
(1,24)(1) ..

NOVENT-T =SCHEDULE THRU DEC 31 (ALL)  
(1,24)(0) ..

DAY-WD =DAY-SCHEDULE (1,8)(0.0)(9,12)(1.0)  
(13,17)(1.0)(18,24)(0.0) ..

DAY-WE =DAY-SCHEDULE (1,8)(0.0)(9,12)(0.0)  
(13,17)(0.0)(18,24)(0.0) ..

DAY-WK =WEEK-SCHEDULE (WD) DAY-WD (WEH)  
DAY-WE ..

DAYVENT-T =SCHEDULE THRU DEC 31 DAY-WK ..

NIGHTVENT-T =SCHEDULE THRU DEC 31 (ALL)  
(1,5)(1)(6,18)(0) (19,24) (1) ..

\$ SET DEFAULT VALUES

SET-DEFAULT FOR SPACE FLOOR-WEIGHT=0 ..

\$ GENERAL SPACE DEFINITION

OFFICE =SPACE-CONDITIONS

TEMPERATURE =(72)

PEOPLE-SCHEDULE =OCCUPY-1

PEOPLE-HEAT-GAIN =400

LIGHTING-SCHEDULE =LIGHTS-1

LIGHTING-TYPE =REC-FLUOR-NV

LIGHT-TO-SPACE =1.0

LIGHTING-W/SQFT =1.5

EQUIP-SCHEDULE =EQUIP-1

EQUIPMENT-W/SQFT =2.0

INF-METHOD =AIR-CHANGE

INF-SCHEDULE =ALLVENT-T

AIR-CHANGES/HR =0.5 ..

## \$ SPECIFIC SPACE DETAILS

### \$ 1st FLOOR OFFICE

OFFICE-1 =SPACE SPACE-CONDITIONS= OFFICE

AREA=17222 VOLUME=1001878

SHAPE=BOX HEIGHT=63

WIDTH=132 DEPTH=132

NUMBER-OF-PEOPLE=10 ..

FRONT1-1 =EXTERIOR-WALL AZIMUTH=180

HEIGHT=57 WIDTH=132

X=-26 Y=-26 Z=0

CONSTRUCTION=WALL-1 ..

FRONT1-2 =INTERIOR-WALL AZIMUTH=180

HEIGHT=57 WIDTH=79

X=0 Y=0 Z=0

INT-WALL-TYPE=STANDARD NEXT-TO OFFICE-1

CONSTRUCTION=WALL-1 ..

RIGHT1-1 =EXTERIOR-WALL AZIMUTH=90

HEIGHT=57 WIDTH=132

X=105 Y=-26 Z=0

CONSTRUCTION=WALL-1 ..

RIGHT1-2 =INTERIOR-WALL AZIMUTH=90

HEIGHT=57 WIDTH=79

X=79 Y=0 Z=0

INT-WALL-TYPE=STANDARD NEXT-TO

OFFICE-1

CONSTRUCTION=WALL-1 ..

BACK1-1 =EXTERIOR-WALL AZIMUTH=0

HEIGHT=57 WIDTH=132

X=105 Y=105 Z=0

CONSTRUCTION=WALL-1 ..

BACK1-2 =INTERIOR-WALL AZIMUTH=0

HEIGHT=57 WIDTH=79

X=79 Y=79 Z=0

INT-WALL-TYPE=STANDARD NEXT-TO OFFICE-1

CONSTRUCTION=WALL-1 ..

LEFT1-1 =EXTERIOR-WALL AZIMUTH=270

|                                          |                            |
|------------------------------------------|----------------------------|
| HEIGHT=57 WIDTH=132                      | HEIGHT=79 WIDTH=79         |
| X=-26 Y=105 Z=0                          | X=0 Y=79 Z=63              |
| CONSTRUCTION=WALL-1 ..                   | CONSTRUCTION=ROOF-1 ..     |
| LEFT1-2 =INTERIOR-WALL AZIMUTH=270       | FLOOR-2 =UNDERGROUND-FLOOR |
| HEIGHT=57 WIDTH=79                       | AREA =6200                 |
| X=0 Y=79 Z=0                             | CONSTRUCTION=FLOOR ..      |
| INT-WALL-TYPE=STANDARD NEXT-TO OFFICE-1  | CARPORT-1 = BUILDING-SHADE |
| CONSTRUCTION=WALL-1 ..                   | AZIMUTH= 0.0 TILT=0.0      |
| FLOOR-1 =UNDERGROUND-FLOOR               | HEIGHT=8.43 WIDTH=105.5    |
| AREA =17222                              | TRANSMITTANCE=0.0          |
| CONSTRUCTION=FLOOR ..                    | X=92.25 Y=0 Z=63 ..        |
| \$ 2nd FLOOR OFFICE                      | CARPORT-2 = BUILDING-SHADE |
|                                          | AZIMUTH= 0.0 TILT=0.0      |
| OFFICE-2 =SPACE SPACE-CONDITIONS= OFFICE | HEIGHT=26.24 WIDTH=131.48  |
| AREA=6200 VOLUME=37200                   | TRANSMITTANCE=0.0          |
| SHAPE=BOX HEIGHT=6                       | X=105.5 Y=0 Z=57 ..        |
| WIDTH=79 DEPTH=79                        | CARPORT-3 = BUILDING-SHADE |
| NUMBER-OF-PEOPLE=10 ..                   | AZIMUTH= 0.0 TILT=0.0      |
| FRONT-2 =EXTERIOR-WALL AZIMUTH=180       | HEIGHT=3 WIDTH=105.5       |
| HEIGHT=7 WIDTH=79                        | TRANSMITTANCE=0.0          |
| X=0 Y=0 Z=57                             | X=92.25 Y=82 Z=63 ..       |
| CONSTRUCTION=WALL-1 ..                   | CARPORT-4 = BUILDING-SHADE |
| WF-2 =WINDOW WIDTH=79 HEIGHT=6           | AZIMUTH= 0.0 TILT=0.0      |
| X=0 Y=0                                  | HEIGHT=26.24 WIDTH=131.48  |
| SETBACK=0.0 GLASS-TYPE = W-1 ..          | TRANSMITTANCE=0.0          |
| RIGHT-2 =EXTERIOR-WALL AZIMUTH=90        | X=105.5 Y=105.24 Z=57 ..   |
| HEIGHT=7 WIDTH=79                        | CARPORT-5 = BUILDING-SHADE |
| X=79 Y=0 Z=57                            | AZIMUTH= 0.0 TILT=0.0      |
| CONSTRUCTION=WALL-1 ..                   | HEIGHT=79 WIDTH=13.25      |
| WR-2 =WINDOW WIDTH=79 HEIGHT=6           | TRANSMITTANCE=0.0          |
| X=0 Y=0                                  | X=0 Y=79 Z=63 ..           |
| SETBACK=0.0 GLASS-TYPE = W-1 ..          | CARPORT-6 = BUILDING-SHADE |
| BACK-2 =EXTERIOR-WALL AZIMUTH=0          | AZIMUTH= 0.0 TILT=0.0      |
| HEIGHT=7 WIDTH=79                        | HEIGHT=79 WIDTH=26.24      |
| X=79 Y=79 Z=57                           | TRANSMITTANCE=0.0          |
| CONSTRUCTION=WALL-1 ..                   | X=0 Y=79 Z=57 ..           |
| WB-2 =WINDOW WIDTH=79 HEIGHT=6           | CARPORT-7 = BUILDING-SHADE |
| X=0 Y=0                                  | AZIMUTH= 0.0 TILT=0.0      |
| SETBACK=0.0 GLASS-TYPE = W-1 ..          | HEIGHT=79 WIDTH=13.25      |
| LEFT-2 =EXTERIOR-WALL AZIMUTH=270        | TRANSMITTANCE=0.0          |
| HEIGHT=7 WIDTH=79                        | X=92.25 Y=79 Z=63 ..       |
| X=0 Y=79 Z=57                            | CARPORT-8 = BUILDING-SHADE |
| CONSTRUCTION=WALL-1 ..                   | AZIMUTH= 0.0 TILT=0.0      |
| WL-2 =WINDOW WIDTH=79 HEIGHT=6           | HEIGHT=79 WIDTH=26.24      |
| X=0 Y=0                                  | TRANSMITTANCE=0.0          |
| SETBACK=0.0 GLASS-TYPE = W-1 ..          | X=105.24 Y=79 Z=57 ..      |
| FLATROOF= ROOF AZIMUTH=270 TILT=0        | END ..                     |

COMPUTE LOADS ..

INPUT SYSTEMS ..

SYSTEMS-REPORT SUMMARY=(SS-A) ..

\$ SCHEDULES

HEAT-1 =SCHEDULE THRU DEC 31 (ALL) (1,24) (45) ..

COOL-1 =SCHEDULE THRU DEC 31 (ALL) (1,24) (78) ..

..

NOVENT-1=SCHEDULE THRU DEC 31 (ALL) (1,24)(0) ..

DAYVENT-1=SCHEDULE THRU DEC 31 (ALL) (1,5)(0)  
(6,18)(1) (19,24) (0) ..

NIGHTVENT-2=SCHEDULE THRU DEC 31 (ALL) (1,5)(1)  
(6,18)(0) (19,24) (1) ..

\$ ZONE DATA

OFFICE-1 =ZONE DESIGN-HEAT-T=50

DESIGN-COOL-T=100

ZONE-TYPE=CONDITIONED

THERMOSTAT-TYPE=TWO-POSITION

HEAT-TEMP-SCH=HEAT-1

COOL-TEMP-SCH=COOL-1 ..

OFFICE-2 =ZONE LIKE OFFICE-1 ..

\$ AIR CONDITIONER

SYS-1 =SYSTEM SYSTEM-TYPE=RESYS

ZONE-NAMES=(OFFICE-1, OFFICE-2)

MAX-SUPPLY-T=140 MIN-SUPPLY-T=50

NATURAL-VENT-AC=100

NATURAL-VENT-SCH=NOVENT-1 ..

PLANT-1 =PLANT-ASSIGNMENT SYSTEM-NAMES=(SYS-1) ..

\$ SYSTEM HOURLY REPORT

HR-SCH-1 =SCHEDULE THRU DEC 31 (ALL) (1,24) (1) ..

HR-SCH-2 =SCHEDULE THRU JAN 16 (ALL) (1,24) (0)

THRU JAN 22 (ALL) (1,24) (1)

THRU DEC 31 (ALL) (1,24) (0) ..

SRB-1 =REPORT-BLOCK VARIABLE-TYPE= OFFICE-1

VARIABLE-LIST=(6,9,31,8,91,92) ..

\$ zone temp, thermal conductance

\$ avg temp, total zone cooling energy input

\$ MRT, OT

\$ SYS-REP-1 =HOURLY-REPORT REPORT-

SCHEDULE=HR-SCH-1

\$ REPORT-BLOCK=(SRB-1) ..

END ..

COMPUTE SYSTEMS ..

STOP ..