- Present utilisation.
- Present staffing.

B EXISTING CONDITIONS

- Present layout of the complex.
- Existing zoning of activities.
- Date of construction / renovation of the different buildings.
- Distribution of departments in the buildings with gross areas.
- Layout of mains services and drainage reticulations.
- Departments which are badly located in relationship to other departments / functions.
- Departments which function well; departments which function badly.
- Condition of key building elements: roofs, external walls, doors and windows, internal partitions, floors, sanitary installations, water and drainage, electrical installations.
- Buildings which should be renovated as a matter of urgency.
- Buildings which should be demolished.

C ISSUES

- What is the expected future utilisation of the facilities? Which provision norms are applicable?
- Which priorities should be used for determining the sequence of future steps?

D FUTURE PROPOSALS

- Areas of the site for future construction
- Future zoning of activities.
- Proposed traffic / circulation routes / ways.
- Future layout plan to anticipate requirements in 15 years time.
- Proposed phasing of activities.

E BUDGET

- Estimates for realising the individual projects shown
- Annual budgets for capital works to realise the masterplan.
- Development plan budgets.

NORMS AND STANDARDS

To make it easier to develop the Brief and to ensure that the results conform to the Ministry of Health's requirements for the implementation of a civil works project, key norms and standards should be established (by both users and consultants) which will then be used for all later projects. The norms can include:

Health Facility Planning Data

- Average number of people who visit health facilities every day. Number of admissions to wards
- Service requirements of people visiting health facilities.
- Number of X-ray examinations, laboratory tests, consultations with specialists, prescriptions issued, etc.
- Production capacities of health facilities and health staff.
- Consultations per doctor, X-rays per X-ray machine, operations per operating theatre, lab tests per laboratory technician, bed utilisation, etc.
- Theoretical optimum distribution of health functions and facilities in relationship to the population.
- Norms for the provision of facilities, number of theatres in relationship to the number of surgical beds, number of delivery rooms in relationship to number of maternity beds, number and types of offices for clinical, nursing and administrative staff.

Specifications of appropriate and affordable building materials and installations for use in rehabilitation of health buildings

- Specifications of materials in the repair of building elements, roofs, ceilings, wall finishes, structural faults in walls and floors, floor finishes, doors and windows, glazing, ironmongery.
- Standards for sanitary installations, water supply and reticulations, water treatment.
- Standards for electricity supply and reticulations including over-voltage protection, lightning conduction.
- Standards for mechanical installations, heating, cooling ventilation, air-treatment generally.
- Standards for energy conservation, environmental protection.

Definition of optimum spatial requirements in existing departments, buildings and institutions, for evaluating functional standards as well as for making proposals for rehabilitation

- Norms for number of square metres per function, such as area of hospital per bed, area of ward unit per bed, area of clinic per consulting unit, distribution of space in institution department by department.
- Definition of optimum planning module.
- Norms for areas and dimensions of rooms, 6-bed ward, 4-bed ward.
- Norms for the provision of sanitary units in relationship to different departments.
- Revised norms for specific functions such as sterilisation, utility rooms, staff common rooms, cleaners rooms, stores.
- Standard schedules of accommodation for different facilities, departments, functions.

Methodology for making masterplans for the future re-use, consolidation and development of existing facilities

- Method for registration by local health personnel of the contents and conditions of facilities.
- Agreed contents of a masterplan.
- Agreed method for documenting masterplans.
- Procedures for implementing proposals in masterplans, providing feed-back and up-dating.

Tools for planning and implementing maintenance of existing buildings and contents

These will include:

- Establishment of a profile for the maintenance of existing health sector buildings.
- Development of standard documents for planning and implementing maintenance activities.
- Evaluation of different methods of performing bio-medical maintenance.
- Proposals for including maintenance considerations in procurement procedures.

Budgeting information

- Square metre rates for different types of facility/department in different regions, for both new and rehabilitation works.
- Costs rates for equipment in different departments expressed as percentage of construction costs or square metre rates.

Development of standard documents for tendering and procurement procedures

- Buildings and works, including invitation to bid, tender and contract documents.
- Equipment, including invitation to bid, tender and contract documents.
- Consumables, including invitation to bid, tender and contract documents.
- Consultancy services, including invitation to bid, tender and contract documents.

Development of relating norms

- Staffing.
- Financing.

OUTLINE SCHEDULE OF ACCOMMODATION AND BUILDING COSTS

Teams should work with realistic cost rates for budgeting from the earliest phase. In the initial phase it is usual to use square metre rates calculated on accepted norms for gross areas of the different departments. The rates will be established through discussion with quantity surveyors and should be drawn from recently-completed projects. The area norms should also be based on recently-completed projects and of course should be arrived at through consultation with health staff.

The rates will vary according to the departments involved. Taking Out-patient Departments and Wards as a standard, departments with requirements for better finishes and more extensive services such as X-ray, Operating Theatre, and Sterilising Department (CSSD) should be priced at approximately 30% higher. More simple units such as Administration, and Waiting Mothers, should be costed at approximately 15% less.

The following example shows the area norms and cost rates used for a recent project consisting of a number of District Hospitals in Zimbabwe with from 42 to 120 beds. Please note that the sizes and rates used are indicative only.

Type of Area	Area m²	Cost rate USD	Total USD
A OUT-PATIENT AREAS			
Out-patient department	280	300	84 000
Pharmacy	110	300	33 000
Emergency	210	300	63 000
Mother and child clinic	100	300	30 000
B MEDICAL SERVICE AREAS			
X-ray (1 diagnostic room)	80	390	31 200
Operating theatre (1 th.)	250	390	97 500
CSSD	140	390	54 600
Rehabilitation	240	300	72 000
C IN-PATIENT AREAS			
Labour ward (4 delivery bays)	240	300	72 000
Maternity ward (26 beds)	390	300	117 000
General ward (26 beds)	390	300	117 000
D RESIDENTIAL AREAS			
Waiting mother lodges (16)	180	255	45 900
Staff houses (70/90/120 m2)	255		
E SERVICE AREAS			
Kitchen	130	300	39 000
Laundry	100	300	30 000
Central store / workshops	100	255	25 500
F OTHER AREAS			
Administration (6 offices)	120	255	30 600
Mortuary (6/9 body chambers)	70	390	27 300
Gate house	20	255	5 100
Incinerator (lump sum)			120 000
Covered area / waiting	100		
G RURAL HEALTH CENTRES			
Type 1			
Type 2 (Mini-centre)			

For the renovation of existing buildings, a proportionate costs norm, say 60% of new buildings, should be applied Where functions are directly similar, the same amount of space should be available in renovated buildings as in new buildings.

When the costs have been calculated for all buildings to be provided on the sites, the costs of site works (total construction costs plus 12-20%), equipment (total building costs plus 20-30%) and fees (total project cost plus 12-15%) have to be added

TIME PLAN

Any time constraints regarding the completion of a construction programme to co-ordinate with other programmes, or to comply with financing should be stated as precisely as possible. From the earliest stages it is necessary to indicate the rate of investment required and show how this is related to the availability of funds.

OPERATIONAL POLICIES

The Ministry of Health will issue statements concerning its policies regarding a number of key functions, in particular, service functions These functions, which may be influential in determining the scope of the project as well as the form and content of the buildings to be provided, include the following:

- Departmental functions
- Staffing
- Referral system
- Transport
- Supplies
  - Food
  - Pharmaceuticals
  - Equipment
  - Consumables
  - Linen
- Catering
- Maintenance
- Medical gases
- Waste disposal
  - Solid
  - Office
  - Organic, hazardous / non-hazardous
- Sterile supplies
- Storage

TECHNICAL STANDARDS

Policy statements should define or rule on any expected technical issues, including:

Distilled water production
Sun-shielding, environmental requirements
Equipment for sterilisation
Toilets and sanitary installations
Shelving systems in stores and pharmacy
X-ray equipment
Kitchen and laundry equipment
Fuels for energy
Laboratory equipment
Piping generally
Stand-by electricity
Emergency lighting
Lighting generally
Nurse call systems
Anaesthetics, safety with the use of anaesthetics
Requirements for cleaning
Wall and floor finishes in special areas
Curtain rails and curtains
Screens between beds
Access for wheelchairs to specific facilities (including toilets)
Glazing to internal walls to wards
Glazing generally
Burglar bars, security
Incinerator, refuse disposal
Communications

CONTENTS OF AN OPERATIONAL POLICY STATEMENT

An Operational Policy Statement means information about the functional activities of a department or unit, which should be provided to the architects and engineers who are engaged in a civil works project.

The Operational Policy Statement should contain the following:

A NAME OF DEPARTMENT

B MAIN FUNCTIONS

C SECONDARY FUNCTIONS

D INFORMATION ON PRODUCTION

E STAFFING

F RELATIONSHIP TO OTHER FUNCTIONS

G INTERNAL ORGANISATION DIAGRAMS

FUNCTIONAL FLOW
STAFF TRAFFIC
PATIENTS TRAFFIC
VISITORS TRAFFIC
SUPPLIES TRAFFIC

H SCHEDULE OF ACCOMMODATION WITH AREAS

J COMMENTS ON RUNNING COSTS

K COMMENTS ON FUTURE DEVELOPMENTS

L NAME OF AUTHOR AND BASIS ON WHICH THE DOCUMENT HAS BEEN DRAWN UP

M RELEVANT ANNEXES)

DETAILED SCHEDULE OF ACCOMMODATION

In the final working Brief, more detailed schedules of accommodation should include all the rooms of all the departments. The schedules should relate to earlier projects and should reflect agreements between all interests (user as well as financial) on what is reasonable to have as standard policy. Realistic and affordable room sizes are essential. Here is a detailed schedule of accommodation used in the district hospitals project.

A OUT-PATIENTS DEPARTMENT

No	Room	Reqd	m^2	Comments
01	Registration	1 no	15	
02	Records	1 no	15	
03	MA Consulting / screening	2 no	15	
04	Doctor consulting	2 no	15	
05	Dentist	1 no	15	
06	Dressings / treatment	1 no	15	
07	Injections	1 no	15	
08	Dirty utility	1 no	12	
09	Laboratory	1 no	43	
10	Blood bank	1 no	15	
11	Staff room	1 no	15	
12	Staff toilet	1 no	5	
13	Cleaner	1 no	15	
14	Store	1 no	5	
15	Covered waiting area	1 no	100	For 80 people

B PHARMACY / DISPENSARY

No	Room	Reqd	m²	Comments
01	Dispensary	1 no	15	
02	Work area	1 no	12	
03	Pharmaceutical store	1 no	32	
04	District store	1 no	15	
05	Unpacking	1 no	12	
06	Covered waiting area	1 no	52	For 40 people

C EMERGENCY, MINOR THEATRE

No	Room	Reqd	m²	Comments
01	Consulting room	1 no	15	
02	Resuscitation	1 no	15	
03	Patient toilet	1 no	8	
04	Dirty utility	1 no	10	
05	Clean store	1 no	12	
06	Minor theatre	1 no	24	
07	Staff change (male)	1 no	22	
08	Staff change (female)	1 no		
09	Observation / recovery	1 no	28	
10	Duty room	1 no	12	
11	Covered waiting area	1 no	12	For 10 people
12	Covered corridor			2.4 metres wide

D MOTHER AND CHILD HEALTH CLINIC

No	Room	Reqd	m²	Comments
01	Family planning consultation	1 no	15	
02	MCH consultation	1 no	15	
03	Multi-purpose room	1 no	24	
04	Utility room / laboratory	1 no	10	
05	Assisted toilet	1 no	5	
06	Covered waiting area	1 no	30	For 30 people
07	Covered corridor			2 metres wide

E DIAGNOSTIC X-RAY DEPARTMENT

No	Room	Reqd	m²	Comments
01	Diagnostic X-ray room	1 no	30	
02	Dark room	1 no	6	
03	Viewing room	1 no	10	
04	Film Store	1 no	6	
05	Reception / office	1 no	10	
06	Ultrasound room	1 no	10	
06	Covered waiting area	1 no	15	For 10 people
17	Covered corridor			2 4 metres wide

F OPERATING THEATRE DEPARTMENT

No	Room	Reqd	m²	Comments
01	Operating theatre	2 no	34 0	
02	Scrub-up	2 no	3.5	
03	CSSD	1 no	34.0	
04	Sterile stores (theatre)	2 no	3 5	
05	Disposal / dirty utility	2 no	4.9	
06	Staff change (male)	1 no	9.5	
07	Staff change (female)	1 no	9.5	
08	Clean store	1 no	7.5	
09	Staff room	1 no	7.5	
10	Sterile store (hospital)	1 no	7.5	
11	Nurses office	1 no	6.0	
12	Recovery	1 no	19.5	4 patient trolleys
13	Dirty utility	1 no	2 5	
14	Toilet	1 no	3.5	
15	Waiting area/ corridor			2 4 metres wide

G CENTRAL STERILE SUPPLY DEPARTMENT

No	Room	Reqd	m²	Comments
01	Cleaning / sorting	1 no	15	
02	Autoclaves	1 no	6	
03	Packing	1 no	12	
04	Sterile Store	1 no	12	
05	Store for other departments	1 no	12	
06	Covered corridor		12	2 4 metres wide

H REHABILITATION DEPARTMENT

No	Room	Reqd	m²	Comments
01	Multi-purpose room)	1 no	31	
02	Woodwork / crafts)			
03	Office	1 no	8	
04	Store	1 no	8	
05	Assisted toilet	1 no	11	
06	Covered veranda	1 no	25	
07	Covered corridor		24	2.2m wide

J LABOUR WARD / DELIVERY

No	Room	Reqd	m²	Comments
01	First stage labour	2 no	20	4 beds each
02	Labour room	2 no	26	2 bays each
03	Bath / WC	1 no	8	
04	Staff Toilet / change	1 no	8	
05	Admissions room	1 no	15	
06	Midwife duty room	1 no	10	
07	Dirty utility	1 no	8	
08	Linen store / kit room	1 no	5	

09	Nursery	1 no	10	Could be in maternity
10	Covered waiting	1 no	10	for 5 people
11	Cleaners room	1 no	5	
12	Visitors toilet	1 no	5	
13	Covered corridor			2.2 metres wide

K STANDARD ACUTE WARD (IN EACH 24-BED WARD UNIT)

No	Room	Reqd	m²	Comments
01	Ward (6 beds)	4 no	34	
02	Day space / niche	4 no	8	
03	Shower / WC / wash-basin	4 no	5	
04	Duty room / nurse	1 no	10	
05	Dirty utility	1 no	8	
06	Linen store / kit room	1 no	8	
07	Ward store	1 no	8	
08	Cleaners room	1 no	8	
09	Covered Corridor			2.4m wide

CENTRAL AREA BETWEEN TWO 26-BED WARD UNITS WITH 2 BEDS

10	Side ward (2 beds)	1 no	16	
11	Bath / WC / wash-basin	1 no	3	
12	Nurses station	1 no	12	
13	Assisted bath and toilet	1 no	8	
14	Dressings / treatment	1 no	12	
15	Pantry	1 no	8	
16	Staff toilet	1 no	3	
17	Covered corridor			3.2m wide

L KITCHEN

No	Room	Reqd	m²	Comments
01	Dry Store	1 no	5	
02	Vegetable store	1 no	5	
03	Office	1 no	5	
04	Preparation area	1 no	8	
05	Cooking	1 no	26	
06	Servery	1 no	12	
07	Trolleys / wash-up area	1 no	12	
09	Staff dining / tea room	1 no	37	for 20 people
10	Cold store	1 no	5	
11	Covered corridor			2.4m wide

M LAUNDRY

No	Room	Reqd	m²	Comments
01	Dirty linen / reception	1 no	20	
02	Washing	1 no	27	
03	Mending / ironing	1 no	20	
04	Clean linen store	1 no	20	
05	Covered corridor			2.4m wide

N CENTRAL STORE AND WORKSHOPS

No	Room	Reqd	m²	Comments
01	Central store	1 no	78	
02	Office for store keeper	1 no	8	
03	Workshop/store electricians	1 no	16	
04	Workshop/store plumber	1 no	16	
05	Workshop/store carpenter	1 no	16	
06	Toilets	1 no	6	
07	Covered way			2 4m wide

O ADMINISTRATION

No	Room	Reqd	m²	Comments
01	Office (1,2 or 3 people)	6 no	12	
02	Meeting room	1 no	20	
03	Pantry	1 no	4	
04	Cleaner	1 no	4	
05	Toilet (men)	1 no	4	
06	Toilet (women)	1 no	4	
07	Covered waiting	1 no	15	for 10 people
08	Covered corridor			2m wide

P MORTUARY

No	Room	Reqd	m²	Comments
01	Autopsy room	1 no	20	
02	Body chamber	1 no	8	6 body shelves
03	Viewing room	1 no	20	
04	Doctor's change	1 no	5	
05	Cleaner	1 no	3	
06	Compressor	1 no	3	
07	Covered waiting	1 no	15	for 10 people
08	Covered corridor			

Q CENTRAL STAFF CHANGE

No	Room	Reqd	m²	Comments
01	Locker room (male)	1 no	12	30 lockers
02	Locker room (female)	1 no	12	30 lockers
03	Toilet (male)	1 no	16	
04	Toilet (female)	1 no	16	
05	Cleaner's depot	1 no	12	
06	Cleaner's duty room	1 no	12	
07	Covered corridor			2 m wide

R CENTRAL AREA FACILITIES

No	Room	Reqd	m^2	Comments
01	Visitor's toilets (male)	1 no	16	
02	Visitor's toilets (female)	1 no	16	
03	Cleaners rooms	8 no	6	
04	Electrical switchboards	8 no	1	
05	Covered seating area			
06	Covered corridor			3.2m wide

S ACCOMMODATION FOR STAFF

T WASTE DISPOSAL FACILITIES

01 Placenta pit
02 Incinerator

U WATER TANK

The room sizes shown reflect the application of an agreed flexibility to make a limited number of standard room sizes provide a maximum number of different functions. The sizes relate to appropriate structural grid dimensions. Different clients will have different policies and practices regarding room sizes.

BUILDING CONSTRUCTION NORMS AND STANDARDS

The Ministry of Works (or of Construction) will be responsible for issuing instructions to the designers regarding the technical specification of the buildings and their contents. But the Ministry of Health as the user Ministry should express its requirements / wishes / policies which are usually the result of experience from other projects.

Although preparing a specification of building elements should be done systematically it should not be started from square one every time. A specification should be developed from project-to-project as a result of post-project evaluations. It should be held in the planning department in constant readiness to be issued (together with the design Brief for each new project) or to be handed over to other organisations or donors about to carry out civil works projects. The information could be presented on two standard charts.

List of key materials, finishes, installations and fittings to be provided in the project

A list should show all the variations of building elements and components which the Ministry expect to be provided in the project. The different sizes of doors, heights of windows, types of sanitary units and so on are needed here. These sizes will accord with the functional requirements. The list could include.

Floor finishes
FL 01 Normal floors in habitable rooms
FL 02 Floors in wet areas
FL 03 Floors in clean areas
FL 04 Floors in heavy-traffic areas
FL 05 Floors in stores and other uninhabited rooms
FL 06 Floors in covered ways and waiting areas

Wall finishes
WF 01 Normal walls in habitable rooms
WF 02 Walls in wet areas
WF 03 Walls in clean areas
WF 04 Walls in heavy-traffic areas
WF 05 Walls in stores and other uninhabited rooms

Doors
DO 01 700 mm door internal)
DO 02 800 mm door internal)
DO 03 900 mm door internal
DO 04 900 mm door external
DO 05 900 mm door external, heavy duty
DO 06 1 350 mm double door, internal
DO 07 1 600 mm double door internal
DO 08 1 600 mm double door external
DO 09 Special doors

Windows
WS 01 Window seating 900 mm
WS 02 Window seating 1100 mm
WS 03 Window seating 1 500 mm
WS 04 Window seating 1 800 mm
WS 05 French windows

Hand-wash basins and sinks
HS 01 HWB in toilets
HS 02 HWB in wash rooms
HS 03 HWB for staff hand-wash
HS 04 HWB for surgeon scrub-up
HS 05 Belfast sinks
HS 06 Other sinks

Urinals
UR 01 Bean type (number)
UR 02 Slab type (length)

Baths and showers
BS 01 Bath in patients wash-rooms
BS 02 Bath in assisted baths
BS 03 Shower in patients wash rooms
BS 04 Shower in staff wash rooms
BS 05 Shower in patients reception

WCs and other large-bore wastes
WC 01 WC in public areas
WC 02 WC in patient areas
WC 03 WC in paediatric areas
WC 04 WC in staff areas
WC 05 Slop hopper
WC 06 Bedpan washer
WC 07 Plaster sink

Lighting
LI 01 General lighting
LI 02 Examination lighting
LI 03 Operating lights
LI 04 Emergency lighting

Power outlets
PO 01 240v socket outlet (number)
PO 02 380v socket outlet (number)

MOH comments regarding specification of key finishes materials and installations

GOVERNMENT OF ZIMBABWE . SECOND FAMILY HEALTH PROJECT MINISTRY OF HEALTH DESIGN BRIEF

DATE . 05 JUNE 91 MH 1

MINISTRY OF HEALTH COMMENTS REGARDING SPECIFICATION OF KEY MATERIALS FINISHES INSTALLATIONS & FITTINGS

. subject to information

FLOOR FINISHES	
FL 01 Normal floors in habitable rooms	Must not be thermo-plastic / Vinyl tiles / none slip finish – [illegible] screed [paint] [pigment]
FL 02 Floors in wet areas	Not vinyl tile, preferably terrazzo / tiles or screed with plastic finish. Should fall
FL 03 Floors in clean areas	Preferably terrazzo, or screed with plastic finish. Not vinyl tiles, none slip finish [illegible]
FL 04 Floors in heavy trafficked areas	Tiles or screed / none slip finish → check quarry tiles avail locally concrete or clay
FL 05 Floors in stores etc.	Screed .
FL 06. Floors in covered ways, etc.	Tiles or screed / none slip finish
WALL FINISHES	
WF 01 Normal walls in habitable rooms	Plaster with plastic paint 'Ks' [illegible] in wards and corridors – at least to 1.5m
WF 02 Walls in wet areas	Plaster with enamel paint : could be with glass fibre mesh .
WF 03 Walls in clean areas	Ditto .
WF 04 Walls in heavy trafficked areas.	Plaster with egg shell enamel. Hardwood crash rails .
WF 05 Walls in stores, etc .	Plaster with enamel paint / or left unplastered or unpainted.
DOORS [illegible]	mechanical
DO 01 700mm door internal .	Should be as solid as possible, with hinges and ironmongery to match .
DO 02 800 mm door internal	As above .
DO 03 900 mm door internal	As above, considere protection against trolleys etc .
DO 04 900 mm door external, normal	As above : is steel promise in Zimbabwe . Glazing if required with wire mesh glass .
DO 05 900 MM DOOR external, heavy duty .	Steel !
DO 06 1400 MM DOOR internal [double]	As above
DO 07 1400 MM double door external	As above
DO 08 1600 mm double door external	As above .
WINDOWS	
WF 01 Window frames .	Rolled steel, heavy duty .
WG 01 Glazing .	
WS 01 Security bars .	Heavy duty . Design and aesthetics are important .
WV 01 VENTILATION panels .	Steel .
HANDWASH BASINS AND SINKS .	
HS 01 HWB normal	Must not be domestic quality, legs support required . Good quality taps .
HS 02 HWB, heavy duty .	Is stainless steel promise in Zimbabwe? strong legs support important .

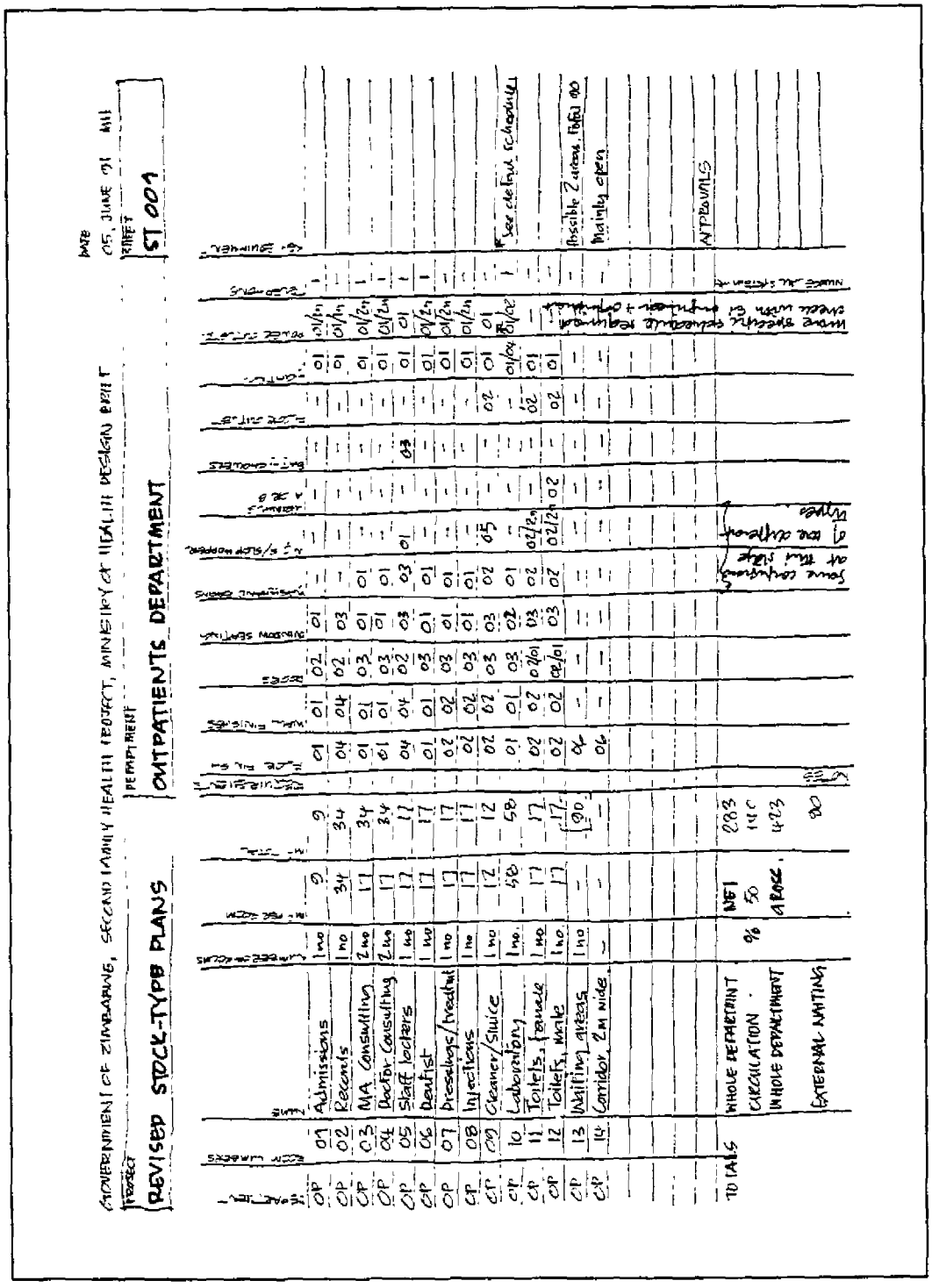
From the list shown, standard sheets can be prepared stating what the user Ministry wants provided in the buildings. It is equally important to specify what it doesn't want. These "negative specification data" can avoid the inclusion of unwanted or inappropriate items and the cost and delay of removal and replacement.

In the Brief, the user Ministry should be able to express its wishes without having to present a detailed technical specification. That is the responsibility of the Ministry of Works (or of Construction) which by using the lists and charts should be able to develop detailed instructions for the designers.

REQUIREMENTS FOR INDIVIDUAL ROOMS

Under the system proposed here the user Ministry will be able to provide detailed requirements for each room listed in the schedule of accommodation. In this way one sheet can contain detailed information on size and specification requirements of all rooms in a department.

Example of the schedule of accommodation for the OPD expanded to give specifications for the individual rooms



PRELIMINARY EQUIPMENT AND COMPONENT SCHEDULES

At the briefing stage, lists should be provided of key equipment and fittings. In combination these lists will influence the sizes and proportions of rooms. Although final decisions regarding equipment lists should be given much later in the process, it is important that these early lists be as comprehensive and realistic as possible. The designers should understand that changes are likely and must accept this.

At the early stages, the team dealing with equipment should concentrate on preparing information to be included in the architects Brief. This essentially covers fixed and loose items of equipment, which require the provision of water, electricity services or drainage, or have dimensions or requirements regarding placing which influence the size and shape of the rooms.

The information should be presented in the following sequence :

- Equipment identification lists
- Equipment specifications
- Equipment location lists, (room sheets)
- Identification of existing reusable items
- Procurement lists for individual institutions.

Seven characteristics are key considerations when drawing up the specifications of the various items of equipment:

- Economy
- Durability
- Correct capacity
- Standardisation
- Continuity of existing practices
- Ease of maintenance
- General appropriateness for use in the districts.

Throughout this work it is essential to maintain close contact with representatives of the users at both national and local level.

It is usual to divide the equipment into categories depending on the different services required by supplier / main contractor / user on delivery. This division could be:

Category 1	Equipment which is procured and installed by the contractor and which is priced for in the main contract
Category 2	Equipment which procured by the client but which is installed by the contractor, who includes changes for installation and attendance in the main contract.
Category 3	Equipment which is procured by the client and installed by the supplier, but which may require specific space or services
Category 4	Small items which do not influence the building contract.

BUDGET COSTS PLAN

This is an updated version of the costs estimate provided in the preliminary Brief and it will be compiled using the same square metre rates. Adjustments may be made to the areas involved and the rates themselves as a result of getting improved information An overall budget for the project should again be set up department-for-department with additions made for site-works, equipment and consultant's fees

ELEMENTAL COSTS

One may calculate the costs of the repair and replacement of building materials in existing buildings by apportioning the square metre rates used to the different building elements and components. This calculation is derived from experience with other projects, appropriately adjusted for expected conditions in the current project. The elemental percentages of cost for an average square metre of buildings will of course vary from building to building and from country to country. The listing here is used only as a typical example:

Foundations	4.54%	
Concrete	4.39%	
Bricklayer	12.08%	
Roofer	5.11%	(Roof covering 2.34% only)
Joiner	20.18%	
Metalwork	5.45%	
Plasterer	6.26%	(includes ceilings)
Flooring	7.91%	
Plumber	13.19%	
Glazier	1.51%	
Painter	5.12%	
Electrical Installations	14.26%	
Total	**100.00%**	

Rates for different types of building work:

		Building where m² costs are estimated as:		
Rate per m² of which	**%**	**USD 390**	**USD 300**	**USD 255**
Roof	2.34	USD 9.12	USD 7.02	USD 5.96
Walls	12.08	USD 47.11	USD 36.24	USD 30.80
Doors/windows	10.09	USD 39.35	USD 30.27	USD 25.27
Floor	7.91	USD 30.84	USD 23.73	USD 20.17
Sanitary installations	6.50	USD 25.35	USD 19.52	USD 16.57
Sanitary fittings	6.50	USD 25.35	USD 19.52	USD 16.57
Painter	5.12	USD 19.96	USD 15.38	USD 13.05
Electrician	14.26	USD 55.61	USD 42.78	USD 36.36
Ironmongery	2.72	USD 10.60	USD 8.16	USD 6.96

By collaborating with the project quantity surveyor the project team can establish precise and reliable rates for the construction works.

ACTIVITY SCHEDULE AND TIME PLAN

The Brief should indicate the user Ministry's expectations or wishes concerning the activities which will take place, its participation in those activities and the estimated time span for each activity. Much of this information can also be standardised.

FORMULATING A DESIGN BRIEF

The Ministry of Works (or of Construction) should convert the Brief, which as described so far contains only user-sourced information, into a technical Design Brief for issuing to the design team.