

II. THE BUILDINGS AT WAIMANO

A. GENERAL DESCRIPTION

Built incrementally since its inception to accommodate changing health care needs and fluctuations in client populations, the buildings at Waimano evidence the evolutionary succession of construction technologies, architectural styles, and philosophies of facility provision represented by public policy and functional needs the past 70 years. The oldest buildings now standing at Waimano are wooden structures dating from 1936. The newest is Hale Aloha, built in 1977.

Buildings constructed of wood, concrete, or concrete block are located along the Waimano Ridge, from the relatively well-kept Hale Complex at the entrance to Waimano to the medical and residential facilities built between 1943-1963 at the site's mauka end. While in various states of repair, all are in need of maintenance. A number of them appear physically capable of continued usage of some sort with little or no corrective measures. Some appear to lack capability for continued usage without major structural or material repair or replacement. Buildings in each category are listed in Table 5 and 6 of this section. All would need updating to comply with current codes if extensive renovation were to be carried out. It should be noted that these evaluations must be qualified by subsequent technical engineering evaluations, architectural program requirements, and master plan locational criteria.

Examination of Waimano Ridge facilities included a visual survey of existing buildings for apparent physical condition, operational adequacy, and code compliance. A survey and assessment of asbestos materials found in the Hale Complex was conducted in 1990. The findings and observations of this study are attached as Appendix I.

Existing Facility Evaluation on the following pages qualitatively addresses existing building soundness, operational adequacy, and code compliance. *Requirements for Future Facility Development* identifies

existing requirements, standards, and guidelines for building design. These narratives follow immediately below.

B. CURRENT PATTERNS OF SITE DEVELOPMENT

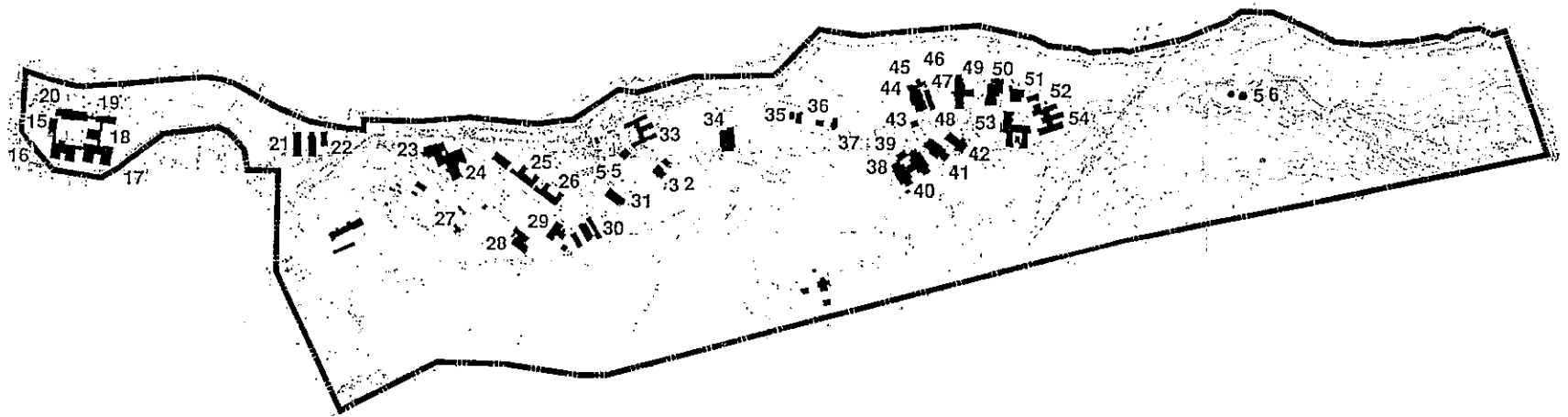
Figure 11: Existing Facility Locations, illustrates the locations of current WTTC facilities. They form a scattered pattern of development along the Waimano Ridge. The ridgetop area and the on-site extension of Waimano Home Road provide the major organizing elements of this essentially linear development pattern. Along this organizing "spine", buildings and facilities have been placed from the ridge's southern boundary (the Hale Complex) to the ridge's northern end (Hale Ola and associated buildings). Residential facilities, day programs, administrative offices, and support facilities are scattered along this zone in a manner that reflects an incremental, additive pattern of site development. No overall organizing concept for grouping functional areas is apparent.

Waimano staff have pointed out that most of the existing buildings were built primarily for residential use. A number of these buildings were converted to office & day program usage in accordance with State & Federal regulations & in response to functional needs.

Staff interviews reveal that this pattern of development has resulted in attenuated functional relationships which result in heavy reliance on vehicular assistance in conducting day-to-day operations. In addition, the existence of facilities in various degrees of repair, soundness, and functional efficiency appear to have resulted in noticeable operational inefficiencies. The need for more efficient organization of facilities and functional groupings based on architectural program requirements is clear.

C. EXISTING FACILITY EVALUATION

During the spring and summer of 1989, a visual survey of 39 principal Waimano buildings was con-



LEGEND					
No.	BUILDING NAME	No.	BUILDING NAME	No.	BUILDING NAME
15	HALE E	26	BUILDING 2	36	HALE ALOHA
16	HALE D	27	DEEP WELL/TRANSFORMER	37	FOSTER GRANDPARENTS/
17	HALE C	28	BUILDING 3	38	VOLUNTEER
18	HALE B	29	BOYS KITCHEN	39	BUILDING 6/POWERHOUSE
19	HALE A	30	OLD MAINTENANCE CLUSTER	40	BUILDING 6/7 DINING
20	HALE F	31	BUILDING 5	41	BUILDING 8
21	MAINTENANCE CLUSTER	32	MEDICAL DIRECTOR'S RESIDENCE	42	HOSPITAL ANNEX
22	CENTRAL SUPPLY	33	OLD ADMINISTRATION	43	CANTEEN
23	BUILDING 4	34	MULTI-PURPOSE BUILDING	44	BUILDING 10
24	THAYER HALL	35	DOCTOR'S RESIDENCE	45	TRAINING/TREATMENT
25	BUILDING A			46	LATH HOUSE
				47	HOBBY CENTER
				48	SEWING
				49	BUILDING 9
				50	KITCHEN/DINING
				51	LAUNDRY
				52	BOILER HOUSE
				53	HALE OLA
				54	BUILDING 11
				55	BOOSTER PUMP STATION
				56	RESERVOIR & CEMETERY

WAIMANO RIDGE MASTER PLAN

FIGURE 11: Existing Facility Locations



Partners, Inc.
July 1991

ducted to estimate their condition. Survey findings for each building examined appear in Appendix H: Existing Facilities Survey. These findings have been qualitatively summarized and tabulated in Table 4: Existing Facilities Assessment Summary. Each surveyed building was examined in terms of six categories of information described below in Table 1:

TABLE 1: BUILDING CATEGORIES

Principal Purposes:	The primary usage of the building.
Area:	Size of entire building in sq. ft.
Primary Type of Construction:	Primary material used in construction, as follows: <ul style="list-style-type: none"> - Concrete: Entirely of concrete, or concrete frame with Concrete Masonry Block infill. - Concrete Masonry: Concrete block - Wood Frame
General Physical Condition	Apparent soundness and state of repair, as revealed by visual inspection.
Operational Adequacy	Apparent adequacy of spaces and equipment for current usage.
Code Compliance	Apparent degree of code compliance. Buildings were evaluated on the basis of: <ul style="list-style-type: none"> - Their apparent physical capability to in use, and - Their apparent overall physical, functional, and statutory (code compliance) adequacy.

Building evaluation categories listed in Table 1 were scored as shown below, which also describes scoring symbols displayed in Table 4:

TABLE 2: EXISTING FACILITIES RATING SYSTEM

Symbol	Construction Type	Physical Condition	Deg. of Adequacy/ Gov't Code Compliance	Rating
●	Concrete/ Concrete Frame	Sound; Little Maint. Needed	Adequate; Fully Compliant	5
◐	Concrete Block (CMU)	Sound; Minor Repairs/ Maintenance Needed	Some Inadequacies; Partially Compliant	3
○	Wood Frame	Major Deficiencies Major Repairs/ Maint. Needed	Marked Inadequacy; Major Code Deficiencies	1
X	Not Applicable	Not Applicable	Deficient; Principally Non-compliant	0

As Table 2 shows, durability of construction material ("construction type"), current physical condition, adequacy for current operations, and compliance with current codes are considered important factors in assessing a building's eligibility for continued usage. "Construction type" suggests a building's long-term continued usage capability. Current physical condition, adequacy for current operations and code compliance suggest its suitability for immediate re-use. Long-term durability and immediate re-use potential were considered together to estimate a building's overall or long-term continued usage suitability.

To establish a building's re-use threshold, distinctions between immediate and long-term re-use potential were made. To accomplish this, separate immediate and a long-term re-use thresholds were estimated as follows:

- Immediate

- *Physical Soundness:*

Whether a building's overall physical condition alone qualifies it for continued usage.

- *Continued Usage Potential:*

Whether present physical condition, operational adequacy and degree of code compliance collectively qualify the facility for re-use under current operational and code requirements.

- Long-term

- *Physical Soundness:*

Whether both construction type and physical condition qualify the facility for continued usage.

- *Continued Usage Potential:*

Whether a building's construction type, present physical condition, operational adequacy, and degree of code compliance qualifies it for re-use under current operational and code requirements.

Under the above scoring system, the following maximum scores and re-use threshold scores were determined:

TABLE 3: EXISTING FACILITY RE-USE THRESHOLD RATINGS

Criterion	Maximum Possible Score		Re-Use Threshold	
	Immed.	Long-Term	Immed.	Long-Term
- Physical Soundness	5	10	3	6
- Overall Continued Usage Potential	20	25	9	13

Under this system, a building could qualify for a maximum long-term "Physical Qualities" rating of "10" if it were constructed of concrete or concrete frame and were in sound condition, needing little maintenance. A building could qualify for a maximum long-term "Overall Adequacy" score of "25" if

it were constructed of concrete or concrete frame, needed little or no corrective maintenance, was fully adequate for its present functions, and complied with all applicable zoning and functional code requirements.

Table 4, on the pages immediately following, summarizes Waimano existing building inspection findings. Building numbers and listing sequence corresponds to the order in which buildings are evaluated in Appendix H.

Numerical scores indicate two types of continued usage suitability: Immediate or Short-Term (designated "S.T.") and Long-Term (designated "L.T."). A building is evaluated for its immediate continued usage suitability based on its general physical condition, operational adequacy, and code compliance. A building is evaluated for long-term continued usage suitability based on its primary type of construction as well as the foregoing characteristics. Scores read as follows: under "Subtotal: Physical Condition", 3/4 indicates an immediate or short-term continued usage suitability of "3", and a Long-Term continued usage suitability of "4".

It should be kept in mind that this building evaluation addresses continued usage or re-use suitability based only on known existing conditions and existing needs. Future program and master plan requirements as well as needs for interim use of buildings which may be ultimately removed are inappropriate for inclusion in this study of existing conditions and therefore have not been considered in the following evaluations.

1. Findings

Based on the assessment displayed in Table 4, 26, or 68% of the buildings surveyed were estimated physically capable of short-term continued usage. Of this group, 21, or 55% were estimated physically capable of long-term continued usage.

BUILDING DESCRIPTION				FACILITY EVALUATION							NOTES
No.	BUILDING NAME	PRINCIPAL PURPOSE	AREA (SF)	PHYSICAL QUALITIES			OPERAT. ADEQUACY	CODE COMPLIANCE		TOTAL SCORE S.T./L.T.	
				TYPE OF CONSTR.	PHYSICAL CONDITION	SUB-TOT. S.T./L.T.		UFAS	FIRE		
1	Hale A	Staff Offcs.	3,910	◐	●	5/8	◐	◐	○	12/15	Minor Repairs Needed
2	Hale B	Staff Offcs.	4,046	◐	●	5/8	◐	◐	○	12/15	Minor Repairs Needed
3	Hale C	Client Ward	12,351	◐	●	5/8	◐	◐	○	12/15	Minor Repairs Needed
4	Hale D	Client Ward	9,300	◐	●	5/8	◐	◐	○	12/15	Minor Repairs Needed
5	Hale E	Recreation Dining, Kitchen	3,090	◐	●	5/8	◐	◐	X	11/14	Minor Repairs Needed
6	Hale F	Client Ward	8,670	◐	●	5/8	◐	◐	○	12/15	Minor Repairs Needed
7	Maint. Cluster	Automotive & Facility Repair & Storage	12,614	○	◐	3/4	●	○	○	10/11	
8	Building 4	SECOH Day Program	20,243	●	◐	3/8	◐	◐	○	10/15	
9	Thayer Hall	Physical Therapy Rec./Mtg	5,000	○	○	1/2	X	X	X	1/2	Extensive Termite Damage
10	Building 1	Sun Project Offices	6,588	○	○	1/2	◐	○	X	5/6	Judged by WTSH facilities maintenance as currently unfit for use
11	Building 2	Recreation	6,588	○	○	1/2	◐	○	X	5/6	
12	Deep Well Transfrm.	Water Supply	756	●	●	5/10	●	X	◐	13/18	Access to authorized staff only
13	Building 3	Waimano Auxiliary	7,866	○	○	1/2	○	○	○	4/5	Extensive repair needed
14	Boy's Kitchen	Occupationl. Therapy	7,444	○	◐	3/4	◐	○	X	7/8	Second floor is wood construction
15	Old Maint. Cluster	Motor Pool Vehicle Storage	12,980	◐	○	1/4	◐	○	○	6/9	Extensive termite damage in Ewa portion
16	Building 5	Client Ward	9,128	●	◐	3/8	◐	◐	○	10/15	Roofing repair needed
17	Medical Director's Residence	Training & Evaluation Center	3,000	○	◐	3/4	●	○	X	9/10	
18	Old Admin.	Offices, Conferences, Storage	12,663	○	○	1/2	◐	○	X	5/6	
19	Multi-Purpose	Indoor Recreation	8,412	●	◐	3/8	●	◐	X	11/16	Wall & roof repair needed
20	Doctor's Residence	Client Residence	2,424	○	○	1/2	◐	○	X	5/6	

TABLE 4: EXISTING FACILITIES ASSESSMENT SUMMARY

BUILDING DESCRIPTION				FACILITY EVALUATION							NOTES
No.	BUILDING NAME	PRINCIPAL PURPOSE	AREA (SF)	PHYSICAL QUALITIES			OPERAT. ADEQUACY	CODE COMPLIANCE		TOTAL SCORE S.T./L.T.	
				TYPE OF CONSTRN.	PHYSICAL CONDITION	SUB-TOT. S.T./L.T.		UFAS	FIRE		
21	Hale Aloha	Training & Treatment Center	1,280	○	◐	3/4	◐	◐	X	9/10	
22	Foster Grandprnt. Volunteer	Office	1,279	○	○	1/2	◐	X	X	4/5	
23	Building 6	Client Ward	8,683	●	●	5/10	◐	○	X	9/14	Heavy termite & wood rot damage
24	Building 6/7	Dining Room	1,800	◐	◐	3/6	◐	○	◐	10/13	
25	Building 7	Client Ward	8,683	●	◐	3/8	◐	◐	○	10/15	
26	Building 8	Client Ward	8,603	◐	◐	3/6	◐	◐	○	10/13	
27	Hospital Annex	Client Ward	6,460	◐	◐	3/6	○	◐	○	10/13	
28	Canteen	Misc. Client Activ	1,008	○	○	1/2	◐	○	X	5/6	Extensive roof repair needed
29	Building 10	Client Ward	8,683	●	◐	3/8	◐	◐	○	10/15	Eave & roof joist repair needed
30	Training/ Treatment Center	Classroom	970	○	○	1/2	○	○	X	3/4	General repair needed
31	Lath House	Vacant	648	○	○	1/2	X	X	X	1/2	Extensive repair needed
32	Hobby Center	Vacant	1,500	○	◐	3/4	◐	◐	X	9/10	General repair needed
33	Sewing Unit	Sewing Staff	1,000	○	◐	3/4	◐	○	X	7/8	General repair needed
34	Building 9	Client Ward	10,739	◐	●	5/8	◐	○	○	10/13	
35	Kitchen/ Dining	Cafeteria & Food Prep	6,288	●	◐	3/8	◐	○	◐	10/15	
36	Laundry/ Transfrm.	Laundry/ Storage	4,247	●	●	5/10	●	○	○	12/17	
37	Boiler House	Water Heating		●	○	1/6	●	◐	◐	12/17	
38	Hale Ola	Client Ward	29,366	●	◐	3/8	◐	○	◐	10/15	General maint. required
39	Building 11		14,788	○	○	1/2	◐	◐	X	7/8	

TABLE 4: EXISTING FACILITIES ASSESSMENT SUMMARY (CONTINUED)

From the perspective of overall continued usage potential, 25, or 66% of the buildings surveyed were estimated suitable for short-term continued usage, while 21, or 55% were estimated suitable for continued usage, based on their capability to serve the activities they now house. Table 5 immediately below displays these findings.

TABLE 5: Existing Facility Continued Usage Potential

BUILDING		Continued Usage Suitability Scores			
		Phys. Qualities		Overall Suitability	
No.	Name	S.T.	L.T.	S.T.	L.T.
1	Hale A	5	8	12	15
2	Hale B	5	8	12	15
3	Hale C	5	8	12	15
4	Hale D	5	8	12	15
5	Hale E	5	8	11	14
6	Hale F	5	8	12	15
7	Maintenance Cluster	3	4	10	11
8	Building 4	3	8	10	15
12	Deep Well/Transformer	5	10	13	18
14	Boy's Kitchen	3	4	7	8
16	Building 5	3	8	10	15
17	Medical Director's Office	3	4	9	10
19	Multi-Purpose Building	3	8	11	16
21	Hale Aloha	3	4	9	10
23	Building 6	5	10	9	14
24	Building 6 / 7	3	6	10	13
25	Building 7	3	8	10	15
26	Building 8	3	6	10	13
27	Hospital Annex	3	6	10	13
29	Building 10	3	8	10	15
32	Hobby Center	3	4	9	10
33	Sewing Unit	3	4	7	8
34	Building 9	5	8	10	13
35	Kitchen/Dining	3	8	10	15
36	Laundry/Transformer	5	10	12	17
37	Boiler House	1	6	12	17
38	Hale Ola	3	8	10	15

It should be stressed that the foregoing evaluation was made on the basis of a visual inspection. Technical engineering evaluations, actual space and functional requirements of an accepted architectural space program, and locational requirements as determined by an accepted master plan may reduce the re-use potential of any of the existing buildings, thus reduc-

ing the actual number of facilities available for continued usage.

2. Recommendations

The existing facilities at the Waimano Ridge could be useful in the future development of the Waimano Training and Treatment Center. Those which are sound and relatively well-suited to health-care or administrative uses, can continue to serve as WTTC or WTTC-related facilities. Others, which are currently sound and suitable for current uses but not necessarily suitable for long-term retention, may serve well as interim facilities during the development of new permanent accommodations for the WTTC. Table 6 displays a list of possible candidates for short-term (immediate) or long-term retention to accommodate WTTC needs.

For each listed facility, immediate or long-term continued usage suitability is indicated. To qualify for either short- or long-term continued usage, a building must meet minimum scoring thresholds for physical qualities or overall suitability separately. It should be noted that in addition to responding to future implementation, space program, and master plan requirements, Developmental Disabilities Division management may choose to assign additional values to specific buildings.

In considering renovation for facility re-use or continued use it should be kept in mind that costs to correct currently deficient facility conditions can often equal or exceed costs associated with demolition and new construction. In addition, rehabilitation and adaptation of existing structures may not provide the optimized operational results which new facilities carefully designed for specific requirements often can.

TABLE 6: Candidate Facilities for Continued Usage

BUILDING		USAGE SUITABILITY ESTIMATE	
No.	Name	Short Term	Long Term
1	Hale A	●	●
2	Hale B	●	●
3	Hale C	●	●
4	Hale D	●	●
5	Hale E	●	●
6	Hale F	●	●
7	Maint. Cluster	●	
8	Building 4	●	●
12	Deep Well/Transf.	●	●
16	Building 5	●	●
17	Med. Dir. Office	●	
19	Multi-Purpose Bldg.	●	●
21	Hale Aloha	●	
23	Building 6	●	●
24	Building 6/7	●	●
25	Building 7	●	●
26	Building 8	●	●
27	Hospital Annex	●	●
29	Building 10	●	●
32	Hobby Center	●	
35	Kitchen/Dining	●	●
36	Laundry/Transf.	●	●
37	Boiler House		●
38	Hale Ola	●	●

D. REQUIREMENTS FOR FUTURE FACILITY DEVELOPMENT

Development of buildings and interior spaces for future WTTC facilities, whether by renovation or new construction, will have to follow applicable governmental codes, regulations, or other standards for construction permissibility, facility accreditation, or funding qualification. Requirements which pertain to architectural facility design include:

- *Uniform Building Code (1988).*
- *Life Safety Code*
(National Fire Prevention Association, 1985).
- U.S. Department of Housing and Urban Development (HUD), *Fair Housing Accessibility Guidelines* (24 CFR Part 100; Proposed Rule, June 15, 1990).
- U.S. Department of Housing and Urban Development (HUD), *Non-discrimination Based on Handicap in Federally Assisted Programs and Activities* (24CFR Part 8; Final Rule, June 2, 1988).
- U.S. Department of Housing and Urban Development (HUD) and General Services Administration, *Uniform Federal Accessibility Standards (UFAS).*
- U.S. Department of Health and Human Services, *Guidelines for Construction and Equipment of Hospital and Medical Facilities*, 1983/84 Edition.
- U.S. Department of Health and Human Services, *Medical Program; Conditions for Intermediate Care Facilities for the Mentally Retarded* (42 CFR Parts 431, 435, 440, 442, and 483, Final Rule, June 3, 1988).
- Title 11, Department of Health, Chapter 94, *Skilled Nursing Facilities.*
- Title 11, Department of Health, Chapter 99, *Intensive Care Facilities/Mentally Retarded.*

- Code of Federal Regulations (CFR), Section 42, Part 483.

Each of the listed publications will influence facility development to varying degrees and in various ways. Because the information they contain is often complex and dependent on specific conditions or actions, these publications should be referred to directly during architectural programming and design processes. The narratives that follow present brief descriptions of selected publications:

Uniform Building Code:

Requirements of this document focus on technical aspects of building design from the perspective of fire protection and user safety. Issues it addresses include:

- Building Exits
- Fire Resistive Standards
- Windows and Doors
- Construction and Occupancy Types
- Foundations

The Uniform Building Code is administered by the Building Department, City and County of Honolulu.

Life Safety Code (National Fire Prevention Association):

Requirements of this code focus on safe routes of egress during fires. It addresses needs of the able-bodied and persons with mental or physical handicaps. Originally developed to prescribe provisions for each of these population groups, it may be modified by mandate of the federal Americans with Disabilities Act of 1989, which bans discrimination in employment, transportation, and communication against persons with disabilities.

Current Life Safety Code provisions prescribe areas of fire refuge from which physically impaired persons could be extracted from life-threatening situa-

tions by fire rescue personnel. New federal requirements would require equal exiting opportunities for all persons. Strict interpretation of these requirements could result in the following changes in subsequent editions of the Life Safety Code:

- Increases in required widths of exit stairs and ramps.
- Handicap refuge areas in stairwells.
- Greater access to building internal areas, affecting normal egress provisions.
- Egress-designated elevators when no life-safety standards equal to areas of refuge or stairwells exist.
- Increases in fire sprinkler protection requirement applicability.

Fair Housing Accessibility Guidelines:

This publication presents accessibility standards and technical design requirements for the handicapped. It should be used in conjunction with the Uniform Federal Accessibility Standards (UFAS) to determine physical facility design usable doors, building entrance and exit routes, light switches, outlets and thermostats, partition reinforcement for grab bars and rails, kitchen and bathroom design, and site considerations.

Non-discrimination Based on Handicap in Federally Assisted Programs and Activities:

This document outlines substantive and procedural requirements for compliance with handicap access requirements for projects assisted by Federal funding. Requirements are general in nature and refer to more detailed standards such as contained in the Uniform Federal Accessibility Standards (UFAS).

Uniform Federal Accessibility Standards (UFAS):

These standards are both physically and perfor-

mance-oriented. They specify dimensional requirements for circulation, operating clearances, and fixture or space and accessory access. They also define performance requirements for meeting handicap access needs.

Guidelines for Construction and Equipment of Hospital and Medical Facilities:

This publication specifies guidelines for the design and furnishing of hospitals. Requirements that would apply specifically to WTTC facilities include those which address Skilled Nursing Facilities (SNF), Intermediate Care Facilities (ICF), and facilities for the Mentally Retarded (MR).

Medicaid Program; Conditions for Intermediate Care Facilities for the Mentally Retarded:

This document is more policy and operationally oriented than the foregoing documents. It has indirect implications on physical design. Its requirements would be incorporated in staffing and operational facility needs that would be translated into architectural space program requirements.