

# ***ACCESS AUDIT REPORT***

## ***Of***



*By*  
***Sanjeevani Creations***  
***A-130, Surajmal Vihar,***  
***Delhi.***  
***Email: [sanjeevanicreations@gmail.com](mailto:sanjeevanicreations@gmail.com)***

***Access Audit-Kendriya Vidyalaya,J.N.U. Campus***



# INTRODUCTION

## INTRODUCTION

*The Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act 1995 is a milestone as far as rights of the persons with disabilities (PWD's) in India is concerned. Its chapter on "Non Discrimination", Section 44 to 46, calls for accessibility in both the built environment (Internal/ External) and transportation. The School of Chief Commissioner for Persons with Disabilities (O/o CCPD) has been working tirelessly to achieve the gigantic task of "Access for All". Article 9 of The UN Convention for Rights of Persons with Disabilities (UNCPRD) also stresses on the "Accessibility" and "Universal Design". India is a signatory and ratified UNCPRD.*

*BROTHERHOOD, a socio-cultural organization, has been organizing various orientation, interaction and association programmes to bridge the gap in perception between children with disability and other children in schools since 1994 through the ORIENTATION, INTERACTION AND ASSOCIATION MODEL (OIA MODEL).*

*With a view to ascertain the details of accessible features in the existing facilities and to suggest improvements, if required, Brotherhood decided to organize access audit of Kendriya Vidyalaya at JNU through Sanjeevani Creations, an organization specializing in Universal Design. It is important to mention that Access Audit is not a fault finding exercise. Its objective is to contribute to the creation of a better universally accessible infrastructure by assessing the accessibility of the facilities and suggest improvements, if necessary. The Access Audit of School Building of Kendriya Vidyalaya was conducted to confirm that the guidelines on accessibility have been followed in construction/up gradation of the place and to include any point that may have been missed out. At this stage, it also intended to include, any point which is unknowingly or inadvertently missed out.*



*The report recommendations only include what is achievable and does not contain standards as it has been adhered in making of the venue. We once again appreciate the determined efforts of Brotherhood to make the said premises accessible to all. We wish them all success and support.*

*Sudhir Bansal*

*Director*

*Sanjeevani Creations  
A-130, Surajmal Vihar,*

*Delhi-110008*

*09871045546*

[sanjeevanicreations@gmail.com](mailto:sanjeevanicreations@gmail.com)

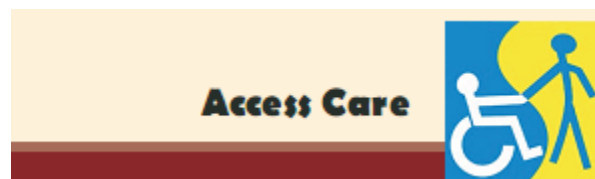
### **About Sanjeevani creations**

Sanjeevani Creations is an organization comprising persons with diverse disabilities, professionals i.e. Architects, Engineers & Others having expertise in Universal Design & access for all.

Its members devoting their time professionally, voluntarily or honorary services are trained by UNESCAP & training program of the **Handicap International India, Delhi.**

1. Put together the resource team has the experience of over 300 access audits & executions all across the country.
2. The resource faculty also conducts sensitization programs & training of trainers courses on “**Universal design**” & “**Accessibility for all**” for professionals & Organizations.
3. It is an upcoming organization & its website is under construction.

**Access Audit-Kendriya Vidyalaya,J.N.U. Campus**



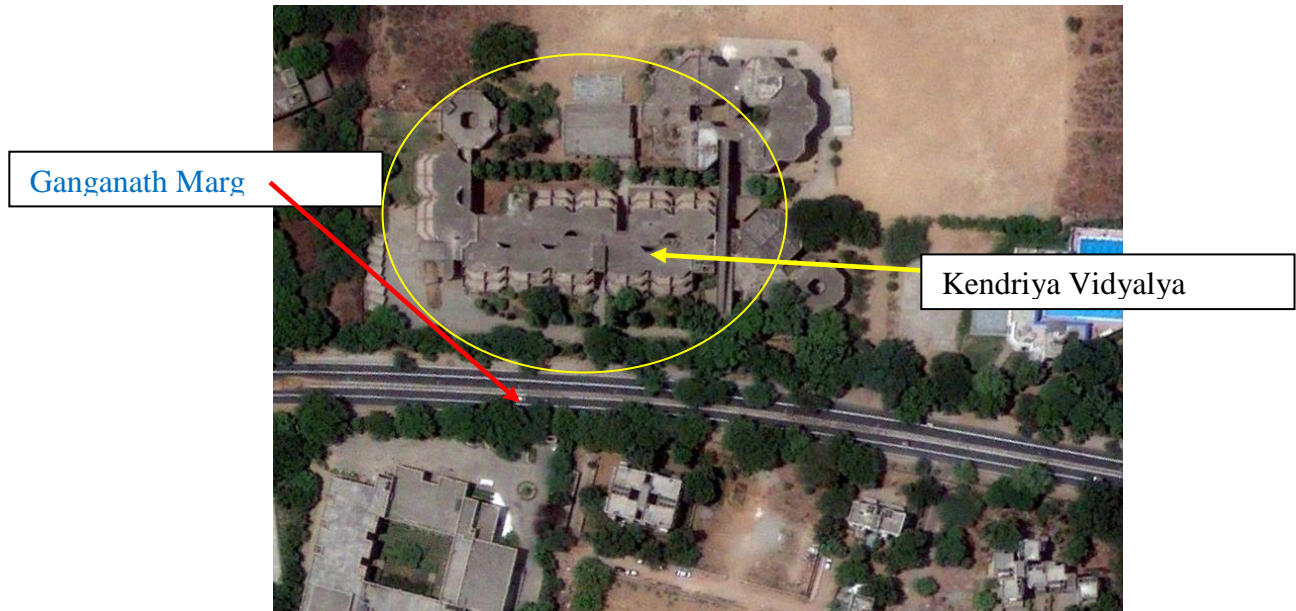
The team covered the following points

- Full inspection of the premises
- A written report
- Recommended action
- Layouts, drawings and pictures explaining barriers



# 1 APPROACH

The approach road to the school is Baba Ganganath Marg near JNU Campus, New Delhi



## 1.1 Roads & pathways/walkways

The pathway before the Entrance of the building is merging with the side entry road with adequate slopes making it accessible for all.



It is needed to pave the existing slopes with hard material to make them more accessible.





## 1.2 Entrance gate & signage

- 1.2.1 The Signage is provided with good colour contrast, font & size, The location of signage is good & helps to identify the location of the school building.
- 1.2.2 For the Entrance of Vehicles as well as pedestrians there is swing type metal gate, with a guard who manually operates the gate. The path material used at the entrance is not in good condition.
- 1.2.3 Krebs stone provides orientation clue to students with vision impairment. However, on reaching the main gate, the clue is lost.
- 1.2.4 Cobbler stone flooring (due to unevenness is not advised for flooring) as it causes inconvenience to persons with mobility impairments using mobility aids like wheel chairs, crutches, walkers etc. Only thing needed is to fill the gaps in between the cobbler path paving.

## Suggestions

- ✓ Pavement should be dropped, to be flush with roadway, at a gradient no greater than 1:12 on both sides of necessary and convenient crossing points with even/smooth finish
- ✓ Signage for the pedestrians including **access symbol** to be provided at these gates



### 1.3SIGN BOARD

- ✓ Signboards to be provided at strategic location(one at the bus stand)
- ✓ All signage to be mounted 2000mm from the footpath level
- ✓ The individual characters to be bold and the color should be in contrast to the background.
- ✓ On the right side of the main entrance it is proposed to install a **Braille Tactile map** to orient students with vision impairment.
- ✓ For orientation and to avoid the above mentioned problem; it is suggested to provide a tiled pathway (900mm min. wide), preferably in colour contrast, on both the sides of the pedestrian entrance, on the cobbler stone.



### 1.3 Guard Room.

1.3.1 The guardroom is located at right side just after the main entry gate

1.3.2 The height of telephone counter is 800mm & projected 150 mm from the wall.

1.3.3 The protruding sharp edges of the telephone counter could be dangerous for students with low vision. It is needed to round off the edges.



Proposed parking space

### 1.4 PARKING

- ✓ There is parking space for scooters and cars.
- ✓ Reserved parking for PwDs is proposed just next to the main entrance.

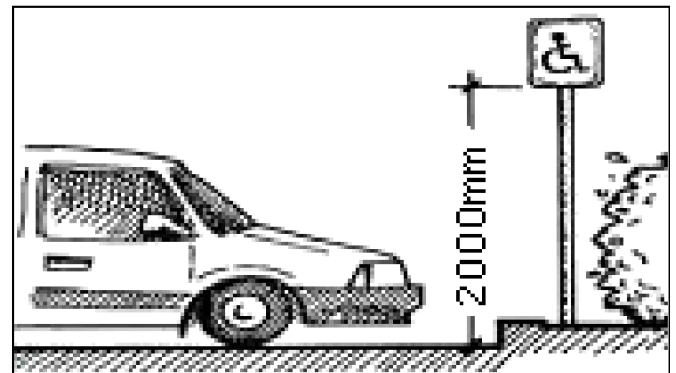
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**Access Care**

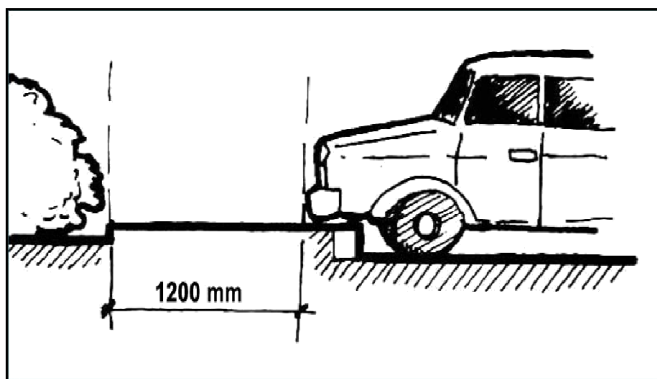




- ✓ Parking should be within 30 meters of the main entrance of the building.
- ✓ Two accessible parking lots with overall minimum dimension 3600mm x 4800mm, should be provided.
- ✓ It should have the international signage painted on the ground with contrasting colour and also on a signpost\ board put near it.
- ✓ There needs to be directional signs guiding students to the accessible parking. All security guards/staff should be sensitized and well informed about these reserved parking for PwDs.



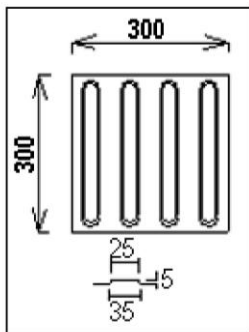
### Proposed signage for reserved parking



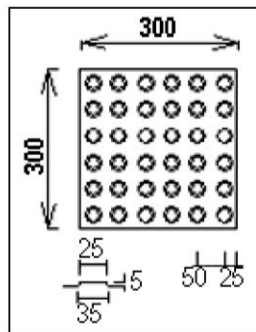
## 1.5 Tactile Surfaces / Guiding strip & Warning blocks

1.51. **Line-type blocks** indicate the correct path/route to follow.

1.52. Dot-type blocks **provides warning signal, to screen off obstacles, drop-offs or other hazards, to discourage movement in an incorrect direction and to warn of a corner or junction. Should be placed 300mm at the beginning and end of the ramps, stairs and entrance to any door.** Line-type blocks indicate the correct route to follow.



**Guiding path**

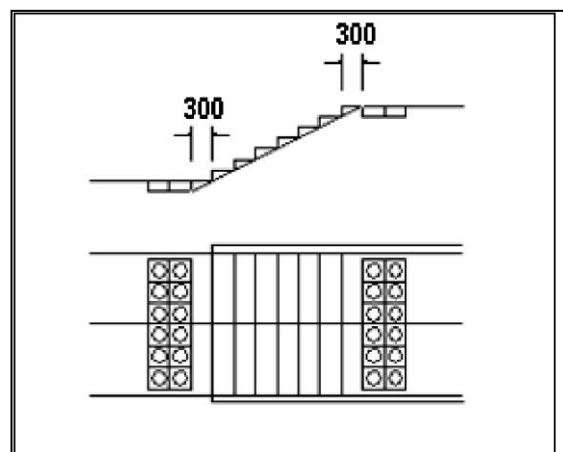


**Warning strip**



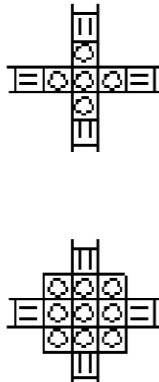
### 1.5.3 Places to install guiding blocks:

- ✓ In front of an area where traffic is present.
- ✓ In front of an entrance/exit to and from a staircase or multi-level crossing facility. Sidewalk section of an approach road to a building.



## Arrangement of guiding blocks for persons with visual impairment

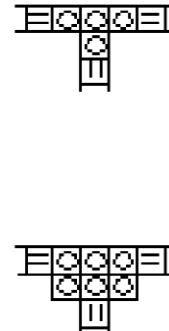
### EXAMPLE OF INTERSECTION



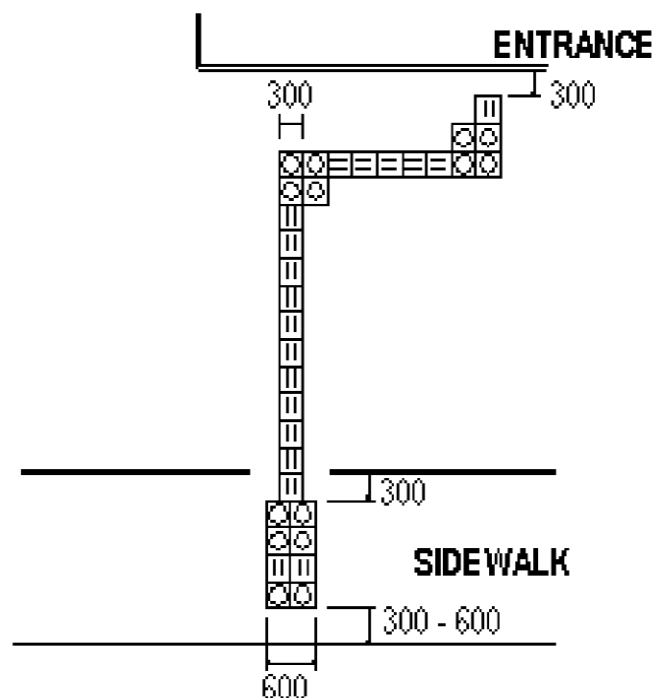
### EXAMPLE OF L-SHAPED INTERSECTION



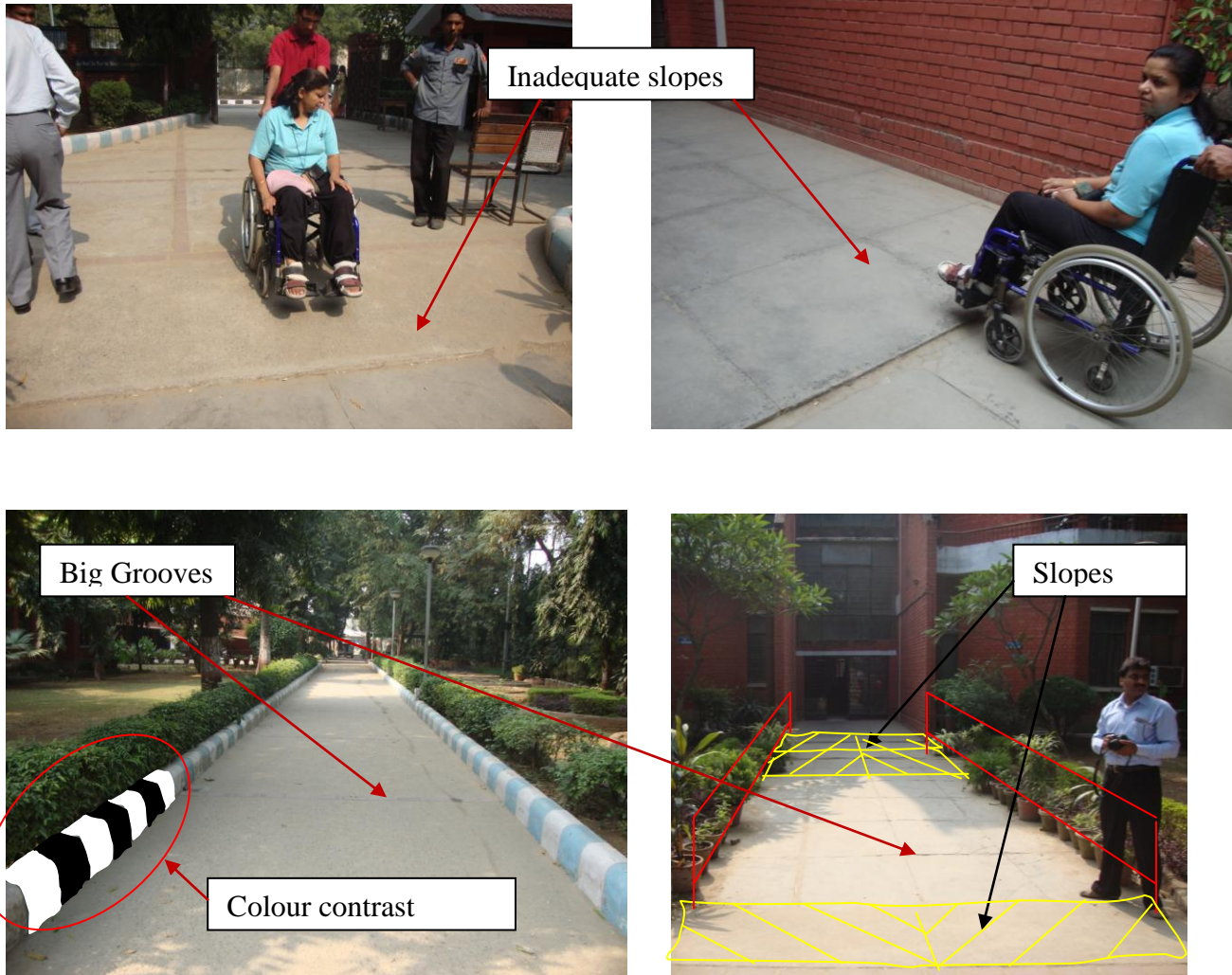
### EXAMPLE OF T-SHAPED INTERSECTION



### Guiding path and approaching sidewalk to the building



## 1.6 Pathways



1.6.1 The Pathways were 2.0 m. wide.

1.6.2 Some pathways were having the curb stone on either side with blue white colour combination. It is suggested that the instead of blue & white colour , there should be yellow & black colour, as during the bad visibility, these colour cues are important for good orientations.

1.6.3. Some pathways were having flowerpots on either side which could mislead the Students with low vision or could be dangerous also. It is suggested that a guard rail of contrasting colour to be provided @900mm & 300 mm before the flowerpots for the good orientation.

1.6.4. Ramped pathways of inadequate slopes were noticed at some places before entry to **Access Audit-Kendriya Vidyalaya,J.N.U. Campus**



school building. It is suggested that these ramps should be repaired by providing the slope of max. 1:12 with contrasting & non slippery surfaces. It is also suggested that warning tactile to be put 300 mm before starting & after ending of ramp.

1.6.5. Big joints were noticed in the pathways. It is suggested that these joints to be filled with mortar.

1.6.6. The pathways should have sign system describing the destination they are cater for.



## 1.7 Entry to School

1. There are two main entries to the school building.
2. One entry is through the staircase with the double leaf door of 900 mm width each. & discourage the wheel chair entry.
3. The colour of the door frames are not in good contrast. It is suggested that same should be painted in contrasting colour
4. No signage is found at required locations.
5. At one of the entrance, grooved drain cover is found. It is suggested that the same should be painted in contrasting colour.

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## Suggestions

- ✓ Braille plates with the name of the school/room of the school, for persons with vision impairment on all handrails to be provided

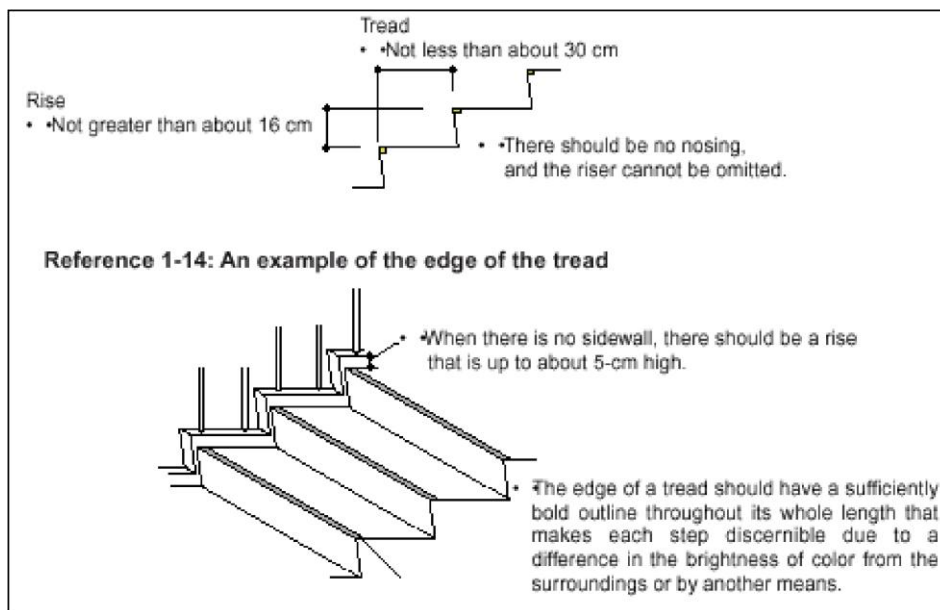
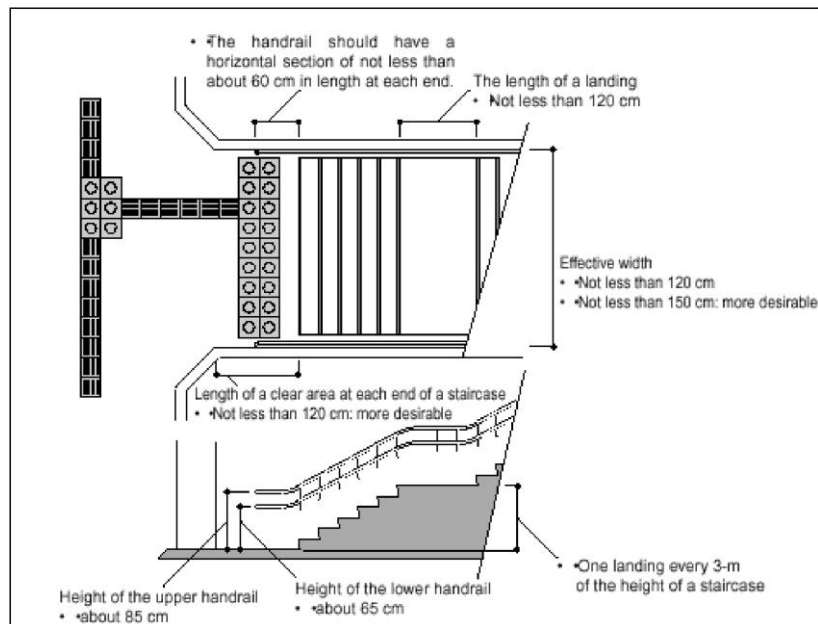
### 1.8 Staircase

1. The main staircase is 1200 mm wide
2. Handrails are not as per required design and wall side should have handrails.

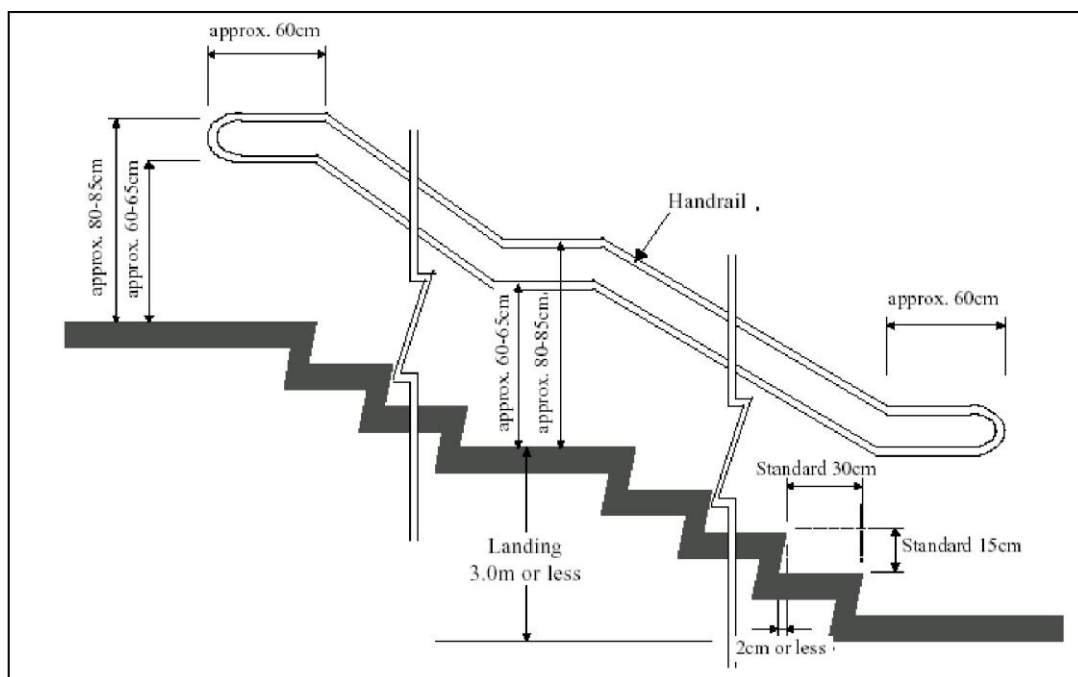


## Suggestions

- ✓ Warning strip and edges of the steps, to be as per standards mentioned earlier.
- ✓ Color contrast in the steps and flooring can be provided for persons with low vision.
- ✓ Braille Plates should be fixed at starting & ending of handrails describing about the no. of steps, landings, destination i.e. going to first floor, etc.



## Detail of Tread and Riser



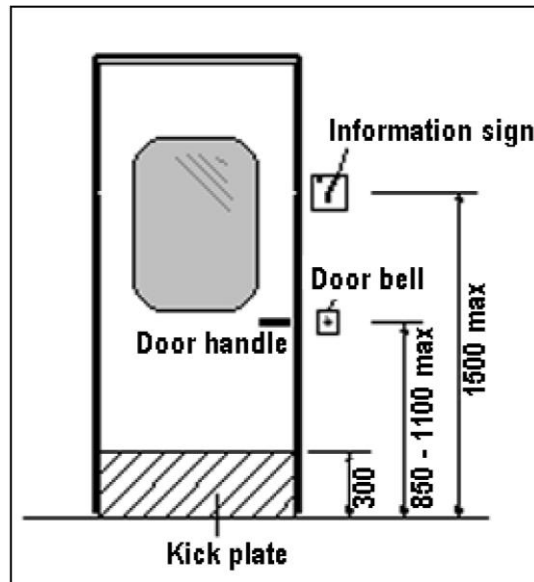
**Detail of Hand rail**

## 1.12 SIGNAGES

Signage outside rooms is mounted too high and is not clearly visible.

### Suggestions

- ✓ **Signs** side of all doors).should be mounted between 1400mm and 1700mm from floor level (preferably on right
  - ✓ The individual characters between 15mm-50mm tall and raise by 1-1.5mm.
- Signage, nameplates and numbers of the rooms** to be in Braille & raised alphabets at the eye level, on the wall, bold & color contrasted with their background.



## 1.9 FOOT MAT

- ✓ All foot mats to be embedded in the ground in a niche.
- ✓ Rubber foot mats can replace the coir mats.

## 1.10 THRESHOLD AT ENTRANCES

A Level difference is noticed at the junction of rooms and connecting corridor

- ✓ All level difference should be smoothly merged by providing the beveled edge for an easy use

## 1.11 CORRIDOR



1.11.1. Big spacious corridors are provided.

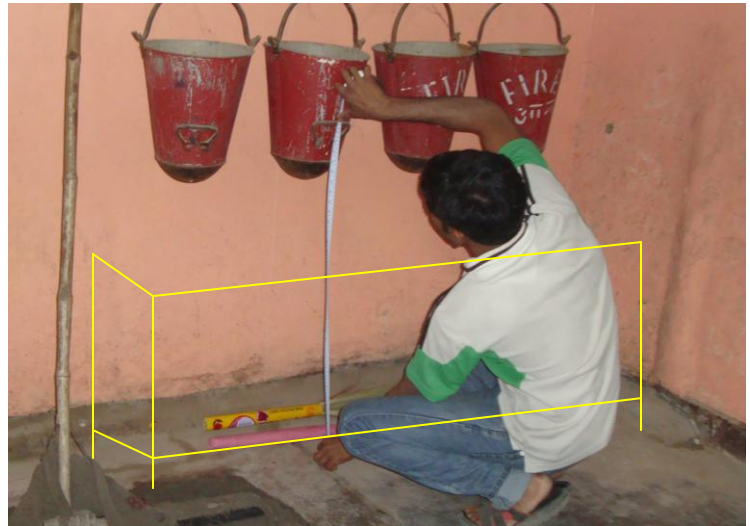
1.11.2 Level differences were noticed. It is suggested that these differences could be

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terminated by providing the beveled edges of slope 1:12.

1.11.3 The columns should have 50 mm wide contrasting colour bands @ 300, 900 mm. & 1200 mm from finished floor level.

1.11.4 The boxes for fire hydrant were protruding in the corridor which can be very dangerous.



It is suggested that either put the fire fighting & other equipments in niche or put guard rail upto 2'-0" from finished floor level

1.11.5. It was noticed that the bottom of collapsible gate were jutting out from the floor which is creating hindrance in the movement.



It is suggested that the bottom rail of the gate should be flushed in the floor as shown in the *Access Audit-Kendriya Vidyalaya,J.N.U. Campus*



photograph with leaving big gaps in between.

### 1.12 Ramps

- ✓ It was noticed that a ramp leading to first floor has been provided near one of the entrances.

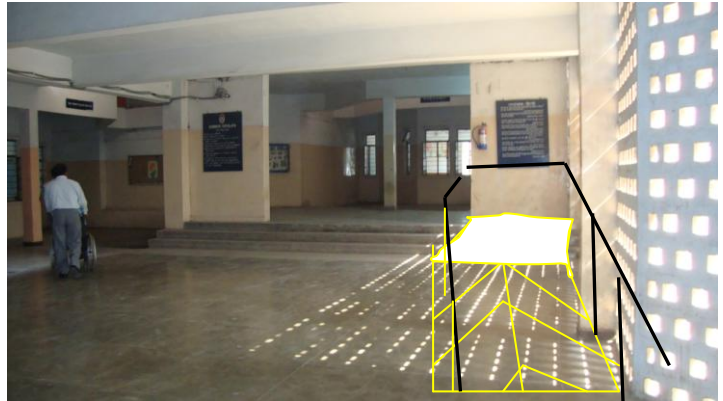
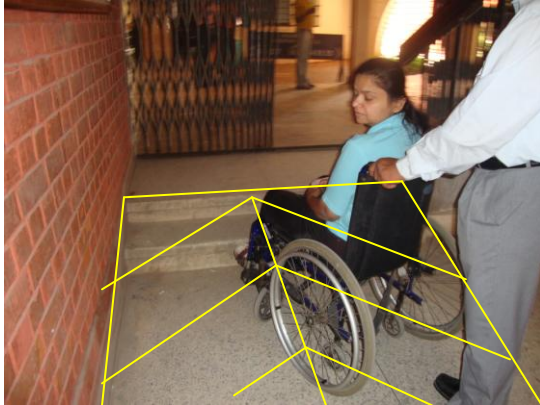


- ✓ The width of the ramp was 1.8 m.
- ✓ The length of the ramp was very long & no landing was found after 9.0 m.
- ✓ No handrails on any side of the ramp were found.

### Suggestions

- ✓ The handrails of 38 mm dia. to be provided on both sides of the ramp @ 900 mm & 750 mm from finished floor level.
- ✓ The colour of the landing surface should be in contrast with the sloped surface of the ramp.
- ✓ It is suggested that warning tactile of contrasting colour to be put 300 mm before starting & after ending of ramp.

### 1.13 Small Ramps.



- ✓ It was noticed that few facilities (i.e. Entry from staircase & hall at the end) are accessed only by the steps.
- ✓ It is suggested that ramp of min. width 1.2 m with gradient of 1:12 should be provided at appropriate location.
- ✓ There should be handrails of design specified earlier on both side of the ramps & at the big level differences as shown below.



### 1.14 Soffit Area below staircase & ramps

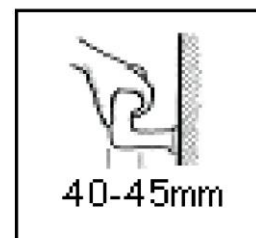
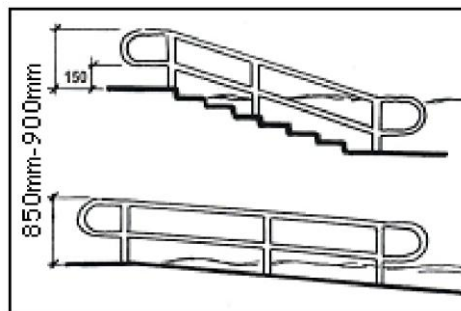


- The area below the Soffit of ramp with height below 2.1 m. can be dangerous for student with vision impairment as the spaces above 0.6 m cannot be identified by the white cane.
- ✓ Therefore it is suggested that such area should be enclosed by putting rails as shown.

### 1.17 Handrail

- ✓ All handrails should be circular in section with a diameter of 40-45mm; at least 45mm clear of the surface to which they are attached; at the height of 850mm-900mm from the floor, extend by at least 300mm beyond the head and foot of the flight and ramp in the line of travel and grouted in the ground. Both on ramps and stairs, Braille plate stating the area/location where the handrail is installed to be provided.

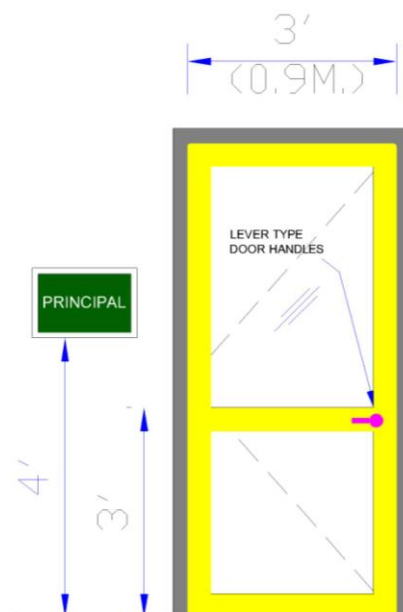
✓





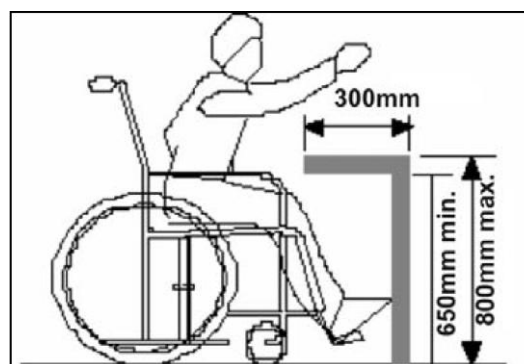
### 1.15 Principal's room

- Glass Door with a width of 780 mm was found in Principal's office & it is difficult for any parent or student using crutches, wheelchair or white cane.
- The signage provided at the door @ 1800 mm from finished floor.



- The counter of Principal's table with counter height of 760 mm and good leg space was observed with a flexible space for wheelchair.
- ✓ It is suggested that Colour of glass door shutter should be painted in contrast with wall.
- ✓ The signage should be put @ 1200 mm from finished floor level.

## 1.16 Class Rooms



1. Vision panels are provided in the doors.
2. The knee space below the study table should be kept 650.
3. The switch board is placed at a height of 1200 mm but difficult to identify due to poor color contrast.
4. The height of the display board is 760 mm but there is no colour contrast.

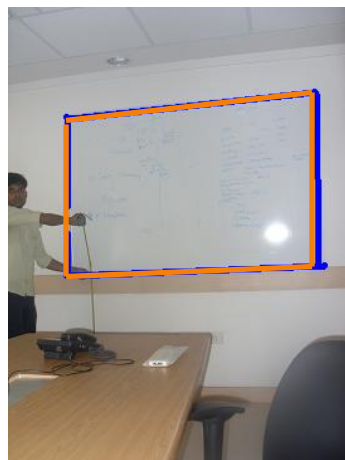
### Suggestions:

- ✓ Contrast color strip band on the black boards to provide for better viewing by low vision students.



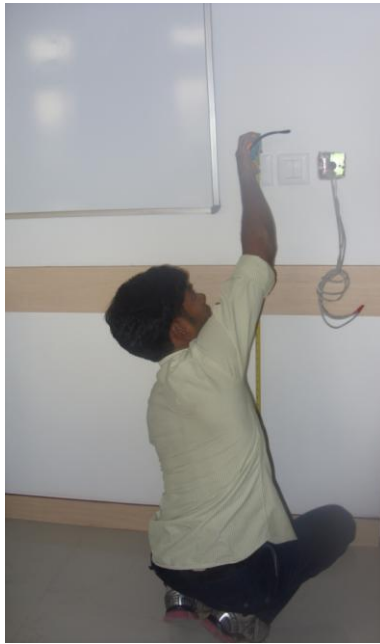


**Before**



**After**

- ✓ It is proposed to have adequate lighting on the black board for better vision.
- ✓ The lighting arrangements should be good for better vision.
- ✓ It is proposed to provide desk & chairs of contrasting colour or strip with respect to flooring & text books.
- ✓ There should be a free space of size 1200 & 1500 mm for wheelchair to stand provided with a desk with clear knee space of 650 mm & top with 780 mm & 300 mm clear projection.
- ✓ It proposed to provide standard colour codes for the doors classrooms, library, laboratories etc with designated numberings.
- ✓ People with impaired hearing have a particular difficulty in comprehending sounds and words in the environment. Rooms should be acoustically well insulated.
- ✓ In classrooms & laboratories, loud-speaking systems should be clearly audible. Supplementary visual information should be provided in for better understanding.
- ✓ It is proposed to put a flash light with standard colour code outside the classrooms @ 1800 mm, outside the laboratories @ 1500 from finished floor level.



**Before**



**After**

## **1.18 Library**

### **Suggestion:**

- ✓ The furniture should be replaced with better accessible design.
- ✓ Shutters of the book racks should have contrast colour coding provided with numbering.
- ✓ The height of study table with clear knee space of 650 mm & top with 780 mm & 300 mm clear projection should be provided.

## **15.1 TOILETS**

- The clear doors widths are less than 900 mm.
- No Unisex Multiuse toilet has been provided.

## MULTI-USE TOILET



### Suggestions

- ✓ 3 unisex toilets are proposed of size 1750 x 2100 after proposing the alterations & additions in the existing toilet near principal's room, in one of the boys toilets & in one of the girl's toilet.
- ✓ All other suggestions are described in the drawings below.
- ✓ Toilet should be provided with a door of clear opening of at least 900mm with the door swing outwards or be folding or sliding type
- ✓ Toilet should have slip resistant flooring
- ✓ Toilet should be provided with a horizontal pull bar at least 600mm long on the inside and 140mm long on the outside, at a height of 700mm

## WATER CLOSET (WC)

### Suggestions

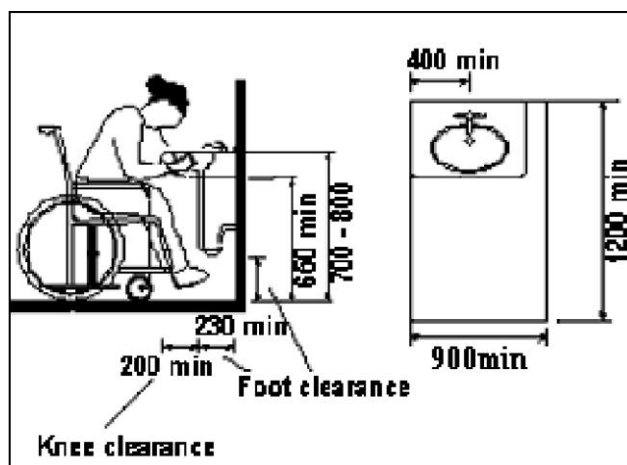
- ✓ There should have clear space of not less than 900mm wide next to the water closet
- ✓ The WC seat should be located between 460mm to 480mm from the centerline of the area to the adjacent wall and have a clear dimension of 800mm from the edge of the WC to the rear wall to facilitate side transfer.
- ✓ The top of the WC to be 475-490mm from the floor with a back support.

- ✓ 700 mm x 700 mm L-shaped S.S. Grab bars of 38 mm dia. should be provided at the rear and the adjacent wall. On the transfer side- swing away/up type and on the wall side L-shape grab bars should be provided.
- ✓ 700 mm long Pull Grab bar, 700 apart from side L-shaped wall to be provided

## WASHBASIN

### Suggestions

- ✓ The dimensions could be of 520mm and 410mm, the top edge should be between 700mm-800mm from the floor; with a knee space of at least 760mm wide by 200mm deep by 650mm-680mm high
- ✓ Lever type handles for taps are recommended.
- ✓ Mirror's bottom edge to be 900-1000mm from the floor and the mirror may be inclined at an angle.



**Accessible toilet** should have a switch near the WC (one at 300mm and the other at 900mm from the floor level), which activates an emergency audio alarm (at the reception/attendants desk, etc).

## EMERGENCY EVACUATION

Exit signage and fire hydrant signage are observed in the building.



- ✓ **Emergency exits** should be clearly marked with proper signage and should be clear of all obstructions.
- ✓ **Emergency alarm** both audio (hooter type) and visual (flashing bulb) to be provided on each floor/level at strategic locations.
- ✓ **Employees/staff and security guards**, need to be drilled for the same at periodic intervals.
- ✓ An **access sensitization/ awareness training** to be given to security guards and staff Handling/transferring students with disabilities to refuge area during emergency.





## GENERAL REMARKS

❖ **Lighting**- Adequate and well distributed lighting should be installed. Glare from excessively bright lights should be avoided. Staircases & corridors should have adequate lighting.

❖ **Induction loop system** in conference room

Students with hearing impairments find it difficult to grasp mass audio activity. In an enclosed venue, it is possible to enclose a small area with a loop-induction system so that students with hearing impairments within it can hear voices and sounds without ambient noise. A loop-induction system comprises of a microphone, an amplifier and a loop (a conducting wire encircling the enclosure). The sound of music or the voices of actors are converted into electromagnetic signals. The signals are carried to the loop. A pickup coil fitted in a hearing aid picks up the electromagnetic signals and the receiver in the ear converts this into comprehensible speech or music. Since the hearing aid does not pick up actual sound signals, it receives no ambient noise, ensuring good quality of sound.

## PRIORITIES

- Toilets
- Signage
- Beveled Edges
- Colour Contrast

Rest Suggestions can be taken with the availability of budget

## LIST OF NGOS/COMPANIES FOR ACCESSORIES

- **Handrails/Grab bars & signage**

Sanjeevani Creations (M) 9810100857, 01165809940

## REPORT COMPLIED BY

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**Access Resource Group, Sanjeevani Creations**

Contact person: Mr. Sudhir Bansal..... Email [sanjeevanicreations@gmail.com](mailto:sanjeevanicreations@gmail.com).