

D.O. No. PL-10 (76)/74

Dated the 6th May, 1983

From The Director General (Road Development) to All State CEs dealing with N.Hs (By name),
D.G.B.R. and D.G. Works, CPWD (By name)

Subject : Road Register for National Highways

As you are aware, the format for maintaining the road register was circulated under this Ministry's letter of even number dated 8th Sept., 1975. Despite persuasions, a large number of States have not yet been able to maintain the road registers as observed during the inspection by the various officers of this Ministry.

2. In this connection, it has been learnt that the present form required simplification for easy collection of data by the State PWD Divisions. The matter has, therefore, been carefully considered in this Ministry and the present form has been reviewed with a view to simplify, rationalise and up-date the same. A copy of the proposed revised format is enclosed.

3. I shall be grateful if you could furnish your comments, if any, as early as possible. However, in case no comments are received within a month from the date of issue of this letter, it will be presumed that you agree with the proposed revised format for adoption.

INSTRUCTIONS FOR FILLING THE ROAD REGISTER

1. General

The register should be maintained in each N.H. Dvn. of the State PWD covering details w.e.f. 1.4.80 (corresponding to the commencement of the 6th Plan period) with the same notations and conventions as shown in the legend for uniformity. This should be done National Highway wise under each State National Highway Division. The dates of preparation should be clearly indicated. Whenever the form is revised, the date of revision should also be indicated on the left hand side of the road register form.

The register should be bound with the size of the pages as per enclosed specimen forms. For purpose of maintaining the register, the road length should be normally divided into convenient sub-sections of 20 to 30 Kms. or even smaller length, if warranted.

2. Road Map (Page No. 1)

Road map with continuous kilometrage should be kept in the register as page No. 1 showing the topography of the area, towns, villages and other roads, railways and rivers etc. The scale should be 2 cm = 1 Km (1 : 50,000). North direction must be clearly shown. This map should also indicate the following details with their locations :

- (1) Curves with their radii
- (2) Rail & Road Crossings
- (3) Culverts/Dips/Bridges/Submersible bridges
- (4) Roadside details, such as tanks, ponds, built-up areas, villages, towns.
- (5) Location of approved quarries.

3. Statistical data (Page No. 3)

- (i) **Rainfall** : Annual average rainfall should be based on meteorological records. The maximum recorded annual rainfall also to be given.
- (ii) **Traffic data** : Should be based on traffic census carried out in accordance with IRC : 9-1972 "Traffic Census on Non-urban Roads".

4. Deficiencies Data (Page No. 3)

The identified deficiencies should be furnished as existing on 1.4.1980 on this table.

As regards the sub-item of level crossing, it is pointed out that the criteria laid down for its replacement is the product of No. of gate closures and the No. of fast moving vehicles in thousands. This index value should be given.

4.1 In case of dips/causeways/submersible bridges the number of interruptions and their duration for each in a year should be furnished.

In respect of the sub-item of weak culverts/bridges, attempt should be made to furnish the present load carrying capacity.

Specific mention should be made about special problems in the reach, if any, besides (a) land slides, and (b) sand dunes, as indicated.

Specific mention should also be made if there is lack of drainage affecting the performance of the road pavement. Further data regarding number of days of water-logging in a year should also be furnished.

5. Existing Width of land Formation and Carriageway etc. (Page No. 4)

Widths should be recorded in figures, correct upto the first place in decimal. In the case of divided highways, the width should be shown as number of lanes 'n' width of each carriageway.

6. Pavement composition : (Page No. 4)

Details to be given for four kms. in each sheet.

Brief details about the thickness and composition of pavement along the centre line of the road should be recorded. The composition should be indicated, by conventional abbreviated symbols given in the legend. Where the sub-base or base course consists of more than one material, each should be shown separately by dividing the space and noting the thickness alongside in the space provided for this purpose in the form. Pavement composition should be entered after making a few trial pits at intervals depending on the variations in crust thickness, if required.

7. Pavement Strengthening widening and surface renewal chart (Pages No. 4 & 5)

Details to be given for 4 kms in each sheet.

These should indicate the works of renewal/pavement strengthening widening carried out from year to year, starting from 1.4.80.

Specifications adopted should be shown using the same symbols as in the legend. Where more than one specification has been used for strengthening/renewal, each should be depicted separately by dividing the available space. Thickness of each course should be recorded alongside in the figures in the space provided for the purpose in the Form. It is pointed out that at times strengthening the pavement is carried out under Special Repairs and Flood Damage grants. Such strengthening should be shown under the appropriate column of "STR".

Whenever more land is acquired, the total width should be given in the column "Width (L)".

KEY MAP

Page No. 1

N.H. No.

Station :

Sub-section : From KM. _____ to KM. _____

Scale : 2 cm = 1 KM. (1 : 50,000)

STANDARD ABBREVIATED SYMBOLS FOR FILLING THE CHARTS IN ROAD REGISTER

A	SUB — BASE	ABBREVIATION
	1. STONE SOLING _____	ST.
	2. BRICK LAID FLAT OR ON EDGE _____	BK.
	3. STABILISED SOIL _____	STB.
	4. GRANULAR (SAND, MOORUM OR GRAVEL) _____	SD, MR, GR.
	5. LATERITE, KANKER OR BRICK METAL _____	LM, KM, BKM.
	6. STONE W.B. MACADAM (OVER SIZE METAL) _____	OSM.
B	BASE	
	1. STONE W.B. MACADAM _____	ST, WBM
	2. BROKEN CEMENT CONCRETE _____	BROKEN C.C.
	3. BITUMINOUS MACADAM _____	BM.
	4. SEMI — GROUT/FULL GROUT _____	SG/FG.
	5. BUILT UP SPRAY GROUT _____	BUSG
C	SURFACING	
	1. SURFACE PAINTING ONE COAT _____	SD (S)
	2. SURFACE PAINTING TWO COAT _____	SD (D)
	3. OPEN GRADED CARPET _____	PC.
	4. MIX — SEAL SURFACING _____	M.S.S.
	5. SEMI — DENSE CARPET _____	S.D.C.
	6. ASPHALTIC CONCRETE _____	A.C.
	7. CEMENT CONCRETE _____	C.C.
D	LAND ACQUISITION	LA

PAGE NO-2

STATISTICAL DATA

THESE DATA SHOULD BE RECORDED FOR EACH SECTION OF THE HIGHWAY SEPARATELY IN THE REGISTER

I NH No. _____ **II NAME OF STATE** _____

SECTION FROM _____ KM. TO _____ KM.
 SUB SECTION FROM _____ KM. TO _____ KM.
 ZERO KM STARTS AT _____

III RAIN FALL - ANNUAL AVERAGE _____ MM. MAXIMUM _____ MM.

IV NATURE OF TERRAIN - PLAIN _____ ROLLING _____ HILLY _____
 MOUNTANOUS _____ STEEP _____

V NATURE OF SOIL - GRAVEL, SAND, LATERITE, BLACK, COTTON SOIL, SANDY CLAY, SILTY CLAY, MOORUM CLAY, & ANY OTHER TYPE _____

VI TRAFFIC DATA _____ CENSUS TAKEN AT K.M. _____

TYPE OF VEHICLES	AVERAGE DAILY TRAFFIC								REMARKS
	WEEK	1	2	3	4	5	6	7	
K.M.V. BUSES AND TRUCKS									
L.M.V. CARS / VANS									
S.M.V. BULLOCK CARTS ETC									
P.C.U.S. EXCLUDING S.M.V.									

VII IMPORTANT DEFICIENCY DATA

ITEMS	LOCATION & EXISTING VALUES
HORIZONTAL CURVE RADIUS	
STEEP GRADIENT	
INADEQUATE SIGHT DISTANCE	
ACCIDENT PRONE SPOTS	
LEVEL CROSSINGS	
JUNCTIONS	
ENCROACHMENT / CONGESTION	
INADEQUATE CLEARANCE ABOVE H.W.L / B.T.S	
WATER LOGGING AND NO OF DAYS ^{IN YEAR}	
WEAK CULVERTS	
WEAK BRIDGES	
NARROW CULVERTS / BRIDGES	
CAUSEWAYS / UNSERVICEABLE BRIDGES / DIPS	
SPECIAL PROBLEMS	
(A) LAND SLIDES	
(B) DUNES	
(C) ANY OTHER PROBLEM	
ROADING QUALITY	

[illegible]

ROAD PAVEMENT STRENGTHENING WIDENING AND SURFACE RENEWALS

202/7

[illegible]

1. THICKNESS OF VARIOUS COURSES SHOULD BE GIVEN IN MM UNDER STRENGTHENING/RENEWALS AND SYMBOL AS PER LEGEND
2. WHENEVER PAVEMENT WIDENING OR ADDITIONAL LAND IS ACQUIRED THE TOTAL WIDTH AND CORRESPONDING SYMBOL SHOULD BE FURNISHED UNDER THE APPROPRIATE COLUMNS.