

Lampiran 1.2.

Tabel Rawat Jalan

Jenis kelamin	Kunjungan Tahunan				
	1994/95	1995/96	1996/97	1997/98	1998/99
Pria	3235	2927	2671	4402	3653
Wanita	2339	2112	1823	3567	2470
Jumlah	5574	5039	4494	7969	6123

sumber : Laporan Akuntabilitas Tahunan RSJ Magelang, 1998/1999

Lampiran 1.3.

Tabel Sepuluh besar data daerah asal pasien masuk

No.	Daerah Asal Pasien	Pasien Masuk		
		Pria	Wanita	Jumlah
1.	Daerah Magelang	158	98	256
2.	Kab. Wonosobo	73	45	118
3.	Kab. Purworejo	118	85	203
4.	Kab. Kebumen	169	101	270
5.	Kab. Temanggung	78	36	114
6.	Kab. Cilacap	44	18	62
7.	Kab. Banyumas	37	22	59
8.	Kab. Banjarnegara	42	16	58
9.	Kab. Semarang	37	32	69
10.	Daerah lain	273	119	392
	Jumlah	1029	572	1601

Sumber : Laporan Akuntabilitas RSJ Pusat Magelang, 1998/1999

Lampiran 1.4.

Keterangan :

- a. Kantor
- b. Ruang Pendidikan
- c. Instalasi Farmasi
- d. Poliklinik
- e. UGD
- f. Bangsal
- g. Unit Elektromedik/Inst. Laboratorium
- h. Rumah Dinas
- i. Asrama
- j. Ruang Pencucian
- k. Rehabilitasi
- l. Pendopo
- m. Instalasi Gizi

DEPARTEMEN
KEPERAWATAN
DEP. KES. RI

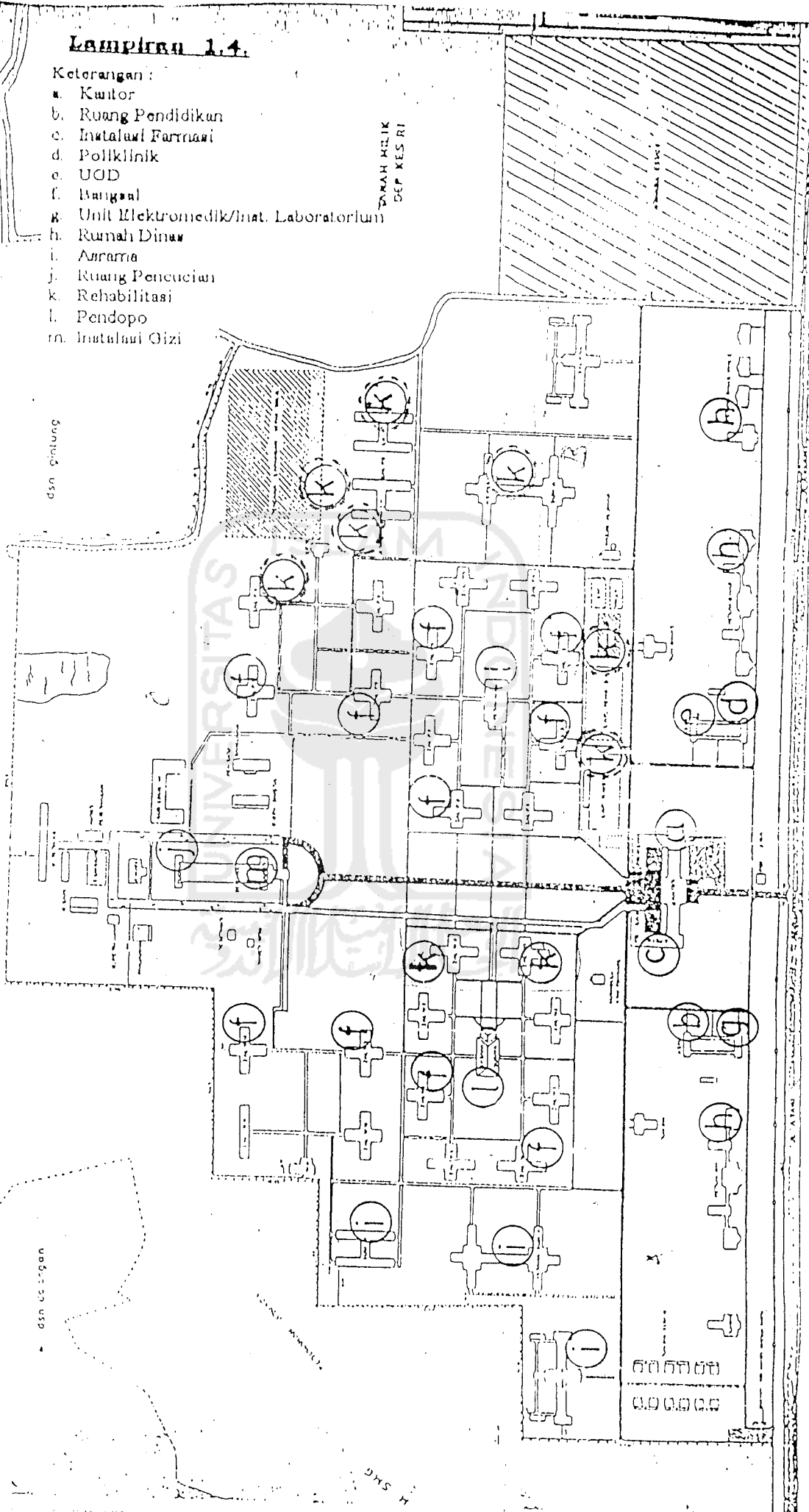


dan lingkungan

dan lingkungan

dan lingkungan

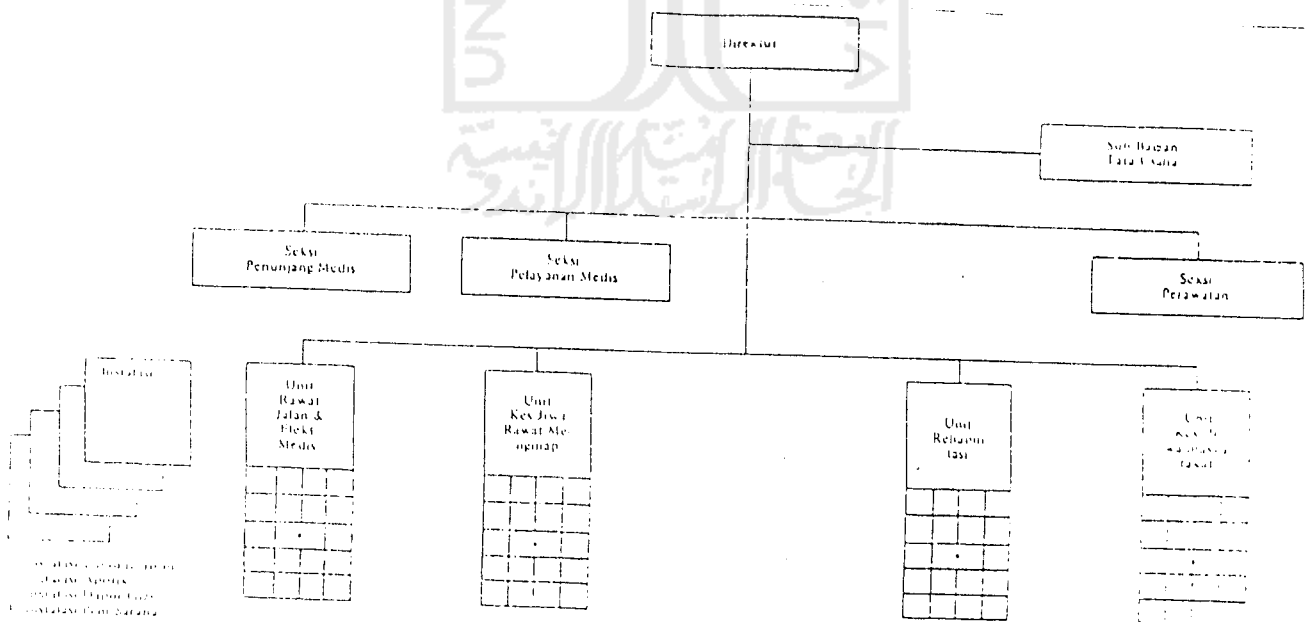
H. S.M.G.



2). RS Jiwa kelas B

RS Jiwa kelas B adalah RS Jiwa yang belum mempunyai spesifikasi luas, melaksanakan usaha-usaha kesehatan jiwa intramural dan ektramural. Secara spesifikasi susunan organisasi RS Jiwa kelas B, diantaranya :

- a. Susunan organisasi terdiri atas direktur, sub bagian tata usaha, seksi pelayanan medis, seksi penunjang medis, dan seksi perawatan.
- b. Unit Pelaksanaan Fungsional (UPF), antara lain :
 - Unit Rawat Jalan dan Elektromedis
 - Unit Kesehatan Jiwa Rawat Menginap.
 - Unit Rehabilitasi.
 - Unit Kesehatan Jiwa Masyarakat.
- c. Instalasi-instalasi, antara lain :
 - Instalasi Laboratorium
 - Instalasi Apotik
 - Instalasi Dapur Gizi.
 - Instalasi Pemeliharaan Sarana RS Jiwa.



Bagan struktur RS Jiwa kelas B

3). RS Jiwa kelas C

RS Jiwa kelas C adalah RS Jiwa yang memberikan pelayanan kesehatan jiwa yang bersifat intramural. Secara spesifikasi susunan RS Jiwa kelas C, adalah :

a. Susunan organisasi terdiri atas direktur, sub bagian tata usaha, seksi medis, dan seksi perawatan.

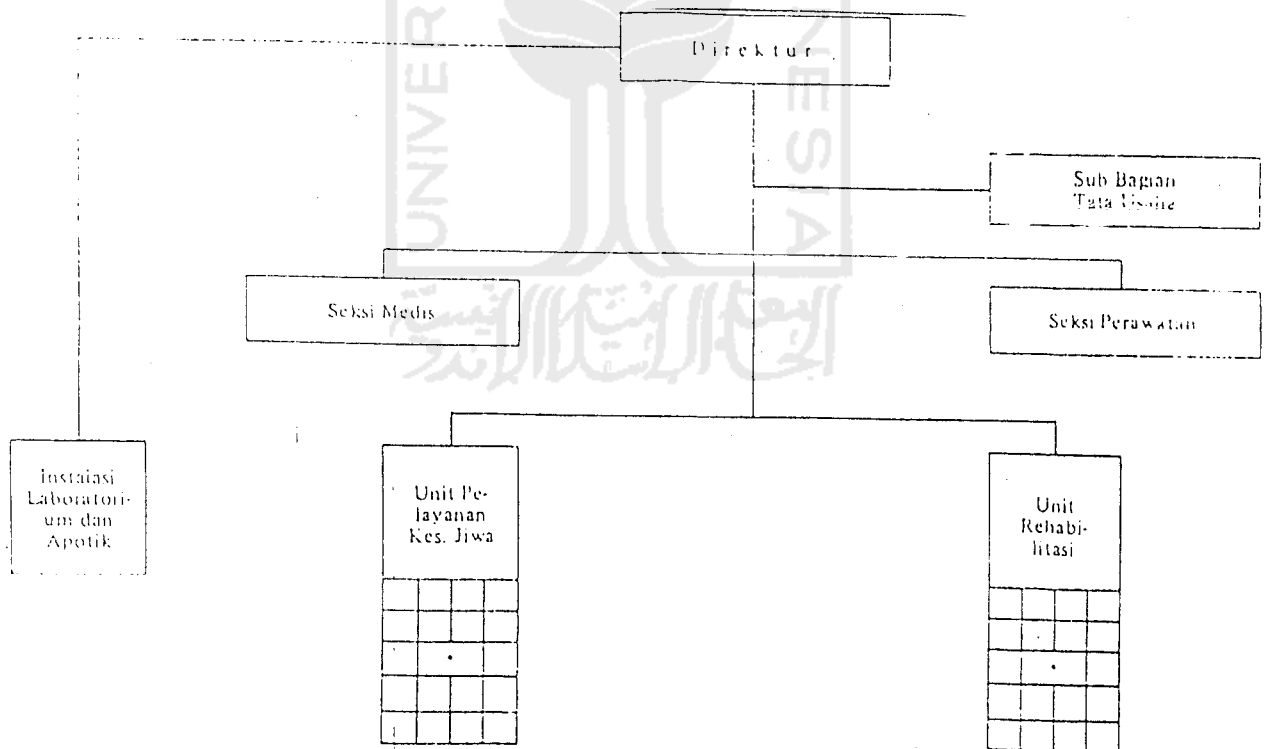
b. Unit Pelaksanaan Fungsional (UPF), terdiri atas :

- Unit Pelayanan Kesehatan Jiwa
- Unit Rehabilitasi

c. Instalasi-instalasi, terdiri dari :

- Instalasi Laboratorium
- Instalasi Apotik

d. Struktur organisasi RS Jiwa kelas C



Bagan struktur RS Jiwa kelas C

Lampiran 2-2.

Fasilitas-fasilitas yang terdapat pada Rumah Sakit Jiwa

A. Bagian pelayanan medis

- Unit Rawat Jalan
- Unit Elektromedik
- Unit Kesehatan Jiwa Dewasa dan Lanjut Usia
- Unit Kesehatan Jiwa Anak dan Remaja
- Unit Gangguan Mental Organik
- Unit Rehabilitasi
- Unit Kesehatan Jiwa Masyarakat

B. Bagian penunjang medis

- Instalasi Laboratorium
- Instalasi Apotik
- Instalasi Dapur Gizi
- Instalasi Pemeliharaan Sarana Rumah Sakit

C. Bagian Pelayanan administrasi

- Bagian Penyusunan Program dan Laporan
- Bagian Tata Usaha dan Pemasaran
- Bagian Rumah Tangga dan Kepegawaian
- Bagian Keuangan
- Bagian Pencatatan Medis

D. Bagian pelayanan non medis

- Kamar jenazah, berfungsi menyediakan tempat bagi pasien yang meninggal, merawat pasien yang meninggal dan menyelenggarakan pembedahan mayat untuk visum dokter.
- Bengkel, berfungsi menyediakan kendaraan-kendaraan sehingga dapat digunakan untuk servis pada bagian peralatan rumah sakit dan keperluan peralatan rumah sakit.
- Bagian okupasi terapi, berperan untuk memberikan kegiatan rehabilitasi yang masih dalam pengobatan, seperti olah raga, kegiatan gerak, dan terapi kerja.
- Bagian latihan kerja, berperan membimbing, melatih, dan mengarahkan rehabilitan
- Bengkel kerja terlindung, berperan meningkatkan keadaan pasien dengan menampung dalam suatu pekerjaan agar dapat melakukan ketrampilan kerja.

E. Bagian pelayanan akomodasi

- Mushola/sarana peribadatan.
- Sarana olah raga serta fasilitas asrama.

Lampiran 2-3.

Tugas masing-masing staf Rumah Sakit Jiwa, diantaranya :

1) Staf medis

Terdiri dokter umum, psikiater, dokter gigi, apoteker, dan koas.

2) Staf para medis

Terdiri atas perawat dan bidan yang bertugas membantu di dalam usaha pengembangan pasien.

3) Staf non medis

Staf non medis adalah semua staf yang berhubungan dan bekerja di dalam rumah sakit jiwa kecuali staf medis dan dapat dibagi menurut hubungannya dengan pasien atas :

a. Staf non medis yang langsung dengan pasien, diantaranya :

- Staf bagian penerima pasien
- Staf bagian laboratorium
- Staf radiology

b. Staf non medis yang tidak langsung berhubungan dengan pasien

- Rekam medik dan staf laundry

c. Staf non medis tidak berhubungan dengan pasien :

- Staf pelaksana pemeliharaan
- Pengawas teknis operasional
- Bagian gudang dan pembelian

Lampiran 2-4

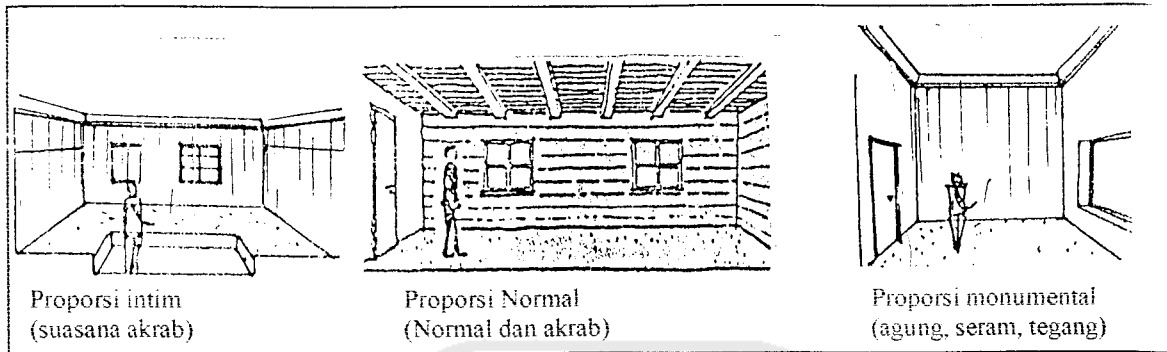
Tugas dan tanggung jawab masing-masing tenaga pekerja dalam Unit Rehabilitasi :

1. Psikiater/dokter, berperan yang bekerja perencanaan program, koordinator team, konsultan, membuat diagnosa dan terapi medis psikiatris, menentukan tindak lanjutnya
2. Psikolog (ahli psikologi klinis), berperan dalam seleksi, work assessment, evaluasi perkembangan, melaksanakan bimbingan dan penyuluhan, terapi kelompok, dan menilai.
3. Social Worker(Pembimbing social psikiatris), berperan dalam melaksanakan resosialisasi dan memecahkan masalah dalam diri rehabilitan serta penghubung kerjasama sektoral.
4. Perawat Psikitri, berperan dalam perawatan/pemeliharaan kesehatan rehabilitan, melaksanakan perawatan lanjutan, dan membantu dokter dalam observasi psikiatrik.
5. Occupational Therapist (Okupasiterapis), berperan melaksanakan terapi kerja sesuai dengan keadaan pasien baik dalam persiapan ke arah vokasional, membantu pengembangan adaptasi rehabilitan terhadap lingkungan social, keluarga.
6. Instruktur (Pelatih kerja), berperan untuk melaksanakan latihan kerja bagi para rehabilitan agar memperoleh bekal ketrampilan untuk hidup dalam masyarakat.
7. Fisioterapis, berperan dalam melaksanakan fisioterapi bagi pasien dalam disabilitas fisik
8. Pembantu instruktur (tukang), berperan dalam membantu melaksanakan berbagai macam pekerjaan dalam terapi kerja, latihan kerja, maupun bengkel kerja terlindung.
9. Petugas terapi rekreasi, berperan untuk merencanakan dan melaksanakan kegiatan rekreasi untuk pasien baik dalam maupun di luar lingkungan terapi.
10. Petugas terapi social, berperan merencanakan dan melaksanakan kegiatan resosialisasi.





Lampiran 2-5.

Aspek tata ruang dalam yang mendukung penyembuhan dan pemulihan pasien diantaranya proporsi, bentuk, warna, tekstur, pencahayaan, dan penghawaan.

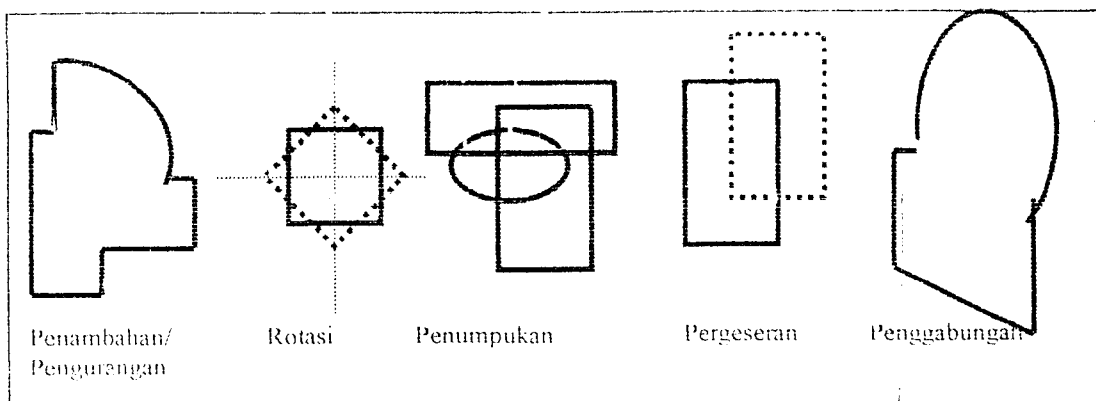
1. Proporsi



2. Bentuk

Bentuk Dasar	Kesan
Lingkaran 	Kesan central, terpusat, tanpa arah, titik-titik hirarki yang sama dan akrab
Segi empat sama sisi 	Nilai sisi ruang sama, arah kurang menunjukkan, netral, dan akrab.
Persegi panjang 	Punya kesan mengarah yang kuat, dinding dapat menunjukkan beda fungsi.
Segi tiga 	Menunjukkan kestabilan pada satu sisi dan tidak stabil pada satu sudut.



Dari bentuk dasar diatas, selanjutnya keempat bentuk ini akan diolah dengan cara penambahan atau pengurangan, perputaran atau rotasi, pergeseran, penumpukan, dan penggabungan dari berbagai bentuk dasar.



3. Warna

Kesan warna	Macam warna
• Warna-warna bersahabat	Orange, antara kuning dan merah
• Warna-warna lembut	Peach, dan warna-warna pastel
• Warna-warna mengundang	Warna antara kuning dan orange, krem
• Warna-warna dinamis	Kuning dengan perpaduan violet
• Warna-warna anggun	Warna pastel yang tipis, kuning, gading, biru muda, violet muda, dan pink
• Warna-warna enerjik	Kombinasi merah dan ungu
• Warna-warna tenang	Biru dan monokromatik

4. Tekstur

Tekstur	Kesan
Halus 	Dapat menyenangkan, meyakinkan, ketenangan, serta kelembutan
Kasar 	Menarik perhatian, memberikan kesan ancaman, kekuatan, serta emosi yang tidak stabil

5. Pencahayaan

Pencahayaan	Kesan
Alami	Dapat mempermudah kesan visual yang jelas, serta menghindari kesan miring yang dialami oleh rehabilitan.
Buatan	Hanya dapat menonjolkan detail dan dapat mendukung kegiatan, tetapi cepat jengkel dan bosan.
Alami dan buatan	Membantu terlaksananya kegiatan rehabilitasi serta hanya dapat membantu kesan kejelasan terhadap ketenangan dan kenyamanan.

6. Penghawaan

Penghawaan	Kesan
Alami	Berkesan tenang, aman, serta dapat mewujudkan kegiatan yang akrab, hangat, dan bersahabat.
Buatan	Suasana cepat menjengkelkan dan jenuh

Lampiran 2-6

Persyaratan Tata ruang dalam pada Rumah Sakit Jiwa (Sumber : Peraturan Menteri Kesehatan RI tentang persyaratan Kesehatan lingkungan Rumah Sakit, Depkes RI, 1996)

a. Lantai :

- Terbuat dari bahan yang kuat dan kedap air, permukaan rata, tidak licin, dan mudah dibersihkan.
- Lantai yang kontak langsung dengan air harus mempunyai kemiringan yang cukup (2-3%) ke arah saluran pembuangan air.

b. Dinding

- Permukaan dinding harus rata, berwarna terang, dicat tembok, dan mudah dibersihkan.
- Permukaan dinding yang selalu terkena percikan air harus terbuat dari bahan yang kuat dan kedap air.

c. Langit-langit

- Kuat, berwarna terang, dan mudah dibersihkan.
- Tinggi minimal 2,5 M dari lantai dan tidak terlalu tinggi.
- Kerangka kayu langit-langit terbuat dari bahan yang anti rayap.

d. Pintu

- Kuat, dapat mencegah masuknya serangga, tikus, dan binatang pengganggu lainnya.
- Bila menggunakan cat diharuskan menggunakan cat anti rayap.

e. Persyaratan pencahayaan

No	Ruang/unit	Pencahayaan (lux)	Keterangan
1.	Ruang pasien : <ul style="list-style-type: none">• Saat tidak tidur• Saat tidur	100-200 maksimal 50	Warna cahaya sedang
2.	Ruang operasi <ul style="list-style-type: none">• Umum• Meja operasi	300-500 10.000-20.000	Warna cahaya sedaang/sejuk Tanpa banyangan
3.	Anestesi, pemulihan, ruang balut	300	-
4.	Endoscopy, laboratorium	300-500	-
5.	X-ray	75-100	-
6.	Koridor	Minimal 60	-
7.	Tangga	Minimal 100	Malam
8.	Kantor/lobby	Minimal 100	-
9.	Ruang alat/gedung	Minimal 100	-
10.	Ruang farmasi]	Minimal 200	-
11.	Dapur	Minimal 200	-
12.	Ruang cuci	Minimal 200	-
13.	Ruang toilet	Minimal 100	-
14.	Ruang isolasi khusus	0,1-1,5	warna cahaya biru

f. Persyaratan Penghawaan

No.	Ruang/unit	Suhu (°C)	Kelembaban (%)
1.	Laboratorium	22 – 25	50 – 60
2.	Pemulihan	24 – 25	50 – 60
3.	Perawatan	26 – 27	40 – 55

Lampiran 2-7

Kondisi Pencahayaan Unit Rehabilitasi RSJ Magelang

Nama Ruangan	Pencahayaan (lux)
1. Ruang Perawatan	215 = + 15
2. Ruang Pemulihan	350 = + 50
3. Ruang Laboratorium	540

Sumber : Laporan Kesehatan Lingkungan RSJ Magelang

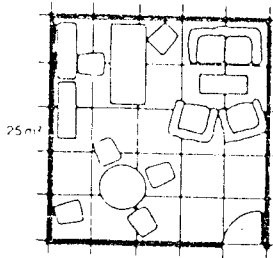
Lampiran 2-8

Kondisi penghawaan Ruang Unit Rehabilitasi RSJ Magelang

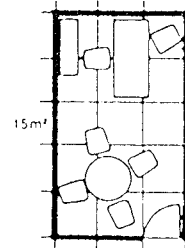
Nama Ruangan	Suhu (°C)	Kelembaban (lux)
1. Ruang Perawatan	29 = + 9	65 = + 5
2. Ruang kerja/pemulihan	27 = + 2	65 = + 5
3. Ruang Laboratorium	27	60

Sumber : Laporan Kesehatan Lingkungan RSJ Magelang

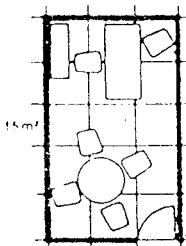
Lampiran 3-1



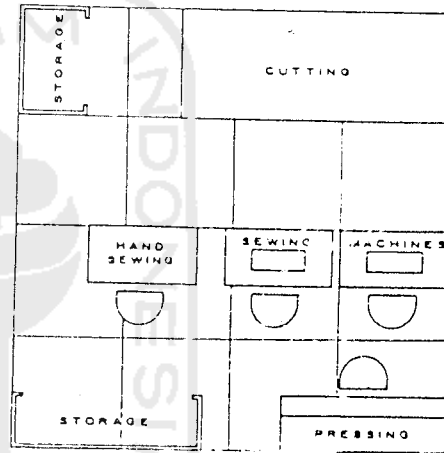
(Ruang Kepala Unit Rehabilitasi)



(Ruang Wakil Kepala Unit Rehabilitasi)



(Ruang Statistik dan penelitian)

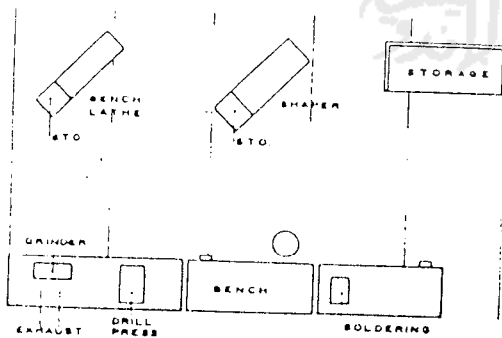


Machine Shop Operations:
 i) tool and die makers;
 ii) machine tool operators.

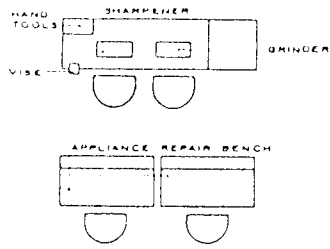
Skilled and Semiskilled
 A. Sewing and Tailoring

- i) spreaders;
- ii) markers;
- iii) cutter;
- iv) trimmers;
- v) pattern makers;
- vi) pattern graders;
- vii) tailors;
- viii) pressers;
- ix) hand sewers;
- x) sewing machine operators;
- xi) weave-bac specialists;
- xii) chair cover makers.

(Ruang Menjahit)



(Ruang Kegiatan Mesin)



Skilled and Semiskilled

G. Building Trades:

- i) carpenters;
- ii) painters;
- iii) plumbers;
- iv) masons;
- v) electricians.

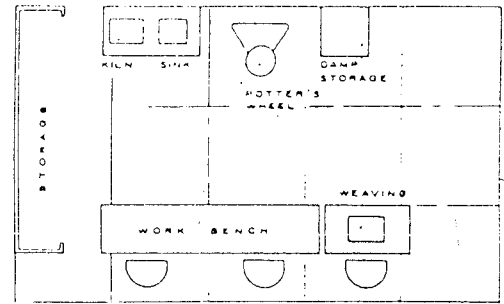
H. Woodwork Trades:

- i) patternmakers;
- ii) cabinet makers;
- iii) furniture repairmen.

I. Plastics Production:

- i) bench grinders;
- ii) hand filers;
- iii) drill press operators;
- iv) assemblers.

(Ruang Kegiatan Bangunan)



Skilled and Semiskilled

D. Arts and Crafts:

- i) ceramics;
- ii) leather;
- iii) metal work;
- iv) weaving;
- v) jewelry;
- vi) electroplating.

(Ruang Seni dan Kerajinan)

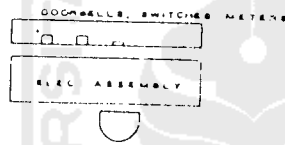


Skilled and Semiskilled

E. Repairmen:

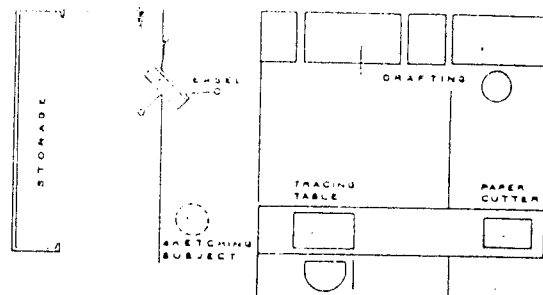
- i) business machines;
- ii) watch repairing;
- iii) assemblers;
- iv) tool sharpening;
- v) camera repairing;
- vi) shoe repairing.

(Ruang Perbaikan Jam)



F. Electric Light, Power, and Electronics:

- i) meter readers;
- ii) motor men;
- iii) assemblers;
- iv) inspectors and testers;
- v) radio, television, electronic machine repairmen.



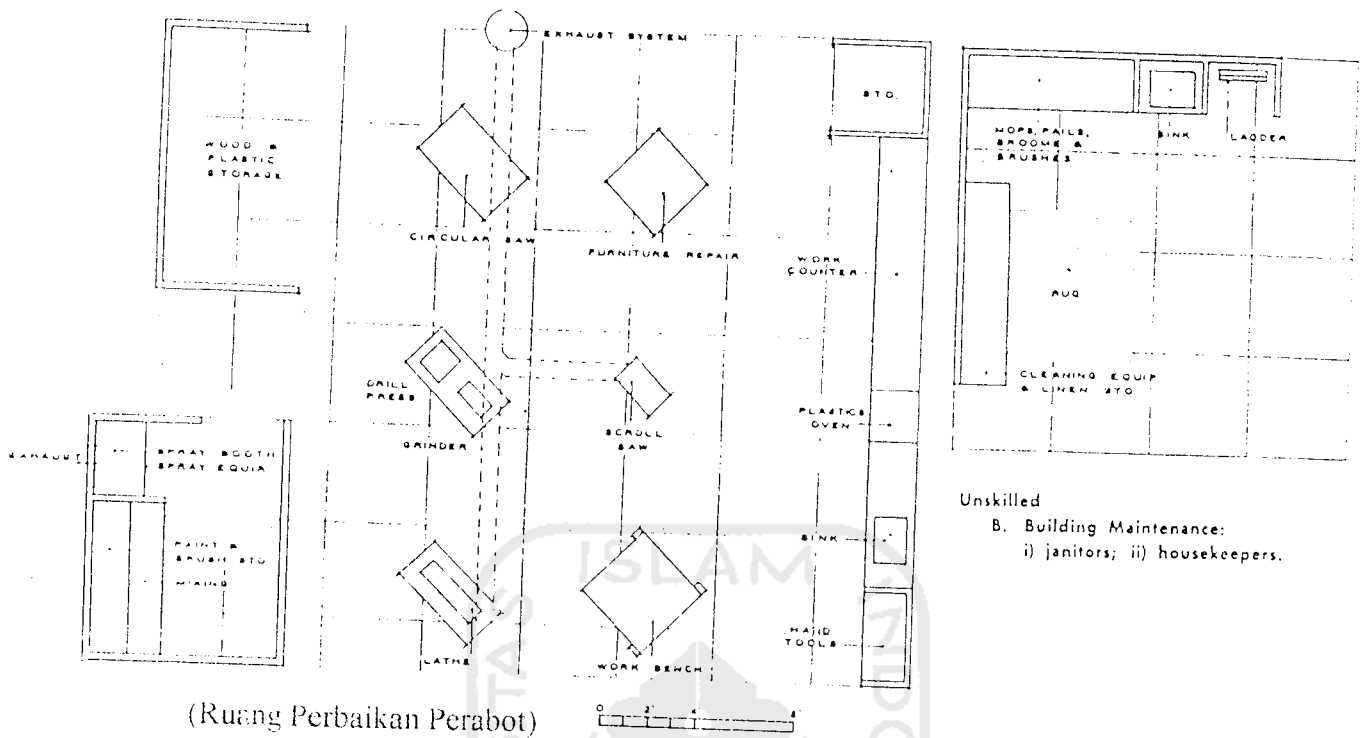
Skilled and Semiskilled

B. Drafting:

- i) electrical draftsmen;
- ii) automotive draftsmen;
- iii) architectural draftsmen;
- iv) mechanical draftsmen.

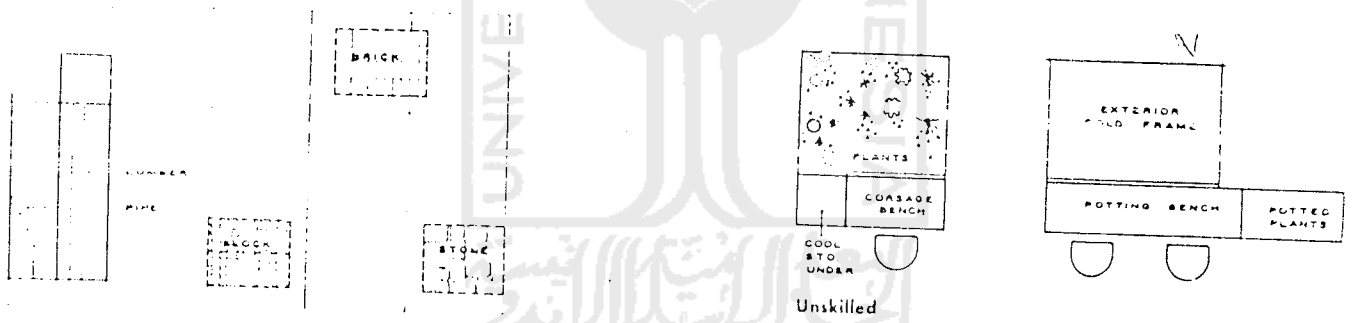
C. Commercial Art:

- i) layout men;
- ii) illustrators;
- iii) letterers;
- iv) window display artists;
- v) show card layout.



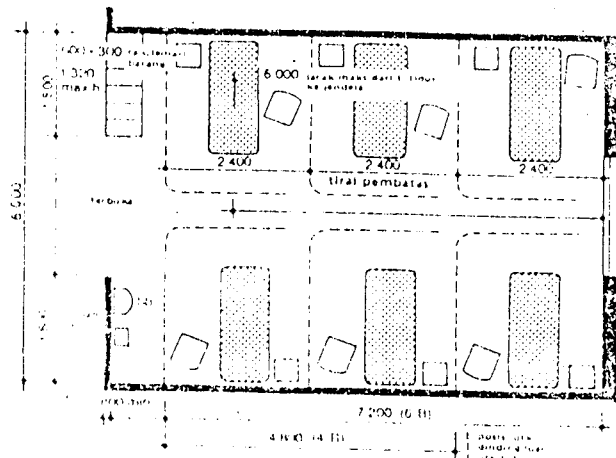
(Ruang Perbaikan Perabot)

Unskilled
 B. Building Maintenance:
 i) janitors; ii) housekeepers.

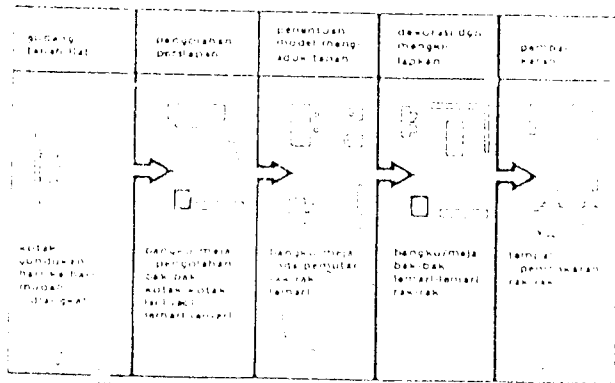


Unskilled
 C. Building Material Handling
 (Ruang Pertukangan)

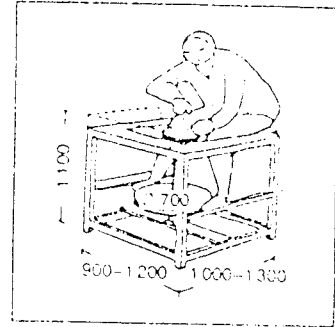
Unskilled
 D. Greenhouse and Floriculture:
 i) greenhouse worker;
 ii) flower preparation (corsages, etc.).
 (Ruang Berkebun)



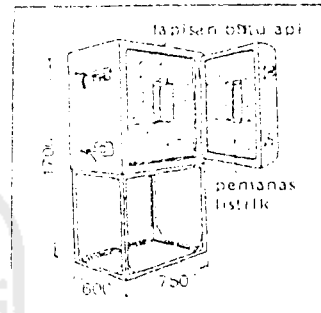
Besaran ruang untuk istirahat



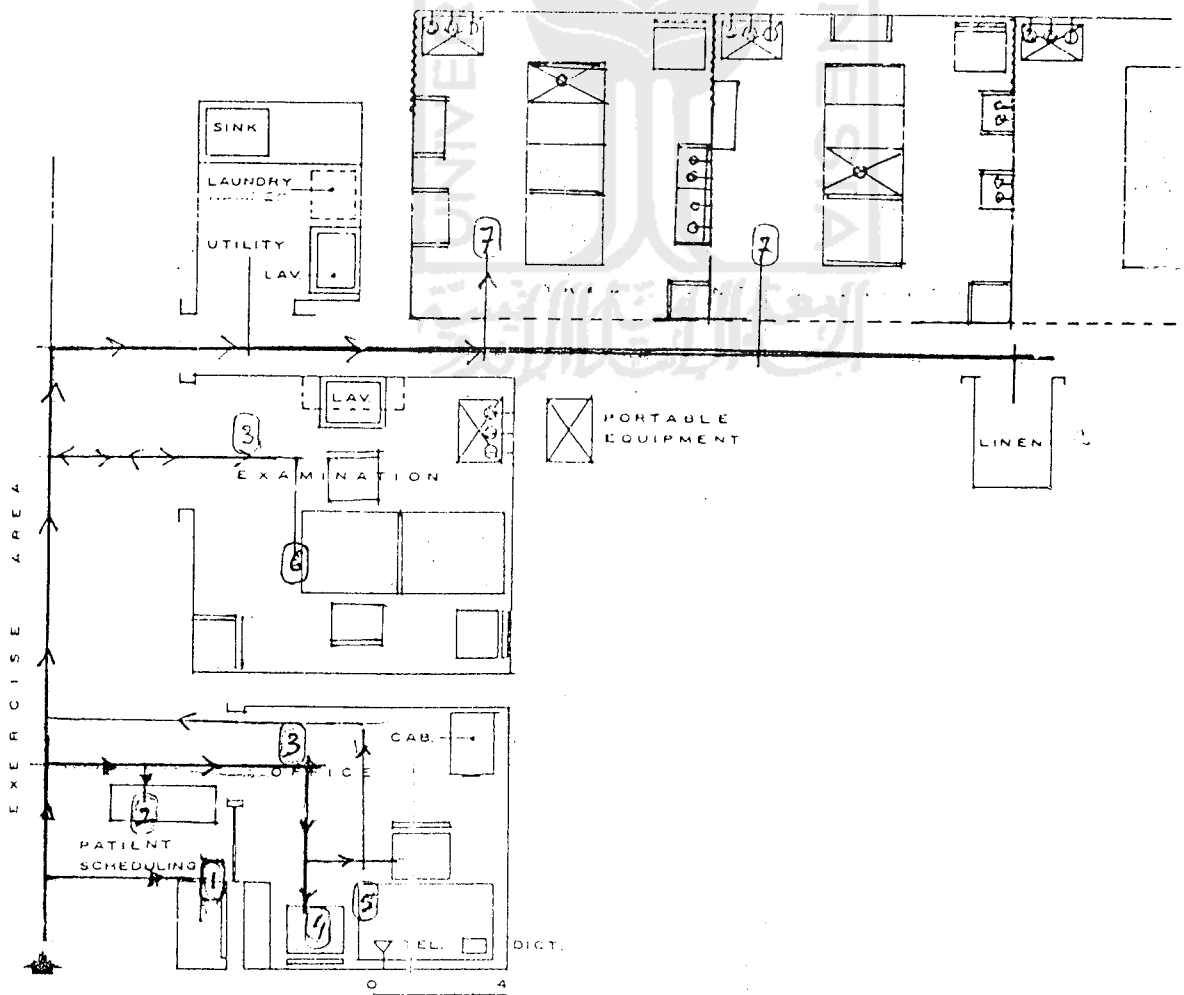
(Pergerakan Kegiatan Gerabah)



4. Ruang yang dibutuhkan untuk roda pengolah keramik

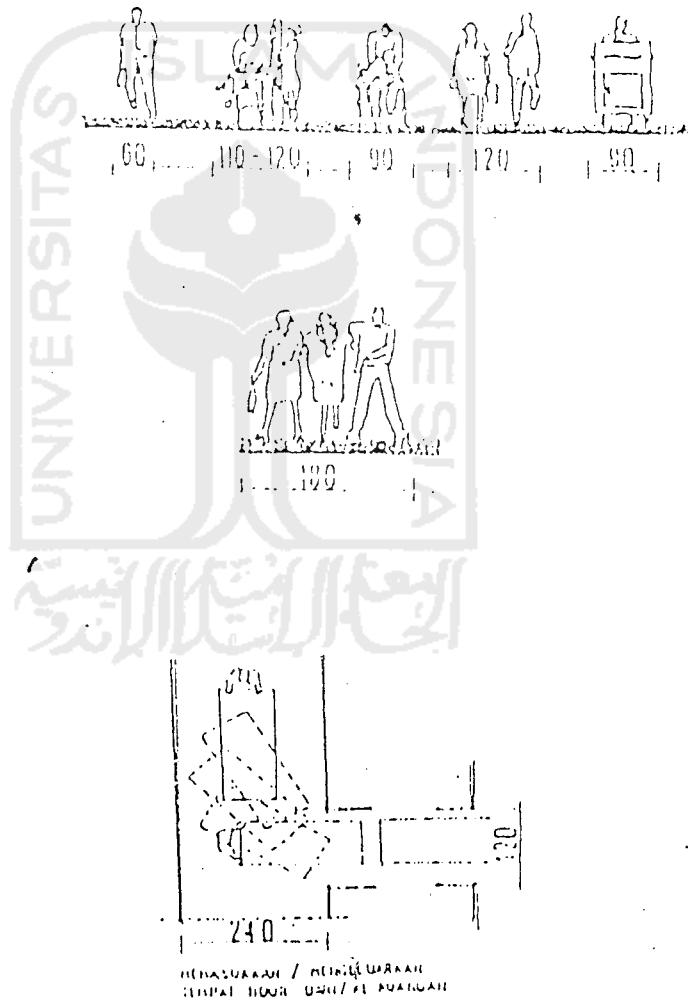


Dapur pembakaran keramik



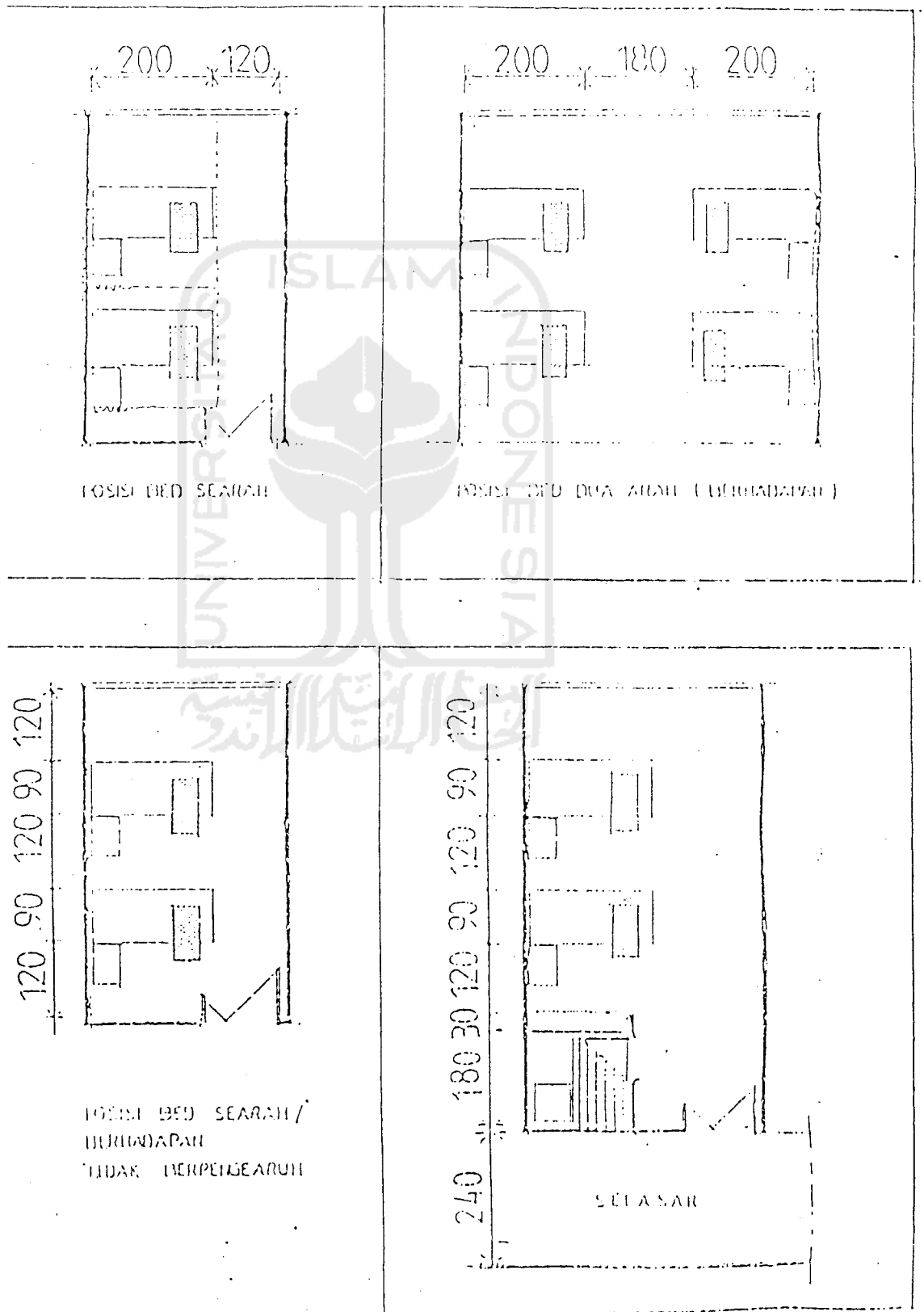
Ruang Medik-psikiatri, Ruang ealuasi psikologi, dan Ruang Uji Coba

PERGERAKAN DAN SIRKULASI MENENTUKAN BESARAN RUANG



Pergerakan dan sirkulasi menentukan besaran ruang

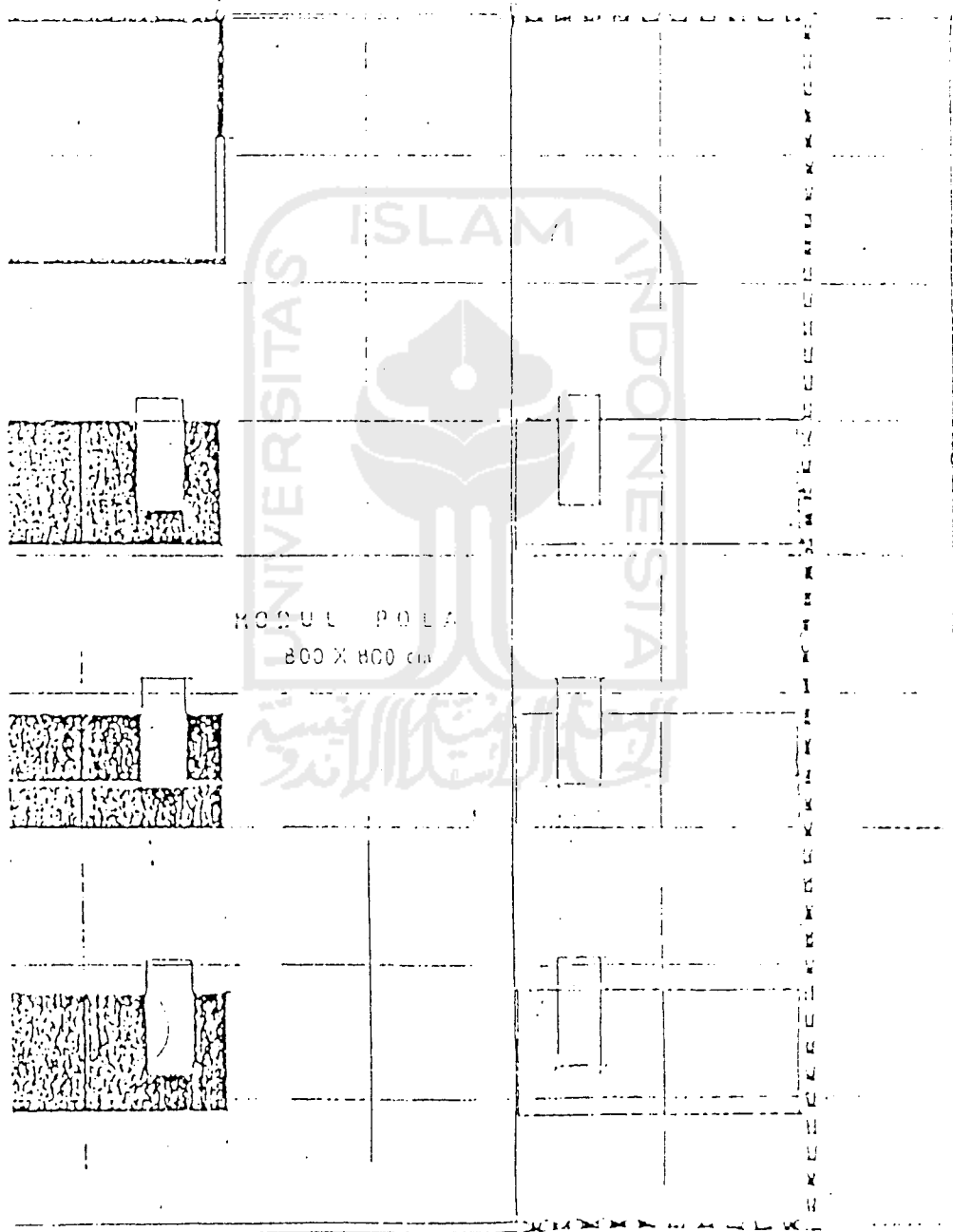
dan minimum besaran ruang berdasarkan ruang tempat tidur dan sirkulasi ruang perawatan.



luan besaran ruang-ruang perawatan berdasarkan tempat tidur dan

si

ilitasnya sebagai dasar modul pola

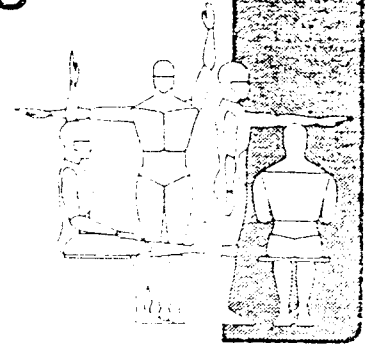


400 rg perawatan
kls I, II

600 kls III (kapasitas 6 bed)

800 (2 unit perawatan kls I, II)

6 HEALTH CARE SPACES



SPACE

TABLE

6.1 MEDICAL TREATMENT
6.2 DENTAL TREATMENT
6.3 HOSPITAL ROOMS

ANTHROPOMETRIC DATA

TABLE	6.1 MEDICAL TREATMENT	6.2 DENTAL TREATMENT	6.3 HOSPITAL ROOMS	ANTHROPOMETRIC DATA
1A,2B	●	●	●	1 STATURE
1B,3C	●	●	●	2 EYE HEIGHT
1C,3B	●			3 ELBOW HEIGHT
				4 SITTING HEIGHT ERECT
				5 SITTING HEIGHT NORMAL
1F,3G	●	●	●	6 EYE HEIGHT SITTING
				7 MIDSHOULDER HEIGHT SITTING
				8 SHOULDER BREADTH
				9 ELBOW-TO-ELBOW BREADTH
				10 HIP BREADTH
				11 ELBOW REST HEIGHT
1L,2H		●		12 THIGH CLEARANCE
				13 KNEE HEIGHT
				14 POPLITEAL HEIGHT
				15 BUTTOCK-POPLITEAL LENGTH
1P,2L		●	●	16 BUTTOCK-KNEE LENGTH
				17 BUTTOCK-TOE LENGTH
				18 BUTTOCK-HEEL LENGTH
1S,4C				19 VERTICAL REACH HEIGHT SITTING
1T,4F				20 VERTICAL GRIP REACH
1U,4E	○			21 SIDE ARM REACH
1V,4D	○	○	○	22 THUMB TIP REACH
1W,6B	●	●	●	23 MAXIMUM BODY DEPTH
1X,6A	●	●	●	24 MAXIMUM BODY BREADTH

6.1 MEDICAL TREATMENT ROOMS

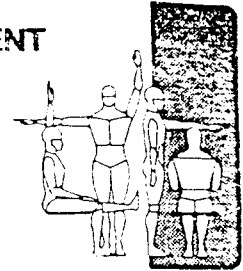
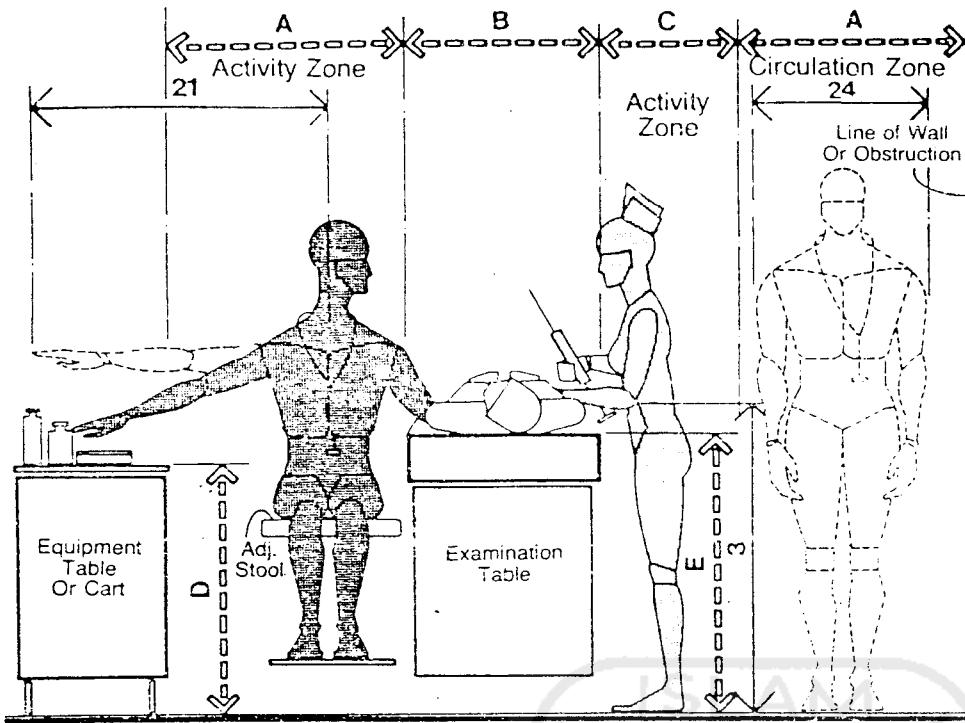


TABLE	EXAMINING	STORAGE	SINK	X-RAY VIEWING	LABORATORY	CIRCULATION	ACTIVITIES	ANTHROPOMETRIC DATA	
								1	2
1A,2B			⊙					1	STATURE
1B,3C		⊙	⊙	⊙				2	EYE HEIGHT
1C,3B	⊙		⊙					3	ELBOW HEIGHT
1F,3G				⊙	⊙			6	EYE HEIGHT SITTING
1U,4E	○							21	SIDE ARM REACH
1V,4D				○				22	THUMB TIP REACH
1W,6B		⊙				⊙		23	MAXIMUM BODY DEPTH
1X,6A						⊙		24	MAXIMUM BODY BREADTH

The drawings on the following pages explore various elements of the medical treatment room, including the examination tables, laboratory tables, wash basins, and film viewing systems, in terms of the clearances and other dimensional requirements necessary to ensure their responsiveness to human body size. The heights of tables and counters and their relationship to the heights of the seats used with them are illustrated, and appropriate clearances and other dimensional data to ensure a proper body fit are indicated. The drawings also illustrate comparative relationships between the body size of the female and male user in terms of the various interior elements involved. The major anthropometric measurements to be considered are indicated in the matrix above. Perhaps the most interesting element, in terms of the anthropometric considerations, is the wall-mounted film viewing system. In all probability the design approach will also prove applicable to various other medical equipment not included in the drawings. Of particular concern in any kind of viewing system is the eye height of the seated and standing male and female viewer of large and small body size. These data are extremely useful, if not absolutely essential, in establishing the proper height above the floor at which the unit must be located. The critical problem is to establish a height that will accommodate the majority of users, taking into account the significant difference in eye height between people of small and large body size. Of the drawings that follow is a series concerned exclusively with this aspect of human dimension. One interesting observation is that the difference in eye height between that of a viewer of very small body size and that of one of very large body size is almost twice as much when both people are standing than when both are in a seated position.

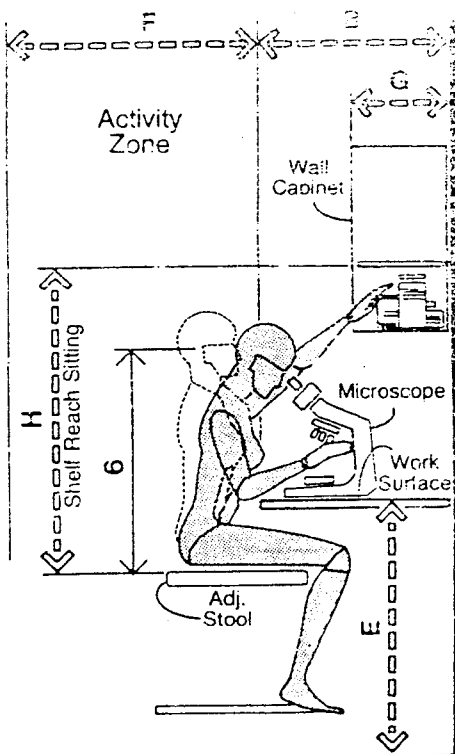
6.1 MEDICAL TREATMENT ROOMS



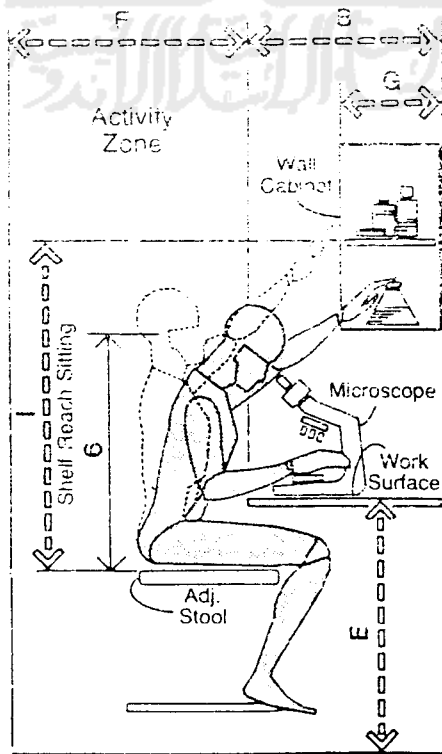
EXAM AREA/ REACH AND CLEARANCE

The top drawing illustrates recommended clearances around an examination table. A space of at least 30 in., or 76.2 cm, should be allowed for the doctor to function. If the procedure requires instruments or other nearby apparatus, side arm reach data should be used to establish the additional clearance required for the table or cart involved.

The two drawings at the bottom of the page illustrate the anthropometric considerations involved when planning a small laboratory area. The drawing at the left shows the relationship of a female of smaller body size to the table and the wall cabinet above. The shelf should be anthropometrically within the reach of the smaller person in a seated position. Eye height sitting is also a useful measurement to consider, in relation not only to the microscope, but to the visibility of any displays that might be tacked on the facing wall surface. Within certain limits, the adjustability of the seat can be used to raise and lower the eye level as required to accommodate the height of the microscope above the table surface. The drawing on the right illustrates the same relationships for a male of smaller body size.



LAB AREA/
FEMALE CONSIDERATIONS



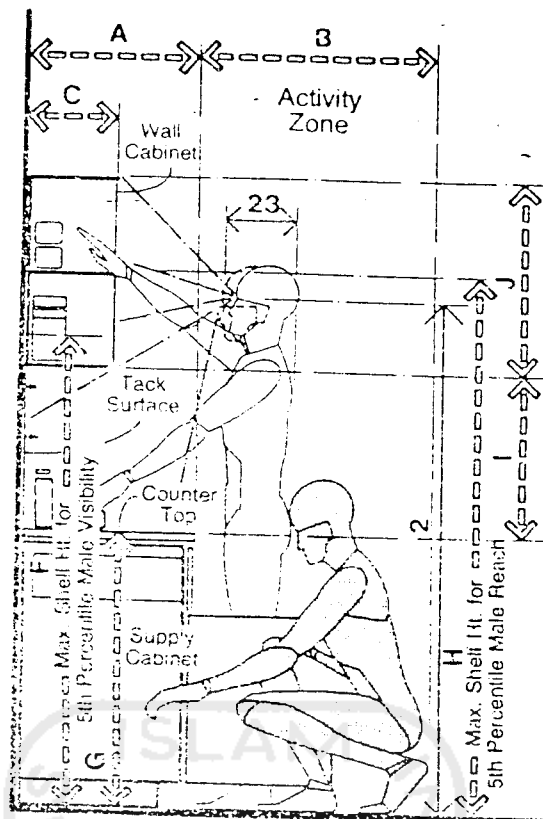
LAB AREA/
MALE CONSIDERATIONS

	in	cm
A	30	76.2
B	24	61.0
C	18	45.7
D	30-36	76.2-91.4
E	34-38	86.4-96.5
F	27	68.6
G	12-15	30.5-38.1
H	39 max.	99.1 max.
I	42 max.	106.7 max.

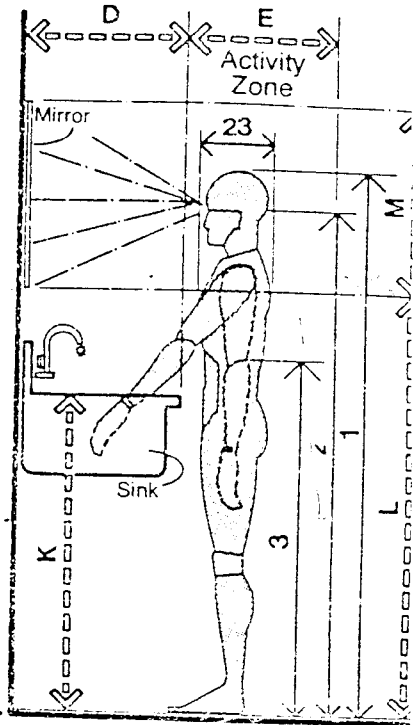


6.1 MEDICAL TREATMENT ROOMS

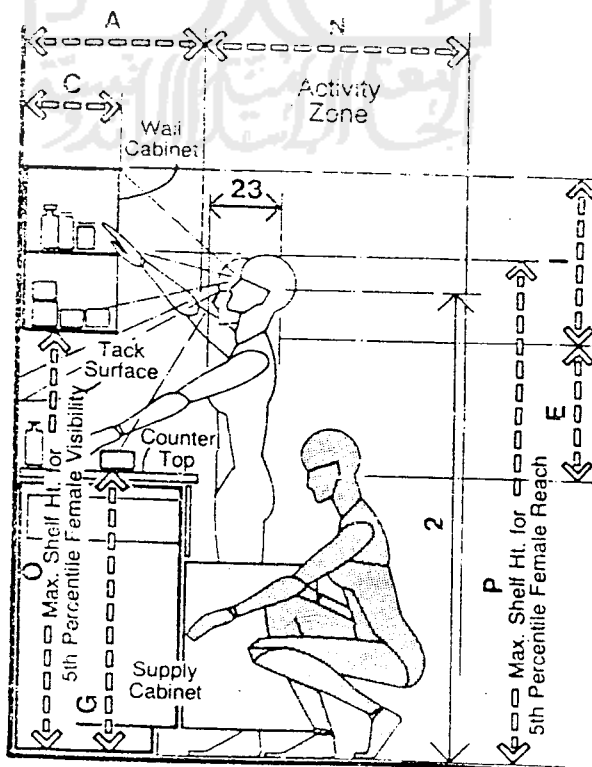
The drawing at the top of the page illustrates the relationship of a male user to an instrument and supply cabinet and a wash-up sink. With respect to the former, eye height and reach are the key anthropometric considerations. The material on the shelves should be accessible to the person of smaller body size. Therefore, 5th percentile reach data should be used to establish the height of the shelf above the floor. It is also important that the depth of the wall cabinet and the distance of the bottom of the cabinet from the top of the counter not obstruct the user's vision of the full counter surface. The overall height of the wall cabinet should allow the user, with a minimum degree of eye and head movement, to visually scan the contents of the cabinet with the least amount of discomfort. For the wash-up sink, the anthropometric measurements of greatest significance are eye height, to establish the location of the mirror, and elbow height, to establish the height of the sink. Research has shown that 2 to 3 in. or 5 to 7.6 cm. below the elbow is a comfortable height for the top of the sink. Generally, sinks are located too low, causing the user discomfort and back pain.



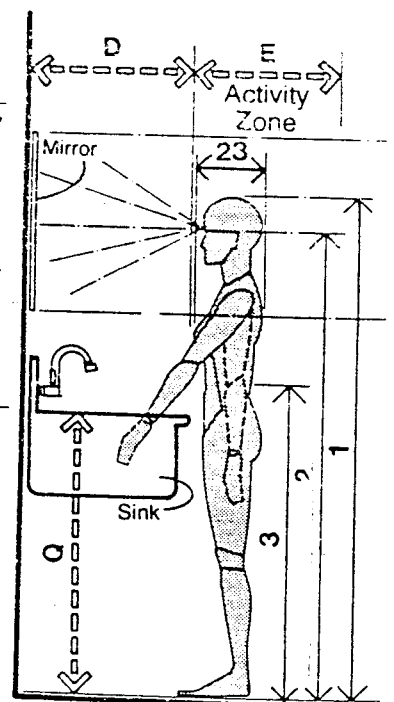
INSTRUMENT AND SUPPLY CABINET / MALE CONSIDERATIONS



WASH-UP SINK / MALE CONSIDERATIONS



INSTRUMENT AND SUPPLY CABINET / FEMALE CONSIDERATIONS



WASH-UP SINK / FEMALE CONSIDERATIONS

	in	cm
A	18-22	45.7-55.9
B	36-40	91.4-101.6
C	12-18	30.5-45.7
D	18-21	45.7-53.3
E	18	45.7
F	60 max.	152.4 max.
G	35-36	88.9-91.4
H	72 max.	182.9 max.
I	21	53.3
J	18-24	45.7-61.0
K	37-43	94.0-109.2
L	54 max.	137.2 max.
M	24	61.0
N	30-36	76.2-91.4
O	56 max.	142.2 max.
P	69 max.	175.3 max.
Q	32-36	81.3-91.4
R	48 max.	121.9 max.

6.3 HOSPITAL ROOMS

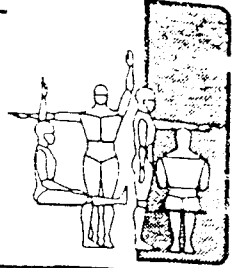
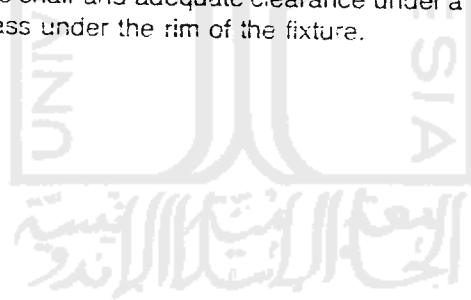


TABLE	NURSING STATION	PATIENT BEDROOM	BEDROOM LAVATORY	CIRCULATION	ACTIVITIES	ANTHROPOMETRIC DATA
1B,3C	●					2 EYE HEIGHT
1F,3G	●					6 EYE HEIGHT SITTING
1P,2L		●				16 BUTTOCK-KNEE LENGTH
1V,4D				○		22 THUMB TIP REACH
1W,6B	●	●			●	23 MAXIMUM BODY DEPTH
1X,6A	●	●			●	24 MAXIMUM BODY BREADTH

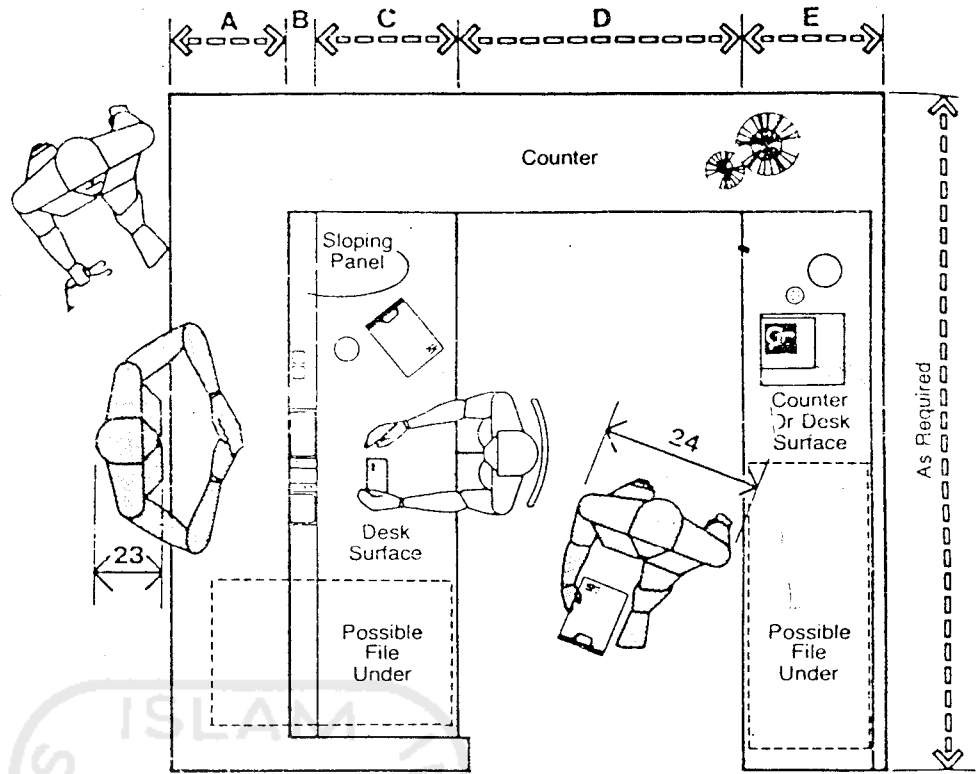
The diagrams that follow illustrate some of the more obvious anthropometric concepts to be taken into account in the design of patients' rooms and nurses' stations. Of the basic considerations, one that has significant emotional impact on both patient and visitor is seating visitors comfortably around the hospital bed. Unfortunately, in many instances the clear overall depth of the room is not sufficient for such accommodation. The design of nurses' stations must also respond to human dimension and body size. The height of the station on the public side should relate to elbow height. The worksurface on the nurses' side should be desk height. The distance from the top of the seat to the underside of the desk should allow sufficient room for thigh clearance. Files should ideally be within reach of the person of smaller body size. The room must also meet the needs of the person confined to a wheelchair. For this, there should be sufficient space to maneuver the chair and adequate clearance under a lavatory to allow the arms of the chair to pass under the rim of the fixture.



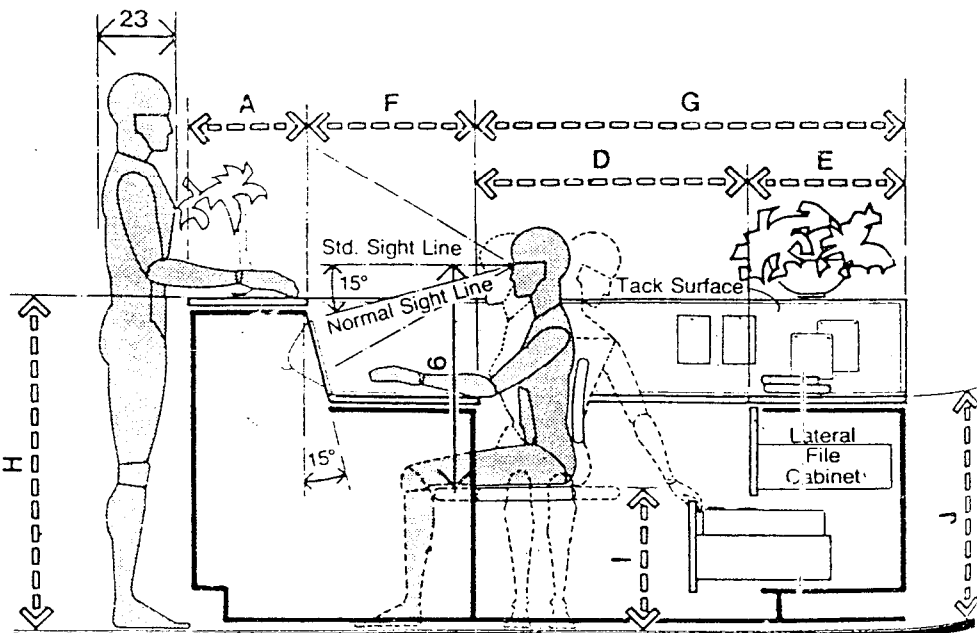
6.3 HOSPITAL ROOMS

The drawing at the top of the page shows a plan view of a typical nurses' station and the clearances necessary to accommodate the human dimensions involved. A space of 36 in, or 91.4 cm, is a preferred minimum clearance between the desk and back counter. This will allow access to the back counter by a second person while the nurse is engaged at the desk; it also makes the files accessible to the nurse who swivels her chair.

The bottom drawing shows a section through the same station. Anthropometrically, several considerations become apparent. The surface of the rear face of the counter should be sloped slightly. The more the sight line approaches a 90° angle with the display, the clearer the visibility will be. The height of the counter should be comfortable for the visitor and yet not obstruct the vision of the nurse. To ensure the former, 2 to 3 in, or 5 to 7.6 cm, below elbow height should provide a comfortable counter height. For the latter, eye height sitting should be taken into account.



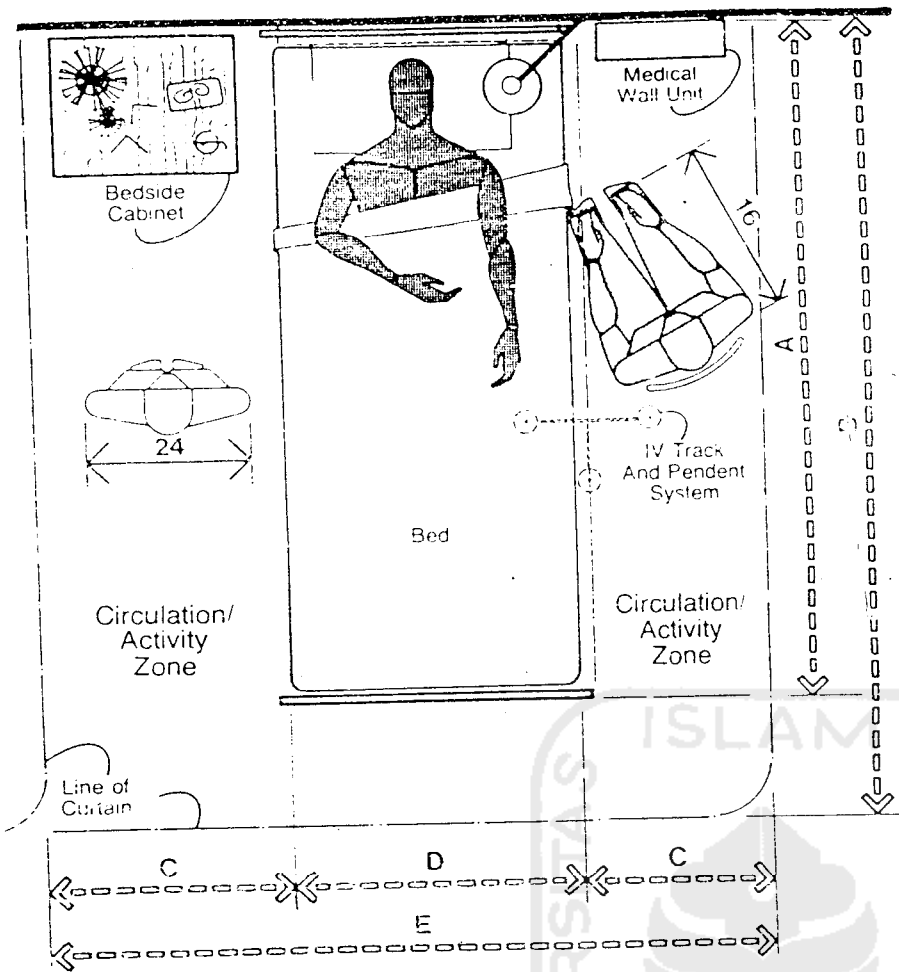
NURSE'S STATION



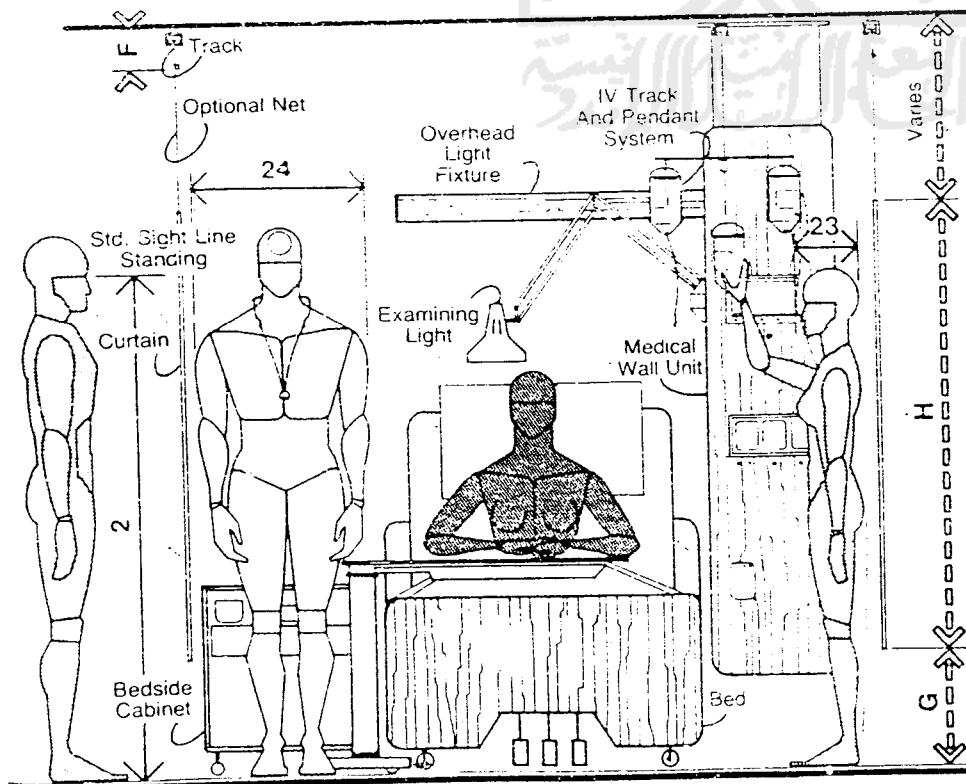
NURSE'S STATION

	in	cm
A	15-18	38.1-45.7
B	3-3.5	7.6-8.9
C	18	45.7
D	36 min.	91.4 min.
E	20	50.8
F	21-21.5	53.3-54.6
G	56 min.	142.2 min.
H	42-43	106.7-109.2
I	15-18	38.1-45.7
J	30	76.2

6.3 HOSPITAL ROOMS



PATIENT BED CUBICLE WITH CURTAINS



PATIENT BED CUBICLE WITH CURTAINS

The drawing at the top of the page shows recommended clearances around an individual hospital bed. A space of 30 in, or 76.2 cm, will allow for circulation and visitor seating around the bed. This clearance will also be adequate to accommodate a standard medical wall unit on one side and a night table on the other.

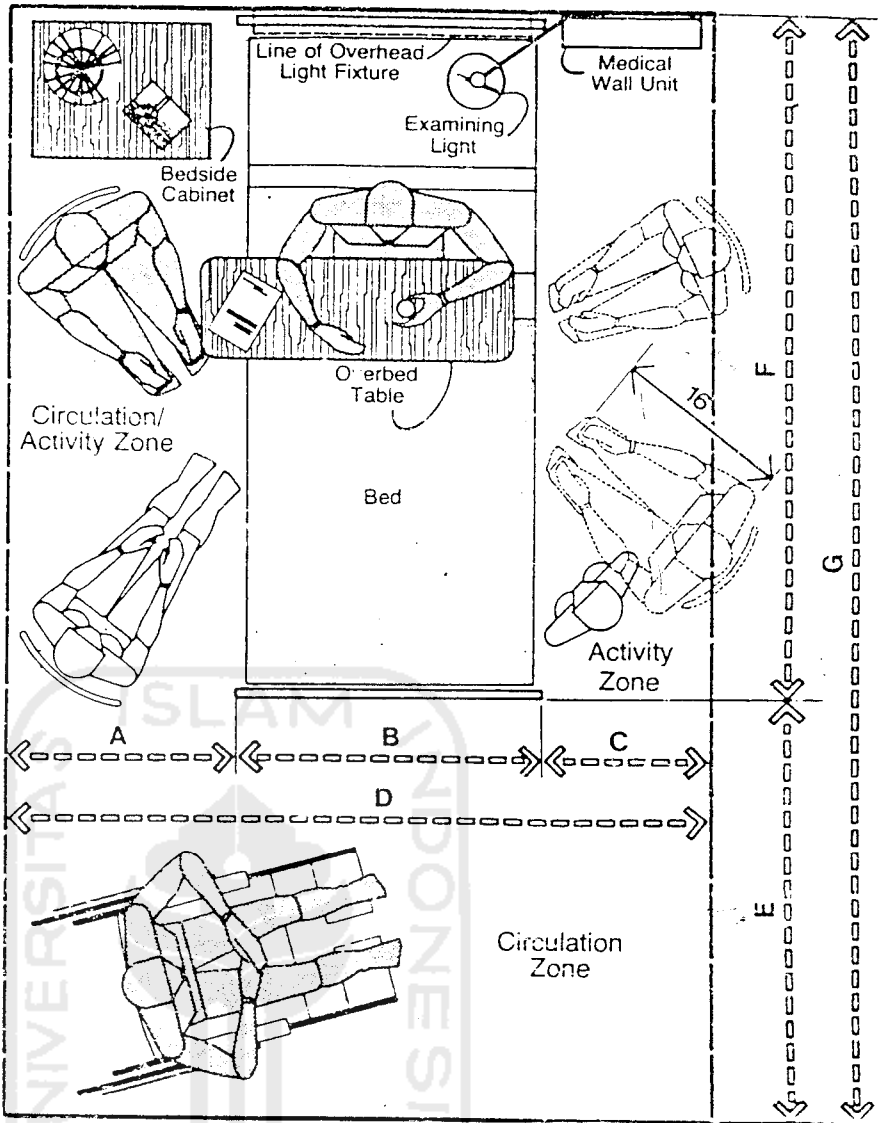
The drawing at the bottom shows the cubicle in elevation. The maximum body breadth of the larger user is the principal human dimension to be accommodated anthropometrically for proper clearance between the edge of the bed and the curtain. Since 95 percent of the sample population measured showed a maximum body breadth of 22.8 in, or 57.9 cm, or less, the 30-in clearance should be adequate. To ensure privacy, eye height or stature of the larger person would be the anthropometric measurement to consider in establishing curtain height.

	in	cm
A	87	221.0
B	96	243.8
C	30 min.	76.2 min.
D	39	99.1
E	99 min.	251.5 min.
F	2-3	5.1-7.6
G	15	38.1
H	54 min.	137.2 min.

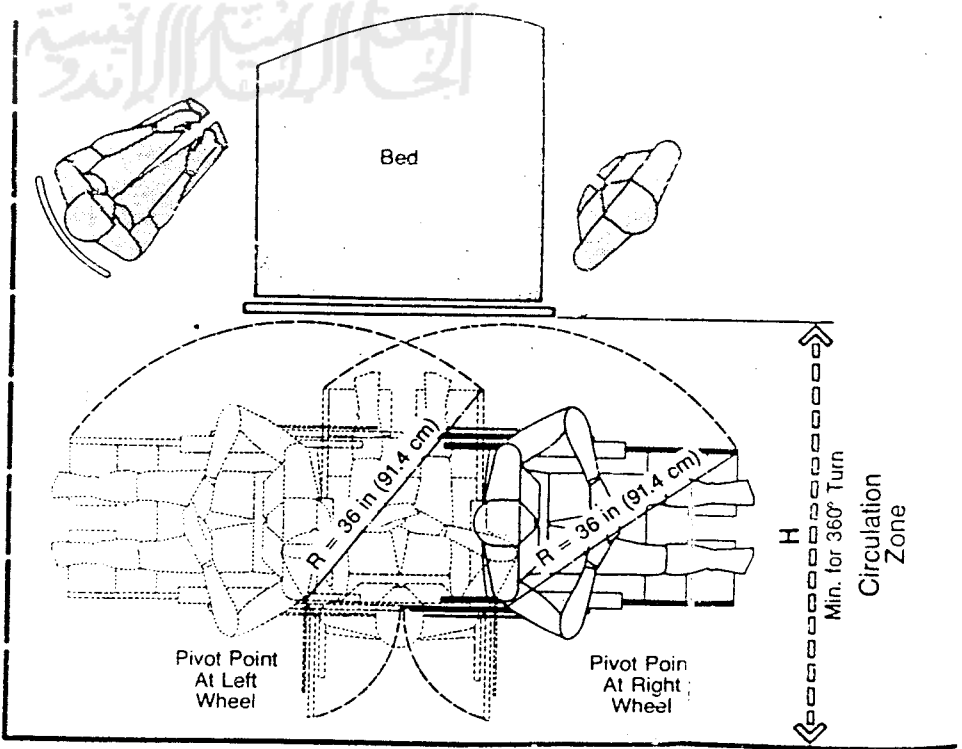
1.3 HOSPITAL ROOMS



The drawing is based on a double bed having a depth of 15 ft, or 4.57 m, although not very desirable, is commonly found in existing hospital rooms. A half the depth would allow 90 cm, for each bed position. The drawing illustrates that an adequate circulation/activity zone of 30 in, or 76.2 cm, can only be provided on one side of the bed. It should be noted that the dimensions indicated to the right of the drawing project into the space allocated to the adjacent bed position, indicating the need for a shared circulation/activity zone between beds. A minimum clearance depth for a double bed room should be 16.5 ft, or 5.03 m, to ensure separate circulation/activity zones on both sides of the bed. The dimensions indicated in the drawing on the following pages indicate the clearance required by a wheelchair user to circulate. Using the wheelchair as a pivot point, the wheelchair will change directions within 54 degrees.



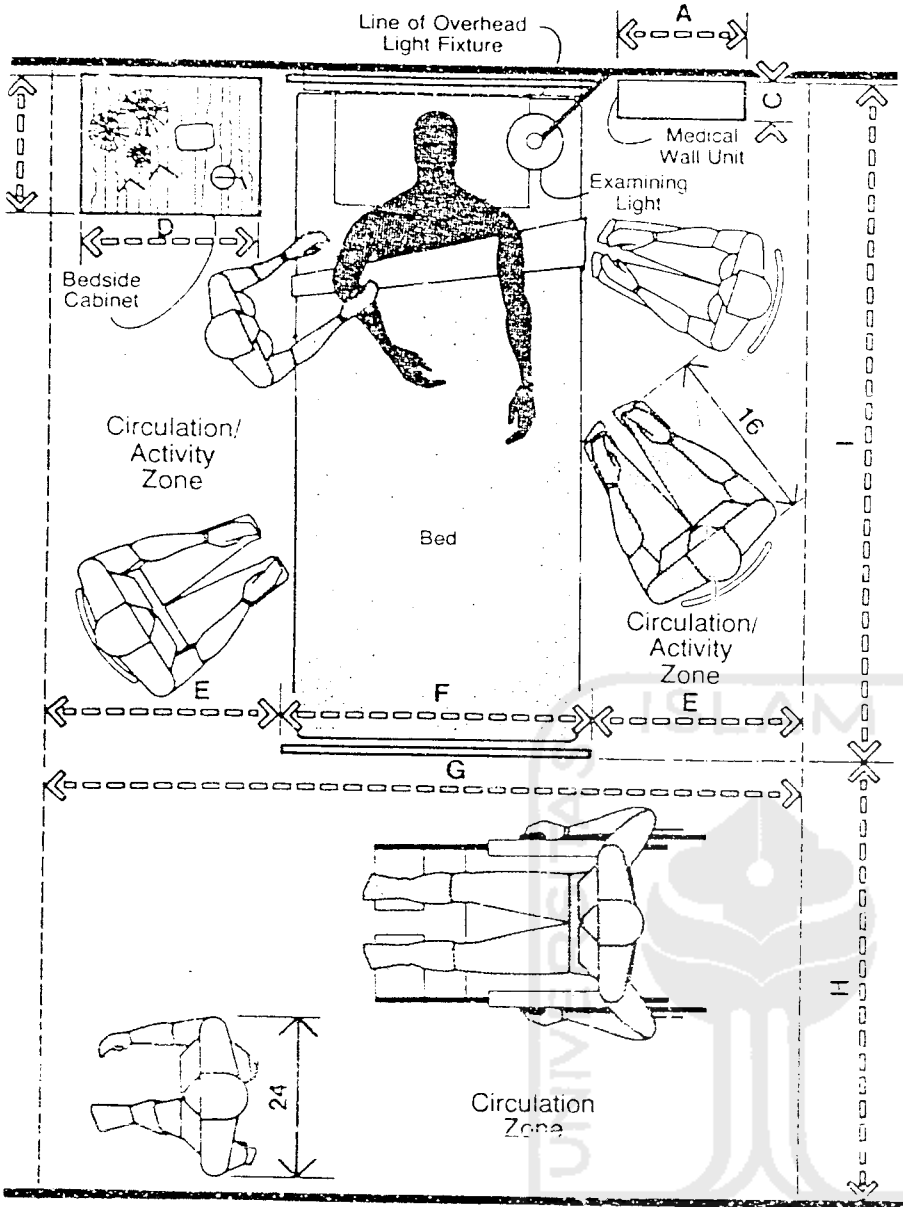
PATIENT BEDROOM



PATIENT BEDROOM / WHEELCHAIR MANEUVERING SPACE

in	cm
76.2 min.	76.2 min.
79	99.1
81	53.3
90	228.6
94	137.2
97	221.0
140	355.6
137.2 min.	137.2 min.

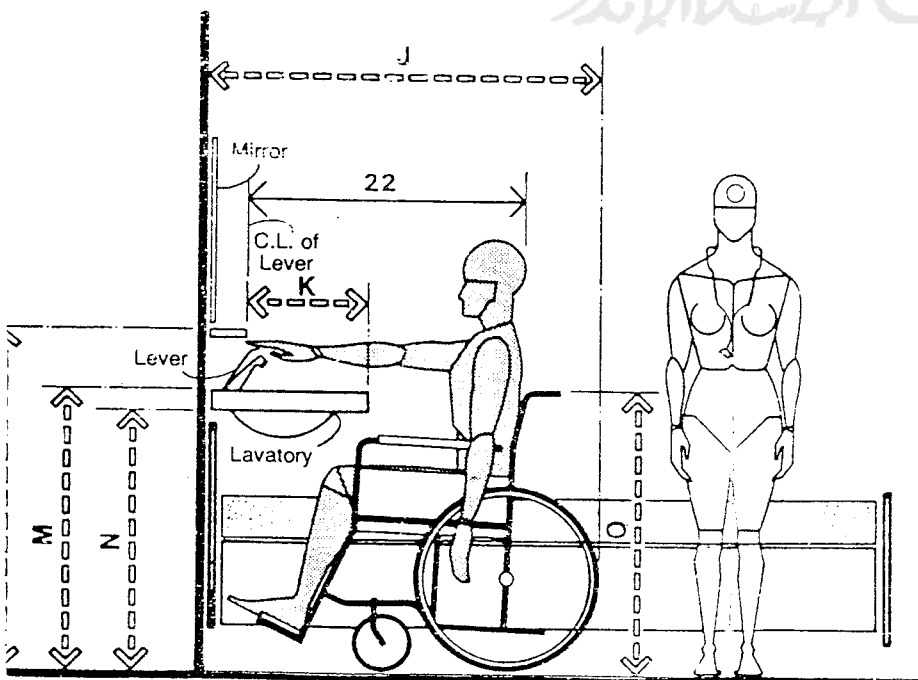
6.3 HOSPITAL ROOMS



The drawing at the top of the page shows the personal area around an individual bed in a double or four-bed arrangement. A preferred depth of 99 in, or 251.5 cm, will allow for a 30-in, or 76.2-cm, circulation/activity zone on both sides of the bed. A space of 96 in, or 243.8 cm, would be the absolute minimum and would require that a few inches of zone space be shared with the personal area of the adjacent bed position.

The drawing at the bottom of the page illustrates the relationship of the wheelchair user to a wall-hung hospital lavatory. It is essential that sufficient clearance be provided to allow the wheelchair to slide partially under the bottom edge of the fixture. For proper access to controls anthropometrically, thumb tip reach should be taken into account. For this, 5th percentile data should be used. If the controls are within reach of the person of small body size, they will also be within reach of those having a larger body size. For further information concerning the interface between the wheelchair user and the lavatory, refer to Section 8.3, Public Bathrooms.

PERSONAL AREA / DOUBLE OR FOUR BEDROOM



BATHROOM LAVATORY

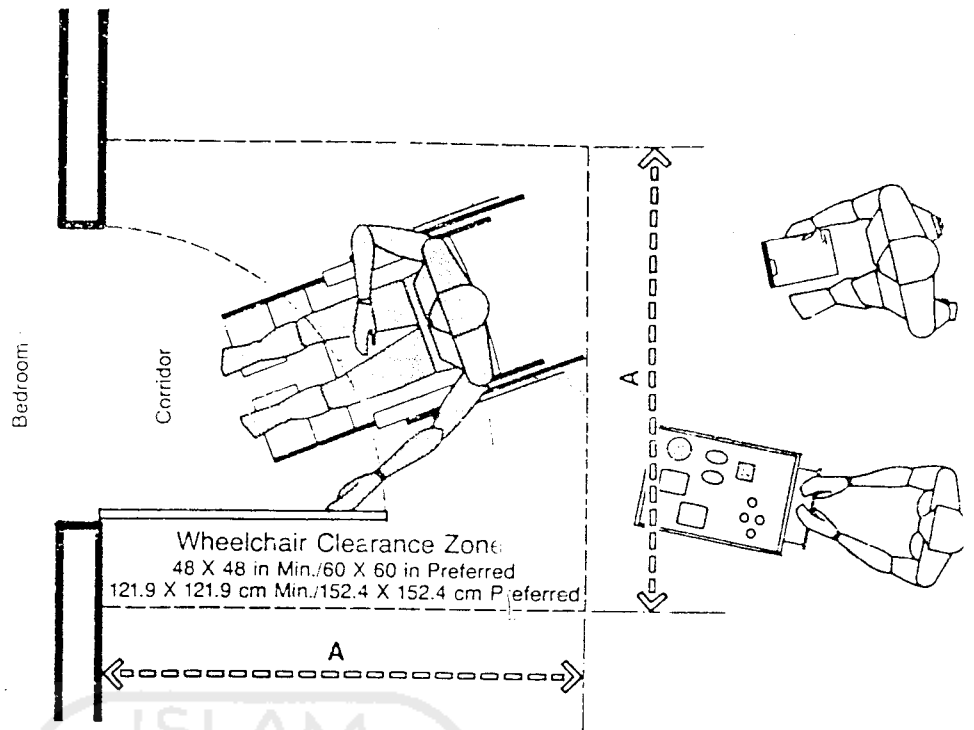
	in	cm
A	17-18	43.2-45.7
B	18	45.7
C	5-6	12.7-15.2
D	20	50.8
E	28.5-30	72.4-76.2
F	39	99.1
G	96-99	243.8-251.5
H	48-66	121.9-167.6
I	87	221.0
J	48	121.9
K	18 max.	45.7 max.
L	40 max.	101.6 max.
M	34 max.	86.4 max.
N	30 min.	76.2 min.
O	36	91.4

5.3 HOSPITAL ROOMS

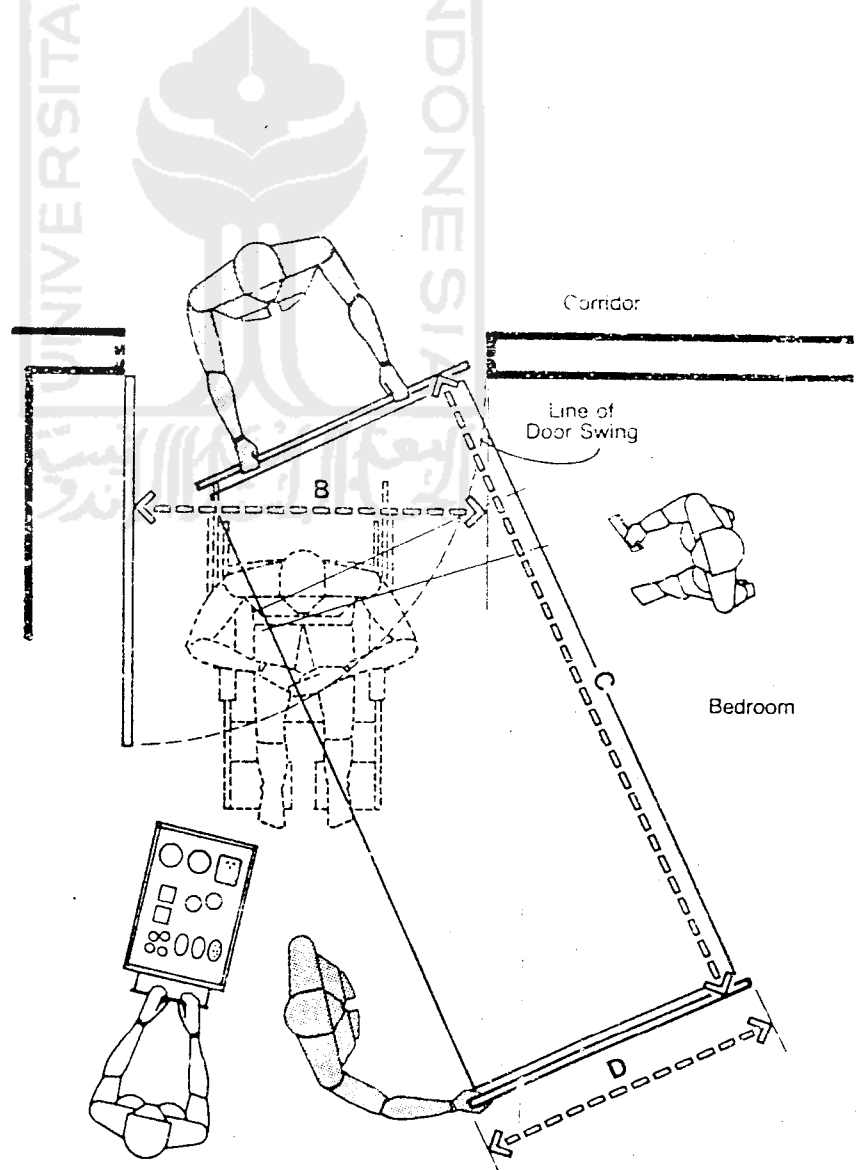


The drawing at the top of the page shows the clearances required in front of a hospital room door to accommodate a wheelchair user. An area of 60 by 60 in, or 152.4 by 152.4 cm, is preferred to allow the disabled user to maneuver the wheelchair into an appropriate approach position, open the door, and exit. A wheelchair can also be maneuvered within a 48- by 48-in, or 121.9- by 121.9-cm, area, but such a space allocation is extremely tight and should be viewed as an absolute minimum. Since door openings to hospital rooms are large enough to allow the passage of beds and other relatively wide equipment, the standard door widths are more than adequate to accommodate the wheelchair.

The drawing at the bottom of the page illustrates the door clearance necessary to allow the passage of a standard bed. In broken line, the drawing also indicates the outline of a wheelchair, showing that a door width appropriate for the passage of a bed is more than adequate to accommodate the passage of a wheelchair.



BEDROOM ENTRANCE DOOR



BEDROOM ENTRANCE DOOR

	in	cm
A	60	152.4
B	46-48	116.8-121.9
C	87	221.0
D	39	99.1

7.1 EXERCISE AREAS

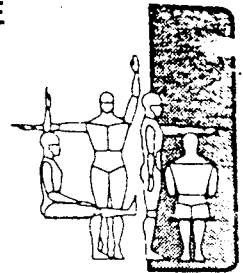


TABLE	EXERCISE SAUNA LOCKER ROOM			ACTIVITIES	ANTHROPOMETRIC DATA
	EXERCISE	SAUNA	LOCKER ROOM		
1A,2B	●	●		1	STATURE
1D,2C	●			4	SITTING HEIGHT ERECT
1G,3E	○			7	MIDSHOULDER HEIGHT SITTING
1N,2J		○	○	14	POPLITEAL HEIGHT
1O,2K		○		15	BUTTOCK-POPLITEAL LENGTH
1P,2L	●	●	●	16	BUTTOCK-KNEE LENGTH
1R,4B	●			18	BUTTOCK-HEEL LENGTH
1U,4E	●			21	SIDE ARM REACH
1V,4D	●		○	22	THUMB TIP REACH
1W,6B	●	●		23	MAXIMUM BODY DEPTH
1X,6A	●	●	●	24	MAXIMUM BODY BREADTH

The drive for health and physical fitness has made exercise activities a popular pastime for many and a major business enterprise for others. Some activities require no equipment, while others involve equipment ranging in levels of sophistication and cost from a simple set of fixed-weight dumbbells to precision-engineered nine-station exercise machines costing thousands of dollars. In all situations however, the spaces designated to house these activities must respond to human dimension. The drawings on the following pages illustrate some of the more fundamental exercise activities and suggest clearances and other dimensional data for use in making preliminary design assumptions. The major anthropometric measurements to consider are indicated in the above matrix.

Saunas and hydrotherapeutic whirlpool equipment are also frequently provided within exercise spaces. A few representative models illustrating the relationship of the human body to the equipment are also included in the drawings in this section.

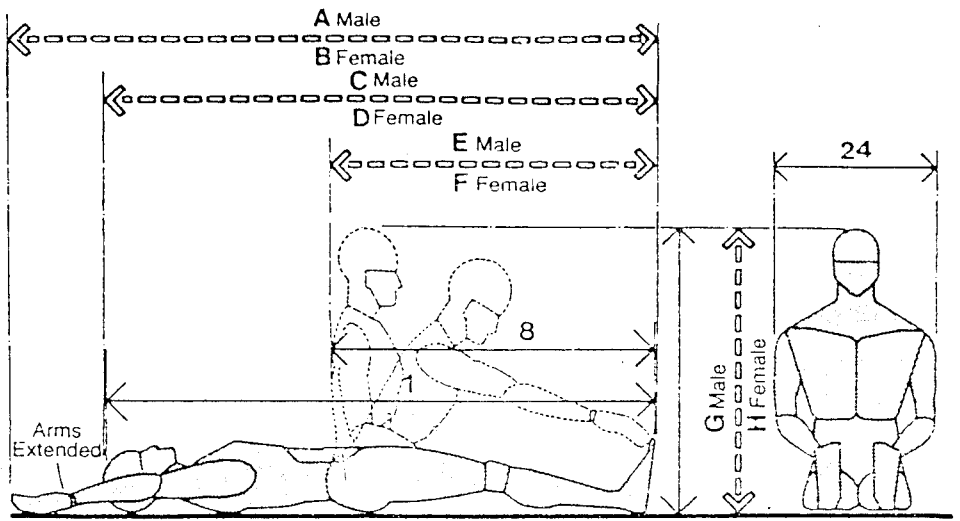
Most exercise spaces also include locker facilities of one type or another and their design must respond to human dimension and body size as well. The height of the benches must conform to the general anthropometric requirements for seating. Of principal concern is the popliteal height of the user. Buttock-heel length and/or buttock-toe length data of the user having a larger body size are useful in determining the extent to which the body of the seated user will project into the space between the edge of the bench and the face of the locker. This dimension plus the maximum body breadth of a larger person can then be used in establishing a comfortable overall clearance between bench and locker for circulation as well as accommodation of the person seated on the bench.

1 EXERCISE AREAS

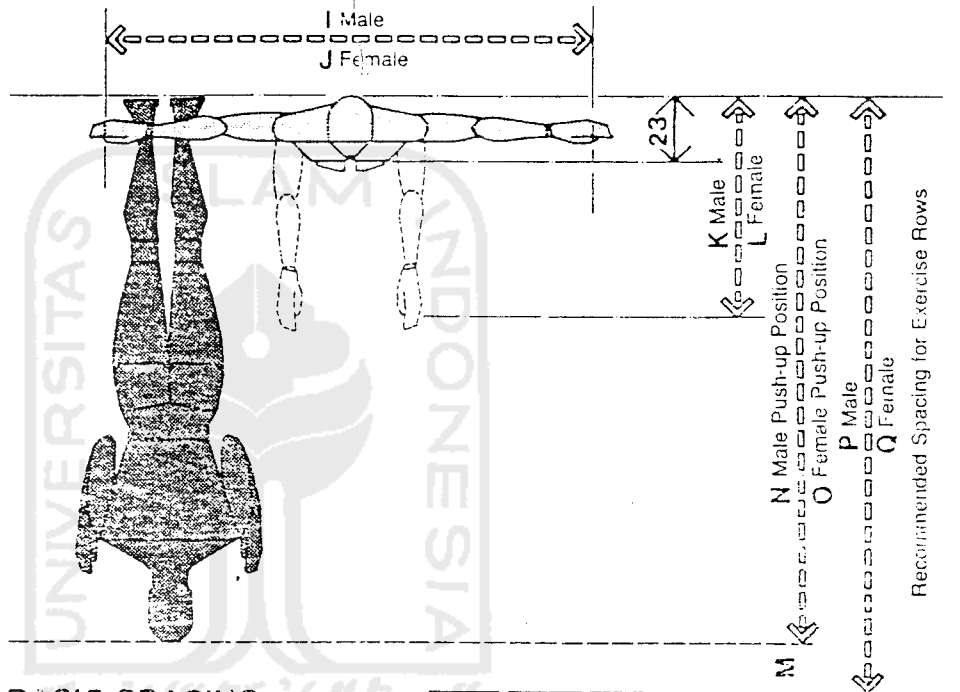
The top drawing indicates in side and front view the clearances required by the human body while engaged in sit-up exercises. Although it is recommended that in establishing clearances, the person of larger body size be used as a model, the ranges shown reflect small and large male and female data. The 5th and 95th percentile vertical grip reach measurements were used as the basis of the dimensions, with an allowance to compensate for the fact that the anthropometric measurement does not quite extend to the tip of the fingers. The authors suggest that even if the design is intended for a particular population of smaller body size, the larger measurements be used. The largest clearance required would be for the large male, and is shown as 91.5 in or 232.4 cm.

The center drawing provides the designer with the dimensional information necessary to establish basic spacing for an exercise class.

The bottom drawing shows the clearance required for push-up exercises. Stature would be the most useful anthropometric measurement to consider.

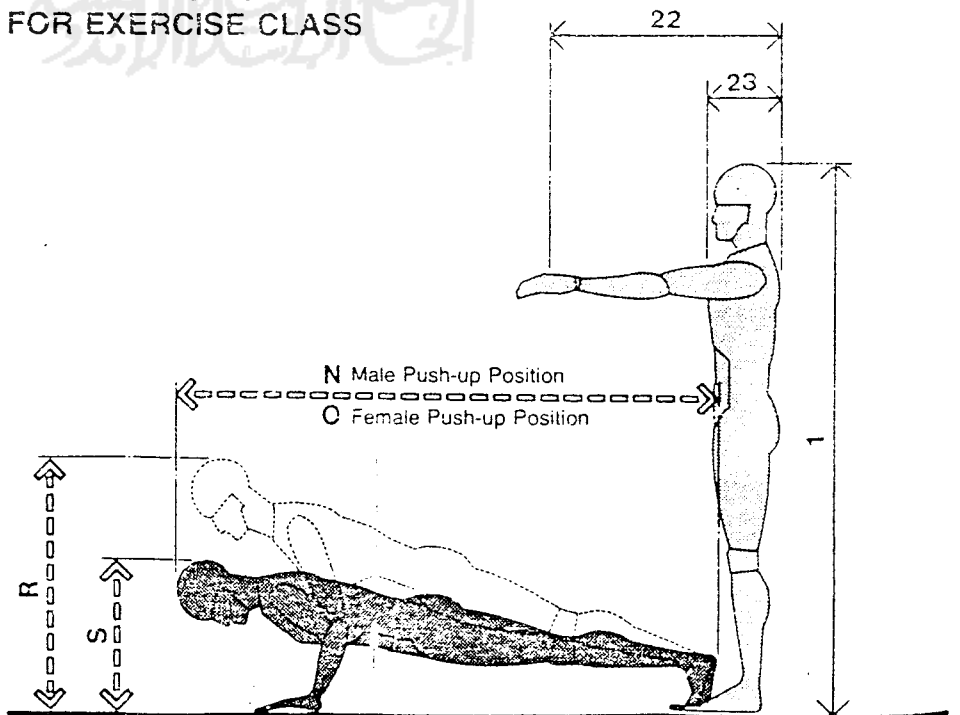


SIT-UP FLOOR EXERCISE



BASIC SPACING FOR EXERCISE CLASS

	in	cm
A	80-91.5	203.2-232.4
B	75-87	190.5-221.0
C	65-74	165.1-188.0
D	60-69	152.4-175.3
E	32-37	81.3-94.0
F	27-37	68.6-94.0
G	33.2-38.0	84.3-96.5
H	30.9-35.7	78.5-90.7
I	58-68	147.3-172.7
J	54-76	137.2-193.0
K	29.7-35.0	75.4-88.9
L	26.6-31.7	67.6-80.5
M	6-12	15.2-30.5
N	63-73	160.0-185.4
O	61-67	154.9-170.2
P	79-85	200.7-215.9
Q	73-79	185.4-200.7
R	23-38	58.4-96.5
S	10-16	25.4-40.6

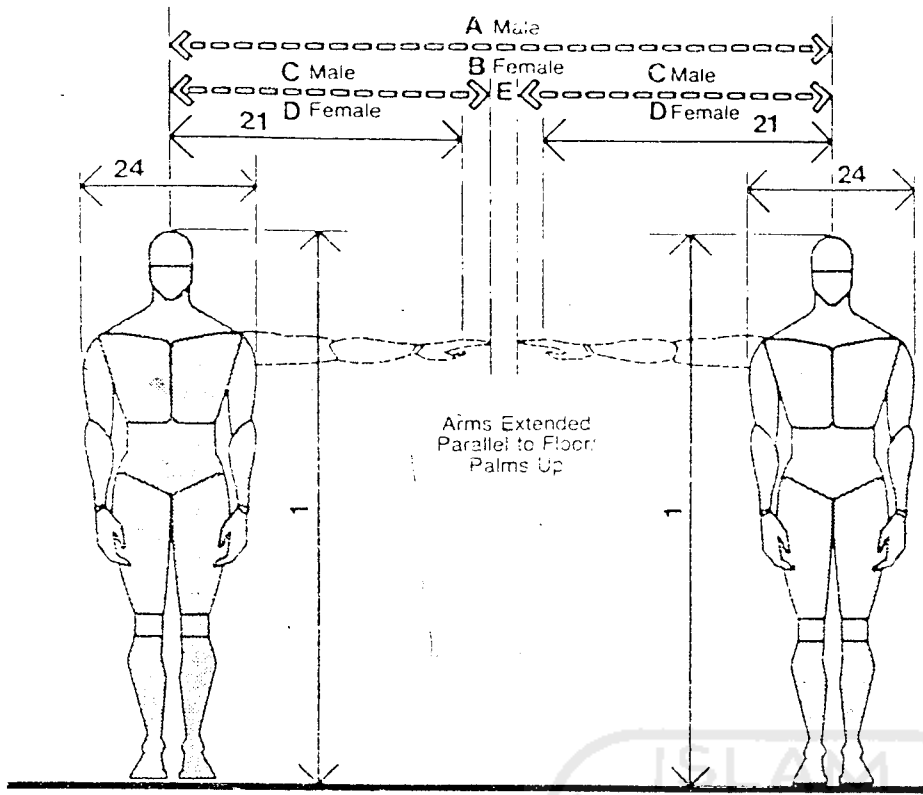


SPACE REQUIREMENTS FOR BASIC PUSH-UP POSITION

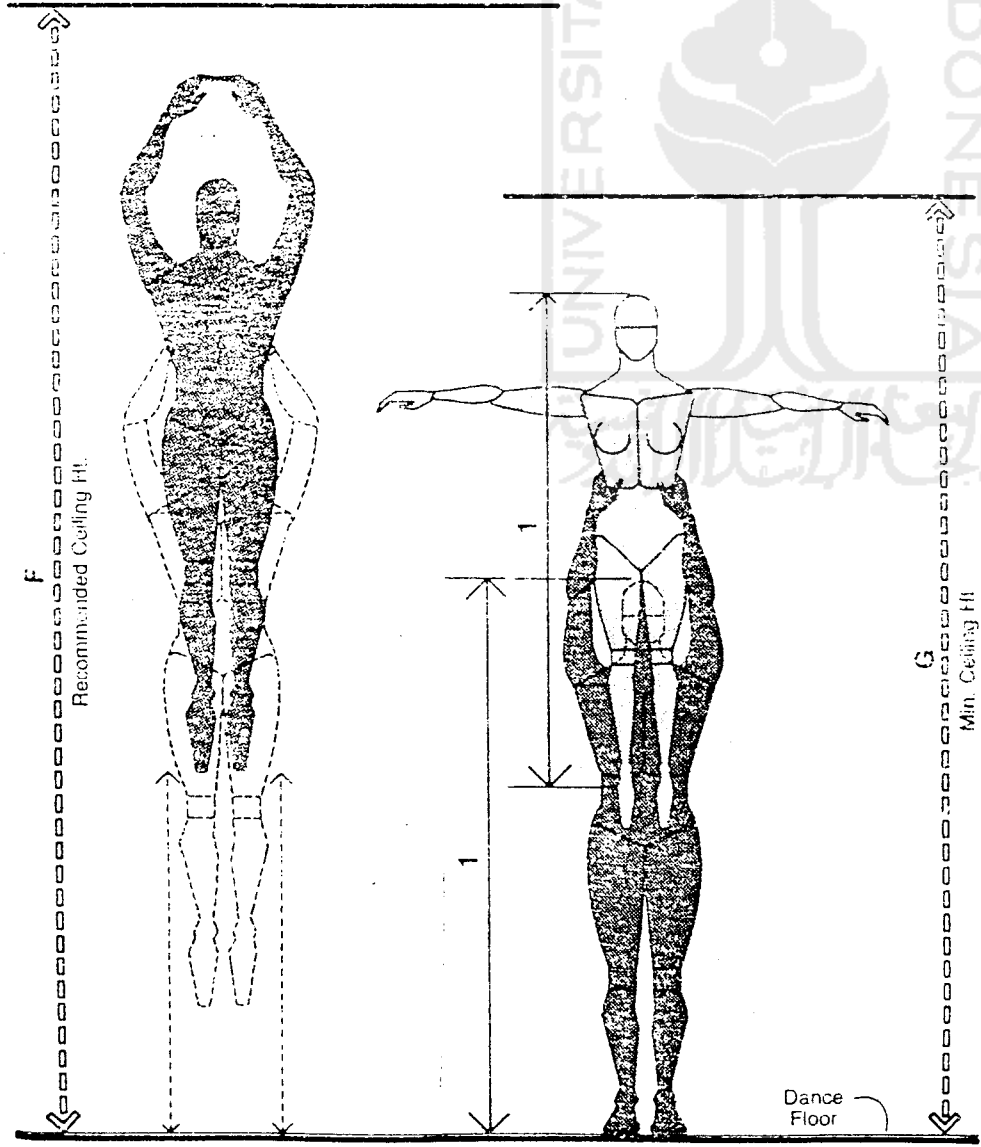
7.1 EXERCISE AREAS

The top drawing should be helpful in establishing minimum center spacing for standing exercises in place. The drawing is not intended as a standard, but rather as a base of reference for preliminary design assumptions. The nature of the particular exercise and the intensity of body movements involved should all be taken into consideration.

Certain exercises require significant head room. Dance and similar activities, for example, require considerable clearance to avoid accidents. The bottom drawing shows only two such possibilities. There are, obviously, many variations. The tables in Part B should provide the necessary data with which to establish clearances appropriate to those variations.



MINIMUM EXERCISE CLEARANCE REQUIREMENTS

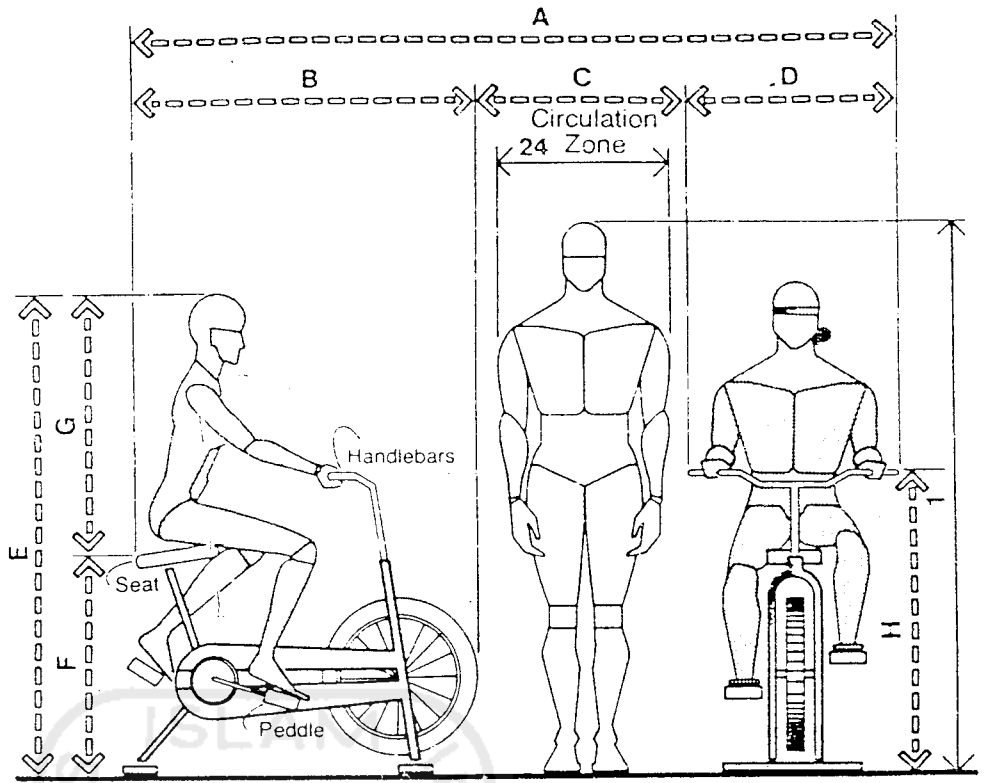


DANCE AND EXERCISE PRACTICE ROOMS/
CEILING HEIGHT REQUIREMENTS

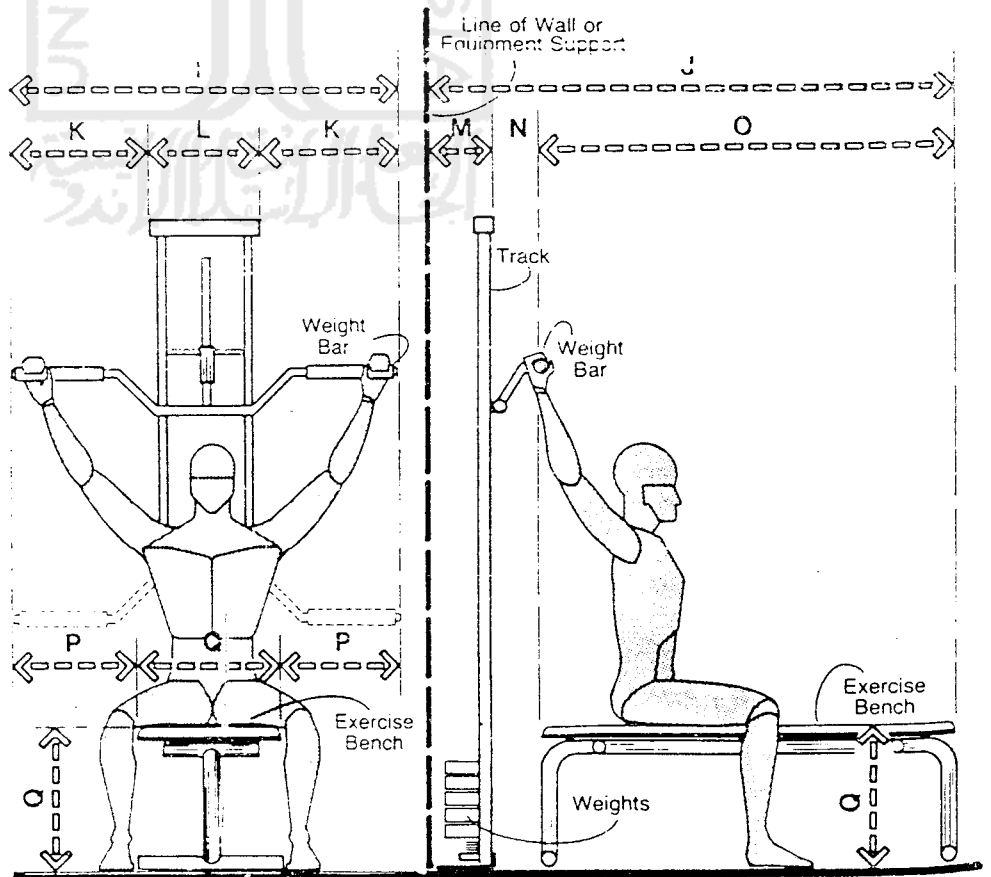
	in	cm
A	65-80	165.1-203.2
B	61-88	154.9-223.5
C	31-37	78.7-94.0
D	29-41	73.7-104.1
E	3-6	7.6-15.2
F	144	365.8
G	120	304.8

1 EXERCISE AREAS

Two corresponding drawings show typical exercise equipment available on the market. The top drawing typifies the classic exercise bicycle and shows some of the clearances required in a commercial installation. The bottom drawing is representative of the many weight-lifting devices presently in use. The front and side views indicate some of the overall dimensions as well as the relationship of the human body to the equipment. Dimensions and general configuration vary with model and manufacturer, but the information shown can be used for making preliminary design assumptions.



EXERCISE BICYCLE

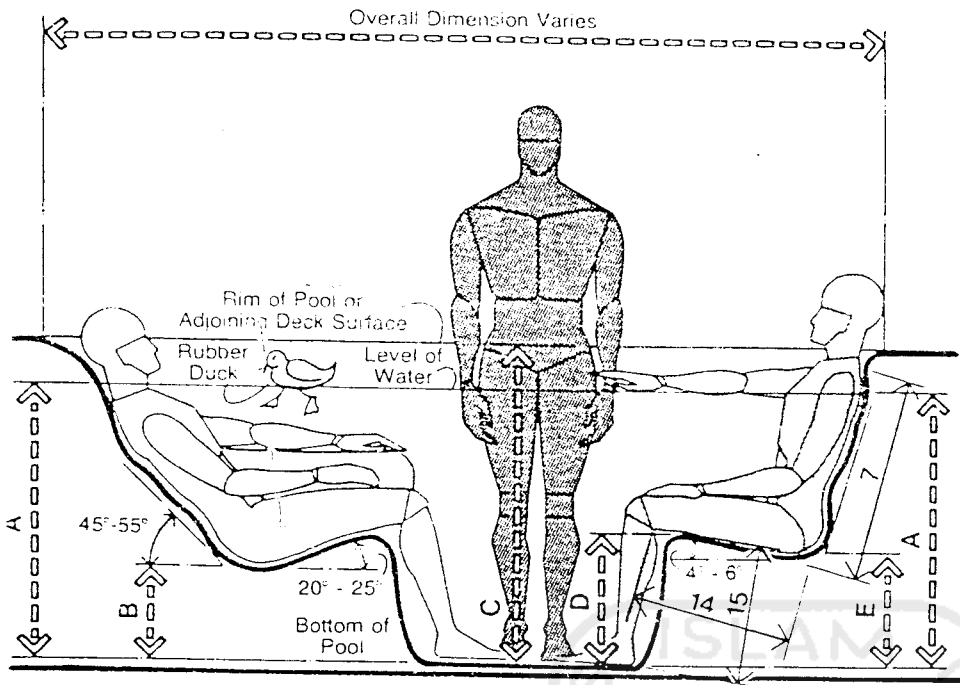


WALL-MOUNTED LATISSIMUS POWER LIFT UNIT

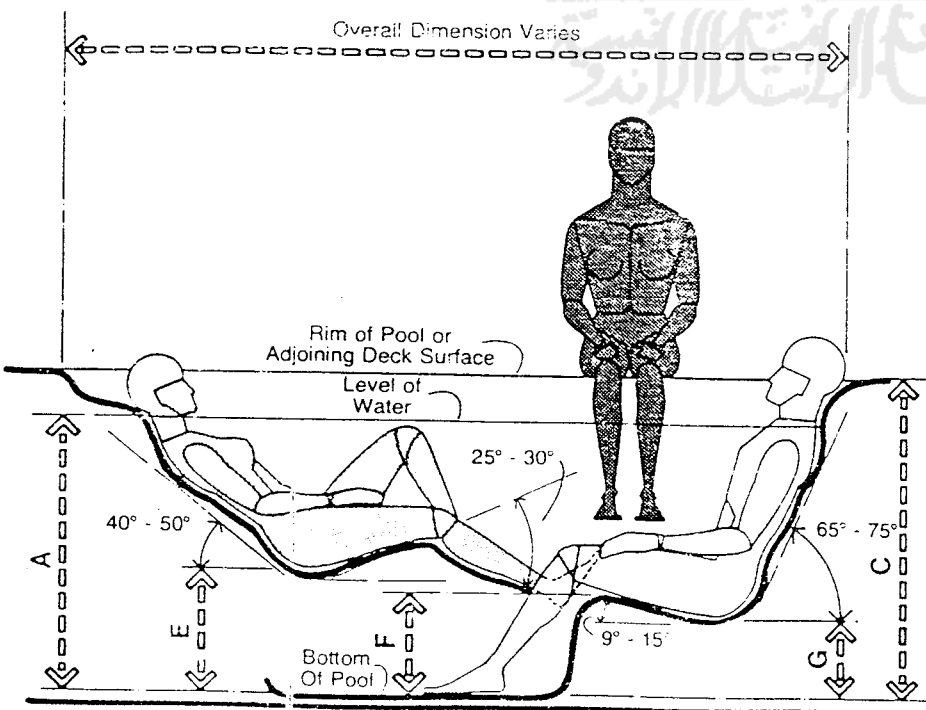
	in	cm
A	83-104	210.8-264.2
B	35-48	88.9-121.9
C	30	76.2
D	18-26	45.7-66.0
E	55-68	139.7-172.7
F	25-30	63.5-76.2
G	30-38	76.2-96.5
H	46	116.8
I	36-48	91.4-121.9
J	58-76	147.3-193.0
K	12-18	30.5-45.7
L	12	30.5
M	6-12	15.2-30.5
N	4-10	10.2-25.4
O	48-54	121.9-137.2
P	9-14	22.9-35.6
Q	18-20	45.7-50.8

7.1 EXERCISE AREAS

Most hydrotherapy pools provide turbulent hot water massage. Some models, such as the ones shown on this page, have been anthropometrically contoured to provide proper support for the back, particularly in the lumbar region. The pools are manufactured in a variety of profiles to accommodate different body positions. The height of the pools is between 33 and 38 in, or 83.8 and 96.5 cm. The lengths and widths vary with the model.



ANTHROPOMETRICALLY CONTOURED HYDROTHERAPY POOL



ANTHROPOMETRICALLY CONTOURED HYDROTHERAPY POOL



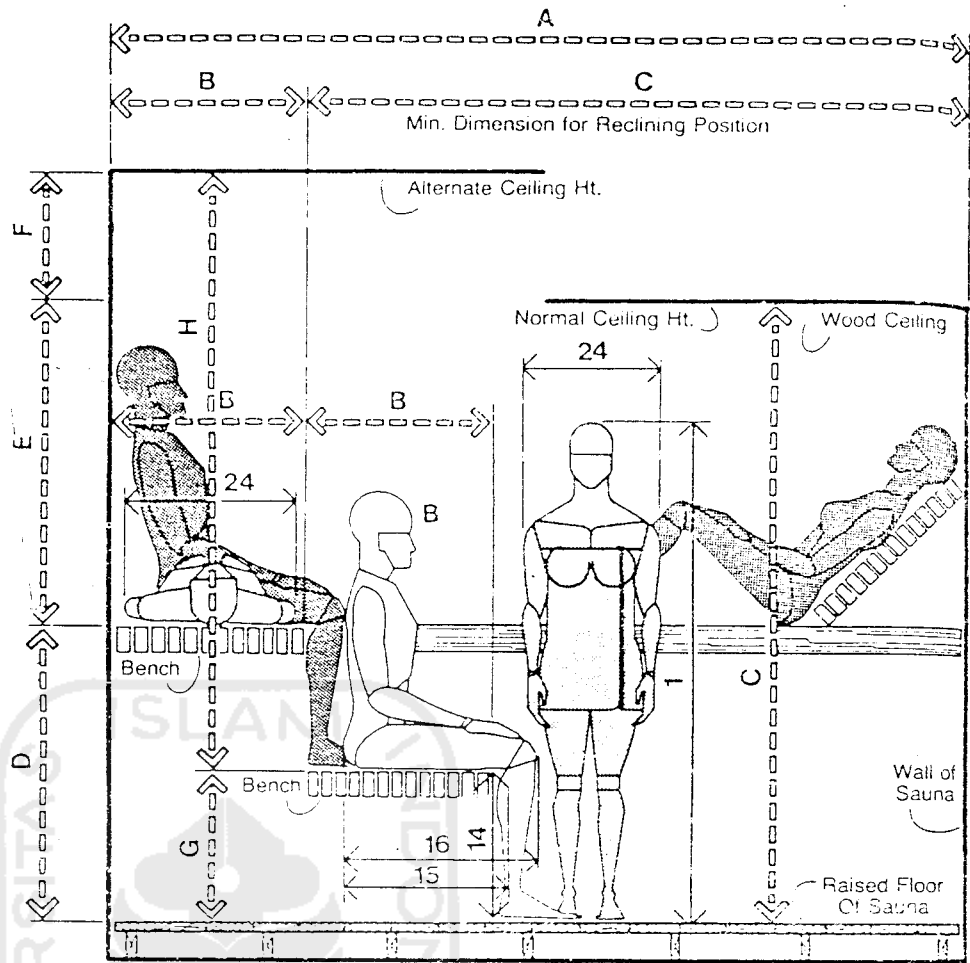
	in	cm
A	33-38	83.8-96.5
B	9-12	22.9-30.5
C	38-44	96.5-111.8
D	13-16	33.0-40.6
E	12-15	30.5-38.1
F	11-14	27.9-35.6
G	8-11	20.3-27.9

7.1 EXERCISE AREAS

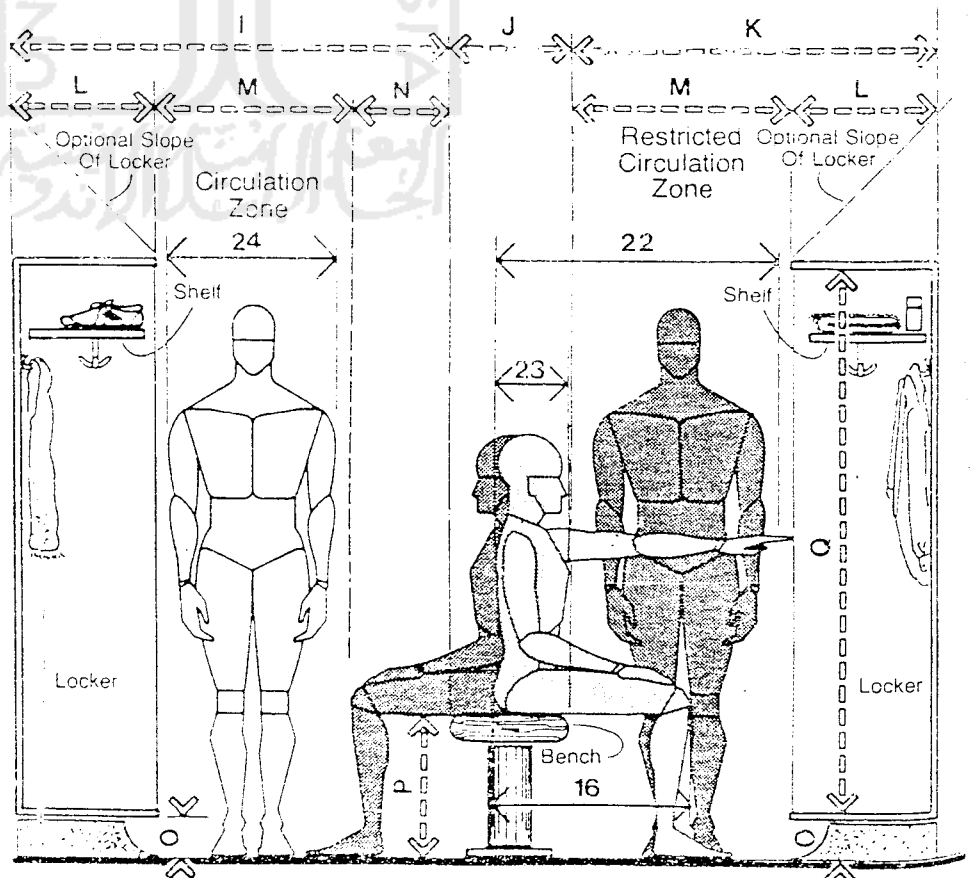
The sauna is essentially a thermal bath using dry heat, unlike the low heat and high humidity of the steam bath. Although there are many complete prefabricated models on the market, the heater units can be purchased separately. It is therefore relatively simple to custom design an individual installation.

The top drawing illustrates some of the critical dimensions involved. Two possible ceiling heights are indicated. The alternate height will allow more comfortable access to the second tier bench, while the normal height will permit installation within the conventional 96-in., or 243.8-cm, ceiling limitations of most residential interior spaces.

The bottom drawing shows a section through a typical locker room. The restricted circulation zone shown at the right would require either the seated or the standing person to move out of the way to avoid body contact. The circulation zone at the left would allow more comfortable passage without body contact.



SECTION THROUGH SAUNA ROOM



LOCKER ROOM

	in	cm
A	108	274.3
B	24	61.0
C	84	213.4
D	36-40	91.4-101.6
E	44-48	111.8-121.9
F	12-14	30.5-35.6
G	18-20	45.7-50.8
H	78 min.	198.1 min.
I	56-64	142.2-162.6
J	12-15	30.5-38.1
K	42-48	106.7-121.9
L	12-18	30.5-45.7
M	30	76.2
N	14-16	35.6-40.6
O	4-6	10.2-15.2
P	14-17	35.6-43.2
Q	60-72	152.4-182.9

7.2 SPORTS AND GAMES

TABLE	ACTIVITIES			ANTHROPOMETRIC DATA
	TABLE TENNIS	POOL TABLE	BASKETBALL	
1A,2B			●	1 STATURE
1C,3B	●	●		3 ELBOW HEIGHT
1T,4F			●	20 VERTICAL GRIP REACH
1U,4E	●			21 SIDE ARM REACH
1X,6A		●		24 MAXIMUM BODY BREADTH

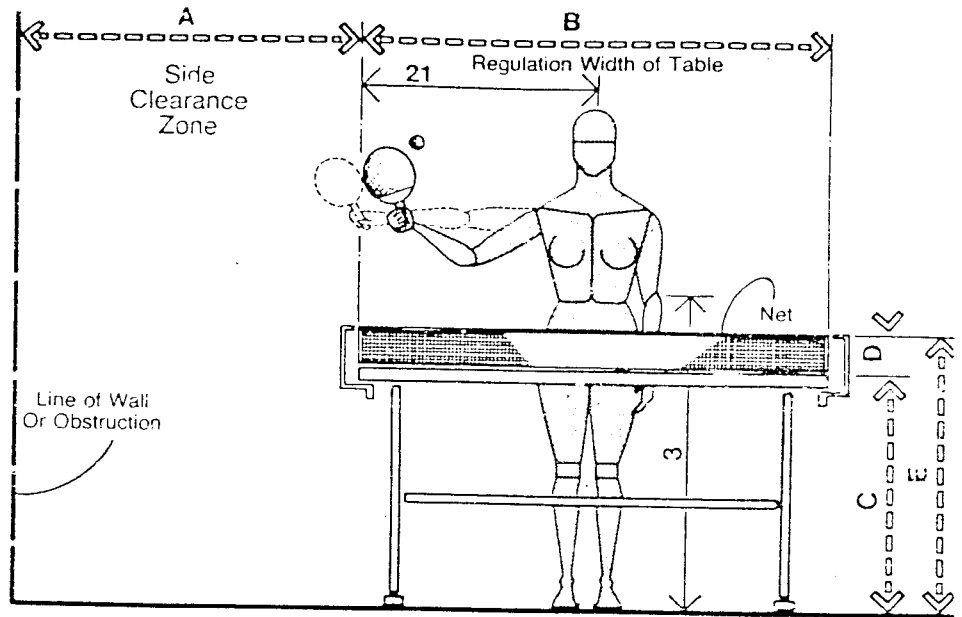
Aside from the basic anthropometric considerations involved to accommodate most sports and game activities, certain of these activities present some unique problems. Can basketball, for example, be truly considered a "sport" if most players must have a 99th percentile stature to participate? A player with a 90th or 95th percentile stature, although possessing skills and agility, would be at an obvious disadvantage for no reason but the body size of his opponent. A tall player may use a "stuff" shot, since his tremendous height enables him to jump high in the air. With both hand and ball positioned slightly above the rim of the basket, he is then able in one swift downward thrust to literally "stuff" the ball through the basket. A proposal is presently under consideration to raise the height of the rim to benefit the tall player; the use of this shot, it is doubtful that Dr. James Naismith, when he conceived the game in 1891, envisioned an 84-in. or 214-cm center in the air to forcefully stuff a round ball into a wooden basket. This condition is one of the many explored in the text and the drawings on the following pages. Perhaps the relationships between human dimension and the degree to which it impacts on the intended spirit of competitive sports should be studied across the board in a field of athletics—surely a novel and interesting investigation for designer and anthropometrist alike.

The present lack of enforceable building code regulations to ensure that the design of interior spaces housing active sports corresponds to human dimension and the dynamics of people in motion constitutes a potential threat to the safety of the participant. There are, for example, no code regulations that establish the minimum space needed between the basketball court boundary lines and the nearest obstruction to allow a player running off the court to reduce his rate of speed to avoid crashing head-on into a wall or other obstacle. Similarly, there are no code requirements establishing minimum clearances between a diving board and an overhead obstruction or between a tennis court baseline and back fence. No minimum ceiling height requirements exist for spaces where a gymnast practices or performs.

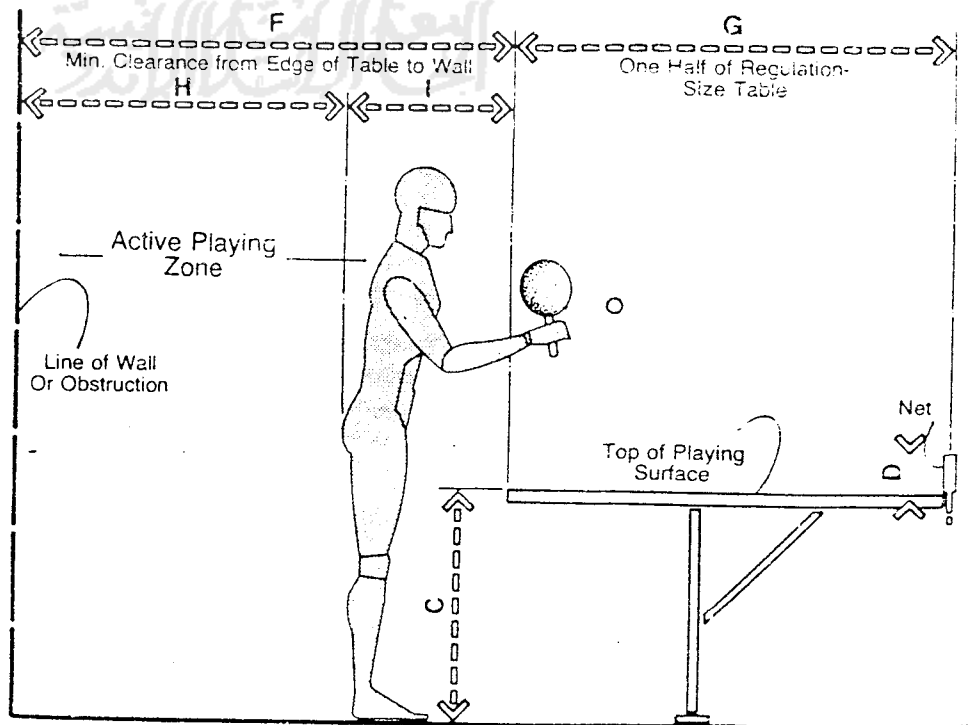
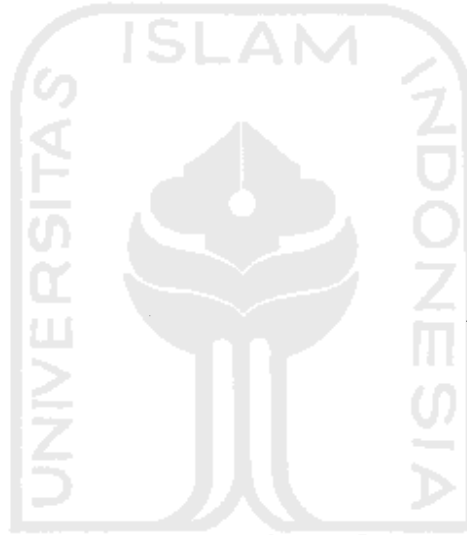
The absence of regulations of the type mentioned not only poses a serious threat to the safety of the users, but it makes both client and designer legally responsible in the event of injury or death if it can be demonstrated that reasonable clearances were not provided. Moreover, in cases where extra-legal guidelines, recommended standards, or simple rules of thumb are the only criteria available, the designer should seriously question and reevaluate them in terms of current published anthropometric data and the nature and character of the materials and physical arrangement of the equipment involved. Included among the drawings on the pages that follow are examples of some of the problems mentioned. The matrix above indicates some of the more relevant anthropometric measurements applicable to spaces used for sports and game activities.

7.2 SPORTS AND GAMES

The top drawing indicates side clearance requirements for a table tennis installation within a residential environment: 48 in, or 121.9 cm, is the absolute minimum, while 72 in, or 182.9 cm, is preferred. The bottom drawing indicates the clearances required at either end of the table. In a close-up position, the player usually stands within 24 to 36 in, or 61 to 91.4 cm, of the edge of the table. An overall clearance between the edge of the table and the wall or nearest physical obstruction—between 84 and 120 in, or 213.4 to 304.8 cm—is suggested. The smaller figure should be regarded as an absolute minimum, and the larger figure as the preferred clearance. The latter, however, may be difficult to provide in terms of the room size required. The extent of clearance is a function of the size of the players and the intensity and skill with which the game is played. What must be considered is not only the space required for low-key volleying but the space required, for example, to chase a strategically placed ball, return it, decelerate, and ultimately stop. It is in enough time to avoid colliding with the wall at the rear or side of the playing area.



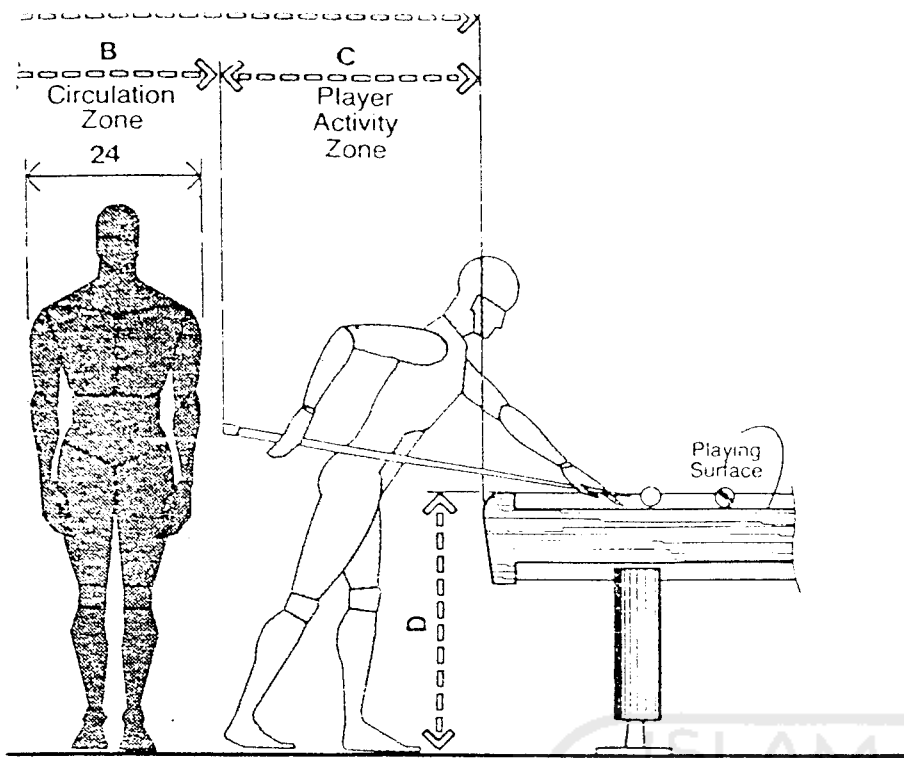
RESIDENTIAL TABLE TENNIS REQUIREMENTS



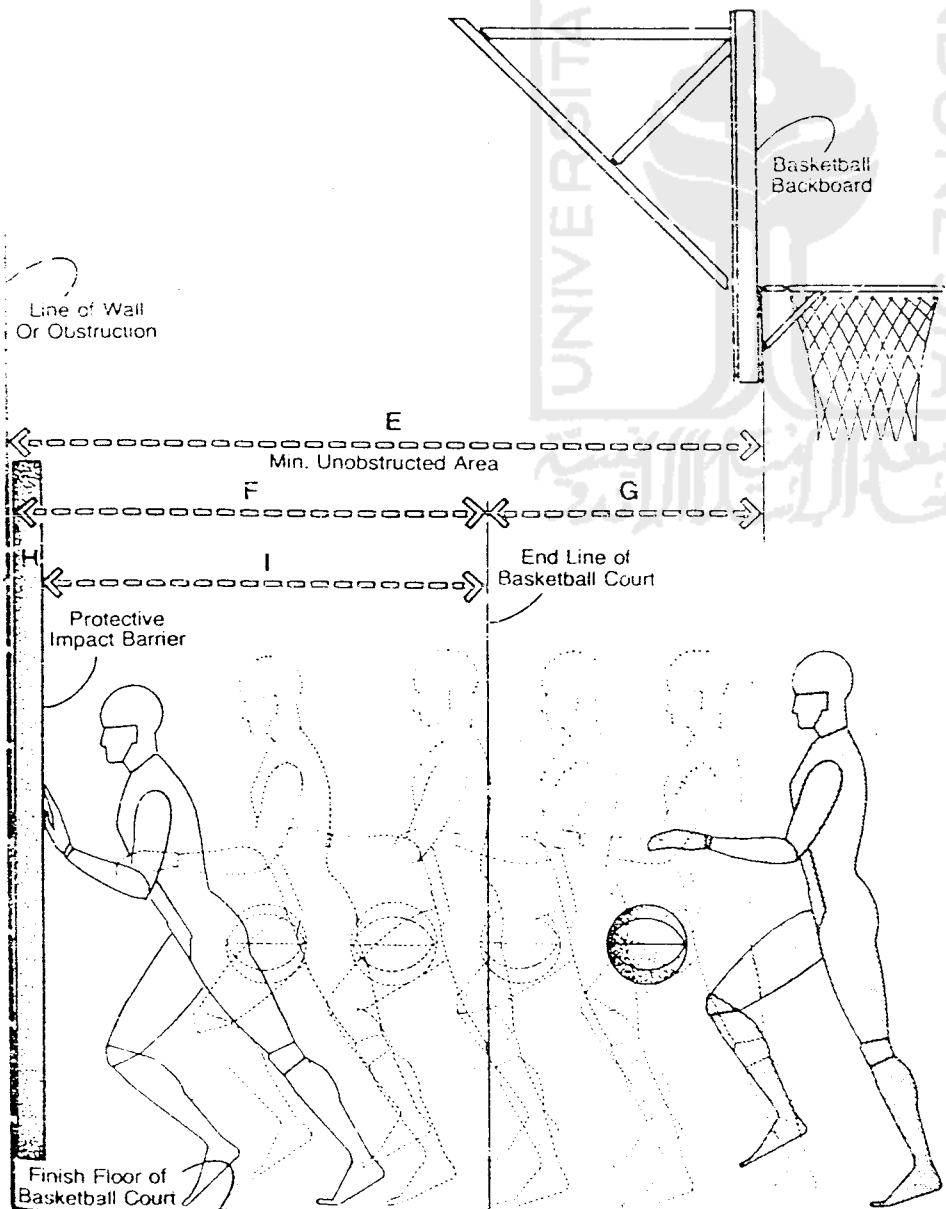
RESIDENTIAL TABLE TENNIS REQUIREMENTS/
REAR CLEARANCE ZONE

in	cm
48-72	121.9-182.9
60	152.4
30	76.2
6	15.2
36	91.4
84-132	213.4-335.3
54	137.2
60-96	152.4-243.8
24-36	61.0-91.4

7.2 SPORTS AND GAMES



BILLIARD AND POOL TABLE REQUIREMENTS

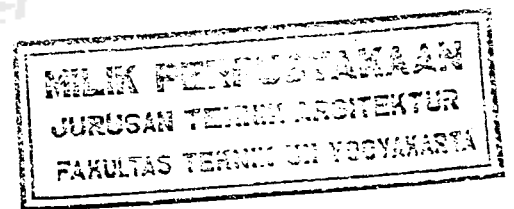


BASKETBALL COURT / SAFETY AREA CLEARANCES

The top drawing indicates the clearance required from the edge of a pool or billiard table to the wall or nearest physical obstruction. A clearance of 60 to 72 in, or 152.4 to 182.9 cm, is suggested to allow the possibility for some circulation behind the active player. The activity zone shown applies for most shots. In some instances, due to the nature of the play, the stance of the player, and the length of the cue stick, there may be some intrusion into the circulation zone.

Safety zones and clearances around the perimeter of a basketball court are not included in codes and ordinances that presumably deal with the public safety. In relatively passive sports and games, the problem is not serious. In sports where the action is more intense, such as basketball, the lack of adequate safety zone clearances may cause injuries to the players and may even prove fatal.

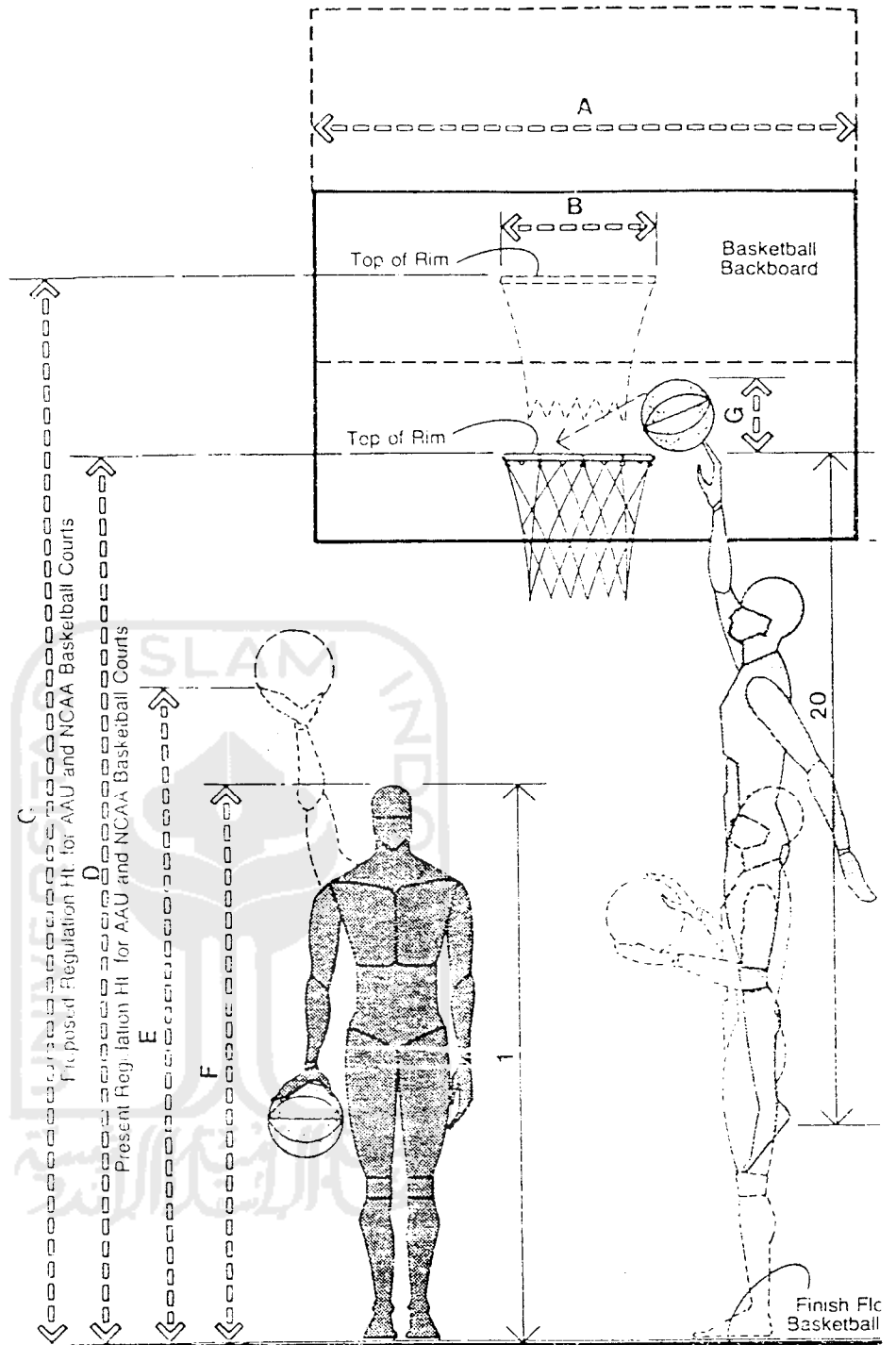
The drawing below suggests minimum clearances to allow the player, running and/or dribbling the ball at full speed, sufficient time and space to decelerate and stop before colliding with the wall.



	in	cm
A	60-72	152.4-182.9
B	30	76.2
C	30-42	76.2-106.7
D	33-34	83.8-86.4
E	142-172	360.7-436.9
F	94-124	238.8-315.0
G	48	121.9
H	4-8	10.2-20.3
I	90-116	228.6-294.6

7.2 SPORTS AND GAMES

The drawing here provides some useful information about human dimension and the sport of basketball. Aside from the dimensional data indicated, the subject serves as an excellent example of how anthropometric considerations relate to almost every facet of our daily life and, in fact, to most human activity. Many of the top professional basketball players have 99th percentile stature and reach dimensions. The extraordinary height and reach of some of these athletes, as well as jumping ability, enable them to do a so-called stuff shot. The player leaps high into the air, slightly above the rim of the basket, and literally stuffs the ball through. Such a player has a distinct advantage, totally unrelated to skill. To compensate for this, a proposal to raise the height of the rim on AAU and NCAA basketball courts is presently under consideration. The drawing shows the present rim height of 120 in., or 304.8 cm, and the proposed rim height of 144 in., or 365.8 cm. It is interesting to note that the top of the head of a player with a stature of 88 in., or 223.5 cm, is only 32 in., or 81.3 cm, below the rim.



BASKETBALL BACKBOARD AND RIM MODIFICATIONS

	in	cm
A	72	182.9
B	18	45.7
C	144	365.8
D	120	304.8
E	91-115	231.1-292.1
F	72-88	182.9-223.5
G	9.6	24.4
H	48	121.9

7.3 WORK AND CRAFT CENTERS

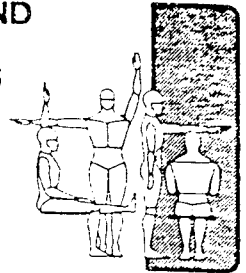


TABLE	PAINTING	DRAFTING	WORKSHOP	ART	ACTIVITIES	ANTHROPOMETRIC DATA
1A,2B,7B					1	STATURE
1B,3C	●				2	EYE HEIGHT
1C,3B			●	●	3	ELBOW HEIGHT
1E,2D		●		●	5	SITTING HEIGHT NORMAL
1F,3G	●				6	EYE HEIGHT SITTING
1K,2G				●	11	ELBOW REST HEIGHT
1L,2H		●	●	●	12	THIGH CLEARANCE
1N,2J,7H	●	●	●	●	14	POPLITEAL HEIGHT
1O,2K,7I	●	●	●	●	15	BUTTOCK-POPLITEAL LENGTH
1U,4E		○			21	SIDE ARM REACH
1V,4D		○			22	THUMB TIP REACH
1W,6B			●		23	MAXIMUM BODY DEPTH
1X,6A	●			●	24	MAXIMUM BODY BREADTH

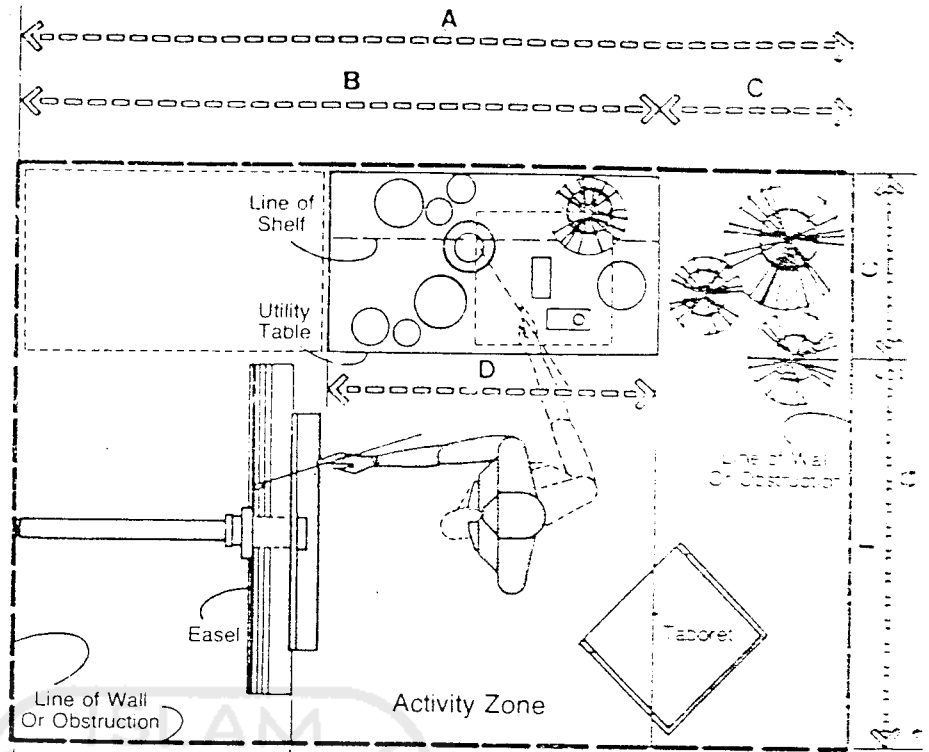
The drawings on the following pages illustrate the clearances suggested for use in making preliminary design assumptions about various types of work and craft spaces. The types involved are areas designed for painting, drafting, children's arts and crafts, and general workbench activities. It should be noted, however, that the drawings are not necessarily intended to show all the work and craft space types possible, nor in the spaces illustrated are all the tools or equipment normally associated with the activities necessarily indicated. To do so would require an entire volume of drawings dealing exclusively with work and craft spaces. The spaces included, however, were selected as representative of certain types of activities in order to illustrate some typical interface situations and the anthropometric considerations involved. One interesting anthropometric problem that applies to any child-oriented work and craft space is the obvious, radical difference in body size between the child and the instructor or teacher. If worksurfaces are designed exclusively to accommodate the body dimensions of the child, the height of the worksurface will be too low to accommodate the adult during any instructional activity or individual demonstration that involves the use of that surface. The approach, therefore, is a design that will reconcile the differences in body size and accommodate the needs of each. The problem is a difficult one and perhaps there is no perfect solution. A higher worksurface height and adjustable seat are one approach. Another may be of a more architectural nature and involves changes in floor levels within the space.

7.3 WORK AND CRAFT CENTERS

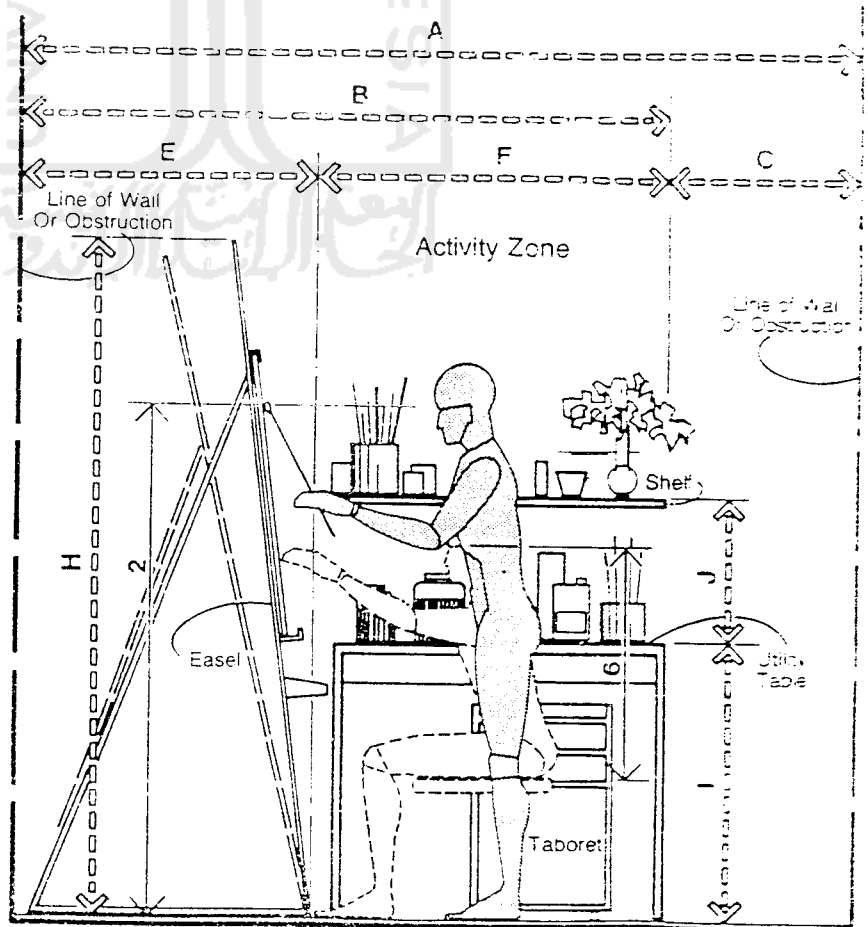
Most artists have individual preferences regarding the arrangement of their particular studio or workplace. In regard to human dimension and the artist's interface with his or her space, the factors to consider also vary greatly. Techniques, media, style, process all impact on the anthropometric requirements. The top drawing, therefore, should not be taken too literally. It is not intended to illustrate in detail a specific plan that will necessarily be responsive to the personal needs of all artists. It is intended simply to illustrate some of the components of the space. The anthropometric considerations involved must be examined with respect to the individual artist and the specific activities involved.

There are, however, some basic considerations that apply in most situations. Vertical reach from a standing and sitting position is helpful in locating shelving for art supplies. Side and forward arm reach measurements can be useful in locating various components of the space, relative to each other and the artist, in the most efficient manner possible. The eye height of a seated and standing person can be used to determine the location of visual displays and reference materials above the floor. Elbow height can be extremely helpful in establishing the height of a utility table. The text related to workbenches on the following pages of this section is also applicable to the artist's utility or prep table.

	in	cm
A	108	274.3
B	84	213.4
C	24	61.0
D	42	106.7
E	36	91.4
F	48	121.9
G	72	182.9
H	72-85	182.9-218.4
I	30-36	76.2-91.4
J	18	45.7



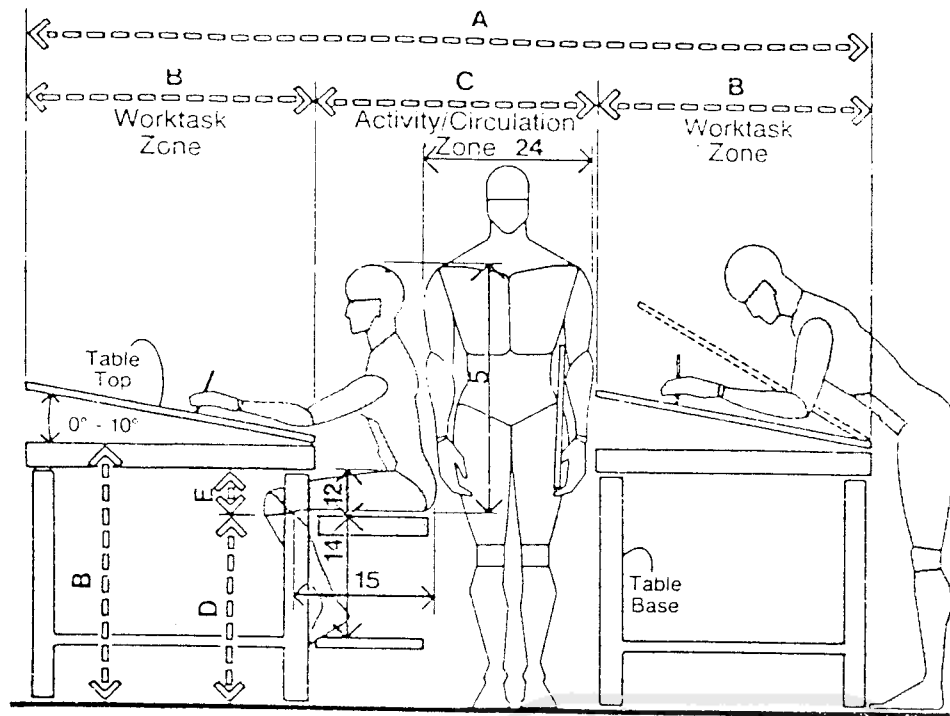
PAINTING FACILITIES



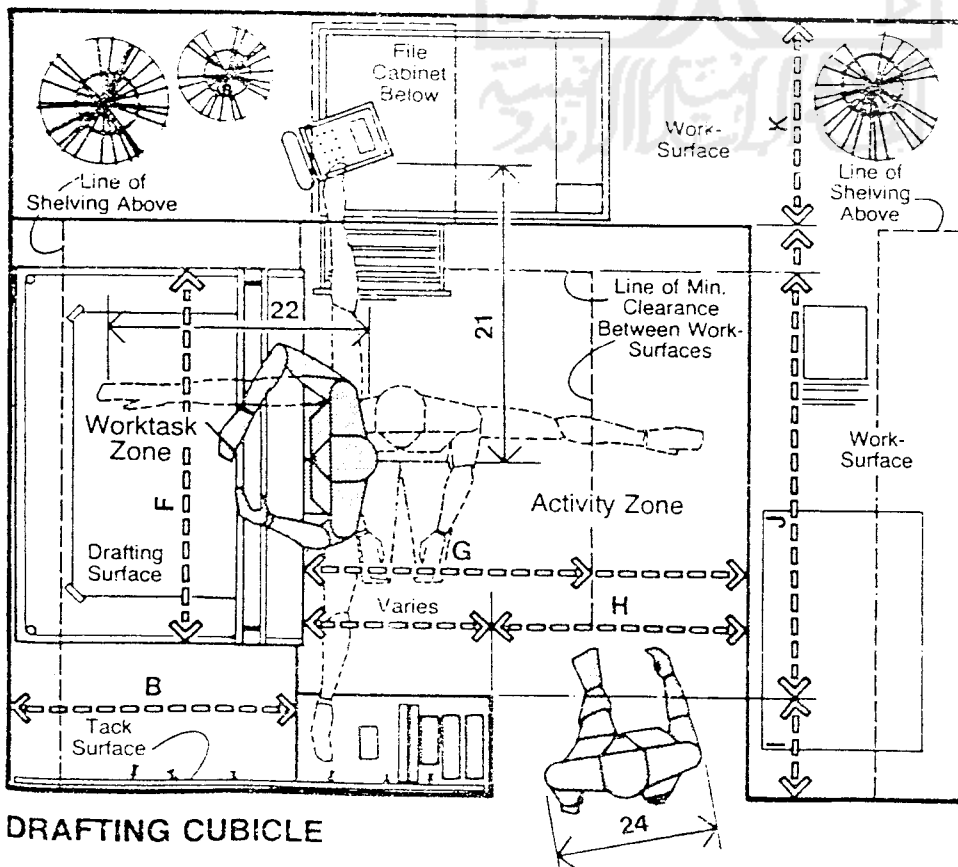
PAINTING FACILITIES

7.3 WORK AND CRAFT CENTERS

Workplaces for drafting and related types of activities for general group use or instructional purposes can be arranged on the basis of individual drafting tables, as shown in the top drawing, or as cubicles or workstations, as indicated in the bottom drawing. The top drawing shows the clearances involved between tables for a seated and standing person and the table. A table height of 36 in., or 91.4 cm, as opposed to regular desk height, will permit use of the table for both a seated and a standing position. Proper minimum clearance between the top of the seat surface and the underside of the table, as shown, is essential. An adjustable stool can be extremely helpful in compensating for variability in body size. Provisions for a footrest are also a critical consideration. Because of the height of the table, the distance of the seat above the floor will invariably be higher than normal and exceed the popliteal height of most, if not all, intended users. This will cause the feet to dangle above the floor, resulting not only in a lack of proper body stability and pressure on the underside of the thigh just behind the knee. This pressure will cause irritation of the tissue involved and impede blood circulation, resulting in considerable discomfort. The lack of body stability will require compensatory muscular force to maintain equilibrium, resulting in additional discomfort and pain.



DRAFTING TABLES/CLEARANCE BETWEEN

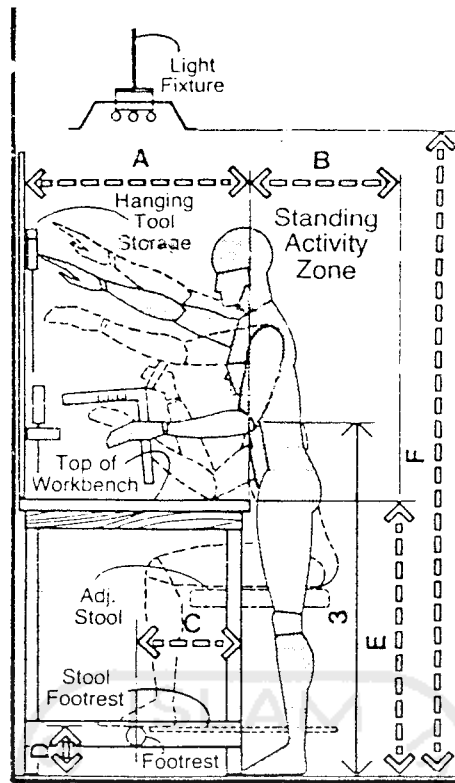


DRAFTING CUBICLE

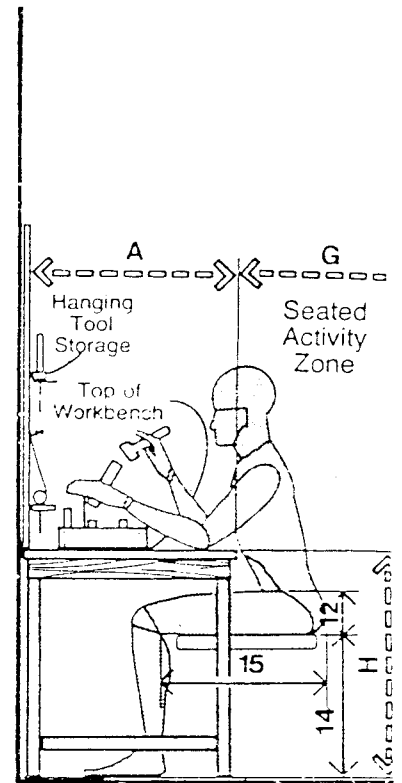
	in	cm
A	106-120	274.3-304.8
B	36	91.4
C	36-48	91.4-121.9
D	21-27.5	53.3-69.9
E	7.5	19.1
F	48-60	121.9-152.4
G	36-60	91.4-152.4
H	30	76.2
I	12	30.5
J	54-60	137.2-152.4
K	27-30	68.6-76.2

7.3 WORK AND CRAFTS CENTER

For standing work height, the height of the elbows above the floor (elbow height) should be considered. If considerable muscular force is required, the distance from the elbow to the top of the bench should be clearly greater. If minimal physical force is involved, a distance between the elbow and the bench top of between 3.5 and 6 in., or 8.9 and 15.2 cm, should be adequate. For preliminary design assumptions, a height of 34 to 36 in., or 86.4 to 91.4 cm, would be reasonable. In regard to bench heights for seated work, 24 to 29 in., or 60.9 to 73.6 cm, can be used for preliminary design assumptions. The limitations of human reach must also be taken into account in locating overhead tool storage. The bottom drawing indicates some of the critical dimensions related to an arts and crafts center for children ranging in age from 6 to 11 years. The critical anthropometric consideration is in making the design responsive to the body size of the child as well as the adult. A teacher forced to bend to the surface of tables scaled down to the body size of a child would suffer fatigue and backache in a short time. Adjustability in both chair and table, however, can reconcile the needs of differing requirements.

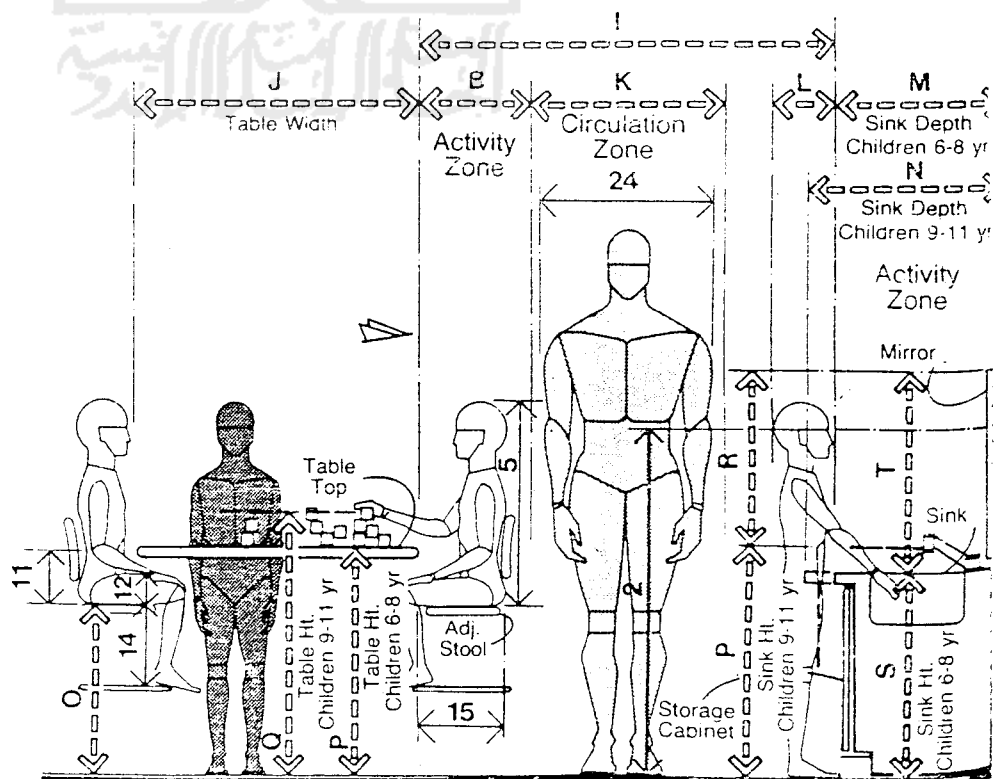


HIGH WORKBENCH



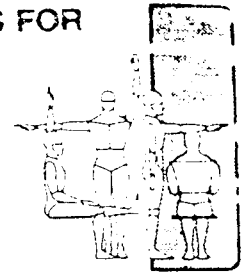
LOW WORKBENCH

	in	cm
A	18-36	45.7-91.4
B	18	45.7
C	6-9	15.2-22.9
D	7-9	17.8-22.9
E	34-36	86.4-91.4
F	84	213.4
G	18-24	45.7-61.0
H	29-30	73.7-76.2
I	65	165.1
J	36	91.4
K	30	76.2
L	15	38.1
M	21	53.3
N	24	61.0
O	22-27	55.9-68.6
P	29	73.7
Q	34	86.4
R	33	83.8
S	26	66.0
T	16	40.6



CHILD ART AND CRAFT CENTER

9.3 DISPLAYS FOR GROUP VIEWING



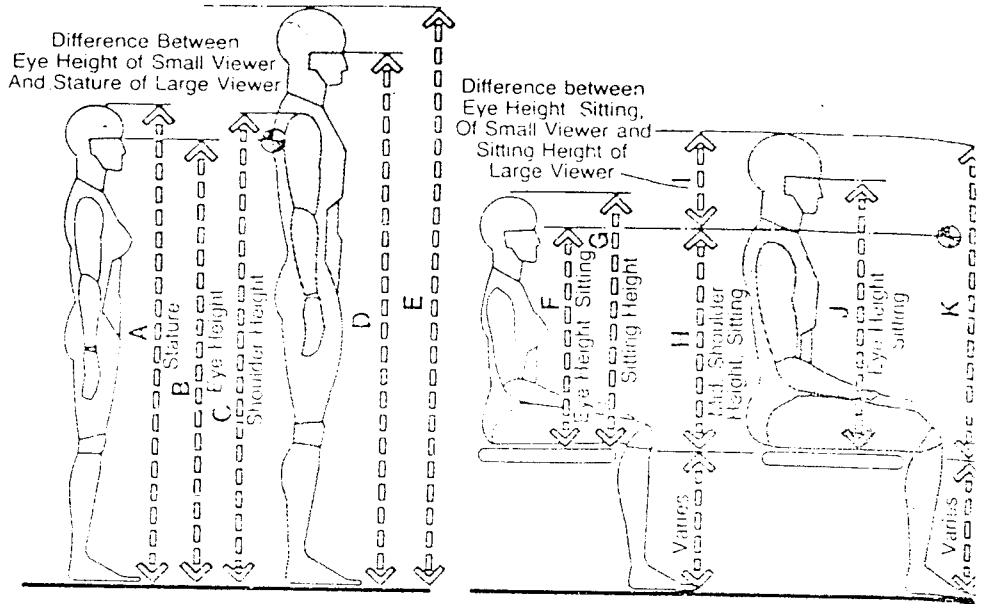
TABLE

	SEATED VIEWING	STANDING VIEWING	SPEAKER	ACTIVITIES	ANTHROPOMETRIC DATA
1A,2B				●	1 STATURE
1B,3C				● ●	2 EYE HEIGHT
1C,3B				●	3 ELBOW HEIGHT
1E,2D	●				5 SITTING HEIGHT NORMAL
1F,3G	●				6 EYE HEIGHT SITTING
1N,2J	●				14 POPLITEAL HEIGHT
1O,2K	●				15 BUTTOCK-POPLITEAL LENGTH
1P,2L	●				16 BUTTOCK-KNEE LENGTH
1Q,3F	●				17 BUTTOCK-TOE LENGTH
1W,6B	●		●		23 MAXIMUM BODY DEPTH
1X,6A	●				24 MAXIMUM BODY BREADTH
	●				28 ECTOCANTHUS TO TOP OF HEAD

Visual communication systems for group viewing present somewhat different problems than those normally associated with systems designed for the individual viewer. Ideal displays for the latter are located so the viewing angle is generally below the horizontal line of sight. However, due to the size and relationship of a group display, such as a projection screen in a motion picture theater, to the viewer, and the obstruction of the visual field of one viewer by another, the display is located so that the upper limit of the optimum viewing angle is situated above the horizontal line of sight. The general layout and configuration of the seating must be planned to ensure the greatest visibility for the greatest number. The minimum distance the front row of seats can be from the display to allow adequate viewing must be considered in the planning of the interior space and general seating layout. Seats must be planned to allow sight lines of one viewer to pass above and between the viewer in front. The distance between rows must allow adequate clearance for circulation and human movement. Provisions for the disabled or wheelchair-bound viewer must also be taken into account. In live situations, a lectern, pulpit, or bimah and the speaker all must be considered as part of the communication system. The design of the lectern should respond to the anthropometric and visual requirements of the speaker. In addition, the lectern-speaker as the display should bear the proper visual relationship to the viewers. The drawings that follow explore various aspects of the group viewing process and suggest clearances and other data for use in preliminary design studies.

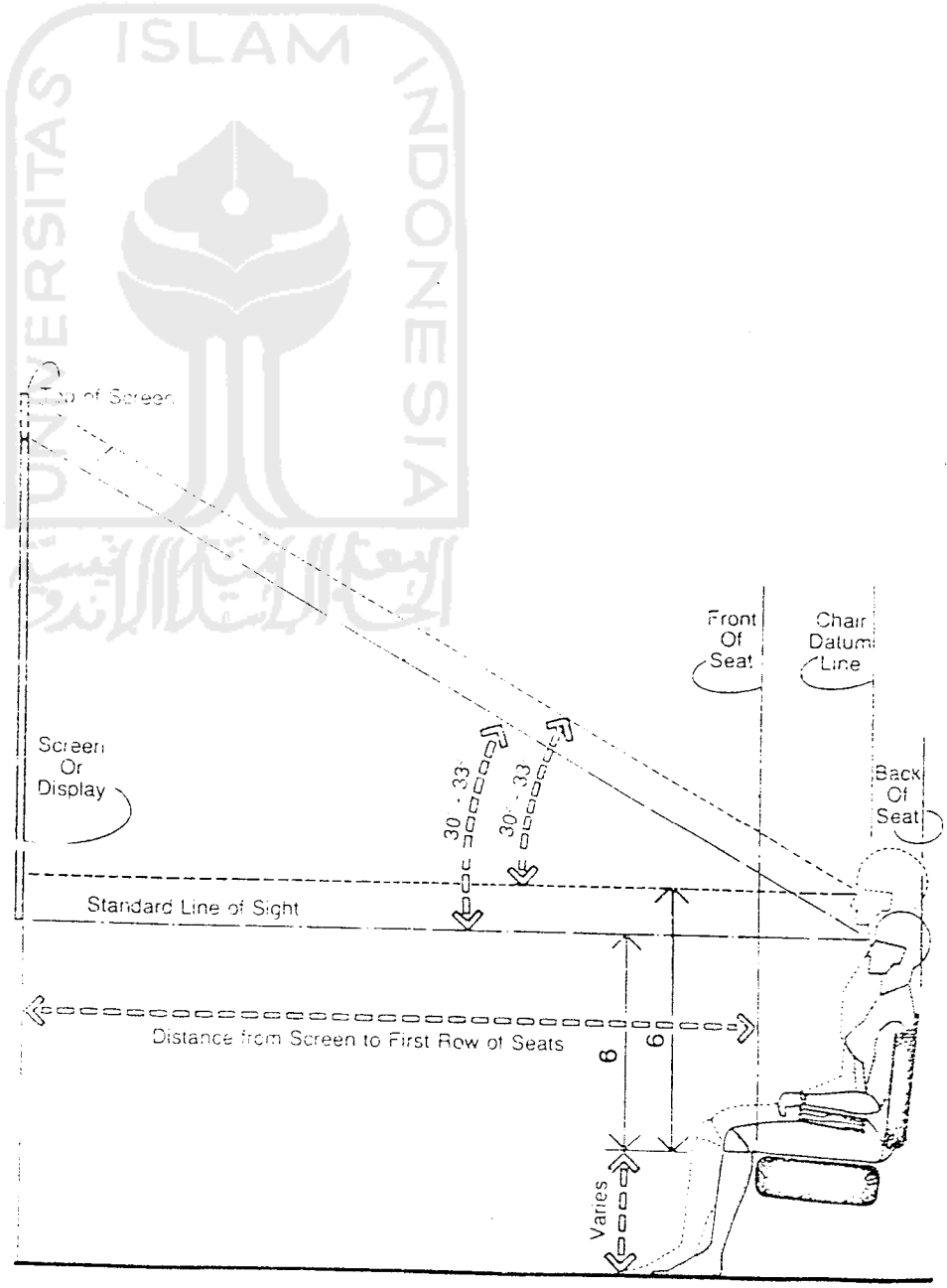
9.3 DISPLAYS FOR GROUP VIEWING

The design of spaces for group viewing activities requires some knowledge of the anthropometrics of the tall and short standing and seated viewer and the visual implications involved. The top drawing shows that the basic 5th percentile and 95th percentile body measurements of standing viewers are such that the line of sight of the shorter viewer would be obstructed by the taller viewer. When the same 5th and 95th percentile measurements are applied, the drawing of the seated viewers indicates that the line of sight of the smaller viewer just clears the midshoulder height of the larger viewer in front. It should be noted that the difference in eye height between the larger and smaller seated viewers is about half the difference in eye height when the larger and smaller viewers are standing. The minimum distance between the first row and the display can be determined by drawing a sight line from the top of the projected image to the eye of the viewer seated in the first row at an angle not less than 30° nor more than 33°, as indicated in the bottom drawing.



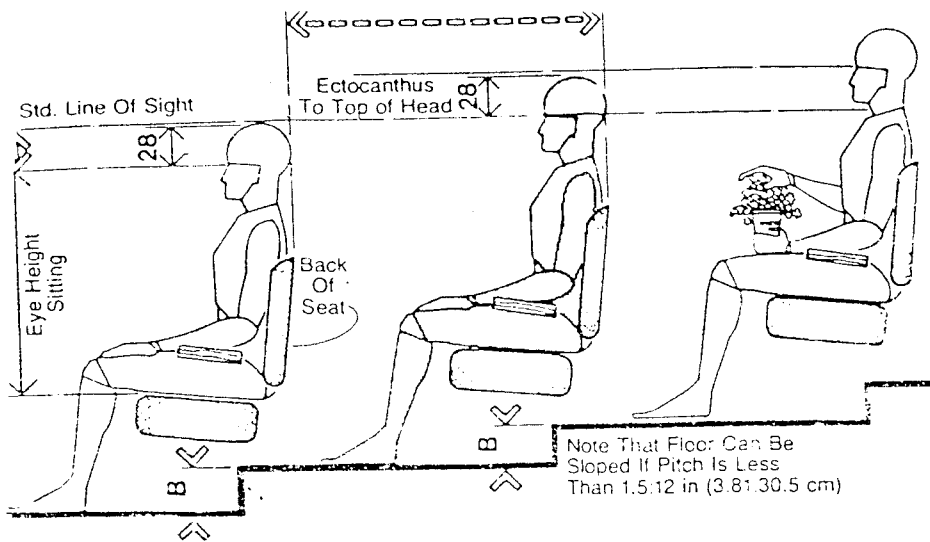
COMPARATIVE ANTHROPOMETRICS/ STANDING AND SEATED VIEWERS

	in	cm
A	59.0	149.9
B	56.3	143.0
C	57.8	146.8
D	68.6	174.2
E	72.8	184.9
F	28.1	71.4
G	29.6	75.2
H	27.3	69.3
I	9.3	23.6
J	33.9	86.1
K	36.6	93.0

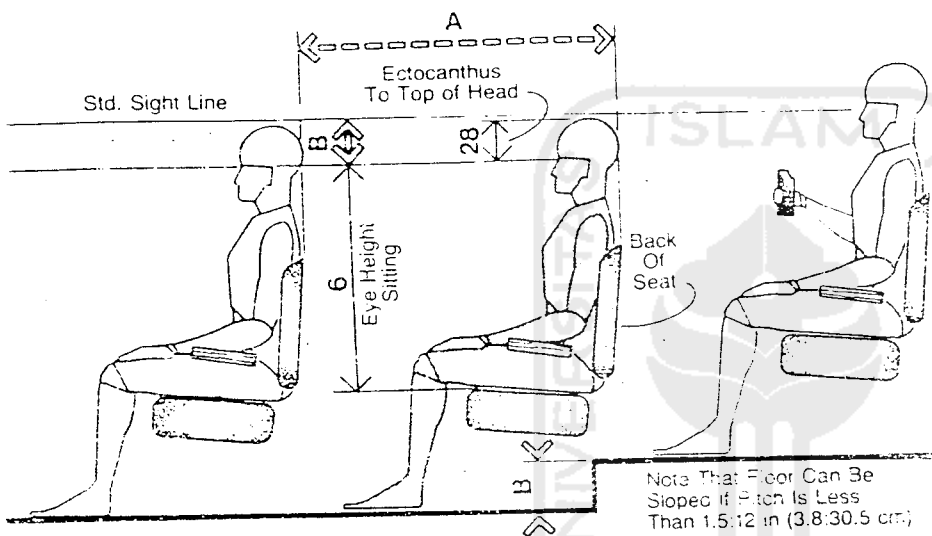


DISTANCE FROM SCREEN TO FIRST ROW

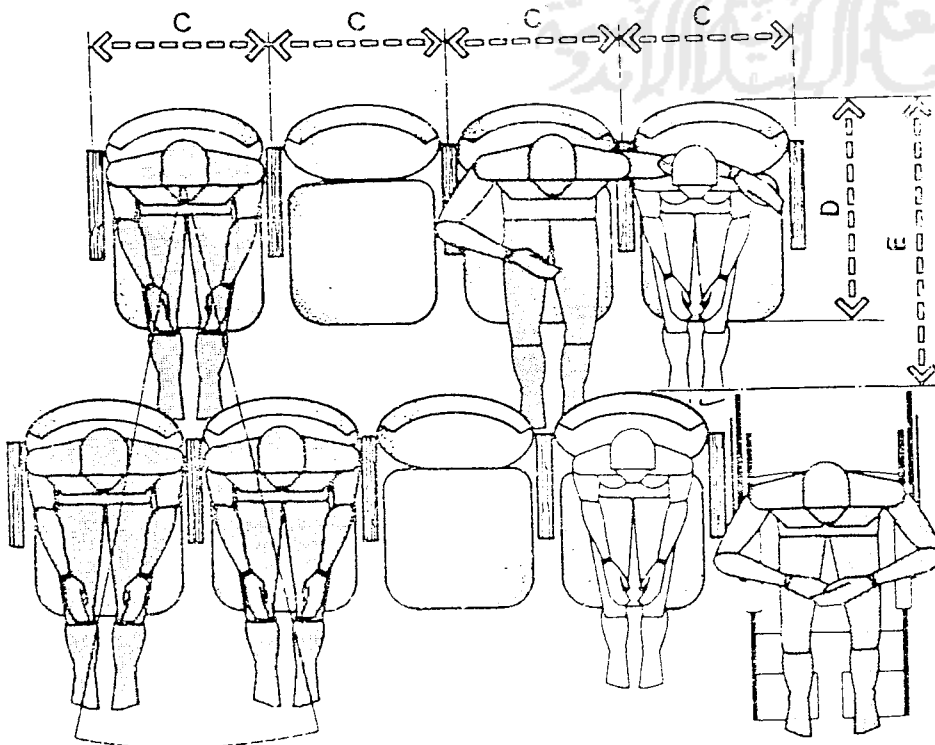
9.3 DISPLAYS FOR GROUP VIEWING



STEPPED SEATING / ONE-ROW VISION



STEPPED SEATING / TWO-ROW VISION



STAGGERED SEATING

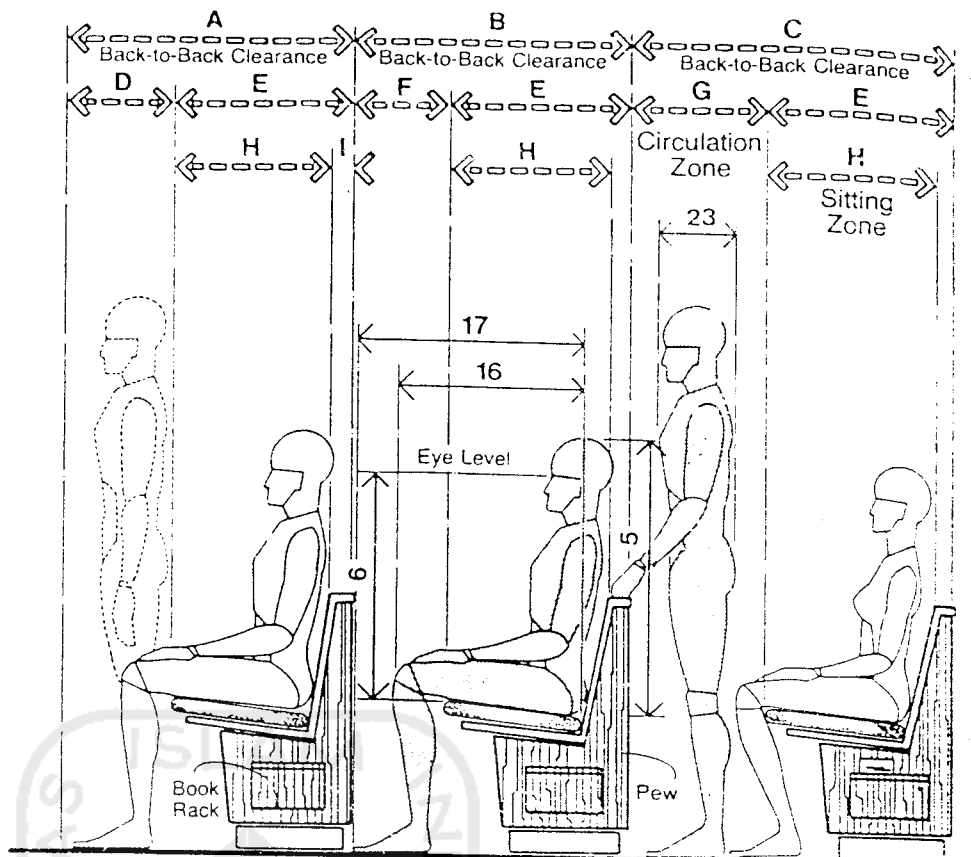
Maximum visibility for the greatest number of seated viewers can be achieved by elevating their eye heights successively from front to back row so that one viewer can look over the head of the person in front. The ectocanthus to top of head measurement is the anthropometric data most useful in determining the actual height by which the floor must be stepped or sloped to achieve this condition. It is the distance from the outer cornea of the eye to the level of the top of the head. The 95th percentile data shows this measurement to be about 5 in. or 12.7 cm, and is the increment by which the floor is stepped. The top drawing illustrates the "one-row vision" method of elevating eye heights so that the viewer may have unobstructed vision over the heads of those viewers in rows immediately ahead. The center drawing illustrates the "two-row vision" method which prevents the heads of all viewers two or more rows ahead from blocking visibility. The advantage of this method is that it minimizes the slope or number of steps. Its disadvantage is that it is not as effective as the one-row scheme. Wider seats and a staggered plan, however, can improve visibility by permitting a view between the heads of those directly in front, as shown in the bottom drawing. In regard to the depth of rows, although a 52-in. or 132-cm spacing is generally used, 40 in. or 101.6 cm is recommended.

	in	cm
A	40	101.6
B	5	12.7
C	20-26	50.8-66.0
D	27-30	68.6-76.2
E	34-42	86.4-106.7

3.3 DISPLAYS FOR GROUP VIEWING

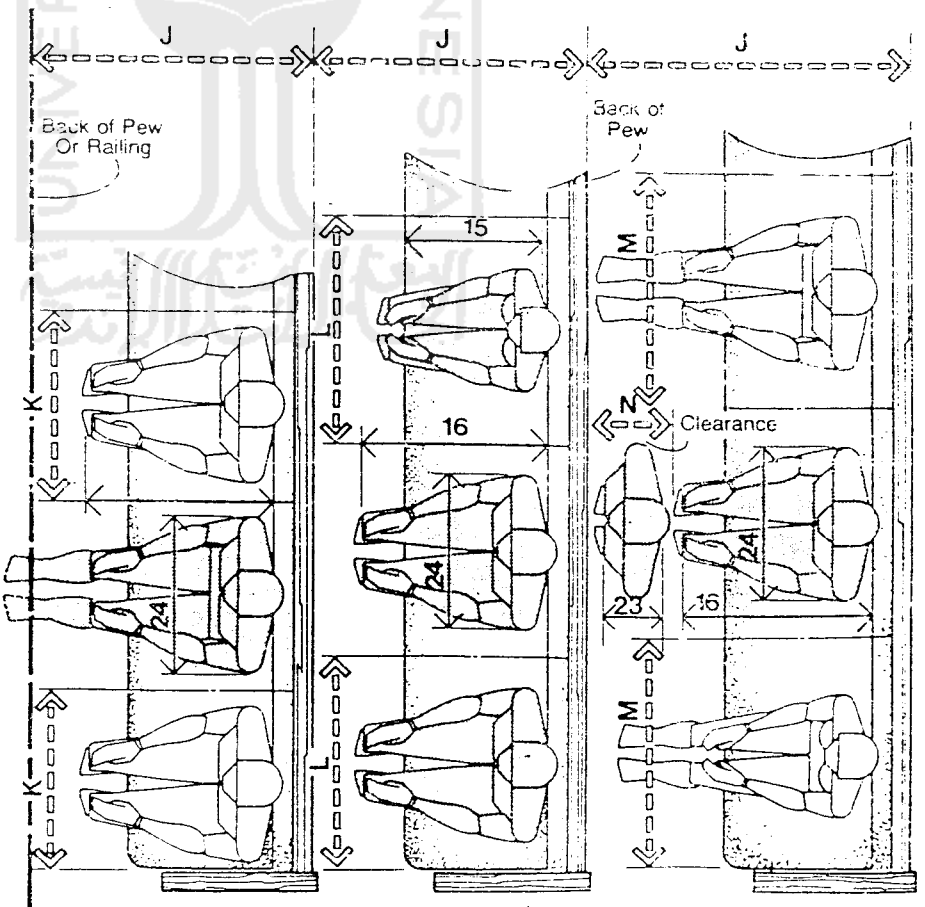
Unless traffic flow to the pew is controlled, the lack of armrests makes the seat allowance shown in the top drawing somewhat theoretical. Assuming some controlled means of seat space definition, however, a reasonable incremental unit to use as a basis for seat width is the maximum body breadth. The 95th percentile data for larger users is 22.8 in, or 57.9 cm, taken with the subjects nude. The top drawing shows three possible seat allowances: 24 to 26 in, or 61 to 66 cm; 28 in, or 71.1 cm; and a possible minimum of 22 in, or 55.9 cm.

When one considers that an allowance for clothing and ritual-related body movement should be added to the 22.8 incremental unit, the 22-in minimum would not comfortably accommodate the majority of users without some body contact. Economics permitting, the 28-in spacing is recommended. The bottom drawing shows several pew spacing possibilities. All can work, depending on the level of comfort desired and the nature and frequency of ritual-related body movements.



WORSHIPPING IN STANDING POSITION WORSHIPPING IN SEATED POSITION MINIMUM CIRCULATION CLEARANCE

BASIC PEW CLEARANCES / ELEVATION



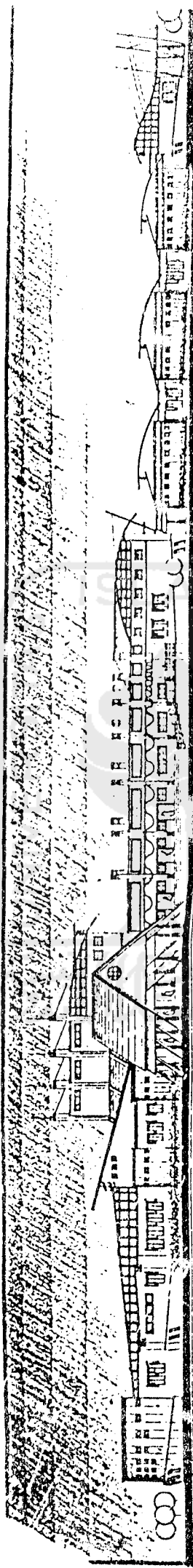
MINIMUM PEW SEAT PER PERSON

OPTIMUM PEW SEAT PER PERSON

RECOMMENDED MINIMUM PEW SEAT PER PERSON

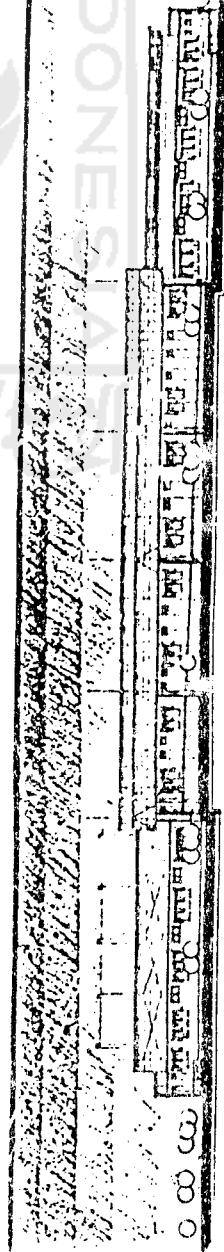
	in	cm
A	34-38	86.4-96.5
B	34-36	86.4-91.4
C	42-48	106.7-121.9
D	12-16	30.5-40.6
E	22	55.9
F	12-14	30.5-35.6
G	20-26	50.8-66.0
H	20	50.8
I	2	5.8
J	42	106.7
K	22 min.	55.9 min.
L	24-26	61.0-66.0
M	28	71.1
N	14-18	35.6-45.7

R . E . D . E . S . A . I . N
UNIT REHABILITASI RUMAH SAKIT JIWA MAGELANG
(PENGOLAHAN TATA RUANG DALAM DAN TATA RUANG LUAR YANG MENDUKUNG
PENYEMBUHAN DAN PEMULIHAN PASIEN)



STAMPAK BARA 1

DOSEN PEMBIMBING :
IR. A. SAIFULLAH MJ, MSI
IR. HJ. RINI DARMAWATI, MT



STAMPAK BARA 1

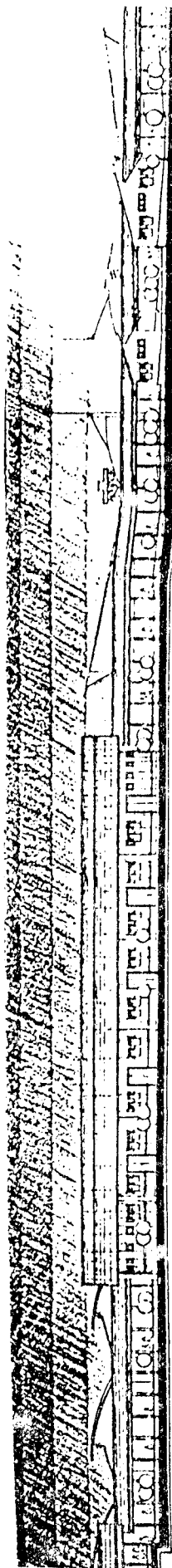
ABSTRAKSI

Pelayanan kesehatan saat ini cenderung meningkat dan maju, bahkan mulai menata fasilitas kesehatan dibagi dengan berbagai jenis penyakit yang diterima oleh pasien. Misalnya pasien yang berpenyakit jiwa disediakan RS Jiwa, pasien akibat kecelakaan disediakan RS Traumatologi dan Ortopedi ataupun pasien yang berpenyakit mata disediakan RS Mata, dan sebagainya. Akan tetapi tidak semua rumah sakit yang ada dalam pelaksanaannya tersedia pelayanan dan kebutuhan yang cukup untuk penyembuhan dan pemulihan pasien

Unit Rehabilitasi adalah suatu wadah fungsional di lingkungan RS Jiwa yang menyelenggarakan dan melaksanakan upaya medis, sosial, edukasional, dan vokasional. Dalam hal ini Unit Rehabilitasi RS Jiwa Magelang yang merupakan salah satu sarana penunjang kurang dapat mendukung pemulihan pasien. Untuk itu aspek penyembuhan dan pemulihan pasien baik fisik maupun non fisik merupakan landasan dalam perencanaan dan perancangan yang dapat ditransformasikan ke dalam penataan ruang dalam dan ruang luar.

Keberadaan Unit Rehabilitasi RSJ Magelang diharapkan dapat menampung kegiatan rehabilitasi bagi pasien mental dalam keadaan tenang minimal dapat berinteraksi dengan temannya maupun lingkungannya secara baik, dimana kebutuhan pasien mental berupa kegiatan yang di dalam ruangan maupun yang di luar ruangan dapat mendukung pemulihan pasien. Dalam Unit rehabilitasi ini pasien mental dapat dididik, dibina, serta diarahkan akan kemampuan dari masing-masing rehabilitan baik berupa ketrampilan maupun penguasaan lainnya yang sesuai.

Jadi dalam aspek yang mendukung penyembuhan dan pemulihan pasien merupakan konsep yang akan diekspresikan oleh bangunan Unit Rehabilitasi RSJ Magelang sehingga dalam mentransformasikannya dalam bangunan menggunakan hal-hal yang dapat ditangkap secara visual oleh manusia. Usaha pemulihan rehabilitan dapat dilihat dari karakter pasien dan cara penanganannya serta aspek-aspek yang mendorong pemulihan rehabilitan dengan cara memberikan suasana ruang yang tenang, nyaman, dan aman dalam melakukan kegiatan rehabilitasi, kesan akrab dan terbuka untuk memudahkan berkomunikasi, serta kesan aktif dan kreatif membuat rehabilitan senang melakukan kegiatan rehabilitasi.



LATAR BELAKANG

- Perkembangan kesehatan jiwa dalam masyarakat
- Kurangnya sarana kegiatan yang mendukung penyembuhan dan pemulihan pasien dalam Unit Rehabilitasi
- Faktor peranan masyarakat, keluarga, dan pemerintah dalam melakukan pemulihan terhadap rehabilitasi

PERMASALAHAN

- Perencanaan dan perancangan dalam kaitannya dengan perancangan ulang Unit Rehabilitasi RS Jiwa Magelang yang dapat memenuhi tuntutan pelayanan kesehatan jiwa.
- Perencanaan dan perancangan dalam kaitannya dengan pengolahan tata ruang luar dan tata ruang dalam yang mendukung penyembuhan dan pemulihan pasien secara optimal.

TUJUAN DAN

Sasaran

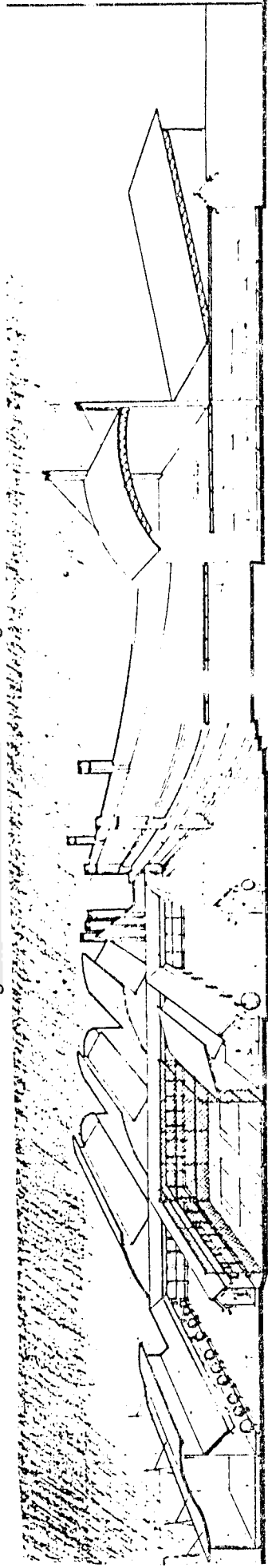
- Merancang ulang Unit Rehabilitasi yang dapat mawadahi kebutuhan dan tuntutan kegiatan pelayanan kesehatan melalui pengolahan tata ruang dalam dan tata ruang luar yang mendukung pemulihan pasien jiwa secara optimal.
- Unit Rehabilitasi yang dapat memenuhi tuntutan kebutuhan akan kegiatan pelayanan kesehatan jiwa melalui macam, kebutuhan, dan kegiatan rehabilitasi serta suasana didalam Unit Rehabilitasi.
- Perancangan tata ruang luar yang memberikan suasana pemulihan pasien, melalui facade, landscape, sirkulasi, dan massa bangunan.
- Perancangan tata ruang dalam yang memberikan suasana pemulihan pasien melalui kajian perilaku pasien dan interiornya (Suasana Ruang).

9 PESIFIKASI BANGUNA **N**

- Nama Bangunan : Unit Rehabilitasi RS Jiwa Magelang
- Lokasi : Di jln. Ahmad Yani, Kota Madya Dati II Magelang, Jawa Tengah.
- Jenis bangunan adalah merupakan bangunan sarana kesehatan bagi pasien jiwa.
- Luas area Unit Rehabilitasi : 2,4 Ha
- Luas bangunan : 8400 M2
- Jumlah lantai : Dominan 1 lantai untuk kegiatan rehabilitan dan 2 lantai untuk bangunan administrasi Unit Rehabilitasi RSJ.

ASPEK YANG MENDUKUNG PENYEMBUHAN DAN PEMULIHAN PASIEN

- Kesan tenang, nyaman, dan aman dalam melakukan kegiatan rehabilitasi.
- Kesan akrab dan terbuka sehingga memudahkan dalam berkomunikasi.
- Kesan kreatif dan aktif membuat rehabilitan senang dan betah dalam melakukan kegiatan rehabilitasi.



Redesain Unit Rehabilitasi RSJ Magelang

POTONGAN 3.2

Sophtian Nursetyanan 90340134

Kriteria penyembuhan dan pemulihan	Aspek Proporsi		
	Intim	Normal	Monumental
Tenang, nyaman, dan aman	X	✓	X
Akrab dan terbuka	X	✓	X
Kreatif dan aktif	X	✓	X

Penilaian terhadap proporsi X : Tidak mendukung ✓ : Mendukung

- Tenang, nyaman, dan aman dapat diwakili dengan skala orang normal. karena kondisi rehabilitasi seperti orang normal bekerja.
- Akrab dan terbuka diekspresikan dengan skala bersahabat sehingga memudahkan berkomunikasi.
- Kreatif dan aktif bisa diekspresikan dengan orang normal yang dapat bergerak tanpa ada yang membatasinya.

Kriteria penyembuhan dan pemulihan	Bentuk dasar			Alternatif Pengolahan Bentuk				
	○	□	△	Tambah/kurang	Rotasi	Tumpang	Geser	Gabung
Tenang, nyaman, aman	X	✓	X	✓	X	X	X	✓
Akrab dan terbuka	✓	X	X	✓	X	X	X	X
Aktif dan kreatif	✓	X	X	✓	X	X	X	X

Penilaian terhadap pengolahan bentuk X : Tidak mendukung ✓ : Mendukung

- Tenang, nyaman, dan aman dengan bentuk ruang yang sederhana tidak berbelit-belit karena dapat membayangkan rehabilitasi.
- Akrab dan terbuka dengan penambahan dan pengurangan bentuk yang mudah dimengerti oleh rehabilitasi.
- Kreatif dan aktif diekspresikan dengan bentuk-bentuk yang tidak monoton akan tetapi menimbulkan kesan senang dan ingin kreatif.

WARNA

Kriteria penyembuhan dan pemulihan	Aspek Warna						
	Sahabat	Lembut	Mengundang	Dinamis	Anggun	Enerjik	Tenang
Tenang, nyaman, aman	✓	✓	×	×	×	×	✓
Akrab dan terbuka	✓	×	✓	×	×	×	✓
Kreatif dan aktif	✓	×	✓	✓	×	✓	✓

Penilaian terhadap warna

X : Tidak mendukung ✓ : Mendukung

- Tenang, nyaman, dan aman dapat diekspresikan dengan warna tenang. seperti biru muda, krem untuk memudahkan rehabilitasi mengenali.
- Akrab dan terbuka dengan warna tenang agar rehabilitasi dapat bersosialisasi.
- Kreatif dan aktif diekspresikan dengan warna-warna yang enerjik serta warna dinamis sehingga aktif dalam melakukan kegiatan rehabilitasi.

TEKSTUR

Kriteria penyembuhan dan pemulihan	Aspek tekstur	
	Halus	Kasar
Tenang, nyaman, aman	✓	×
Akrab dan terbuka	✓	×
Aktif dan kreatif	✓	×

Penilaian terhadap tekstur

X : Tidak Mendukung ✓ : Mendukung

- Tenang, nyaman, dan aman dapat diekspresikan dengan penggunaan tekstur halus, karena dapat menimbulkan rehabilitasi berkonsentrasi dalam melakukan kegiatan rehabilitasi.
- Akrab dan terbuka menggunakan tekstur halus memudahkan dalam bersosialisasi.
- Kreatif dan aktif agar dapat menarik perhatian, kelembutan, serta betah menggunakan tekstur halus.

Kriteria penyembuhan dan pemulihan	Aspek pencahayaan		
	Alami	Buatan	Gabungan
Tenang, nyaman, aman	✓	✓	X
Akrab dan terbuka	✓	X	X
Aktif dan kreatif	✓	X	✓

Penilaian terhadap pencahayaan X : Tidak mendukung ✓ : Mendukung

- Tenang, nyaman, dan aman dapat diekspresikan dengan penggunaan pencahayaan yang cukup mendukung kelancaran kegiatan.
- Akrab dan terbuka lebih ditonjolkan penggunaan pencahayaan alami pada ruang kerjanya.
- Kreatif dan aktif dengan pengolahan pencahayaan yang merata keseluruhan ruangan kerja serta pergerakan yang leluasa.

Dalam sistem penghawaan unit rehabilitasi terdapat dua macam yakni penghawaan buatan dan penghawaan alami. Penghawaan buatan terdapat pada ruang administrasi Unit rehabilitasi, sedangkan penghawaan buatan terdapat pada ruang-ruang kegiatan rehabilitasi.

TATA RUANG LUAR

SIRKULASI

Jalur sirkulasi merupakan unsur penunjang dalam pola bangunan, dalam hal ini menyangkut kegiatan rehabilitasi didalamnya. Jalur sirkulasi ini meliputi jalur manusia, jalur kendaraan. Untuk jalur sirkulasi manusia meliputi pasien, tenaga medik, tenaga administrasi, tenaga service umum. Adapun analisis sirkulasi pencapaian Unit Rehabilitasi yang dapat mendukung penyembuhan dan pemulihan pasien adalah sebagai berikut :

- a. Suasana yang akrab dan terbuka sehingga disini rehabilitasi tidak cepat bosan dan jenuh.
- b. Suasana yang tenang, nyaman, dan aman dengan leluasa untuk bersosialisasi bagi rehabilitasi.
- c. Suasana kreatif dan aktif diekspresikan pada pengolahan ruang luar yang tidak terikat oleh bangunan sehingga memudahkan pencapaian.
- d. Kemudahan dalam pengawasan dan keamanan pasien dengan melakukan tidak begitu ketat karena merasa terkekang akan tetapi dengan pengontrolan secara bersosialisasi.
- e. Aksesibilitas mudah dijangkau oleh pasien, karena merupakan salah satu kemudahan dalam pencapaian kegiatan rehabilitasi.

POLA GUBAHAN MASSA

Dalam analisis pola gubahan massa yang dominan adalah pola tata massa linear dan cluster, yakni ruang-ruang yang dikelompokkan dalam suatu kegiatan. Sebab dalam organisasi linear dan cluster ruang-ruang yang berlainan dalam ukuran, bentuk, dan fungsinya dalam menempati ukurannya. Dalam bentuk linear dan cluster ini dapat pula terjadi pertumbuhan, karena polanya tidak dari konsep yang kaku, sehingga nantinya dapat berkembang lebih luas lagi.

Dalam hal ini landscape merupakan unsure yang terpenting dan berpengaruh terhadap penyembuhan dan pemulihan pasien, sehingga faktor peneuduh maupu perlengkapan luar sangat berperan dalam kegiatan rehabilitasi pasien jiwa.

- Tenang, nyaman, dan aman dapat diekspresikan dengan menggunakan tanaman peneuduh dan tanaman hias serta perlengkapan taman yang dapat memberikan aspek tenang dan dapat menghilangkan kejenuhan.
- Akrab dan terbuka dengan menggunakan tanaman pembatas dan tanaman penghias sehingga dapat beradaptasi serta berkesan bebas.
- Kreatif dan aktif diekspresikan dengan menggunakan tanaman pengarah dan peneuduh sehingga aktifitas rehabilitasi diluar dapat diwujudkan dengan dengan kegiatan yang memberikan efek psikologis berupa ketenangan, kesejukan, dan bebas bersosialisasi.

SISTEM STRUKTUR BANGUNAN

Material bangunan yang terdapat pada Unit Rehabilitasi ini diantaranya :

- Atap menggunakan genteng dengan dimodifikasi dengan fiber glass atau semacamnya untuk penggunaan atap lengkung.
- Langit-langit terbuat dari bahan yang terang dan terkesan nyaman denagn tidak dibuat monumental.
- Dinding menggunakan bata serta kedap air dan permukaan yang halus.
- Lantai terbuat dari keramik yang mudah dibersihkan, berwarna terang serta tidak licin.
- Pintu dan jendela pada ruang adminstrasi sebagian terbuat dari kaca, sedangkan untuk kegiatan rehabilitasi tidak menggunakan kaca untuk menghindari dari kenakalan pasien akan tetapi menggunakan jendela yang yang berjalusi, sedangkan pintu terbuat dari kayu/papan panil.

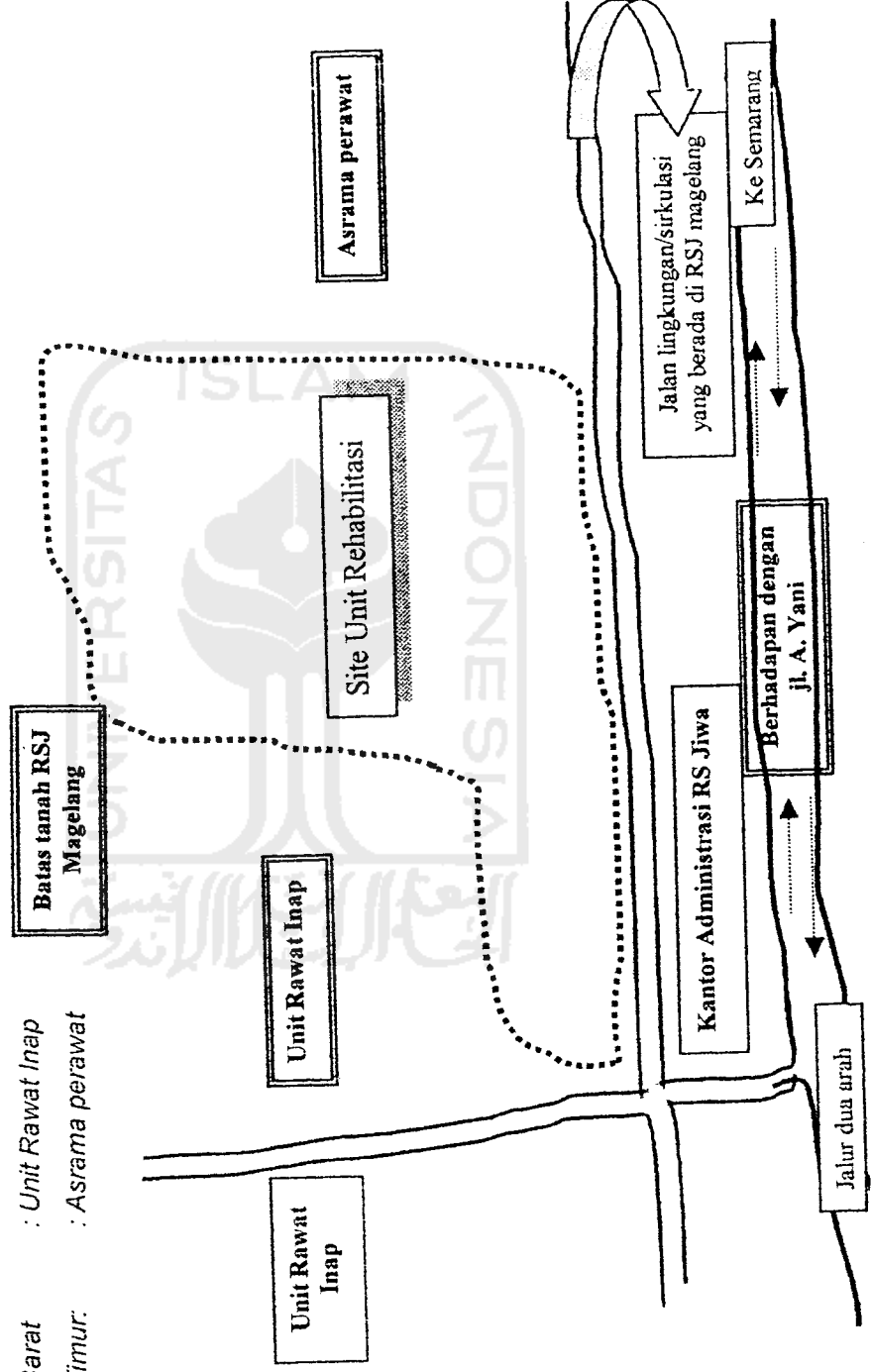
SISTEM UTILITAS

Suatu bangunan dapat berfungsi dengan maksimal dengan didukung oleh utilitas bangunan yang merupakan faktor penunjang dari fungsi bagunan itu sendiri. Adapaun dalam sistem Unit Rehabilitasi RSJ Magelang ini menggunakan utilitas diantaranya jaringan air bersih, jaringan air kotor, jaringan air limbah, jaringan komunikasi, jaringan listrik.

KONSEP PERENCANAAN

Site Unit Rehabilitasi berada di lokasi RS Jiwa Magelang yang terletak di sepanjang jalan Ahmad Yani yakni berada di Kotamadya Dati II Magelang. Adapun batas-batas Site tersebut adalah :

- Sebelah Utara : Batas tanah RS Jiwa Magelang
- Sebelah Selatan : Berhadapan dengan langsung dengan jalan lingkungan RS Jiwa Magelang dan jalan Ahmad Yani.
- Sebelah Barat : Unit Rawat Inap
- Sebelah Timur : Asrama perawat



ZONING

Dalam penzoningan ini dimaksudkan untuk memudahkan sirkulasi serta pengelompokan kegiatan yang ada pada site, sehingga pengolahan tata ruang dapat berjalan secara optimal.

Lahan tertutup sebagai kegiatan terapi kerja dari pasien yang baru bisa bersosialisasi. (daerah privat)



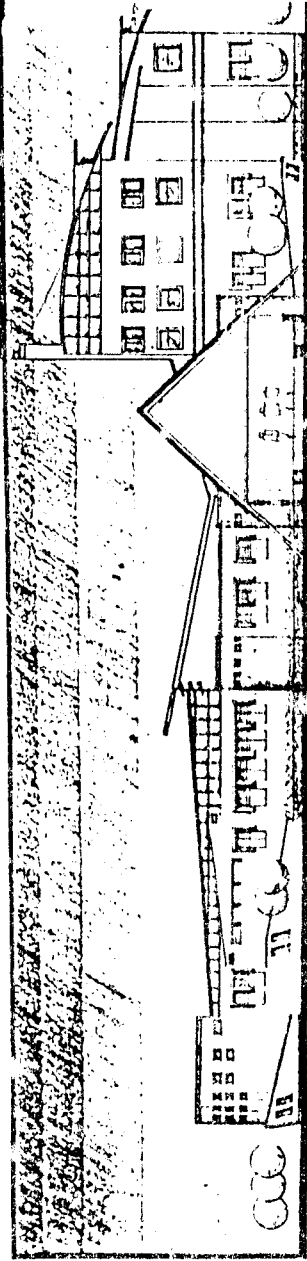
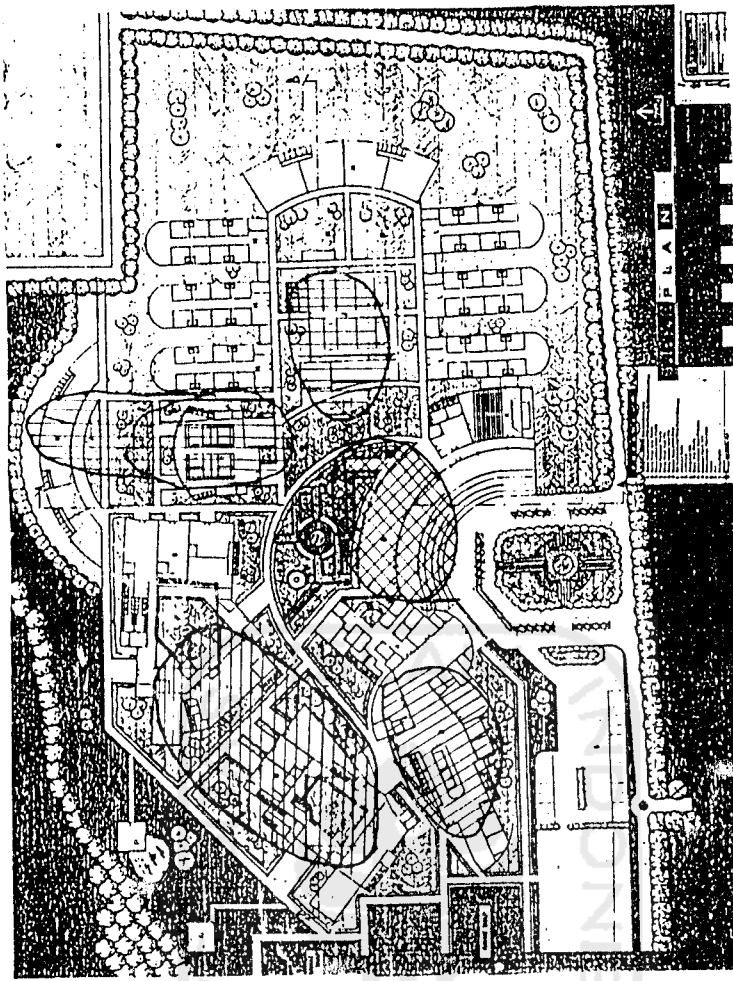
Daerah pemeriksaan medik, psikologi dan uji coba pekerjaan



Daerah penerima umum (Daerah publik)

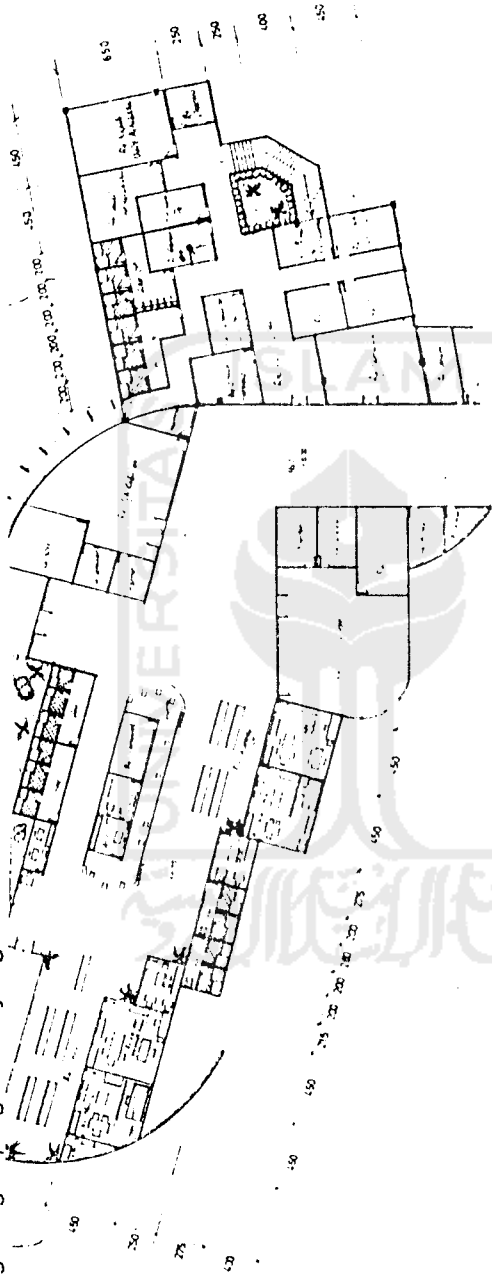


Daerah semi publik

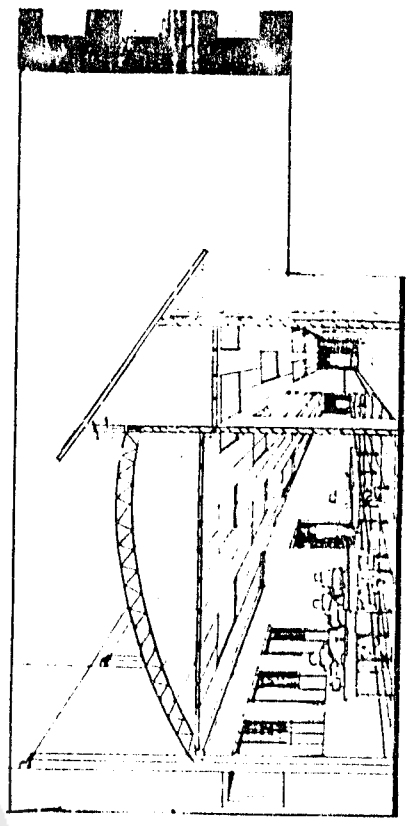
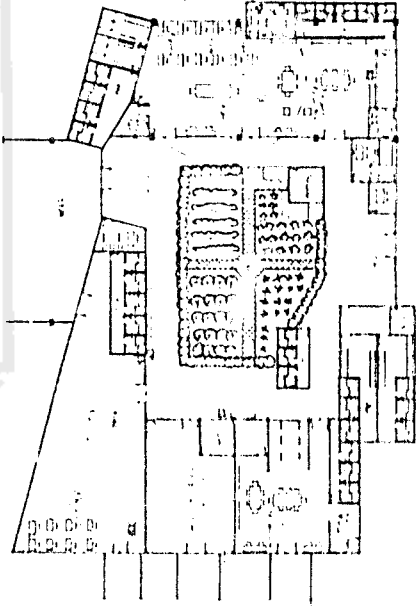


TATA RUANG DALAM

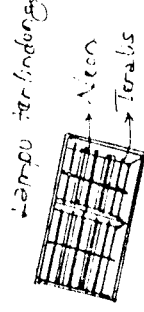
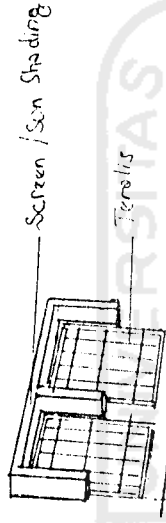
- Bentuk ruang yang digunakan dalam Unit Rehabilitasi RSJ Magelang adalah menggunakan bentukun yang memberikan keleluasaan dalam beraktifitas, maka bentuk ruang yang dipilih adalah bentuk ruang perpaduan antara segi empat dan setengah lingkaran, dimana ruang-ruang dengan pergerakan yang leluasa untuk memudahkan dalam melakukan kegiatan rehabilitasi.



- Proporsi yang digunakan adalah skala yang normal dan bersahabat yang terletak pada ruang-ruang kerja bagi rehabilitan, sedangkan skala yang tinggi ditampilkan pada ruang olahraga didalam bangunan serta auditorium dan hall penerima.



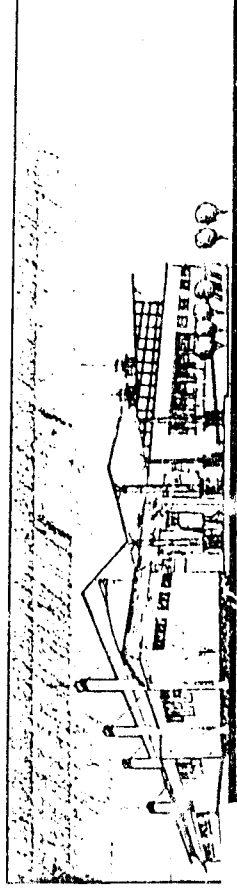
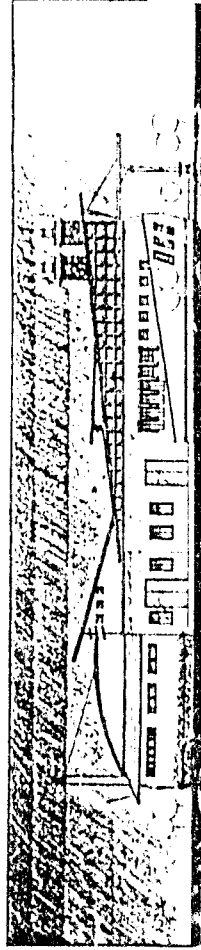
- Warna yang digunakan adalah warna yang berkesan tenang dan bersahabat yakni warna krem agar rehabilitasi dengan mudah memahaminya dan dimengerti.
- Tekstur yang digunakan adalah tekstur halus agar dapat dengan mudah bersosialisasi dengan keadaan sekitarnya.
- Pencahayaan menggunakan pencahayaan alami dan buatan jika terjadi cuaca yang tidak memungkinkan untuk kegiatan rehabilitasi. Untuk cahaya buatan ini menggunakan perlindungan dan keamanan terhadap gangguan pasien dengan menggunakan lampu yang disembunyikan dan terlindung oleh teralis.

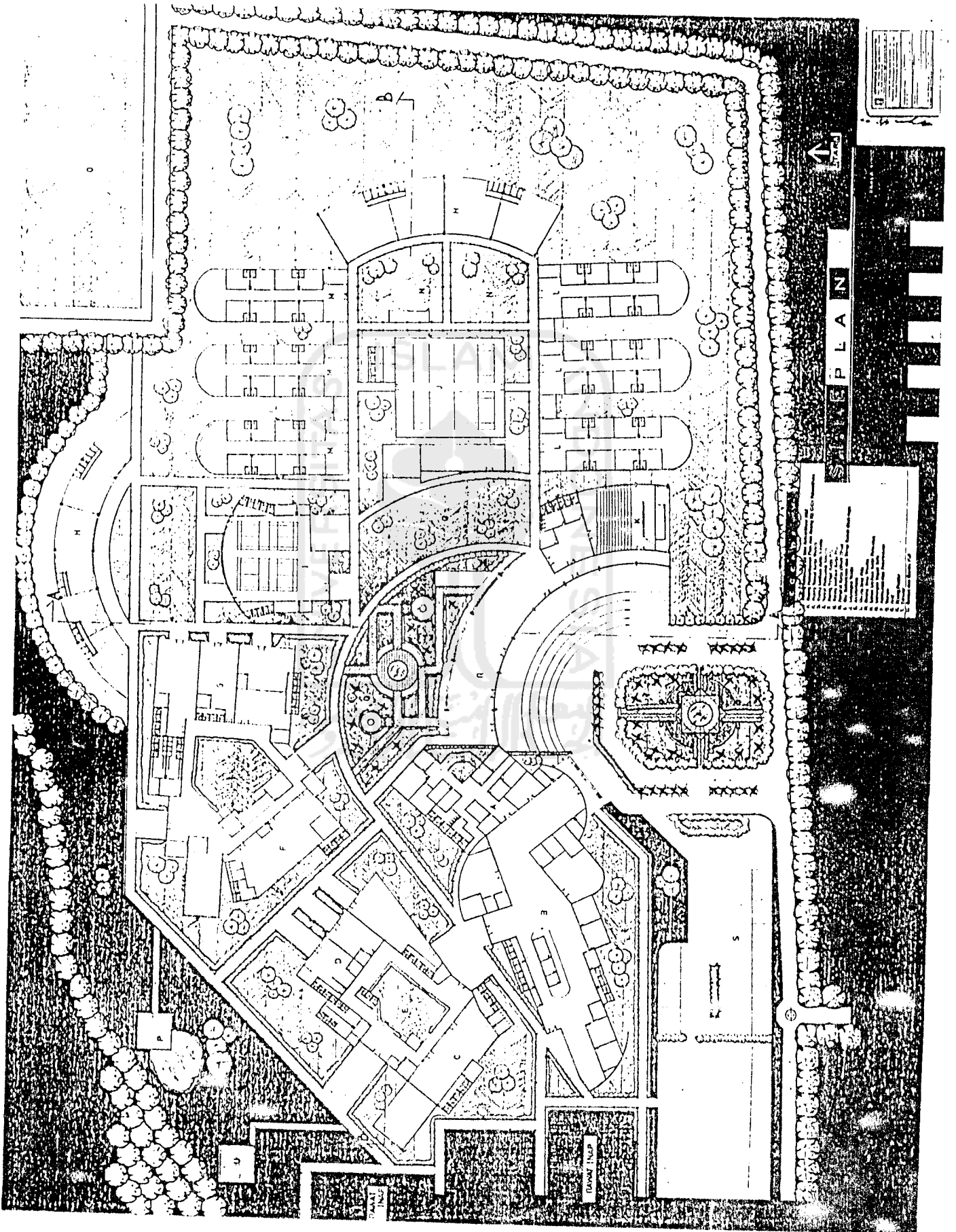


- Penghawaan dominan menggunakan penghawaan alami dengan diberi sun shading untuk menghindari silau dari matahari pada ruang-ruang kerja rehabilitasi sedangkan untuk ruang administrasi sebagian ada yang menggunakan penghawaan buatan.

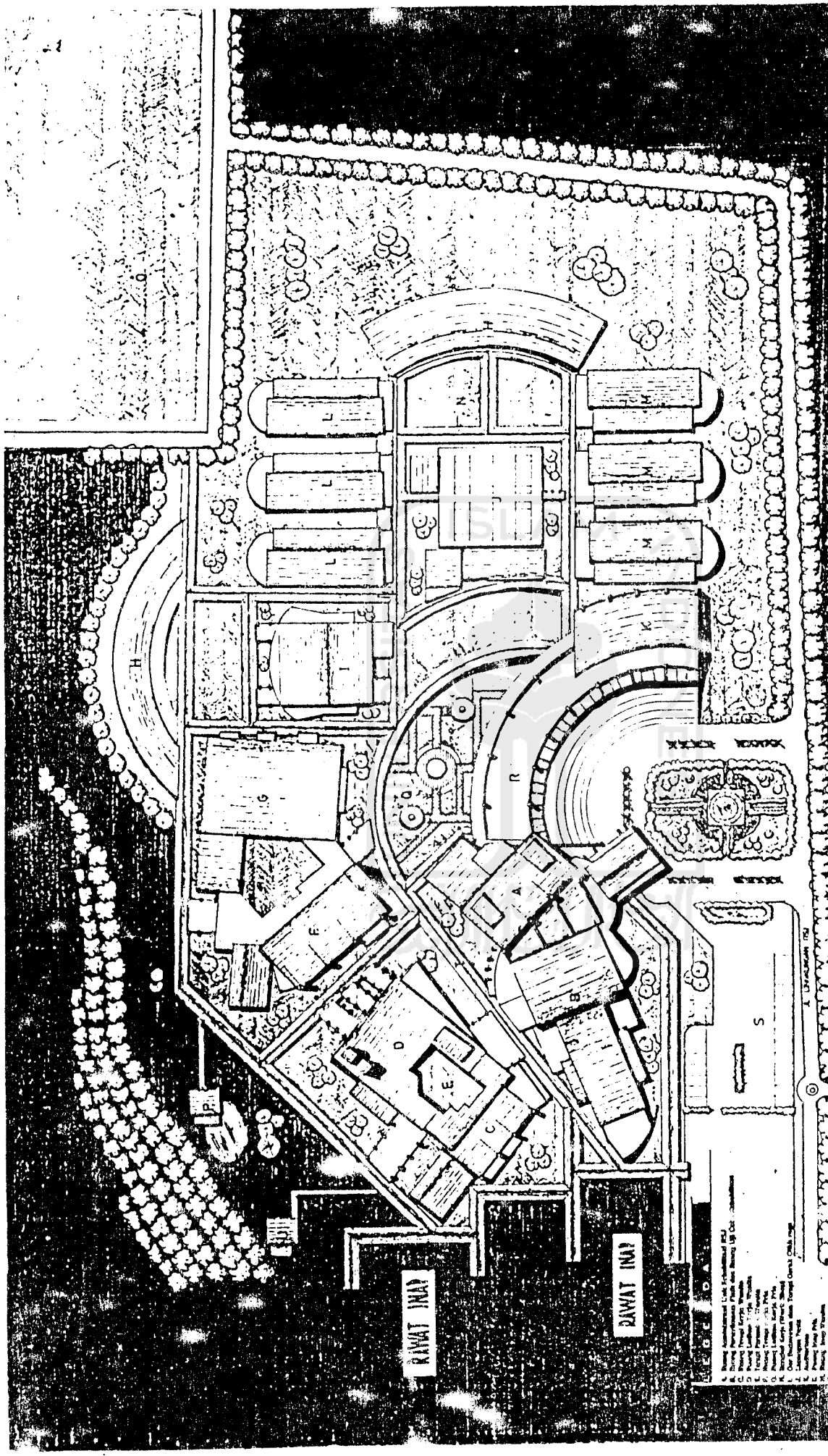
TATA RUANG LUAR

- Penampilan bangunan dibuat kesan tenang, nyaman, dan aman ditimbulkan oleh perpaduan garis, bidang, serta atap tropis yang yang diolah sehingga menarik dan senang dilihatnya.
- Akrab dan terbuka dengan penambahan dan pengurangan serta bukaan bidang yang komunikatif.
- Kreatif dan aktif melalui penambahan dan pengurangan bentuk massa bangunan sehingga menarik untuk dikenalnya.





1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.
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S.I.T.U.A.S.I.
 UTARA

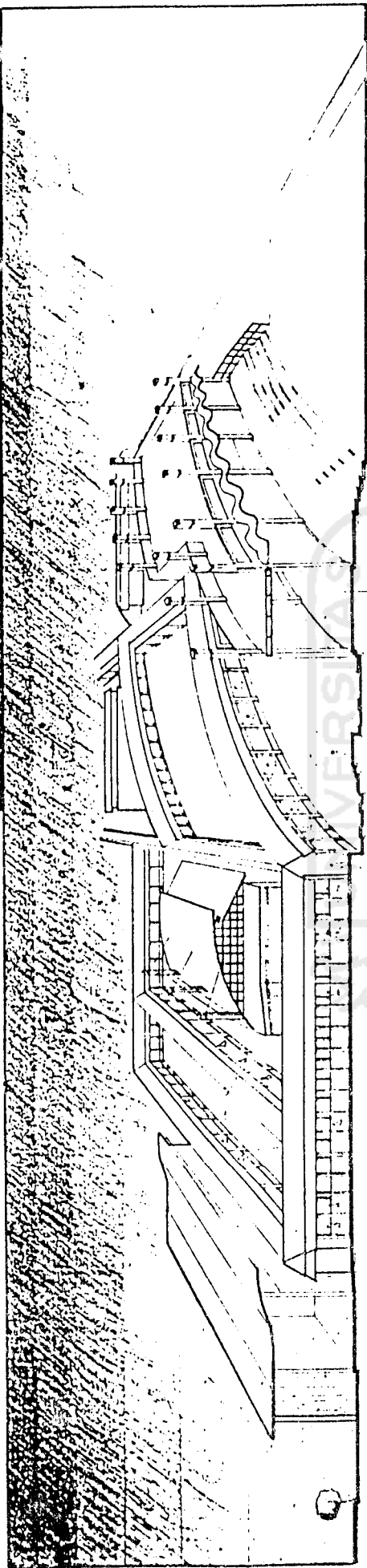
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RAWAT INAP

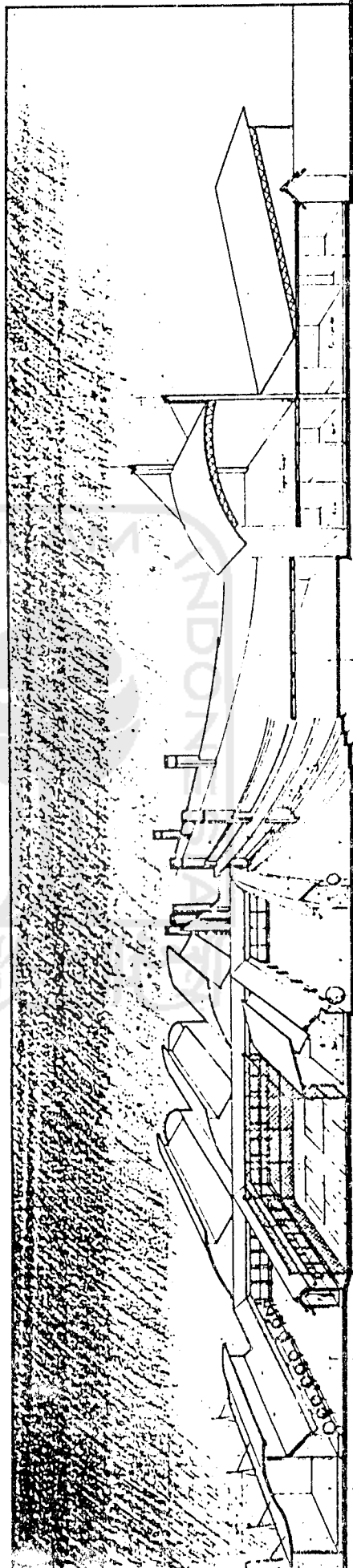
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POTONGAN KAWASAN

SEKALA

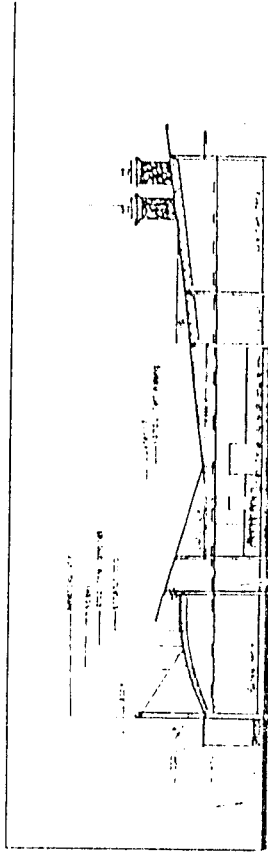


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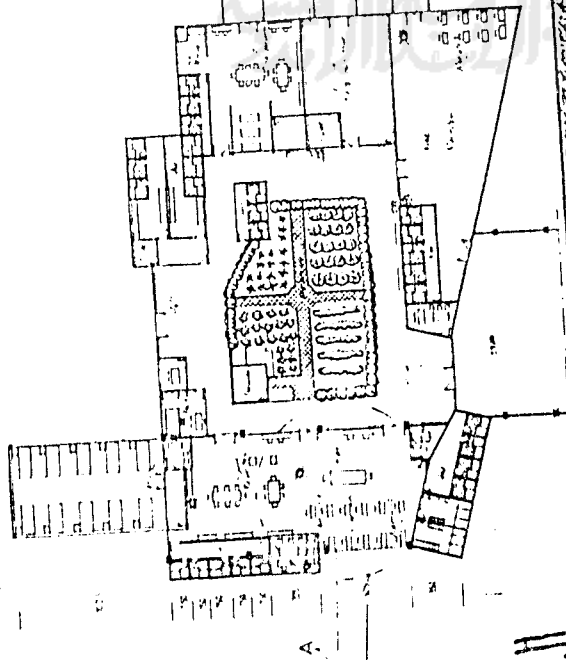


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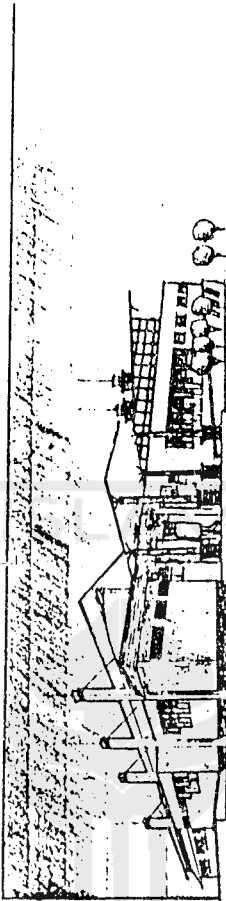




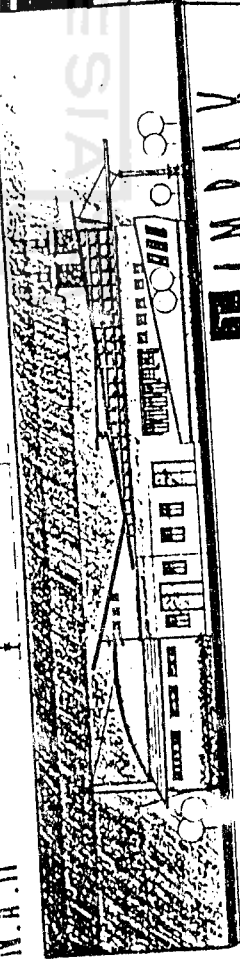
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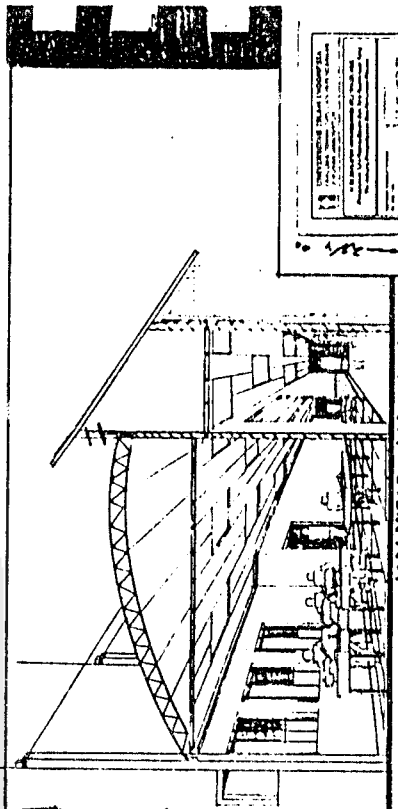
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PERSPEKTIF



A.M.P.A.K

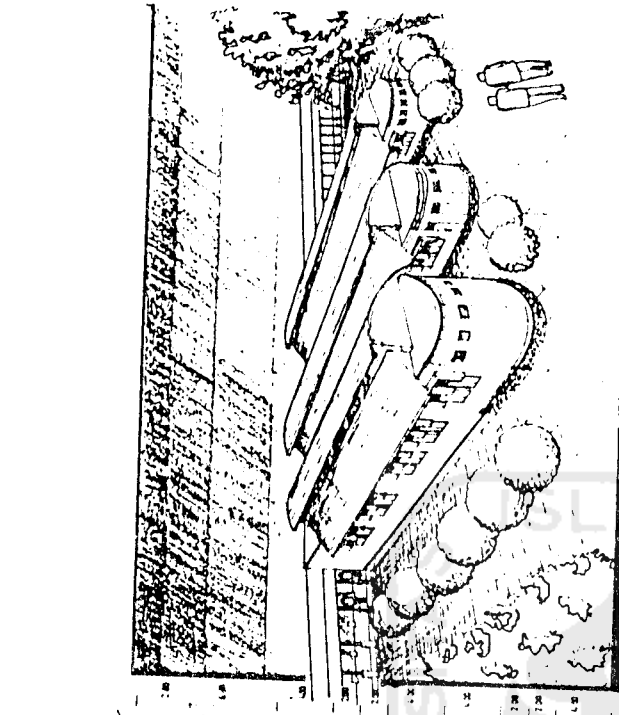


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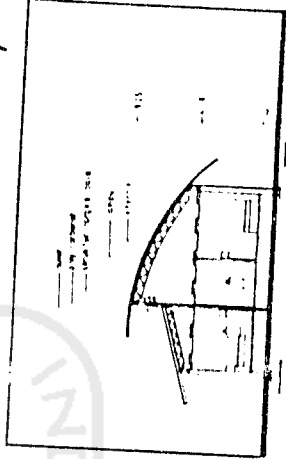
Table with multiple rows and columns, likely a technical drawing legend or specification table.

BAN.G.U.N.A.IN TRAI DAN LATIHAN KERJA PUTRI

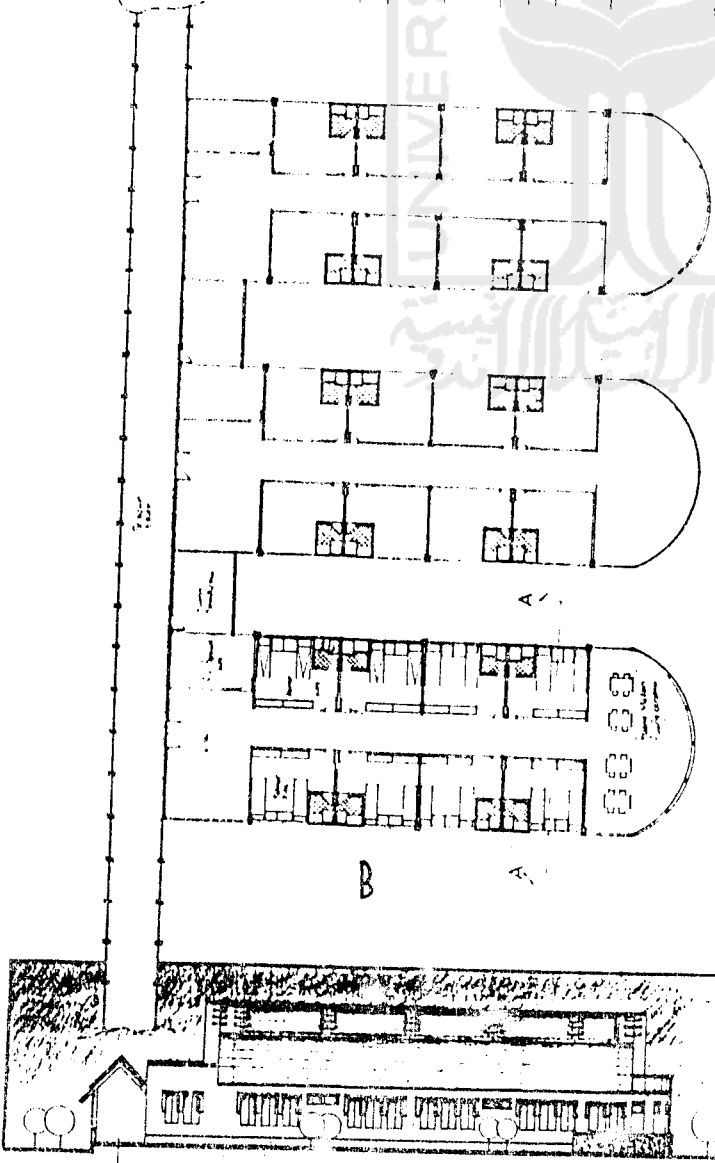
J.K.A.L.A 1:200



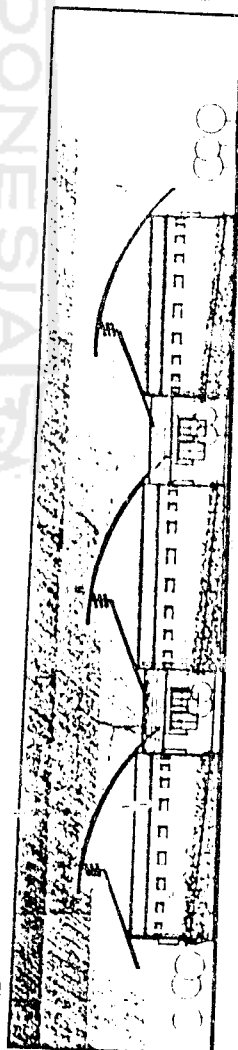
PERSPEKTIF



BOTONGAN A-A



DENAH



TAMPAK A

BANGUNAN RAWAT INAP

SKALA 1:200

NO. PROJEK	
TITLE	
DATE	
DESIGNER	
CHECKER	
APPROVER	