HOSPITAL INTERIOR DESIGN SPECIFICATION DEVELOPMENT

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When a study is made in any specialized area, credit should not be given only to its author. It is with the help of his faculty, specialists in the area, and others knowledgeable about the field that the author can have a more complete picture of what he is studying.

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CHAPTER I

INTRODUCTION

Architectural innovations in hospital design have changed the traditional institutional appearance associated with hospital structures into contemporary designs which allow transition from the exterior environmental setting. The interiors, too, continue the transition not only from the exterior but also from the residential to the institutional.

Placement, function and durability of products used in hospitals head the considerations a designer must face; but the aesthetic qualities such as color and texture can affect the psychological atmosphere as well. Attitudes of patients, their families and the hospital staff can ultimately affect recovery.

The typical austere clinical look of hospitals of the past is being replaced with warm, more inviting interiors. Cool colors, ceramic tile walls and hard flooring are frequently being replaced by warm earth colors, vinyl wall covering and carpeted floors.

Changes in the shapes of patient rooms from the rectangular to innovative areas which include at least one diagonal wall have produced trapezoidal, hexagonal and other angular shapes. Placement of beds on the angled wall may facilitate patient handling.

The architect in developing his design works with the hospital board and staff to help determine the functional flow. General specialty suites and room dimensions have been established by the time the interior

designer is consulted. The flow pattern has been charted and the areas arranged accordingly. Open space regions designed for business office, lobby, lounge or waiting room use are often the responsibility of the interior designer. Definition of these spaces can be achieved through the use of a contrast of carpeting and resilient flooring, a contrast of patterns or colors in carpeting, or through furniture grouping as well as divider screen panels.

Graphics and color keying of specific areas of the hospital and universal visual identifications aid in the ease of traffic flow.

Waiting rooms and lobbies do not comprise a majority of the space in a hospital. Patient rooms and areas for specialized treatment dominate. Most of these areas call for specific equipment. This machinery by nature of its function is an integral part of the space design. Many products now being designed are aesthetically more pleasing and lend themselves to more attractive interiors than formerly. When specialized equipment is obtained directly from hospital supply companies, it is not generally the responsibility of the interior designer. However, knowledge of the dimensions and color of this equipment is essential.

New developments in hospital furnishings have revolutionized the design approach in certain areas. The introduction of modular furnishing systems exemplifies a new approach to health care interiors. This and other innovations such as environmental care units and the patient room supply system will be covered in ensuing chapters.

This study involves the development of design specifications for hospital interiors and does not encompass the design of the structure except where it pertains to the division of space. Product knowledge is vital to the designer/specifier. Flooring, wall treatments, lighting,

furnishings and communication systems must be combined as an integral whole. Lack of vital information in any of these areas can be unfortunate toward the function of the finished interior.

Purpose

The purpose of this study is to provide interior designers, students, and administrators unfamiliar with hospital requirements a reference which may acquaint them with some of the specifications needed for hospital interiors.

Procedure

The procedure of this study was to review the literature and investigate current installations at the Stillwater Municipal Hospital as well as selections for the Stillwater Municipal Hospital scheduled for completion Fall, 1975, and from these studies developed criteria applicable to the selection of flooring, wall covering, color, lighting, and furnishings.

CHAPTER II

REVIEW OF LITERATURE

Health care is becoming one of the nation's fastest growing industries. As a result, interest in the field has increased. Architects, interior designers, and manufacturers as well as those actually working in the area such as doctors, nurses and administrators are all becoming cognizant of the new trends in hospital design. Awareness is increased by regularly featured articles in Interiors and Interior Design, publications of both residential and contract interiors, Contract, the magazine of commercial furnishings and interior architecture, Architectural Record, Progressive Architecture and the AIA Journal, publications directed toward architects.

Experienced designers of medical facilities generally agree that a hospital environment should be humanistic, warm and functional. The importance of color, finishes, and furnishings have been discussed by Mary Louise Shum, A.I.D.[1] and designer Jain Malkin[2], both of California, and James Falick, A.I.A. of New York City.[3] These and other designers differ in opinions about specific use of such techniques as supergraphics but have similar interests in their search for solutions to the physiological and psychological needs of both patients and staff within the hospital.

Flooring

In Interiors, Herbert Bright, a flooring consultant, reviewed resilient and hard surface flooring. The different types of vinyls and other resilient products were included as well as wood, marble, ceramic, stone, slate and brick. Designer-supplier relationships and installation procedure information acquaint the designer with the business aspects of resilient flooring.[4] New product information is featured periodically in Interiors and in Contract. Innovations in construction and design are pictured with a brief synopsis describing them. Manufacturers' literature supplies information on their products outlining performance, suggested end uses and recommended maintenance procedures. The general concensus of all was that, of the resilient floorings, vinyl asbestos tile is currently the most widely used. Poured epoxy terrazzo-like surfaces are generally preferred where conductive flooring is needed.

Innovations in carpet have changed its end uses, especially in the contract field. Bernie Egerter discusses flamability, wearability, maintenance, acoustics, traction, static and color of carpeting as outlined relating to health care use.[5]

Wallcoverings

New developments in wall treatment are featured in both Interiors and Contract magazines and in numerous other design publications. At least two issues per year discuss vinyl wallcoverings as well as High Performance Architectural Coatings, their uses, types of coatings and general characteristics. Most of the articles are centered around product information. Throughout design magazines products are featured and accompanied by photographs. The trends in the design of wallcoverings

can be visually interpreted through these photographs which are frequently in full color. Specification guides supplied by manufacturers describe their products and give their suggested uses. Selection of wallcoverings is flexible, as many new products insure durability and ease of maintenance as well as contributing to the aesthetic quality of the hospital.

Color

Color selection for hospital interiors involves both physiological and psychological effects of color. Mary Louise Shum[6] and James Falick[7] feel that color is an integral part of the design of the hospital. In these articles and in Hospitals, J.A.H.A. the behavioral effects of color in interior design are discussed. Absence of stress, relief from the monotony of long stays and the effect of color in diagnostic areas are all considerations the designer faces in selecting colors for hospital interiors. Faber Birren, noted for his research in color, explores the use of color in everyday life, color in diagnosis, psychiatry and color, and the effect of color on mood.[8]

Lighting

Lighting is a highly technical area which is mainly the responsibility of the architect. The I.E.S. Lighting Handbook, a publication of the Illuminating Engineer Society, provides a list of the minimum foot-candles needed in each particular area of the hospital.[9] The choice between the use of incandescent or fluorescent fixtures depends upon the activity in the space for which it is selected. When maximum visability and consistent illumination are needed, fluorescent lamps may be

preferred. When warmth and a less harsh environment is desired, incandescent lighting fulfills this need. Whichever lighting is selected, most sources agree that a consistency of color in diagnostic areas is essential.

Furnishings

Product literature in issues of Interiors magazine which featured health care furnishings and brochures from manufacturers provided information on current innovations in hospital equipment and furnishings. "Design Lines", a regular feature in Hospitals, J.A.H.A., follows current trends and developments in hospital design. A guide for hospital equipment buyers, published annually in this magazine, lists hospital products and services currently available.

August Hoenack, Chief of the Architectural and Engineering Branch of the Public Health Service, suggests layouts of each hospital department including interrelationships and inventory lists of equipment and furnishings. Although most of this information is directed toward architects, interior designers can also benefit from suggestions regarding finishes and furnishings.[10] For a detailed discussion of patient housing, therapy, supply, housekeeping, administrative, business and utility systems, Roy Hudenburg has devoted the majority of his book, Planning the Community Hospital, to these areas.[11] Brochures and product information as published by manufacturers are listed in Appendix H.

FOOTNOTES

[1]Mary Louise Shum, "Hospital Interiors Should Comfort, Entertain--Not Excite," Interiors, CXXXIV (1974), pp. 93-94.

[2]Jain Malkin, "Thoughts on Interior Design of Medical Facilities," Interior Design, XLIII (1972), pp. 157, 170-171.

[3]James Falick, "Inmate...Patient...Patron," Interiors, CXXXII (1972), pp. 102-104.

[4]Herbert Bright, "The Do's and Don'ts of Resilient and Hard Surface Flooring," Interiors, CXXX (1970), pp. 158-159.

[5]Bernie Egerter, "Carpet World in Hospitals and Nursing Homes," Interiors, CXXXII (1972), p. 76.

[6]Shum, pp. 93-94

[7]Falick, pp. 102-104.

[8]Faber Birren, Color: A Survey in Words and Pictures (New Hyde Park, New York, 1963), pp. 177-212.

[9]John E. Kaufman, ed., I.E.S. Lighting Handbook (New York, 1972), pp. 9-84 - 9-85.

[10]August Hoenack, "Health: Hospitals," Time-Saver Standards for Building Types (New York, 1973), pp. 327-366.

[11]Roy Hudenburg, Planning the Community Hospital (New York, 1967), pp. 130-402.

CHAPTER III

DEVELOPMENT OF SPECIFICATION CRITERIA

Designing interiors involves the use of a wide range of materials. Knowledge of suitability and availability of these products is vital to the designer. This knowledge is especially important when dealing with health care interiors. Continued awareness of the different products for flooring, wall treatments, lighting, and furnishings is necessary for responsible designing. Color is an aspect which appears in all of these areas.

Flooring

Resilient and Hard Surface Flooring

Resilient and hard surface flooring were predominately used until the late 1960's when carpet was introduced into hospital interiors. In certain areas such as operating rooms, delivery rooms, fracture rooms, cystology, radiology, and most laboratories, carpet would not be so practical as resilient or hard surface flooring.

According to Alden Mills:

> Conductive floors have been essential in anesthetic areas, although some hospitals using increasing amounts of non-explosive anesthetic gases are designing some rooms without conductive features. Brass stripping is no longer recommended and some authorities are skeptical of conductive terrazzo because it can develop innumerable cracks for the retention of bacteria. Conductive ceramic or vinyl tile has fewer crevices and is proportionly more acceptable. Many planners favor the trowel applied floor-

ings of epoxyresins and polyesterins.[1]

In 1950, a static-conductive solid vinyl flooring was developed which dissipates electrostatic charges from persons wearing conductive footwear and from properly grounded equipment. This smooth continuous floor covering resists abrasion and chemicals, and helps to muffle sound and reduce foot fatigue.

Hard surface flooring refers to natural products such as wood, marble, slate, stone, brick, terrazzo, and ceramics. Durability in wood flooring necessary for contract use has been achieved through recent technology. The wood is saturated throughout its pore structure with a liquid plastic (acrylic or monomer) and is hardened by exposure to nuclear radiation. The result is the toughness of terrazzo, permanent color and low maintenance.[2] Wood flooring can be used in some areas such as hospital lobbies, waiting rooms, coffee shops and other public areas to add warmth through its natural wood grain.

"Marble and slate are quarried minerals, sliced into tile or slab shapes and thicknesses, polished and installed."[3] The initial cost continues to rise, but the permanent quality almost elimates replacement costs.

Also expensive but becoming more popular are quarry tiles, terra cotta tiles, ceramic tiles and glazed stone tiles. According to Herbert Bright in an article for Interiors, tiles are defined as follows:

> Quarry tiles are domestically made tiles of clay, molded into shape and baked. Such tiles are flat and undifferientiated in color. Terra cotta tiles are made of similar clay but usually made by hand outside of the United States, and have more interesting shadings. Both quarry tiles and terra cotta tiles are quite porous and require oiling and paste waxing. They are not the easiest tiles to maintain. Ceramic tiles both can be clay or several different types of compressed mineral granules with color pigment applied to the surface before

> baking. The higher the temperature used in baking, the more resistant the surface will be to scratching and cracking. The temperature is determined by the color. Pure prime colors must be baked at low temperatures.[4]

Unless the quarry and terra cotta tiles are coated with an acrylic or similar sealer, maintenance problems would make them unsuitable for hospital use. Ceramic tiles are available in relief patterns, decorative patterns or brilliant solid colors.

The most widely used resilient floorings include vinyl asbestos tile, asphalt tile, linoleum, sheet vinyl, cork and rubber tile. Cork is too porous for institutional use while sheet vinyl lacks the surface durability required on commercial floors. Vinyl asbestos tile is now the most widely used in contract installations, and as a result new colors and patterns have been developed.

Vinyl flooring made of polyvinyl chloride (PVC) falls into three catagories. The first, a translucent vinyl with floating color pigments, forms a marbleized pattern which does not wear off. The second, an opaque vinyl, has fillers which help to resist cigarette burns and make it appropriate for commercial use. However, "embossed patterns resembling slate, travertine, wood, stone, or brick are not recommended for heavy duty traffic areas, because once the surface embossing wears off, the pattern is gone."[5] The third, a laminate, fuses a design element--silk screen design, fabric, wood veneer, caning, etc.--between two layers of vinyl.

Cushioned sheet vinyl is available in various colors and designs. The added resilience, when used where hospital staff members are required to stand for extended periods of time, gives relief to their legs. Germ-free and waterproof surfaces result from welded seams and edges coved up walls.[6] A sheet vinyl of vinyl resins, colorfast pigments and

a hydrafelt backing is suitable for this use.[7]

In addition to traditional flooring surfaces, urethane, a more durable vinyl that PVC, in the future may be fabricated into a flooring material. Urethane is a substance that has proved to be long wearing and resistant to abrasion.[8]

In a hospital where there is activity day and night, an abrasion-resistant rubber tile permits the staff to properly maintain the floor's appearance with a minimum of traffic disturbance.[9] Rubber sheet flooring may allow movement over its surface, deaden sound, absorb shocks, prevent slipping and minimize bacterial growth. With these characteristics this particular flooring could be adopted for use in the physical therapy area.

Epoxy flooring provides maximum resistance to acids, alkalis, solvents and wear. The flooring forms a uniform seamless surface that can be simply maintained with detergents or cleaning solvents. Some manufacturers incorporate rough marble chips in their epoxy resin to resemble terrazzo.

In all other areas, except those specifically restricted to resilient or hard surfaces, carpet is now being widely used throughout hospital interiors.

Carpet

Flamability, wearability, static resistance, color fastness, cleanability, resilience, acoustical qualities and aesthetics are all elements to consider when selecting carpeting for installation in hospital interiors. Patient safety and reduced maintenance costs are especially important to the client.

Earl Taylor, Director of Aviation at McCarram International Airport in Las Vegas, Nevada, reported at least a forty percent savings in labor and material since the carpet replaced the tile flooring.[10] Using low level loop carpet, the airport also lowered its serious accident rate one hundred percent in the first three years after its installation. As a result the insurance rate was lowered.[11] According to George Human, Assistant Director of Public Works, the Fort Worth Municipal Building in Texas recovered the original carpet cost in two and one half years through maintenance cost savings.[12]

Carpet maintenance can be further minimized through proper selection of the type of fiber to be used. Fibers with maximum stain and soil resistance are recommended such as olefins and second generation nylons. Natural fibers such as wool are more porous and absorbant than the continous filament fibers which resist moisture absorption. Fibers which contribute to bacteriological growth cannot be specified for hospital use. Spilled food and liquids, airborne fumes, grease and tracked-in particles all soil carpeting. Trapped dust particles in the carpet are held and generally not circulated into the air again until vacuuming removes them. During the interim periods the color of the carpet as well as the type of fiber minimizes the appearance of soil. This quality is further improved by selection of colors peculiar to the geographic soil conditions or the environment. For example, Alan Lightkep, President of the Carpet Technical Service Institute, recommends:

> Carpets in earth-tone colors are easier to maintain in areas where reddish clay soil is tracked in. Gray or neutral color combinations in carpet usually can be maintained satisfactorily in industrial or urban environments, where the air is saturated with unburned hydrocarbons, or soot.[13]

Solids show stains and soil more readily than most tweeds, heathers

or salt and pepper mixtures. However, the lightest yarn in these combinations will still discolor like the lighter solids even though they may not be visable as soon. Patterns mask tracking and are suitable for high traffic areas such as the lobby, corridors, dining rooms and lounges. The possible exception to these colors is the use of a light color in the patient rooms. Some hospital staffs prefer to have the soil visable so that it can be thoroughly cleaned to prevent bacterial growth.

Walk-off mats bridging tiled and carpeted areas as well as immediate spot-cleaning delay the need for extensive cleaning. Preventive maintenance prolongs the life and general appearance of any carpet.

Resilience is a desirable feature for hospital carpeting as it not only prolongs the appearance of wear but increases the tractive quality and helps reduce the number of falls to ambulatory patients.

Safety factors needed in hospital interiors not only include minimization of injuries but also the protection of the patient from problems related to static build-up. Cardiac and other monitoring equipment are sensitive to the presence of a medium to high voltage level. The danger related to the presence of excess oxygen is also lessened with reduced static build-up.

Methods employed to control static include chemical spray treatments which are short lived and tin-coated copper wires combined with yarn which can break with abrasion. Nylon blends with stainless steel fibers, continuous extruded filament fibers with a humectant built in using moisture for the conductor and a continuous filament fiber using carbon for its conductor have been more successful in reducing static build-up to below the common threshold of sensitivity reached between

2000 and 3000 volts.[14]

Direct glue-down of low level loop carpets is preferred for hospital use because of lower initial cost, stability under carts, wheeled stretchers and mobile equipment, and minimization of "shrinkage, mildew, or delamination problems with systematic cleaning."[15]

Carpeting itself is rarely the primary element responsible for the development and spread of fires. However, government regulations prohibit the manufacture and sale of carpeting which does not pass flamability testing. Each piece of carpet must be tested individually due to the infinite combinations of "weave, fiber and backing."[16] Research is being conducted to determine ways to limit the smoke and toxic fumes released when the carpet is consumed by fire.

Noise level reduction helps the psychological well-being of the patient. In addition to absorbing the sound of footsteps, rolling equipment, dropped objects, office machinery, air conditioners and telephones, carpets also soak up a portion of air-borne noise.

> Depending on fabric construction and method of installation, carpet will absorb between 20 and 70 per cent of the sound energy which strikes it; subjective noise levels are usually less than half that of similar hard floor areas.[17]

The aesthetic appearance of carpet may also have an important psychological effect on the patients' recovery process, the patients' families and the hospital staff. Color selection for ease of maintenance has been discussed. Color, texture and pattern to create a certain atmosphere are the tools of the interior designer. As long as intended use is taken into consideration and proper maintenance is assured, the designer can coordinate the carpet with the other interior finishings. Plain carpeting is best where sanitation measures must be maintained, such as in patient rooms. Pattern areas are recommended for long

stretches of corridors, nurses stations, lounges, dining areas, lobbies and other large public areas.

According to the Contract Carpet Specification Guide, the causes for disappointment in carpet selected include:

> Firstly, failure to analyze correctly the type of use to which the carpet will be put and the kind of performance expected from it, followed by specification of the wrong type of fiber in the wrong type of carpet construction, color, and design for the particular job.
>
> Secondly, the wrong system of installation. Such as using a direct glue down method where maximum luxury is sought or conversely a traditional type of installation with padding, in an area which would be frequently traversed by heavy trolleys or carts whose progress would be impeded by such a method.
>
> Thirdly, the failure to recognize the importance of preventive and routine maintenance procedures using the correct equipment, cleaning agents and schedules for the particular installation and surface fiber.
>
> Fourthly, the purchase of inexpensive carpet in the belief that it would be amortized and then failing to replace it.[18]

Wall Treatments

In specifying for hospitals the designer must be cognizant of the stringent building codes which regulate not only the type of flooring which may be used but also the specific weights, textures and thicknesses of wallcoverings allowed. In most areas of a hospital smooth, nonporous surfaces help to minimize the accumulation of germs and bacteria. These surfaces should be durable, stain-resistant and fire retardant as well as attractive. Surfacings are divided into three catagories. Coated surfacings include paint and glazes, soft surfacings refer to wall paper, vinyls and fabrics, and hard surfacings include paneling and tile.

Coated Surfacings

In the past ceramic tile was used almost exclusively in the critical areas of hospitals. Unlike tile where bacteria can lodge in crevices, smooth, impervious surfaces are easier to keep clean. Alterations in wall-mounted surgical equipment produce fewer problems when walls are covered with coatings or other soft materials. For this reason as well as rising costs in construction High Performance Architectural Coatings (HIPAC) are beginning to replace the use of tile. Epoxy polyamide, an alkali-resistant coating used on damp masonry and in high-humidity areas, is resistant to abrasion. Ultraviolet light does not affect either its color or gloss. Polyurethane coatings in one- and two-component coatings which dry to a hard glaze glossy finish with good color are extremely abrasion-resistant and fire-resistant. HIPAC coatings usually require less scrubbing time because they are stain- and chemical-resistant. The non-porous nature of the HIPAC finishes can be important in areas where entrapment of bacteria or radiation particles could cause problems, such as operating rooms, food preparation areas, laboratories and X-Ray rooms.[19] These coatings can be applied over concrete, masonry, plaster, gypsum drywall, cement-asbestos, painted surfaces, and most rigid surfaces.

An epoxy-resin paint which dries to a high gloss enamel finish that will not chip, crack or peel may be used in laboratories because it resists chemicals, heat, moisture, abrasion, oils, soaps, detergents, solvents, and most acids and alkalis.

Soft Surfacings

A coated vinyl wall covering which is stain-resistant, mildew-

resistant and anti-bacterial may be specified for corridors, patient rooms, most treatment areas, and lounges as well as waiting rooms and the lobby. The heavier weight vinyls should be specified for areas where wall protection is needed most, while the lighter weight vinyls are sufficient for lighter use areas. Non-porous vinyl wall coverings are particularly effective in the hospital's kitchen where spattered grease can be easily cleaned with detergents and wall damage from food carts is reduced.

Fabric can be applied to walls and sealed with an acrylic for soil resistance and cleanability. Accent areas in patient rooms, nurses stations, lounges and waiting rooms can be treated in this way.

Wallpaper that is not in itself scrubbable must also have an acrylic or other sealant applied over the surface. Any surface which cannot be cleaned regularly would not be appropriate for hospital use.

Hard Surfacings

Of the hard surfacings, ceramic tile is used most extensively. However, plastic laminates are increasing in popularity. Marble presents problems of cracking which can allow bacterial growth and is therefore not suitable for sterile areas. Cork, extremely porous, is rarely used except as accents in lobby or lounge areas.

Development of new designs and colors have brought ceramic tiles increased popularity, but cost tends to discourage use. Sheets of ceramic tile can be grouted with non-allergenic waterproof silicone rubber grout that resists stains, dirt, bacteria and fungi, and that will not crack, powder, or mildew. The tiles can be applied over gypsum board, masonry, or existing tile installations. The sheets conform to slight irregularities in the wall but maintain perfect joint alignment.

Most of the decorative interior hardboard paneling being produced in the seventies is a "preprinted smooth surface; about one-fifth of the volume (is) embossed."[20] To pass building codes, all paneling must conform to rigid flamability requirements. Used in lobbies, lounges, waiting rooms, and dining areas, wood grain panels add warmth which helps patients as well as their families to make the transition from the residential to the institutional.

New developments and applications of plastic laminates widen their possible uses. Wall panels have been introduced which are surfaced with deeply embossed vinyl-facings factory laminated to a fireproof core of gypsum. The panels are durable, easy to maintain and come in a range of colors. Color-matched moldings are also available. Wood grains, marbles, abstracts, leathers, veneered cork, woven reed and solid colors are used sucessfully in satin, mirror and textured finishes. Plastic laminates are generally not recommended for direct application to plastered walls, gypsum wallboard or concrete walls, but can be bonded to plywood, particle board, flake board or metal using adhesives. A recently developed real metalic laminate is designed for use only as vertical or light duty horizontal applications.[21] Its suitability for hospital interiors is limited to areas where more dramatic statements are possible such as in public dining areas.

Color

Color offers the designer the opportunity to make a significant statement without the investment of additional money. In the initial specifications the choice of one color over another does not vary the price. It costs no more to select a "good" color than it does to choose

a "bad" one. Color properly used can provide a sense of orientation and enhance the patient environment.

According to a report prepared by Indiana's Grant-Blackford Mental Health Association:

> Color is a highly subjective, personalized stimulus that must be recognized and used for its strong effect (good and bad) on the patient's mental condition. Thus rather than handling color as an architectural veneer the designer would do well to treat color as an architectural mass capable of fitting and shaping space, setting environment mood.[22]

Mary Louise Shum, Vice President of Associated Design, Planning and Art, Inc. of Los Angeles believes:

> Color judiciously used (can) alleviate tension; divert attention by distracting pleasantly, thus encouraging recovery; and for staff personnel, provide a more pleasant, comfortable environment, thus promoting efficiency.[23]

From the physiological standpoint, color selection in hospitals must not interfere with diagnosis. For instance, reflection of light from yellow walls might make a patient appear jaundiced, a green appearance could indicate anemia, or a reddish cast might give the patient a flushed or feverish look.

Robert Gerard, a California clinical psychologist, studied the physical and emotional influences of color. In his testing he used colored lights to stimulate responses in blood pressure, palmar conductance, respiration, heart rate, muscular activation, frequency of eye blinks and brain waves. Body reactions were partially summarized as follows:

1. Blood pressure increased under red light and decreased under blue light.
2. Respiration rate increased with red light and decreased with blue light.
3. Heart rate had no appreciable differences with red or blue light.

The conclusion of his experiments was that blue tends to be a "relaxant and tranquilizer (while) red and other 'warm' colors are in general more related to excitation."[24]

The effect a certain color has on one person is not necessarily the same on another. Although cool colors generally have a quieting effect, some people may find them stimulating. Likewise, warm colors may calm one person and excite another. Generally red is a highly exciting color and its use should be limited in areas such as the psychiatric ward where suppression of anxieties may be important. Yellow provides the warmth desired for an anti-depressant without the additional stimulation. The effect of hue, value and intensity is best summarized in Table I.[25]

No matter what color scheme is selected, variations are needed within each area. For instance, patient rooms may have three or more different schemes, the corridors on alternating floors can differ, and the color matched to their particular use. Color keying of certain areas throughout the hospital is an effective way to orientate patients and visitors to the proper location.

In hospitals people are often confined to limited areas for extended periods of time. Colors which add to the pleasantness, cheerfulness and intimacy of their surroundings help the patient to be more comfortable and secure.

Color can be introduced in accent areas. Problems with color are more frequent when all walls are the same hue. When light reflects off these surfaces a saturation of the same basic hue make it even more exaggerated. Neutral surroundings provide a background for colorful wallcoverings, upholstery, bedspreads, cubicle curtains, works of art or supergraphics. Stronger colors can be specified for lobbies, dining

areas and nurses' stations than are possible in areas where restricted activity is needed such as in the patient rooms.

TABLE I

THE EFFECT OF HUE VALUE AND INTENSITY ON INTERIOR DESIGN

	HUE	VALUE	INTENSITY
FEELINGS	Warm hues are stimulating, cool hues quieting.	Light values are cheering; dark values range from restful to depressing; contrasts are alerting.	High intensities are heartening and strong; low intensities are peaceful.
ATTENTION	Warm hues attract more attention than cool hues.	Extreme values tend to attract the eye; but contrasts or surprises are even more effective.	High intensities attract attention.
SIZE	Warm hues increase apparent size of objects; used on walls they decrease apparent size of room.	Light values increase apparent size of objects; but strong contrast with background is equally effective.	High intensities increase apparent size of objects; used on walls, they decrease apparent size of room.
DISTANCE	Warm hues bring objects forward; cool hues make them recede.	Light values recede, dark values advance; sharp contrasts also bring objects forward.	High intensities decrease apparent distances.
OUTLINE OR CONTOUR	Warm hues soften outlines slightly more than cool hues; contrasting hues make outlines clearer than related hues.	Value contrasts are a potent way of emphasizing contours.	Intensity contrasts emphasize outlines.

Variations in color may be restricted to things which do not require a large investment and may be easily changed if the use of the area is changed. Furnishings should be color-coordinated so that they might be easily moved from one area to another and still go with the new surroundings.

Pediatric wards are the exception for the use of strong primary colors. Contrasted with adults who need serene surroundings, children respond to the brighter colors. Use of strong colors, patterns and forms in children's areas have proved beneficial to their recovery.

Bright colors may be appropriate for use in physical therapy rooms. According to Faber Birren "brightness of color seems to draw human interest outward and to spur muscular reactions".[26] However, after the therapy is completed the patient should be moved to an area where cool colors are dominant so he can relax and let his body return to a less stimulated level.

Lighting

Natural lighting is generally determined by the architectural design. Electrical lighting needs are met by the architect, the medical specialist and the interior designer. Considerations for selection include the type of fixture, the number to be used and the location of each. The desired effect determines whether fluorescent, incandescent or a combination of both will be used.

Lighting fixtures for hospitals must be of the highest quality, give excellent performance and be easy to maintain. They must not only aid the hospital staff in caring for patients but can contribute greatly to the patient's morale which can aid in his recovery. This applies

not only to light fixtures but also to window glare and reflection from room surfaces.

According to R. G. Hopkinson and J. D. Kay, general lighting in patient rooms should be sufficient for the nursing staff to work efficiently and the patient to read, sew, etc., but there should be no glare or visual distraction or irritation. No patient should face the window and the glare index of the artificial lighting should not exceed 13. A reading light controlled by the patient and a night light switched at the door are also needed.[27] A doctor's examining light may also be installed either separately or incorporated into the patient's reading light.

Soft semi-direct lighting in the hospital recovery room protects the eyes of patients while providing an illumination level sufficient for post-operative care and observation.

In the corridors indirect lighting or fully diffusing units with no possibility of view of a bare lamp avoids glare to patients being wheeled from one area to another. A lowering of the level of corridor lighting at night is desirable in the patient areas. Currently recommended foot-candles for selected areas are listed in the IES Lighting Handbook, fifth edition.[28]

Daylight and incandescent filament lamp lighting have in the past been the most commonly accepted sources of illumination for critical seeing involving color determination. A daylight type of fluorescent lamp can aid in recognition of early jaundice but is not suitable for general lighting. "Delux warm" is recommended for general lighting. Whichever type of fluorescent light is selected, medical staffs prefer that it be consistant throughout the hospital. They could adjust their

judgment of skin coloration to the color rendering given by the lighting.

Furnishings

Until recently only a few manufacturers have handled interior furnishings in the health care field. Now many companies are researching the requirements of "patient, staff and treatment" which produces an end product that meets function, quality, cost and aesthetics. Numerous companies specialize in hospital equipment or offer these furnishings in addition to their other lines. To find a complete listing consult the American Hospital Association publication, Hospitals. This directory, published annually as a part of the Journal of the American Hospital Association, contains a guide for buyers of hospital equipment which lists manufacturers who offer products and services used in hospitals. For a brief listing, see Appendix H.

Robert Probst designed an outstanding and revolutionary development in total hospital care. Probst researched the problem that "hospitals are too small institutions with unusually complex functions. They provide a multitude of services, each demanding improvement and each threatened by rising costs and obsolescence."[29] This system, called CO/STRUC, is an assemblage of legless furniture pieces which are hung on walls, rails on doors, rails on partitions and bedrails. A few items that swing on arms are coupled onto polls and posts, including bed posts. The goal of CO/STRUC is to provide all surface and storage needs in the hospital.

> The system entails the assembly of all furniture pieces from their component parts--which parts can be stored in minimal space and for their dismantling and reassembly into either the same or other furniture combinations. Disassembled

> or assembled, the items and/or components thereof are washable and sanitizable eigher by hand or in dishwasher equipment.
>
> All CO/STRUC surfaces are pleasant to touch and handle, stain-proof, fade-proof, mar-proof, indifferent to water, oil, acids, alkalis, heat, cold, impact and abrasion--these being the characteristics of the high-performance engineering thermoplastic of which CO/STRUC components are injection-molded.[30]

In the patient rooms furniture should be selected with patient needs in mind. Chairs with special height and seat pitch enable patients to get in and out of them more easily. Night stands which are not built-in should be on casters so they can easily be moved for cleaning or to make room for emergency equipment. A small shelf may help keep flowers out of the way and at the same time make them more easily enjoyed by the patient. The addition of a small bulletin board gives extended stay patients a place to display their cards and help to personalize their area.

Patient service walls contain technical equipment including a "medical gas module, the communication/physiological monitoring modules and the electric-service/lighting module".[31] Though not furnishings per se, the designer may help select these items.

The pediatric unit is similar to other patient care areas in the care it offers except that the interior design must relate specifically to the age of its occupants. Imaginative approaches help children adjust to an unfamiliar surrounding. Wall graphics, bright murals, wall hangings and bright prints are often incorporated into the design. Bright colors can be used extensively in many small areas, particularly in patterns where white is the background. However, color reflection cannot be so intense that it interferes with diagnosis. According to the Committee on Hospital Care for the American Academy of Pediatrics:

> Every pediatric unit should have a playroom. It (is) not a luxury. . .but a therapeutic adjunct for patients who are convalescent or ambulatory. There should be tables and chairs suitable both for food service and play activities.[32]

Appropriate toys, equipment and programs help to alleviate children's anxieties and boredom. A colorful toybox adds to the cheerfulness of the play area while a large bulletin board might be placed near the patient's bed. This should be topped with a juvenile motif, as some children do not receive get-well cards. A chairbed which can be opened at night for a parent is suggested for each pediatric room. Automatic pediatric beds with nylon-mesh net sides or transparent plexiglass panels are recommended.

Few furnishings are need for corridors with the exception of planters, ash urns, and water fountains. The main consideration in selection and placement of these items is ease of maintenance. For this reason, wall-hung fixtures are generally preferred. Shock absorbent handrails and bumper guards protect the walls from rolling equipment and provide a safe, sure grip for ambulatory patients.

For flexibility in design mobile or modular furniture can be specified for lounge areas. Depending on use, the furniture can be arranged formally or in small conversation areas allowing for more privacy in a residential-like arrangement. Regardless of whether it is the main lobby, a waiting room or doctors' lounge, the designer should strive for a non-institutional look.

The "first impression of the lobby, corridor and room is crucial to the patient's mental outlook which (ultimately) affects his recovery."[33] James Falick feels that:

> Lobbies need not be large, extremely ordered spaces centered around a reception counter (but) can have smaller intimate areas where volunteers can offer coffee or talk to anxious

members of the family.[34]

Business offices, dining and other public areas are designed as in other types of buildings. Flexibility of furniture use is achieved through selection of colors and styles which are compatible throughout.

Large scale projects may be facilitated through the use of computers. Not only can the special arrangement of the hospital as a whole be determined with computerized programming, but space relationships with individual rooms can be calculated. Once the needs of each area are determined an inventory is made and a set of cards is punched. After cards are completed for the entire inventory of movable equipment, they can be fed into the computer. Print outs may simply be a listing of inventory by rooms or a master list of specific types and amounts of equipment such as beds, overtables, chairs, etc. The latter list is especially helpful when writing the specification sheets for bids. Companies bidding can easily price each type of furnishings without making a repetitious room-by-room price list.

FOOTNOTES

[1]Alden B. Mills, ed., Functional Planning of General Hospitals (New York, 1969), p. 176.

[2]"The Quest for Resilient and Hard Surface Floor Coverings," Interiors, CXXXI (1971), p. 147.

[3]Herbert Bright, "The Do's and Don'ts of Resilient and Hard Surface Flooring," Interiors, CXXX (1970), p. 158.

[4]Ibid.

[5]Ibid.

[6]Jain Malkin, "Thoughts on the Interior Design of Medical Facilities," Interior Design, XLIII (1972), p. 171.

[7]"Hard Surface & Resilient Flooring," Interiors, CXXXII (1973), p. 109.

[8]Bright, p. 158.

[9]"The Quest for Resilient and Hard Surface Flooring," p. 149.

[10]E. I. Du Pont de Nemours and Company, Specification Guide for Carpet of Antron Nylon (Wilmington, Delaware, 1974), p. 12.

[11]Bernie Egerter, "Carpet World in Hospitals and Nursing Homes," Interiors, CXXXXII (1972), p. 76.

[12]Du Pont, p. 8.

[13]Alan H. Lightkep, "Don't Specify the Carpet Without a Maintenance Program," Contract, XV (1974), p. 106.

[14]Monsanto Company, Monsanto Contract Carpet Specification Guide (New York, 1974), p. 18.

[15]I. L. Shaw, "Update on No-pad Carpet Direct Glue-down," Installation Specialist, XII (1974), p. 27.

[16]Egerter, p. 76.

[17]Du Pont, p. 16.

[18]Monsanto, p. 10.

[19]"High Performance Wall Coating," Hospitals, J.A.H.A., XLIX (1975), p. 86.

[20]"Durable Surfacing Material," Interiors, CXXXI (1972), p. 108.

[21]Ibid, p. 113.

[22]Noreen Walsh, "Therapeutic Furniture Concept Shape Hospital Environment, Contract, XV (1974), p. 74.

[23]Mary Louise Shum, "Hospital Interiors Should Comfort, Entertain--not Excite," Interiors, CXXXIV (1974), p. 93.

[24]Faber Birren, Color: A Survey in Words and Pictures (New Hyde Park, New York, 1963), p. 178.

[25]Ray Faulkner and Sarah Faulkner, Inside Today's Home (New York, 1968), p. 134.

[26]Birren, p. 177.

[27]R. G. Hopkinson and J. D. Day, The Lighting of Buildings (New York, 1969), pp. 201-202.

[28]John E. Kaufman, ed., I.E.S. Lighting Handbook (New York, 1972), p. 9-84 - 9-85.

[29]"CO/STRUC--The Systems Answer for Hospital Furnishing," Interiors, XLIII (1972), p. 150.

[30]Ibid., pp. 148-149.

[31]"Patient Service Walls," Hospitals, J.A.H.A., SLVIII (1974), p. 113.

[32]Committee on Hospital Care for the American Academy of Pediatrics, "Planning the Pediatric Nursing Unit," Hospitals, Clinics and Health Centers (New York, 1960), p. 139.

[33]James Falick, "Inmate...Patient...Patron," Interiors, CXXXII (1972), p. 103.

[34]Ibid.

CHAPTER IV

SPECIFICATION DEVELOPMENT

Most all of the specifications in this study are intended for use in all general hospitals regardless of size. However, this study has dealt primarily with facilities which are approximately 100-bed structures.

For this reason, the Stillwater Municipal Hospital in Stillwater, Oklahoma, was selected for application of these design specifications. A new hospital is being constructed and is scheduled for completion Fall, 1975. The hospital in current use is presently operating at a maximum 90-bed capacity while the proposed new building will exceed 100 beds and the maximum occupancy will be less than 200 beds.

Although the number of patient rooms will not increase proportionately, services offered in the new structure will exceed those currently available.

For comparitive purposes, an inventory of finishes and lighting was conducted. The results of this inventory are listed in Appendix A.

After completing the inventory of finishes and lighting of the existing hospital, the proposed structure was studied. Since the building was not completed, the architectural plans were the primary sources reviewed. The schedule of finishes and lighting for the proposed Stillwater Hospital is in Appendix B. The division of movable equipment into groups of similar items such as chairs, desks, beds, etc., enables

the designer to easily note which furnishings are needed in the different areas. The furnishings and movable equipment of the present hospital and the proposed hospital are found in Appendixes D and E. For a comparison with currently suggested furnishings and their placement, an adaptation of Shampaine Industries' Hospital Planning Guide[1] is included in Appendix G.

The literature and these four inventories made by the author, plus an inventory of placement of movable equipment made by Shampaine Industries reinforced the salient points of material, color, lighting, and furnishings for hospital interior design and form the basis for the recommended schedule of floor and wall finishes and lighting.

The basic problems faced by the Stillwater Municipal Hospital were far more serious than could be corrected by a simple cosmetic change. Growth in daily occupancy, changing medical techniques, and additional equipment and services have resulted in an extremely poor spatial arrangement. Awareness of these problems resulted in the decision to construct a new building. Most of the conditions existing in the old structure have been solved by the architect in the design of the new hospital. Not only have additional patient romms been provided, but a logical and efficient arrangement of services and their satellite units allows for a smoother flow of personnel and patients.

Lighting in most of the old hospital was inadequate. Most of the incandescent fixtures are to be replaced by fluorescent lighting except in areas where a softer effect was desired, such as in corridors and patient rooms.

Surface materials were not altered drastically with the exception of the introduction of the vinyl wall coverings into the patient rooms and some public areas. Painted gypsum board surfaces will still dominate the list of wall finishes in the building.

Floors throughout the existing structure are almost totally covered with vinyl asbestos tile. This is also the case in the new hospital with the exception of the use of carpet in the office areas and conductive flooring in surgery-related areas. Although carpet is being used widely in hospital interiors, both initial cost and rolling resistance made it unacceptable to the Stillwater Hospital planners.

Although floor and wall finishes were not changed greatly in the new design, the colors selected for the finishes in each differ. Cool colors in pastel shades have been replaced by an array of warm golds, olive greens, browns, oranges, and yellows. Plain, unbroken, solid-color walls are now accented in areas with patterned vinyl wall covering.

Some of the existing furnishings will be transferred to the new structure. Much of the movable equipment will be retained and increased to the quantity needed. In many public areas and business offices, new furnishings have been specified. Except for a few recent acquisitions, new furnishings were selected which should improve the functioning of activities in these areas. Inadequate and inappropriate furnishings are to be replaced. The check lists substantiated these changes and are reflected in the schedule of recommended finishes.

FOOTNOTES

[1]Shampaine Industries, Hospital Planning Guide (St. Louis, Missouri, 1960), pp. 5-91.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The development of specifications for hospital interiors is a highly-detailed, specialized problem. The designer must be aware of the unique functions of the hospital and coordinate the many details of the interior design to meet these needs. The psychological and physiological needs of the patient are met through the placement, function, durability, and aesthetic quality of the products used. This study provides designers and planners with bases for specification of hospital interiors.

General trends in hospital design have been discussed with regard to the floor and wall finishes, color, lighting, and furnishings. Due to the increased emphasis in the health care field, these elements are becoming increasingly more important.

Comparative inventories of the existing Stillwater Hospital and its proposed replacement substantiate recommendations observed in the literature and in actual use. This made possible a development of a schedule of recommended finishes.

Conclusions and Recommendations

For an interior designer to adequately fulfil the design specifications, he needs to be experienced in the function of the building for

which he is designing. The designer will be more adequately prepared to accurately and efficiently specify the finishes and furnishings for a total hospital environment after he has a working knowledge of hospital activities. Creativity within the functional needs of the hospital is, of course, what allows the designer to reach beyond what is conventional.

Since the specifications on the new Stillwater Municipal Hospital were proposed and not installed, the author would like to recommend that a follow-up survey be conducted after the proposed hospital has been in use for a year or more.

Another possible study would be to review in depth the available products used in all phases of health care. A study of the performance, dependability, ease of maintenance, and cleaning would be a helpful reference for those in the health care field.

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APPENDIX A

FINISH AND LIGHTING SCHEDULE FOR EXISTING STILLWATER MUNICIPAL HOSPITAL

	Corridor	Stair	Dishwash	Dining	Serving Line	Kitchen	Kitchen Storage	Mechanical	Janitor Closet	Locker	Housekeeping	Engineer	Boiler Room	Clean Linen	Soiled Linen	Pharmacy	Shop	Central Storage	Women/Men	Waiting	Physical Therapy	Hubbard	Treatment	Work Room	Clean-up	Generator	Auxiliary	Gift	Canteen	Director/Nursing Board Room	Patient Room	Nurses' Lounge	Nurse's Station	Viewing	Surgical Supervisor	Work Area	Equipment Room	Surgery Waiting	Intensive Care Unit	Central Sterile	Sterilizer	Sterile Storage
FLOOR																																										
Concrete								•					•				•									•										•							
Terrazzo		•																																							
Vinyl Asbestos Tile	•		•	•					•	•		•		•	•	•		•		•	•	•	•	•		•	•	•	•	•		•	•	•		•	•	•	•	•	•
Special Coating					•	•																																			
Conductive Flooring							•																																			
BASE																																										
4" Rubber	•			•				•			•			•	•			•	•	•	•	•	•			•	•	•	•	•		•		•		•		•			
Special Coating																																										
Ceramic Tile			•			•	•						•																													
WAINSCOT																																										
Ceramic Tile			•			•	•						•																													
Vinyl Wall Covering																																										
WALLS																																										
Gypsum Board	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•	•	•
Concrete Block																																										
Exposed Concrete													•													•																	
Paint	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•	•	•
Vinyl Wall Covering																																										
Special Coating																																										
CEILING																																										
Acoustical Board				•	•						•			•	•					•							•	•	•	•		•		•	•	•		•				
Gypsum Board	•	•	•						•	•					•				•		•	•	•	•	•		•	•	•	•												
Exposed Structure						•	•	•				•	•			•	•									•																
LIGHTING																																										
Fluorescent (Recessed)																																										
Fluorescent (Surface)				•	•			•				•	•		•	•										•							•									
Incandescent (Recessed)																				•																							
Incandescent (Surface)	•	•	•			•	•		•	•	•			•	•			•	•		•	•	•	•	•		•	•	•	•		•		•	•	•	•	•	•	•	•
Examination Light																																										
1-Bank Illuminator																																										
2-Bank Illuminator																																										
Recessed Illuminator																																										
Wall Bracket Light																														•												

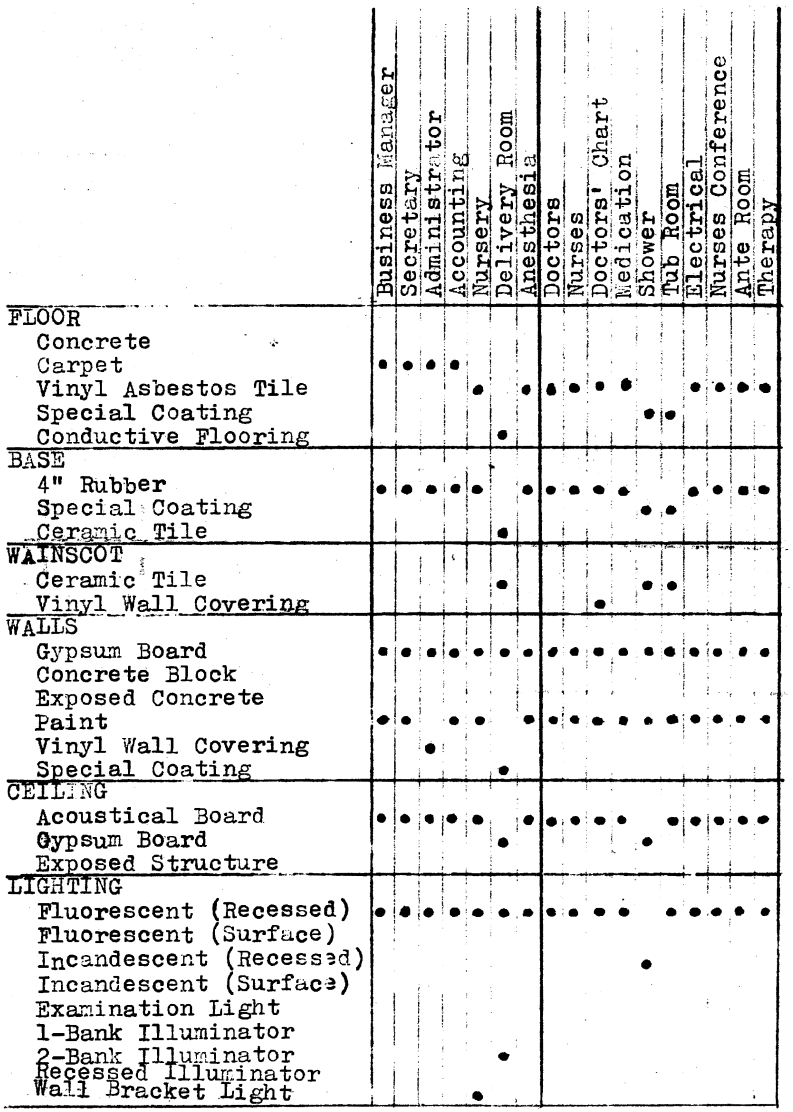
	FLOOR							BASE						WAINSCOT		WALLS				CEILING			LIGHTING						
	Concrete	Carpet	Vinyl Asbestos Tile	Special Coating	Conductive Flooring			4" Rubber	Special Coating	Ceramic Tile				Ceramic Tile		Vinyl Wall Covering	Gypsum Board	Concrete Block	Exposed Concrete	Paint	Vinyl Wall Covering	Special Coating	Acoustical Board	Gypsum Board	Exposed Structure	Fluorescent (Recessed)	Fluorescent (Surface)	Incandescent (Recessed)	Incandescent (Surface)	Examination Light	1-3 nk Illuminator	2-Bank Illuminator	Recessed Illuminator	Wall Bracket Light
Work Area	•		•					•									•	•	•	•	•		•	•		•							
Equipment Room	•		•					•									•	•	•	•	•		•	•		•							
Surgery Waiting	•		•					•									•	•	•	•	•		•	•		•							
Intensive Care Unit	•		•					•									•	•	•	•	•		•	•		•							
Central Sterile	•		•					•									•	•	•	•	•		•	•		•							
Steriliger	•		•					•									•	•	•	•	•		•	•		•							
Sterile Storage	•		•					•									•	•	•	•	•		•	•		•							
Doctors' Lounge	•		•					•									•	•	•	•	•		•	•		•							
Shower																																	
Surgeons' Lockers	•		•					•									•	•	•	•	•		•	•		•							
Nurses' Lockers	•		•					•									•	•	•	•	•		•	•		•							
Outpatient Surgery	•		•					•									•	•	•	•	•		•	•		•							
Dressing Room	•		•					•									•	•	•	•	•		•	•		•							
Recovery Room	•		•					•									•	•	•	•	•		•	•		•							
Operating Room	•				•												•	•	•	•	•		•	•		•							
Scrub-up	•				•			•									•	•	•	•	•		•	•		•							
Sub-Sterile	•				•			•									•	•	•	•	•		•	•		•							
Fracture	•				•			•									•	•	•	•	•		•	•		•							
Surgical Corridor	•				•			•									•	•	•	•	•		•	•		•							
Dark Room	•				•			•									•	•	•	•	•		•	•		•							
Observation	•				•			•									•	•	•	•	•		•	•		•							
Cystoscopic	•				•			•									•	•	•	•	•		•	•		•							
Medical Records			•					•									•	•	•	•	•		•	•		•							
Medical Librarian		•						•									•	•	•	•	•		•	•		•							
Transcribe		•						•									•	•	•	•	•		•	•		•							
Library		•						•									•	•	•	•	•		•	•		•							
Receiving	•		•					•									•	•	•	•	•		•	•		•							
Exam. EKG	•		•					•									•	•	•	•	•		•	•		•							
Clerk	•		•					•									•	•	•	•	•		•	•		•							
Emergency Room	•		•					•									•	•	•	•	•		•	•		•							
X-Ray	•		•					•									•	•	•	•	•		•	•		•							
Technician	•		•					•									•	•	•	•	•		•	•		•							
Film Files	•		•					•									•	•	•	•	•		•	•		•							
Isotopes	•		•					•									•	•	•	•	•		•	•		•							
Blood Bank	•		•					•									•	•	•	•	•		•	•		•							
Bacteriology	•		•					•									•	•	•	•	•		•	•		•							
Laboratory	•		•					•									•	•	•	•	•		•	•		•							
Blood Samples	•		•					•									•	•	•	•	•		•	•		•							
Blood Donor	•		•					•									•	•	•	•	•		•	•		•							
Business Office	•		•					•									•	•	•	•	•		•	•		•							
Xerox	•		•					•									•	•	•	•	•		•	•		•							
Credit Office	•		•					•									•	•	•	•	•		•	•		•							
Admitting Office	•		•					•									•	•	•	•	•		•	•		•							
Information	•		•					•									•	•	•	•	•		•	•		•							

APPENDIX B

FINISH AND LIGHTING SCHEDULE FOR PROPOSED STILLWATER MUNICIPAL HOSPITAL

	Corridor	Stair	Classroom	Cartwash	Dishwash	Dining	Serving Line	Kitchen	Kitchen Storage	Meals on Wheels	Mechanical	Janitor Closet	Locker	Housekeeping	Trash	Tele. Equipment	Engineer	Boiler Room	Clean Linen	Soiled Linen	Pharmacy	Shop	Autopsy	Central Storage	Women/Men	Waiting	Physical Therapy	Hubbard	Treatment	Work Room	Clean-up	Generator	Vestibule	Auxiliary	Gift	Canteen	Minister	Director/Nursing	Board Room	Patient Room	Nurses' Lounge	Nurse's Station	Viewing	Surgical Supervisor
FLOOR																																											
Concrete											●				●			●	●												●													
Carpet																																											
Vinyl Asbestos Tile	●		●			●						●	●	●		●	●			●	●	●			●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Special Coating				●	●		●	●	●	●		●		●									●																				
Conductive Flooring																											●	●															
BASE																																											
4" Rubber	●	●	●			●					●		●	●		●	●			●	●	●			●	●	●		●	●	●		●	●	●	●		●	●	●	●	●	●
Special Coating				●	●		●		●	●		●			●								●					●															
Ceramic Tile				●	●		●	●																																			
WAINSCOT																																											
Ceramic Tile				●	●		●	●																																			
Vinyl Wall Covering	●	●																																									
WALLS																																											
Gypsum Board	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Concrete Block															●	●	●	●	●		●																						
Exposed Concrete											●							●						●							●												
Paint	●	●	●	●	●			●	●	●	●		●	●		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●		●					●	●	●	●	●	●
Vinyl Wall Covering							●	●																	●							●		●	●	●	●	●	●	●			
Special Coating												●																															
CEILING																																											
Acoustical Board	●		●				●	●	●	●		●	●	●		●				●	●		●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●	●	●
Gypsum Board		●		●	●										●	●																											
Exposed Structure											●							●	●												●												
LIGHTING																																											
Fluorescent (Recessed)			●	●														●	●	●	●	●	●	●	●	●	●	●	●	●	●		●			●	●			●	●	●	●
Fluorescent (Surface)					●	●		●	●	●	●		●	●	●		●																										
Incandescent (Recessed)		●					●																																				
Incandescent (Surface)	●																						●															●					
Examination Light																																●											
1-Bank Illuminator																																											
2-Bank Illuminator																																											
Recessed Illuminator																																											
Wall Bracket Light																																●											

	Doctors' Lounge	Shower	Surgeons' Lockers	Nurses' Lockers	Recovery Room	Operating Room	Scrub-up	Sub-Sterile	Fracture	Surgical Corridor	Dark Room	Medical Records	Medical Librarian	Transcribe	Library	Receiving	Exam. EKG	Clerk	Emergency Room	X-Ray	Technician	Film Files	Isotopes	Blood Bank	Bacteriology	Laboratory	Blood Samples	Blood Donor	Business Office	Xerox	Credit Office	Admitting Office	Information	Business Manager	Secretary	Administrator	Accounting	Nursery	Delivery Room	Anesthesia	Medication	Shower	Tub Room	Electrical	Ante Room
FLOOR																																													
Concrete	•								•						•																														
Carpet																																												
Vinyl Asbestos Tile		•	•	•								•	•	•		•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
Special Coating																																												
Conductive Flooring					•	•	•	•		•																		•																
BASE																																												
4" Rubber	•								•		•	•	•	•		•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•								
Special Coating																																												
Ceramic Tile	•				•	•	•	•		•																		•																
WAINSCOT																																												
Ceramic Tile																																												
Vinyl Wall Covering																																												
WALLS																																												
Gypsum Board	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•								
Concrete Block																																												
Exposed Concrete																																												
Paint	•	•	•						•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•								
Vinyl Wall Covering																																												
Special Coating																																												
CEILING																																												
Acoustical Board	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•								
Gypsum Board																																												
Exposed Structure																																												
LIGHTING																																												
Fluorescent (Recessed)															•	•	•		•	•	•																								
Fluorescent (Surface)																																												
Incandescent (Recessed)															•	•	•		•	•	•																								
Incandescent (Surface)	•	•	•	•	•	•	•	•	•	•	•	•	•	•																														
Examination Light																•	•		•	•	•																								
1-Bank Illuminator																																													
2-Bank Illuminator																																													
Recessed Illuminator																																													
Wall Bracket																																												


Business Manager
Secretary
Administrator
Accounting
Nursery
Delivery Room
Anesthesia
Doctors
Nurses
Doctors' Chart
Medication
Shower
Tub Room
Electrical
Nurses Conference
Ante Room
Therapy
FLOOR
Concrete
Carpet
Vinyl Asbestos Tile
Special Coating
Conductive Flooring
BASE
4" Rubber
Special Coating
Ceramic Tile
WAINSCOT
Ceramic Tile
Vinyl Wall Covering
WALLS
Gypsum Board
Concrete Block
Exposed Concrete
Paint
Vinyl Wall Covering
Special Coating
CEILING
Acoustical Board
Gypsum Board
Exposed Structure
LIGHTING
Fluorescent (Recessed)
Fluorescent (Surface)
Incandescent (Recessed)
Incandescent (Surface)
Examination Light
1-Bank Illuminator
2-Bank Illuminator
Recessed Illuminator
Wall Bracket Light

APPENDIX C

RECOMMENDED FINISH AND LIGHTING SCHEDULE

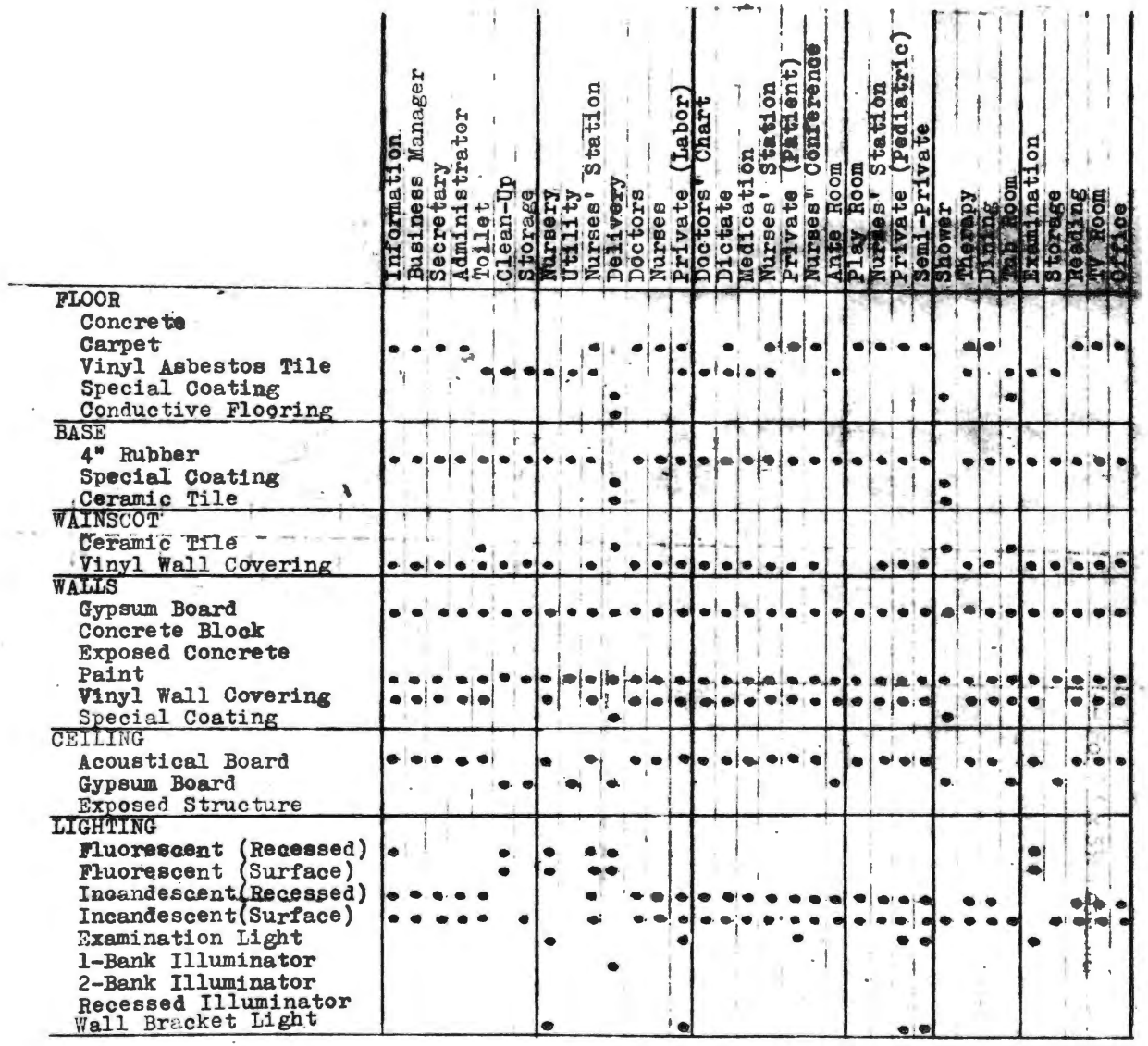
FOR HOSPITAL INTERIORS

	Corridor	Stair	Cartwash	Dishwash	Dining	Serving Line	Kitchen	Kitchen Storage	Mechanical	Janitor Closet	Lockers	Trash	Housekeeping	Telephone Equipment
FLOOR														
Concrete			•	•			•	•	•	•		•		•
Carpet	•				•									
Vinyl Asbestos Tile		•			•	•	•	•			•		•	•
Special Coating			•	•		•	•	•						
Conductive Flooring														
BASE														
4" Rubber	•	•	•	•	•	•					•		•	•
Special Coating			•	•		•	•	•						
Ceramic Tile			•	•			•	•						
WAINSCOT														
Ceramic Tile				•			•	•						
Vinyl Wall Covering	•	•			•	•	•	•					•	
WALLS														
Gypsum Board	•	•			•	•	•	•					•	
Concrete Block			•	•					•	•	•	•	•	•
Exposed Concrete									•			•		•
Paint	•	•			•	•	•	•		•	•		•	•
Vinyl Wall Covering	•	•			•	•	•	•					•	
Special Coating			•	•										
CEILING														
Acoustical Board	•	•			•	•	•	•					•	
Gypsum Board			•	•			•	•			•	•		•
Exposed Structure									•	•		•		
LIGHTING														
Fluorescent (Recessed)	•					•	•	•					•	
Fluorescent (Surface)			•	•		•	•	•	•	•	•	•	•	•
Incandescent (Recessed)	•	•			•	•								
Incandescent (Surface)	•	•			•	•								
Examination Light														
1-Bank Illuminator														
2-Bank Illuminator														
Recessed Illuminator														
Wall Bracket Light														

	Engineer	Boiler Room	Clean Linen	Soiled Linen	Pharmacy	Shop	Autopsy	Central Storage	Women/Men	Waiting	Physical Therapy	Hubbard	Treatment	Work Room
FLOOR														
Concrete	•	•				•								
Carpet										•				
Vinyl Asbestos Tile	•		•	•	•			•	•	•	•	•	•	•
Special Coating							•					•		
Conductive Flooring							•							
BASE														
4" Rubber	•		•	•	•		•	•	•	•	•	•	•	•
Special Coating							•					•		
Ceramic Tile														
WAINSCOT														
Ceramic Tile											•	•		
Vinyl Wall Covering			•	•	•				•	•	•	•	•	
WALLS														
Gypsum Board			•	•	•		•	•	•	•	•	•	•	•
Concrete Block	•	•				•								
Exposed Concrete		•				•								
Paint	•		•	•	•	•	•	•	•	•	•		•	•
Vinyl Wall Covering	•		•	•	•		•	•	•	•	•	•	•	•
Special Coating							•					•		
CEILING														
Acoustical Board	•		•	•	•				•	•	•		•	
Gypsum Board							•	•				•		•
Exposed Structure						•								
LIGHTING														
Fluorescent (Recessed)	•		•	•	•		•	•	•		•	•	•	•
Fluorescent (Surface)	•	•	•	•	•	•	•	•	•		•	•	•	•
Incandescent (Recessed)	•								•	•	•	•	•	
Incandescent (Surface)	•								•	•	•	•	•	
Examination Light														
1-Bank Illuminator							•							
2-Bank Illuminator							•							
Recessed Illuminator														
Wall Bracket Light														

	Clean-Up	Generator	Auxiliary	Gift	Canteen	Director/Nursing	Board Room	Patient Room	Nurses' Lounge	Viewing	Surgical Supervisor	Work Area	Equipment Room	Surgery Waiting
FLOOR														
Concrete		•											•	
Carpet			•	•	•	•	•	•	•		•			•
Vinyl Asbestos Tile	•							•		•		•		
Special Coating														
Conductive Flooring														
BASE														
4" Rubber	•		•	•	•	•	•	•	•	•	•	•		•
Special Coating														
Ceramic Tile														
WAINSCOT														
Ceramic Tile														
Vinyl Wall Covering			•	•	•	•	•	•	•		•			•
WALLS														
Gypsum Board	•		•	•	•	•	•	•	•	•	•	•		•
Concrete Block		•											•	
Exposed Concrete		•												
Paint	•		•	•	•	•	•	•	•	•	•	•	•	•
Vinyl Wall Covering	•		•	•	•	•	•	•	•		•			•
Special Coating														
CEILING														
Acoustical Board			•	•	•	•	•	•	•		•			•
Gypsum Board	•									•		•	•	
Exposed Structure		•											•	
LIGHTING														
Fluorescent (Recessed)	•											•	•	
Fluorescent (Surface)	•	•										•	•	
Incandescent (Recessed)			•	•	•	•	•	•	•		•			•
Incandescent (Surface)			•	•	•	•	•	•	•	•	•			•
Examination Light								•						
1-Bank Illuminator														
2-Bank Illuminator														
Recessed Illuminator														
Wall Bracket Light								•						

	Intensive Care Unit	Central Sterile	Sterilizer	Sterile Storage	Doctors' Lounge	Shower	Surgeons' Lockers	Nurses' Lockers	Anesthesia	Outpatient Surgery	Dressing Room	Recovery Room	Operating Room	Scrub-Up	Sub-Sterile	Fracture	Surgical Corridor	Cystoscopic	Dark Room	Observation	Exam EKG	Receiving	Medical Records	Medical Librarian	Transcribe	Library	Clerk	Emergency Room	Dressing Room	X-Ray	Technician	Film Files	Viewing	Isotopes	Blood Bank	Blood Samples	Blood Donor	Bacteriology	Laboratory	Business Office	Xerox	Credit Office	Admitting Office	Accounting
FLOOR																																												
Concrete																																												
Carpet	•				▲																						•																	
Vinyl Asbestos Tile	•	•	•	•			•	•	•		•	•		•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Special Coating						•				•						•																											
Conductive Flooring										•				•		•		•										•																
BASE																																												
4" Rubber	•	•	•	•	•		•	•	•	•	•	•		•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Special Coating			•			•							•			•		•																										
Ceramic Tile						•							•			•		•																										
WAINSCOT																																												
Ceramic Tile							•						•																														
Vinyl Wall Covering	•	•			•		•	•			•	•				•	•		•				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
WALLS																																												
Gypsum Board	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Concrete Block																																												
Exposed Concrete																																												
Paint	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vinyl Wall Covering	•				•		•	•			•	•					•			•	•		•	•	•	•	•	•	•	•												
Special Coating						•				•			•			•		•																										
CEILING																																												
Acoustical Board	•				•							•					•		•				•	•	•	•	•			•										•	•	•
Gypsum Board	•	•	•	•		•	•	•	•	•	•		•	•	•	•		•		•	•	•						•	•		•	•	•	•	•	•	•	•				
Exposed Structure																																												
LIGHTING																																												
Fluorescent (Recessed)	•	•	•	•			•	•	•	•		•	•	•	•	•	•	•	•	•			•	•				•	•	•	•	•	•	•	•	•	•						
Fluorescent (Surface)		•	•	•					•	•		•	•	•	•	•	•	•	•	•			•	•			•	•		•	•	•	•	•	•	•	•					
Incandescent (Recessed)					•																					•	•		•									•	•	•	•	•	•
Incandescent (Surface)						•					•															•	•		•									•	•	•	•	•	•
Examination Light	•											•																•															
1-Bank Illuminator										•			•		•		•																										
2-Bank Illuminator													•					•																										
Recessed Illuminator																																												
Wall Bracket Light	•										•																		•														


Information
Business Manager
Secretary
Administrator
Toilet
Clean-Up
Storage
Nursery
Utility
Nurses' Station
Delivery
Doctors
Nurses
Private (Labor)
Doctors' Chart
Dictate
Medication
Nurses' Station
Private (Patient)
Nurses' Conference
Ante Room
Play Room
Nurses' Station
Private (Pediatric)
Semi-Private
Shower
Therapy
Dining
Tub Room
Examination
Storage
Reading
TV Room
Office
FLOOR
Concrete
Carpet
Vinyl Asbestos Tile
Special Coating
Conductive Flooring
BASE
4" Rubber
Special Coating
Ceramic Tile
WAINSCOT
Ceramic Tile
Vinyl Wall Covering
WALLS
Gypsum Board
Concrete Block
Exposed Concrete
Paint
Vinyl Wall Covering
Special Coating
CEILING
Acoustical Board
Gypsum Board
Exposed Structure
LIGHTING
Fluorescent (Recessed)
Fluorescent (Surface)
Incandescent (Recessed)
Incandescent (Surface)
Examination Light
1-Bank Illuminator
2-Bank Illuminator
Recessed Illuminator
Wall Bracket Light

APPENDIX D

INVENTORY OF FURNISHINGS OF EXISTING STILLWATER MUNICIPAL HOSPITAL

BASEMENT	Corridor	Stair	Classroom	Lobby	Office	Cartwash	Dining	Dishwash	Serving Line	Kitchen	Kitchen Storage	Meals on Wheels	Dietary	Mechanical	Janitor Closet	Lockers	Trash	Housekeeping	Telephone Equipment	Engineers	Boiler Room	Clean Linen	Pharmacy	Storage	Shop	Autopsy	Central Storage	Women	Men	Waiting	Clean-Up	Physical Therapy	Hubbard	Treatment	Work Room
Chair, Dining							24																											
Chair, Posture																																1	
Chair, Side					2								3					6	1								2			8		6		
Chair, Swivel Arm					1								3						1				1											
Stool, Counter																					1		1				1							
Stool, Foot																							1				2							
Stool, Revolving																																		
Desk, 1-Pedestal													1					1					1											
Desk, 2-Pedestal					1								1										1											
Desk, Table													1														1							
Table, 30X30							6																											
Table, Linen																		3																
Table, Work (Steel)																																		
Table, Treatment																															3			
Table, Utility																											1							
File, 2-Drawer													2																					
File, 4-Drawer					1								2						1				1										1	1
Cabinet, Storage		1																					1											
Lockers (Set)													1														1							
Shelving, Wire																											1							
Stand, Typing																											1							
Lecturn, Mobile																		1																
Cart, A-Line																											1							
Cart, Housekeeping																		3																
Cart, Linen																		4																
Receptacle, Linen																															1			
Waste Basket					1													3					2											
Serving Line								1																										
Refrigerator										1													1											
Coat Tree													1					1																
Clock							1											1																

PATIENT, O.B. AND PEDIATRIC FLOORS	Nursery	Utility	Nurses' Station	Delivery	Doctors'	Nurses	Private (Labor)	Doctors' Chart	Dictate	Medication	Nurses' Station	Private (Patient)	Nurses' Conference	Male Room	Play Room	Nurses' Station	Private (Pediatric)	Semi-Private	Shower	Therapy	Dining	Tub Room	Examination	Storage	Reading	TV Room	Office
Chair, Lounge					1																						
Chair, Rocking	2																										
Chair, Side	1		2		1		1					1															
Stool, Counter	1																										
Stool, Revolving				2																							
Desk, Modular			1																								
Table, Anesthesia				1																							
Table, Delivery				1																							
Table, Instrument	1			2																							
Table, Overbed							1					1					1	2									
Cabinet, Bedside							1																				
Cabinet, Storage					1																						
Lockers (Set)					1																						
Stand, I.V.	1				1		1																				
Stand, Mayo					1																						
Bed, Adjustable												1					1										
Bed, Crib																		2									
Bed, Labor							1																				
Bassinet	3																										
Isolette	4																										
Cart, Emergency	1																										
Receptacle, Linen	3																										
Kick Bucket					1																						
Waste Basket	5		1				1				1	1					1	1									
Clock	3	2																									
Coat Tree			1																								

GROUND FLOOR	Dark Room	Observation	Exam EKG	Receiving	Medical Records	Medical Librarian	Transcribe	Library	Clerk	Emergency Room	Dressing Room	X-Ray	Technician	Film Files	Viewing	Isotopes	Blood Bank	Blood Samples	Blood Donor	Bacteriology	Laboratory	Business Office	Xerox	Credit Office	Admitting Office	Accounting	Information	Business Manager	Secretary	Administrator	Toilet	Clean-Up	Storage
Chair, Executive																											1		1			
Chair, Lounge																			2													
Chair, Posture						1	3															4	1	1	3	1		1				
Chair, Side							1		1	1			2	1			2	1			1		2				2		2			
Chair, Swivel Arm																																
Stool, Counter															1						3											
Stool, Foot										1																						
Stool, Revolving										1																						
Desk, 1-Pedestal															1		1								3							
Desk, 2-Pedestal							4															5	1	1				1				
Desk, Modular																										1			1			
Desk, Typing						1																										
Credenza																													1			
Table, Drawing																		1														
Table, Examination										1									1													
Table, Instrument										1																						
Table, Work							1		1																							
File, 4-Drawer							9								1						2	8	1					4	1			
Cabinet, Storage										1																						
Bookcase						1																										
Stand, I.V.										1																						
Stand, Mayo										1																						
Stand, Typing							3																									
Cart, Utility										1																						
Receptacle, Linen										1																						
Kick Bucket										1																						
Waste Basket						1	3		1													6										
Clock						1			1																							

GROUND FLOOR	Vestibule	Lobby	Auxiliary	Gift Shop	Canteen	Minister	Secretary	Director of Nursing	Board Room	Nurses' Lounge	Surgical Supervisor	Nurses' Station	Work Area	Equipment Room	Surgery Waiting	Intensive Care Unit	Central Sterile	Sterilizer	Sterile Storage	Doctors' Lounge	Shower	Surgeons' Lockers	Nurses' Lockers	Anesthesia	Outpatient Surgery	Dressing Room	Recovery Room	Operating Room	Scrub-Up	Sub-Sterile	Fracture	Surgical Corridor	Cystoscopic
Chair, Dining					16																												
Chair, Lounge		12													4					2													
Chair, Posture			1				2	1																									
Chair, Side			2	1				2			4																1						
Chair, Swivel Arm								1																									
Stool, Counter												1				2																	
Stool, Foot																1												1		1			
Stool, Revolving																												3					
Settee															1																		
Desk, 1-Pedestal																																	
Desk, 2-Pedestal			1				1	1																									
Desk, Modular																1																	
Desk, Table																				2													
Table, 30X30					4																												
Table, Anesthesia																												1					
Table, Coffee		1																															
Table, Corner		2																															
Table, Cystoscopic																																1	
Table, Instrument																												2		1			
Table, Major O.R.																												1					
Table, Overbed																1																	
Table, Prep																												1					
File, 4-Drawer			1				3	2				1																					
Cabinet, Bedside														1																			
Lockers (Set)																														1			
Stand, Cash				1																													
Stand, Double Basin																												1					
Stand, I.V.																1												2		1			
Stand, Mayo																												2					
Cart, Gift				1																													
Bed, Intensive Care																1																	
Receptacle, Linen																											2						
Receptacle, Step-On																													1				
Kick Bucket																												2					
Waste Basket				1				1								2											1				1		
Refrigerator				1								1		1																			
Hook Strip																															1		
Clock												2								1							1	1			1		
Planter		1																															

APPENDIX E

INVENTORY OF FURNISHINGS OF PROPOSED STILLWATER MUNICIPAL HOSPITAL

BASEMENT	Corridor	Stair	Classroom	Lobby	Office	Carwash	Canning	Dishwash	Serving Line	Kitchen Storage	Meals on Wheels	Dietary	Mechanical	Janitor Closet	Lockers	Trash	Housekeeping	Telephone Equipment	Engineer	Boiler Room	Clean Linen	Pharmacy	Storage	Shop	Autopsy	Central Storage	Women	Men	Waiting	Clean-Up	Physical Therapy	Hubbard	Treatment	Work Room
Chair, Dining							56																										
Chair, Lounge																												5		1			
Chair, Posture			1								1	2					2					1									1		
Chair, Side			2		2						3	1		2					1			1						3				2	
Chair, Stacking			36																														
Chair, Swivel Arm			1		1														1			1											
Stool, Counter									1												2	1											
Stool, Foot																								1									
Stool, Revolving																								1						3			
Sofa									1																								
Desk, 1-Pedestal																				1													
Desk, 2-Pedestal			1		1						1	1										1											
Table, 30X30							5																										
Table, 30X60							10																										
Table, Autopsy																									1								
Table, Folding			1																														
Table, Linen																					3												
Table, Projector			1																														
Table, Work (Steel)										1	1																				1		
Table, Tilt																														1			
Table, Traction																														1			
Table, Utility																									2								
File, 2-Drawer																																	
File, 4-Drawer			2		1						1	3								1		1									1	1	1
Cabinet, Ice Cream									1	1																							
Cabinet, Instrument																									1								
Cabinet, Storage										1												1	3										
Bookcase			2																														
Lockers (Set)														1																			
Shelving, Metal										1															1								
Shelving, Wire			1								2	1									1					1							
Stand, Projection			1																														
Stand, Tray									1																								
Stand, Typing			1																														
Lecturn, Mobile			1																														
Cart, A-Line																							3										
Cart, Housekeeping																	6																
Cart, Linen																					1					1							
Cart, Supply (I.V.)																						3				1				1			
Cart, Trash																	3																
Cart, Tray Delivery											5																						
Cart, Wire Basket			1									1																	1			1	
Ash Urn, Floor																												1					
Ash Urn, Wall Mount				2																													
Coat Tree			1									1																			1		
Receptacle, Brute																										1				1			
Receptacle, Linen																									1	1							
Receptacle, Step-On														1																			
Receptacle, Torpedo																											1	1				1	
Sick Bucket																									1								
Waste Basket					1						1	1						1				3										1	
Bulletin Board			1																														
Chalk Board			1																														
Serving Line									1																								
Refrigerator										2																						1	
Clock			1									1																				1	
Accessories																												1					

GROUND FLOOR	Vestibule	Lobby	Auxiliary	Gift Shop	Canteen	Minister	Secretary	Director of Nursing	Board Room	Nurses' Lounge	Surgical Supervisor	Nurses' Station	Work Area	Equipment Room	Surgery Waiting	Intensive Care Unit	Central Sterile	Sterilizer	Sterile Storage	Doctors' Lounge	Shower	Surgeons' Lockers	Nurses' Lockers	Anesthesia	Outpatient Surgery	Dressing Room	Recovery Room	Operating Room	Scrub-Up	Sub-Sterile	Fracture	Surgical Corridor	Cystoscopic
Chair, Dining					4																												
Chair, Lounge		12																		2													
Chair, Posture			1				2	1				2												1		1							
Chair, Side			2	1		2		2		4	1			2						1					1								
Chair, Swivel Arm						1		1			1																						
Stool, Counter												1																					
Stool, Foot																											4		4				
Stool, Revolving																											3		3			2	
Bench, With Cushion																						1	1										
Settee		6						1																									
Desk, 1-Pedestal				1		1		1												1				1									
Desk, 2-Pedestal			1																														
Desk, Modular							1	1																									
Desk, Platform												1																					
Desk, Table																																	
Desk, Typing Return							1																										
Table, 30X30														1																			
Table, 30X60					2																												
Table, Anesthesia																											1		1				
Table, Coffee		3																															
Table, Conference									1																								
Table, Corner						1			1											1													
Table, Cystoscopic																																1	
Table, Examination																																	
Table, Instrument																											2		2				
Table, Major O.R.																											1						
Table, Overbed																1																	
Table, Prep																											1		1			1	
File, 4-Drawer			1				3	2									1																
Cabinet, Bedside														1																			
Cabinet, Gown										1																							
Lockers (Set)																						3	2	3									
Stand, Anesthesia																											3		1			1	
Stand, Cash				1																													
Stand, Double Basin																											1		1			1	
Stand, I.V.																1											2		2				
Stand, Mayo																											2		2				
Shelving, Glass				1																													
Cart, Covered																															7		
Cart, Gift				1																													
Cart, Supply														1																			
Cart, Utility							2																			1							
Bed, Intensive Care																1																	
Receptacle, Linen																										2							
Receptacle, Step-On													1	1							1			1		4					3		
Receptacle, Torpedo					1			1																									
Kick Bucket																												2		2			
Waste Basket			1			1	2	1			1					2				2				1		1							
Bulletin Board										1		1																					
Coat Tree												1																					
Smoker, Floor Stand																						1	1										
Refrigerator					1							1		1																			
Clock											2																						
Planter			1		1					1																							
Accessories (Lot)			1		1	1	1	1		1																							

GROUND FLOOR	Dark Room	Observation	Exam EKG	Receiving	Medical Records	Medical Librarian	Transcribe	Library	Clerk	Emergency Room	Dressing Room	X-Ray	Technician	Film Files	Viewing	Isotopes	Blood Bank	Blood Samples	Blood Donor	Bacteriology	Laboratory	Business Office	Xerox	Credit Office	Admitting Office	Accounting	Information	Business Manager	Secretary	Administrator	Toilet	Clean-Up	Storage
Chair, Executive																												1		1			
Chair, Lounge																																	
Chair, Posture						1	7	3	3	1							1					8		1	2	1	2		1				
Chair, Side			2				2	8	1				2					1	1			9		2	2				3	2	3		
Chair, Swivel Arm																1						1		1									
Chair, Tablet Arm																			1														
Stool, Counter																1								1									
Stool, Foot			1							4																							
Stool, Revolving										2																							
Desk, 1-Pedestal																1						1											
Desk, 2-Pedestal																																	
Desk, Modular																								1									
Desk, Table																														1			
Desk, Typing Return						1	6															8							1				
Credenza																												1		1			
Table, Drawing																		1															
Table, Examination			1							1																							
Table, Library								2																									
Table, Work							1					1																					
File, 4-Drawer									1							1						10		1					2				
File, Motorized(Lot					1									1																			
Cabinet, Bedside																		1	2														
Cabinet, Gown										1			1																				
Cabinet, Lead-Lined	1																																
Cabinet, Storage			1																														4
Bookcase		1																															
Shelving, Wire																																	3
Wall System																													1				
Stand, I.V.										1																							
Stand, Mayo			1							2																							
Stand, Typing																						1											
Cart, A-Line																																	1
Cart, Crash										1																							1
Cart, Utility										1																							
Receptacle, Brute																																	2
Receptacle, Linen																																	3
Receptacle, Step-On																																	1
Kick Bucket										4																							
Waste Basket						1																											
Screen							7																										
Refrigerator																	1			2													
Clock										1																							

PATIENT, O.B. AND PEDIATRIC FLOORS	Nursery	Utility	Nurses' Station	Delivery	Doctors	Nurses	Private (Labor)	Doctors' Chart	Dictate	Medication	Nurses' Station	Private (Patient)	Nurses' Conference	Ante Room	Play Room	Nurses' Station	Private (Pediatric)	Semi-Private	Shower	Therapy	Dining	Tub Room	Examination	Storage	Reading	Rm Room	Office
Chair, Dining																				12	12						
Chair, Lounge					1	1	1					1													2	8	
Chair, Posture			2					2	1		4		1			2											
Chair, Rocking	5																										
Chair, Side												1			1		1	2									2
Chair, Swivel Arm																											1
Chair, Tablet Arm													12														
Stool, Counter	1																										
Stool, Revolving				2																			1				
Desk, 2-Pedestal																											1
Credenza																											1
Table, 30X30															1				3								
Table, 30X60																				2							
Table, 18X36													1														
Table, Anesthesia				1																							
Table, Coffee																							1				
Table, Corner																									3		
Table, Delivery				1																							
Table, Examination																							1				
Table, Instrument	1		2																								
Table, Overbed							1					1					1	2									
Table, Utility		1																									
File, 4-Drawer													1														1
Cabinet, Bedside																							2				
Cabinet, Gown													1	1			1	2									
Cabinet, Storage		2		1																							
Bookcase													1														
Lockers (Lot)					1	1																					
Stand, I.V.	5			1																							
Stand, Mayo				1																			1				
Stand, Solution							1																				
Bed, Adjustable													1				1										
Bed, Chair																	1										
Bed, Crib																		2									
Bed, Labor							1																				
Bed, Studio					1													1							1		
Cart, A-Line											1													1			
Cart, Crash																								1			
Cart, Emergency	1																										
Cart, Isolation														1													
Cart, Supply			1																								
Bassinet	17																										
Isolette																	1										
Receptacle, Linen	5				1	1					1			1													
Receptacle, Step-On										1	1			1													
Receptacle, Torpedo											1																
Kick Bucket				1																							
Waste Basket	5	1	1					1	1		2	1				2	1	2					1				1
Ash Urn, Floor					1	1																					
Bulletin Board				1	1																						
Chalk Board																							1				
Presentation Center													1														
Refrigerator				1												1											
Clock	4	2																					1				

APPENDIX F

CURRENTLY RECOMMENDED MIMIMUM ILLUMINATION

FOOTCANDLES FOR HOSPITAL LIGHTING

CURRENTLY RECOMMENDED MINIMUM ILLUMINATION

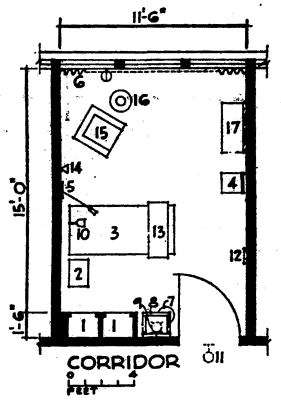
FOOTCANDLES FOR HOSPITAL LIGHTING

Anesthetising and preparation room	30
Auditorium	
Assembly	15
Exhibition	30
Autopsy and morgue	
Autopsy room	100
Autopsy table	2500
Morgue, general	20
Central sterile supply	
General	30
Needle sharpening	150
Corridor	
General	10
Operating and delivery suites and laboratories	20
Cystoscopic room	
General	100
Cystoscopic table	2500
Dental suite	
Waiting room	
General	15
Reading	30
Operatory, general	70
Instrument cabinet	70
Dental chair	1000
Laboratory, bench	100
Recovery room	5
Dining areas	20
Encephalographic suite	
Office	100
Workroom	30
Patients' room	30
Emergency room	
General	100
Local	2000
EKG, BMR and Specimen room	
General	20
Specimen table (supplementary)	50
Examination and treatment room	
General	50
Examining table	100
Eye, ear, nose, and throat suite	
Dark room	10
Eye examination and treatment room	50
Ear, nose and throat room	50
Exits, at floor	5
Flower room	10
Formula room	30
Fracture room	
General	50
Fracture table	200
Kitchen	
Central	70
Floor, kitchen and pantry	70
Dishwashing	30
Laboratories	
Assay rooms	30
Work tables	50
Close work	100
Laundry	70
General	30
Pressers and ironers	70
Sorting	70
Libraries	70
Linen closet	10
Locker rooms	20
Lobby	30
Lounge rooms	30
Maintenance shop	
General	30
Work benches	100
Paint storage	10
Medical records room	100
Nurses' station	
General	30
Desk and charts	50
Medicine room counter	100
Nurses' workroom	30
Nurseries	
General	10
Examination table	70
Play room, pediatric	30

Obstetrical	
Cleanup room	30
Scrubup room	30
Labor room	30
Delivery room, general	100
Delivery table	2500
Offices	
General	100
Bookkeeping and fine work	150
Conference and consultation room	30
Information and switchboard	30
Retiring room	10
Waiting room	20
Parking lot	5
Power plant	
Boiler room	10
Machine room	20
Switchboard room	30
Transformer room	10
Pharmacy	
General	30
Work table	100
Active storage	30
Alcohol vault	10
Private rooms and wards	
General	10
Reading	30
Psychiatric disturbed patient's area	10
Radioisotope facilities	
Radiochemical laboratory	30
Uptake measuring room	20
Examination table	50
Retiring room	10
Sewing room	
General	20
Work area	100
Solariums	20
Stairways	20
Storage, central	
General	15
Office	70
Surgery	
Instrument and sterile supply room	30
Cleanup room (instruments)	100
Scrubup room	30
Operating room, general	100
Operating table	2500
Recovery room	30
Therapy	
Physical	20
Occupational	30
Toilets	10
Utility room	20
Waiting room	
General	15
Reading	30
X-ray room and facilities	
Radiography and fluoroscopy	10
Deep and superficial therapy	10
Dark room	10
Waiting room, general	15
Waiting room, reading	30
Viewing room	30
Filing room, developed films	30
Storage, undeveloped films	10

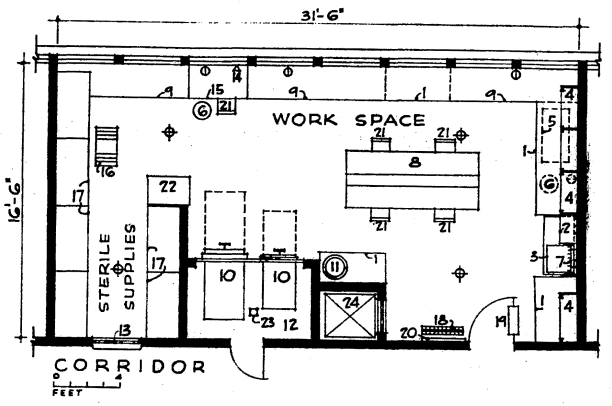
APPENDIX G

INVENTORY AND PLACEMENT OF MOVABLE EQUIPMENT FOR HOSPITAL INTERIORS



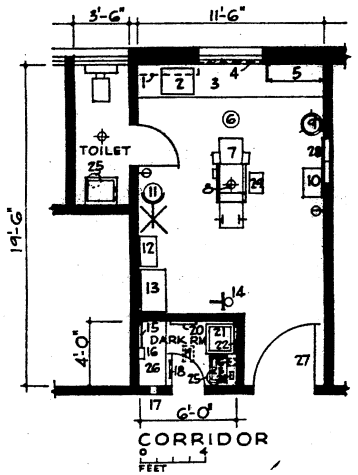
Typical One-Bed Room

1. Built-in locker
2. Bedside cabinet
3. Adjustable hospital bed
4. Straight chair
5. Nurses call
6. Sliding window curtain
7. Waste basket
8. Lavatory (knee control)
9. Wall bracket light
10. Bed light
11. Corridor dome light
12. Night light
13. Overbed table
14. Telephone outlet
15. Easy chair
16. Floor lamp
17. Dresser



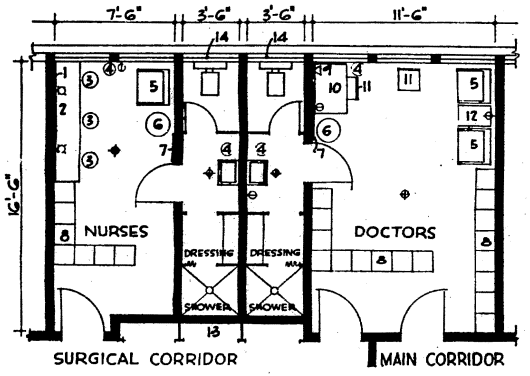
Central Sterilizing and Supply Room

1. Counter, Stainless Steel top
2. Shelf, Stainless Steel
3. Sink and drainboard, Stainless Steel
4. Wall cabinet, sloping top
5. Supply cart
6. Waste basket
7. Multiple rubber tube washer
8. Table with shelf over, 42 X 96
9. Counter, cabinets and drawers below
10. Dressing sterilizers
11. Water still
12. Ventilated mechanical space
13. Pass window
14. Telephone outlet
15. Built-in desk, Stainless Steel top
16. Step ladder
17. Sterile supply cabinet, sloping top
18. Glove drying rack
19. Dutch door
20. Bulletin board
21. Straight chair
22. Hot air sterilizer
23. Floor drain
24. Dumb waiter



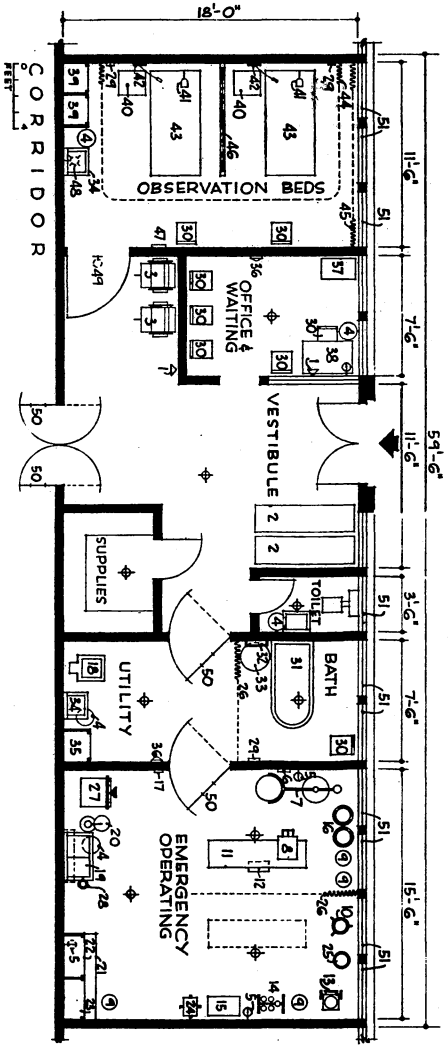
Cystoscopic Room

1. Shelf, Stainless Steel
2. Sink, knee control
3. Counter, Stainless Steel
4. Light proof shade
5. Wall cabinet, sloping top
6. Adjustable stool
7. Urological X-Ray table
8. Ceiling light
9. Kick bucket
10. Wheeled catheter tray
11. Examining light
12. Electric cautery
13. Urological instrument cabinet
14. Irrigator stand
15. Film hanger rack
16. Safelight
17. Exhaust fan
18. Light-proofed door
19. Ceiling light, white and red
20. Towel bar
21. Developing tank
22. Film drying bracket
23. Sink with shelf over
24. Timer
25. Waste basket
26. Counter, cabinets below
27. Light-proofed door
28. Double recessed view box
29. Footstool



Doctors' and Nurses' Locker Rooms in Surgical Suite

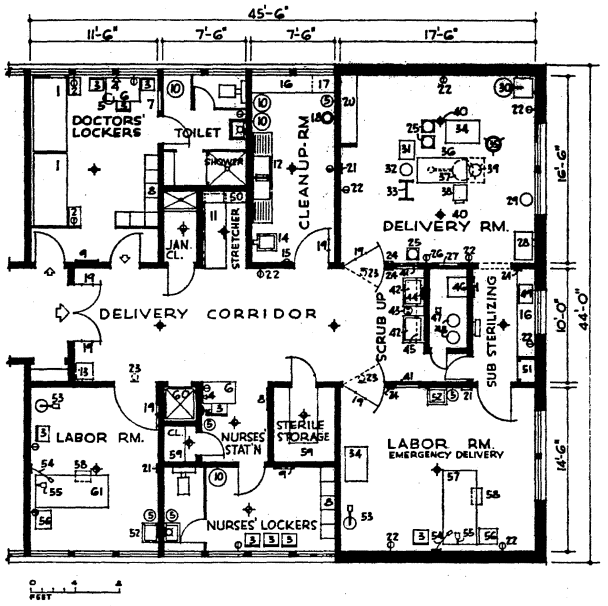
1. Mirror
2. Counter, plastic top with back splash
3. Stool
4. Waste basket
5. Easy Chair
6. Linen hamper
7. Bulletin board
8. Lockers
9. Telephone outlet
10. Desk
11. Straight chair
12. End table
13. Instrument cabinets, Stainless Steel
14. Obscure glass



Emergency Suite

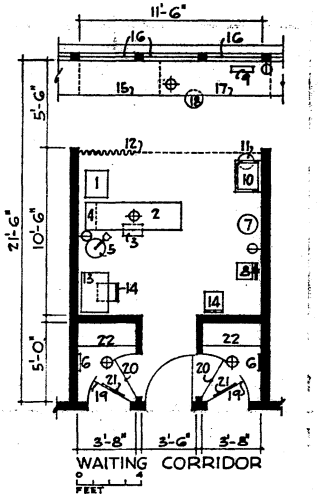
1. Telephone outlet
2. Wheel stretcher
3. Wheel chair
4. Waste basket
5. Explosion proof outlet
6. Clock
7. Portable emergency light
8. Mayo table
9. Adjustable stool
10. Kick bucket
11. Examining table
12. Foot stool
13. Resuscitating apparatus
14. Anesthesia unit
15. Instrument table
16. Double basin stand
17. Mercury switch
18. Clinical sink with bed pan flushing attachment
19. Instrument and Scrub sink, knee control
20. Alcohol dispenser
21. Counter, Stainless Steel
22. Wall cabinet, sloping top
23. Locked wall cabinet, sloping top.
24. Leg stand
25. Sanitary waste receptacle
26. Curtain and rod
27. High speed pressure sterilizer
28. Single soap dispenser
29. Hook strip
30. Straight chair
31. Shallow tub
32. Towel bar
33. Linen hamper
34. Lavatory, knee control
35. Blanket warmer
36. Dome light and buzzer
37. Filing cabinet, 4-Drawer
38. Desk
39. Locker
40. Bedside cabinet
41. Bed light
42. Nurses calling station
43. Adjustable hospital bed
44. Cubicle curtain and rod
45. Sliding Window curtain
46. Cubicle partition
47. Night light
48. Wall bracket light
49. Corridor dome light
50. Vision panel
51. Obscure glass

Delivery Suite



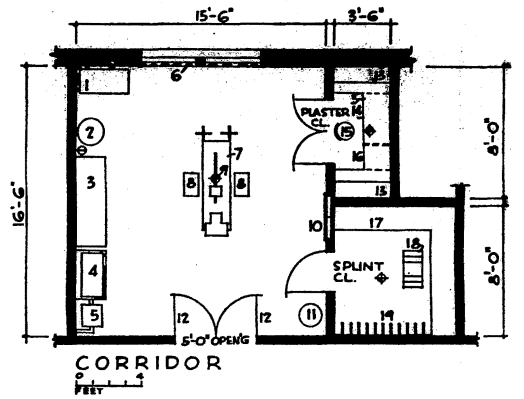
1. Studio bed
2. Night table
3. Straight chair
4. Telephone outlet
5. Waste basket
6. Table
7. Recessed double X-Ray film illuminator
8. Lockers
9. Bulletin board
10. Linen hamper
11. Wheel stretcher
12. Double compartment laundry tray with drainboards
13. Water cooler
14. Clinical sink with bedpan flushing attachment
15. Dome light and buzzer
16. Counter, Stainless Steel top
17. Cabinet below counter
18. Sanitary waste receptacle
19. Vision panel
20. Adjustable open shelving, sloping Stainless Steel top
21. Clock with sweep second hand
22. Explosion proof outlet
23. Corridor dome light
24. Mercury switch
25. Single Basin stand
26. Explosion proof calling station, foot operated
27. Aspirator
28. Incubator
29. Adjustable stool
30. Portable emergency light, explosion proof
31. Anesthetists' table
32. Anesthetists' stool
33. Anesthesia unit
34. Instrument table
35. Kick bucket
36. Delivery table
37. Obstetrical light
38. Mayo table
39. Kick bucket
40. Flush ceiling fixture
41. View window, clear glass
42. Scrub sink
43. Soap dispenser
44. Clock
45. Shelf over scrub sinks, Stainless Steel
46. High speed pressure sterilizer
47. Floor drain
48. Water sterilizers
49. Sink in counter, Stainless Steel
50. Wall cabinet, sloping Stainless Steel top
51. Blanket and solution warmer
52. Lavatory, knee control
53. Examining light
54. Nurses calling station
55. Bed light
56. Bedside cabinet
57. Obstetrical bed
58. Foot stool
59. Shelving
60. Dumbwaiter connecting with Central Sterile
61. Labor bed

Examination and Treatment Room with Dressing Cubicles



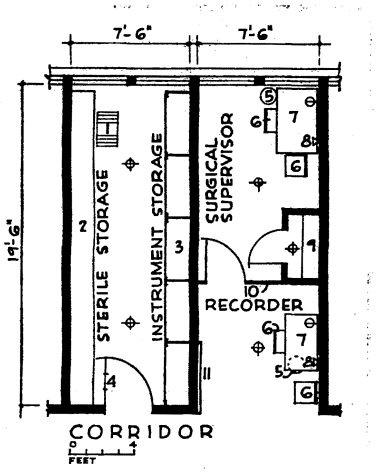
1. Cabinet
2. Examining table
3. Footstool
4. Paper sheet dispenser
5. Examining light
6. Hook strip
7. Adjustable stool
8. Adult scale
9. Instrument sterilizer
10. Lavatory, knee control
11. Waste basket
12. Cubicle curtain and rod
13. Table, 20 X 30
14. Straight chair
15. Counter, cabinets below
16. Obscure glass
17. Counter, open below
18. Stool
19. Door, spring latch and with throw bolt
20. Door, Spring latch
21. Mirror
22. Built in seat

Fracture Room



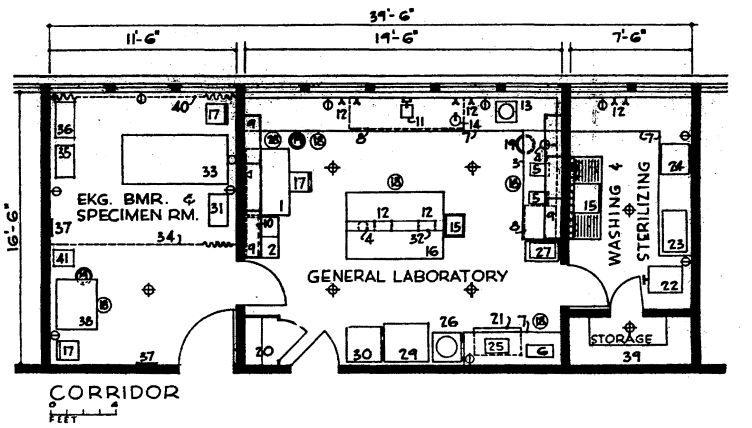
1. Instrument table
2. Galvanized iron can
3. Counter, Stainless Steel top
4. Plaster sink
5. Plaster trap
6. Light proof shade
7. Fracture table
8. Footstool
9. Ceiling Fixture
10. Recessed double X-Ray film illuminator
11. Linen hamper
12. Light-proof door
13. Three shelves
14. Plaster drawer
15. Adjustable stool
16. Plaster bin
17. Six shelves
18. Step ladder
19. Two rows of 3/4 inch diameter dowels, staggered

Instrument and Sterile Supply Room, Surgical Supervisor and Recorder



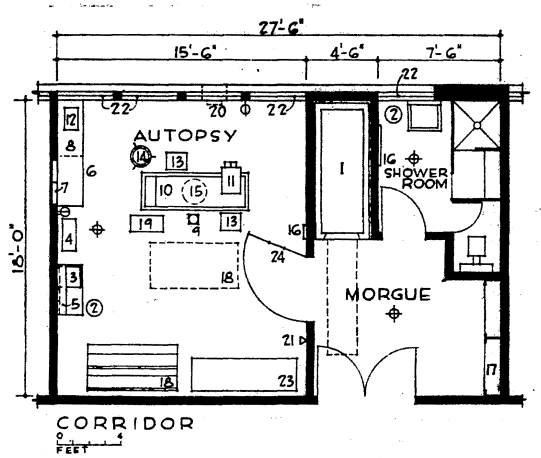
1. Step ladder
2. Shelving, 18 inches wide
3. Instrument cabinet, Stainless Steel
4. Vision panel
5. Waste basket
6. Straight chair
7. Desk
8. Telephone outlet
9. Shelving, 12 inches wide
10. Glazed door and partition, clear glass
11. Chalkboard

Laboratory



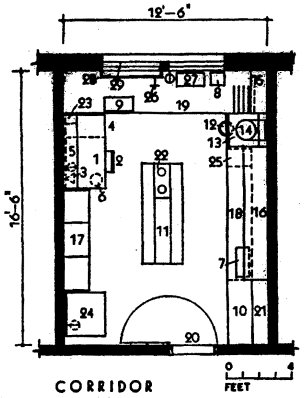
1. Desk
2. Filing cabinet
3. Microscope table
4. Cup sink, gooseneck spout
5. Microscope
6. Analytical balance
7. Acid resisting counter
8. Cabinets below counter
9. Wall cabinets
10. Book shelves
11. Laboratory sink
12. Air, gas and electric outlets
13. Single hot plate
14. Bunsen burner
15. Laboratory sink
16. Chemistry table
17. Straight chair
18. Stool
19. Sanitary waste receptacle
20. Closet
21. Wheel cart for frozen sections
22. Laboratory autoclave
23. Hot air sterilizer
24. Incubator
25. Water bath
26. Centrifuge
27. Shaking Machine on Stand
28. Waste basket
29. Refrigerator, 8 cubic feet
30. Refrigerator, 6 cubic feet
31. Bedside table
32. Shelves
33. Hospital bed
34. Cubicle curtain and rod
35. Basal metabolism apparatus
36. Electrocardiograph
37. Hook strip
38. Table, 24 X 36
39. Shelving
40. Sliding window curtain
41. Adult scale

Morgue and Autopsy Suite



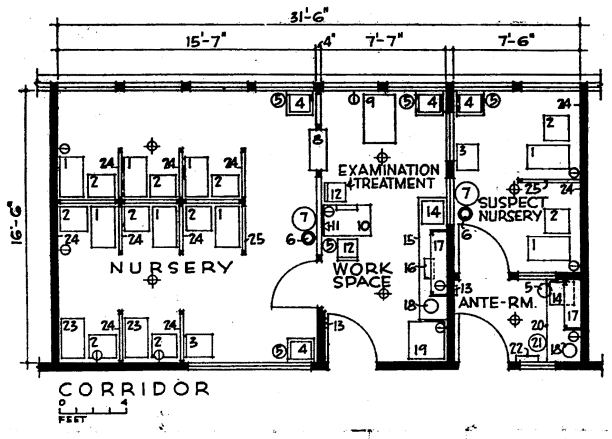
1. Mortuary refrigerator
2. Waste basket
3. Instrument and scrub sink, knee control
4. Instrument sterilizer
5. Shelf, Stainless Steel
6. Cabinet below counter
7. Double recessed view box
8. Counter, Stainless Steel
9. Floor drain
10. Autopsy table with sink
11. Mayo table
12. Scales
13. Footstool
14. Kick bucket
15. Light
16. Hook strip
17. Specimen cabinet with glazed doors, Stainless Steel
18. Portable observation stand
19. Suction glass
20. Ventilating fan
21. Telephone outlet
22. Obscure glass
23. Stretcher
24. View panel

Pharmacy



1. Desk
2. Chair
3. Telephone outlet
4. Two-drawer file
5. Book shelves
6. Waste basket
7. Prescription scale, Class A
8. Prescription scale, heavy duty
9. Counter scale
10. Counter, open adjustable shelves below
11. Carboy rack
12. Sanitary waste can
13. Sink with gooseneck spout and drain-board
14. Glass tank, distilled water
15. Cabinet, adjustable shelves
16. Drug cabinet, shelf above counter
17. Drug cabinets
18. Prescription counter
19. Counter, cabinets below
20. Dutch door
21. Open adjustable shelves
22. Filter rack
23. Prescription file
24. Refrigerator, 8 cubic feet
25. Narcotic safe
26. Gas outlet
27. Double element hot plate
28. Heat outlet grill, inlet grill in base of cabinet
29. Guards, at both windows

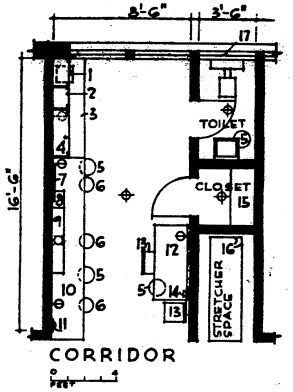
Nursery*



1. Bassinet
2. Bedside cabinet
3. Table for infant scale
4. Lavatory, knee control
5. Waste basket
6. Sanitary waste receptacle
7. Linen hamper
8. Pass window with shelf and sliding sash
9. Table, 24 X 36
10. Nurses' desk with chart rack
11. Telephone outlet
12. Straight chair
13. Hook strip
14. Sink, Stainless Steel, knee control
15. Counter, cabinets below
16. Instrument sterilizer
17. Wall cabinet, sloping top
18. Single element hot plate
19. Refrigerator, 6 cubic feet
20. Counter, Stainless Steel
21. Stool
22. Chart rack, 2 charts
23. Incubator
24. Gown hook
25. Cubicle partitions

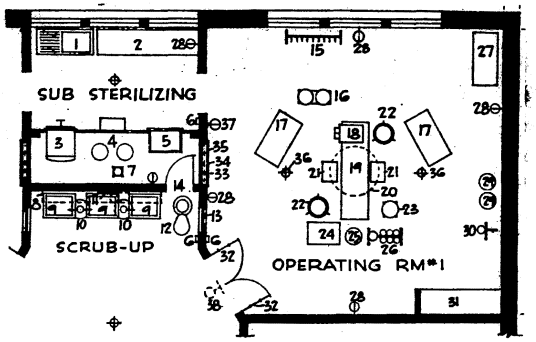
*The above plan is for a nursery of a 50 bed general hospital. Additional bassinets are needed for a nursery of a 100 bed hospital.

Nurses' Station and Stretcher Space



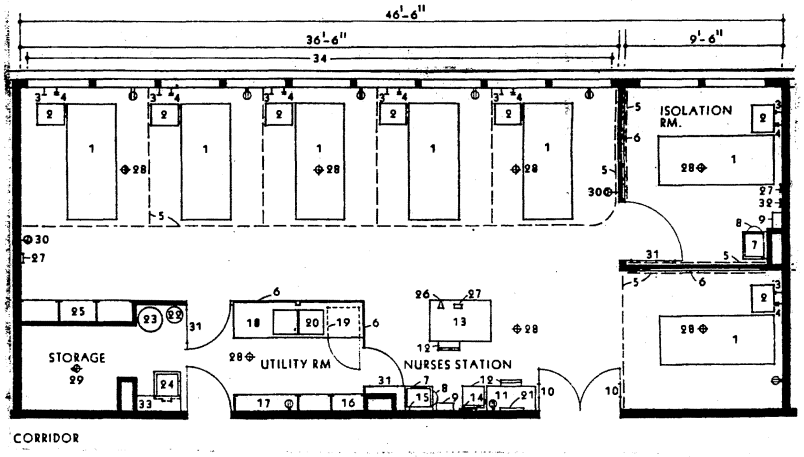
1. Medicine sink, Stainless Steel
2. Locked wall cabinet
3. Counter, cabinets below, Stainless Steel top
4. Wall cabinet, sloping top
5. Waste basket
6. Stool
7. Bulletin board
8. Pigeonhole form rack
9. Chart Rack
10. Counter, open below
11. Dome light and buzzer
12. Nurses' desk
13. Straight chair
14. Telephone outlet
15. Shelving
16. Wheel stretcher
17. Obscure glass
18. RX cart

Operating Room, Scrub-up and Sub-Sterilizing



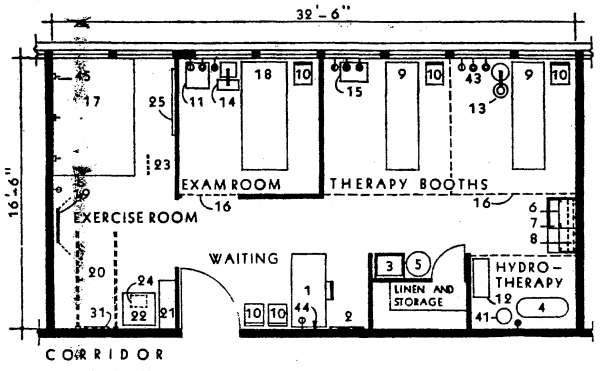
1. Sink and drainboard
2. Counter, Stainless Steel
3. High Speed pressure Sterilizer
4. Water sterilizers
5. Blanket and Solution warmer
6. Mercury switch
7. Floor drain
8. Glass shelf
9. Scrub sink
10. Soap dispenser
11. Clock
12. Alcohol dispenser
13. View window, clear
14. Access door
15. Sponge rack
16. Double basin stand
17. Instrument table
18. Mayo table
19. Operating table
20. Operating light
21. Footstool
22. Kick bucket
23. Single basin stand
24. Anesthetist's table
25. Anesthetist's stool
26. Anesthesia unit
27. Pack table
28. Explosion proof electric outlet
29. Adjustable stool
30. Irrigator stand
31. Adjustable open shelving
32. Vision panel
33. Clock
34. Recessed double X-Ray film illuminator
35. Aspirator
36. Flush ceiling fixture
37. Explosion proof calling station, foot operated
38. Corridor dome light
39. Caddy cart to hold accessories
40. Portable explosion proof light

Recovery Room



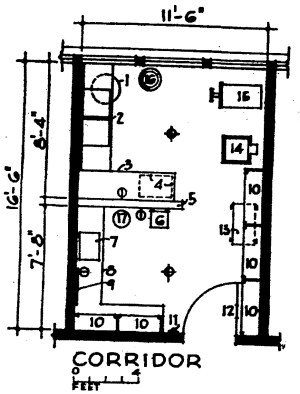
1. Adjustable hospital bed, Recovery stretcher
2. Bedside cabinet
3. Oxygen outlet
4. Suction outlet
5. Cubicle curtain
6. Partition to ceiling, glass view panel
7. Lavatory, knee control
8. Waste basket
9. Paper towel dispenser
10. Vision panel
11. Table, 24 X 48
12. Straight chair
13. Executive type desk
14. Clock
15. Mirror
16. Locked wall cabinet
17. Shelf, Stainless Steel, Cabinets above and below
18. Work counter, Stainless Steel
19. Refrigerator under counter
20. Double compartment sink
21. Bulletin board
22. Sanitary waste receptacle
23. Laundry hamper
24. Clinical sink with bed-pan flushing attachment
25. Storage cabinet, sloping top
26. Telephone outlet
27. Nurses' call
28. 500-watt indirect lighting units
29. 200-watt semidirect lighting unit
30. Single receptacle 30 amps
31. Glazed door
32. Hook strip
33. Shelf, Stainless Steel

Physical Therapy Suite



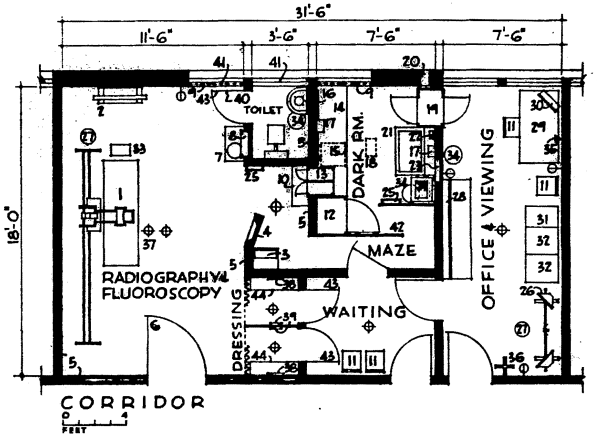
1. Desk
2. Bulletin board
3. Lavatory, gooseneck spout
4. Whirlpool bath
5. Laundry hamper
6. Wall cabinet
7. Sink with drainboard
8. Glass shelf
9. Treatment table, storage below
10. Chair
11. Bedside table
12. Paraffin bath
13. Infa red lamp
14. Ultra violet lamp
15. Short wave diathermy unit
16. Rod and curtains
17. Gym mat
18. Examination table, storage below
19. Posture mirror
20. Parallel bars
21. Three shelves
22. Table, 24 X 24
23. Sayre head sling attached to ceiling
24. Foot rest
25. Shoulder wheel
26. Steps
27. Stall bars
28. Shoulder abduction ladder, arch type
29. Stationary bicycle
30. Pulley weights
31. Wall mirror
32. Shelf, 6 feet high
33. Wheel chair
34. Wheel stretcher
35. Hubbard tank
36. Monorail over
37. Direct current generators
38. File cabinet
39. Water closet
40. Bench
41. Adjustable stool
42. Hand rail
43. Outlets
44. Telephone outlet
45. Gym mat hooks
46. Parallel bars

Utility



1. Laundry hamper
2. Double compartment laundry trap with drainboards
3. Counter, open below, Stainless Steel top
4. Cracked ice bin
5. Partition
6. Single element hot plate on bracket
7. Sink in Stainless Steel counter, knee control
8. Stainless Steel counter, cabinets below
9. Bulletin board
10. Wall cabinet, sloping top
11. Dome light and buzzer
12. Vision panel
13. Dressing cart
14. Clinical sink
15. Pressure sterilizer
16. Sanitary waste receptacle
17. Waste basket

Radiographic Suite



1. Combination radiographic and fluoroscopic unit
2. Cassette changer
3. Control unit
4. Leaded glass view window
5. Lead lining
6. Lead-lined door
7. Barium sink
8. Recessed cabinet
9. Light-proof shade
10. Low cabinet for supplies
11. Straight chair
12. Storage cabinet, sloping top
13. Cassette pass box
14. Film loading counter, cabinets below
15. Film storage bin
16. Film hanger racks
17. Safe light
18. Ceiling light, white and red
19. Two-door film dryer
20. Film dryer exhaust
21. Developing tank with thermostatic mixing valve
22. Timer
23. X-Ray film illuminator, wall mounted
24. Sink
25. Towel bar
26. Steroscope
27. Adjustable stool
28. Wall mounted view box
29. Executive-type desk
30. X-Ray film illuminator
31. Filing cabinet, 4-Drawer
32. Film filing cabinet, 3-Drawer
33. Footstool
34. Waste basket
35. Telephone outlet
36. Costumer
37. Fluoroscopic ceiling light
38. Hook strip
39. Mirror
40. Hook on door
41. Obscure glass
42. Movable partition
43. Light-proofed door
44. Seat

APPENDIX H

MANUFACTURERS OF PRODUCTS SUITABLE FOR USE IN HOSPITALS

MANUFACTURERS OF PRODUCTS SUITABLE FOR USE IN HOSPITALS

Flooring

Resilient and Hard Surface Flooring

American Olean Tile Company
Arco Chemical Company
Armstrong Cork Company
Azrock Flooring Company
Bangkok Industries
Burke Rubber Company
Commercial Steel Company
Desco International
Flintkote Company
H. B. Fuller Company
Interpace, Incorporated
Kentile Corporation
National Floor Products
Parkwood Laminates
Radiation Technology
R. C. A. Rubber Company
United States Ceramic Tile Company
Vinyl Plastics, Incorporated

Carpet Fibers

Allied Chemical Company
Brunswick Corporation
Celanese Corporation
Dow-Badische Company
E. E. du Pont de Nemours and Company
Herculon
Monsanto Corporation
Rohm and Haas Company

Wallcoverings

Coated Surfacings

Desco International Association
Fisher Scientific Corporation

Vinyl Wallcoverings

L. E. Carpenter and Company
Columbus Coated Fabrics, Division of Borden Chemical
Durawall, Incorporated
Flexi-Wall Systems
General Tire Company
Inmont Corporation
J. Josephson
Stauffer Chemical Company

Paneling

Bangkok Industries
Forms and Surfaces
Georgia-Pacific Corporation
Marlite Paneling Company
Marvelwood Corporation
Masonite Corporation
U. S. Plywood, Incorporated

Laminates

Exxon Chemical Company
Formica Corporation
Parkwood Laminates
U. S. Gypsum
Ralph Wilson Plastic Company

Ceramic Tile

American Olean Tile Company
Amsterdam Corporation
Mid-State Tile Company

Lighting

American Sterilizer Company
Cavitron Burton Division
Emerson Electric Company, Day-Brite Division
Vista Lighting Company

Furnishings

Affliated Hospital Products
American Sterilizer Company
Borg-Warner, Ingersoll Products Division
Crimso, Incorporated
Fritz Hansen, Incoprorated
Hardwood House
Hill-Rom Company
I. E. Industries
Interroyal Corporation
Isolette, a Narco Medical Company
Joerns Furniture Company, Division of American Seating Company
Lundia Corporation
Herman Miller Company
National Industries Division, AVM of Maryland, Incorporated
Reflector Hardware Corporation
Rudd International, Skandi-Form, Incorporated
Shelby-Williams Medical
Shelley Manufacturing Company
Simmons Company, Contract Division
Sunroc Corporation
Halsey W. Taylor Company
Thonet Industries

Cubicle Curtains

Jack Lenor Larsen
Steri-Tex Corporation
Tami Products Company
Vikton Company

Handrails and Bumper Guards

Brown Manufacturing Company
Construction Specialties

VITA

Carol Jean Bormann

Candidate for the Degree of

Master of Science

Thesis: HOSPITAL INTERIOR DESIGN SPECIFICATION DEVELOPMENT

Major Field: Housing and Interior Design

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Education: Graduated from Joplin Senior High School, Joplin, Missouri, May, 1959; received the Bachelor of Science degree in art from Southwest Missouri State University, Springfield, Missouri, in 1963; completed requirements for the Master of Science degree, Oklahoma State University, Stillwater, Oklahoma, May, 1975.

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