Proposed NEW Permanent building of Kendriya Vidyalaya at Air Force Station MULLANPUR Garibdas

Scope of work

Norms for Architectural planning:

- 1. The proposed Kendriya Vidyalaya new permanent building is of 'A' Type to accommodate 960 students from classes I to XII. The Space Norms of A-Type School Building are being provided separately.
- 2. Building Type- G+2
- 3. Building should be planned preferably with "H", "U", shape configuration and with single loaded corridor to reduce level of noise.1
- 4. Building should not be planned based on the concept of central courtyard system.
- 5. Adequate toilet facilities are to be provided separately for boys and girls and for male and female staff members and these may be spread out. These toilets may also be provided with permanent ventilation and with exhaust fans where necessary.
- 6. The <u>clear height of the class-rooms may be kept not less than 3.5 meters</u>, subject to such variations as may be prescribed by the Municipal and other local authorities.
- 7. Arrangements for water supply and electricity may be made considering the overall requirements.
- 8. Land clearing of open areas especially in consideration to buildings planned is desirable as it helps in increasing comfort conditions in the building and also in the surrounding environment.
- 9. Incorporate plantation scheme, parks and other horticulture works in the campus in the master plan, however, this will be developed by the Vidyalaya.
- 10. While preparing layout, building should have long facades oriented approximately north-south, light source should preferably face north orientation and the shorter facades should face west orientation. Adequate care should be taken for proper ventilation.
- 11. Proper surface and rain water drainage should also be planned so that there is no stagnation of water during monsoon.

Source of Norms for Architectural planning: Copy of KVS Educational Code – Annaxure-1

Space Norms of (A-Type) School Building: The proposed Kendriya Vidyalaya new permanent building is of 'A' Type to accommodate 960 students from classes I to XII. Building Type- G+2

Total plinth Area 4500 Sq. mtr with facility of Ramp up to first floor.

S.N O.	Description	Qty	Si	ize	Area	Flooring	Internal finishes	Other Room Requirement	Remarks
			LXB (m)	H (m)	Sq.mts.				
1	Class Room								
	(a) Primary Class Room	10	7.0x7.0	3.5	490	Kota Stone	Plastic Emersion Paint		
	(b) Higher Secondary Class Room	14	7.0x7.0	3.5	686	Kota Stone	Plastic Emersion Paint		
2	Labs								

	(a) Computer Labs	2	7.0x10.60	3.5	148.4	Double Charged Vitrified tiles	Plastic Emersion Paint	
	(b) Physics Lab							
	(i) Lab	1	7.0x8.80	3.5	61.6	Kota Stone	Plastic Emersion Paint	Lab Counters (6+1) 01 Teacher Demonstration Table
	(ii) Store Room	1	7.0x3.60	3.5	25.2	Kota Stone	Plastic Emersion Paint	
	(c) Chemistry Lab							
	(i) Lab	1	7.0x8.80	3.5	61.6	Kota Stone	Plastic Emersion Paint	LabCounters(6+1)01TeacherDemonstrationTable.AcidResistancetile600x600oncounter
	(ii) Store Room	1	7.0x3.60	3.5	25.20	Kota Stone	Plastic Emersion Paint	
	(d) Biology Lab							
	(i) Lab	1	7.0x8.80	3.5	61.6	Kota Stone	Plastic Emersion Paint	
	(ii) Store Room	1	7.0x3.60	3.5	25.20	Kota Stone	Plastic Emersion Paint	
3	Social Sci/Geo/Rest Room (P) Primary	1	7.0x3.40	3.5	23.80	Kota Stone	Plastic Emersion Paint	
4	Social Sci/Geo/Rest Room High. Sec.	1	7.0x7.0	3.5	49.0	Kota Stone	Plastic Emersion Paint	
5	Math's Lab	1	7.0x7.0	3.5	49.0	Kota Stone	Plastic Emersion Paint	
6	Activity Room	1	7.0x10.6	3.5	74.20	Kota Stone	Plastic Emersion Paint	
7	Art Room	1	7.0x10.6	3.5	74.20	Kota Stone	Plastic Emersion Paint	
8	SUPW/Works hop	1	7.0x10.6	3.5	74.20	Kota Stone	Plastic Emersion Paint	

9	Library	1	7.0x14.20	3.5	99.40	Kota Stone	Plastic Emersion Paint		
В	Administration Spaces								
1	Principal Room	1	7.0x7.0	3.5	49	Double Charged Vitrified tiles	Plastic Emersion Paint	Attached Bathroom	
2	Office	1	7.0x7.0	3.5	49	Double Charged Vitrified tiles	Plastic Emersion Paint		
3	Staff Common Room	1	7.0x7.0	3.5	49	Double Charged Vitrified tiles	Plastic Emersion Paint		
4	H. Master /Mistress Room	1	7.0x3.4	3.5	23.80	Double Charged Vitrified tiles	Plastic Emersion Paint		
5 C	Exam Room Service and	1	7.0x3.4	3.5	23.80	Kota Stone	Plastic Emersion Paint		
	support spaces						Plastic	To be provided	
1	NCC/S/G Room	1	7.0x7.0	3.5	49	Kota Stone	Emersion Paint	near playground/ assembly area	
2	PET ROOM	1	7.0x7.0	3.5	49	Kota Stone	Plastic Emersion Paint	To be provided near playground/ assembly area	
3	General Stores	1	7.0x7.0	3.5	49	Kota Stone	Plastic Emersion Paint		
4	Medical Room	1	7.0x3.4	3.5	23.8	Double Charged Vitrified tiles	Plastic Emersion Paint	Attached Bathroom	
D	Atal tinkering Lab								
1	Atal tinkering Lab	1	7.0x10.60	3.5	74.2	Kota Stone	Plastic Emersion Paint		
	<u>9 Unit Staff Qua</u> 1. Type II – 4 No	arter os Ar	rea – 70 sa m	ntr./Or as per	· SOA 202	2 whichever	is more		
E	 2. Type III - 4 Nos., Area - 80 sq mtr/ Or as per SOA 2022 whichever is more 3. Type V - 1 No., Area - 200 sq mtr /Or as per SOA 2022 whichever is more Note - 1. Exterior finishes should be exterior acrylic emulsion and internal finishes should be oil-based distemper. 2. Ceiling height of all accommodation should be kept 3.20 meter. 								
F	Santry Post – Sa	ntry P	ost of area 3	.24 sqm to b	e provided	l at the main	/ entry gate of	f school.	
G	Assembly Area:	Open	assembly a	rea (30x40r	n) with C	e at proper lo overed stag	e (9 mx15m)	quired in the campus.), Hight (4.50 mtr.):	- Provision for
Н	making an open-a view in the layout	ir ass plan o	embly area v	with Paver b	lock or for blocks. The	r adding an a e plinth heigl	assembly hal ht of stage sh	l at a later stage ma ould be 1 meter form	y also be kept in the ground level.
Ι	A flag post shall be provided with the assembly stage.								

	Canteen: Wet Canteen, Area -12.96 sqm, KIOSK Type- service counter facilities without sitting arrangements					
J	Note : Canteen without sitting facility but cooking, washing, storage and service counter facilities should be provided in canteen. Its location in campus should be planned in such a way that entries of outsiders should be restricted.					
K	Underground Water sump: Underground water sump (50000 Litres water capacity), MES Supply.					
L	Compound wall height 1.8 meter with grill provision in front side. School sign board should have pillars base on which the Vidyalaya Name and the Emblem should be written in. The sign board should have the following description "KENDRIYA VIDYALAYA MULLANPUR GARIBDSS, AIR FORCE STATION MULLANPUR, DISTT. SAS NAGAR MOHALI, PUNJAB".					
	Cycle stand / Scooter shed / Car parking- Steel Structure					
м	Car Parking for -50 no of cars, plan area of a car should be 8 sq meter. Plinth height of parking should be 0.30mtr above ground level.					
IVI	Cycle/Scooter parking - 250 No. of Cycles and 50 number of Scooters/Motor cycle (Class XII students are eligible to					
	avail scooter facility with proper documents and driving licence.)					
	Note: Cycle/ scooter parking should be provided close to the boundary wall near left hand side of the main gate.					
Ν	Ramp-upto first floor of the building.					
	Sports facilities					
	(a). Space Primary play area with parks, open spaces near Primary block (earthen) to be marked on plan.					
	(b). Middle, Secondary & Senior Secondary					
0	(i). Earthen playground (as per the available space) can accommodate 200 mtr. running track or 400 mtr. running track.(ii). Basket Ball Court (C.C.) -01					
	(iii) Badminton (C.C.)02 No					
	(iv). Volley Ball Court (earthen)-01					
Р	Street lights : LED Street lighting, campus security lights with adequate illumination for safety, watch and ward etc. Conner lights at all the building corners and street light parallel to roads/ paths shall be provided for proper watch and ward.					
	Roads and pathways- Economic and functional layout of internal roads and paths to connect various facilities in the					
Q	campus. The width of the road from main gate to the main entry of the school shall be 5.50 Mts., All other roads shall be					
	minimum width of 3.65 m as per requirements.					
R	Drainage System: Area drainage around the school building with proper slope so that water do not stagnate in the					
	campus.					
S	External service connection – MES Water supply from existing lines.					
	(a) Electrical Supply: - As per MES Norms.					
_	(b) Sewage system: Sewage system with (a) Septic tank (b) Soak pit					
T	(c) Water supply: MES Water supply system with Distribution lines.					
	(d) Rain water harvesting – Rainwater harvesting system included in PAR rates					

Notes: - Provision for future expansion to construct 10 Number of Bal Vatika Rooms and a Bal Vatika Hall should be kept in the lay out plan and should be shown in dotted lines adjacent to the main building.

BASIC SPECIFICATIONS FOR KENDRIYA VIDYALAYA SCHOOL BUILDING FOUNDATIONS:

(I) <u>Civil Portion</u>

(a) Foundation:

- (i) Bearing capacity 10 tons Sq.mts
- (ii) Type spread foundation- isolated / combine
- (iii) Depth- up to 1.20 mts below ground level.
- (b) Super structures:
- (i) R.C.C framed construction with filler walls in brick work or load bearing construction in brick / load bearing construction in brick.
- (ii) Internal partition in brick masonry
- (iii) RCC Chajjas, fins etc.

Remarks: The design foundation / superstructure shall strictly be subject to soil investigation report of site and incorporating necessary provisions for earth quake resistance as per IS codes.

- (c) Entrance lobby: Floor should be Granite finish, internal finishes of plastic emulsion paint.
- (d) Staircase & Ramps: Kota stone single piece, DADO- Enamel paint, walls plastic emulsion.
- (e) Railings: Stainless steel
- (f) Corridors: Kota stone, DADO- Enamel paint, walls plastic emulsion.
- (g) External walls finish: Exterior Acrylic Emulsion paint.
- (h) Door frame: MS T Iron -40 x 40 x 5 mm, Enamel paint.
- (i) Door shutters: 35MM(BWP) Flush doors, Enamel paint.
- (j) Toilet Door: FRP Door frame and shutters in wet areas.
- (k) Windows: Power coated MS Tube section.
- (I) Cupboards: 25 MM Flush doors
- (m) Roofing: Integral cement-based water proofing (Guarantee bond of 10 years)
- (n) Water supply and sanitation: (As per MES Norms.)

(II) <u>Electrical Portion</u>

- (a) Wiring for light point/fan point/ exhaust fan point/call bell point with FRLS PVC Insulated copper conductor single core cable in recess.
- (b) Wiring for light/power plug circuit / submain with FRLS PVC insulated copper conductor single core cable in recess.
- (c) Supply, installation, testing and commissioning of DB's, MCCB's & RCCB's.
- (d) Providing Energy saving LED Light fittings & accessories.
- (e) Providing Energy saving ceiling fans/ Exhaust fans.
- (f) Supply, installation, testing and commissioning of fire fighting with down comer system or as per local Bye-laws.
- (g) Providing fire extinguishers.
- (h) Providing street light with energy saving LED light fittings.
- (i) A light plug shall be provided at the back of the class rooms for projection facilities. Necessary provision for power plugs should also be made in the laboratories, Principal's room, staff room, etc.,
- (j) Providing illuminated Signages.
- (k) Providing Earthing and lighting conduct for the better safety of the electrical installation and human safety.
- (1) LT panel as per MES norms
- (m) External & internal Electric supply as per MES norms.
- (n) Fire Fighting: Firefighting as per NBC Norms.

Source of Basic specifications: "Guidelines for planning and construction of School Building of KVS" Manual and Checklist for master plan of KV – Campus requirements of an ideal Kendriya Vidyalaya – Annexure -III.

Additional Data/ Fitting & Fixture for School Building of Kendriya Vidyalaya Building:

1. CLASS ROOMS: - Secondary and Senior Secondary (As Per KVS Drawing No, KVS -01 (Page 19)

S. No.	Item	Description (Refer Page to page 5 of KVS	Remarks
		Guidelines for planning and construction of	
		School Building of KVS)	
1	Flooring	Kota stone	
2	Wall & Ceiling	Plastic Emulsion Paint	
3	Black Board	3.00 mts x 1.40 mts (Cement Concrete)	
4	Cup board	1 No. With C.C. rack and black board shutter up	Wall opposite to the entry
		to lintel level	door shall be provided
			with cupboard,

5	Fans	5 Nos (56") including one above the Techer	
6	Tube Light	5 Nos including one above the teacher/ Black Board (LED Tube Light)	
7	Power Point-15Amp	01 No	
8	05 Amp Plug	05 Nos.	
9	Pin- Up Board	01 No	As Per KVS Drawing No, KVS -01 (Page 19)

- (i) Green board for school: Green board 8x04 ft. should be fixed in all the class rooms and labs.
- (ii) One entry door adjacent shall be provided and the wall facing opposite to the door should be provided with one cup board up to lintel level with concrete racks, rest of entire wall should be provided with windows to give sufficient light as well as ventilation. (Refer to KVS Drawing No, KVS -01, Page 19).
- (iii) A provision for pin board should be provided on the black board containing wall.
- (iv) The glass of the window pane should not have more than 0.1 sqm area.

Note: (i) Raised platform for teaching <u>shall not</u> be provided.

(ii) M.C.Bs. should be covered in box and shall be provided at lintel level.

I (A) Primary Class Room:

- (i) Left hand side of the wall with reference to entry to the class room shall have a two tier shelve with height up to window cill level. Sliding shutter with loch shall be provided
- (ii) The wall opposite to the black board, up to window cill level shall be finished properly with green paint and preferably with a band of 2" of yellow colour, so that the students can draw figures sketches etc.
- (iii) The other fitting fixers are same as that of Sr and Sec Sr class rooms.

(II) PHYSICS LAB: Refer KVS Drawing No: 03 KVS -03 (Page 21)

- (a) Physics lab should have 06 working tables / lab counters concrete structure (1.8 m x1.00 m) for students, the counter top should be provided with granite.
- (b) The should be 01 teacher demonstration table with sink provision same specifications as that of students table.
- (c) Provision for book and baggage storage shall be provided near the entry door.
- (d) Lab should be provided with 02 double door entries and 01 door for entry to store room from lab.
- (e) Fixed working platforms (RCC) of the height 830 mm and width 600 mm wide to be provided with two walls facing each other and platform of height 830 mm width 400 mm to be provided with the wall opposite to the black board.
- (f) Working platform of height 830 mm and width 600 mm wide to be provided in the store room
- (g) Green board 8x04 ft. should be fixed in the lab.
- (h) The entry door opposite entire wall should be provided with adequate number of windows for light and ventilation. The windows to be extended in the adjacent store room on the same wall.
- (i) Two number of ventilators to be provided each in lab and store room.
- (j) 06 Number of power plug (15 Amp) and 10 number of plugs (05 Amp) to be provided in the physics lab.
- (k) 07 number of fans including one on the teacher table should be provided in the lab and two fans in the store room.
- (1) 10 number of LED tube lights to be provided in the lab and 02 in the store room.
- (m) Provision for 02 number of exhaust fans should be kept in the labs and store room.
- (n) Water supply should be provided as required.

III. CHEMISTRY LAB: Refer KVS Drawing No: 04 KVS -03 (Page 22)

- (a) Chemistry lab should be on the ground floor and should not be surrounded with class rooms.
- (b) There should be 06 number of working tables (180 x 100 cm) and 83 cm height fitted with acid proof tiles.
- (c) There should be a provision of sink on the working table at the center of table.
- (d) The racks on the student working table are to be provided for storage of Chemicals.
- (e) There should be one teacher demonstration table with sink fitted at the corner of the table.
- (f) The sink size should be 600x450x300 mm ceramic type should be provided in each working table.
- (g) A fixed service unit (02 Reagent bottle rack, one sink, two taps, two gas points) to be provided on each working table.
- (h) A fixed bench (Acid Proof) of the size 80cm height and 40cm wide to be provided with wall facing the corridor and, on the wall, opposite to the Black board.

- (i) The fixed bench of the height 83 Cm and 50 cm wide to be provided in the store room to the window wall and the wall opposite to balckboard. The bench of the size 83 Cm and 60 Cm wide with sink to be provided in the store room with wall opposite to the window.
- (j) The entry door opposite entire wall should be provided with adequate number of windows for light and ventilation. The windows to be extended in the adjacent store room on the same wall.
- (k) Two number of ventilators to be provided each in lab and store room.
- (1) The entry door opposite entire wall should be provided with adequate number of windows for light and ventilation. The windows to be extended in the adjacent store room on the same wall.
- (m) Green board 8x04 ft. should be fixed in the lab.
- (n) Provision for book and baggage storage shall be provided near the entry door.
- (o) Provision for 04 number of exhaust fans should be kept in the labs and 02 in the store room.
- (p) Grooves for gas pipeline should be provided on the floor connecting all the student and teacher working table
- (q) Water supply should be provided with sinks with proper draining system.
- (o) 04 Number of power points (15 Amp) in lab & store and 10 number of plugs (05 Amp) to be provided in the Chemistry lab.
- (p) 10 number of LED tube lights to be provided in the lab and 02 in the store room.
- (q) 07 number of fans including one on the teacher table should be provided in the lab and two fans in the store room.

IV. BIOLOGY LAB: Refer KVS Drawing No:- 05 KVS -03 (Page 23)

- (a) Biology should have 06 number of students working RCC table/Lab counter (1.80x1.00 m.)
- (b) There should be a teacher demonstration table with sink provision at the corner of the table.
- (c) Provision for book and baggage storage shall be provided near the entry door.
- (d) There should be 02 no. of double doors for entry in the lab at the two ends of the wall & 02 nos. double door for store room entry.
- (e) Fixed working platform (RCC) of height 83 Cm and 60 Cm wide to be provided with two walls and a working platform of 40 cm wide with a height of 83 cm to be provided on the wall opposite to the black board.
- (f) Working platform of 60 cm wide and 83 cm height is to be provided in the store room towards corridor side wall.
- (g) Green board 8x04 ft. should be fixed in the lab.
- (h) The entry door opposite entire wall should be provided with adequate number of windows for light and ventilation. The windows to be extended in the adjacent store room on the same wall.
- (i) Two number of ventilators to be provided each in lab and store room.
- (j) There should be provision of partition (4 inch wall) in store room to divide the store room in 02 compartment. 01 compartment for teacher room and other as a museum.
- (k) Provision for 02 number of exhaust fans should be kept in the labs and 02 in the store room.
- (1) Water supply should be provided with sinks with proper draining system.
- (m) 04 Number of power plugs (15 Amp) in lab & store and 10 number of plugs (05 Amp) to be provided in the Chemistry lab.
- (n) 10 number of LED tube lights to be provided in the lab and 02 in the store room.
- (o) 07 number of fans including one on the teacher table should be provided in the lab and two fans in the store room.

V. Computer Lab:

(a) The Computer lab should be 10.60 x 7.0 m

- (b) There should be one entry point for the computer lab
- (c) The labs should have 06 number of fans for students and 01 fan for teacher
- (d) 01 number of exhaust fan in computer lab
- (e) 60 number of 5 amp plugs and 06 number of 15-amp plugs should be provided in each computer lab.
- (f) 10 number of LED tube lights to be provided in the computer lab
- (g) Provision of 02 number of AC should be provided in the computer lab.
- (h) Flooring: Double Charged Vitrified tiles
- (i) Paint: Plastic Emulsion Paint
- (j) Separate copper earthing of electrical points used for IT Equipment's
- (h) Fixtures such as tube lights and fans should have separate phase
- (i) Green board 8x04 ft. should be fixed in the lab.

Note: Kendriya Vidyalaya Sangathan – Benchmarking of computer lab

VI. ARTS AND CRAFT: Refer KVS Drawing No: 06 KVS -03 (Page 24)

- (a) The room dimension should be 10.60x7.00 m.
- (b) There should be one double door entry in the art room.
- (c) Green board 8x04 ft. should be fixed in the lab.
- (d) A provision of a cub board of with C.C. rack and black board shutter up to lintel level.
- (e) A platform (RCC) of the dimension 1888x600x830 mm to be provided at the rear corner of the entry door wall of the Art room.
- (f) A provision of display board to be made on the longer wall with the entry door.
- (g) The entire wall excluding the cupboard opposite to the entry door wall to be provided with adequate number of windows for light and ventilation as per KVS drawing.
- (h) A provision to place Almirah along with the main entry door wall should be provided but Almirah should not be provided by MES
- (i) 03 no. of ventilator to be provided on the wall facing Corridor.
- (j) 02 Number of power plugs (15 Amp) in the Art Room and 04 number of plugs (05 Amp) to be provided in the Art Room.
- (k) 10 number of LED tube lights to be provided in the Art room.
- (1) 07 number of fans including one on the teacher table should be provided in the Art room.

VII. Library Room: Refer KVS Drawing No: 07 KVS -03 (Page 25)

- (a) The Library size should be 07.0x10.6x3.5 (m).
- (b) 01 double door entry to be provided to the Library.
- (c) A book Store room of the size 7.0x2.3 m should be provided with the Library by providing a RCC wall (9 inches) in the room. A double door entry from library to the store room should be provide.
- (d) A self of working table RCC of the size 470 x60x83 cm. to be provided in the Library Store room on the longer opposite walls of the store room (As per the drawing).
- (e) A provision to place steel Almirahs should be kept in the store room. However steel Almirah should not be provided.
- (f) A provision for counter, catalog and book rack, reading table should be kept in the library but Items should not to be provided by the construction agency.
- (g) The entire wall opposite to the entry door to be provided with adequate number of windows for light and ventilation.
- (h) 06 numbers of ventilators in library room and 02 number of ventilators in the store room should be provided.
- (i) 13 number of fans including 01 fan on the counter should be provided in the library and 02 no. of fans in the library store room.
- (j) 20 no. of LED lights in library and 04 no. of LED light should be provided in the Library store room.
- (**k**) 06 no. of power plug (15 Amp) and 10 no. of plug (05 amp) to be provided in the library (01 power plug and 02 plugs to be provided in the library store room)
- (I) A Provision of 04 nos. of ACs (Split) and should be Kept in the Library. However, ACs should not be provided by MES.

VIII. ATAL TINKERING LAB

- (a) The room dimension should be 10.60x7.00 m.
- (b) There should be one double door entry in the room.
- (c) Green board 8x04 ft. should be fixed in the lab.
- (d) A provision of a cub board of with C.C. rack and black board shutter up to lintel level.
- (e) A platform (RCC) of the dimension 1888x600x830 mm to be provided at the rear corner of the entry door wall of the LAB.
- (f) 03 no. of ventilator to be provided on the wall facing Corridor.
- (g) 05 Number of power plugs (15 Amp) in the Lab and 10 number of plugs (05 Amp) to be provided in the Lab.
- (h) 10 number of LED tube lights to be provided in the Art room.
- (i) 07 number of fans including one on the teacher table should be provided in the Art room.

IX Principal Room: - Refer KVS Drawing No: 08 KVS -03 (Page 26)

- (a) Attached toilet facility shall be suitably located with the principal room.
- (b) Single Entry Door should be provided in the Principal Room.
- (c) A provision for Display Board on 01 of the walls should be kept.
- (d) A provision to place steel Almirah should be kept in the Principal Room.
- (e) The Wall opposite to the entry door should be provided with 02 nos. of windows for light and ventilation.
- (f) 02 nos. of ventilators to be provided in the room
- (g) A provision for 02 No.s ACs (Split) should be kept in the room, but AC's should not be provided by MES.
- (h) 02 no. of Power plugs (15 Amp) and 08 nos. of plug (05 Amp) should be provided in the room.
- (i) 06nos. of LED lights to be provided in the Principal room.

X . Medical Room: - Refer KVS Drawing No: 08 KVS -03 (Page 26)

- (a) Attached toilet facility shall be suitably located with the Medical room.
- (b) A single-Entry door facility should be provided in the medical room.
- (c) A fixed low wall partition should be kept for assigning waiting area in the medical room.
- (d) 02 nos. of Ventilators on the entry door wall and its opposite entire wall should be provided with the adequate no. of windows upto lintel level for light and ventilation.
- (e) A sink with water point to be provided in the examination & dressing room.
- (f) A cupboard to be provided inside the examination & dressing room.
- (g) Medical beds and furniture of medical room should not be provided by the construction agency.
- (h) A provision for AC (Split) should be kept in the medical room.
- (i) 02 no. of Power plugs (15 Amp) and 04 nos. of plug (05 Amp) should be provided in the room.

X. Office Room: - Refer KVS Drawing No: 09 KVS -03 (Page 27)

- (a) There should be single door entry in the office.
- (b) 02 nos. of Ventilators on the entry door and 03 no. of windows on its opposite wall should be provided upto lintel level for light and ventilation.
- (c) There should be a built-in storage (RCC) selves on two opposite walls of the office.
- (d) A provision for the pin board to be provided on the entry door wall. However, Pin board should not be provided
- (e) The office furniture should not be provided by the construction agency.
- (f) 06 no. of Power plugs (15 Amp) and 08 nos. of plug (05 Amp) should be provided in the room

Standard for Public SANITARY CONVENIENCES:

For SCHOOL:

S. No	Fitments	For Boys	For Girls	Remarks
1	W.C.	1 per 40	1 per 25	Separate toilets facility should be provided for
2	Urinals	1 per 20	NIL	Primary block (Age Group (6 to 10 Yrs.), Secondary
3	Wash basins	1 per 40	1 per 40	block (11 to 13 Yrs. age group) Sr Sec (Age Group 14
4	Drinking Water Fountain	1 per 50		to 17 Yrs.)

For staff: For Two Section Total staff = 60 (30 Males and 30 Females)

S. No	Fitments	For Males	For Female
1	WC	1 per 25	1 per 15
2	Urinal	2 per 21 to 45	NIL
3	Wash basin	1 for 25	1 for 25
4	Drinking Water Fountain	1 Per 100 persons or Minimum of 1 on each floor	

Note-:

- (i) A ratio of 60 (Boys) and 40 girls of total planned strength of Vidyalaya shall be taken into consideration
- (ii) Separate Toilets for staff (Gents and Ladies) Shall be provided
- (iii) Toilet for differently abled person (Boys, Girls, Gents, Ladies) With necessary fittings / fixture shall be provided as per standards

FUNCTIONAL REQUIREMENTS OF SCHOOL BUILDINGS: -

- 1. When two rooms are facing each other, doors should not be kept facing each other but should be kept on al ternate corners of each room so that they are farthest from each other.
- 2. Chemistry lab. should be planned on ground floor.
- **3.** Necessary built- in facilities like teachers' cup-boards, bulletin boards, and display boards in class rooms, corridors, cabinets for each teacher in the staff common room, built- in almirahs in laboratories, under work benches, store.
- 4. Sprouts(pernala) is to be provided in place of rain water pipe.

CLIMATE AND DESIGN CRITERIA FOR COMFORT:

1. Orientating the main facades of the buildings approximately north- south (with Corrections to increase ventilation); planning single banked buildings with opening of a size and position to achieve required ventilation and shading all opening from sun radiations.

NOTES-:

- (I) While developing master plan clear boundaries of KV Plot, proposed facilities Viz School building (Making provision to further expansion to next higher type) residential area showing no. of blocks, play fields, cycle stand canteen, drinking water facilities services, roads / paths drainage, septic tank, soak pit water supply like tube well, pump house etc. shall be clearly shown, so that the overall development is made in planned way.
- (II) CRZ/AAI guidelines shall be followed while developing the drawings.
- (III) National building code shall be kept in view while developing the drawings.
- (IV) While planning and designing buildings, standard engineers' practice should be followed.
- (V) It is desirable to make first a master of the entire area showing the detailed layout of the school along with provisions for future expansion, if any. Areas shall be earmarked for staff quarters, play- grounds, approach roads and internal connecting roads, green areas, location of septic tank, Sump, sub- station etc. Construction then could be taken up in a phased manner depending on priorities.
- (VI) Energy efficient electric fitting / fixtures shall be adopted.
- (VII) Provision for firefighting as per NBC Norms shall be taken in drawing / estimates
- (VIII) Provision of EARTH QUAKE resistance shall be taken in the drawings.
- (IX) Aluminum door with collapsible shutter shall be provided at the entry of the building
- (X) For safety precautions all opening, electrical panels, proper enclose / grills shall be provided
- (XI) Plinth protection around building with plinth drain connecting to the main drains in the campus shall be provided. similarly, proper drainage arrangement in the open space inside / outside of the building shall also be made so that water do not stagnate in the campus.
- (XII) Coolers space with glazed tiles and water supply arrangements and drainage shall be provided at suitable places in the school building as decided by the architect. These Spaces should not be too close to toilets. <u>Coolers shall not be provided by MES.</u>
- (XIII) In the campus, drinking water point shall be provided at suitable locations and play area, one each for Primary, Secondary and Sr Secondary block.
- (XIV) At least one power point shall be provided in all admn. /Service Support rooms.
- (XV) Width of the corridors should be 1800 mm.
- (XVI) Details of windows may be such that size of the glass may not be more than 0.1 sq. in area, in order to minimize maintenance cost. For the reasons of security, grills should be provided in all windows.
- (XVII) All open drain shall be covered with pre-cast slabs for student's safety and also ease of maintenance.
- (XVIII) All inputs material to be used shall be cost effective and durable. However locally available material /specifications shall be adopted as decided by the architect to economies the cost.
- (XIX) Ensure designed planning efficiency (Ratio of the carpet area to plinth area) is achieved.
- (XX) Building should be aesthetically pleasing and looks like educational building.
- (XXI) Proposed school building shall match and blend with local architecture of the area.
- (XXII) School building should be planned adopting singly loaded corridors to reduce the noise level/ disturbance.

- (XXIII) Wet area in school building shall be kept away within the building to prevent seepage in adjacent rooms and foul smell.
- (XXIV) Proper location of sump, septic tank and electric transformer (if any) etc., shall be decided so that these will not create safety hazards and become obstructions for future expansion of building and other facilities.
- (XXV) The plinth level of the building should be kept atleast 1 ¹/₂ feet higher than existing ground level of outside road with the consideration of economy. Campus drainage system be made effective to avoid stagnation of water.

Source of General Guidelines for School Building: "Guidelines for planning and construction of School Building of KVS" Manual and Checklist for master plan of KV – Campus requirements of an ideal Kendriya Vidyalaya – Annexure -III.

Principal