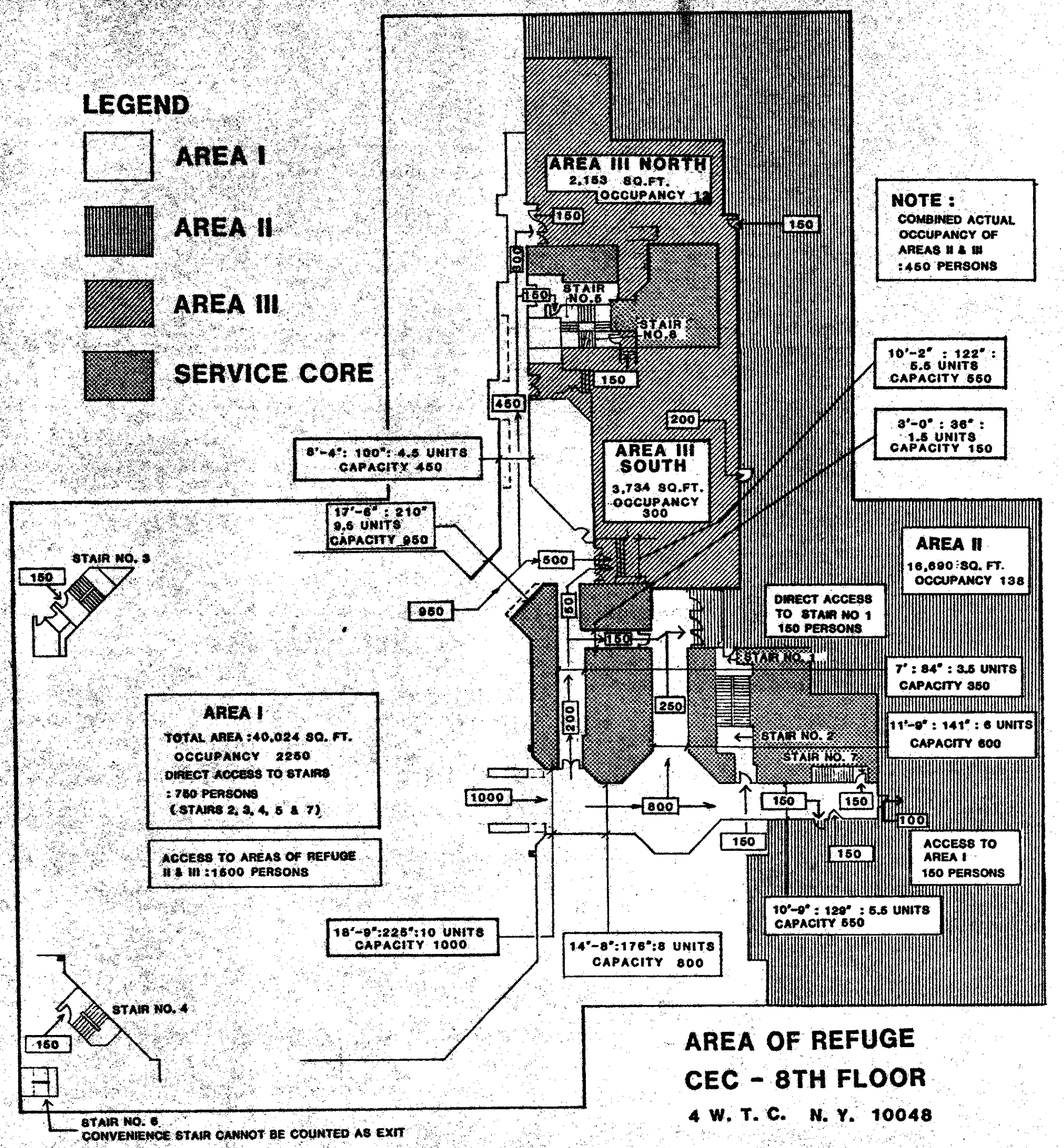


AREA OF REFUGE
CEC - 8TH FLOOR
4 W. T. C. N. Y. 10048

ANALYSIS:

A. EXIT REDUCTION C26-603.3)
If two (2) areas of refuge are provided, the number of persons for which vertical exits (stairs) must be provided can be reduced to 33 1/3% of the occupant load of the floor area. Occupancy Area I = 2,250 persons 2,250 x 33 1/3% = 750 persons. 750 persons require direct access to stair.

B. OCCUPANT LOAD C26-604.5b)
Areas of refuge must be adequate in size to hold the occupant load it receives from the area it serves, in addition to its own occupant load, allowing 3 square feet per person.
AREA I - 40,024 square feet
Normal Occupancy 2,250
Maximum Refuge Occupancy 300
Total 2,550
Refuge Area required = 2,550 persons x 3 square feet = 7,650 square feet.
AREA II - 16,690 square feet
Normal Occupancy 138
Maximum Refuge Occupancy 650
Total 788
Refuge Area required = 788 persons x 3,square feet = 2,464 square feet.
AREA III - North - 2,153 square feet
Normal Occupancy 12
Maximum Refuge Occupancy 300
Total 312
Refuge Area required =
312 x 3 square feet = 936 sq. ft.
Area III - South - 3,734 square feet
Normal Occupancy 300
Maximum Refuge Occupancy 550
Total 850
Refuge Area Required =
850 x 3 sq. ft. = 1,754 sq. ft.

C. REQUIRED EXITS (C26-604.5c)
Areas of refuge shall be provided with at least one (1) vertical exit (stair).

D. DETERMINATION OF EXIT STAIR CAPACITY (C26-600 TABLE 6-1)
See drawing No. S-10 for calculations.

E. HORIZONTAL EXIT CAPACITY (C26-600 TABLE 6-1)
1. Door Width = 3'-0" = 1 1/2 Units = 150 persons.
2. Door Width = 3'-8" = 2 Units = 200 persons.

F. EXIT PASSAGEWAY CAPACITY C26-604.3; TABLE 6-1)
1. 1 Unit = 22" = 100 persons.
2. 1/2 Unit = 12" = 50 persons.

G. TOTAL ACTUAL FLOOR OCCUPANCY (PROPOSED)
Area I 2,250 persons
Area II & III 450 persons
Total Floor Occupancy 2,700 persons

H. TOTAL DESIGN FLOOR OCCUPANCY (BASED ON STAIR CAPACITY AND 2 AREAS OF REFUGE)
Area I 2,250
Area II 450
Area III 450
Total Floor Occupancy 3,150

REVISIONS
SUBMITTED TO F.A. FOR REVIEW

CEC
COMMODITIES EXCHANGE CENTER, INC.
FOUR WORLD TRADE CENTER
NEW YORK, NEW YORK 10048

EGRESS UPGRADE
PHASE 1&2

TITLE
8TH FLOOR
AREA OF REFUGE PLAN

SONSIONORE BRIGNATI & MAZZOTTA, P.C. ARCHITECTS
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