



# **National Programme for Control of Blindness**

## ***CONSTRUCTION OF EYE WARDS AND OT & REPAIRS AND RENOVATIONS OF EXISTING UNITS***

Guidelines



*Ophthalmology / Blindness Control Section  
Directorate General of Health Services  
Ministry of Health & Family Welfare  
Government of India, New Delhi – 110 011*

**Guidelines to Non-Project States on construction of 10 bedded Eye Wards & OT & repair and renovation of existing units.**

**Introduction**

*One of the objectives of National Programme for Control of Blindness is to enhance the capabilities of the States for sustainable eye care services in each district. For reduction in backlog of bilaterally Cataract blind persons, reach in approach is the preferred one emphasizing is low institute of surgeons. To facilitate the approach, appropriate development of eye care infrastructure through construction of eye wards and dedicated eye operation theatres is necessary. Reach out activities should be restricted to screening, motivation and transportation of patients.*

*One of the main reasons for sub-optimal performance standards of OT and wards which do not give a feeling of confidence to the patients about the quality of the services. It is therefore, necessary to have provisions for construction of dedicated eye wards and operation theatres where ever required and for provision of funds for repair and renovation to improve the condition of available infrastructure.*

*In view of the above, the proposal to expand the project component of Civil Works - construction of eye wards and operation theaters is now expanded to cover all States of UTS.*

*The construction of eye wards and OT and repair and renovation of existing units, would be undertaken by the State PWD or any other organization identified by the State.*

## **METHOD OF PROCUREMENT**

*The 10 bedded eye ward with OT has to be constructed within an areas of 230-240sq.m as per approved plan and in accordance with the technical specification forming annexure I to these guidelines. The drawings and specifications are to be followed in total and any deviations there on has to be authorized by the Ministry of Health & Family Welfare, Government of India.*

*The Procedure lays down that at least three tenders are to be called from eligible contractors working in the construction field doing similar nature of works and on the approved list of PWD or any other organization identified by the States. The invitation for bids or the notice invitation of tenders (N.I.T) should provide brief description of work, contract conditions, specifications, financing of project, eligibility requirement, time and place where tenders to be submitted. Contractor should be made responsible for all materials (including cement and steel) without depending on departmental supplies. A schedule of quantities and specifications should be prepared for each package before invitation of tenders.*

## **GENERAL TERMS & CONDITIONS OF CONTRACT**

*The construction of eye wards and OT and repair and renovation of existing units is to be entrusted to PWD or any other identified organization of the State under overall administrative control of the State Secretary of Health, Department of Health. The order for execution of works by the consultant agency to be on the pattern of deposit works procedures.*

## **WHERE AS**

- 1. Funds would be released by Government of India to respective States for this task on the basis of estimated costs and number of 10 bedded eye wards with OT proposed to be constructed and repair and renovation of existing units to be undertaken.*
- 2. The contractor shall carry out the services in accordance with provisions of the agreement and mutual understanding with the State Government.*
- 3. Payments to the agency would be in accordance with the provision of the agreement i.e. according to Deposit works procedures.*

## **GENERAL CONDITION OF THE AGREEMENT**

### **ELIGIBLE BIDDERS**

*Any agency/individuals possessing experience in work of a similar nature and on the approved list of PWD / CPWD / MES of the appropriate class and fulfilling other conditions of PWD, can be eligible bidders. Each bidder shall submit only one bid for one job.*

### **CONTRACT DATA**

*The Executive Engineers of the agency will prepare bill of quantities as per the drawings and technical specifications forming Annexure of these guidelines.*

## INVITATION OF BIDS (Annexure II)

The Executive Engineers of the agency will call for tenders by advertising in local / National Papers mentioning place and time of issue of tenders, date and time & place of submission of tenders, date and time of opening of tenders. At least 15 days time should be given to bidders for submission of their bids.

There should be at least three tenders for deciding the award of contract. A complete record should be available with Executive Engineer of the agency on the bidding / tendering process for review by the Government of India at any time.

## SUBMISSION OF BIDS

The bids submitted by the bidder should contain rates of all items of bills of quantities / (Schedule) and amount of all items along with bid security duly sealed. In case rate is not quoted for any item, it would be assumed that the bidder will execute that item free of cost. The bids should be opened at pre-advertised time and date in the presence of present bidders.

## BID SECURITY

The bidder shall furnish as part of his bid, a bid security equivalent to 3 percent of the cost estimate / the amount put to tender, in the form of a challan from Government treasury or a duly pledged deposit at call receipt or Demand Draft from any scheduled bank, pledged in favour of the Executive Engineer calling for tenders.

### EVALUATION AND COMPARISON OF BIDS

The Executive Engineer / Engineer-in-charge, will compare and evaluate the bids and determine the most responsive bid.

### AWARD CRITERIA

The Engineer-in-charge / the executive Engineer concerned will decide or forward to his superior for award of contract to the most responsive bidder who has offered the lowest evaluated bid price.

### NOTIFICATION AWARD (Annexure III)

The Engineer-in-charge will notify the award mentioning the sum, which he will pay to the contractor in consideration of execution and completion of the work as prescribed in the contract.

### EXECUTION OF CONTRACT

The Engineer-in-charge shall ensure that the contract is as per drawings and specifications of local PWD and as mentioned in these guidelines. The contractor is to construct in accordance with the drawings and specifications of the bid document (Notice inviting Tenders – N.I.T). The contractor will carry out all instructions of the site engineers and the representatives of the Engineer-in-charge, and comply the provisions of the contract.

### QUALITY CONTROL

The contractor on his own cost make arrangements for testing of building materials at site / at prescribed testing laboratories as per standard norms. The results of tests shall be properly posted in a register to be available at

site for inspection by the superior engineers and the representatives of the Government of India. If any materials fails the required specifications, should be rejected and not used at site. The site engineers / Engineer-in-charge to check the contractors work and to notify the contractors through a "Site Order Book," if any defects which he observes. The contractor is to rectify the defects and to ensure that similar defects and deficiencies should not occur again.

For any defective work both the supervisory staff of the agency and the contractor will be held responsible.

### PAYMENTS

The value of the work done is to be measured by the sub-ordinate site engineers, test checked by the superior engineers and engineer-in-charge, certified that the work has been done as per specifications, the amount payable to be recommended. The Engineer-in charge is to pay the contractor the amount certified by the site engineers without any delay and within one month of submission of the bill.

### TAXES

The rates quoted by the contractor's shall be deemed to be inclusive of all taxes on the materials that the contractor shall purchase for execution of the contract.

### FINAL ACCOUNTS

The engineer-in charge, after completion of the work in all respects shall finalize the final bill and make payment to the contractor. The engineer-in-

charge shall than submit a completion certificate with final amount of expenditure to the State Secretary Health, who will then inform the Government of India.

### DRAWINGS

A type design for a combined 10 bedded eye wards with OT is attached as annexure I, showing details of arrangement of facilities in Operation Theater areas and the wards areas with toilet blocks etc. The type design could be adopted in total or with minor changes within an area ranging from 230 to 240 sq. m as per details given below.

Space for wards including store & duty room	800 sq.ft
Operation Theater Complex	1000 sq.ft
Toilets	300 sq.ft
Circulation area 25%	425 sq.ft
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Total	2525 sq.ft
	235 sq.m

Say between 230-240 sq.m

### TECHNICAL SPECIFICATIONS

Besides local PWD specifications, following technical specifications are to be followed. Any deviation there on has to be referred to Government of India for prior review and approval.



## SITE SELECTION

Criteria for selection of sites are

1. Where eye beds are not already provided for or are inadequate
2. Where eye surgeons are posted
3. Where sufficient number of Cataract Operations and other eye surgeries are not performed due to lack of facilities.
4. Population of the district and already available beds in the existing hospitals should be taken into consideration before deciding the civil work sites and number of beds to be constructed / added.
5. The site selected should be nearer to the existing OPD and wards and shall form part of the existing hospital complex. Site should not be away from the main building of the hospital.
6. The site should not be near incinerator, mortuary and any other potentially unhygienic structure.
7. The site selected shall be connected by a covered and short corridor so as to enable the movement of patients, doctors, nurses and other staff and serving of food etc.
8. The CMO/M.S of the hospital and Ophthalmologists should be consulted in selection of most suitable site within the compound of the existing hospital and fulfilling all the above requisite conditions.

## FOUNDATIONS

The foundations shall be decided by nature of the soil. A black cotton soil shall need deeper foundations and a cushion of sand filling. A rocky soil will need stepped foundations and for ordinary soil, spread footing foundation with load bearing walls shall be provided.

The foundation masonry shall be in building material locally available and adopted for similar construction with cement mortar 1:6 (1cement : 6 sand)

## PLINTH

For black cotton and expandable soil, plinth and tie beams of R.C.C 1:2:4 shall be provided. No DPC shall be needed further.

For other soils. Plinth shall be in brick or stone masonry (which ever is available locally and economically) in cement sand mortar of 1:6 mix and shall be 35mm / 40mm thick for brick / stone masonry respectively. A layer of DPC in 1:2:4 cement concrete of 50mm thick shall be laid at plinth level. The plinth height to vary between 45-60 cm depending on the existing plinth level of the district hospital building.

## SUPERSTRUCTURE

The super structure shall be in 23 cm thick brick masonry or 35 cm thick stone masonry depending on availability and economy of bricks and stones, in cement mortar of 1:6 mix (a cement: 6 sand). The height of the walls shall be in conformity with the existing building.

## ROOF

The roof shall be of R.C.C 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate). Thickness to be according to the design and load conditions.

For hilly areas sloping roofs as per local traditions to be adopted.

## DOORS & WINDOWS

The door and window frames shall be of M.S section with Red oxide Coat of anti-corrosive paint on the exposed side and bitumen paint on inside.

The doors shutters shall be either flush doors with commercial ply on both sides or plastic fiber depending on availability and economy aspect.

The windows to be of glazed, section windows. The doors & windows shutter shall be painted with synthetic enamel paint with 2 or more coats over a priming coat.

MS Grills to be provided in the windows for safety and security.

## FINISHING

The walls shall be finished with 15 mm thick cement & sand plaster of 1:6 mix on rough face and with 12 mm thick on smooth face.

Exposed surface of RCC shall be finished with 12 mm thick cement sand plaster of 1:3

## PLINTH PROTECTION

Plinth protection to be provided for 60cm width on outside around the building at ground level with 50mm, 1:3:6 mix cement concrete over 75mm thick compacted layer of brick aggregate impregnated with fine sand.

Inside walls to be white washed with 3 or more coats. Outside walls to be painted with water proof cement paint, 2 or more coats over a priming coat of white cement paint.

## ROOF TREATMENT

The terrace plan with proper marking of ridge and valley shall be prepared and, rain water spout position marked for draining rain water from the roof. The roof terrace shall be provided with mud phuska as specified in PWD/CPWD specifications or the roof shall be treated with water proofing compound and brick tiles laid over it in accordance with the specifications adopted for similar buildings in the district.

## DRAINAGE OF RAIN WATER

100mm dia PVC pipes shall be provided and fixed with clamps from roof to ground level at the places marked in the terrace plan to drain out the rain water.

## FLOORING

The flooring to be Kota stone flooring with 35mm thick stone slabs of suitable sizes over a cushion of cement concrete 1:5:10 mix. The flooring to be rubbed and polished complete as per specifications.

*At places where Kota stone is not available or not economical similar stone locally available to be used.*

### ALLUMINIUM DOORS

*At the entrance to the building and for OT entrance Aluminum anodized swing doors to be provided with glazing and locking arrangement.*

*All Doors and windows to be provided with wire gauge or mosquito proof netting extra shutters for keeping flies and mosquitoes away.*

*In toilets, the windows provided to be at higher level than the other windows and sizes to be smaller.*

### AIR CONDITIONERS IN OT

*Space for fixing air conditioners and the electric points to be provided in OT at a height of 2.00meter. The Ac's will be part of furnishing.*

*In the scrub room, a long arm tap to be provided and not a ordinary tap.*

### DADOS

*Ceramic white glazed tiles dado to be provided to a height of 1.20m in wards, 2.10 meter in toilets and up to ceiling height in OT.*

## ELECTRIFICATION WORKS

### 1 Ward Lighting

General : Fluorescent lamp fitting with opal acrylic diffuser with centralized control to be provided.

Night Light: Low Wattage wall recessed light, 30cm above floor level with diffuser screen with centralized control to be provided.

Examination Light : Separate lamp on wall to read charts etc to be provided.

### 2 OT General Lightning

High lux out put shadow less central light plus mirror optics luminaires.

### 3 General Area Lighting

Wall / ceiling mounted fluorescent lamp at level of 150-300 lux,

### 4 Area compound Lightning

Suitable outdoor type light fitting depending upon site condition.

### 5 Power Source

State Electricity Board / Spare power from adjacent hospital.

### 6 Fans

Adequate no. of fans for wards

1 fan for nurses station

1 fan in waiting area

1 fan in Doctor's room

1 fan in OT preparation area.

### 7 Generators

Arrangement for generator connection to be made for OT.

## SANITARY AND WATER SUPPLY

*Necessary sanitary and water supply arrangement shall be made as per local/PWD specifications adopted for similar buildings.*

*Rough estimates for electrifications works to be 10% of the building cost and for sanitary and water supply to be 7 to 10% of the building cost.*

## DEFECTS LIABILITY PERIOD

*There shall be a defect liability period of 12 months from the date of completion. The agency shall get the rectification of defects from the contractor during this period. Release of security deposit to the contractor to be made only after completion of defects liability period and on the certification that rectification of defects completed.*

## REPORTING OBLIGATIONS

*The agency shall submit to the client the reports such as progress reports, statement of expenditure etc regularly every month. The State Government shall then forward such reports to Government of India on a quarterly basis.*

## INSPECTION AND AUDITING

*The construction agency shall permit the representative of Government of India to inspect the construction sites and accounts and records relating to the performance*

## DESCRIPTION OF THE SERVICES OF CONSULTANTS

*The specific tasks to be performed by the Construction agency (PWD etc) are as follows :*

1. *Site Survey*
2. *Preparation of Architectural and working drawings for Civil, electrical & Public Health Works.*
3. *Preparation of detailed design, specifications, bill of quantity and bidding document (NIT).*
4. *Prepare invitation for bids and arrange for its publication in newspapers of general circulation in all parts of the States.*
5. *Sale of bid documents.*
6. *If required, arrange pre-bid conference for purchasers of bid document and meeting in connection with procurement activities. Provide clarification to queries regarding bid documents raised by prospective / likely bidders.*
7. *Receipt of bids, and opening of bids at the stipulated time and place. Examine bids on the basis of the guidelines.*
8. *Evaluate and compare bids for purpose of award of contract. Department of Health, representative should participate in evaluation process.*
9. *Award of work contract.*



10. *Execution of contract agreement with selected contractors on behalf of Medical & Health Department of the State for construction of Works.*
11. *Supervision of works, quality control, checking contractors bills, payment to construction agency on behalf of Medical & Health department of the States.*
12. *Handling over of the completed building with civil, electrical and PH fittings.*
13. *Supervision of defects, if any during the defect liability period of 12 months.*
14. *Execution of works on the order of the client on the basis of "deposit works" procedures.*

### REPORTING REQUIREMENTS

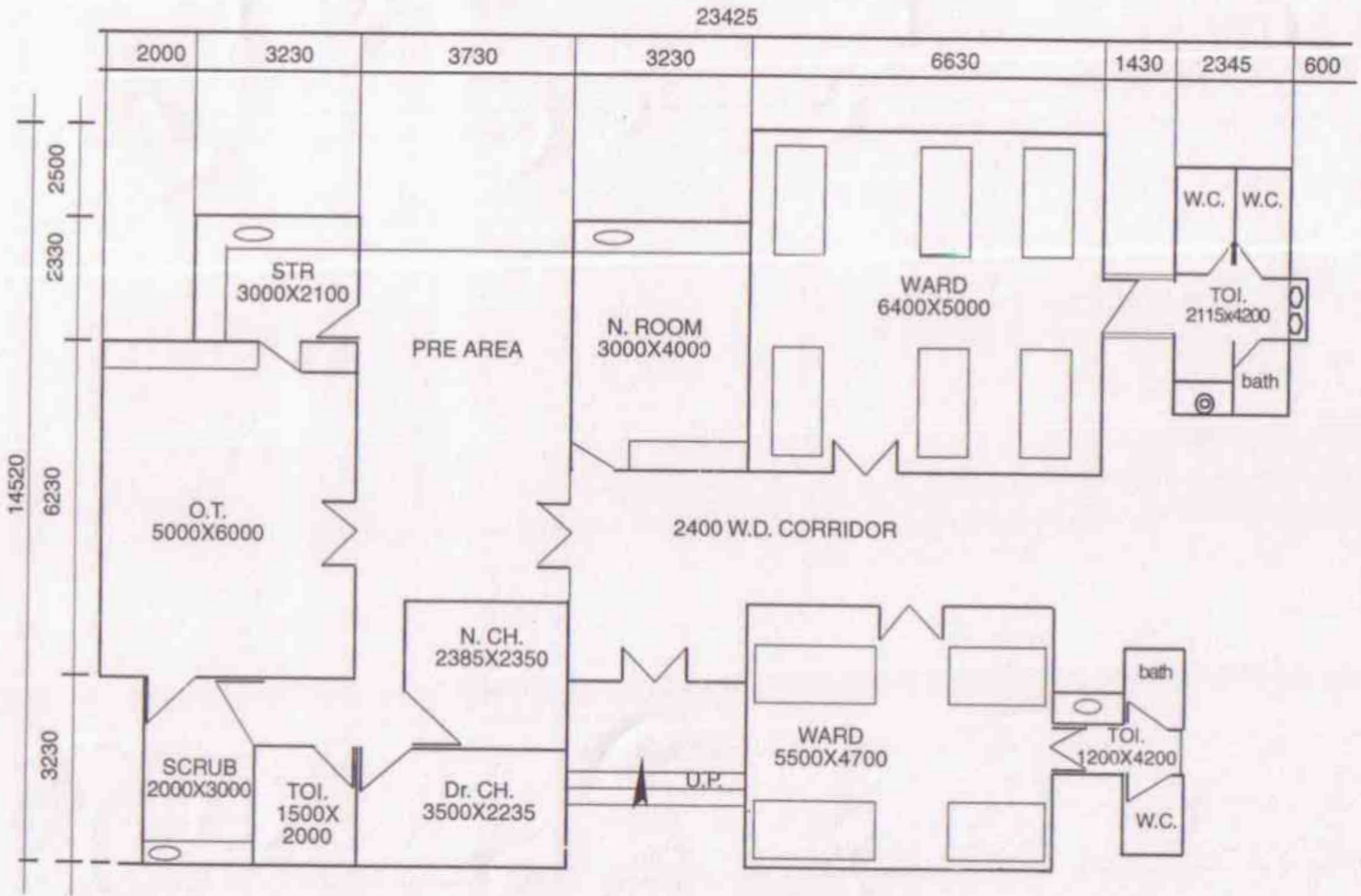
1. *Preparation of bar charts for civil, electrical and PH works.*
2. *Monthly progress reports both Financial as well as physical.*
3. *Quarterly cash flow statements.*

*SERVICE AND FACILITIES TO BE PROVIDED  
BY THE STATE GOVERNMENT*

1. *List of locations where 10 bedded wards & OT to be constructed and repairs and renovation of existing units to be done, are to be given to the agency.*
2. *Availability of land at hospital locations to be handed over to the agency.*
3. *Release of funds for payment to contractors as per bills submitted by the contractors.*
4. *Monthly review of works and solution of site problems if any.*
5. *Approval of site specific drawings for each type of plan and giving administrative approval.*
6. *Arranging audit of all expenditure*
7. *Taking over all of buildings once they are completed for use.*
8. *Application to State Electricity Board for external electric connection of completed buildings and to local municipality for external sewer and water connection to the buildings.*

ANNEXURE-I

O.T. WITH 10 BED EYE WARD



AREA 238.00 sq. mt.