SPECIFICATIONS OF BUILDINGS

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Table of Contents

- Definition
- Factors
- Classification
- General Specifications for buildings
- Detailed Specifications for buildings
- General Specifications for roads

Definition

- Describes the nature and class of work, materials to be used in work etc.
- Describe quantity of materials, proportion of mortar, workmanship etc. which are not mentioned in drawings.
- Drawings and Specifications collectively define the full structure.

Factors

The factors on which specifications depend upon are mentioned below :

- Nature of the work
- Strength of materials
- Availability of materials
- Quality of Materials

Classification

Specifications are of two types :

- General or Brief Specification : It is different for different classes of buildings i.e.
  - First Class
  - Second Class
  - Third Class
  - Fourth Class
- Detailed Specifications

General Specification
(for First Class Buildings)

- Foundation and Plinth :
- DPC : 1:1.5:3 cement concrete of 1” thickness with standard water proofing material mixed with cement and two coatings of bitumen
- : : Flooring :

General Specifications
(Foundation and Plinth)

- First Class Buildings
  Ist class brickwork in 1:6 cement mortar over 1:4:8 cement concrete
- Second Class Buildings
  Ist class brickwork with lime mortar over lime concrete
- Third Class Buildings
  IInd class brickwork in lime mortar over lime concrete
- Fourth Class Buildings
  Sun-dried or kutcha bricks in mud mortar

General Specifications
(Damp Proof Course)

- First Class Buildings

  1:1.5:3 cement concrete of 1” thickness with standard water proofing material mixed with cement and

of bitumen

- Second Class Buildings

  1:2 cement mortar of 2cm thickness with standard water proofing material

- Third Class Buildings

  1:2 cement mortar of 2cm thickness with standard water

material

- Fourth Class Buildings

General Specifications

(Superstructure)

- First Class Buildings

  First class brickwork with 1:6 cement mortar. Lintels over doors and windows shall be of RCC.

- Second Class Buildings

  Second class brickwork in lime mortar. Lintels over doors and windows shall be of RB.

- Third Class Buildings

  Second class brickwork in mud mortar. Doors and window openings provided with arches of second class brickwork in lime mortar or wooden planks

- Fourth Class Buildings

  Sun-dried or kutcha bricks in mud mortar. Doors and window openings provided with arches of second class brickwork in lime mortar or wooden planks

General Specifications
(Roofing)

- First Class Buildings

  Height of rooms shall not be less than 12'. Over RCC slab insulation layer should be provided.

- Second Class Buildings

  R.B. slab with 7.5cm lime concrete terracing aove (Flat terraced roofs over wooden beams or Jack arched roofs)

- Third Class Buildings

  Mud over bricks or planks over wooden beams OR G.I. sheet sloping roof

- Fourth Class Buildings

  Tile roof over bamboo and wooden supports

General Specifications
(Flooring)

- First Class Buildings
  2.5cm cement concrete over 7.5cm lime concrete
- Second Class Buildings
  2.5cm cement concrete over 7.5cm lime concrete. Verandah floor shall be of brick tile over lime concrete
- Third Class Buildings
  Brick on edge floor over well rammed earth
- Fourth Class Buildings
  Kutcha floor or earthen floor finished with cow-dung lapping.

General Specifications
(Finishing)

- First Class Buildings

  Inside and outside shall be 12mm cement lime plastered 1:1:6. Inside and outside whitewashed with interior distempered

- Second Class Buildings

  Inside and outside shall be 12mm cement mortar plastered 1:6. Ceiling shall be cement plastered 1:3. inside and outside whitewashed

- Third Class Buildings

  Inside and outside shall be plastered with lime mortar and whitewashed

- Fourth Class Buildings

  Inside and outside shall be water proof mud plastered

Detailed Specifications

Sample of Detailed Specifications of building works is mentioned on link mentioned below :
http://www.dudbc.gov.np/uploads/default/files/945fbff43121355eead2401e84446cb5.pdf

General Specifications (Roads)

- **Subgrade** : Well consolidated and compacted with camber 1 in 60
- **Soiling** : Minimum 1’ wider than metaled width of road with –
  - Over burnt bricks filled up with sand and 1” thick earth lightly compacted
  - Stone boulders 6” thick well packed and compacted earth over it
- **Inter Coat and Top Coat** : Stone ballast or over burnt brick ballast of 4.5” and consolidated as well as compacted to 3”

General Specifications (Roads)

- **Bitumen first coat** : Stone grit of 20mm gauge at 220 kg asphalt or Tar no.3 and 1.35 cum stone grit per 100 sqm.
- **Bitumen second coat** : Stone grit of 12mm gauge at 120 kg asphalt and 0.75 cum stone grit per 100 sqm.
- **Brick Edging** : Over burnt bricks on both sides
- **Misc.** :
  - **For heavy traffic wearing surface may be provided with cement concrete**
  - **If subgrade is soft or weak well compacted thick sub base of inferior materials to be used**