

General Methods

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Ground Rules: The APPA method to evaluate custodial staffing is based on three ground rules. They are:

1. **Appearance Levels**—If cleaning activities are accomplished with decreasing frequency, appearance will suffer. Five appearance levels have been defined.
2. **Standard Spaces**—Not all spaces are created equal. Different types of space require different types and amount of cleaning effort. Thirty-three distinct standard space types have been identified for which cleaning data have been accumulated.
3. **All Data Presented in Assignable Square Feet (cleanable square feet, CSF) Per Worker**—This is an industry standard of measure by which comparisons can be made.

Appearance Levels

Although the concept appears elementary, it is often difficult to explain to senior administrators. There is a direct correlation between the available amount of resources and the appearance of the facilities. Therefore, the five levels are mathematically tied, through the accumulated data, to the number of workers required to produce a given level of appearance. Subsequently, the authors determined that these guidelines should describe cleaning requirements to produce five levels of cleanliness. The levels and their appearance factors are:

Level 1—Orderly Spotlessness

- Floors and base moldings shine and/or are bright and clean; colors are fresh. There is no buildup in corners or along walls.
- All vertical and horizontal surfaces have a freshly cleaned or polished appearance and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Level 2—Ordinary Tidiness

- Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days worth of dust, dirt, stains, or streaks.
- All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable upon close observation. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Level 3—Casual Inattention

- Floors are swept or vacuumed clean, but upon close observation there can be stains. A buildup of dirt and/or floor finish in corners and along walls can be seen.
- There are dull spots and/or matted carpet in walking lanes. There are streaks or splashes on base molding.
- All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints. Lamps all work and fixtures are clean.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Level 4—Moderate Dinginess

- Floors are swept or vacuumed clean, but are dull, dingy, and stained. There is a noticeable buildup of dirt and/or floor finish in corners and along walls.
- There is a dull path and/or obviously matted carpet in the walking lanes. Base molding is dull and dingy with streaks or splashes.
- All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks. Lamp fixtures are dirty and some lamps (up to 5 percent) are burned out.
- Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked. Trash containers smell sour.

Level 5—Unkempt Neglect

- Floors and carpets are dull, dirty, dingy, scuffed, and/or matted. There is a conspicuous buildup of old dirt and/or floor finish in corners and along walls. Base molding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.
- All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, all of which will be difficult to remove. Lack of attention is obvious.
- Light fixtures are dirty with dust balls and flies. Many lamps (more than 5 percent) are burned out.

- Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour.

Standard Spaces

The second ground rule: We established 33 standard area types and identified cleaning activities required to attain each respective level of cleanliness. Hundreds of respondents from educational institutions contributed data to establish cleaning times for the activities in each space category. The size of each standard space is defined by “cleanable square feet” (CSF) and the fixed and movable contents of the area. Cleanable square feet is wall-to-wall area.

Staffing Level Summary

The third ground rule is the requirement that the format of the results must be cleanable square feet assigned to each custodian. Figure 1 summarizes the basic data used in the guidelines for staff predictions in units of assignable square feet per custodian rounded to the nearest hundred square feet. Although actual staffing can vary, these are good figures to make a rough estimate of staff required. They dramatically demonstrate the variable cleaning requirements for different space types and cleaning levels. The results presented assume 420 productive minutes per shift per custodian. The details of how the summary is developed from the survey data will be presented in Chapter 2. Subsequent chapters will address the process for identifying variables that exist in your institution.

Synopsis of the Methods

In order to use the material in this book you must create an inventory of each space for which you are responsible. The more accurate the inventory is, the more accurate your results will be. Each space in the inventory must be measured in CSF or wall-to-wall area in square feet and be assigned one of the APPA space categories. If you do not see an exact match of an APPA category for your space, choose one that is similar and assign that category. Later, in the Barton Hall staffing example in Chapter 4, there is a “Treat Like” exercise that explains this in detail. For example, a Conference Room can be “Treated Like” an Office. If there is no close match, you may have to develop your own data for a given space.

Each standard space has cleanable square feet that can be assigned to a custodian. The number of staff required to clean a given number of square feet is calculated by dividing that measurement by the square feet assigned to each custodian. The result will be different for each cleaning level, since the CSF assignment will increase with a poorer appearance classification. The method assumes that cleaning time is directly proportional to the area of a given space. Although the staffing level summary is simplistic, its accuracy

Figure 1 Staffing Service Levels

APPA Standard Space	Level #1	Level #2	Level #3	Level #4	Level #5
Classroom with Hard Floor	8,500	16,700	26,500	39,500	45,600
Entranceway	4,300	7,500	12,300	20,700	35,000
Locker/Changing Room - No Shower	11,800	12,100	xxxx	xxxx	xxxx
Office with Carpet Floor	9,600	18,200	32,000	53,000	87,000
Public (Circulation) with Hard Floor	7,500	20,500	30,500	38,400	41,800
Research Lab with Hazardous Waste	5,200	7,000	8,200	11,400	28,200
Research Lab without Hazardous Waste	6,900	10,600	13,500	25,000	87,200
Stairwell	7,500	15,100	17,400	24,500	75,300
Storeroom	77,000	210,000	395,300	1,832,700	3,360,000
Washroom	2,000	2,600	xxxx	xxxx	xxxx
Shower Room	5,200	5,200	xxxx	xxxx	xxxx
Public (Circulation) with Carpet Floor	17,700	40,400	53,500	80,900	93,600
Office with Hard Floor	8,400	14,600	25,100	36,000	49,500
Classroom with Carpet Floor	9,700	21,700	24,000	34,700	37,200
Classroom with Carpet Floor-High Use	5,100	12,700	13,400	17,900	18,800
Classroom with Hard Floor-High Use	4,700	9,600	10,100	21,000	22,900
Washroom-High Use	1,000	1,300	xxxx	xxxx	xxxx
Utility	4,100	5,500	9,800	17,700	45,700
Vending	4,800	11,100	16,000	17,700	19,500
Dormitory Lounge	5,200	8,700	17,800	42,900	136,500
Cafeteria with Carpet	9,900	15,400	xxxx	xxxx	xxxx
Cafeteria with Hard Floor	11,200	16,400	xxxx	xxxx	xxxx
Library with Carpet	17,900	36,900	72,600	106,400	126,800
Library with Hard Floor	10,900	20,200	23,500	47,000	57,000
Auditorium Seating & Foyer	5,700	14,000	32,600	67,200	408,000
Auditorium Stage & Wings	18,600	27,500	82,800	239,500	xxxx
Gymnasium (Wood Floor)	17,300	36,500	80,700	257,400	1,108,200
Dormitory Washroom	1,500	1,800	xxxx	xxxx	xxxx
Dormitory Sleep/Study	3,900	4,100	8,000	18,700	24,700
Patient Conference Room	8,300	8,300	xxxx	xxxx	xxxx
Patient Treatment Area — Carpeted	3,300	3,300	xxxx	xxxx	xxxx
Patient Treatment Area — Hard Floor	2,900	2,900	xxxx	xxxx	xxxx
Nursing Station — Hard Floor	5,700	5,700	xxxx	xxxx	xxxx

can be highly developed using methods described in Chapter 2. Even so, the summary can be used to quickly answer many questions such as:

- How many custodians do I theoretically need to clean my facility at a specific level of cleanliness?
- Given CSF for each type of area and FTE, what is my theoretical cleaning level?
- How many custodians do I need to improve service? (This can be a double-edged sword.)
- How many minutes should it take to clean a specific room?

Results here are theoretical because they are based on “averages.” Your results may differ from the calculations because of a number of variables; these will be discussed in later chapters. Take a few minutes to go through the following exercises; it is an important process that will help to fix the concepts in your mind.

Example 1

Your campus has 251,876 square feet of space assigned to classrooms with hard floors, and 6 custodians to clean that space. Identify your current theoretical cleaning level on Figure 1 and calculate the number of custodians required to clean at Level 2.

Current position:

- ⊕ $251,876 \text{ CSF} \div 6 \text{ custodians} = 41,979 \text{ sq. ft. per custodian}$. Refer to Figure 1, Classroom with Hard Floor. Level 4 is 39,500 CSF, and Level 5 is 45,600 CSF, so your level will fall between these two levels and you would expect a corresponding appearance.

Additional custodians required to clean at Level 2:

- ⊕ $251,876 \text{ CSF} \div 16,700 \text{ (assignable CSF per custodian at Level 2)} = 15.08$ (round off to 15.1), since you already have 6 custodians, an additional 9.1 custodians will be required.

Example 2

You have a 2,640 CSF room which is designated as a Chemistry Lab. How long should it take to clean that space at Level 2?

- ⊕ Assume the space can be “Treated Like” a Research Lab without Hazardous Waste, with a 10,600 CSF per custodian assignment at Level 2. $2,640 \text{ CSF} \div 10,600 \text{ CSF per custodian} = 0.249$ FTE. Since the summary is based on 420 minutes per shift, it will take $0.249 \times 420 = 104.6$ minutes to clean that space.

Example 3

You have a Workers Compensation hearing scheduled in which a worker is claiming job stress due to overwork and wants to be awarded a disability. He is assigned 18,000 CSF of carpeted offices in his 7-productive-hour shift (420 minutes), with activities to be performed at Level 2 frequencies. As shown in Figure 1, the APPA guidelines say the worker can do 18,200 CSF. This was an actual experience. The claim was denied.