EXECUTIVE SUMMARY

The Interior Design Manual (IDM) will provide VA staff participating in the development of interior design projects with an understanding of their roles, responsibilities and the appropriate procedures for creating a comprehensive Interior Design environment. All VA staff members taking part in interior design are expected to follow this manual as best practice.

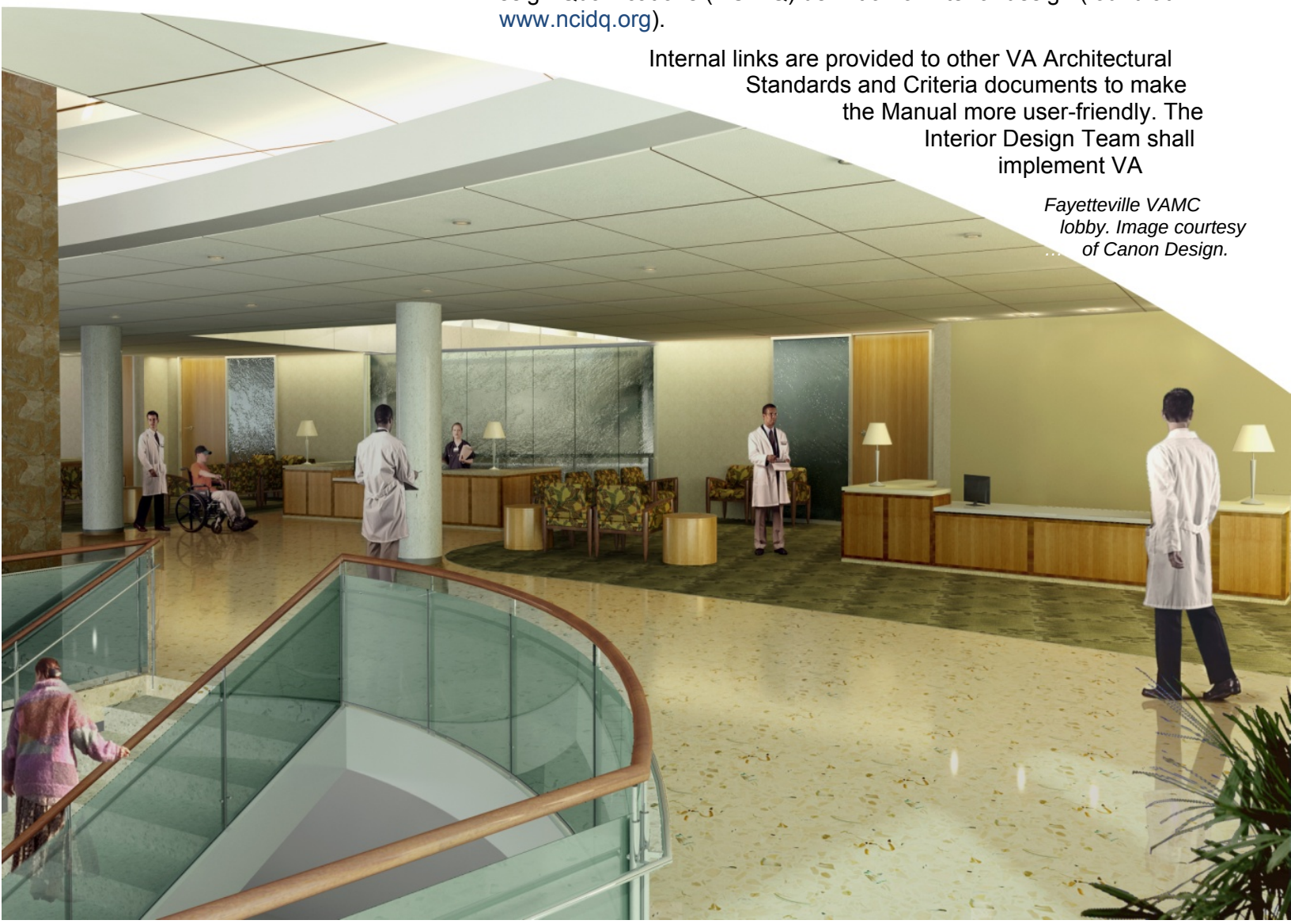
The purpose of the IDM is to aid in the translation of VA Master Specifications (http://www.va.gov/facmgt/standard/spec_idx.asp) into patient-centered design solutions. Design solutions should improve the quality of life and productivity as well as protect the health, safety and welfare of the veterans, visitors and staff. Interior Design is a major component in establishing and maintaining an environment that is professional, therapeutic, safe, aesthetically pleasing, and functionally appropriate.

The IDM will provide tools for understanding current healthcare design industry standards as well as innovative out-of-the-box thinking balanced with a clear awareness of what designing for VA means.

The IDM is a living document that VA staff will support and contribute to in future revisions, therefore creating a sense of ownership and collaboration between the staff and VA Central Office.

All VA designers should reference the National Council for Interior Design Qualifications (NCIDQ) definition of interior design (found at www.ncidq.org).

Internal links are provided to other VA Architectural Standards and Criteria documents to make the Manual more user-friendly. The Interior Design Team shall implement VA

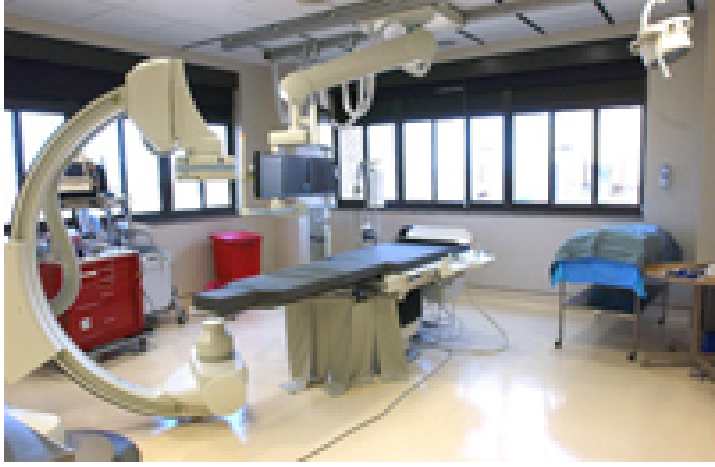


Fayetteville VAMC lobby. Image courtesy of Canon Design.

Architectural Standards and Criteria documents as a basis of design. The IDM is the resource to help build the rationale for options and challenges to those standards.

The IDM is intended to be a companion manual to the Architectural Design Manual. The manual provides check lists to organize the design process from Conceptual Design into Architectural Rules and throughout the Design Approach (http://www.va.gov/facmgt/standard/manuals.asp).

The IDM is also intended to be a companion to the Design Guides. The Design Guides provide functional and space criteria that are integrated with architectural, equipment, and environmental requirements into "guide plates," detailed, illustrative plans for each space (http://www.va.gov/facmgt/standard/dg_idx.asp).



Cardiac catheterization laboratory at VA Pittsburgh Healthcare System. Photo courtesy of the Department of Veterans Affairs

The manual is organized into four sections. Section one is the **Design Principles.** This section will provide VA staff members who participate in project design work a reference place to inspire the best design that meets the vision and mission of VA, recognizes the needs of the veteran patient and becomes an exemplary site for design. Section two is the **VA Design Portfolio,** which is organized by building types and provides a listing of sites that have achieved "best-in-class" design examples. Section three is the **Glossary,** which includes definitions of language used either within the VA system or in the Healthcare and design industry. Section four is labeled **Resource** and provides support web sites internal to VA and external to the design industry.

Left: Doctor and patient from VA's Fiscal Year 2005 Performance and Accountability Report. Photo courtesy of the Department of Veterans Affairs.

Below: Physical therapy at VA Pittsburgh Healthcare System. Photo courtesy of the Department of Veterans Affairs

VA ARCHITECTURAL STANDARDS AND CRITERIA

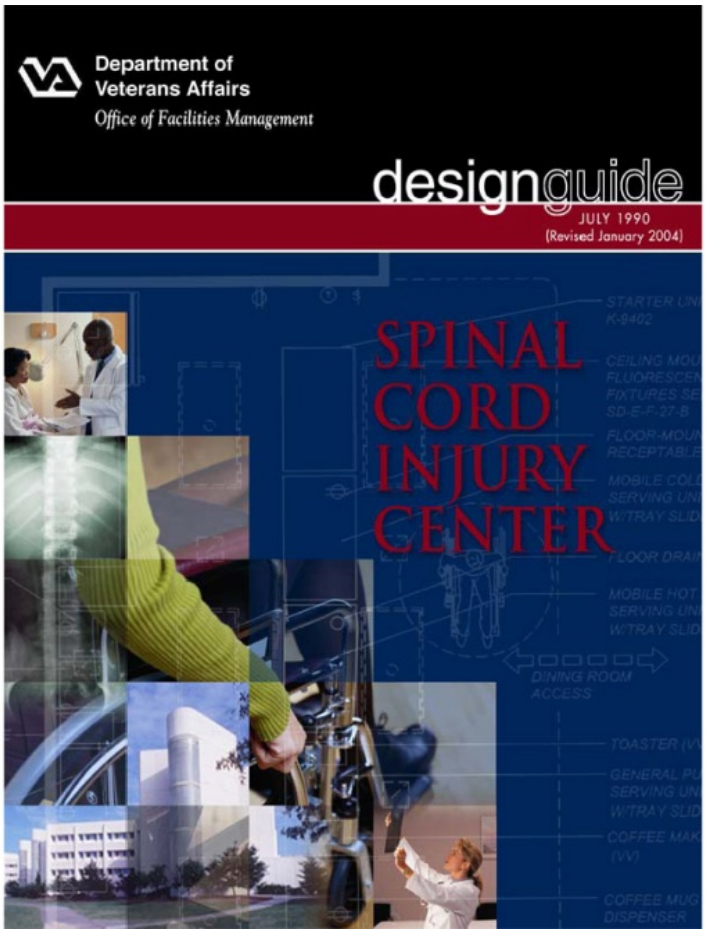
This Manual and the current editions of the following documents, also found in VA's Technical Information Library (http://www.va.gov/facmgt/standard/), comprise VA's architectural standards and criteria:

Design Manuals (http://www.va.gov/facmgt/standard/manuals.asp) – There are a number of Design Manuals falling under the following categories: Auto Transport, Architectural, Asbestos Abatement, Critical Path Method, Electrical, Equipment, Fire Protection, HVAC, Interior Design, Plumbing, Sanitary, Site Development, Specifications, Steam Generation and Distribution, and Structural. The manuals are a guide and a master reference that are expected to be followed in the design and renovation of medical facilities for VA.

Design Guides (http://www.va.gov/facmgt/standard/dg_idx.asp) – These documents include functional and space criteria integrated with architectural, equipment, and environmental requirements that are made into "guide plates" for each space.

Design and Construction Procedures (http://www.va.gov/facmgt/standard/proc_idx.asp) – A collection of VA requirements and guidance on various construction-related topics. Many of them were formerly known as VA "Construction Standards."

Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp) – This is a list of equipment, furnishings, and utility requirements for each space in a functional area.



Equipment Reference Manual (http://www.va.gov/facmgt/standard/equiprm.asp) – This manual includes graphic representations of each piece of equipment to be purchased and installed by the construction contractor.

Room Finishes, Door and Hardware Schedule (http://www.va.gov/facmgt/standard/rooms/rooms.doc) – The schedule includes room-by-room standards for interior finishes, doors, and door hardware.

Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/) – This includes approved space criteria for each room in a functional area, plus "design considerations" for that area, space relationship diagrams, and interfunctional relationship matrices.

Standard Details (http://www.va.gov/facmgt/standard/details.asp) – Standard Details include scale drawings of many specific items and conditions and are to be used as a guide only, except for standard details specifically stipulated by PG-18-3, VA Design and Construction Procedures (http://www.va.gov/facmgt/standard/proc_idx.asp).

Master Construction Specifications (http://www.va.gov/facmgt/standard/spec_idx.asp) – The Master Construction Specifications are the specific requirements that architects, engineers, designers, and contractors must implement into construction documents for a VA building.

Infection-Control Standards – Although no architectural standards explicitly address infection control, it is a basic hospital function and a consideration underlying most of VA's standards and criteria.

Basic separation of clean and soiled material and activities is guided by the Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp), particularly by the Design Considerations and Relationship Matrixes and Diagrams.

Frequent hand washing is promoted by adequate and appropriately located lavatories and sinks, as per Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and the Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp).

Isolation of contagious or especially vulnerable patients is provided by isolation rooms or spaces in accordance with Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and Tuberculosis Facility Guidance (http://www.va.gov/facmgt/standard/tb_idx.asp).

Control of airborne infection in general, as well as in isolation rooms, requires proper design of ventilation systems, as specified in HVAC Design Manual (http://www.va.gov/facmgt/standard/manuals.asp).

General cleanliness (as well as sterility in critical spaces) is facilitated by the following:

Finishes appropriate for each space, as per Room Finishes, Door and Hardware Schedule (http://www.va.gov/facmgt/standard/rooms/rooms.doc).

Detailing of features such as door frames, casework, and finish transitions to avoid dirt-catching and hard-to-clean crevices and surfaces, as shown in Standard Details (http://www.va.gov/facmgt/standard/details.asp) and Equipment Reference Manual (http://www.va.gov/facmgt/standard/equipment.asp).

Adequate and appropriately located and equipped housekeeping spaces, as provided by Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and the Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp).

Outpatient Clinic and Regional Office, Anchorage, Alaska. Image courtesy of the Department of Veterans Affairs.

CONCEPTUAL DESIGN CONSIDERATIONS

DESIGN CONSIDERATIONS

Design Story

The "Design Story" will justify "why" spaces have been designed the way they are, or "why" certain materials have been used that may deviate from the established VA standards. It provides the validation, benchmarking, and "lessons learned" rationalization. The story is a tool for designers to build consensus and gain approval for their design solutions. It should be conceptualized early in the project and become enhanced during all design phases. The design story should be inspired by a patient-centered care delivery model, the military and national patriotism of the patients, and an understanding of veteran-specific disease and illness. It should also recognize the cultural, regional and ethnical differences, and should follow Federal Government codes, directives, rules and regulations. The design story should be inspired by emerging healthcare design, technology, evidence-based design, sustainability, and collaborative resources. This inspiration becomes the basis of the design story. In every sizeable project the whole project team can contribute to the design story. The project team includes all VA staff participants. This includes the Director's Office, Administration, VA Engineers, VA Architects, Environmental Programs staff, care giving staff, and end users that are affected by the project. Patient and family users can bring great perspective.

In medium and small projects there may not be a project team to contribute to the story; therefore, the story can be crafted by the designer, project engineer, in-house engineering trades (if available) and the end users that are affected by the project.

> "In a patient-centered environment, design solutions will respond to the needs of the patient profile both architecturally and through material selections."

Patient Profile

VA staff participating in the development of interior design projects should create a patient profile for their facility. The patient profile is a description of the unique characteristics and needs of the various Veteran patient users and may include cultural, regional, and ethnic

Hand painted mural at the VAMC Battle Creek Community Living Center. Photo courtesy of the Department of Veterans Affairs.

characteristics, to name a few. The description should address both mental and physical characteristics. This profile will help the designer create patient-focused design solutions. Refer to the Demographic material beginning on page 1-8.

In a patient-centered environment, design solutions will respond to the needs of the patient profile both architecturally and through material selections. When VA staff members participating in the development of interior design projects have the opportunity, they should discuss the patient profile benefits with the project team. In patient-centered environments, care givers include the patients in the collaboration of their care; therefore, the benefits of understanding the patient profile affect both the patient and the care givers.

VAMC, Cleveland, Ohio. Photo courtesy of the Department of Veterans Affairs.

Examples of a few specific VA Patient Profile design responses:

- Profile 1 - Post Traumatic Stress Disorder (PTSD)

  Attributes: Mental health patients typically arrive alone and the need for privacy is very great.

  Design Response: Small separated waiting pods are better than one large waiting room.

  VA Site Reference: VA Palo Alto Health Care System, VAMC Cleveland

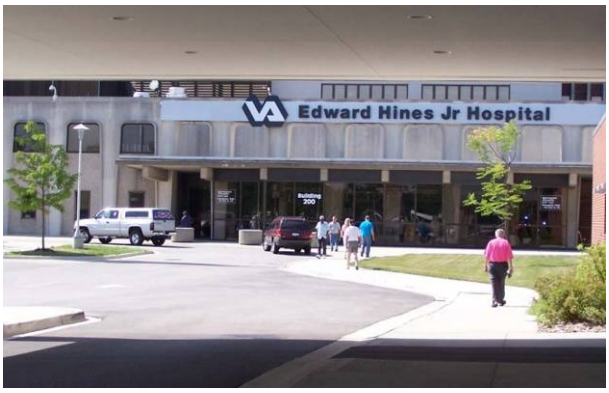
Veteran using treadmill from VA's National Center for Patient Safety 2004 Falls Toolkit. Photo courtesy of the Department of Veterans Affairs.

- Profile 2 –Spinal Cord Injury (SCI)

  Attributes: Patients with conditions ranging from limited physical mobility to complete paralysis.

  Design Response: Empower patients by providing a wireless system to control light, temperature, nurse call, TV, etc.

  VA Site Reference: VAMC Cleveland, VAMC Hines



Edward Hines, Jr. VA Hospital, Chicago, Illinois. Photo courtesy of the Department of Veterans Affairs.

- Profile 3 –POLY Trauma

  Attributes: A Poly Trauma area serves patients that require the environment to take into consideration their multiple disabilities of varying severity and their requirement for support over long periods of time.

  Design Response: High contrast in the environment, such as providing a counter top in one color and the sink in a contrasting color to meet visual impairment issues.

  VA Site Reference: VAMC Minneapolis

  VA Article Reference: The article highlighted in *Time Magazine's* August 27, 2006 issue, "How VA Hospitals Became the Best" explained "how the VA care is acing competitors."

- Profile 4 –Family Support Areas

  Attributes: Physicians need to discuss sensitive and / or confidential patient information with families.

  Design Response: Instead of the traditional consultation room, provide alternative respite spaces outfitted with comfortable and informal seating arrangements and a dignified and calm décor.

  VA Site Reference: VAMC Albany

Demographics. VA staff participating in the development of interior design projects will take into account the demographics of each VA

All VA patient-centered building designs will understand the demographics of each Veteran patient user type. This information will provide the designer with a humanistic understanding of the attributes of veterans as individuals.

Demographics include the basic information of age and sex, but also include the area of military service. Military demographics describe the state, period, and service activity information.

Reference the military census material listed on the following pages to better understanding the demographics of every individual veteran patient user type. The demographic information will provide context for the project team to better appreciate the needs of veterans that use their facility.

Veteran in his "personalized" bedroom at the Miles City, Montana Nursing Home. Photo courtesy of the Department of Veterans Affairs.

VETERANS BY STATE, AGE GROUP, PERIOD, GENDER, 2000-2003

State	Age Group																
	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+	Grand Total
Alabama	266	5,726	12,627	15,742	23,371	28,207	34,081	38,791	55,169	49,202	36,995	39,486	35,902	26,525	12,412	2,996	417,497
Alaska	61	1,200	2,235	2,724	4,949	6,229	7,233	8,263	10,444	8,590	5,130	3,328	2,670	1,822	703	184	65,767
Arizona	281	7,319	16,443	20,188	29,215	35,530	41,523	45,041	63,778	64,466	49,533	54,611	52,895	42,153	21,627	5,492	550,095
Arkansas	185	3,889	8,238	10,113	14,655	16,961	20,109	22,818	34,420	30,249	24,504	25,285	21,518	18,559	8,804	2,306	262,613
California	1,826	35,418	67,766	76,532	107,967	139,218	166,276	182,308	272,165	283,791	206,221	202,391	190,771	160,427	86,963	23,686	2,203,727
Colorado	204	5,467	13,505	18,061	28,073	34,175	38,469	40,497	57,105	53,363	34,833	32,622	28,933	20,870	11,024	2,737	419,938
Connecticut	168	2,551	5,233	6,085	9,655	14,274	17,104	17,212	29,292	36,373	25,385	25,623	26,217	21,473	12,064	3,249	251,957
Delaware	50	1,066	2,145	2,514	4,074	5,582	6,766	6,696	9,773	10,272	7,194	7,256	7,203	5,385	2,497	555	79,029
D.C.	24	433	822	1,035	1,811	2,379	2,681	2,700	3,853	4,007	3,183	3,558	3,412	2,830	1,540	537	34,804
Florida	824	20,747	45,976	56,042	81,714	108,744	134,419	134,408	189,458	194,568	155,355	177,594	182,807	158,084	83,558	22,778	1,747,076
Georgia	522	11,490	27,046	35,696	54,577	68,265	77,458	72,060	98,954	90,056	62,413	55,986	47,528	34,371	16,639	4,009	757,070
Hawaii	87	1,694	2,607	2,729	4,599	6,353	7,897	9,164	13,733	13,952	9,514	9,380	9,007	7,720	3,225	734	102,396
Idaho	133	2,706	5,586	6,165	8,133	9,780	10,407	11,403	16,249	15,759	11,617	10,991	9,413	8,436	3,984	1,065	131,827
illinois	749	13,468	27,772	32,206	44,798	51,450	57,095	57,929	111,295	110,406	77,514	81,999	79,473	65,050	32,749	8,455	852,409
Indiana	404	6,868	16,083	20,848	30,853	39,933	43,067	44,029	72,073	66,808	46,697	45,050	45,157	35,386	16,694	4,084	534,033
Iowa	155	3,186	7,097	8,773	12,933	15,768	16,372	18,871	36,656	31,895	21,720	25,712	23,695	19,542	10,037	2,442	254,855
Kansas	152	3,243	6,883	8,405	13,030	15,467	17,494	20,404	33,269	29,610	20,206	21,194	20,351	16,930	8,574	2,353	237,564
Kentucky	236	5,143	10,807	13,295	20,705	25,436	27,249	29,282	49,457	43,004	30,771	30,757	28,718	22,875	10,699	2,753	351,185
Louisina	354	7,226	14,139	15,896	22,450	22,344	25,031	30,639	47,425	41,271	31,014	31,307	29,327	23,551	11,709	2,778	356,461
Maine	78	1,712	3,580	4,302	6,407	9,035	11,309	11,801	18,905	17,774	12,754	14,130	11,867	9,364	4,871	1,174	139,063
Maryland	364	6,557	14,648	18,070	27,427	38,297	43,521	40,722	60,059	57,496	42,104	39,052	36,415	27,782	14,597	3,613	470,722
Massachusetts	215	4,952	10,633	12,981	17,979	25,669	31,446	30,475	56,190	61,344	45,679	48,763	48,038	39,925	21,896	5,899	462,083
Michigan	352	8,750	22,387	30,265	44,313	56,782	57,986	61,656	111,605	105,612	72,562	70,112	70,323	57,231	27,823	6,250	804,011
Minnesota	249	4,234	10,095	13,227	20,233	26,790	30,246	33,153	59,756	54,851	38,386	38,123	35,975	26,977	13,942	3,927	410,166
Mississippi	245	3,993	8,481	10,219	14,022	15,721	19,563	20,876	29,553	26,056	21,244	22,156	19,544	15,196	7,584	1,884	236,338
Missouri	352	6,751	15,410	19,466	29,101	35,993	42,451	45,266	72,262	66,571	46,973	50,736	46,838	37,475	18,018	4,507	538,172
Montanta	98	1,569	3,051	3,499	4,988	6,189	7,226	8,781	13,641	13,729	9,902	8,937	7,882	6,515	3,344	879	100,230
Nebraska	77	2,134	4,809	5,905	8,623	10,121	10,820	12,250	21,177	18,736	13,294	14,796	13,811	10,573	5,382	1,327	153,834
Nevada	177	2,741	6,799	8,921	12,991	16,980	20,110	22,607	31,022	31,897	24,475	22,418	20,006	14,747	6,738	1,665	244,295
New Hampshire	52	1,329	3,344	4,367	6,439	8,991	11,345	10,748	16,670	17,228	12,250	11,483	10,269	7,789	4,038	1,092	127,434
New Jersey	240	6,126	12,322	13,808	20,259	29,682	35,802	34,274	63,412	75,645	53,509	58,414	59,696	49,349	25,914	6,897	545,345
New Mexico	148	2,529	5,147	6,241	9,249	11,251	14,752	16,857	23,792	21,445	15,660	16,081	14,588	11,048	5,618	1,517	175,923
New York	782	13,060	25,636	29,438	44,882	65,313	75,225	73,389	134,286	145,104	105,225	113,647	112,667	94,058	47,920	13,757	1,094,391
North Carolina	469	11,626	24,624	30,436	46,187	58,413	67,266	68,551	96,638	90,100	62,976	66,498	59,814	46,136	21,633	4,849	756,216
North Dakota	49	999	1,763	1,944	2,558	2,959	3,418	4,484	7,864	6,582	4,964	4,779	4,735	3,495	1,886	572	53,048
Ohio	602	12,824	30,708	39,744	56,992	69,954	76,647	77,551	136,243	126,387	88,065	88,698	89,441	74,396	35,817	8,398	1,012,466
Oklahoma	247	5,876	12,009	13,894	18,516	20,967	25,200	30,983	46,356	44,317	31,467	31,421	28,612	22,845	11,338	2,657	346,707
Oregon	164	4,319	10,460	13,363	18,903	23,004	25,498	32,094	49,668	48,417	33,937	29,765	27,020	24,498	12,852	3,356	357,319
Pennsylvania	568	12,250	26,251	31,301	47,608	63,528	70,247	74,264	140,277	139,789	103,719	108,755	111,944	96,853	48,664	12,203	1,088,220
Rhode Island	27	965	2,007	2,422	3,276	5,440	6,485	5,829	11,095	11,516	7,770	8,251	8,736	7,394	4,038	1,078	86,327
South Carolina	406	6,860	14,229	16,672	23,434	30,556	35,628	36,474	54,935	48,638	36,947	36,201	31,435	23,830	11,187	2,650	410,084
South Dakota	63	1,099	2,194	2,551	4,076	4,567	5,161	6,010	9,850	7,785	6,045	6,986	6,579	4,787	2,603	623	70,981
Tennessee	273	6,329	15,564	20,605	30,486	39,228	44,519	47,381	74,187	66,594	48,610	46,177	41,969	31,734	14,783	3,666	532,105
Texas	1,577	29,130	64,086	77,544	106,062	114,833	133,854	154,314	209,064	202,964	139,325	137,316	124,347	96,985	48,889	11,925	1,652,214
Utah	122	2,630	5,226	5,926	7,788	9,586	10,050	12,365	19,042	18,044	12,637	13,376	12,713	10,624	5,374	1,235	145,738
Vermont	20	462	1,127	1,490	2,576	3,901	4,613	4,652	7,228	7,833	5,524	5,265	4,909	3,760	1,801	511	55,670
Virginia	747	14,559	26,705	30,696	46,371	62,905	73,925	72,348	92,698	88,347	59,594	57,230	50,696	37,863	18,270	4,647	737,600
Washington	387	8,555	19,010	24,113	37,211	46,350	53,318	61,012	81,790	83,154	55,984	47,828	41,374	34,451	18,317	4,871	617,723
West Virginia	134	2,428	5,423	6,740	8,589	10,344	11,453	13,643	26,749	23,002	17,872	17,498	16,842	13,610	6,437	1,522	182,285
Wisconsin	211	5,080	12,071	15,487	24,724	29,945	32,608	35,251	62,781	58,670	43,345	44,409	40,544	32,597	15,708	4,019	457,450
Wyoming	58	1,166	2,189	2,319	2,880	3,158	3,698	4,858	7,843	7,225	5,096	4,394	3,942	3,027	1,535	323	53,711
Puerto Rico	117	1,744	2,988	3,044	4,248	6,533	9,071	10,446	14,416	14,460	12,988	16,710	14,656	8,481	4,237	1,055	125,194
Is. Areas & Foreign	80	1,304	2,309	2,822	5,677	8,515	11,148	12,591	15,075	14,855	12,740	10,236	8,467	7,771	6,851	2,185	122,625
Grand Total	**16,433**	**335,482**	**720,292**	**876,868**	**1,282,634**	**1,617,594**	**1,866,341**	**1,980,471**	**3,080,697**	**2,999,809**	**2,163,422**	**2,194,770**	**2,081,691**	**1,685,153**	**855,408**	**219,927**	**23,976,991**

CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA
August 1990 or later (including Persian Gulf War):	60,227	15,320	66,563	33,386	278,003	67,184	21,180	9,967	4,942	201,065	133,149
Served in Vietnam era	8,484	2,169	7,896	3,775	25,385	8,607	1,619	1,490	325	28,357	14,847
No Vietnam era service:	51,743	13,151	58,667	29,611	252,618	58,577	19,561	8,477	4,617	172,708	118,302
Served Septemeber 1980 or later only:	46,530	11,474	53,723	27,557	235,642	52,626	18,409	7,692	4,295	155,106	106,520
Served under 2 years	10,695	1,449	9,418	6,936	44,678	7,631	4,259	1,578	834	28,523	16,923
Served 2 or more years	35,835	10,025	44,305	20,621	190,964	44,995	14,150	6,114	3,461	126,583	89,597
Served prior to September 1980	5,213	1,677	4,944	2,054	16,976	5,951	1,152	785	322	17,602	11,782
May 1975 to July 1990 only:	61,431	12,565	71,781	36,566	334,578	66,453	34,757	12,082	5,820	231,351	128,362
September 1980 to July 1990 only:	34,311	6,984	40,245	20,780	186,996	37,007	18,629	6,796	3,479	130,870	76,063
Served under 2 years	6,529	953	7,774	4,473	32,370	7,006	3,421	1,047	541	23,970	12,202
Served 2 or more years	27,782	6,031	32,471	16,307	154,626	30,001	15,208	5,749	2,938	106,900	63,861
Other May 1975 to July 1990 service	27,120	5,581	31,536	15,786	147,582	29,446	16,128	5,286	2,341	100,481	52,299
Vientam era, no Korean War, no WWII, no August 1990 or later	126,847	26,148	150,138	79,453	754,682	142,958	87,712	23,680	11,816	444,997	232,891
Vietnam era and Korean War, no WWII, no August 1990 or later	7,714	818	9,154	4,640	29,220	6,655	1,396	1,194	494	30,064	11,156
Vietnam era, Korean War, and WWII, no August 1990 or later	4,016	377	5,500	2,173	22,412	3,820	922	378	468	21,533	5,499
Febrauary 1955 to July 1964 only	46,221	5,750	56,805	31,470	272,408	41,720	37,908	9,217	4,718	185,316	70,764
Korean War, no Vietnam era, no World War II	55,278	4,448	71,943	32,910	301,034	44,532	42,918	10,416	5,430	242,777	73,642
Korean War and World War II, no Vietnam era	7,315	478	10,910	4,447	50,627	6,033	4,560	1,167	967	38,910	9,107
World War II, no Korean War, no Vietnam era	73,515	5,228	115,615	53,716	504,010	64,101	75,822	15,403	9,269	461,291	97,796
Other service only	4,833	420	4,507	2,953	22,366	2,929	2,894	785	560	18,293	6,309
Total	**447,397**	**71,552**	**562,916**	**281,714**	**2,569,340**	**446,385**	**310,069**	**84,289**	**44,484**	**1,875,597**	**768,675**

CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA
August 1990 or later (including Persian Gulf War):	18,312	20,340	97,386	59,009	26,382	33,051	45,366	53,843	14,326	73,287	39,792
Served in Vietnam era	2,413	1,922	6,955	4,233	2,162	4,011	4,367	5,023	1,720	8,862	2,926
No Vietnam era service:	15,899	18,418	90,431	54,776	24,220	29,040	40,999	48,820	12,606	64,425	36,866
Served Septemeber 1980 or later only:	14,246	16,859	85,489	51,524	23,044	26,364	37,902	46,489	11,568	57,333	34,889
Served under 2 years	1,708	2,801	18,982	11,577	5,522	5,009	8,055	11,312	2,421	9,969	8,275
Served 2 or more years	12,538	14,058	66,507	39,947	17,522	21,355	29,847	35,177	9,147	447,364	26,614
Served prior to September 1980	1,653	1,559	4,942	3,252	1,176	2,676	3,097	2,331	1,038	7,092	1,977
May 1975 to July 1990 only:	15,260	16,842	118,086	85,645	31,863	31,562	51,051	49,477	21,341	80,902	63,402
September 1980 to July 1990 only:	746	9,911	69,758	50,924	18,923	18,055	30,478	26,688	11,975	47,844	34,885
Served under 2 years	1,082	1,937	13,981	9,970	4,162	3,889	6,441	5,522	2,068	7,760	6,648
Served 2 or more years	6,864	7,974	55,777	40,954	14,761	14,166	24,037	21,166	9,907	40,084	28,237
Other May 1975 to July 1990 service	7,314	6,931	48,328	34,721	12,940	13,507	20,573	22,789	99,366	33,058	28,517
Vientam era, no Korean War, no WWII, no August 1990 or later	35,738	39,851	289,637	176,218	87,496	79,493	114,213	114,470	46,434	150,518	150,981
Vietnam era and Korean War, no WWII, no August 1990 or later	2,151	1,562	4,033	2,971	1,388	2,608	3,628	4,524	2,142	5,271	2,864
Vietnam era, Korean War, and WWII, no August 1990 or later	1,328	768	1,930	1,217	622	1,168	1,849	2,225	857	3,581	1,786
Febrauary 1955 to July 1964 only	12,010	14,534	120,642	68,273	32,851	27,645	41,250	41,684	17,088	55,388	68,742
Korean War, no Vietnam era, no World War II	13,132	15,054	133,155	74,559	42,299	31,692	47,069	43,980	19,794	55,875	78,706
Korean War and World War II, no Vietnam era	1,389	2,179	11,313	6,512	3,232	3,414	4,204	5,818	2,062	7,320	9,112
World War II, no Korean War, no Vietnam era	19,844	24,358	217,908	110,729	63,292	54,431	68,404	71,894	29,317	87,442	138,650
Other service only	1,423	1,096	9,482	5,343	2,595	2,388	3,584	4,571	1,229	4,646	4,898
Total	**120,587**	**136,584**	**1,003,572**	**590,476**	**292,020**	**267,452**	**380,618**	**392,486**	**154,590**	**524,230**	**558,933**

CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

	MI	MN	MS	MO	MT	NE	NV	NH	NJ	NM	NY
August 1990 or later (including Persian Gulf War):	82,180	38,395	36,848	60,764	11,602	21,751	29,080	12,770	44,908	24,374	104,128
Served in Vietnam era	5,176	3,132	4,122	6,098	1,326	2,971	4,433	1,418	3,283	3,902	7,344
No Vietnam era service:	77,004	35,263	32,726	54,666	10,276	18,780	24,647	11,352	41,625	20,472	96,784
Served Septemeber 1980 or later only:	73,293	33,289	30,154	50,459	9,547	17,240	22,500	10,473	39,253	18,176	92,159
Served under 2 years	14,435	7,234	7,458	10,970	1,889	3,286	3,620	1,863	9,434	2,972	23,458
Served 2 or more years	58,858	26,055	22,696	39,489	7,658	13,954	18,880	8,610	29,819	15,204	68,701
Served prior to September 1980	3,711	1,974	2,572	4,207	729	1,540	2,147	879	2,372	2,296	4,625
May 1975 to July 1990 only:	121,244	57,744	33,355	78,361	12,909	19,767	33,723	20,560	74,589	26,410	162,974
September 1980 to July 1990 only:	73,616	32,946	18,339	43,290	7,270	11,458	18,805	11,086	42,238	14,408	93,160
Served under 2 years	14,230	6,699	3,500	9,202	1,553	2,403	3,408	2,170	7,893	2,583	19,373
Served 2 or more years	59,386	26,247	14,839	34,088	5,717	9,055	15,397	8,916	34,345	11,825	73,787
Other May 1975 to July 1990 service	47,628	24,798	15,016	35,071	5,639	8,309	14,918	9,474	32,351	12,002	69,814
Vientam era, no Korean War, no WWII, no August 1990 or later	276,749	146,799	66,703	173,656	34,199	50,708	71,415	42,815	180,497	57,340	364,061
Vietnam era and Korean War, no WWII, no August 1990 or later	3,355	1,712	4,230	4,871	1,138	1,625	4,475	1,581	2,976	3,180	4,027
Vietnam era, Korean War, and WWII, no August 1990 or later	1,586	978	2,147	2,408	458	583	2,440	919	1,866	1,757	2,290
Febrauary 1955 to July 1964 only	106,430	57,690	25,821	66,555	12,365	18,106	25,804	15,934	84,348	18,065	166,779
Korean War, no Vietnam era, no World War II	118,636	62,681	29,796	77,455	12,885	24,117	28,441	16,880	97,585	21,942	196,018
Korean War and World War II, no Vietnam era	8,946	5,221	3,900	8,126	1,600	1,860	4,662	2,053	8,674	3,286	15,284
World War II, no Korean War, no Vietnam era	186,516	90,206	43,547	114,795	20,413	33,450	36,062	24,594	170,074	32,699	332,779
Other service only	7,931	3,542	3,084	5,280	907	1,222	2,026	932	6,700	1,665	12,824
Total	**913,573**	**464,968**	**249,431**	**592,271**	**108,476**	**173,189**	**238,128**	**139,038**	**672,217**	**190,718**	**1,361,164**

CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX
August 1990 or later (including Persian Gulf War):	118,357	7,805	109,397	48,681	36,587	95,741	8,001	63,972	9,821	70,025	263,192
Served in Vietnam era	13,087	896	8,166	5,503	3,457	8,178	820	8,746	1,114	8,578	29,209
No Vietnam era service:	105,270	6,909	101,231	43,178	33,130	87,563	7,181	55,226	8,707	61,447	233,983
Served Septemeber 1980 or later only:	95,436	6,335	95,464	39,782	31,089	82,491	6,633	49,325	8,024	56,042	215,600
Served under 2 years	15,508	1,313	21,031	8,497	6,101	18,720	1,673	9,253	1,784	11,535	38,805
Served 2 or more years	79,928	5,022	74,433	31,285	24,988	63,771	4,960	40,072	6,240	44,507	176,795
Served prior to September 1980	98	574	5,767	3,396	2,041	5,072	548	5,901	683	5,405	18,383
May 1975 to July 1990 only:	117,407	6,119	155,424	42,982	49,211	145,531	12,559	61,628	9,127	78,796	237,880
September 1980 to July 1990 only:	67,471	3,456	91,349	22,389	27,841	84,937	7,075	35,981	5,162	44,944	129,187
Served under 2 years	10,513	666	18,399	5,062	5,644	16,394	1,510	5,530	1,057	8,717	24,333
Served 2 or more years	56,958	2,790	72,950	17,327	22,197	68,537	5,565	30,451	4,105	36,227	104,854
Other May 1975 to July 1990 service	49,936	2,663	64,075	2,059	21,370	60,600	5,484	25,647	3,965	33,852	108,693
Vientam era, no Korean War, no WWII, no August 1990 or later	226,806	18,780	335,572	116,672	123,113	350,055	27,967	122,615	22,660	171,540	533,801
Vietnam era and Korean War, no WWII, no August 1990 or later	11,272	309	5,538	5,461	3,271	5,706	885	8,034	707	7,022	27,952
Vietnam era, Korean War, and WWII, no August 1990 or later	5,230	69	2,492	2,643	2,074	3,667	621	4,093	324	2,863	15,729
Febrauary 1955 to July 1964 only	77,355	7,454	130,172	39,857	44,036	156,183	11,181	42,217	8,639	61,434	169,650
Korean War, no Vietnam era, no World War II	89,290	8,174	144,768	42,946	43,849	177,394	13,548	44,816	11,738	64,585	179,512
Korean War and World War II, no Vietnam era	9,558	479	12,457	6,742	6,822	17,512	1,749	5,665	1,034	6,919	26,223
World War II, no Korean War, no Vietnam era	129,478	11,604	237,430	66,698	76,939	316,088	25,187	63,607	14,709	91,043	284,458
Other service only	7,893	572	10,757	3,380	3,088	12,911	796	4,324	611	5,914	16,412
Total	**792,646**	**61,365**	**1,144,007**	**376,062**	**388,990**	**1,280,788**	**102,494**	**420,971**	**79,370**	**560,141**	**1,754,809**

CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

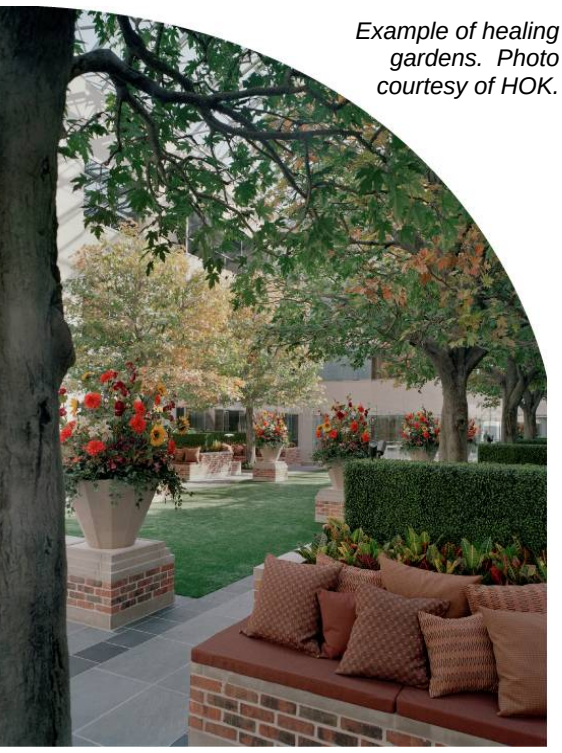
	UT	VT	VA	WA	WV	WI	WY	PR
August 1990 or later (including Persian Gulf War):	21,348	5,146	159,915	94,170	18,723	46,415	8,327	14,761
Served in Vietnam era	2,718	496	27,496	12,478	1,837	3,865	933	1,292
No Vietnam era service:	18,630	4,650	132,419	81,592	16,886	42,550	7,394	13,469
Served Septemeber 1980 or later only:	17,339	4,287	113,204	73,544	16,118	40,128	6,888	12,615
Served under 2 years	4,262	979	16,874	11,347	3,819	8,675	1,235	3,739
Served 2 or more years	13,077	3,308	96,330	62,797	12,299	31,453	5,653	8,876
Served prior to September 1980	1,291	363	19,215	8,048	768	2,422	506	854
May 1975 to July 1990 only:	18,268	8,871	115,601	94,743	21,902	63,164	6,110	18,972
September 1980 to July 1990 only:	10,536	4,727	66,029	53,451	12,741	36,472	3,477	10,016
Served under 2 years	2,500	965	10,182	8,692	2,425	7,099	759	2,137
Served 2 or more years	8,036	3,762	55,847	44,759	10,316	29,373	2,718	7,879
Other May 1975 to July 1990 service	7,732	4,144	49,572	41,292	9,161	26,692	2,633	8,956
Vientam era, no Korean War, no WWII, no August 1990 or later	46,045	19,060	226,908	212,698	61,260	150,679	19,083	35,822
Vietnam era and Korean War, no WWII, no August 1990 or later	1,475	428	13,854	9,326	1,888	1,973	527	1,247
Vietnam era, Korean War, and WWII, no August 1990 or later	924	217	10,184	6,112	553	814	384	726
Febrauary 1955 to July 1964 only	17,047	7,909	66,854	67,566	24,093	67,698	6,573	17,047
Korean War, no Vietnam era, no World War II	19,993	8,090	71,521	64,921	27,410	69,651	6,454	34,577
Korean War and World War II, no Vietnam era	2,439	923	11,020	11,472	2,687	5,074	676	2,337
World War II, no Korean War, no Vietnam era	32,309	11,640	103,986	104,590	41,041	104,290	9,377	18,864
Other service only	1,503	525	6,516	5,030	2,144	4,455	349	1,648
Total	**161,351**	**62,809**	**786,359**	**670,628**	**201,701**	**514,213**	**57,860**	**146,001**

Example of an area of respite. Photo courtesy of HOK.

Healing Environments

VA staff participating in the development of interior design projects will create a Healing Environment Statement for each VA Hospital or care-giving site. That statement will define the Healing Environment Design Goals and Principles.

The Healing Environment statement should recognize the mission statement of each VA facility and the mission of VA. The mission of VA is: "To care for him who shall have borne the battle and for his widow and his orphan." These words, spoken by Abraham Lincoln during his Second Inaugural Address, reflect the philosophy and principles that guide VA, and are the focus of VA's endeavors to serve the Nation's veterans and their families. Reference the mission of VA at the following website: http://www.va.gov/about_va/mission.asp.



Example of healing gardens. Photo courtesy of HOK.

During all phases of the project, from early design development to final design solutions, creating a healing environment is important in a patient-centered environment. All designs should be judged against the Healing Environment Statement to validate the solution meets the goals and principles of the Healing Environment.

Recent VA building designs have been recognized for creating successful Healing Environments. This recognition comes through the application of Planetree principles, or the application of therapeutic programs, or displaying good design in healing gardens to mention just a few.

VA Site Reference: Planetree -

VAMC Albany, NY - VA Healthcare Network, Upstate New York, continues to integrate Planetree Philosophy in all facilities

(www1.va.gov/visns/visn02/network/planetree/docs/planetree.pdf).

VAMC Albany NY, Network 2 Website was selected from among 30 best practice programs for a Planetree Spirit of Caring Award in the core component of Information and Education. The Spirit of Caring Awards recognizes the most innovative programs from around the nation. Network 2 subscribes to the Planetree principles (http://www1.va.gov/visns/visn02/network/planetree/index.cfm) of creating healing environments through patient-centered care. The 2006 award was created by *New Yorker* magazine cartoonist Arnie Levin, and illustrates the Planetree principles (http://www1.va.gov/visns/visn02/website/images/planetree2004b.jpg).

VA Site Reference: Therapeutic -

VA Palo Alto Health Care System, CA - Areas of Service, Recreation Therapy (www.palo-alto.med.va.gov/hcservices/RecTherapyService.asp).

VA Site Reference: Healing Gardens -

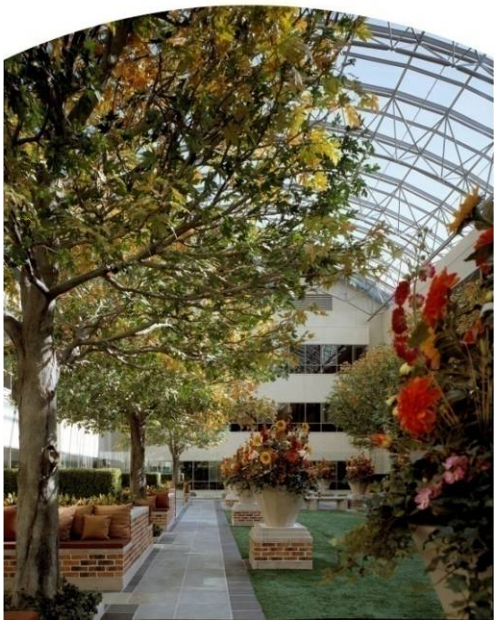
Portland VA Medical Center - The Healing Garden is designed with wide paths to accommodate wheel chairs and hospital beds and many of the

features will trigger the senses, such as tranquil sounds of water and wind chimes and the soothing scents of lavender and mint.

VA Site Reference: Healing Environments -

Pittsburgh, PA - The VA in Pittsburgh is getting underway with a $200 million project on the O'Hara campus. The facility will be enlarged by 264,000 square feet, including a 104,000-square-foot ambulatory care center, a 40,000-square-foot administration building and a residential complex comprised of seven townhouses (around 65,000 square feet total). The residential units will be used by veterans receiving help from VA. The design of the new facilities will incorporate healing elements. The goal is to create healing environments and not healthcare buildings. Plans are also underway to have the new buildings certified as "green" by the U.S. Green Building Council (www.va.gov/pittsburgh/public_affairs_news/va_parking_lot_project_to_break_ground.rtf).

> “...creating a healing environment is important in a patient-centered environment.”



Example of healing gardens. Photo Courtesy of HOK.

VA Site Reference: Evidence-Based Design -

Health Services Research and Development - The Health Services Research and Development (HSR&D) Service pursues research at the interface of healthcare systems, patients and healthcare outcomes. HSR&D underscores all aspects of VA healthcare, specifically quality, access, patient outcomes and healthcare costs. Additional information can be found on VA’s website at: http://www.research.va.gov/programs/hsrd.cfm and http://www.hsrd.research.va.gov/.

There are fifteen HSR&D Centers of Excellence (COE) (http://www.hsrd.research.va.gov/about/centers/centers_of_excellence.cfm) and three Resource Centers (http://www.hsrd.research.va.gov/about/centers/resource_centers.cfm) located throughout the US. In addition, HSR&D's Research Enhancement Award Program (REAP) (http://www.hsrd.research.va.gov/about/centers/reap.cfm) and the Targeted Research Enhancement Program (TREP) (http://www.hsrd.research.va.gov/about/centers/trep.cfm) support the development of other research centers across the country.

VA Site Reference: Evidence-Based Design -

The Richard L. Roudebush VA Medical Center in Indianapolis has partnered with VA Research and Development Service and was designated as a Center of Excellence on Implementing Evidence Based Practice. With the newly funded Research Enhancement Award Program (REAP) the Health Services research will focus on information management for patient centered treatment (http://www.index.va.gov/search/va/va_search.jsp?QT=evidence+based+design).

The healthcare design industry has publications that VA staff participating in the development of interior design projects can reference on Healing Environments. These publications include books, magazines, and articles which can be purchased or ordered through attending or visiting web-sites, conferences and symposiums on Healing Environments.

Healthcare Industry Article Reference: The Healing Environment principles should focus on:

- Positive Self Awareness
- Link to Nature
- Culture
- People
- Sense of Privacy
- Harmless to the Environments
- Meaningful/Diverse Stimuli
- Place for Relaxation
- Interaction with Outside World
- Balance between New and Familiar
- Beauty

From Venolia C. (1990) Healing Environments. *Journal of Healthcare Interior Design*, 2, 127-136.

Healthcare Industry Article Reference: Susan Frampton, Ph.D. President of Planetree. As the President of Planetree, a non-profit organization, Frampton works with a growing alliance of hospitals and health centers around the country and in Europe that have implemented Planetree's unique patient-centered model of care. Prior to her work with Planetree, she spent over twenty years at several hospitals in the New England area. *Putting Patients First: Designing and Practicing Patient-Centered Care*, (J-B AHA Press).

Healthcare Industry Article Reference: Roger Ulrich is Professor of Architecture at Texas A&M University and a Faculty Fellow of the Center for Health Systems and Design, an interdisciplinary center housed jointly in the colleges of Architecture and Medicine. *Therapeutic Environments*, from the Therapeutic Environments Forum, AIA Academy of Architecture for Health. "How Design Impacts Wellness" by Roger Ulrich, PhD, Texas A&M University; Mardelle McCuskey Shepley, D. Arch., AIA.

Example of meaningful / diverse stimuli. Photo courtesy of HOK.

Healthcare Industry Reference:

AIA Guidelines for Design and Construction of Healthcare Facilities ..... www.aia.org
American Academy of Healthcare Interior Designers ..... www.aahid.org/en-us/default.aspx
American Society of Healthcare Environmental Services ..... www.ashes.org
Green Guide for Health Care ..... www.gghc.org

Healthcare Industry Conference Reference:

Center for Health Design Conference ..... www.healthdesign.org/education/conf
Academy of Architecture for Health Conference ..... www.aia.org

Healthcare Industry Magazines Reference:

Healthcare Design Magazine ..... www.healthcaredesignmagazine.com
Journal of Healthcare Design ..... www.healthdesign.org
Building Design and Construction ..... www.bdcnetwork.com
Facility Care ..... www.facilitycare.com

VA Pittsburgh Domiciliary Housing Units, Pittsburgh, Pennsylvania. Image courtesy of the Department of Veterans Affairs.

Physical Environment- The following does not provide a comprehensive list, but is an incomplete collection of concepts that impact the physical environment.

Understand the physical hierarchy of building zones and the corresponding design and material selections. The common zones are: **public, patient, staff** and **service**.

- The **public zone** includes but is not limited to all building entries, lobbies, adjacent circulation, vertical lobbies, retail, spiritual space, conference, and even registration areas.
- The **patient zone** includes but is not limited to any area that a patient circulates and resides in along their journey to receive care. This includes departmental entries, waiting, consults, and exam and treatment spaces as well as patient wards.
- The **staff zone** includes, but is not limited to, offices, work rooms, copy spaces, nurse stations, physician spaces, locker rooms, lounges, conference, and all research areas.
- The **service zone** includes but is not limited to building support spaces (communication, electrical, etc.), utility spaces (soiled and clean linen), stairwells, and housekeeping aide spaces.

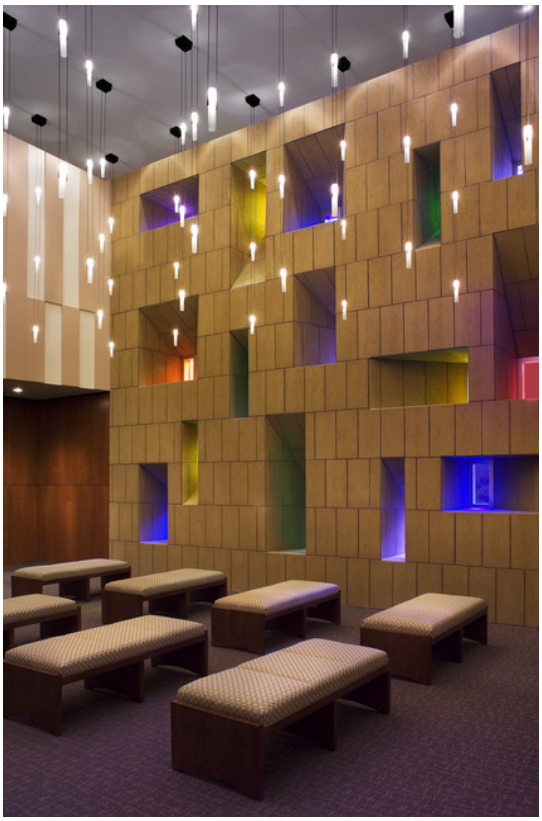
VA staff participating in the development of interior design projects can impact the indoor air quality of their facilities through the products they specify. Existing environments that are effected by sick building syndrome also require careful material selections. VA staff have a responsibility to understand the impact of their specifications on the immediate health of all building occupants, including patients, staff, and visitors. The emissions of building and furniture materials, cleaning products and ventilation of mechanical systems will profoundly affect the quality of the indoor air.

Understand the physical design elements that impact the acceptance of the healing environment such as art, accessories, ceilings, color, floors, furniture/cabinetry, hardware, lighting, linens, music, plants, textures, upholstery, walls and wall coverings, window coverings and wood work.

Building zones. Image courtesy of HOK.

Examples:

- Art: One goal of art is to provide an image that offers stress reduction and a tranquil view.
- Ceiling: The ceiling should provide a positive distraction or indirect lighting where patients are recovering.
- Color: Color perception can impact patients healing. When choosing colors, keep in mind that the elderly experience colors differently.
- Lighting: The lamp color temperature is important because it can change the color of floor and wall materials by dulling or enhancing their color. This can also be affected by direct or indirect lighting.



Design Elements – color. Photo courtesy of HOK.

Design Elements – art. Photo courtesy of HOK.

VA staff participating in the development of interior design projects should be familiar with CARES (Capital Asset Realignment for Enhanced Services - May 2004) to better understand VA's long term goals and how the goals directly impact their facilities. Seventeen sites around the United States were studied with the objective to identify the optimal approach to provide veterans with healthcare equal to or better than is currently provided in terms of access, quality, and cost effectiveness. CARES is VA's effort to produce a logical, national plan for modernizing healthcare facilities.

Examples:

- CARES: 2007 Chicago

  North Chicago VAMC is part of the Veterans Integrated Service Network (VISN) 12, a regional health care system that provides a full spectrum of health care to veterans. North Chicago VAMC serves as the long-term care referral center for this area's medical and mental health patients (www.visn12.med.va.gov/NorthChicago).

- CARES: 2007 Pittsburgh

  This project consolidated a three-division health care delivery system into two divisions to better accommodate current and projected workload. This provides a state-of-the-art improved environment, while reducing operating expenses and enhancing services. This project meets VA's strategic goals of honoring and memorializing veterans as well as increasing contributions to public health research.

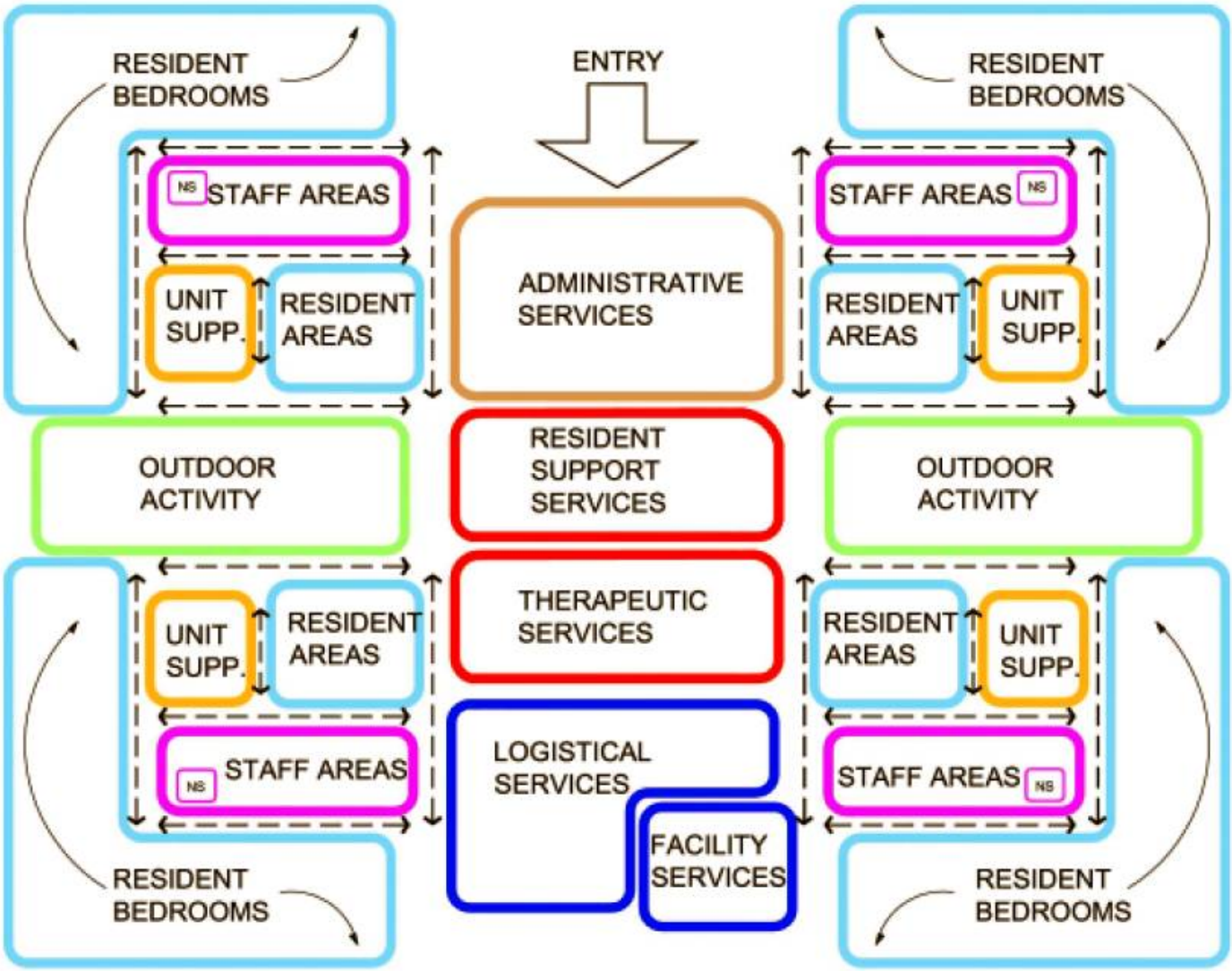
Organizational Planning Understanding
In early conceptual design for all sizeable projects, VA staff participating in the development of interior design projects will need to ask questions about organization planning.

Ask for a copy of the operational narrative if one has been written. This will provide a description of how the department being designed will function every day.

Ask questions on how VA patient-centered care is being planned and delivered by staff in the new space.

Example:

- The Planetree Model is committed to enhancing healthcare from the patient's perspective. It empowers patients and families through information and education, and encourages "healing partnerships" with caregivers to support active participation. Through organizational transformation, the Planetree Model creates healing environments in which patients can be active participants and caregivers are enabled to thrive, i.e., open nursing stations that encourage communication, and pantries that allow family members to access snacks and beverages for the patient.



Nursing home planning diagram. Image courtesy of the Department of Veterans Affairs.

Ask for diagrams that show external adjacency of how that department is supported by other departments. Reference the Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/).

Nursing home wayfinding – signage. Photo courtesy of the Department of Veterans Affairs.

Use bubble diagrams for internal adjacency to understand how the department will function day-to-day. Reference the Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/).

Organization planning topics that designer should ask about include:

- Operational assumptions
- Patient volumes and average length of stay
- Patient flow though the department
- Staff volumes - number of people working in the department
- Key rooms in department
- Internal and external functional adjacency
- Departmental needs of the patients and family
- Departmental needs of the staff

Amenities

Amenities can describe patient care services that a VA Hospital offers to patients to create a more hospitality-like environment. Complementary and Alternative Medicine (CAM) is also an amenity.

Examples:

- HOPTEL UNIT- Provides short term and sleeping accommodations for Veterans either before or after a procedure.
- FISHER HOUSE – The Fisher House is a home-away-from-home for families of hospitalized veterans or veterans who are in the area to visit a hospitalized member of their immediate family. Also welcome to stay at the Fisher House are veterans undergoing an extended episode of outpatient therapy who are able to care for their own personal needs or are accompanied by a caretaker.
- WELCOME CARTS – This service is handled by Voluntary Service and supplied through donations from Veteran Groups. The volunteers welcome each in-patient leaving them with items such as a crocheted lap blanket, books, crossword puzzles, toiletries, and other small items.
- ENTERTAINMENT – Coordinated through Music Therapy, this service provides musicians that perform in the main lobby creating a welcoming feel to the space.

VA Site Reference: VAMC Albany, NY

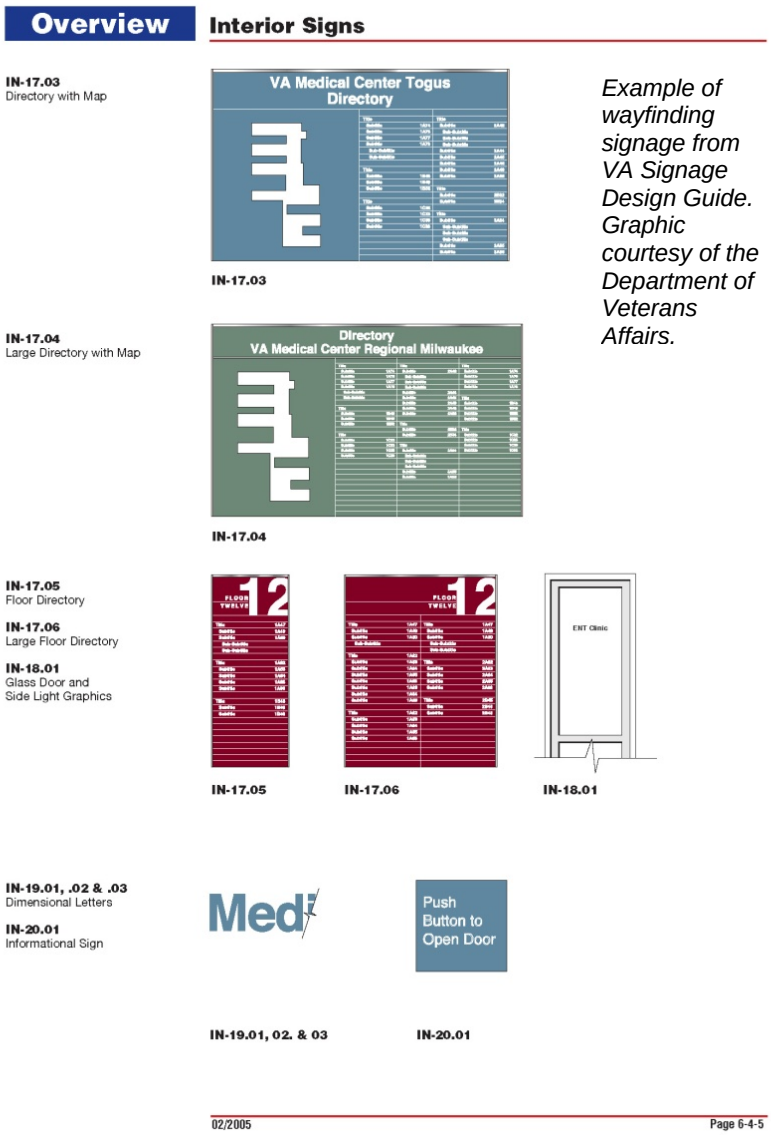
Amenities can describe architectural elements and services available in a building such as phone alcoves, welcome carts, drinking fountains, public and family assist toilets, ATMs, discrete drop off and pick up, concierge, mail and laundry services, and retail shops (including staff uniform shops), among others.

Wayfinding - "Wayfinding" consists of two main elements: orientation ("Where am I?") and navigation ("How do I get there?"). Signs play an active role in the wayfinding process by providing the primary form of communication. Wayfinding in built environments creates a people movement system that is simple to understand and promotes a friendly ease of movement.

Wayfinding should be planned around an intuitive **Orientation to Spaces**. VA staff participating in the development of interior design projects can impact orientation by providing views to the outside whenever possible. These views create a sense of direction for all users, patients, visitors, and staff inside the building.

Wayfinding is the relationship between landmarks and recall. All healthcare journeys start outside the building in parking lots or structures and continue into buildings. Patients and families can use these landmarks as a meeting place or to assist in giving directions.

Wayfinding should have **Consistent Destination Labels**. VA staff participating in the development of interior design projects should partner with their project team, environmental graphic consultants, administration, and management staff to create messaging. Provide consistent, easy to understand destination labels.

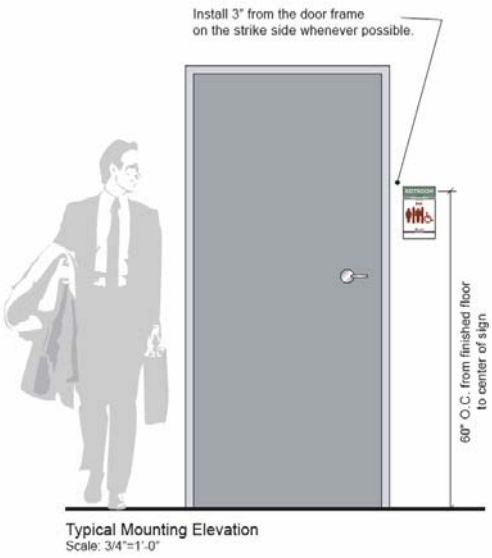


Example of wayfinding signage from VA Signage Design Guide. Graphic courtesy of the Department of Veterans Affairs.

Wayfinding should incorporate the needs of staff and material management movements as well.

Physical building signs are a key element of wayfinding. Wayfinding is partly achieved through signs that are overhead or hung on the wall. VA staff participating in the development of interior design projects should work with the project team and environmental graphic consultants to verify that the signage systems are integrated into the architectural design per the VA Signage Design Guide (http://www.va.gov/facmgt/standard/signage.asp). Signage concepts should limit messaging and avoid visual clutter to minimize confusion.

The VA Signage Design Guide provides signage design and systems guidelines. The guide describes how signage should assist VA customers, visitors, and others as they approach the property, locate buildings, and proceed to functions. Signage should inform in a direct and simple manner.



Example of consistent destination labels. Graphic courtesy of HOK.

Material Appropriateness – All projects should follow the schedule for finishes found in Division 9 of the VA Master Specifications (www.va.gov/facmgt/standard/spec_9.asp).

Occasional deviation for the VA Master Specifications may be required. VA staff participating in the development of interior design projects should justify the deviation and build the evidence to support the modification.

Example:

Rubber floors, which do not require striping and waxing and have cushioning comfort qualities plus acoustical properties, are good for Emergency Departments. The resulting reduction in noise leads to higher patient stratification, under foot comfort qualities, higher staff satisfaction levels, and potentially lower staff injury rates. Life-cycle maintenance costs and long warranties strongly support the consideration of using this type of product.

VA Site Reference: VAMC Chicago

Material deviations should follow VA Codes, Standards, and Executive Orders. See the Design and Construction Procedures, Topic 1, "Codes, Standards and Executive Orders" (www.va.gov/facmgt/standard/cpro/cp_top01.doc).

Materials board, VAMC Biloxi Mental Health Facility Biloxi, Mississippi. Photo courtesy of the Department of Veterans Affairs.

Material deviations should also be coordinated with the local facilities environmental maintenance abilities, facility site and local repair abilities, local manufacturer relationships, and project budget.

Material modifications would be expected if the deviation was to support Sustainable or Green Guidelines. Reference VA Master Specifications for sustainable issues (http://www.va.gov/facmgt/standard/spec_idx.asp), as well as the VA Sustainable Design Manual (http://www.va.gov/facmgt/standard/energy.asp).

Discuss the proposed deviation with the VA Office of Construction and Facilities Management and your project team. Provide all back up material to support the rationale of the deviation.

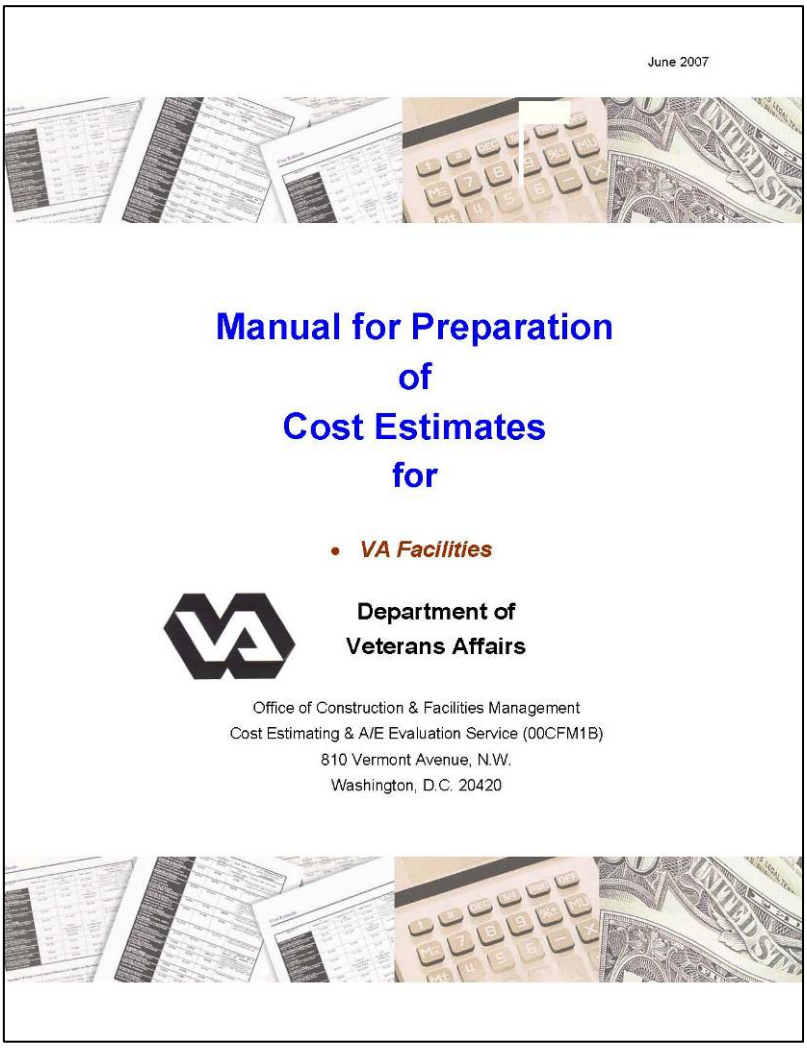
Budget Realism

At the beginning of every project the designer should request an interior finish budget. This budget number should include all finishes applied to the floors, walls and ceilings. The designer is responsible for distributing the budget over the public, patient, staff and service areas. The Designer is responsible for designing to the established budget. The VA Cost Estimating Index can be found online at http://www.va.gov/facmgt/cost-estimating/.

All material choices should be decided with the overall project budget in mind. Break the budget down into floors, walls and ceiling cost. Factor in price escalation for future material purchases. Talk with your estimator, project team or contractor to understand the percent per year they are estimating.

Cost Analysis:

- Purpose: Create a cost analysis for each colored plan (by room). This can be as easy as coloring your rooms finish schedule document.
- Audience: This is a good graphic way to understand the distribution of materials. This is a nice visual to share with the users for them to understand what materials are going to be installed in what rooms.



Cover of Cost Estimating Manual. Graphic courtesy of the Department of Veterans Affairs.