
BAB V

KONSEP DASAR PERENCANAAN DAN PERANCANGAN

5. 1. KONSEP DASAR PERENCANAAN

5. 1. 1 Konsep Analisis Lokasi

A. Konsep Lokasi

Lokasi bangunan Kompleks Lingkungan Binaan Masjid Kalasan Di Yogyakarta adalah Kalasan Maguwoharjo Kabupaten DATI II Sleman .

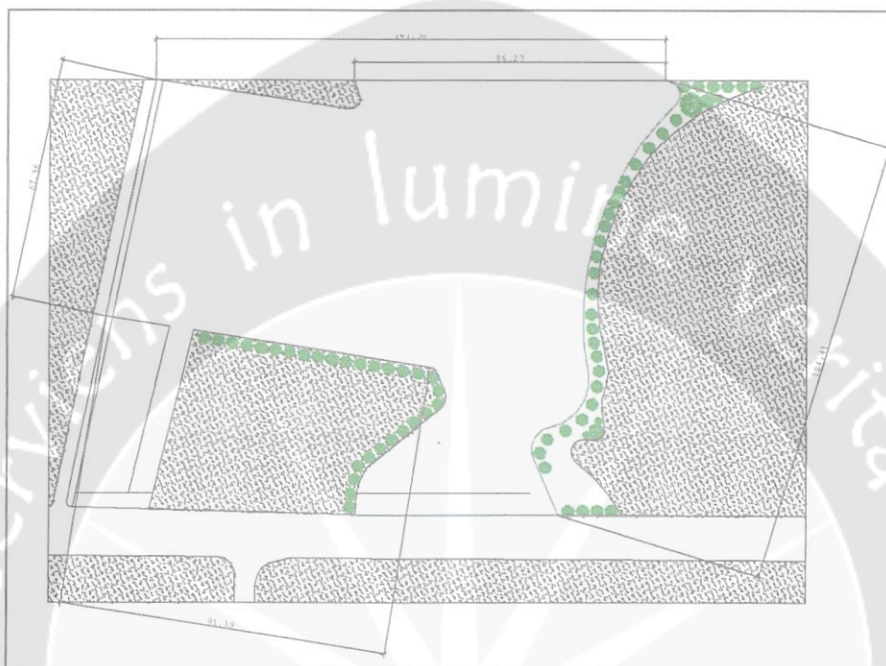
Gambar 5.1.
Peta Site Terpilih



(Sumber : Foto Udara Kota Yogyakarta, 20002)

B. Konsep Tapak

Gambar 5. 2.
Luasan Tapak Terpilih



1. Tata Guna Lahan

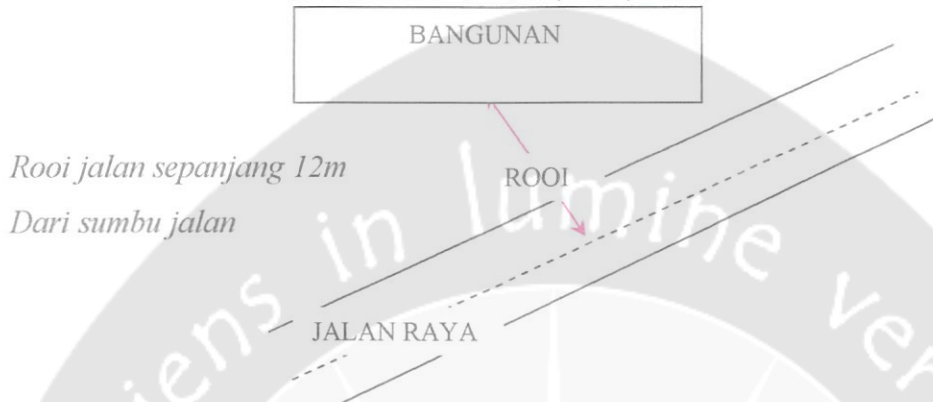
Gambar 5. 3.
Skema Tata Guna Lahan



(Sumber : Analisis Penulis, 2005)

2. Luasan, BCR, Rooi

Gambar 5. 4.
Skema Luasan, BCR, Rooi



3. Vegetasi

Gambar 5. 5.
Skema Kondisi Vegetasi



(Sumber : Analisis Penulis, 2005)

3. View

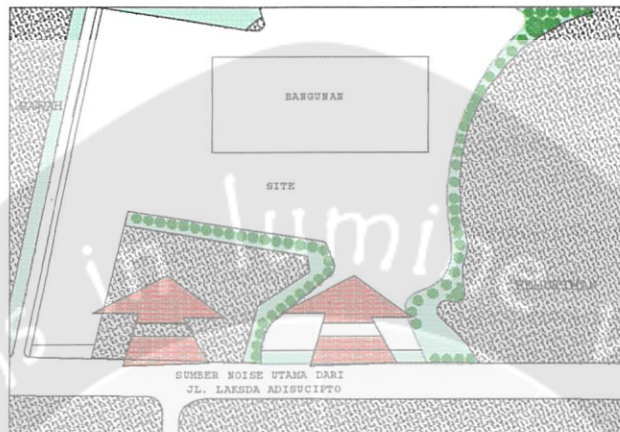
Gambar 5. 6.
Skema Orientasi View Bangunan



(Sumber : Analisis Penulis, 2005)

4. Kebisingan / Noise

Gambar 5. 7.
Skema Faktor Kebisingan



(Sumber : Analisis Penulis, 2005)

5. 1. 2. Konsep Tata Ruang Dalam

A. Pengelompokan Kegiatan

1. Kelompok Kegiatan Pelayanan Umum
2. Kelompok Kegiatan Beribadah
3. Kelompok Kegiatan Pendidikan
4. Kelompok Kegiatan Pengelola
5. Kelompok Kegiatan Bermukim Siswa / Siswi
6. Kelompok Kegiatan Service
7. Kelompok Kegiatan Bermukim Pengajar
8. kelompok Kegiatan Umum

B. Jenis Ruang Dan Besaran Ruang

Jenis ruang dan besaran yang dibutuhkan dalam perencanaan dan perancangan Bangunan Kompleks Lingkungan Binaan Masjid Kalasan Di Yogyakarta adalah sebagai berikut :

1. Kelompok Kegiatan Pelayanan Umum

- Ruang parkir kendaraan
 - a. Parkir Tamu = 197,32 m²
 - b. parkir pengelola dan karyawan = 116 m²
- Pos penjaga (keamanan) = 13,32 m²
- Entrance hall = 16,8 m²
- Ruang informasi dan administrasi = 33 m²
- KM/WC
 - a. luas km/wc = 3,4 m²
 - b. luas km/wc wanita = 3,4 m²

2. Kelompok Kegiatan Beribadah

- Ruang Imam (mihrab) = 1,152 m²
- Mimbar = 1,152 m²
- Ruang Shalat = 921 m²
- Serambi = 230 m²
- Ruang wudhlu
 - a. Ruang Wudhlu Pria = 20 m²
 - b. Ruang Wudhlu wanita = 20 m²
- Km/wc
 - a. luas km/wc pria = 6,8 m²
 - b. luas km/wc wanita = 6,8 m²

3. Kelompok Kegiatan Bermukim Siswa

- Ruang berkumpul / hall = 30 m²
- Ruang tidur = 858 m²

- Ruang dapur / pantry = 22,5 m²
- Ruang cuci pakaian = 125 m²
- Ruang jemur pakaian = 75 m²

4. Kelompok Kegiatan Bermukim Siswi

- Ruang berkumpul / hall = 30 m²
- Ruang tidur = 858 m²
- Ruang dapur / pantry = 22,5 m²
- Ruang cuci pakaian = 125 m²
- Ruang jemur pakaian = 75 m²

5. Kelompok Kegiatan Bermukim Pengajar

- Kamar tidur = 9 m²
- Ruang tamu = 9,60 m²
- Ruang keluarga = 26,40 m²
- Ruang makan = 20 m²
- Dapur = 12 m²
- Kamar mandi = 3,4 m²

6. Kelompok Kegiatan Pendidikan

1. Rg. Kelas = 500 m²
2. Rg. Pengajar = 80 m²
3. Rg. Tata usaha = 13,20 m²
5. Rg. Auditorium

a. Rg. Proyektor = 8,79 m²

b. Rg. Duduk = 86,40 m²

6. Perpustakaan

- Lobby = 24,96 m²

- Rg. Penitipan Barang = 15,60 m²

- Rg. Buku = 22,04 m²

- Rg. Baca = 58 m²

- Rg. Petugas = 16,50 m²

- Rg. Kep. Perpus = 9,24 m²

- Rg. Staff = 26,40 m²

7. Kelompok Kegiatan Pengelola

1. Rg. Direktur = 24 m²

2. Rg. Sekretaris = 13,20 m²

3. Rg. Tamu = 18,20 m²

4. Lavatori = 96 m²

5. Rg. Administrasi / TU

- Rg. Kepala Adm = 9,24 m²

- Rg. Tamu = 9,60 m²

- Hall = 10,20 m²

- Rg. Arsip = 8,78 m²

8. Kelompok Kegiatan Service

1. Rg. Keamanan	= 24,40 m ²
2. Rg. Istirahat	= 18,20 m ²
3. Rg. Mekanikal	= 120 m ²
4. Rg. Elektrikal	= 70 m ²
5. Gudang Alat	= 20 m ²
6. Rg. Cleaning Service	= 16 m ²
7. Lavatori	= 24,96 m ²
8. Dapur	= 24,96 m ²
Luas total	= 1224,96 m²

9. kelompok Kegiatan Umum

- Aula = 100,20 m²
- Lavatory = 24,96 m²

5. 2. KONSEP DASAR BANGUNAN

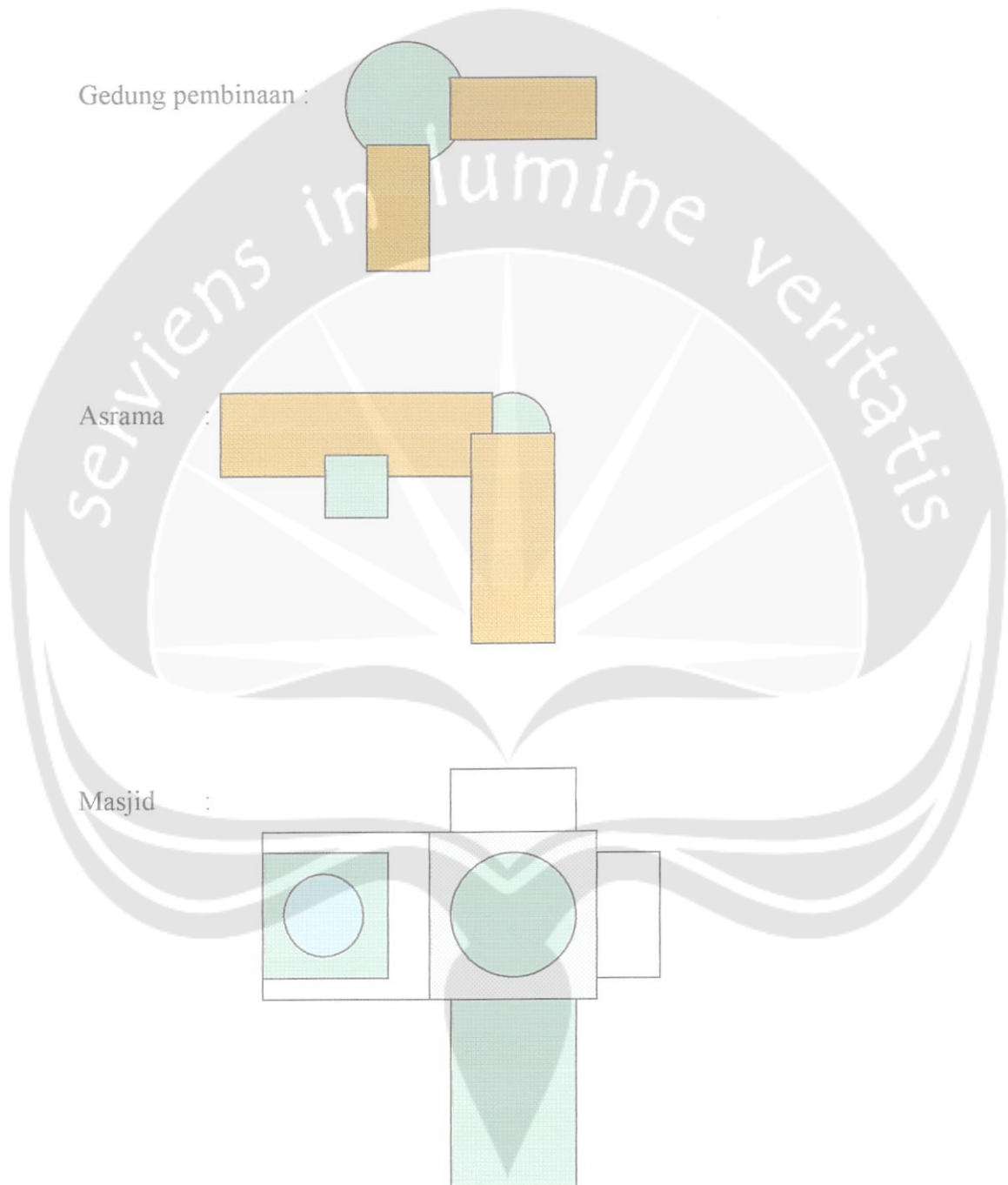
Konsep dasar bangunan meliputi komposisi massa-massa bangunan yang tertata dalam sebuah site yang telah dipilih. Dalam perencanaan ini merupakan perpaduan konsep Islami dan modern.

1. Geometris

Bentuk-bentuk geometris merupakan bentuk yang menjadi dasar pembangunan sebuah masjid.



Gambar 5.8.
Tata Massa Bangunan Dari Bentuk Geometris Lingkaran dan Persegi



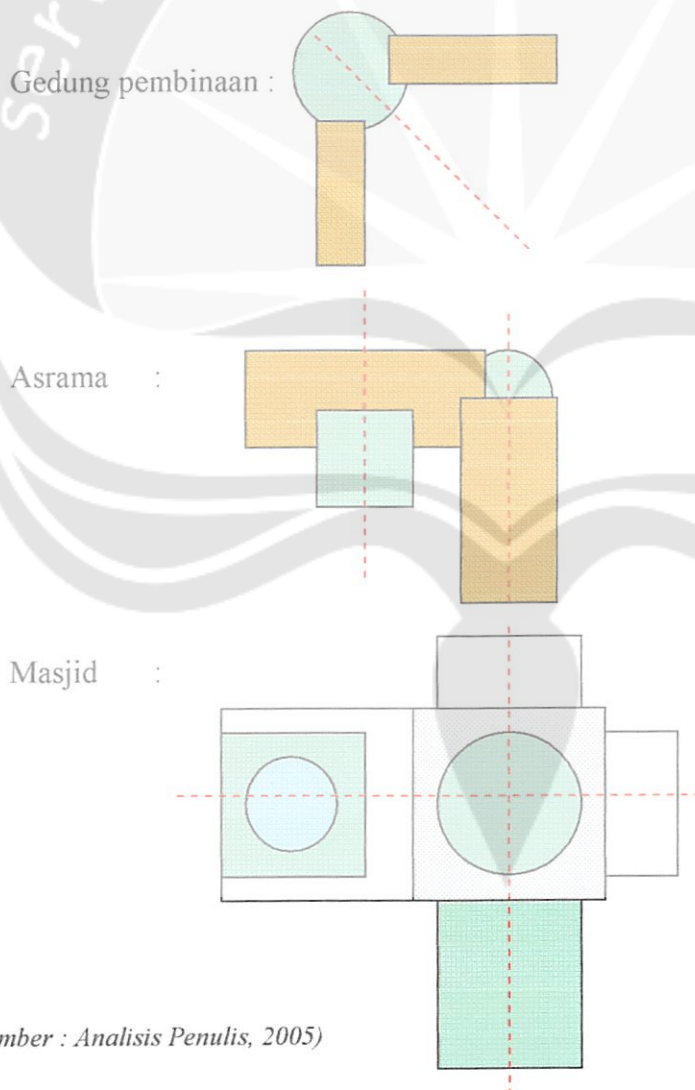
(Sumber : Analisis Penulis, 2005)

2. Simetris

Kesimetrisan dan keseimbangan dimaksudkan untuk :

- kemudahan dan efisiensi dalam pembagian shaft kanan dan shaft kiri dalam menunaikan ibadah shalat.
- Membedakan asrama putra dan asrama putri.
- Membagi kelompok binaan putra dan putri
- Membagi asrama pengajar pria dan wanita

Gambar 5.9.
Kesimetrisan Bangunan

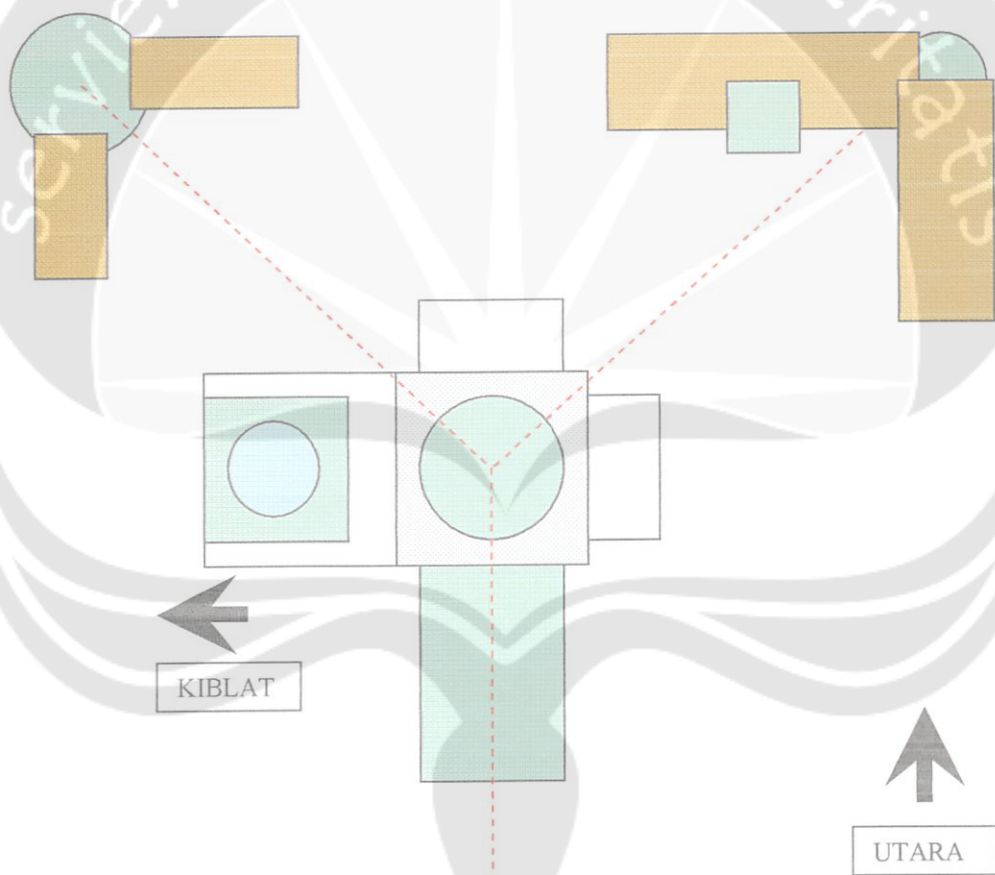


(Sumber : Analisis Penulis, 2005)

3. Centralis Radial

Dalam penataan multi massa bangunan kompleks lingkungan binaan masjid Kalasan di Yogyakarta, masjid merupakan centre (pusat) aktivitas sehingga diterapkan pola centralis radial.

Gambar 5.10.
Tata Letak Massa Bangunan Sebagai Cental dan Pendukung

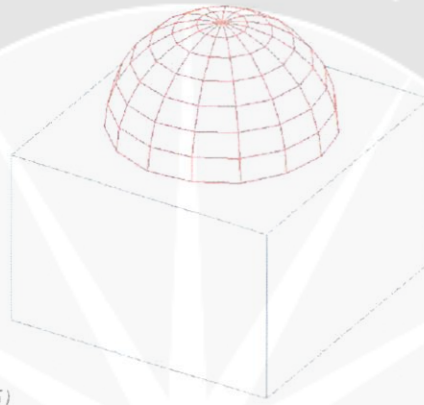


(Sumber : Analisis Penulis, 2005)

4. Kubisme

Kubisme merupakan sebuah aliran dalam Arsitektur modern yang kemudian diterapkan pada perancangan ini sebagai bentuk dasar masjid. Bentuk ini juga didukung oleh bentuk geometris dari Ka'bah yaitu kubus.

Gambar 5.11.
Bentuk Dasar Masjid

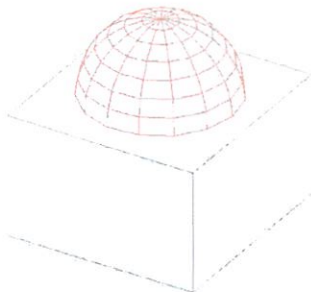


(Sumber : Analisis Penulis, 2005)

5. International style

International style dalam Islam yaitu berupa penggunaan atap kubah dan unsur lengkung khas Islami. Penggunaan ornamen hanya minimalis karena menganut dasar modernisme yang anti ornamen termasuk pada pola-pola kaligrafi yang diterapkan pada pola lantai dalam masjid dan serambi luar

Gambar 5.12.
Bentuk Kubah Dan Lengkung



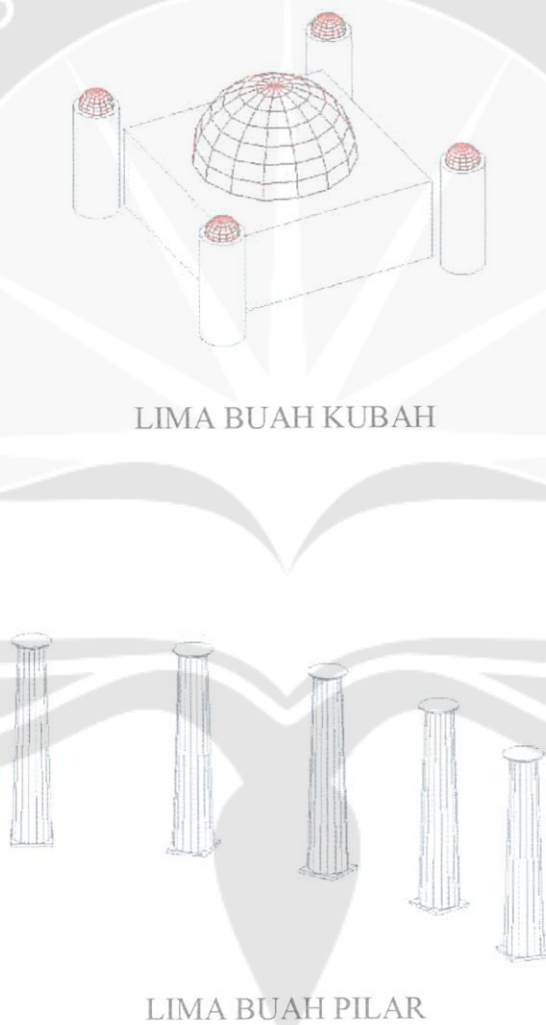
(Sumber : Analisis Penulis, 2005)



6. Rukun Islam

Penerapan 5 bagian dalam rukun Islam diolah pada penggunaan 5 kubah dan 5 pilar luar sebagai jumlah dari rukun Islam yaitu lima serta shalat lima waktu.

Gambar 5.13.
Penerapan Rukun Islam Pada Bangunan Masjid



(Sumber : Analisis Penulis, 2005)

DAFTAR PUSTAKA

- Affan Hasyim M *et. al.*, *Menggagas Pesantren Masa Depan Geliat Suara Santri Untuk Indonesia Baru*, CV. Qalam, Yogyakarta, 2003.
- Bambang, dkk., *Metodologi Pembinaan Generasi Muda Melalui Pendekatan Agama*, Proyek Pembinaan Generasi Muda, Departemen Agama RI, Jakarta, 1982.
- Ching F, *Arsitektur : Bentuk, Ruang dan Susunannya*, Penerbit Erlangga, Jakarta, 1996.
- Tanudjaja, F. Christian J. Sinar, *Arsitektur Modern Tradisi-tradisi dan Aliran-aliran Serta Peranan Politik-politik*, Penerbit Universitas Atma Jaya, Yogyakarta, 1998.
- Curt Siegel, *Structure and Form in Modern Architecture*, Translated by ; Thomas E. Burton.
- Edward T, dkk., *Tata Atur Pengantar Merancang Arsitektur*, Penerbit ITB Bandung, 1986.
- Ikhwanuddin, *Menggalai Pemikiran Posmodernisme Dalam Arsitektur*, Gadjah Mada University Press, Yogyakarta, 2005.
- Kenneth Frampton, *Modern a Critical History Architecture with 362 illustrations*, third edition : revised and enlarged, Thames and Hudson, London, 1992.
- Mangunwijaya Y.B., *Wastu Citra Pengantar ke Ilmu Budaya Bentuk Arsitektur Sendi-sendi Filsafatnya Beserta Contoh-contoh Praktis*, PT Gramedia Pustaka Utama, Jakarta, 1995.
- Reyner Banham, *Guide To Modern Architecture*, D. Van Nostrand Company, Inc. Princeton, New Jersey, Architectural Press, London, 1962.
- Robert H, *Islamic Architecture Form, Function and Meaning*, Edinburgh University Press, 1994.
- Rustam Hakim, Ir. MT. IALI & Ir. Hardi Utomo, MS. IAI., *Komponen Perancangan Arsitektur Lansekap Prinsip – Unsur dan Aplikasi Disain*, Penerbit Bumi Aksara, Jakarta, 2003.
- Simposium Nasional Arsitektur Islam, *Prosiding Aplikasi Arsitektur Islam Pada Lingkungan Binaan*, Universitas Muhammadiyah, Surakarta, 16-17 Juni 2004.

Thoyib, Dr., *Petunjuk Pelaksanaan Pembinaan Dan Pengembangan Generasi Muda Melalui Pendekatan Keagamaan*, Proyek Pembinaan Generasi Muda Departemen Agama, Jakarta, 1981/1982.

Zamakhsyari Dhofier, *Tradisi Pesantren Studi Tentang Pandangan Hidup Kyai*, Lembaga Penelitian, Pendidikan dan Penerangan Ekonomi dan Sosial, Jakarta, 1982.



Tabel/table 01

Penduduk menurut umur, daerah perkotaan/perdesaan, dan jenis kelamin
Population by age in single year, urban/rural and sex

umur Age	Perkotaan/urban			Perdesaan/rural			Perkotaan+perdesaan/urban+rural		
	Laki-laki Male	Perempuan Female	Jumlah Total	Laki-laki Male	Perempuan Female	Jumlah Total	Laki-laki Male	Perempuan Female	Jumlah Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	12856	12511	25367	9389	9077	18466	22245	21588	43833
1	12035	11388	23423	9143	8754	17897	21178	20142	41320
2	13027	12616	25643	9829	9419	19248	22856	22035	44891
3	13173	12331	25504	10735	10253	20988	23908	22584	46492
4	14095	13348	27443	11725	11201	22916	25810	24549	50359
5	13782	12852	26635	11216	10511	21727	24998	23363	48361
6	13046	12177	25223	10590	9995	20585	23636	22172	45808
7	12815	12059	24874	10907	10122	21029	23722	22181	45903
8	13173	12420	25593	11243	10683	21926	24416	23103	47519
9	12840	12266	25106	11193	10681	21874	24033	22947	46980
10	13274	12517	25791	11326	10536	21862	24600	23053	47653
11	12316	11896	25212	10563	9934	20497	22879	21830	44709
12	12581	12171	25752	10940	10395	21335	23542	22566	46087
13	13210	12854	26054	10866	10477	21343	24076	23331	47407
14	14115	13713	27828	11949	11137	23086	26064	24850	50914
15	15938	15667	31605	12955	11914	24869	28893	27581	56474

16	16609	16720	33329	15174	11214	23388	28783	27934	56717
17	19033	19593	38626	13586	11818	25404	32619	31411	65030
18	21291	21755	43046	12942	11400	24342	34233	33155	67388
19	25435	25590	51025	11155	9365	20520	36590	34955	71545
20	28976	28046	56991	10858	10077	20935	39833	38093	77929
21	26699	24176	50875	9310	8823	18133	36009	32999	69008
22	25278	21650	46928	9078	8877	17955	34356	30527	64883
23	23433	19774	43207	8758	8694	17452	32191	28468	60659
24	20971	18666	39637	9078	9606	18684	30049	28272	58321
25	20685	18438	39123	10848	11350	22198	31533	29788	61321
26	16095	14827	30922	8309	8880	17189	24404	23707	48111
27	16934	15972	32906	9453	10151	19604	26387	26123	52510
28	15318	15125	30443	8993	10010	19003	24311	25135	49446
29	14922	14820	29742	8828	9793	19620	23750	24613	48363
30	18295	18433	36728	12576	13849	26425	30871	32282	63153
31	14208	14475	28683	9565	10159	19724	23773	24634	48407
32	14238	14906	29144	9175	10103	19278	23413	25009	48422
33	12688	13455	26143	8387	9090	17477	21075	22545	43620
34	14376	15062	29438	9347	10120	19467	23723	25182	48905
35	16795	17155	33950	12421	13893	26314	29216	31048	60264
36	12510	13292	25802	8760	9275	18035	21270	22567	43837
37	12524	13350	25874	9051	9920	18971	21575	23270	44845
38	12079	12843	24922	8297	9328	17625	20376	22171	42547

39	12358	12724	25082	8575	9531	18106	20933	22255	43188
40	16285	16601	32886	13082	14744	27826	29367	31345	60712
41	11641	11490	23131	8391	8640	17031	20032	20130	40162
42	11258	11031	22289	7994	8320	16314	19252	19351	38603
43	10430	10146	20576	7060	7678	14738	17490	17824	35314
44	10080	9960	20040	7327	8028	15355	17407	17988	35395
45	12612	12374	24986	11076	11719	22795	23688	24093	47781
46	9187	8608	17795	6941	6739	13680	16128	15347	31475
47	8520	8088	16608	6660	6912	13582	15180	15000	30180
48	8100	7807	15907	6792	6859	13651	14892	14666	29558
49	7649	7769	15418	7428	7543	14971	15077	15312	30389
50	9558	10621	20179	10010	11630	21640	19568	22251	41819
51	6282	6572	12854	6022	6311	12333	12304	12883	25187
52	5618	6078	11696	5593	5899	11492	11211	11977	23188
53	4721	5448	10169	4563	5171	9734	9284	10619	19903
54	5964	679	12713	5420	6280	11700	11384	13029	24413
55	7749	9048	16797	8472	10221	18693	16221	19269	35490
56	5369	5409	10779	4876	4906	9782	10245	10315	20560
57	6165	5950	12115	5530	5583	11113	11695	11533	23228
58	5616	5578	11194	5238	5496	10734	10854	11074	21928
59	5602	6373	11975	5400	6345	11745	11002	12718	23720
60	9373	11663	21036	11034	13259	24293	20407	24922	45329
61	5068	5113	10181	5139	5463	10602	10207	10576	20783

62	4613	4856	9469	4609	4809	9418	9222	9665	18887
63	4380	4902	9282	4094	4466	8560	8474	9368	17842
64	4704	5832	10536	4458	5367	9825	9162	11199	20361
65	6857	9640	16497	8067	10309	18376	14924	19919	34873
66	3456	3982	7438	3233	3632	6865	6689	7614	14303
67	3749	4092	7841	3610	4237	7847	7359	8329	15688
68	3301	3843	7144	3131	3981	7112	6432	7824	14256
69	4116	5124	9240	4089	5269	9358	8205	10393	18598
70	7285	9834	17119	8617	10443	19060	15902	20277	36179
71	3132	3203	6335	3385	3502	6887	6517	6705	13222
72	3084	3037	6121	2867	3038	5905	5951	6075	12026
73	2543	2550	5093	2266	2403	4669	4809	4953	9762
74	2492	2901	5393	221	2590	4801	4703	5491	10194
75+	18194	23860	42054	19315	25675	44990	37509	49535	87044
tak terjawab/not stated	-	-	-	-	-	-	-	-	-
Jumlah/total	898778	899735	1798513	648083	673882	1321965	1546861	1573617	3120478

Keterangan: tidak termasuk jumlah penduduk yang non-response sebesar 317 orang di daerah perkotaan dan 250 orang di daerah pedesaan

Explanatory: not included population of non-response of 317 persons in urban and 250 persons in rural areas

Non-response: angka sementara/preliminary figures

Tabel / Table 02

Jumlah pemeluk agama menurut golongan dan kabupaten/kota di Propinsi D.I. Yogyakarta
 Number of population religion by classification and regency/city in D.I. Yogyakarta province
 1998-2003

Kabupaten/kota Regency/city	Islam Moslem	Kristen Christian	Katolik Catholic	Hindu Hindu	Budha Buddhist	Lainnya Others	Jumlah Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Kulonprogo	421.867	7.499	20.859	11	673	-	450.909
2. Bantul	759.743	13.207	17.566	669	246	-	791.431
3. Gunungkidul	716.049	19.185	16.501	1.985	470	-	754.190
4. Sleman	812.812	22.606	56.710	1.234	746	-	894.108
5. Yogyakarta	403.973	37.528	57.278	2.242	2.723	153	503.897
Propinsi DIY DIY province	3.114.444	100.025	168.914	6.141	4.858	153	3.394.535
2002	3.084.990	92.097	162.806	5.798	5.387	117	3.351.195
2001	3.059.957	89.924	158.962	6.209	5.728	103	3.320.883
2000	3.034.805	89.259	157.960	6.077	5.460	153	3.293.714
1999	3.000.234	86.654	162.644	5.727	6.384	298	3.261.941
1998	3.006.171	92.674	159.441	5.637	5.154	708	3.269.785

Sumber : Kanwil Departemen Propinsi D.I. Yogyakarta

Source : Regional office of religious affairs department of D.I. Yogyakarta province

Ket. Note :

Tabel / table 03

Jumlah tempat peribadatan menurut jenisnya dan kabupaten/kota di propinsi D.I. Yogyakarta
 Sumber of religious worship facilities by regency/city in D.I. Yogyakarta province
 1999-2003

Tempat peribadatan Religious worship facilities	Kabupaten/kota/regency city					Propinsi DIY
	Kulonprogo	Bantul	Gunungkidul	Sleman	Yogyakarta	DIY province
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Islam/moslem						
1. Masjid/mosque	919	1.389	1.531	1.773	364	5.976
2. Mushola/private mosque	339	305	426	298	150	1.518
3. Langgar/other	667	1.306	635	1.066	156	3.830
Kristen/christian						
1. Gereja/church	24	30	53	52	36	195
2. Rumah kebaktian/other	12	-	3	2	6	23
Katolik/catholic						
1. Gereja/church	13	14	3	28	8	66
2. Kepel/capel	9	7	31	21	3	71
Hindu/hindu						
1. Pura/temple	-	3	14	3	-	30
2. Sanggar/other	-	1	-	1	-	2
Budha/buddhist						
1. Wihara/temple	7	-	8	4	5	24
2. Cetya/other	-	-	-	-	-	-
Jumlah/total	1.990	3.055	2.704	3.248	728	11.725
2002	1.974	2.897	2.471	3.166	833	11.341
2001	1.942	2.872	2.224	3.164	819	11.021
2000	1.921	2.871	2.224	3.147	817	10.980
1999	1.970	2.788	2.220	3.052	721	10.751

Sumber : Kanwil Departemen Propinsi D.I. Yogyakarta

Source : Regional office of religious affairs department of D.I. Yogyakarta province

Ket. Note :

Tabel / table 04

Jumlah pemuka agama menurut kabupaten/kota di propinsi D.I. Yogyakarta
 Number of priests religions by regency/city in D.I. Yogyakarta province
 1998-2003

Pemuka agama Priests religious	Kabupaten/kota/regency city					Propinsi DIY DIY province
	Kulonprogo	Bantul	Gunungkidul	Sleman	Yogyakarta	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Islam/moslem Ulama/ulcer	715	401	370	365	230	2.281
2. Kristen/christian/ protestan Pendeta/clergyman	12	11	14	40	52	129
3. Katolik/catholic Pastur/pastor	9	6	3	80	74	172
4. Hindu/hindu Pedande/priest	1	8	10	8	2	29
5. Budha/buddhist Bhiku/bhiku	-	-	-	-	4	4
Jumlah/total	737	426	597	493	362	2.615
2002	732	429	590	494	336	2.581
2001	357	436	294	480	274	1.841
2000	359	434	292	474	278	1.837
1999	732	496	505	458	312	2.503
1998	757	430	519	439	328	2.473

Sumber : Kanwil Departemen Propinsi D.I. Yogyakarta

Source : Regional office of religious affairs department of D.I. Yogyakarta province

Ket. Note :

Tabel / Table 05

Jumlah juru penerang agama menurut kabupaten/kota di propinsi D.I. Yogyakarta
 Number of informant priests religions by regency/city in D.I. Yogyakarta province
 1998-2003

Pemuka agama Priests religious (1)	Kabupaten/kota/regency city					Propinsi DIY DIY province (7)
	Kulonprogo (2)	Bantul (3)	Gunungkidul (4)	Sleman (5)	Yogyakarta (6)	
Islam/moslem						
1. Mubaligh/intermediary	884	2.753	2.067	3.332	837	9.873
2. Khotib/preacher	1.973	1.735	2.799	1.815	835	9.157
Kristen/christian						
1. Pendeta/clergyman	12	11	14	40	52	129
2. Majelis/council	162	141	176	398	395	1.272
Katolik/catholic						
1. Pastur/pastor	9	6	3	80	74	172
2. Bruder/bruder	7	24	-	34	337	402
3. Suster/sister	27	55	12	192	350	636
Hindu/hindu						
1. Pedande/priest	-	2	-	-	-	2
2. Pinundita/other	-	10	24	10	2	46
Budha/buddhist						
1. Bhiksu/bhiksu	-	-	-	-	4	4
2. Pandita/other	5	1	1	1	10	18
Jumlah/total	3.079	4.738	5.096	5.902	2.896	21.711
2002	3.468	4.464	5.180	4.770	2.567	20.449
2001	3.347	4.553	5.049	6.586	2.132	21.667
2000	3.254	4.470	4.929	4.516	1.711	18.722
1999	3.753	4.700	2.950	3.572	1.617	16.592
1998	3.258	4.436	4.400	4.250	1.820	18.164

Sumber : Kanwil Departemen Propinsi D.I. Yogyakarta

Source : Regional office of religious affairs department of D.I. Yogyakarta province

Ket. Note :

Tabel / Table 06

Jumlah pondok pesantren, kyai, dan santri menurut kabupaten/kota di propinsi D.I. Yogyakarta
 Number of moslem boarding schols, religions teacher, and pupils by regency/city in D.I. Yogyakarta province
 1998-2003

Kabupaten/kota Regency/city	Pondok pesantren Moslem boarding schools	Kyai Religion teacher	Santri/student	
			Diasramakan In redence hall	Seluruhnya Total
(1)	(2)	(3)	(4)	(5)
1. Kulonprogo	17	92	3.470	4.057
2. Bantul	47	228	4.994	10.284
3. Gunungkidul	16	97	2.109	2.691
4. Sleman	53	296	3.753	7.308
5. Yogyakarta	15	71	2.629	3.192
Propinsi DIY DIY province	148	784	16.955	27.532
2002	143	784	17.594	26.853
2001	132	772	18.078	26.543
2000	127	762	18.093	26.024
1999	122	732	16.119	21.492
1998	107	642	15.784	21.045

Sumber : Kanwil Departemen Propinsi D.I. Yogyakarta

Source : Regional office of religious affairs department of D.I. Yogyakarta province

Ket. Note :

Tabel / table 07

Penduduk menurut golongan umur, daerah perkotaan/pedesaan, dan jenis kelamin
Population by age group, urban/rural and sex

Golongan umur Age group	Perkotaan/urban			Perdesaan/rural			Perkotaan+perdesaan/urban+rural		
	Laki-laki Male	Perempuan Female	Jumlah Total	Laki-laki Male	Perempuan Female	Jumlah Total	Laki-laki Male	Perempuan Female	Jumlah Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0-4	65186	62194	127380	50811	48704	99515	115997	110898	226895
5-9	65656	61774	127430	55149	51992	107141	120805	113766	234571
10-14	65496	63151	128647	55644	52479	108123	121140	115630	236770
15-19	98306	99325	197631	62812	55711	118523	161118	155036	316157
20-24	125356	112282	237638	47082	46077	93159	172438	158359	330797
25-29	83954	79182	163136	46431	50184	96615	130385	129366	259751
30-34	73805	76331	150136	49050	53321	102371	122855	129652	252507
35-39	66266	69364	135630	47104	51947	99051	113370	121311	234681
40-44	59694	59228	118922	43854	47410	91264	103548	106638	210186
45-49	46068	44646	90714	38897	39772	78669	84965	84418	169383
50-54	32143	35468	67611	31608	35291	66899	63751	70759	134510
55-59	30501	32358	62859	29516	32551	62067	60017	64909	124926
60-64	28138	32366	60504	29334	33364	62698	57472	65730	123202
65-69	21479	26681	48160	22130	27428	49558	43609	54109	97718
70-74	18536	21525	40061	19346	21976	41322	37882	43501	81383
75 +	18194	23860	42054	19315	25675	44990	37509	49535	87044
tak terjawab/not stated	-	-	-	-	-	-	-	-	-
Jumlah/total	898778	899735	1798513	648083	673882	1321965	1546861	1573617	3120478

Keterangan: tidak termasuk jumlah penduduk yang non-response sebesar 317 orang di daerah perkotaan dan 250 orang di daerah pedesaan

Explanatory: not included population of non-response of 317 persons in urban and 250 persons in rural areas

Non-response: angka sementara/preliminary figures

Tabel / table 08

Penduduk menurut kabupaten/kota dan agama
 Population by regency/municipality and religion
 Perkotaan+perdesaan/urban+rural laki-laki+perempuan/male+female

Kabupaten/kota Regency/municipality	Agama/religion						Jumlah Total
	Islam Moslem	Katolik Catholic	Protestan Protestant	Hindu Hindu	Budha Buddhist	Lainnya Other	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Kabupaten/regency							
Kulonprogo	348177	17231	4813	19	701	3	370944
Bantul	745018	24942	9776	948	183	146	781013
Gunung kidul	641869	13175	11912	1670	576	1231	670433
Sleman	802127	67767	28098	2285	869	231	901377
Kota/municipality							
Yogyakarta	326560	42295	25053	793	1598	412	396711
Jumlah/total	2863751	165410	79652	5715	3927	2023	3120478

Keterangan/explanatory: lihat keterangan tabel 01/See explanatory table 01

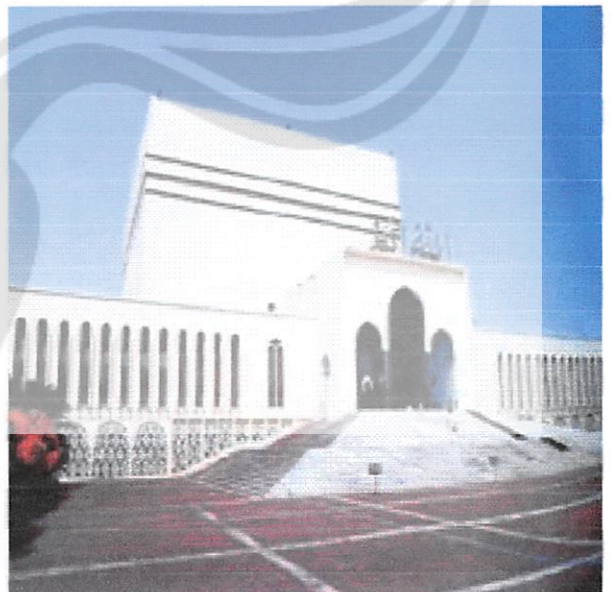
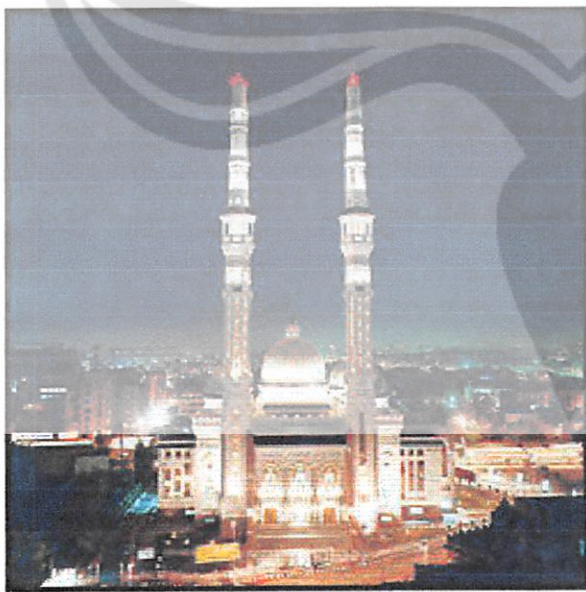
Tabel / table 09

Penduduk berumur 5 tahun ke atas menurut kabupaten/kota dan pendidikan tertinggi yang ditamatkan
Population 5 years of age and over by regency/municipality and educational attainment

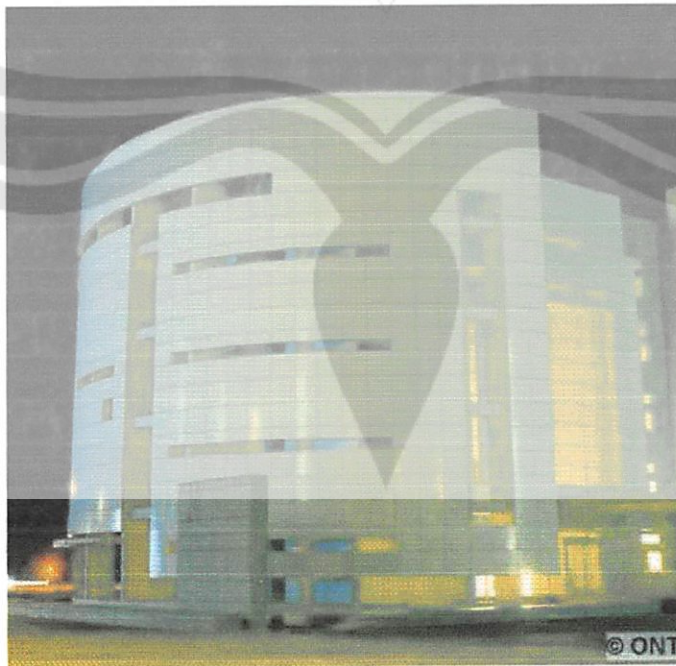
Kabupaten/kota Regency/municipality	Pendidikan tertinggi yang ditamatkan/educational attainment								Jumlah total
	Tidak/belum tamat SD Did not completed/not yet completed primary school	SD Primary school	SLTP Junior high school	SLTA Senior high school	Diploma I/II Diploma I/II	Akademi/ diploma III Academy/ diploma III	Universitas University	Tak terjawab Not stated	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kabupaten/regency									
Kulonprogo	113206	109063	53830	22705	3024	2546	5148	-	342522
Bantul	235508	197862	113974	141333	5613	9373	17950	-	721613
Gunung kidul	258605	219111	83932	50682	2848	2191	3427	-	620796
Sleman	202977	169867	130278	266654	7690	18711	41163	-	837340
Kota/municipality									
Yogyakarta	58583	67495	60887	139539	3314	14388	27106	-	371312
Jumlah/total	868879	763398	442901	653913	22489	47209	94794	-	2893583

Keterangan/explanatory: lihat keterangan tabel 01/see explanatory table 01

THE MODERN MOSQUE

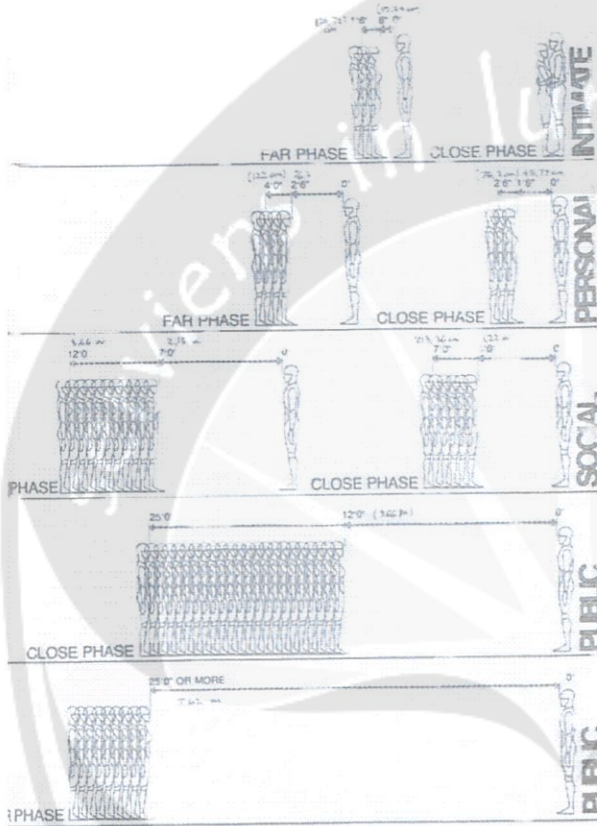


THE MODERN BUILDINGS



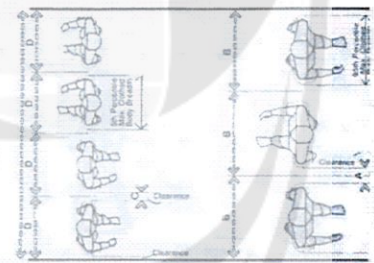
STANDART SCALE (Human Dimension & Interior Space, 1980)

Human Interaction Scale



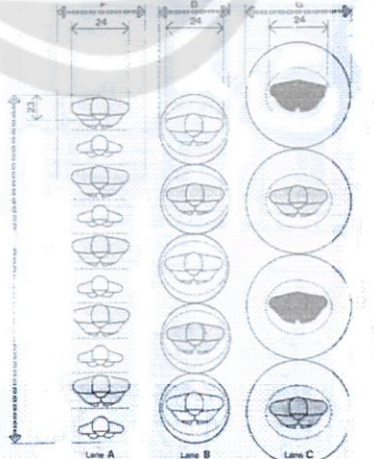
8.1 HORIZONTAL CIRCULATION SPACES

The purpose of the drawing at the top is to provide some idea of the physical relationship between human dimension and corridor width in terms of the number of lanes that can be accommodated. The row with three persons abreast is based on data concerning maximum clothed body breadth, while the row with four abreast is based on 5th percentile data. The corridor width was arbitrarily selected as 96 in, or 243.8 cm. The drawing should not be taken literally. The statistical likelihood of having the lineup of body sizes shown, at any single point in time, would be remote unless the space was originally intended to serve a specific user population of larger or smaller body size. Moreover, the 24 in, or 61-cm, lane with a 1-ft clearance is obviously not intended as a standard.



ACCOMMODATION OF SMALL AND LARGE USERS ABREAST IN A 96-IN (243.8-CM) CORRIDOR OR PASSAGE WIDTH

The bottom drawing is intended to provide some insight into relative densities possible within a 120-in, or 304.8-cm, queue. Lane A shows, as many people lined up as possible, with no regard for comfort or body contact. When an allowance for sliding is added to the minimum body breadth, the people in lane A would be pressed tightly together, violating all notions of personal space and comfort. Lanes B and C show the number of people that could be lined up, based on the densities of 3 and 7 sq ft, or 28 and 65 sq m per person, respectively.



QUEUE LINES / COMPARATIVE DENSITIES

	in	cm
A	4.5	11.4
B	32	81.3
C	1.6	4.1
D	24	61.0
E	96	243.8
F	30	76.2
G	36	91.4
H	120	304.8

Divable Area Scale

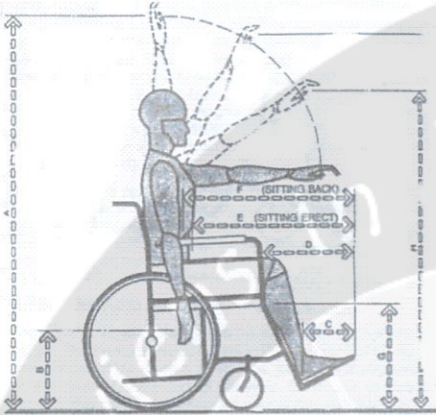


Figure 3-3. Anthropometrics of chairbound people. The side view, showing user and chair, indicates some of the more critical anthropometric measurements for both men and women. All reach dimensions are based on 2.5 percentile data to accommodate those users with smaller body sizes. It is recommended that since the female body is smaller than the male, the female dimensions be used for the design of all reach situations. Dimensions involving clearance problems are based on 97.5 percentile data. Since the male body size is larger, the dimensions for men should be used to satisfy clearance requirements. The figure and data were adapted from Goldsmith's *Designs for the Disabled*, 1963, and were based on measurements obtained from British and American studies.

	MALE		FEMALE	
	in	cm	in	cm
A	62.25	158.1	56.75	144.1
B	16.25	41.3	17.5	44.5
C	8.75	22.2	7.0	17.8
D	18.5	47.0	16.5	41.9
E	25.75	65.4	23.0	58.4
F	28.75	73.0	26.0	66.0
G	19.0	48.3	19.0	48.3
H	51.5	130.8	47.0	119.4
I	58.25	148.0	53.24	135.2

Chart 3-4. Data accompanying

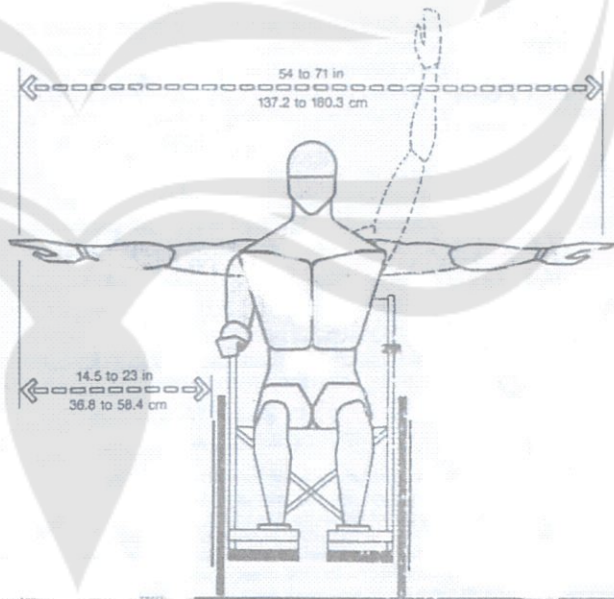
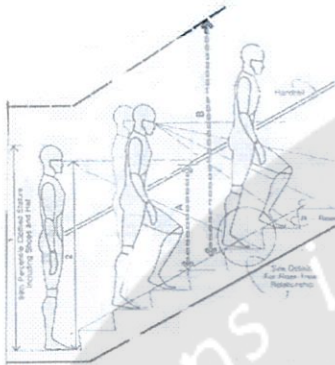
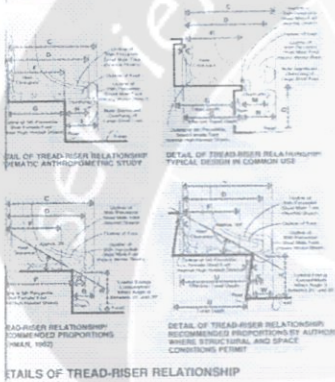


Figure 3-4. Anthropometrics of chairbound people. The front view, showing user and chair, also indicates some of the more critical anthropometric measurements. The source of the bilateral horizontal reach dimensions with both arms extended to each side, shoulder high, was the American National Standards Institute (ANSI Pub. A117-1961, Revalidated 1971). It should be noted that no data were available with regard to sex or precise percentile grouping.

Stair Scale



STAIRS



	in	cm
A	30-34	762-864
B	84 min	2134 min
C	14.3	363
D	12.9	328
E	4.3	109
F	9.1	231
G	9.6	244
H	3.7	93
I	5	127
J	0.5	13
K	0.1	0.3
L	1.3	32
M	3.9	99
N	5.3	135
O	7.6	193
P	11.4	290
Q	2	51
R	3.4	86
S	6.7	170
T	9.5-11	13-28
U	11.8	299
V	1.6-2.1	41-53
W	3-3.5	7.6-89
X	6.8	171

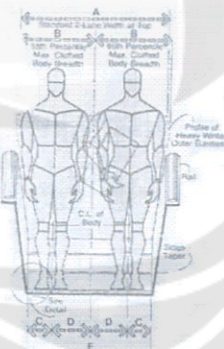
8.2 VERTICAL CIRCULATION SPACES

The drawing of the 48-in. or 121.9-cm two-lane escalator is intended to suit both that 48 in. is inadequate. As comfortably accommodate larger-sized people on the same tread. Moreover, the 40-in. or 101.6-cm clearance at the bottom limits the user's stance thereby reducing body sway. Stair motion, body contact, and lack of stability, taken together, present a safety hazard. This may account for the fact that the presence of two people on the same tread is not a very frequent occurrence.

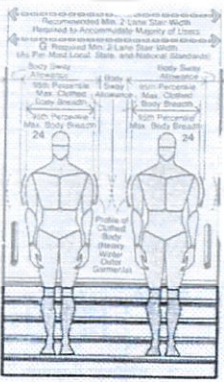
The authors contend that the standard 44-in. or 111.7-cm stair width, based on two 22-in. or 56.0-cm body increments, will not accommodate a stock or larger body size. The argument equated the 22-in. increment to that reported in the text related to the first drawing in Section 8.1.

Rail distance should accommodate the hand thickness of the larger user and handrail size, the inside grip diameter of the smaller user. Arking gave thickness to the data shown in the drawing, a 2-in. or 5.1-cm clearance and a 1.5-in. or 3.8-cm rail diameter will accommodate most people.

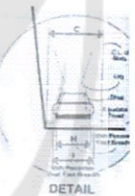
	in	cm
A	48	121.9
B	25.8	65.5
C	7.1	18.0
D	12.9	32.8
E	40	101.6
F	68	172.7
G	44	111.8
H	4.2	10.7
I	4.9	12.4
J	2 min	5.1 min
K	1.5	3.8
L	3.5 max	8.9 max
M	30-34	762-864
N	1.5 min	3.8 min



ESCALATORS



STAIRS; EXISTING AND RECOMMENDED 2-LANE WIDTH



DETAIL



GRIP DIAMETER INSE



HAND THICKNESS



HANDRAILS ANTHROPOMETRIC OF PREVAILING STA

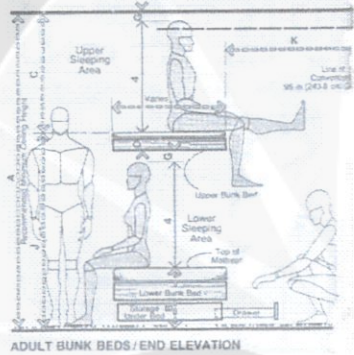
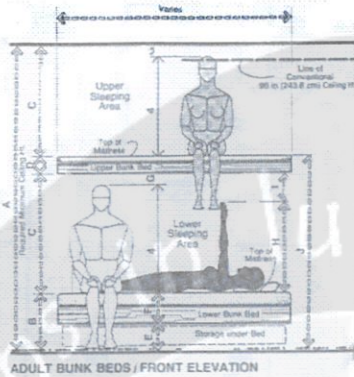


HANDRAIL RECOMMENDED BY AUTH

Sleeping Area Scale

2.3 SLEEPING SPACES

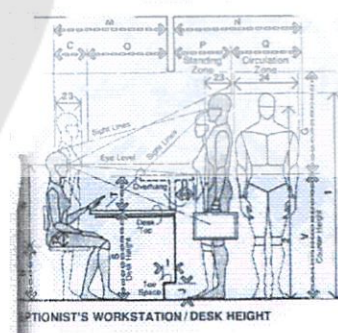
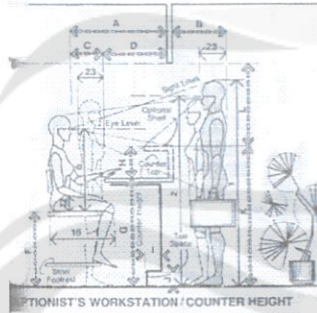
Overhead sleeping facilities are a common space-saving device, particularly where the number of beds, rooms or bedrooms size is limited. Although standard bunk beds are available on the market, it is often necessary because of user preference or existing conditions within the interior space to custom design the bed installation. The drawing at the top of the page shows the vertical clearances necessary to accommodate an adult of large body size. The most essential body measurement anthropometrically is sitting height. If vertical space is extremely critical, it would be wise to measure the actual sitting height of the intended user in the hope that a low inches might be saved. It should be noted that 95 percent of men between the ages of 18 and 79 have a sitting height of 38.9 in. or 98.8 cm, or less. The clearance allowed between the top of the mattress and the nearest overhead construction is 42 in. or 107.6 cm. Theoretically, if 6 in. or 15.2 cm, is allowed for the depth of the upper bunk, and 38 in. or 96.5 cm, is allowed from the top of the lower bunk to an adult of larger body size could not be accommodated within a conventional 66-in. or 167.6 cm, ceiling height unless the depth of the lower bunk is reduced. The bottom drawing shows that a horizontal clearance of 48 in. or 121.9 cm, or 116.8 to 157.5 cm, is necessary for comfortable access to the undisturbed storage.



	in	cm
A	104	264.2
B	18-22	45.7-55.9
C	40-44	101.6-111.8
D	6-8	15.2-20.3
E	9-10	22.9-25.4
F	10-12	25.4-30.5
G	2	5.1
H	28-38	71.1-96.5
I	6-12	15.2-30.5
J	61-74	154.9-188.0
K	48-62	121.9-157.5

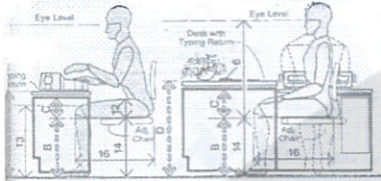
3.3 RECEPTION SPACES

For the purpose of privacy or security, the receptional workstation is often an area physically separated by built-in furniture and/or partitions. The drawing at the top of the page shows a counter height receptional workstation. While the relationship of work surface to user height is key, other anthropometric considerations are eye height and sitting height normal. The minimum height of the opening above the floor has been established at 19 in. or 483.1 cm. Sitting height and eye height are significant in providing unobstructed vision. The drawing at the bottom depicts a desk height receptional workstation. The depth of the work surface ranges from 26 to 30 in. or 66 to 76.2 cm, allowing the thumb to reach required for the opening of papers and packages. Both drawings show a beveled or an added counter top element also included for security or as a visual barrier of the workstation top.

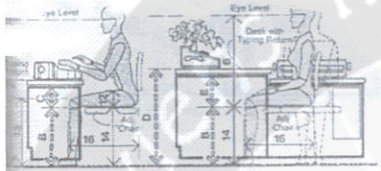


	in	cm
A	43-48	101.6-121.9
B	24 min.	61.0 min.
C	3-8	7.6-20.3
D	27-30	68.6-76.2
E	78 min.	198.1 min.
F	24-27	61.0-68.6
G	36-39	91.4-99.1
H	6-8	15.2-20.3
I	2-4	5.1-10.2
J	4	10.2
K	44-48	111.8-121.9
L	34 min.	86.4 min.
M	44-48	111.8-121.9
N	54	137.2
O	25-30	63.5-76.2
P	34	86.4
Q	30	76.2
R	15-18	38.1-45.7
S	29-30	73.7-76.2
T	10-12	25.4-30.5
U	6-9	15.2-22.9
V	35-42	88.9-106.7

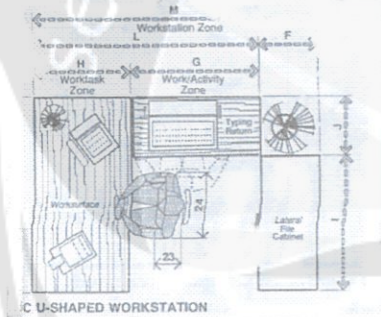
Working Area Scale



WORKING RETURN AND DESK / MALE USER



WORKING RETURN AND DESK / FEMALE USER



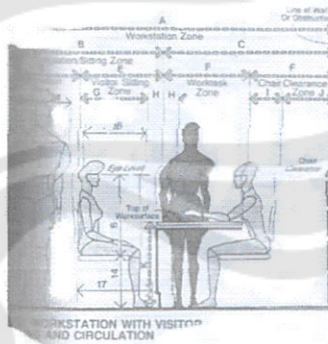
C U-SHAPED WORKSTATION

3.2 THE GENERAL OFFICE

The two elevations at the top illustrate the major anthropometric considerations for the seated male and female user at both workstation and typing return. What should be noted is the seat height of the chair is function of popliteal height and its relationship to the specific task. When the workstation is lowered to accommodate a specialized function, as in the case of the typing return, special attention must be given to the requirements for high clearance. Most standard office typing returns have been geared to the anthropometric requirements of the female user. The popliteal height and thigh clearance requirements of the larger male user may not be readily met.

The plan at the bottom shows the typical workstation expanded into the basic U-shaped configuration. The workactivity zone dimension range is shown as 46 to 58 in, or 116.8 to 147.3 cm; additional space is needed to allow for drawer extension of the lateral file. Not only does it provide more storage, the lateral file unit is generally the same height as that of the work surface and is often utilized as a supplementary work surface. The distance between this unit and that of the primary work surfaces must be sufficient to allow for movement and rotation of the chair.

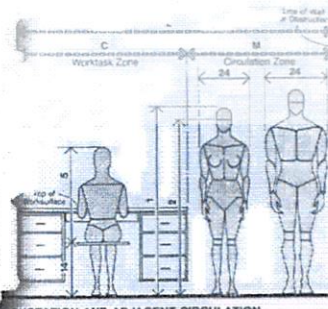
	in	cm
A	26-27	66.0-68.5
B	14-20	35.6-50.8
C	7.5 min.	19.1 min.
D	29-30	73.7-76.2
E	7 min.	17.8 min.
F	18-24	45.7-61.0
G	46-58	116.8-147.3
H	30-36	76.2-91.4
I	42-50	106.7-127.0
J	18-22	45.7-55.9
K	60-72	152.4-182.9
L	75-84	191.5-213.3
M	94-118	239.8-299.7



WORKSTATION WITH VISITOR AND CIRCULATION

3.2 THE GENERAL OFFICE

Anthropometrically, the circulation zone and the visitor seating zone must accommodate both maximum body breadth and buttock-toe length measurements of the larger person. Note that in the illustrative plan, the visitor seating zone is within an initial range of 24 to 30 in, or 61 to 76.2 cm. Allow an additional clearance from knee to top of workstation of 6 to 12 in, or 15.2 to 30.5 cm, and a minimum clearance range from 30 to 42 in, or 76.2 to 106.7 cm. This assumes that the individual in the visitor's chair does not push it back when coming or going, but will stand and then move laterally in the space provided. It should also be noted that the lack of a desk top overhang does not provide an adequate interface between chair and desk for close-up conferences. The circulation zone dimension is shown as a minimum of 36 in, or 91.4 cm. In addition to maximum body breadth, the figure in this illustration is shown carrying an attaché case in his hand. The attaché case is there to suggest that in those circulation zones, where the carrying of objects (documents, trays, bags) is required, additional space must be allowed for that function. The elevation at the bottom shows a circulation zone adjacent to the work zone that is wide enough to permit clear passage of two people. A minimum dimension of 60 in, or 152.4 cm, is allowed for here, considering once again maximum body breadth constraints.



WORKSTATION AND ADJACENT CIRCULATION

	in	cm
A	198-199	503.0-505.0
B	66-76	167.6-193.0
C	95-72	152.4-182.9
D	30	76.2
E	30-42	76.2-106.7
F	30-36	76.2-91.4
G	24-30	61.0-76.2
H	6-12	15.2-30.5
I	12-16	30.5-40.6
J	18-20	45.7-50.8
K	29-30	73.7-76.2
L	75-84	191.5-213.3
M	92	152.4

Bathroom Scale

2.5 BATHROOMS

The drawings at the top and center of the page deal with the anthropometric considerations related to the individual water closet and bidet. The drawing at the top left suggests an activity zone or clearance between the lane of a water closet to the line of the wall or nearest obstruction of at least 24 in., or 61 cm. Accessories in front or to the side of the user should be within reach. Thumb tip arm reach and side arm reach should both be taken into account in locating these items anthropometrically. A height of about 30 in., or 76.2 cm, from the floor to the center line of the paper dispenser is suggested.

The bottom drawing of the water closet shows some of the horizontal clearances required.

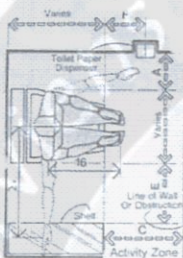
The two drawings of the individual bidet illustrate in a similar manner some of the basic anthropometric requirements and clearances suggested for a typical installation. The bottom drawing indicates some of the clearances involved when the water closet and bidet are located side by side.



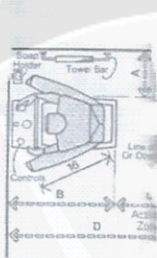
WATER CLOSET



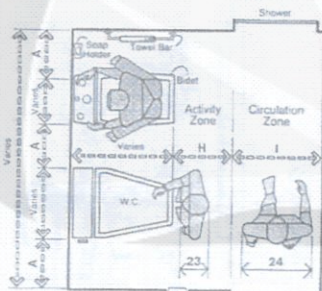
BIDET



WATER CLOSET



BIDET



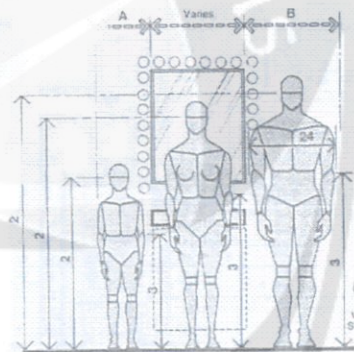
BIDET AND WATER CLOSET

	in	cm
A	12 min.	30.5 min.
B	26 min.	71.1 min.
C	24 min.	61.0 min.
D	52 min.	132.1 min.
E	12-16	30.5-40.7
F	12	30.5
G	40	101.6
H	18	45.7
I	30	76.2

INTERIOR SPACE DESIGN STANDARDS

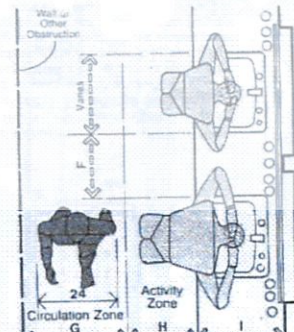
2.5 BATHROOMS

The drawing at the top of the page illustrates some of the basic anthropometric considerations related to the lavatory area. Perhaps the most obvious problem concerns the height of the lavatory above the floor. For too long this dimension has been established in the field on so-called trade practice at 31 to 34 in., or 78.7 to 86.3 cm, and has little relationship to the anthropometric requirements involved. Optimum work heights for the hands on a counter or work bench situation is established at about 2 to 3 ft or 5 to 7.5 cm, below elbow height. Published data show that only 5 percent of a male sampling of measures had an elbow height of 41.3 in., or 104.9 cm, or less, while 5 percent of a female sampling had an elbow height of 38.6 in., or 98 cm. Subtracting 3 in. from the female measurement would place a comfortable height for the lavatory at 35.6 in., or 90.4 cm. That is greater than the height at which lavatories are normally installed, presumably to accommodate the majority of the population. Stated another way, more than 95 percent of users are not properly accommodated by the heights at which most lavatories are presently installed. The drawing indicates ranges for adult males, females, and children of lavatory heights able to accommodate a greater portion of the respective populations. The bottom drawing indicates horizontal clearances recommended in the lavatory area.

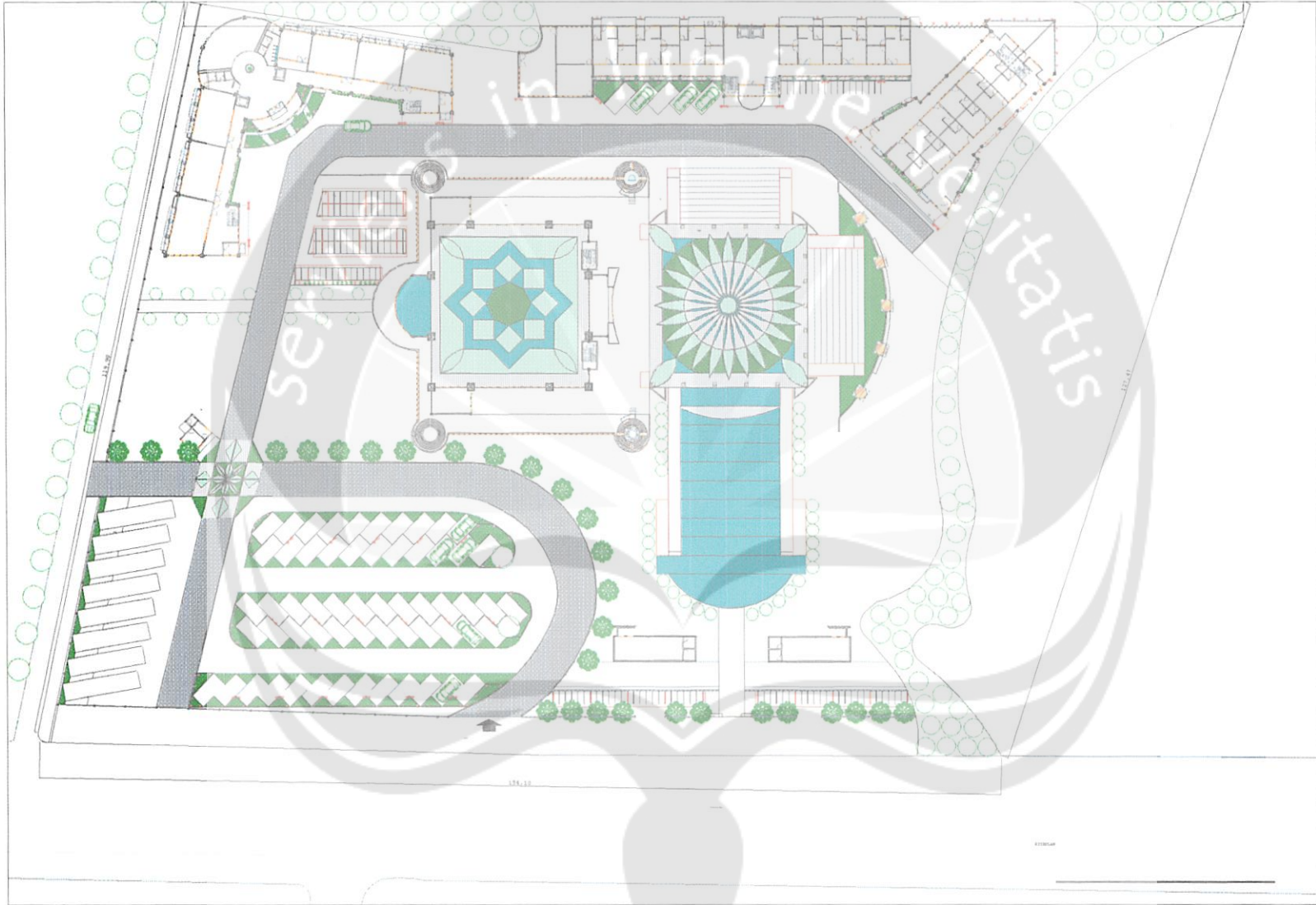


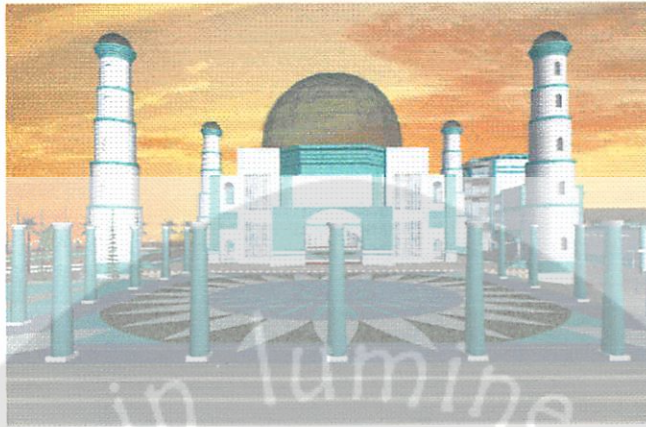
LAVATORY / GENERAL ANTHROPOMETRIC CONSIDERATIONS

	in	cm
A	15-18	38.1-45.7
B	28-30	71.1-76.2
C	37-43	94.0-109.2
D	32-36	81.3-91.4
E	26-32	66.0-81.3
F	14-18	35.5-45.7
G	30	76.2
H	18	45.7
I	21-26	53.3-66.0



DOUBLE LAVATORY CLEARANCES





serviens in lumine veritatis

