ZONE _____ OF _____ ZONES

FIRE/SMOKE ZONE* EVALUATION WORKSHEET FOR HEALTH CARE FACILITIES

2000 LIFE SAFETY CODE

FACILITY	BUILDING
ZONE(S) EVALUATED	
PROVIDER/VENDOR NO.	DATE OF SURVEY

COMPLETE THIS WORKSHEET FOR EACH ZONE. WHERE CONDITIONS ARE THE SAME IN SEVERAL ZONES, ONE WORKSHEET CAN BE USED FOR THOSE ZONES.

Step 1: Determine Occupancy Risk Parameter Factors - Use Table 1.

A. For each Risk Parameter in Table 1, select and circle the appropriate risk factor value. Choose only one for each of the five Risk Parameters.

TABLE 1. OCCUPANCY RISK PARAMETER FACTORS

Risk Parameters	Risk Factors Values				
1. Patient Mobility *(M)*	Mobility Status	Mobile	Limited Mobility	Not Mobile	Not Movable
	Risk Factor	1.0	1.6	3.2	4.5
2. Patient Density *(D)*	No. of Patients	1–5	6–10	11–30	>30
	Risk Factor	1.0	1.2	1.5	2.0
3. Zone Location *(L)*	Floor	1st	2nd or 3rd	4th to 6th	7th and Above	Basements
	Risk Factor	1.1	1.2	1.4	1.6	1.6
4. Ratio of Patients to Attendants *(T)*	Patients / Attendant	1–2 / 1	3–5 / 1	6–10 / 1	>10 / 1	One or More / None
	Risk Factor	1.0	1.1	1.2	1.5	4.0
5. Patient Average Age *(A)*	Age	Under 65 Years and Over 1 year		65 Years and Over 1 Year and Younger		
	Risk Factor	1.0		1.2		

Step 2: Compute Occupancy Risk Factor (F) - Use Table 2.

A. Transfer the circled risk factor values from Table 1 to the corresponding blocks in Table 2.

B. Compute F by multiplying the risk factor values as indicated in Table 2.

TABLE 2. OCCUPANCY RISK FACTOR CALCULATION

	M		D		L		T		A		F
OCCUPANCY RISK	☐	X	☐	X	☐	X	☐	X	☐	=	☐

Step 3: Compute Adjusted Building Status (R) - Use Table 2.

A. If building is classified as “NEW” use Table 3A. If building is classified as “Existing” use Table 3B.

B. Transfer the value of F from Table 2 to Table 3A or Table 3B as appropriate. Calculate R.

C. Transfer R to the block labeled R in Table 7 on page 4 of the work sheet.

TABLE 3A. (NEW BUILDINGS)

	F		R
1.0 X	☐	=	☐

TABLE 3B. (EXISTING BUILDINGS)

	F		R
0.6 X	☐	=	☐

*** FIRE/SMOKE ZONE is a space separated from all other spaces by floors, horizontal exits, or smoke barriers.**

SURVEYOR SIGNATURE	TITLE	DATE
FIRE AUTHORITY SIGNATURE	TITLE	DATE

Step 4: Determine Safety Parameter Values - Use Table 4.

A. Select and circle the safety value for each safety parameter in Table 4 that best describes the conditions in the zone. Choose only one value for each of the 13 parameters. If two or more appear to apply, choose the one with the lowest point value.

TABLE 4.

Safety Parameters	Safety Parameters Values						
1. Construction	Combustible Types III, IV, and V				NonCombustible Types I and II		
Floor or Zone	000	111	200	211 + 2HH	000	111	222, 322, 433
First	-2	0	-2	0	0	2	2
Second	-7	-2	-4	-2	-2	2	4
Third	-9	-7	-9	-7	-7	2	4
4th and Above	-13	-7	-13	-7	-9	-7	4
2. Interior Finish (Corridors and Exits)	Class C	Class B	Class A				
	-5(0)[f]	0(3)[f]	3				
3. Interior Finish (Rooms)	Class C	Class B	Class A				
	-3(1)[f]	1(3)[f]	3				
4. Corridor Partitions/Walls	None or Incomplete	<1/2 hour	≥1/2 to <1 hour	≥1 hour			
	-10(0)[a]	0	1(0)[a]	2(0)[a]			
5. Doors to Corridor	No Door	<20 min FPR	≥20 min FPR	≥20 min FPR and Auto Clos.			
	-10	0	1(0)[d]	2(0)[d]			
6. Zone Dimensions	Dead End			No Dead Ends >30 ft and Zone Length Is			
	>100 ft	>50 ft to 100 ft	30 ft to 50 ft	>150 ft	100 ft to 150 ft	<100 ft	
	-6(0)[b]	-4(0)[b]	-2(0)[b]	-2(0)[c]	0	1	
7. Vertical Openings	Open 4 or More Floors	Open 2 or 3 Floors	Enclosed with Indicated Fire Resist.				
			<1 hr	≥1 hr to <2 hr	≥2 hr		
	-14	-10	0	2(0)[e]	3(0)[e]		
8. Hazardous Areas	Double Deficiency		Single Deficiency		No Deficiencies		
	In Zone	Outside Zone	In Zone	In Adjacent Zone			
	-11	-5	-6	-2	0		
9. Smoke Control	No Control	Smoke Barrier Serves Zone	Mech. Assisted Systems by Zone				
	-5(0)[c]	0	3				
10. Emergency Movement Routes	<2 Routes	Multiple Routes					
		Deficient	W/O Horizontal Exit(s)	Horizontal Exit(s)	Direct Exit(s)		
	-8	-2	0	1	5		
11. Manual Fire Alarm	No Manual Fire Alarm		Manual Fire Alarm				
			W/O F.D. Conn.	W/F.D. Conn			
	-4		1	2			
12. Smoke Detection and Alarm	None	Corridor Only	Rooms Only	Corridor and Habit. Spaces	Total Spaces In Zone		
	0(3)[g]	2(3)[g]	3(3)[g]	4	5		
13. Automatic Sprinklers	None	Corridor and Habit. Space	Entire Building				
	0	8	10				

NOTE:

[a] Use (0) where parameter 5 is -10.

[b] Use (0) where parameter 10 is -8.

[c] Use (0) on floor with fewer than 31 patients (existing buildings only)

[d] Use (0) where parameter 4 is -10.

[e] Use (0) where Parameter 1 is based on first floor zone or on an unprotected type of construction (columns marked “000” or “200”)

[f] Use ( ) if the area of Class B or C interior finish in the corridor and exit or room is protected by automatic sprinklers and Parameter 13 is 0; use ( ) if the room with existing Class C interior finish is protected by automatic sprinklers, Parameter 4 is greater than or equal to 1, and Parameter 13 is 0.

[g] Use this value in addition to Parameter 13 if the entire zone is protected with quick-response automatic sprinklers.

For SI units: 1 ft = 0.3048 m

Step 5: Compute Individual Safety Evaluations – Use Table 5.

A. Transfer each of the 13 circled Safety Parameter Values from Table 4 to every unshaded block in the line with the corresponding Safety Parameter in Table 5. For Safety Parameter 13 (Sprinklers) the value entered in the People Movement Safety column is recorded in Table 5 as ½ the corresponding value circled in Table 4.

B. Add the four columns, keeping in mind that any negative numbers deduct.

C. Transfer the resulting total values for S_1, S_2, S_3, S_G to blocks labeled S_1, S_2, S_3, S_G in Table 7 on page 4 of this sheet.

TABLE 5. INDIVIDUAL SAFETY EVALUATIONS

Safety Parameters	Containment Safety (S_1)	Extinguishment Safety (S_2)	People Movement Safety (S_3)	General Safety (S_4)
1. Construction				
2. Interior Finish (Corr. and Exit)				
3. Interior Finish (Rooms)				
4. Corridor Partitions/Walls				
5. Doors to Corridor				
6. Zone Dimensions				
7. Vertical Openings				
8. Hazardous Areas				
9. Smoke Control				
10. Emergency Movement Routes				
11. Manual Fire Alarm				
12. Smoke Detection and Alarm				
13. Automatic Sprinklers			÷ 2 =	
Total Value	**S_1=**	**S_2=**	**S_3=**	**S_4=**

TABLE 6.
MANDATORY SAFETY REQUIREMENTS (FOR USE IN HOSPITALS OR NURSING HOMES)

Zone Location	Containment (S_a)		Extinguishment (S_b)		People Movement (S_c)	
	New	Exist.	New	Exist.	New	Exist.
1st story	11	5	15(12)[a]	4	8(5)[a]	1
2nd or 3rd story[b]	15	9	17(14)[a]	6	10(7)[a]	3
4th story or higher	18	9	19(16)[a]	6	11(8)[a]	3

a. Use ( ) in zones that do not contain patient sleeping rooms.

b. For a 2nd story zone location in a sprinklered EXISTING facility, as an alternative to the mandatory safety requirement values set specified in the table, the following mandatory values *set* shall be permitted to be used: S_a=7, S_b=10, and S_c=7

Step 6: Determine Mandatory Safety Requirement Values - Use Table 6.

A. Using the classification of the building (i.e., New or Existing) and the floor where the zone is located circle the appropriate value in each of the three columns in Table 6.

B. Transfer the three circled values from Table 6 to the blocks marked S_a, S_b, and S_c in Table 7.

C. For each row check "Yes" if the value in the answer block is zero or greater. Check "No" if the value in the answer block is a negative number.

TABLE 7. ZONE FIRE SAFETY EQUIVALENCY EVALUATION					Yes	No
Containment Safety (S_1)	minus	Mandatory Containment (S_a)	≥ 0	S_1 ☐ − S_a ☐ = C ☐		
Extinguishment Safety (S_2)	minus	Mandatory Extinguishment (S_b)	≥ 0	S_2 ☐ − S_b ☐ = E ☐		
People Movement Safety (S_3)	minus	Mandatory People Movement (S_c)	≥ 0	S_3 ☐ − S_c ☐ = P ☐		
General Safety (S_4)	minus	Occupancy Risk (R)	≥ 0	S_4 ☐ − R ☐ = G ☐		

TABLE 8. FACILITY FIRE SAFETY REQUIREMENTS WORKSHEET				
Complete one copy of this worksheet for each facility. For each consideration, select and mark the appropriate column.		Met	Not Met	Not Applic.
A.	Building utilities conform to the requirements of Section 9.1.			
B.	In new facilities only, life-support systems, alarms, emergency communication systems, and illumination of generator set locations are powered as prescribed by 18.5.1.2 and 18.5.1.3.			
C.	Heating and air conditioning systems conform with the air conditioning, heating, and ventilating systems requirements within Section 9.2, except for enclosure of vertical openings, which have been considered in Safety Parameter 7 of Worksheet 4.7.6.			
D.	Fuel-burning space heaters and portable electrical space heaters are not used.			
E.	There are no flue-fed incinerators.			
F.	An evacuation plan is provided and fire drills conducted in accordance with 18.7.1/18.7.2 and 19.7.1/19.7.2.			
G.	Smoking regulations have been adopted and implemented in accordance with 18.7.4 and 19.7.4.			
H.	Draperies, upholstered furniture, mattresses, furnishings, and decoration combustibility is limited in accordance with 18.7.5 and 19.7.5.			
I.	Fire extinguishers are provided in accordance with the requirements of 18.3.5.4 and 19.3.5.6.			
J.	Exit signs are provided in accordance with the requirements of 18.2.10.1 and 19.2.10.			
K.	Emergency lighting is provided in accordance with 18.2.9.1 or 19.2.9.			
L.	Standpipes are provided in all new high rise buildings as required by 18.4.2.			

CONCLUSIONS

1. ☐ All of the checks in Table 7 are in the "Yes" column. The level of fire safety is at least equivalent to that prescribed by the *Life Safety Code*.*

2. ☐ One of more of the checks in Table 7 are in the "No" column. The level of fire safety is not shown by this system to be equivalent to that prescribed by the *Life Safety Code*.*

*The equivalency covered by this worksheet includes the majority of considerations covered by the *Life Safety Code*. There are a few considerations that are not evaluated by this method. These must be considered separately. These additional considerations are covered in Table 8, the "Facility Fire Safety Requirements Worksheet." One copy of this separate worksheet is to be completed for each facility.

FIRE SAFETY SURVEY REPORT
CRUCIAL DATA EXTRACT
(TO BE USED WITH CMS-2786 FORMS)

PROVIDER NUMBER	FACILITY NAME	SURVEY DATE
K1		* K4

K6 DATE OF PLAN APPROVAL

K3 MULTIPLE CONSTRUCTION

TOTAL NUMBER OF BUILDINGS _____

NUMBER OF THIS BUILDING _____

☐

A BUILDING
B WING
C FLOOR
D APARTMENT UNIT

LSC FORM INDICATOR

Health Care Form		
12	2786R	2000 EXISTING
13	2786R	2000 NEW

ASC Form		
14	2786U	2000 EXISTING
15	2786U	2000 NEW

ICF/MR Form		
16	2786V, W, X	2000 EXISTING
17	2786V, W, X	2000 NEW

* K7 ☐ SELECT NUMBER OF FORM USED FROM ABOVE

COMPLETE IF ICF/MR IS SURVEYED UNDER CHAPTER 21

SMALL (16 BEDS OR LESS)

K8: ☐ 1 PROMPT 2 SLOW 3 IMPRACTICAL

LARGE

K8: ☐ 4 PROMPT 5 SLOW 6 IMPRACTICAL

APARTMENT HOUSE

K8: ☐ 7 PROMPT 8 SLOW 9 IMPRACTICAL

(Check if K29 or K56 are marked as not applicable in the 2786 M, R, T, U, V, W, X and Y.)

K29: ☐ K56: ☐

ENTER E – SCORE HERE

K5: ☐ e.g. 2.5

*K9: FACILITY MEETS LSC BASED ON *(Check all that apply)*

A1. ☐ (COMP. WITH ALL PROVISIONS)

A2. ☐ (ACCEPTABLE POC)

A3. ☐ (WAIVERS)

A4. ☐ (FSES)

A5. ☐ (PERFORMANCE BASED DESIGN)

FACILITY DOES NOT MEET LSC

B. ☐

K0180

A. ☐ FULLY SPRINKLERED (All required areas are sprinklered)

B. ☐ PARTIALLY SPRINKLERED (Not all required areas are sprinklered)

C. ☐ NONE (No sprinkler system)

* MANDATORY