

**APPENDIX J. SAMPLE BLAST INPUT FILE**

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## APPENDIX J. SAMPLE BLAST INPUT FILE

### J.1 SAMPLE BLAST INPUT FILE

```
** THIS RUN'S SETTINGS:
** run_ID = 1012_DTW_2, wban_number = 94847, city = DETROIT_MI, bldg_type = ret,
sqft_scale = 30000, floors_scale = 2, WWR = 0.200000003, aspect_ratio_scale =
1.5, wall_const_fyi = Masonry, roof_R_fyi = 19, roof_U = 0.050999999, wall_R_fyi
= 11, wall_U = 0.079000004, fens_SC = 0.479999989, fens_U = 0.59, schedule_name
= RET_MFS, months_oper = 12, light_power = 1.879999995, equip_power =
0.400000006, people_dens = 2.221999884, vent_peak = 0.25, infiltration =
0.037999999, activity_level = 0.425000012, econ = Yes, econ_type = Enth, heat_SPT
= 70, cool_SPT = 75, setback_T = 60, setup_T = 85, econ_hi_limit = 70,
base_fan_esp = 0.75, fan_power_ratio = 0.109999999, run_type = design, roof_type
= builtup, wall_type = mass, EER = 8.899999619, over_sizing_factor = 1.129456997,
pct_cooled_scale = 75, pct_pkgd_cooling_scale = 75
```

```
**
```

```
BEGIN INPUT;
  RUN CONTROL:
    NEW ZONES,
    NEW AIR SYSTEMS,
    PLANT,
```

```
*****
```

```
** Comment out the following block when running an annual run
**   DESIGN SYSTEM,   ** DESIGN ONLY   COMMENTED OUT FOR ANNUAL RUN
```

```
*****
```

```
  DESIGN PLANT,
  REPORTS(SYSTEM LOADS,COIL LOADS,ZONE LOADS,PLANT LOADS,HUMIDITY REPORT,
    AHS Usage Summary, Energy Utilization),
  UNITS(IN=ENGLISH, OUT=ENGLISH);
  TEMPORARY MATERIALS:
```

```
** Use Function to calculate wall properties from U-Value and HC
```

```
  WI-MAT = (L=0.5727,K=0.0530,D=6.0,CP=0.200,ABS=0.7,
    TABS=0.900,ROUGH);
  RI-MAT = (L=0.4652,K=0.0265,D=6.0,CP=0.200,ABS=0.7,
    TABS=0.900,ROUGH);
```

```
SL-INS = (L=0.0001,K=0.0010,D=1.8,CP=0.290,ABS=0.75,  
          TABS=0.900,ROUGH);  
GLSS = (R=0.8449,SC=0.479999989,VERY SMOOTH,GLASS);
```

```
** NOTE, EFFECTIVE SLAB INSULATION LEVELS ARE USED IN THE PERIMETER ZONES OF THE  
MODEL
```

```
** OF DIRT.
```

```
** PROPERTIES OF DIRT FROM FUNDAMENTALS '93
```

```
** ASSUME 1 FT OF DIRT, CONDUCTIVITY AS THE AVERAGE OF ALL HIGH/LOW SOILS
```

```
** CP BASED ON TYPICAL SPECIFIC HEATS OF MASONRY-TYPE MATERIALS
```

```
** OTHER MATERIALS
```

```
ADIABATIC
```

```
= (L=0.100,K=0.0001,D=1.8,CP=0.290,ABS=0.75,  
   TABS=0.900,ROUGH);
```

```
DIRT
```

```
= (L=1.000,K=0.9250,D=100.0,CP=0.20,ROUGH);
```

```
GP02
```

```
= (L=0.0521,K=0.0926,D=50.0,CP=0.200,ABS=0.5,  
   TABS=0.900,ROUGH);
```

```
PW04
```

```
= (L=0.0521,K=0.0667,D=34.0,CP=0.290,ABS=0.75,  
   TABS=0.900,ROUGH);
```

```
BR01
```

```
= (L=0.0313,K=0.0939,D=70.0,CP=0.350,ABS=0.50,  
   TABS=0.900,ROUGH);
```

```
BK05
```

```
= (L=0.333,K=0.7576,D=130.0,CP=0.220,ABS=0.88,  
   TABS=0.900,ROUGH);
```

```
PW05
```

```
= (L=0.0625,K=0.0667,D=34.0,CP=0.290,ABS=0.75,  
   TABS=0.900,ROUGH);
```

```
CC23
```

```
= (L=0.1667,K=0.2083,D=80.0,CP=0.200,ABS=0.4,  
   TABS=0.900,ROUGH);
```

```
CP02
```

```
= (R=1.230,ABS=0.25,TABS=0.900,ROUGH);
```

```
CC14
```

```
= (L=0.3300,K=1.0417,D=140.0,CP=0.200,ABS=0.25,  
   TABS=0.900,ROUGH);
```

```
AL21
```

```
= (R=0.890,AIR);
```

```
AL500
```

```
= (R=0.297,ABS=0.75,TABS=0.900,ROUGH);
```

```
AC02
```

```
= (L=0.0402,K=0.0330,D=18.0,CP=0.320,ABS=0.5,  
   TABS=0.900,ROUGH);
```

```
AS01
```

```
= (L=0.005,K=26.0,D=120.0,CP=0.10,ABS=0.5,  
   TABS=0.900,ROUGH);
```

```

END;
    TEMPORARY WALLS:
        EXTWALLL
            = (GP02 ,
              WI-MAT ,
              BK05);

** This is the original partitions based on non-adiabatic walls
**
** PARTITIONL
**     = (GP02 ,
**       AL21 ,
**       GP02);
** HALFPARTL
**     = (GP02 ,
**       AL21);
** PARTITIONAL
**     = (GP02,
**       AL21);
** AIRWALL
**     = (AL500 ,
**       AL500 ,
**       AL500);

** This is the partitions that dwv modified to make the walls adiabatic
**
** PARTITIONL
**     = (GP02 ,
**       AL21 ,
**       ADIABATIC,
**       GP02);
** HALFPARTL
**     = (GP02 ,
**       ADIABATIC,
**       AL21);
** PARTITIONAL
**     = (GP02,
**       ADIABATIC,
**       AL21);
** AIRWALL
**     = (AL500 ,
**       ADIABATIC,
**       AL500 ,
**       AL500);
END;
    TEMPORARY ROOFS:
    EXTROOFL
        = (RI-MAT ,
          PW05 ,
          BR01);

    CEIL
        = (CC23 ,
          CP02 ,

```

```

        AC02);
END;
TEMPORARY FLOORS:
  PLNFLOORL
    = (AC02 ,
       CP02,
       CC23);
  SLABL_P
    = (CP02 ,
       CC14 ,
       SL-INS,
       DIRT);
  SLABL_C
    = (CP02 ,
       CC14 ,
       ADIABATIC,
       DIRT);
  PLNFLOOR
    = (AC02 ,
       CP02 ,
       CC23);
END;
TEMPORARY WINDOWS:
  FENTS
    = (GLSS);
END;

```

```

** set up perimeter and core People, Lights, Equip
* This file contains the Peaks required for the BLAST simulation
* The BLAST input deck is defined in the EPActPrelim.tpl file

* Generated by Srinivas Katipamula on Nov. 22nd based on previous versions
* of peaks.logic

```

```

** set up temporary schedules for internal loads, service hot water, and hvac
system operation

```

```

TEMPORARY SCHEDULE(LIGHT):
MONDAY THRU FRIDAY = (0.18,0.18,0.18,0.18,0.18,0.18,0.18,0.18,
                    0.18,0.32,0.61,1.00,1.00,1.00,1.00,1.00,
                    1.00,1.00,1.00,0.71,0.32,0.32,0.32,0.18) ,
SATURDAY = (0.18,0.18,0.18,0.18,0.18,0.18,0.18,0.18,
            0.18,0.32,0.61,1.00,1.00,1.00,1.00,1.00,
            1.00,1.00,1.00,0.71,0.32,0.32,0.32,0.18) ,
SUNDAY = (0.11,0.11,0.11,0.11,0.11,0.11,0.11,0.11,
          0.11,0.11,0.13,0.26,0.35,0.35,0.35,0.35,
          0.35,0.26,0.17,0.11,0.11,0.11,0.11,0.11) ,
HOLIDAY=SUNDAY;
END;

```

```

TEMPORARY SCHEDULE(EQUIP) :
MONDAY THRU FRIDAY = (0.25,0.25,0.25,0.25,0.25,0.25,0.25,0.25,
                      0.25,0.38,0.65,1.00,1.00,1.00,1.00,1.00,
                      1.00,1.00,1.00,0.74,0.38,0.38,0.38,0.25) ,
SATURDAY = (0.25,0.25,0.25,0.25,0.25,0.25,0.25,0.25,
            0.25,0.38,0.65,1.00,1.00,1.00,1.00,1.00,
            1.00,1.00,1.00,0.74,0.38,0.38,0.38,0.25) ,
SUNDAY = (0.25,0.25,0.25,0.25,0.25,0.25,0.25,0.25,
          0.25,0.25,0.28,0.47,0.60,0.60,0.60,0.60,
          0.60,0.47,0.35,0.25,0.25,0.25,0.25,0.25) ,
HOLIDAY=SUNDAY;
END;

TEMPORARY SCHEDULE(OCCUP) :
MONDAY THRU FRIDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,
                      0.00,0.13,0.25,0.63,0.88,0.88,0.88,0.88,
                      1.00,0.88,0.63,0.63,0.13,0.13,0.13,0.00) ,
SATURDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,
            0.00,0.13,0.25,0.63,0.88,0.88,0.88,0.88,
            1.00,0.88,0.63,0.63,0.13,0.13,0.13,0.00) ,
SUNDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,
          0.00,0.00,0.05,0.09,0.18,0.18,0.18,0.18,
          0.18,0.09,0.05,0.00,0.00,0.00,0.00,0.00) ,
HOLIDAY=SUNDAY;
END;

TEMPORARY SCHEDULE(FANSCH) :
MONDAY THRU FRIDAY = (0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                      0.0,0.0,1.0,1.0,1.0,1.0,1.0,1.0,
                      1.0,1.0,1.0,1.0,0.0,0.0,0.0,0.0) ,
SATURDAY = (0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
            0.0,0.0,1.0,1.0,1.0,1.0,1.0,1.0,
            1.0,1.0,1.0,1.0,0.0,0.0,0.0,0.0) ,
SUNDAY = (0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
          0.0,0.0,0.0,0.0,1.0,1.0,1.0,1.0,
          1.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0) ,
HOLIDAY=SATURDAY;
END;

TEMPORARY SCHEDULE(INFILTRATION) :
MONDAY THRU FRIDAY = (1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,
                      1.0,1.0,0.0,0.0,0.0,0.0,0.0,0.0,
                      0.0,0.0,0.0,0.0,1.0,1.0,1.0,1.0) ,
SATURDAY = (1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,
            1.0,1.0,0.0,0.0,0.0,0.0,0.0,0.0,
            0.0,0.0,0.0,0.0,1.0,1.0,1.0,1.0) ,
SUNDAY = (1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0,
          1.0,1.0,1.0,1.0,0.0,0.0,0.0,0.0,
          0.0,1.0,1.0,1.0,1.0,1.0,1.0,1.0) ,
HOLIDAY=SATURDAY;
END;

TEMPORARY SCHEDULE(MINVENT) :
MONDAY THRU FRIDAY = (0,0,0,0,

```

```

                                0,0,0,0,
                                0,0,0,0,
                                0,0,0,0,
                                0,0,0,0,
                                0,0,0,0) ,
SATURDAY = (0,0,0,0,
            0,0,0,0,
            0,0,0,0,
            0,0,0,0,
            0,0,0,0,
            0,0,0,0) ,
SUNDAY = (0,0,0,0,0,
          0,0,0,0,0,
          0,0,0,0,0,
          0,0,0,0,0,
          0,0,0,0,0,
          0,0,0,0) ,
HOLIDAY=SATURDAY;
END;
TEMPORARY SCHEDULE(MAXVENT) :
MONDAY THRU FRIDAY = (0,0,0,0,0,
                     0,0,0,0,0,
                     0,0,1,1,1,
                     1,1,1,1,1,
                     1,1,1,1,1,
                     0,0,0,0,0) ,
SATURDAY = (0,0,0,0,0,
            0,0,0,0,0,
            0,0,1,1,1,
            1,1,1,1,1,
            1,1,1,1,1,
            0,0,0,0,0) ,
SUNDAY = (0,0,0,0,0,0,
          0,0,0,0,0,
          0,0,0,0,0,
          1,1,1,1,1,
          1,0,0,0,0,
          0,0,0,0,0) ,
HOLIDAY=SATURDAY;
END;
TEMPORARY CONTROLS(SET POINT) :
    PROFILES:
DBT=(1.000 AT 70, 0 AT 70, 0 AT 75, -1.000 AT 75);
SBK=(1.000 AT 60, 0 AT 60, 0 AT 85, -1.000 AT 85);
RMP=(1.000 AT 65, 0 AT 65, 0 AT 80, -1.000 AT 80);
    SCHEDULES:
MONDAY THRU FRIDAY= (0 TO 1-SBK,1 TO 2-SBK,2 TO 3-SBK,3 TO 4-SBK,
                    4 TO 5-SBK,5 TO 6-SBK,6 TO 7-SBK,7 TO 8-SBK,
                    8 TO 9-SBK,9 TO 10-RMP,10 TO 11-DBT,11 TO 12-DBT,
                    12 TO 13-DBT,13 TO 14-DBT,14 TO 15-DBT,15 TO 16-DBT,
                    16 TO 17-DBT,17 TO 18-DBT,18 TO 19-DBT,19 TO 20-DBT,
                    20 TO 21-SBK,21 TO 22-SBK,22 TO 23-SBK,23 TO 24-SBK) ,

```

```

SATURDAY= (0 TO 1-SBK,1 TO 2-SBK,2 TO 3-SBK,3 TO 4-SBK,
4 TO 5-SBK,5 TO 6-SBK,6 TO 7-SBK,7 TO 8-SBK,
8 TO 9-SBK,9 TO 10-RMP,10 TO 11-DBT,11 TO 12-DBT,
12 TO 13-DBT,13 TO 14-DBT,14 TO 15-DBT,15 TO 16-DBT,
16 TO 17-DBT,17 TO 18-DBT,18 TO 19-DBT,19 TO 20-DBT,
20 TO 21-SBK,21 TO 22-SBK,22 TO 23-SBK,23 TO 24-SBK),
SUNDAY= (0 TO 1-SBK,1 TO 2-SBK,2 TO 3-SBK,3 TO 4-SBK,
4 TO 5-SBK,5 TO 6-SBK,6 TO 7-SBK,7 TO 8-SBK,
8 TO 9-SBK,9 TO 10-SBK,10 TO 11-SBK,11 TO 12-RMP,
12 TO 13-DBT,13 TO 14-DBT,14 TO 15-DBT,15 TO 16-DBT,
16 TO 17-DBT,17 TO 18-SBK,18 TO 19-SBK,19 TO 20-SBK,
20 TO 21-SBK,21 TO 22-SBK,22 TO 23-SBK,23 TO 24-SBK),
HOLIDAY=SATURDAY;
END;

```

\* get schedules for SHW

```

TEMPORARY SCHEDULE (SHW):
MONDAY THRU FRIDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.17,0.33,0.51,
0.67,0.92,1.00,1.00,0.75,0.67,0.75,0.75,0.67,0.51,0.51,0.00,0.00,0.00),
SATURDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.13,0.17,0.29,0.54,0.67,
0.75,0.75,0.62,0.62,0.67,0.62,0.50,0.29,0.21,0.17,0.00,0.00),
SUNDAY = (0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.13,0.17,0.29,0.54,0.67,
0.75,0.75,0.62,0.62,0.67,0.62,0.50,0.29,0.21,0.17,0.00,0.00),
HOLIDAY=SUNDAY;
END;

```

\*\* removed the design day logic file in place of the following

\*\* print the schedule name RET\_MFS

\*\* print out the equip fleoh

```

*****
*****

```

```

TEMPORARY LOCATION:
94847 = (LAT=42.23, LONG=83.33, TZ=5);

```

END LOCATION;

\*\* Doing Temporary Design Days

TEMPORARY DESIGN DAYS:

94847 WINTER=(HIGH=6, LOW=5,WB=3.2,DATE=21 Jan,  
PRES=397,WS=2112,DIR=240,CLEARNESS=0, WEEKDAY);  
94847 SUMMER=(HIGH=87, LOW=66.6,WB=72,DATE=21 Jul,  
PRES=397,WS=1144,DIR=230,CLEARNESS=1, WEEKDAY);

END DESIGN DAYS;

PROJECT="UNITARY AIR CONDITIONING ANALYSIS, EPACT STANDARDS PROGRAM 2002";  
LOCATION=94847;

\*\*\*\*\*

\*\* ANNUAL ONLY

\*\* Uncomment next two lines to make an annual run

WEATHER TAPE FROM 1JAN THRU 31DEC; \*\* UNCOMMENTED FOR ANNUAL RUN  
REPORT FILE FROM 1JAN THRU 31DEC; \*\* UNCOMMENTED FOR ANNUAL RUN

\*\*\*\*\*

GROUND TEMPERATURES=(56,54,54,56,59,62,66,68,67,66,62,59);  
DESIGN DAYS=94847 SUMMER, 94847 WINTER;

BEGIN BUILDING DESCRIPTION;

\*\* WHEIGH\*99.0/1300 = WWR

DIMENSION: WHEIGHT = 2.6262;

BUILDING="3-STORY GUMBY - VAV/DX SYSTEMS ";

NORTH AXIS=0.00;

SOLAR DISTRIBUTION=-1;

ZONE 1 "south one ":

ORIGIN:(0.00, 0.00, 0.00);

NORTH AXIS=0.00;

EXTERIOR WALLS :

STARTING AT(0.00, 0.00, 0.00)

FACING(180.00)

TILTED(90.00)

EXTWALLL (100.00 BY 13.00)

WITH WINDOWS OF TYPE

FENTS (99.0 BY WHEIGHT)

REVEAL(0.00)

AT (0.01, 3.0);

PARTITIONS :

STARTING AT(100.00, 0.00, 0.00)

FACING(90.00)

TILTED(90.00)

```

HALFPARTL (15.00 BY 13.00),
STARTING AT(0.00, 15.00, 0.00)
FACING(270.00)
TILTED(90.00)
HALFPARTL (15.00 BY 13.00);
INTERZONE PARTITIONS :
STARTING AT(100.00, 15.00, 0.00)
FACING(0.00)
TILTED(90.00)
PARTITIONL (70.00 BY 13.00)
ADJACENT TO ZONE (5),
STARTING AT(30.00, 15.00, 0.00)
FACING(0.00)
TILTED(90.00)
AIRWALL (30.00 BY 13.00)
ADJACENT TO ZONE (5);
SLAB ON GRADE FLOORS :
STARTING AT(0.00, 0.00, 0.00)
FACING(90.00)
TILTED(180.00)
SLABL_P (15.00 BY 100.00);
INTERZONE CEILINGS :
STARTING AT(0.00, 0.00, 13.00)
FACING(180.00)
TILTED(0.00)
CEIL (100.00 BY 15.00)
ADJACENT TO ZONE (6);
INTERNAL MASS: PARTITIONAL
( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
3412000.0 HEATING, 3412000.0 COOLING,
0.00 PERCENT MRT,
FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
** INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

WITH COEFFICIENTS (1.0,0,0,0),

```

```

        FROM 01JAN THRU 31DEC;
        REPORT VARIABLES = (5, 10);
**      REPORT VARIABLES = ( 5, 10, 24, 26, 32, 33, 34, 35);
END ZONE;
      ZONE 2 "west one ":
        ORIGIN:(-15.00, 15.00, 0.00);
        NORTH AXIS=0.00;
        EXTERIOR WALLS :
          STARTING AT(0.00, 100.00, 0.00)
          FACING(270.00)
          TILTED(90.00)
          EXTWALLL (100.00 BY 13.00)
          WITH WINDOWS OF TYPE
            FENTS (99.0 BY WHEIGHT)
            REVEAL(0.00)
            AT (0.01, 3.0);
        PARTITIONS :
          STARTING AT(0.00, 0.00, 0.00)
          FACING(180.00)
          TILTED(90.00)
          HALFPARTL (15.00 BY 13.00),
          STARTING AT(15.00, 100.00, 0.00)
          FACING(0.00)
          TILTED(90.00)
          HALFPARTL (15.00 BY 13.00);
        INTERZONE PARTITIONS :
          STARTING AT(15.00, 0.00, 0.00)
          FACING(90.00)
          TILTED(90.00)
          PARTITIONL (70.00 BY 13.00)
          ADJACENT TO ZONE (5),
          STARTING AT(15.00, 70.00, 0.00)
          FACING(90.00)
          TILTED(90.00)
          AIRWALL (30.00 BY 13.00)
          ADJACENT TO ZONE (5);
        SLAB ON GRADE FLOORS :
          STARTING AT(0.00, 0.00, 0.00)
          FACING(90.00)
          TILTED(180.00)
          SLABL_P (100.00 BY 15.00);
        INTERZONE CEILINGS :
          STARTING AT(0.00, 0.00, 13.00)
          FACING(180.00)
          TILTED(0.00)
          CEIL (15.00 BY 100.00)
          ADJACENT TO ZONE (7);
        INTERNAL MASS: PARTITIONAL
          ( 135.00 BY 10.00);
        PEOPLE=3.33, OCCUP ,
          AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
          FROM 01JAN THRU 31DEC;

```

```

LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4,24,25, 31,32, 35);
END ZONE;
ZONE 3 "north one ":
    ORIGIN:(0.00, 115.00, 0.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
        STARTING AT(100.00, 15.00, 0.00)
        FACING(0.00)
        TILTED(90.00)
        EXTWALLL (100.00 BY 13.00)
        WITH WINDOWS OF TYPE
        FENTS (99.0 BY WHEIGHT)
        REVEAL(0.00)
        AT (0.01, 3.0);
    PARTITIONS :
        STARTING AT(100.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 13.00),
        STARTING AT(0.00, 15.00, 0.00)
        FACING(270.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 13.00);
    INTERZONE PARTITIONS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)
        PARTITIONL (70.00 BY 13.00)
        ADJACENT TO ZONE (5),
        STARTING AT(70.00, 0.00, 0.00)

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    FACING(180.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (5);
SLAB ON GRADE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    SLABL_P (15.00 BY 100.00);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (100.00 BY 15.00)
    ADJACENT TO ZONE (8);
INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY  COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4,24,25, 31,32,35);
END ZONE;
ZONE 4 "east one ":
    ORIGIN:(100.00, 15.00, 0.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
        STARTING AT(15.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        EXTWALLL (100.00 BY 13.00)

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WITH WINDOWS OF TYPE  
 FENTS (99.0 BY WHEIGHT)  
 REVEAL(0.00)  
 AT (0.01, 3.0);  
 PARTITIONS :  
 STARTING AT(0.00, 0.00, 0.00)  
 FACING(180.00)  
 TILTED(90.00)  
 HALFPARTL (15.00 BY 13.00),  
 STARTING AT(15.00, 100.00, 0.00)  
 FACING(0.00)  
 TILTED(90.00)  
 HALFPARTL (15.00 BY 13.00);  
 INTERZONE PARTITIONS :  
 STARTING AT(0.00, 100.00, 0.00)  
 FACING(270.00)  
 TILTED(90.00)  
 PARTITIONL (70.00 BY 13.00)  
 ADJACENT TO ZONE (5),  
 STARTING AT(0.00, 30.00, 0.00)  
 FACING(270.00)  
 TILTED(90.00)  
 AIRWALL (30.00 BY 13.00)  
 ADJACENT TO ZONE (5);  
 SLAB ON GRADE FLOORS :  
 STARTING AT(0.00, 0.00, 0.00)  
 FACING(90.00)  
 TILTED(180.00)  
 SLABL\_P (100.00 BY 15.00);  
 INTERZONE CEILINGS :  
 STARTING AT(0.00, 0.00, 13.00)  
 FACING(180.00)  
 TILTED(0.00)  
 CEIL (15.00 BY 100.00)  
 ADJACENT TO ZONE (9);  
 INTERNAL MASS: PARTITIONAL  
 ( 135.00 BY 10.0);  
 PEOPLE=3.33,OCCUP ,  
 AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,  
 FROM 01JAN THRU 31DEC;  
 LIGHTS=9.62,LIGHT ,  
 10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,  
 20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,  
 FROM 01JAN THRU 31DEC;  
 CONTROLS=SET POINT ,  
 3412000.0 HEATING, 3412000.0 COOLING,  
 0.00 PERCENT MRT,  
 FROM 01JAN THRU 31DEC;  
 ELECTRIC EQUIPMENT=2.05,EQUIP ,  
 30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,  
 FROM 01JAN THRU 31DEC;

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** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

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    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4,24,25, 31, 32,35);
END ZONE;
ZONE 5 "core one ":
  ORIGIN:(0.00, 15.00, 0.00);
  NORTH AXIS=0.00;
  INTERZONE PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (1),
    STARTING AT(30.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (1),
    STARTING AT(100.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (4),
    STARTING AT(100.00, 30.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (4),
    STARTING AT(100.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (3),
    STARTING AT(70.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (3),
    STARTING AT(0.00, 100.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (2),
    STARTING AT(0.00, 70.00, 0.00)

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    FACING(270.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (2);
SLAB ON GRADE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    SLABL_C (100.00 BY 100.00);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (100.00 BY 100.00)
    ADJACENT TO ZONE (10);
    PEOPLE=22.22,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
    LIGHTS=64.16,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
    CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
    ELECTRIC EQUIPMENT= 13.65,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=0.00,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=2500,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
** REPORT VARIABLES = ( 5, 10, 24, 26);
    END ZONE;
ZONE 6 "south two ":
    ORIGIN:(0.00, 0.00, 13.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 13.00)
    WITH WINDOWS OF TYPE
    FENTS (99.0 BY WHEIGHT)

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    REVEAL(0.00)
    AT (0.01, 3.0);
PARTITIONS :
    STARTING AT(100.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00),
    STARTING AT(0.00, 15.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00);
INTERZONE PARTITIONS :
    STARTING AT(100.00, 15.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (10),
    STARTING AT(30.00, 15.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (10);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (15.00 BY 100.00)
    ADJACENT TO ZONE (1);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (100.00 BY 15.00)
    ADJACENT TO ZONE (11);
INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY

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** Uncomment next line to make an annual run
   INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

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      WITH COEFFICIENTS (1.0,0,0,0),
      FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 7 "west two ":
  ORIGIN:(-15.00, 15.00, 13.00);
  NORTH AXIS=0.00;
  EXTERIOR WALLS :
    STARTING AT(0.00, 100.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 13.00)
    WITH WINDOWS OF TYPE
      FENTS (99.0 BY WHEIGHT)
      REVEAL(0.00)
      AT (0.01, 3.0);
  PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00),
    STARTING AT(15.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00);
  INTERZONE PARTITIONS :
    STARTING AT(15.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (10),
    STARTING AT(15.00, 70.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (10);
  INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (100.00 BY 15.00)
    ADJACENT TO ZONE (2);
  INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)

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TILTED(0.00)
CEIL (15.00 BY 100.00)
ADJACENT TO ZONE (12);
INTERNAL MASS: PARTITIONAL
( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
3412000.0 HEATING, 3412000.0 COOLING,
0.00 PERCENT MRT,
FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
** INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

WITH COEFFICIENTS (1.0,0,0,0),
FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 8 "north two ":
ORIGIN:(0.00, 115.00, 13.00);
NORTH AXIS=0.00;
EXTERIOR WALLS :
STARTING AT(100.00, 15.00, 0.00)
FACING(0.00)
TILTED(90.00)
EXTWALLL (100.00 BY 13.00)
WITH WINDOWS OF TYPE
FENTS (99.0 BY WHEIGHT)
REVEAL(0.00)
AT (0.01, 3.0);
PARTITIONS :
STARTING AT(100.00, 0.00, 0.00)
FACING(90.00)
TILTED(90.00)
HALFPARTL (15.00 BY 13.00),
STARTING AT(0.00, 15.00, 0.00)
FACING(270.00)
TILTED(90.00)

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    HALFPARTL (15.00 BY 13.0);
INTERZONE PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (10),
    STARTING AT(70.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (10);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (15.00 BY 100.00)
    ADJACENT TO ZONE (3);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (100.00 BY 15.00)
    ADJACENT TO ZONE (13);
INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);

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END ZONE;
ZONE 9 "east two ":
  ORIGIN:(100.00, 15.00, 13.00);
  NORTH AXIS=0.00;
  EXTERIOR WALLS :
    STARTING AT(15.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 13.00)
    WITH WINDOWS OF TYPE
    FENTS (99.0 BY WHEIGHT)
    REVEAL(0.00)
    AT (0.01, 3.0);
  PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00),
    STARTING AT(15.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 13.00);
  INTERZONE PARTITIONS :
    STARTING AT(0.00, 100.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 13.00)
    ADJACENT TO ZONE (10),
    STARTING AT(0.00, 30.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 13.00)
    ADJACENT TO ZONE (10);
  INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (100.0 BY 15.00)
    ADJACENT TO ZONE (4);
  INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 13.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (15.00 BY 100.00)
    ADJACENT TO ZONE (14);
  INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.0);
  PEOPLE=3.33, OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
  LIGHTS=9.62, LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,

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    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 10 "core two ":
    ORIGIN:(0.00, 15.00, 13.00);
    NORTH AXIS=0.00;
    INTERZONE PARTITIONS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)
        AIRWALL (30.00 BY 13.00)
        ADJACENT TO ZONE (6),
        STARTING AT(30.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)
        PARTITIONL (70.00 BY 13.00)
        ADJACENT TO ZONE (6),
        STARTING AT(100.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        AIRWALL (30.00 BY 13.00)
        ADJACENT TO ZONE (9),
        STARTING AT(100.00, 30.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        PARTITIONL (70.00 BY 13.00)
        ADJACENT TO ZONE (9),
        STARTING AT(100.00, 100.00, 0.00)
        FACING(0.00)
        TILTED(90.00)
        AIRWALL (30.00 BY 13.00)
        ADJACENT TO ZONE (8),
        STARTING AT(70.00, 100.00, 0.00)

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FACING(0.00)
TILTED(90.00)
PARTITIONL (70.00 BY 13.00)
ADJACENT TO ZONE (8),
STARTING AT(0.00, 100.00, 0.00)
FACING(270.00)
TILTED(90.00)
AIRWALL (30.00 BY 13.00)
ADJACENT TO ZONE (7),
STARTING AT(0.00, 70.00, 0.00)
FACING(270.00)
TILTED(90.00)
PARTITIONL (70.00 BY 13.00)
ADJACENT TO ZONE (7);
INTERZONE FLOORS :
STARTING AT(0.00, 0.00, 0.00)
FACING(90.00)
TILTED(180.00)
PLNFLOORL (100.0 BY 100.00)
ADJACENT TO ZONE (5);
INTERZONE CEILINGS :
STARTING AT(0.00, 0.00, 13.00)
FACING(180.00)
TILTED(0.00)
CEIL (100.00 BY 100.00)
ADJACENT TO ZONE (15);
    PEOPLE=22.22,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=64.16,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT= 13.65,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=0.00,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=2500,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN
    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;

```

ZONE 11 "south three " :  
 ORIGIN:(0.00, 0.00, 26.00);  
 NORTH AXIS=0.00;  
 EXTERIOR WALLS :  
   STARTING AT(0.00, 0.00, 0.00)  
   FACING(180.00)  
   TILTED(90.00)  
   EXTWALLL (100.00 BY 9.00)  
     WITH WINDOWS OF TYPE  
     FENTS (99.0 BY WHEIGHT)  
     REVEAL(0.00)  
     AT (0.01, 3.0);  
 PARTITIONS :  
   STARTING AT(100.00, 0.00, 0.00)  
   FACING(90.00)  
   TILTED(90.00)  
   HALFPARTL (15.00 BY 9.00),  
   STARTING AT(0.00, 15.00, 0.00)  
   FACING(270.00)  
   TILTED(90.00)  
   HALFPARTL (15.00 BY 9.00);  
 INTERZONE PARTITIONS :  
   STARTING AT(100.00, 15.00, 0.00)  
   FACING(0.00)  
   TILTED(90.00)  
   PARTITIONL (70.00 BY 9.00)  
   ADJACENT TO ZONE (15),  
   STARTING AT(30.00, 15.00, 0.00)  
   FACING(0.00)  
   TILTED(90.00)  
   AIRWALL (30.00 BY 9.00)  
   ADJACENT TO ZONE (15);  
 INTERZONE FLOORS :  
   STARTING AT(0.00, 0.00, 0.00)  
   FACING(90.00)  
   TILTED(180.00)  
   PLNFLOORL (15.00 BY 100.00)  
   ADJACENT TO ZONE (6);  
 INTERZONE CEILINGS :  
   STARTING AT(0.00, 0.00, 9.00)  
   FACING(180.00)  
   TILTED(0.00)  
   CEIL (100.00 BY 15.00)  
   ADJACENT TO ZONE (16);  
 INTERNAL MASS: PARTITIONAL  
   ( 135.00 BY 10.00);  
   PEOPLE=3.33, OCCUP ,  
   AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,  
   FROM 01JAN THRU 31DEC;  
 LIGHTS=9.62, LIGHT ,  
   10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,  
   20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,

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    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 12 "west three ":
    ORIGIN:(-15.00, 15.00, 26.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
        STARTING AT(0.00, 100.00, 0.00)
        FACING(270.00)
        TILTED(90.00)
        EXTWALLL (100.00 BY 9.00)
        WITH WINDOWS OF TYPE
            FENTS (99.0 BY WHEIGHT)
            REVEAL(0.00)
            AT (0.01, 3.0);
    PARTITIONS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 9.00),
        STARTING AT(15.00, 100.00, 0.00)
        FACING(0.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 9.00);
    INTERZONE PARTITIONS :
        STARTING AT(15.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        PARTITIONL (70.00 BY 9.00)
        ADJACENT TO ZONE (15),
        STARTING AT(15.00, 70.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        AIRWALL (30.00 BY 9.00)

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    ADJACENT TO ZONE (15);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (100.00 BY 15.00)
    ADJACENT TO ZONE (7);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 9.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (15.00 BY 100.00)
    ADJACENT TO ZONE (17);
INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**          INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

    WITH COEFFICIENTS (1.0,0,0,0),
    FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 13 "north three ":
    ORIGIN:(0.00, 115.00, 26.00);
    NORTH AXIS=0.00;
EXTERIOR WALLS :
    STARTING AT(100.00, 15.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 9.00)
    WITH WINDOWS OF TYPE
    FENTS (99.0 BY WHEIGHT)

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        REVEAL(0.00)
        AT (0.01, 3.0);
PARTITIONS :
    STARTING AT(100.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 9.00),
    STARTING AT(0.00, 15.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 9.00);
INTERZONE PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 9.00)
    ADJACENT TO ZONE (15),
    STARTING AT(70.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 9.00)
    ADJACENT TO ZONE (15);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (15.00 BY 100.00)
    ADJACENT TO ZONE (8);
INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 9.00)
    FACING(180.00)
    TILTED(0.00)
    CEIL (100.00 BY 15.00)
    ADJACENT TO ZONE (18);
INTERNAL MASS: PARTITIONAL
    ( 135.00 BY 10.00);
PEOPLE=3.33,OCCUP ,
    AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
    FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
    10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
    20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
    FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
    3412000.0 HEATING, 3412000.0 COOLING,
    0.00 PERCENT MRT,
    FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
    30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
    FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY

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** Uncomment next line to make an annual run
   INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

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      WITH COEFFICIENTS (1.0,0,0,0),
      FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
ZONE 14 "east three ":
  ORIGIN:(100.00, 15.00, 26.00);
  NORTH AXIS=0.00;
  EXTERIOR WALLS :
    STARTING AT(15.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 9.00)
    WITH WINDOWS OF TYPE
    FENTS (99.0 BY WHEIGHT)
    REVEAL(0.00)
    AT (0.01, 3.0);
  PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 9.00),
    STARTING AT(15.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 9.00);
  INTERZONE PARTITIONS :
    STARTING AT(0.00, 100.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    PARTITIONL (70.00 BY 9.00)
    ADJACENT TO ZONE (15),
    STARTING AT(0.00, 30.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    AIRWALL (30.00 BY 9.00)
    ADJACENT TO ZONE (15);
  INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (100.0 BY 15.00)
    ADJACENT TO ZONE (9);
  INTERZONE CEILINGS :
    STARTING AT(0.00, 0.00, 9.00)
    FACING(180.00)

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TILTED(0.00)
CEIL (15.00 BY 100.00)
ADJACENT TO ZONE (19);
INTERNAL MASS: PARTITIONAL
( 135.00 BY 10.0);
PEOPLE=3.33,OCCUP ,
AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
FROM 01JAN THRU 31DEC;
LIGHTS=9.62,LIGHT ,
10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
3412000.0 HEATING, 3412000.0 COOLING,
0.00 PERCENT MRT,
FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT=2.05,EQUIP ,
30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
INFILTRATION=49.40,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
** INFILTRATION=375,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

WITH COEFFICIENTS (1.0,0,0,0),
FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31,32,35);
END ZONE;
ZONE 15 "core three ":
ORIGIN:(0.00, 15.00, 26.00);
NORTH AXIS=0.00;
INTERZONE PARTITIONS :
STARTING AT(0.00, 0.00, 0.00)
FACING(180.00)
TILTED(90.00)
AIRWALL (30.00 BY 9.00)
ADJACENT TO ZONE (11),
STARTING AT(30.00, 0.00, 0.00)
FACING(180.00)
TILTED(90.00)
PARTITIONL (70.00 BY 9.00)
ADJACENT TO ZONE (11),
STARTING AT(100.00, 0.00, 0.00)
FACING(90.00)
TILTED(90.00)
AIRWALL (30.00 BY 9.00)
ADJACENT TO ZONE (14),
STARTING AT(100.00, 30.00, 0.00)

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FACING(90.00)
TILTED(90.00)
PARTITIONL (70.00 BY 9.00)
ADJACENT TO ZONE (14),
STARTING AT(100.00, 100.00, 0.00)
FACING(0.00)
TILTED(90.00)
AIRWALL (30.00 BY 9.00)
ADJACENT TO ZONE (13),
STARTING AT(70.00, 100.00, 0.00)
FACING(0.00)
TILTED(90.00)
PARTITIONL (70.00 BY 9.00)
ADJACENT TO ZONE (13),
STARTING AT(0.00, 100.00, 0.00)
FACING(270.00)
TILTED(90.00)
AIRWALL (30.00 BY 9.00)
ADJACENT TO ZONE (12),
STARTING AT(0.00, 70.00, 0.00)
FACING(270.00)
TILTED(90.00)
PARTITIONL (70.00 BY 9.00)
ADJACENT TO ZONE (12);
INTERZONE FLOORS :
  STARTING AT(0.00, 0.00, 0.00)
  FACING(90.00)
  TILTED(180.00)
  PLNFLOORL (100.0 BY 100.00)
  ADJACENT TO ZONE (10);
INTERZONE CEILINGS :
  STARTING AT(0.00, 0.00, 9.00)
  FACING(180.00)
  TILTED(0.00)
  CEIL (100.00 BY 100.00)
  ADJACENT TO ZONE (20);
PEOPLE=22.22,OCCUP ,
  AT ACTIVITY LEVEL 0.425000012, 70.00 PERCENT RADIANT,
  FROM 01JAN THRU 31DEC;
LIGHTS=64.16,LIGHT ,
  10.00 PERCENT RETURN AIR, 20.00 PERCENT RADIANT,
  20.00 PERCENT VISIBLE, 0.00 PERCENT REPLACEABLE,
  FROM 01JAN THRU 31DEC;
CONTROLS=SET POINT ,
  3412000.0 HEATING, 3412000.0 COOLING,
  0.00 PERCENT MRT,
  FROM 01JAN THRU 31DEC;
ELECTRIC EQUIPMENT= 13.65,EQUIP ,
  30.00 PERCENT RADIANT, 0.00 PERCENT LATENT, 0.00 PERCENT LOST,
  FROM 01JAN THRU 31DEC;
*****
** ANNUAL ONLY

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** Uncomment next line to make an annual run
   INFILTRATION=0.00,INFILTRATION , ** UNCOMMENTED FOR ANNUAL RUN
*****
**      INFILTRATION=2500,FANSCH , ** DESIGN ONLY COMMENTED OUT FOR ANNUAL
RUN

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      WITH COEFFICIENTS (1.0,0,0,0),
      FROM 01JAN THRU 31DEC;
REPORT VARIABLES = (5, 10);
* REPORT VARIABLES = (4, 24,25, 31, 32,35);
END ZONE;
  ZONE 16 "SOUTH PLENUM ":
  ORIGIN:(0.00, 0.00, 35.00);
  NORTH AXIS=0.00;
  EXTERIOR WALLS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 4.00);
  PARTITIONS :
    STARTING AT(100.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 4.00),
    STARTING AT(0.00, 15.00, 0.00)
    FACING(270.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 4.00);
  INTERZONE PARTITIONS :
    STARTING AT(100.00, 15.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    AIRWALL (100.00 BY 4.00)
    ADJACENT TO ZONE (20);
  INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (15.00 BY 100.00)
    ADJACENT TO ZONE (11);
  ROOF :
    STARTING AT(0.00, 0.00, 4.00)
    FACING(180.00)
    TILTED(0.00)
    EXTROOFL (100.00 BY 15.0);
* REPORT VARIABLES = (24,25, 32,35);
END ZONE;
  ZONE 17 "west plenum ":
  ORIGIN:(-15.00, 15.00, 35.00);
  NORTH AXIS=0.00;
  EXTERIOR WALLS :
    STARTING AT(0.00, 100.00, 0.00)

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    FACING(270.00)
    TILTED(90.00)
    EXTWALLL (100.00 BY 4.00);
PARTITIONS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(180.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 4.00),
    STARTING AT(15.00, 100.00, 0.00)
    FACING(0.00)
    TILTED(90.00)
    HALFPARTL (15.00 BY 4.00);
INTERZONE PARTITIONS :
    STARTING AT(15.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(90.00)
    AIRWALL (100.00 BY 4.00)
    ADJACENT TO ZONE (20);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (100.00 BY 15.00)
    ADJACENT TO ZONE (12);
    ROOF :
    STARTING AT(0.00, 0.00, 4.00)
    FACING(180.00)
    TILTED(0.00)
    EXTROOFL (15.00 BY 100.00);
*REPORT VARIABLES = (24,25, 32,35);
END ZONE;
ZONE 18 "north plenum ":
    ORIGIN:(0.00, 115.00, 35.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
        STARTING AT(100.00, 15.00, 0.00)
        FACING(0.00)
        TILTED(90.00)
        EXTWALLL (100.00 BY 4.00);
    PARTITIONS :
        STARTING AT(100.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 4.00),
        STARTING AT(0.00, 15.00, 0.00)
        FACING(270.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 4.00);
    INTERZONE PARTITIONS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)

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    AIRWALL (100.00 BY 4.00)
    ADJACENT TO ZONE (20);
INTERZONE FLOORS :
    STARTING AT(0.00, 0.00, 0.00)
    FACING(90.00)
    TILTED(180.00)
    PLNFLOORL (15.00 BY 100.00)
    ADJACENT TO ZONE (13);
    ROOF :
    STARTING AT(0.00, 0.00, 4.00)
    FACING(180.00)
    TILTED(0.00)
    EXTROOFL (100.00 BY 15.00);
*REPORT VARIABLES = (24,25 );
END ZONE;
ZONE 19 "east plenum ":
    ORIGIN:(100.00, 15.00, 35.00);
    NORTH AXIS=0.00;
    EXTERIOR WALLS :
        STARTING AT(15.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(90.00)
        EXTWALLL (100.00 BY 4.00);
    PARTITIONS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(180.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 4.00),
        STARTING AT(15.00, 100.00, 0.00)
        FACING(0.00)
        TILTED(90.00)
        HALFPARTL (15.00 BY 4.00);
    INTERZONE PARTITIONS :
        STARTING AT(0.00, 100.00, 0.00)
        FACING(270.00)
        TILTED(90.00)
        AIRWALL (100.00 BY 4.00)
        ADJACENT TO ZONE (20);
    INTERZONE FLOORS :
        STARTING AT(0.00, 0.00, 0.00)
        FACING(90.00)
        TILTED(180.00)
        PLNFLOORL (100.0 BY 15.00)
        ADJACENT TO ZONE (14);
        ROOF :
        STARTING AT(0.00, 0.00, 4.00)
        FACING(180.00)
        TILTED(0.00)
        EXTROOFL (15.00 BY 100.0);
*REPORT VARIABLES = (24,25 );
END ZONE;
ZONE 20 "core plenum ":

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ORIGIN:(0.00, 15.00, 35.00);
NORTH AXIS=0.00;
INTERZONE PARTITIONS :
  STARTING AT(0.00, 0.00, 0.00)
  FACING(180.00)
  TILTED(90.00)
  AIRWALL (100.00 BY 4.00)
  ADJACENT TO ZONE (16),
  STARTING AT(100.00, 0.00, 0.00)
  FACING(90.00)
  TILTED(90.00)
  AIRWALL (100.00 BY 4.00)
  ADJACENT TO ZONE (19),
  STARTING AT(100.00, 100.00, 0.00)
  FACING(0.00)
  TILTED(90.00)
  AIRWALL (100.00 BY 4.00)
  ADJACENT TO ZONE (18),
  STARTING AT(0.00, 100.00, 0.00)
  FACING(270.00)
  TILTED(90.00)
  AIRWALL (100.00 BY 4.00)
  ADJACENT TO ZONE (17);
INTERZONE FLOORS :
  STARTING AT(0.00, 0.00, 0.00)
  FACING(90.00)
  TILTED(180.00)
  PLNFLOORL (100.0 BY 100.00)
  ADJACENT TO ZONE (15);
ROOF :
  STARTING AT(0.00, 0.00, 4.00)
  FACING(180.00)
  TILTED(0.00)
  EXTROOFL (100.00 BY 100.00);
*REPORT VARIABLES = (24,25 );
  END ZONE;
  END BUILDING DESCRIPTION;
END INPUT;

BEGIN FAN SYSTEM DESCRIPTION;
#

** SYSTEM 1
DX PACKAGED UNIT SYSTEM 1
  "SOUTH1 " SERVING ZONES
  1;
  FOR ZONE 1:
    SUPPLY AIR VOLUME = 1035.0343920508; ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY

```

```

** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ; ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**     REPORT VARIABLES = (6,11, 23,34,49,50);
**     REPORT VARIABLES = (6,11, 23,34,49,50, 12, 13, 15, 5, 26 );
**     REPORT VARIABLES = (6,11, 23,19,33,34,49,50, 12, 13, 15, 5, 26 );
REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**     DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

#

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 33.287356615584; ** ( 2.8 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;

```

```

HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 2
DX PACKAGED UNIT SYSTEM 2
  "WEST1 " SERVING ZONES
    2;
  FOR ZONE 2:
    SUPPLY AIR VOLUME = 1267.250750634;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

    BASEBOARD HEAT CAPACITY=0.0;
    BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

    ZONE MULTIPLIER=1;
  END ZONE;
  OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
    REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
    SUPPLY FAN PRESSURE= 1.99301096666825;
    SUPPLY FAN EFFICIENCY=0.55;
    RETURN FAN PRESSURE=0.0;
    RETURN FAN EFFICIENCY=0.65;
    EXHAUST FAN PRESSURE=0.0;
    EXHAUST FAN EFFICIENCY=0.65;

    HEATING COIL ENERGY SUPPLY=GAS;
    HEATING COIL CAPACITY=3412000;

    MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
    DESIRED MIXED AIR TEMPERATURE=70;
    GAS BURNER EFFICIENCY = 0.8;

    SYSTEM ELECTRICAL DEMAND=0.0;
  END OTHER SYSTEM PARAMETERS;

```

```

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 39.744462267433;  ** ( 3.3 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

```

```

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

```

```

** SYSTEM 3
DX PACKAGED UNIT SYSTEM 3
  "NORTH1 " SERVING ZONES
    3;
  FOR ZONE 3:
    SUPPLY AIR VOLUME = 836.4758519782;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
   REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
   SUPPLY FAN PRESSURE= 1.99301096666825;
   SUPPLY FAN EFFICIENCY=0.55;
   RETURN FAN PRESSURE=0.0;
   RETURN FAN EFFICIENCY=0.65;
   EXHAUST FAN PRESSURE=0.0;

```

```

EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 27.861445201996;  ** ( 2.3 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 4
DX PACKAGED UNIT SYSTEM 4
  "EAST1 " SERVING ZONES
    4;
  FOR ZONE 4:
    SUPPLY AIR VOLUME = 1154.305050934;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY

```

```

** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ; ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 35.6908411052; ** ( 3.0 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;

```

```

MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

```

```

** SYSTEM 5
DX PACKAGED UNIT SYSTEM 5
  "CORE1 " SERVING ZONES
    5;
  FOR ZONE 5:
    SUPPLY AIR VOLUME = 5973.698057133; ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=2500 ; ** UNCOMMENTED FOR ANNUAL RUN

    BASEBOARD HEAT CAPACITY=0.0;
    BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

    ZONE MULTIPLIER=1;
  END ZONE;
  OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
**   REPORT VARIABLES = (6,11, 23,19,33,34,49,50, 12, 13, 15, 5, 26 );
    REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
    SUPPLY FAN PRESSURE= 1.99301096666825;
    SUPPLY FAN EFFICIENCY=0.55;
    RETURN FAN PRESSURE=0.0;
    RETURN FAN EFFICIENCY=0.65;
    EXHAUST FAN PRESSURE=0.0;
    EXHAUST FAN EFFICIENCY=0.65;

    HEATING COIL ENERGY SUPPLY=GAS;
    HEATING COIL CAPACITY=3412000;

    MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
    DESIRED MIXED AIR TEMPERATURE=70;
    GAS BURNER EFFICIENCY = 0.8;

    SYSTEM ELECTRICAL DEMAND=0.0;
  END OTHER SYSTEM PARAMETERS;

```

```

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 195.76878129001;  ** (16.3 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

```

```

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

```

```

** 2nd floor **
** SYSTEM 6
DX PACKAGED UNIT SYSTEM 6
  "SOUTH2 " SERVING ZONES
    6;
  FOR ZONE 6:
    SUPPLY AIR VOLUME = 1471.682467091;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
   REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
   SUPPLY FAN PRESSURE= 1.99301096666825;
   SUPPLY FAN EFFICIENCY=0.55;
   RETURN FAN PRESSURE=0.0;
   RETURN FAN EFFICIENCY=0.65;

```

```

EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 44.714073054233;  ** ( 3.7 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 7
DX PACKAGED UNIT SYSTEM 7
  "WEST2 " SERVING ZONES
    7;
  FOR ZONE 7:
    SUPPLY AIR VOLUME = 1777.765313278;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY

```

```

** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ; ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 53.10706799894; ** ( 4.4 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;

```

```
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;
```

```
** SYSTEM 8
DX PACKAGED UNIT SYSTEM 8
  "NORTH2 " SERVING ZONES
    8;
  FOR ZONE 8:
    SUPPLY AIR VOLUME = 1165.599620904; ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ; ** UNCOMMENTED FOR ANNUAL RUN

    BASEBOARD HEAT CAPACITY=0.0;
    BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

    ZONE MULTIPLIER=1;
    END ZONE;
    OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
    REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
    SUPPLY FAN PRESSURE= 1.99301096666825;
    SUPPLY FAN EFFICIENCY=0.55;
    RETURN FAN PRESSURE=0.0;
    RETURN FAN EFFICIENCY=0.65;
    EXHAUST FAN PRESSURE=0.0;
    EXHAUST FAN EFFICIENCY=0.65;

    HEATING COIL ENERGY SUPPLY=GAS;
    HEATING COIL CAPACITY=3412000;

    MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
    DESIRED MIXED AIR TEMPERATURE=70;
    GAS BURNER EFFICIENCY = 0.8;

    SYSTEM ELECTRICAL DEMAND=0.0;
    END OTHER SYSTEM PARAMETERS;
```

```

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 36.557134621899;  ** ( 3.0 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

```

```

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

```

```

** SYSTEM 9
DX PACKAGED UNIT SYSTEM 9
  "EAST2 " SERVING ZONES
    9;
  FOR ZONE 9:
    SUPPLY AIR VOLUME = 1717.904092437;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

```

```

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

```

```

ZONE MULTIPLIER=1;
END ZONE;

```

```

OTHER SYSTEM PARAMETERS:

```

```

** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)

```

```

**   REPORT VARIABLES = (6,11, 23,34,49,50);
   REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
   SUPPLY FAN PRESSURE= 1.99301096666825;
   SUPPLY FAN EFFICIENCY=0.55;
   RETURN FAN PRESSURE=0.0;
   RETURN FAN EFFICIENCY=0.65;
   EXHAUST FAN PRESSURE=0.0;
   EXHAUST FAN EFFICIENCY=0.65;

```

```

HEATING COIL ENERGY SUPPLY=GAS;

```

```

HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 48.790283356406;  ** ( 4.1 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 10
DX PACKAGED UNIT SYSTEM 10
  "CORE2 " SERVING ZONES
    10;
  FOR ZONE 10:
    SUPPLY AIR VOLUME = 6074.219729866;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=2500 ;  ** UNCOMMENTED FOR ANNUAL RUN

```

```

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 196.99988941674;  ** (16.4 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;
** 3rd floor

```

```

** SYSTEM 11
DX PACKAGED UNIT SYSTEM 11
  "SOUTH3 " SERVING ZONES
    11;
  FOR ZONE 11:
    SUPPLY AIR VOLUME = 1503.307263007;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

    BASEBOARD HEAT CAPACITY=0.0;
    BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

    ZONE MULTIPLIER=1;
    END ZONE;
    OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
    REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
    SUPPLY FAN PRESSURE= 1.99301096666825;
    SUPPLY FAN EFFICIENCY=0.55;
    RETURN FAN PRESSURE=0.0;
    RETURN FAN EFFICIENCY=0.65;
    EXHAUST FAN PRESSURE=0.0;
    EXHAUST FAN EFFICIENCY=0.65;

    HEATING COIL ENERGY SUPPLY=GAS;
    HEATING COIL CAPACITY=3412000;

    MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
    DESIRED MIXED AIR TEMPERATURE=70;
    GAS BURNER EFFICIENCY = 0.8;

    SYSTEM ELECTRICAL DEMAND=0.0;
    END OTHER SYSTEM PARAMETERS;

    DX CONDENSING UNIT PARAMETERS:
    DESIGN FULL LOAD POWER RATIO={0.3274};
    DX CONDENSING UNIT CAPACITY = 45.451608473274;  ** ( 3.8 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
    END DX CONDENSING UNIT PARAMETERS;

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EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 12
DX PACKAGED UNIT SYSTEM 12
  "WEST3 " SERVING ZONES
    12;
  FOR ZONE 12:
    SUPPLY AIR VOLUME = 1801.483910215;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

    BASEBOARD HEAT CAPACITY=0.0;
    BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

    ZONE MULTIPLIER=1;
    END ZONE;
    OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
    REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
    SUPPLY FAN PRESSURE=1.99301096666825;
    SUPPLY FAN EFFICIENCY=0.55;
    RETURN FAN PRESSURE=0.0;
    RETURN FAN EFFICIENCY=0.65;
    EXHAUST FAN PRESSURE=0.0;
    EXHAUST FAN EFFICIENCY=0.65;

    HEATING COIL ENERGY SUPPLY=GAS;
    HEATING COIL CAPACITY=3412000;

    MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
    DESIRED MIXED AIR TEMPERATURE=70;

```

```

GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 53.690997266389;  ** ( 4.5 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 13
DX PACKAGED UNIT SYSTEM 13
  "NORTH3 " SERVING ZONES
    13;
  FOR ZONE 13:
    SUPPLY AIR VOLUME = 1202.871701805;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ;  ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);

```

```

REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**      DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 37.513784698358;  ** ( 3.1 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

** SYSTEM 14
DX PACKAGED UNIT SYSTEM 14
  "EAST3 " SERVING ZONES
    14;
  FOR ZONE 14:

```

```

SUPPLY AIR VOLUME = 1687.408753518; ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
    EXHAUST AIR VOLUME=375 ; ** UNCOMMENTED FOR ANNUAL RUN

BASEBOARD HEAT CAPACITY=0.0;
BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

ZONE MULTIPLIER=1;
END ZONE;
OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
SUPPLY FAN PRESSURE= 1.99301096666825;
SUPPLY FAN EFFICIENCY=0.55;
RETURN FAN PRESSURE=0.0;
RETURN FAN EFFICIENCY=0.65;
EXHAUST FAN PRESSURE=0.0;
EXHAUST FAN EFFICIENCY=0.65;

HEATING COIL ENERGY SUPPLY=GAS;
HEATING COIL CAPACITY=3412000;

MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
DESIRED MIXED AIR TEMPERATURE=70;
GAS BURNER EFFICIENCY = 0.8;

SYSTEM ELECTRICAL DEMAND=0.0;
END OTHER SYSTEM PARAMETERS;

DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 47.726334865232; ** ( 4.0 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;

EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

```

```

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;

```

```

** SYSTEM 15
DX PACKAGED UNIT SYSTEM 15
  "CORE3 " SERVING ZONES
    15;
    FOR ZONE 15:
      SUPPLY AIR VOLUME = 6305.758414251;  ** COMPUTED FOR ANNUAL RUN (design
value was 1)
*****
** ANNUAL ONLY
** Uncomment next line to make an annual run
      EXHAUST AIR VOLUME=2500 ;  ** UNCOMMENTED FOR ANNUAL RUN

      BASEBOARD HEAT CAPACITY=0.0;
      BASEBOARD HEAT ENERGY SUPPLY=HOT WATER;

      ZONE MULTIPLIER=1;
      END ZONE;
      OTHER SYSTEM PARAMETERS:
** Report variables 6 (QCC) and 11 (QHC) and 23 (Supply Fan Power)
**   REPORT VARIABLES = (6,11, 23,34,49,50);
      REPORT VARIABLES = (6,11, 23,19,33,34,49,50);
      SUPPLY FAN PRESSURE= 1.99301096666825;
      SUPPLY FAN EFFICIENCY=0.55;
      RETURN FAN PRESSURE=0.0;
      RETURN FAN EFFICIENCY=0.65;
      EXHAUST FAN PRESSURE=0.0;
      EXHAUST FAN EFFICIENCY=0.65;

      HEATING COIL ENERGY SUPPLY=GAS;
      HEATING COIL CAPACITY=3412000;

      MIXED AIR CONTROL= ENTHALPY ECONOMY CYCLE;
**   DESIRED MIXED AIR TEMPERATURE=COLD DECK TEMPERATURE;
      DESIRED MIXED AIR TEMPERATURE=70;
      GAS BURNER EFFICIENCY = 0.8;

      SYSTEM ELECTRICAL DEMAND=0.0;
      END OTHER SYSTEM PARAMETERS;

```

```
DX CONDENSING UNIT PARAMETERS:
DESIGN FULL LOAD POWER RATIO={0.3274};
DX CONDENSING UNIT CAPACITY = 203.59591827922; ** (17.0 tons) COMPUTED
FOR ANNUAL RUN (design value was 487.3)
END DX CONDENSING UNIT PARAMETERS;
```

```
EQUIPMENT SCHEDULES:
SYSTEM OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
EXHAUST FAN OPERATION=FANSCH, FROM 01JAN THRU 31DEC;
HEATING COIL OPERATION=ON, FROM 01JAN THRU 31DEC;

TSTAT BASEBOARD HEAT OPERATION=OFF, FROM 01JAN THRU 31DEC;
HEAT RECOVERY OPERATION=OFF, FROM 01JAN THRU 31DEC;
MINIMUM VENTILATION SCHEDULE=MINVENT, FROM 01JAN THRU 31DEC;
MAXIMUM VENTILATION SCHEDULE=MAXVENT, FROM 01JAN THRU 31DEC;
SYSTEM ELECTRICAL DEMAND SCHEDULE=ON, FROM 01JAN THRU 31DEC;
END EQUIPMENT SCHEDULES;
END SYSTEM;
```

```
END FAN SYSTEM DESCRIPTION;
```

```
BEGIN CENTRAL PLANT DESCRIPTION;
PLANT 1 "SERVICE HOT WATER" SERVING ALL SYSTEMS;
EQUIPMENT SELECTION:
FUEL DOMESTIC HOT WATER HEATER:
1 OF SIZE 100;
END EQUIPMENT SELECTION;
SCHEDULE:
HOT WATER=32.00, SHW, FROM 01JAN THRU 31DEC, AT 125.0 SUPPLIED
BY FUEL DOMESTIC HOT WATER HEATER;
```

```
END SCHEDULE;
SPECIAL PARAMETERS:
** Blast takes as input the thermal efficiency of the water heater and a
dimensionless loss factor
** Equivalent to the ratio of the standby loss / Input rate * thermal efficiency
** We take as parametric input an shw_loss variable equivalent to the
standbyloss / Input rate
DHWLOS = 0.00088;
DHWEFF = 0.8;
END SPECIAL PARAMETERS;
** OTHER PLANT PARAMETERS:
```

```

**          REPORT VARIABLES = (1,2);
**          END OTHER PLANT PARAMETERS;
          END PLANT;
          END CENTRAL PLANT DESCRIPTION;
END INPUT;

```

```

**          These are the engineering inputs from the parm
file*****

```

```

*** EER = 8.899999619
*** WWR = 0.200000003
*** activity_level = 0.425000012
*** aspect_ratio_scale = 1.5
*** base_fan_esp = 0.75
*** bldg_type = ret
*** city = DETROIT_MI
*** cool_SPT = 75
*** econ = Yes
*** econ_hi_limit = 70
*** econ_type = Enth
*** equip_power = 0.400000006
*** fan_power_ratio = 0.109999999
*** fens_SC = 0.479999989
*** fens_U = 0.59
*** floors_scale = 2
*** heat_SPT = 70
*** infiltration = 0.037999999
*** light_power = 1.879999995
*** months_oper = 12
*** over_sizing_factor = 1.129456997
*** pct_cooled_scale = 75
*** pct_pkgd_cooling_scale = 75
*** people_dens = 2.221999884
*** roof_R_fyi = 19
*** roof_U = 0.050999999
*** roof_type = builtup
*** run_ID = 1012_DTW_2
*** run_type = design
*** schedule_name = RET_MFS
*** setback_T = 60
*** setup_T = 85
*** sqft_scale = 30000
*** vent_peak = 0.25
*** wall_R_fyi = 11
*** wall_U = 0.079000004
*** wall_const_fyi = Masonry
*** wall_type = mass
*** wban_number = 94847

```

```

*****
*****
**          These are all the variables used in the simulation inputs or
calculations*****

```

```
*** Activity_Level = 0.425000012
*** COPDC = 3.0543677458766
*** Diversity_Lights = 1
*** EER = 8.899999619
*** Equip_Core = 13.65
*** Equip_Perim = 2.05
*** HPHeatCapRatio = 0.5
*** Inf_Core = 0.00
*** Inf_Perim = 49.40
*** Lighting_Core = 64.16
*** Lighting_Perim = 9.62
*** OAcfm_per_sf = 0.25
*** People_Core = 22.22
*** People_Perim = 3.33
*** RoofInsK = 0.0265
*** SHWpeak_Bldg = 32.00
*** WWR = 0.200000003
*** WallInsK = 0.053
*** activity_level = 0.425000012
*** aspect_ratio_scale = 1.5
*** base_fan_esp = 0.75
*** bldg_type = ret
*** city = 94847
*** cool_SPT = 75
*** cool_sys = packaged
*** dflpr = 0.3274
*** econ = Yes
*** econ_hi_limit = 70
*** econ_type = Enth
*** equip_power = 0.400000006
*** equipfleoh = 4579
*** fan_power_ratio = 0.109999999
*** fanpressure = 1.99301096666825
*** fens_SC = 0.479999989
*** fens_U = 0.59
*** floors_scale = 2
*** floortype = slab
*** heat_SPT = 70
*** heat_sys = gasf
*** heateff_t = 0.8
*** infiltration = 0.037999999
*** lat = 42.23
*** light_power = 1.879999995
*** lightfleoh = 4014
*** long = 83.33
*** months_oper = 12
*** occfleoh = 2513
*** over_sizing_factor = 1.129456997
*** pct_cooled_scale = 75
*** pct_pkgd_cooling_scale = 75
*** people_dens = 2.221999884
*** prelim_equipfleoh = 4662
```

```
*** prelim_lightfleoh = 4292
*** prelim_occfleoh = 2806
*** roofR_BOA = 2.0503
*** roof_R_fyi = 19
*** roof_U = 0.050999999
*** roof_type = builtup
*** roofinsulthick = 0.4652
*** run_ID = 1012_DTW_2
*** run_type = design
*** schedule_name = RET_MFS
*** sclns = 1
*** sdate = 21 Jul
*** sdbhi = 87
*** sdblo = 66.6
*** sdir = 230
*** setback_T = 60
*** setup_T = 85
*** shw_eff = 0.8
*** shw_fuel = gas
*** shw_loss = 0.0011
*** slabInsK = 0.001
*** slabR_Boa = 2.846
*** slab_U_eff = 0.77
*** slabinsulthick = 0.0001
*** spres = 397
*** sqft_scale = 30000
*** susn1 = WEEKDAY
*** swb = 72
*** sws = 1144
*** sys_isp = 1.24301096666825
*** tz = 5
*** vent_peak = 0.25
*** wallR_BOA = 1.8521
*** wall_R_fyi = 11
*** wall_U = 0.079000004
*** wall_const_fyi = Masonry
*** wall_type = mass
*** wallinsulthick = 0.5727
*** wban_number = 94847
*** wclns = 0
*** wdate = 21 Jan
*** wdbhi = 6
*** wdblo = 5
*** wdir = 240
*** wndw_r = 0.8449
*** wpres = 397
*** wusn1 = WEEKDAY
*** ww b = 3.2
*** wws = 2112
```