RAILWAY WORKS ENGINEERING
CHAPTER 3
RAILWAY STATIONS

3.1 DEFINITION OF RAILWAY STATION

A railway station is defined as any place on a railway line where traffic is booked and dealt with and where an authority to proceed is given to the trains. In some stations, only one of these functions is carried out and accordingly these are classified as flag station or block station. In case of flag station, only traffic is dealt with and there is no arrangement to control the movement of trains. In case of block station, a train cannot proceed further without obtaining permission from the next station and traffic may or may not be dealt with. Most of the stations on railway system perform both the functions indicated above.

3.2 Purposes of a Railway Station:

A Railway Station is provided for one or more of the following purposes:

(i) To entrain or to detrain the passengers.
(ii) To load or off load the goods or parcels.
(iii) To control the movement of trains.
(iv) To enable the trains to cross each other in case of single line section.
(v) To enable the faster trains to overtake the slower trains.
(vi) To enable the locomotives to take fuel, water or coal.
(vii) To attach or detach coaches or wagons to the trains.
(viii) To collect food and water for the passengers.
(ix) To provide facilities for change of engines and crew/staff.
(x) To enable sorting out of wagons and bogies to form new trains.
(xi) To provide facilities and hold the passengers in case of emergencies like floods and accidents etc., when traffic is disrupted.

3.3 Considerations for selection of site of a railway station

(i) *Adequate Land:* There should be adequate land available for station building not only for the proposed line, but for the future expansion. The proposed area should also be free from religious buildings.

(ii) *Level area with good drainage :* The proposed site should preferably be on a fairly level ground with good drainage arrangements. It should be possible to provide maximum permissible gradient in the yard. In India, maximum permissible gradient adopted is 1in 400, but 1 in 1000 gradient is recommended.

(iii) *Alignment :* The station site should preferably be located on a straight alignment so that various signals can be visible clearly. The proximity of station site on a curve presents a number of operational problem.

(iv) *Easy accessibility :* The station site should be such that it is easily accessible. The site should be near the villages and towns. The nearby villages should be connected by approach roads for the convenience of the passengers.

(v) *Water supply arrangements :* While selecting the site, it should be seen that the source of adequate water supply required for passengers and operational needs is available.

3.4 Facilities required at railway stations

The passenger station is the gate-way through which people find their way into a town or community. First impression is a lasting one and hence there is the importance of a well designed station building and its surrounding, which should match with other civic amenities. Whilst service is the main consideration, the type and finish of a station building should be, as far as practicable, in keeping with the best standard of civic amenities available in that area. A big passenger station should provide for

facilities corresponding to anticipated demands during at least the first 25 years of its life with provision for future expansion. The facilities required at stations consist of the following main groups:

(i) *Passenger requirements :* Such as waiting rooms and retiring rooms, refreshment rooms and tea stalls, enquiry office and reservation office, bathrooms and toilets, drinking water supply arrangements, platforms and platform sheds and approach roads.

(ii) *Traffic requirements:* Such as Goods Sheds and goods platforms station buildings, Station Master's office and other office, signal and Signal cabins, reception and departure lines and sidings, brake down trains and arrangements for the same and station equipment etc.

(iii) *Loco, Carriage and Wagon requirements :* Such as Loco Shed, watering or fueling facilities, inspection pits, etc.

(iv) *Staff requirements :* Such as rest houses for officers and staff, running rooms for guards and drivers and staff canteens etc.

3.5 Requirements of a passenger station yard

The main requirements which a passenger yard is called upon to fulfill are :

(i) It should be possible to lower signals for the reception of trains from the different directions at the same time. This facility is particularly necessary at junction stations so that all the trains, which are required to connect each other, may be received at the same time.

(ii) Unless all the trains are booked to stop at the station, it should be possible to run a train through the station at booked speed.

(iii) If it is an engine changing station, engine coming from or going to shed should have minimum interference with the arrival and departure of trains.

(iv) Adequate number of platforms should be provided so that all the trains can be dealt with at the same time.

(v) There should be convenient sidings where extra carriages can be stabled after having detached from trains or before attachment to trains.

(vi) Facilities for dealing with special traffic like pilgrim and tourist traffic, parcels in wagon loads, live stock and motor cars, etc. should be made.

(vii) Stabling lines, washing lines and sick lines etc. should be provided as per requirement.

3.6 Classification of Railway Stations

Railway stations can be classified in various classes broadly from two main considerations.

(i) *Operational considerations :* The stations are classified as Block Stations and Non-block Stations. Block Stations are further classified as A class, B class, and C class stations. Non-block Stations are classified as D class stations or flag stations.

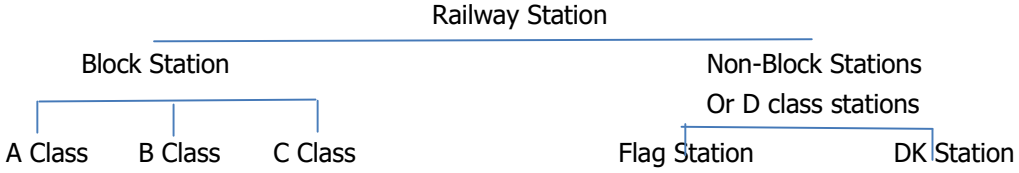
(ii) *Functional considerations :* Stations are classified based on the functions the stations area required to perform. Under this category, stations are classified as halt stations, flag stations, Crossing Stations or Way side stations, Junction Stations and Terminal Stations.

(iii) *Categories of Station:* Stations are categorised as 'A', 'B', 'C', 'D', 'E' & 'F' depending upon their earnings.

Full details of these two types of stations are given in subsequent pages.

3.7 Classification of Stations as per operational considerations.

As per general and subsidiary rules of Indian Railways. The Railway Stations area classified in two main categories, which area further divided in sub-categories as indicated below:



The following factors are taken into consideration for the above classifications:

(i) Maximum economy so as to provide minimum signals.

(ii) Flexibility in shunting operations.

(iii) Increasing line capacity.

(iv) Faster movement of trains.

3.7.1 Block Stations:

A block station can be defined as a station at which the driver has to obtain an 'Authority to proceed' to enter the next block section. In this systems of working, the entire railway line is divided into convenient block sections of say 5 to 10 kms and a block station is provided at the end of each block section. The system ensures that suitable 'space interval' is provided between running trains so that there are no collisions and accidents. There are three types of block stations:

A Class Station : (Fig/3.1)

A Class Stations are normally provided on double line sections. At such stations, line clear cannot be granted to a station in rear unless the line on which it is proposed to receive a train is clear and facing points are set and locked. No shunting can be done after line clear has been granted.

An A class station is suitable on a section where traffic passes rapidly and advance knowledge of the condition of block station is required for the driver of the train. A typical layout of 'A' class station with two aspect signaling is given in Fig. 3.1

The requirements of signals at A class station are:

(i) *Warner :* A warner signal placed at a warning distance from the home, the main function of which is to indicate whether the section beyond is clear or otherwise.

(ii) *Home :* A Home Signal, which is the first stop signal.

(iii)*Starter :* A starter Signal, which is placed at an adequate distance from the Home and which, therefore, marks the point upto which the line should be clear for giving permission to approach.

(iv)*Advance Starter :* This signal is optional and can be provided for speeding the trains further.

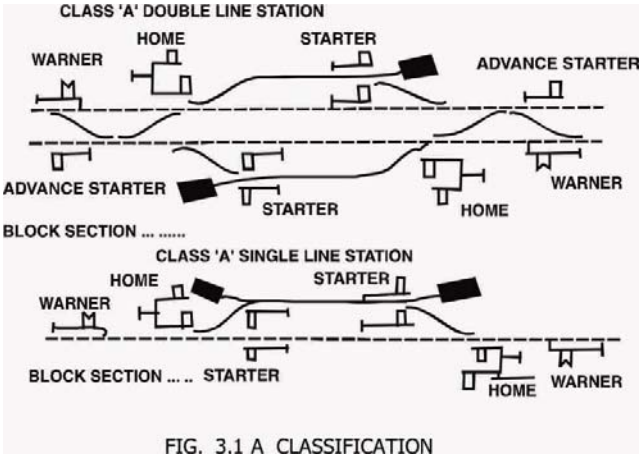


FIG. 3.1 A CLASSIFICATION

Advantages :

(i) More economical vis-à-vis B class station because of less signals.

(ii) Ensures safety because of a Warner Signal ahead of Home signals.

(iii) A train normally stops within limits.

Disadvantage:

(i) No shunting is possible after line clear is granted.

(ii) Another clear disadvantage of 'A' class station, is that a line at the station has to be kept clear upto Starter signal after giving the line clear and as such flexibility of working and shunting is restricted.

II. B Class Station : (Fig. 3.2)

This is the most common type of station and is provided both on single line as well as on Double line sections. 'B' Class station is a station where the line has to be clear upto an adequate distance beyond the outer signal before giving 'permission to approach' to a train. The minimum requirement of signals is as follows : Fig. 3.2. B Class Station.

(i) *Outer :* An outer signal which is the first stop signal. The outer signal can be below the warner also.

(ii) *Home :* A home signal which protects the facing point and is placed at an adequate distance from the outer.

(iii) *Starter:* A Starter Signal is also provided on a double line section.

The 'B' class station is generally in use maximum on Indian Railways because of greater flexibility of working. By provisions of a warner on the Outer arm post, this can cater for fast traffic also whilst facility of shunting movement, even when the clear is given, is available.

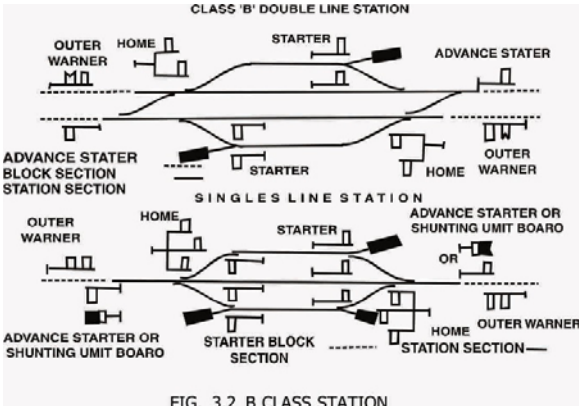


FIG. 3.2 B CLASS STATION

III 'C' Class Station : (Fig.3.3)

'C' class station is only a block hut where no passengers are booked. It is provided basically as a mean to split a long section so that interval between successive trains are reduced. No trains normally stop at these stations. The minimum requirement of signals is:

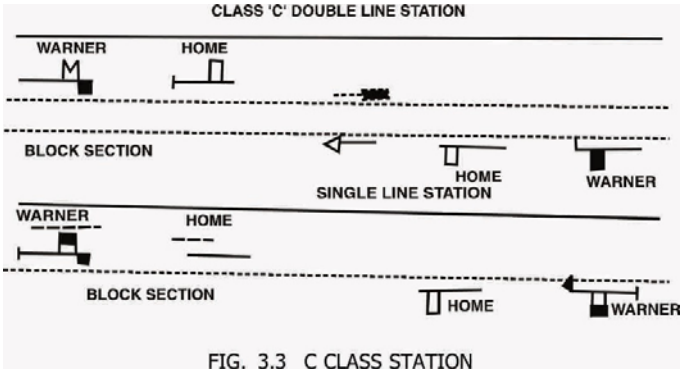


FIG. 3.3 C CLASS STATION

(i) *Warner :* A Warner signal placed at an adequately warning distance from the home to indicate the condition of the section ahead.

(ii) *Home :* A home signal which is the first stop signal.

The advantages of a 'C' class station are that it ensures faster movement and it increases line capacity. Its disadvantages, however, is that no shunting is possible and trains do not stop at these stations.

3.7.2 Non-Block Stations or D Class Stations.

D class or Non block stations are places, which area situated between two block stations and do not form the boundary of any block section. No signals are provided in D class stations.

A D class station, which serves an outlying siding is called a 'DK station'. The siding takes off through a cross over at such a station and the cross over can be operated only with the help of a key released with the help of 'ball token' A D class station which serves no siding is called a 'flag station'.

3.8 Classification of stations as per functional considerations.

The layout of stations vary in size and importance according to the type and volume of traffic handled and according to their location in respect of cities or industrial areas. Broadly speaking, for the purpose of study, the layouts required for the passenger stations and their yards can be divided into the following categories.

(i) Halts.
(ii) Flag stations.
(iii) Road side or Crossing Stations.
(iv) Junction Stations.
(v) Terminal Stations.

3.8.1 Halt (Fig. 3.4)

A halt is a stopping place on a Railway line of the simplest kind. Halt has usually a rail level platform only with a name board at either end. A small waiting shed is also provided sometimes, which also serves as a booking office. There is no yard or station building or staff provided for such types of stations. Some selected trains are given stoppage of a minute or two at such stations to enable passengers to entrain or detrain. The booking of passengers is done by Travelling Ticket examiners or by Travelling booking clerks at these stations. A notable example of a halt is a Garhmukteshwar bridge halt, which is situated on the bank of Ganga River

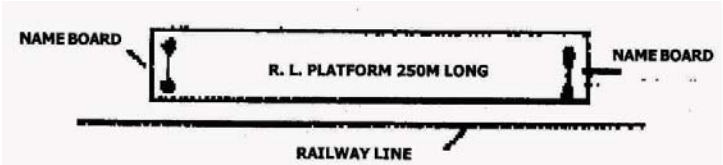


FIG. 3.4 LAYOUT OF HALT STATION

3.8.2 Flag Station (Fig.3.5)

A flag station is a more important stopping place than a halt and has station building and staff. On controlled sections, a flag station has got either a Morse telegraph or a control phone connected to one of the stations on either side for easy communication. A flag station is usually provided with a small waiting hall and booking office, platforms with benches and with drinking water arrangements. Sometimes a siding is also provided for a flag station for stabling wagons booked for that stations.

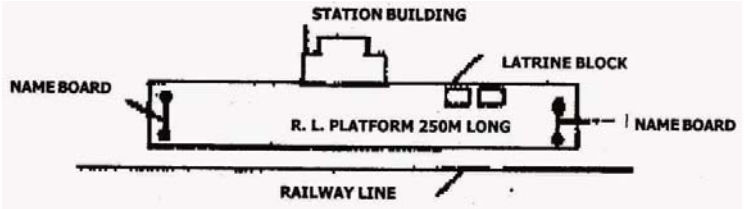


FIG. 3.5 LAYOUT OF A FLAG STATION

3.8.3 Way Side or Crossing Station

After flag station, the next stage of development is a way side or crossing station. In case of flag station, only traffic is dealt with and there are no arrangements to control movement of trains. In cases of crossing station, this forms a limit of block section and movement of trains is also controlled. The idea of a crossing station was initially conceived on a single line section for crossing of trains going in opposite direction so that movements of train may be accelerated.

The crossing stations may be further classified as

(i) Road side small and medium size stations.

(ii) Major stations.

Some of the important features of these stations are:

(i) *Operating Work:* Main operating work is passing of trains, crossing of trains, giving precedence to trains and miscellaneous work for stopping passenger trains. Mostly slow passenger trains stop at small stations whereas mail and express trains stop at major stations.

(ii) *Goods traffic :* These stations deal mostly with parcel traffic only. Piece meal wagon load goods traffic is now not being accepted on the road side stations as per new policy of Railway Ministry since December 1994.

(iii) *Operation of Points & Signals :* The operation of points and signals is controlled either by a central cabin or two cabins at either end of the station.

(iv) *Reception and dispatch of trains :* The reception and dispatch of trains and shunting movements etc. are done as per the instructions laid down in 'station working order': Black instruments are provided either in the station masters office or in the cabin, but entire responsibility of operation lies with station master.

(v) *Station Master's duty for run through trains:* When a train runs through, the station master in proper uniform should stand opposite his office and exchange 'All right' signals with the driver and guard of the train. He should carefully watch the running train and if there are any unusual conditions such as hot box etc. he should advise the station in advance to stop and examine the train.

3.9 Commercial categories:

Classification of Stations as per earning Considerations

The railways stations are also classified as per consideration of passenger earning per year. Depending upon the passenger earning of the railway stations and some other important considerations, the stations have been classified in **seven** categories viz A1,A,B,C,D,E &F which is also an indicator of the passenger traffic. These categories are **(RB/L&A/005/2012/LM(PA)/3/5 dt.09/5/2011):**

S.No.	Category	Criteria
1.	A1	Non-Suburban stations with an annual passenger earning of more than Rs.60 crores.
2.	A	Non-Suburban stations with an annual passenger earnings of Rs.8 crores and upto Rs. 60 crores.
3.	B	I. Non-Suburban stations with annual passenger earnings between Rs. 4 crores to Rs. 8 crores. II. Stations of tourist importance or an important junction station (to be decided by G.M.)
4.	C	All suburban stations *.
5.	D	Non suburban stations with passenger earnings between Rs.60 lakhs and Rs. 4 crores.
6.	E	Non suburban stations with passenger earnings less than Rs.60 lakhs.
7.	F	Halts
* For station dealing with both suburban / non-suburban traffic, the Railway may take a view regarding up-gradation of classification depending upon station earnings, quantum of non-suburban traffic, etc.,		

Note: Annual Passenger Earnings at the station for the purpose of the amenities shall be worked out as per para 2.3 of the instructions.

Minimum Essential Amenities

The minimum essential amenities required for each category of station has been indicated in the table. The railway should generally ensure that these essential facilities are provided at all the stations.

MINIMUM ESSENTIAL AMENITIES AT VARIOUS CATEGORIES OF STATIONS

SL. NO.	AMENITIES	STATION CATEGORY						
		A1	A	B	C	D	E	F
1.	Booking Facility	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.	Drinking water Piped/Hand Pump	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3.	Waiting hall	Yes	Yes	Yes	-	Yes	Yes	Yes
4.	Seating arrangement	Yes	Yes	Yes	Yes	Yes	Yes	-
5.	Platform shelter Shady trees	Yes -	Yes -	Yes -	Yes -	Yes -	Yes -	- Yes
6.	Urinals	Yes	Yes	Yes	Yes	Yes	Yes	-
7.	Latrines	Yes	Yes	Yes	Yes	Yes	Yes	-
8.	Platforms – High level- Medium level- Rail level-	 Yes - -	 Yes - -	 - Yes -	 Yes - -	 - Yes -	 - - Yes	 - - Yes
9.	Lighting #	Yes	Yes	Yes	Yes	Yes	Yes	Yes@
10.	Fans	Yes	Yes	Yes	Yes	Yes	Yes	-
11.	Foot over bridge	Yes*	Yes *	Yes	Yes	©	-	-
12.	Time Table Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13.	Clock	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14.	Water cooler	Yes	Yes	Yes	Yes	Yes	-	-
15.	Public Address system/ Computer based announcement	Yes	Yes	Yes	-	-	-	-
16.	Parking –cum-circulatory area, with lights	Yes	Yes	-	-	-	-	-
17.	Electronic Train indicator board	Yes**	Yes	-	-	-	-	-
18.	Public phone booth	Yes	Yes	-	-	-	-	-
19.	Signage (standardized)	Yes	Yes	Yes	-	-	-	-

* With Cover.

** At station entrance/concourse , on Foot-over bridges (at landing locations) and on platforms located appropriately to guide passengers at every stage.

Stations may be electrified as per provisions of Board's circular No.95/Elec(G)/109/1 dt. 1.2.95

@Where train stops at night.

©Foot over-bridges shall be provided at all crossing stations during doubling/gauge conversion upto 'D' category stations , wherever the same are not available.

NORMS OF MINIMUM ESSENTIAL AMENITIES AT VARIOUS CATEGORIES OF STATIONS

SL. NO.	AMENITY	STATION CATEGORY						
		A1	A	B	C	D	E	F

1.	Booking Facility% (No. of Counters)	15	10	6	4	4	2	1
2.	UTS as per norms	Yes	Yes	Yes	Yes	Yes	Yes	-
3.	Drinking water^ (No. of taps/PF)$^^	20	20	20	6	8	2*	Appropriate drinking water facility**
4.	Waiting hall @ sq m	250	125	75	0	30	15	10 sqm booking office cum Wtg.hall
5.	Seating arrangement (No. of seats/PF)	150	125	100	10	50	10	-
6.	Platform shelter (on each PF)#	500 Sqm	400 Sqm	200 Sqm	200 Sqm	50 Sqm+	50 Sqm+	Shady trees
7.	Urinals ##	12	10	6	4	4	1	-
8.	Latrines ##	12	10	6	2	4	1	-
9.	Foot over bridge ®	1 with cover	1 with cover	1	1	®®		
10.	Water cooler £	2 on each PF	2 on each PF	2 on each PF	2 on main PF	1 on main PF	-	-
11.	Signage (standardized)	Yes	Yes	Yes	-	-	-	-
12.	Platforms ***	High Level	High Level	Medium Level	High Level	Medium Level	Rail Level	
13.	Lighting +++ (Lux level)	As per Annexure II of Board's letter No.2004/Elec(G)/109/1 dated 18.5.2007						
14.	Fans ©	As given below						
15.	Time table display	As per extant instructions						
16.	Clock	To be decided by zonal railways						
17.	Public Address System/ Computer based announcements	As per extant instructions						
18.	Parking –cum – circulatory area, with lights	As per extant instructions						
19.	Electronic Train indicator board	As per extant instructions						
20.	Public phone booth	As per extant instructions						

% At A1,A,B,C & D category of stations , the booking counters to operate round the clock except at stations where there is no night working.

^ At stations falling in water scarcity zones or where water source dries up in summer, drinking water facility should be ensured at every platform by means of syntax tanks/ CANS/ Matkas / Piaos etc.,. as decided by GM of the Railways. At less important stations , particularly those falling under category E & F , one water supply source at a location convenient to passengers may be provided. Drinking water facility would include all necessary units whether donated by private parties or Railways themselves.

$ There should be one drinking water tap suitable for use by disabled persons on alternate water booths at every platforms .

^^ Adequate number of water taps should be suitably located to serve passengers of GS coaches, i.e., at the end of platforms.

* At 'E' category stations , wherever piped water supply is not feasible due to local conditions, separate arrangement for portable water at each platforms shall be made available with the approval of General Manager of the concerned Zonal Railway.

** Drinking water arrangements should be made at halt stations by means of water taps/hand pumps/ tubewells / sintex tanks/ piaos as decided by the General Manager of the concerned Zonal Railway.

@ If the variation is marginally on the lower side (upto – 5 sqm), then it can be taken to be adequately provided.

Shelter should be suitably spaced ensuring natural light and ventilation and covering areas from where passengers aboard the General Coach.

+ Preferably light weight shelters.

1. Number of latrines/ urinals/includes provision in waiting room/halls. 1/3rd of the toilet may be reserved for ladies. In case of 2 toilets existing, one should be earmarked for ladies &gents.

2. Number of latrines/urinals can be reduced in water scarcity areas by the Railway with the approval of GM.

3. Includes pay and use toilets. The policy for setting up such toilets be referred in terms of Board's letter No.05/TGIV/10 SAN/32/Pay & Use Policy Dt.7.6.06.

®New FOBs should be at least 6 m wide at 'A-1', 'A' and 'C' category stations wherever feasible. New FOBs at 'A1' & 'A' category

stations should be compatible for installation of escalators.
®® Foot over-bridges shall be provided at all crossing stations during doubling/gauge conversion upto 'D' category stations, wherever the same are not available.
£ To be provided as per Board's letter No.69/Elec(g)/730/8 Dt.30.03.1971.
***(a) On all New lines, Gauge conversion & Doubling projects, minimum level of platforms shall be medium level(Board's letter No. 2003/LMB/14/29 Dt.26.4.2005).Wherever medium level of platform is to be provided as per norms, the same shall be with the foundation for high level platform. (Board's letter No.2012/LM(PA)/03/07/Policy dated 06.07.12). (b)Wherever platform height gets reduced on account of track works , the same should be restored(Board's letter No. 2003 /LMB/14/29 Dt.03.02.2005) (c)Platform should be high level, irrespective of category ,wherever EMU trains are dealt with (Board's letter No.2006/LMB/2/121 Dt.11.8.2006)
++Solar energy based lighting needs to be introduced to provide emergency lighting at "D" and "E" category stations, wherever feasible, in non-electric traction areas.
©For covered platforms having width of 6-9mts; one row of fans should be provided @one fan in the centre of supporting columns. For covered platforms with more than 9 mts width, fans should be provided in 2 rows.
Note: (1) At stations where only one ASM is posted, only one booking window will be provided. In respect of 'E' category stations, where the earnings is less than Rs.20 lakh per annum, the quantum of amenities to be provided could be decided by General Managers based on actual requirements. (2) Scale of all the amenities prescribed above are the bare minimum to be provided at appropriate category of stations. Amenities over and above the prescribed minimum scales will continue to be provided as per norms for provision of amenities at "Recommended Level".

Recommended Amenities

Once the essential amenities as indicated in above table are available at a station to the prescribed levels, further augmentation of these amenities can be made to higher recommended norms. Details of these amenities are given in the Table below:

Nmax = Maximum number of trains dealt with in any interval of half an hour at the station multiplied by the average number of passengers dealt per train at that station. The average number of passengers per train at a station shall be the average number of daily passengers dealt with at the station divided by the number of trains stopping at the station during 24 hours.

Ndb = Design figure for number of passenger for 'A' & 'B' stations to be calculated as Ndb =0.3(Nmax)

Nds = Design figure for number of passenger for 'C' , 'D' & 'E' stations to be calculated as Nds=0.45(Nmax)

(Norms for Recommended level of Amenities at various categories of stations)

S.No.	Amenities	Recommended scale for provision	
		Cat. A1, A & B	Other stations
1.	Booking Facility	1 window per 800 tickets per shift (shift with maximum number of tickets sold should be taken)	
2.	Drinking water (No. of tapes)	No. of taps= Nmax/25. Taps should be distributed so that every alternate coach gets benefit of a tap.	No. of taps= Nmax/25.
3.	Waiting hall /Shed	1.394 Ndb sqm	1.394 Nds sqm(Excluding C)

4.	Seating Arrangement (No.of Seats)	0.4Ndb	0.4 Nds
5.	Platform Shelter* (on each PF)	0.28 Nmax	0.28 Nmax
6.	Urinals #	Ndb/200	Nds/200
7.	Latrines#	Ndb/200	Nds/200
8.	Platform Level	To be decided by the Zonal Railways	
9.	Lighting ®	As per Board's letter no.95/Elec(G) /138/5 dated 19.3.96 .Norms indicated in Note below.	
10.	Fans **	As per Board's letter no.95/Elec(G) /138/5 dated 19.3.96	
11.	Foot over bridge	To be decided by the Zonal Railways	
12.	Time Table Display	To be decided by the Zonal Railways	
13.	Clock	To be decided by the Zonal Railways	
14.	Bathrooms #	1/400Ndb	1/400 Ndb at other junction & terminal stations only
15.	Water Coolers	To be provided if total number of passengers ,inward and outward is more than 1000 per day (As per Board's letter no.69/Elec(g) /730/8 dated 30.3.71. To be decided by Zonal Railways	
16.	IVRS	A-48 lines (calls 72000) B-24 lines (calls 5000-20000)	A central IVRS with adequate lines should be provided to cover all suburban stations-Minimum 6 lines if IVRS is otherwise justified.
17.	Public Address System/ Computer based Announcement	To be decided by the Zonal Railways	
18.	Parking-cum-circulatory area,with lights	To be decided by the Zonal Railways	
19.	Electronic Train indicator board	To be decided by the Zonal Railways	
20.	Public phone booth	To be decided by the Zonal Railways	
21.	Signage (standardized)	To be decided by the Zonal Railways	

*At important A1, 'A' category and suburban stations, efforts should be to cover the entire PF.

#1/3rd of urinals/latrines be reserved for ladies.

® (a) Emergency light: From Auxiliary Transformer (AT) connected to traction supply,10 light points for A1 and A category stations on each platform. Emergency light from DG set/Solar supply on each platform at all stations where traction supply is not available, except E & F category stations. (b) Minimum one light in ASM room, Booking Window, Waiting Hall each, one light on each FOB at every 30 meter,03 lights on each platform and one light in circulating area shall be provided as emergency light with suitable back up power source such as Solar/wind etc.,.

**For covered platforms having width of 6-9 mts, one row of fans should be provided @one fan in the centre of supporting columns. For covered platforms with more than 9 mts width , fans should be provided in 2 rows.

$At suburban stations ,bathrooms need not be provided.

Note:Norms for recommended level illumination at various categories of stations are as follows (Ref Bd's Circular No.2005/Elec(G)/150/1 Dt.28.2.06)

S.No.	Area	Proposed lux level for category I/II/III station
1.	Station circulating area	50/30/20
	Outdoor car parking	20/20/20
2.	Station concourse area	100/100/100
3.	Booking office, reservation office, enquiry office	200 (localized above counter) & 100 in remaining areas for category I, II, III stations.
4.	Parcel & luggage office counter	150/150/150 150/150/150
5.	Platform covered open area	50/30/20
6.	Waiting halls/rooms	100/100/100
7.	Retiring rooms	100/100/100
8.	Restaurant & kitchen in general building area: i. Restaurant area: ii. Kitchen: iii. Stores:	 150/150/150 100/100/100 100/100/100
9.	Foot over bridge	50/30/20
10.	Other service buildings inside Railway station area	200 for SM's office for category I, II , III stations.

Category (I) – Stations on Zonal railway HQs/State capitals and all A1 & A category stations.

Category (II) - Stations on Rlys. Divisional Hq./ State Distt. HQs & all B category stations.

Category (III) – Stations in remaining categories.

Desirable Amenities

Desirable amenities are those which are considered desirable to further improve customer satisfaction and interface process at the station. The quantum of these amenities would depend upon the category of the station. A comprehensive list of the desirable amenities is given in table. The provision of desirable amenities need not wait for complete provision of amenities to levels recommended. These amenities should be provided based on the need and relative importance of the station.

S.NO.	AMENITIES	STATION CATEGORY						
		A1	A	B	C	D	E	F
1.	Retiring room	Yes [1]	Yes	Yes	-	-	-	-
2.	Waiting room(with bathing facilities) Upper class	Yes [1]	Yes	-	-	-	-	-
	2nd class	Yes [1]	Yes	Yes	-	Yes	-	-
	Separate for ladies (combines upper and 2nd class)	Yes [1]	Yes	-	-	-	-	-
3.	Cloak room	Yes	Yes	Yes	-	-	-	-
4.	Enquiry Counter	Yes	Yes	Yes	-	-	-	-

5.	NTES	Yes	Yes	-	-	-	-	-
6.	IVRS	Yes	Yes	Yes	-	-	-	-
7.	Public Address system/ Computer based announcement	*Yes*	*Yes*	*Yes*	Yes	Yes	-	-
8.	Book stalls/ other –stalls of essential goods	Yes [2]	Yes	Yes	Yes	Yes	-	-
9.	Refreshment room	Yes	Yes	Yes	-	-	-	-
10.	Parking / circulatory area with lights ***	*Yes*	*Yes*	Yes	Yes	Yes	-	-
11.	Washable apron with jet cleaning #	Yes	Yes	Yes	-	-	-	-
12.	Electronic Train indicator board	*Yes*	*Yes*	Yes	Yes	-	-	-
13.	Touch Screen Enquiry system	Yes	Yes	Yes	-	-	-	-
14.	Water vending machines	Yes	Yes **	Yes **	-	-	-	-
15.	Foot Over Bridges	*Yes*	*Yes*	*Yes*	*Yes*	Yes ®		
16.	Escalators	Yes [3]	Yes [3]	-	Yes [3]	-	-	-
17.	Travellator	Yes [4]	Yes [4]	-	-	-	-	-
18.	Signage (standardized)	*Yes*	*Yes*	*Yes*	Yes	Yes	-	-
19.	Modular Catering Stalls *	Yes	Yes	Yes	Yes	Yes	-	-
20.	Automatic Vending Machines	Yes	Yes**	Yes **	Yes **	-	-	-
21.	Pay & Use Toilets on end of platforms & circulating area.	Yes	Yes	Yes	Yes	Yes	Yes	-
22.	Provision of cyber cafes	Yes [4]	-	-	-	-	-	-
23.	Provision of ATMs (preferably with ticketing facility)	Yes	Yes	Yes	Yes	Yes**	Yes **	-
24.	Provision of at least one AC VIP/ Executive Lounge	Yes	-	-	-	-	-	-
25.	Food plaza	Yes	-	-	-	-	-	-
26.	Train coach indication system	Yes	-	-	-	-	-	-
27.	CCTV for announcement & security purpose	Yes	-	-	-	-	-	-
28.	Coin operated Ticket Vending Machines	Yes	Yes	Yes	Yes	-	-	-
29.	Pre-paid Taxi service	Yes [5]	-	-	-	-	-	-
30.	High Level Platform	*Yes*	*Yes*	Yes	*Yes*	Yes [6]	-	-

Yes (in italics): **Also prescribed as minimum Essential Amenity under Annex. II.**

***** should include high mast lighting wherever feasible.**

 # Washable aprons with water hydrant/jet system should be provided at all platforms where morning train stops for longer duration to ensure cleanliness and better maintenance.

® On double line sections.

*** In end platforms, all stalls should be preferably embedded in walls.**

**** Optional items vide Board's letter No.94/LMB/2/175 dated 16.1.05**

Numbered subscripts:

1: **Up gradation to be taken up preferably public-private partnership schemes. Retiring Rooms need not be provided at 'D' category stations.**
2: **Should provide for minimum essential medicines.**
3: **Escalators at 'A1', 'A' & 'C' category stations and stations of Tourist importance.**
4: **Subject to availability of space & feasibility.**

5: **Subject to availability / clearance from local authorities.**
6: **With the approval of General Manager.**

3.10 Station Platforms

Station platforms are provided for the passengers to entrain or detrain the trains. The platforms can be rail level, low level or high level platform depending upon the expected passenger traffic at each station. The policy generally adopted on the Indian Railways is to provide high level platforms at all important main line stations, low level platforms at less important main line stations and rail level platforms at unimportant way side stations.

The rail level platforms are just flush with rail level, the low level platforms are at a height of 455mm(1'-6") for B.G. & 305mm for M.G. The high level platforms are at a height of 760mm to 840mm (2'-6" to 2'-9") for B.G. and 305 mm to 405 mm (1'-0" to 1'-4") for M.G.

3.10.1 Main building areas for different types of stations.

The main facilities for a small station are waiting hall, booking hall, ASM Office and store room. Type designs have been standardised by various railways which provide facilities for small and medium size stations. For big stations, however, design of an individual station building has to be done based on the requirement of passenger traffic and giving due regard to its architectural features.

3.11 Stations Building, Platforms and Circulating Area

Railway Station is a public premise. It is the first contact point regarding the railway environment with the passengers. Being public premises, all the public facilities are to be available in the station premises.

3.12.6 Platform cover:

Depending upon the climatic condition number of passengers and nature of traffic, platform covers should be provided at the rate of 6sq.m. per passenger preferably to accommodate 50% of the maximum passenger at a time.

3.12.7 Foot over Bridge or Subway:

Foot over bridge or subway as per the requirement should be provided keeping in view the following factors:

1. Inter connection between high level or low level platform,
2. Maximum number of passengers dealt with at a time,
3. Frequency of train services,
4. Blocking of lines between platforms by freight trains.

Design and location of foot Over Bridge of Subway should be in such a way to suite the convenience of the passengers and should be able to cater for the rush.

3.12.8 Approach Roads and Circulating Area

(a) The location of new stations and their facilities covering Booking offices. Goods sheds, etc. should be so chosen as to be convenient to the city, town or village served by the station. The station and goods shed approach should have an easy and unobstructed connection with the main road system serving the station.

(b) The Approach roads for all the station facilities within the Railway land should be maintained by the Engineering Department. The portion of the approach road beyond the Railway Boundary linking the main road network of the city, town or village can also be maintained by the Engineering Department if the Road Authorities agree to the arrangement with the maintenance being undertaken as a Deposit work.

(c) The circulating area adjoining the station building and goods shed should be properly designed to ensure rapid dispersal of the passengers and road vehicles and avoiding conflict between pedestrian and vehicular traffic. The circulating area should provide adequate parking space, nominated space for embarking and disembarking for vehicle traffic, and loading and

unloading of goods. The circulating area should facilitate a smooth and unhampered flow of the road traffic in the vicinity of the station building and the goods shed.

(d) While formulating the plans for new circulating area or modifying the existing circulating areas, the Engineering Department may consult the appropriate local authorities to ensure that the Railway's planning matches with the local authorities' planning for the road traffic management near the station area.

3.12.9 Station Building: It should have the following broad features:-

(a) The layouts for the station building should provide for all the passenger amenities detailed herein above and the functional requirements. The layout should also provide for future expansion and should result in an overall pleasing and functionally efficient layout.

(b) The station buildings should incorporate in them the features of the local architectural heritage wherever possible. While extending or modifying the existing station buildings, it must be ensured that the new construction harmonises with the architecture of the existing station buildings. The plinth level of the station buildings should provide for raising of the platform to a high level platform.

(c) For all stations, the centre of the station building acts as the reference point for the yard plans, inter-station distances, chargeable distances, etc. The reference point shall be prominently marked with an engraved vertical arrow on the external walls of the station building with the caption 'CENTRE LINE OF STATION" engraved below it. The location represents a fixed reference point and shall not be altered if the station building is subsequently extended, altered or rebuilt. The fixed reference point shall be maintained properly and in the event of removal of the part of the structure on which it is fixed, the reference point shall be re-engraved at the same location on any other permanent structural element available.

(d) A permanent Bench Mark (B.M.) linked with the Survey of India B.M. System should also be provided in the prescribed manner on a suitable part of the station building at a location least likely to be disturbed. A list of B.M.S should be maintained in the offices of IOW, AEN & DEN with complete description of their location, level etc.

3.13 Important features of Passenger and Goods Platforms

Item	Details		
Passenger Platforms			
1. Height of Platform	(i)	High level platform (for all important main line stations)	0.76m on B.G. 0.405m for M.G.
	(ii)	Low level platform (less important main line stations)	0.455m for B.G. 0.305m for M.G.
	(iii)	Rail level platform for unimportant way-side stations.	At rail level
2. Length of platforms	Enough length to accommodate the longest passenger train on the station. Minimum length is 180m. Normally on main line platforms of 450m length are provided to accommodate 20 bogies.		
3. width of platform	Platform to be wide enough to accommodate full trains load of passengers. A suggested yard stick is 1.5sqm. per passenger for main line and 1.0sqm. per passenger for suburban train; Minimum width of platform is 3.66 metres.		
4. End of platform	A ramp is provided with slope 1 in 6		

5.	Platform cover	platform to be covered as per the passengers requirement, minimum length of platform cover is 60 metres.
6.		
8.	Station name boards	Two station name boards placed one on each side of platform perpendicular to track. Name of station is written in Hindi, English and regional language. Height of underside of board is 1.8 metres.

Goods Platforms

1.	Height of platform	B.G. 1.07 metre, M.G. 0.69 metre and N.G. 0.61 metre.
2.	Length of platform	Adequate to deal with goods received or dispatched, normally not less than 60 metres.
3.	Width of platform	Depends upon volume of traffic; minimum width specified is 3.1 metres.
4.	Other facilities	Weighing facilities, direct access road, paved platform, etc.