IRC : 9-1972

TRAFFIC CENSUS
ON
NON-URBAN ROADS

(First Revision)

THE INDIAN ROADS CONGRESS

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TRAFFIC CENSUS ON NON-URBAN ROADS

1. INTRODUCTION

1.1. Periodic traffic census are a valuable source of basic data for highway planning. As such, these should be a regular feature in all highway departments.

This Standard was originally published in 1960. The revised Standard was considered and approved by the Specifications and Standards Committee in their meeting held on the 18th and 19th November, 1971 and by the Executive Committee in their meeting held on the 26th and 27th April, 1972. Later, it was approved for publication as the finalised Standard by the Council at their 78th meeting held at Nainital on the 10th July, 1972.

2. SCOPE

2.1. It is desirable that traffic census operations be carried out in a uniform manner throughout the country.

2.2 The repetition of census operations, on the scale recommended here, should normally be limited to important trunk routes like the National Highways, State Highways and Major District Roads.

3. SELECTION OF CENSUS POINTS

3.1. Judicious location of traffic count stations is crucial to the success of a census programme. For trunk routes serving inter-city traffic, it is relevant that the census sites should be fixed well away from all urbanised developments and villages. In particular, sites within zone of influence of towns where there may be a regular flow of commuter traffic must be avoided. If need be, additional stations could be set up for these zones.

3.2. Every road should be divided into convenient sections, each carrying approximately similar traffic between points of substantial traffic change. Count stations should be set up for each section. The limits of the sections could generally be the important towns along the road or major roads intersecting or taking off from the highway in question.

3.3. Since division of the highway into sections and fixation of census points for them are decisions of lasting significance, these should be taken at a senior level in each highway department after considering the traffic pattern along the entire route.

3.4 Every subsequent census should be taken at the same locations. New stations could, of course, be added as and when needed.

4. FREQUENCY AND DURATION OF CENSUS

4.1. Traffic should be counted at each point at least twice every year. One count should be taken during the peak season of harvesting and marketing and the other during the lean season. Each time the count should be made for a full week spread over 7 consecutive days and 24 hours of each day.

4.2. Traffic census should not generally encompass abnormal conditions of traffic like a fair or exhibition. In such cases, the count in the area should be postponed by a few days till normalcy returns.

5. RECORDING OF DATA

5.1. For the purpose of counts, a day could be divided into three shifts of 8 hours each and separate enumerators with a supervisor assigned for each shift. Enumerators should be literate persons with preferably middle or matriculation level qualification. It may be worth-while to specially train supervisors to go round from one census point to the next and initiate the other staff new to this kind of work.

5.2. Recording should be done for each direction of travel separately. For this it will be necessary to divide staff for every shift into two parties.

5.3. A field data sheet form for the manual recording of hourly flows is given in Plate I. Before start of enumeration, it should be ensured by the supervisors that the information in the form at the top is duly filled in by the enumerators.

5.4. In each hourly column, the traffic should be recorded by making tally marks in the five-dash system (vertical strokes for the first four vehicles, followed by an oblique stroke for the fifth vehicle so as to depict a total of five). Hourly totals should be made at the end of the shift.

6. COMPILATION OF DATA

6.1. A form for daily traffic summary is shown at Plate II. Information in this sheet should be compiled from the field data sheets. The highest peak hour traffic in the day for fast as well as slow vehicles may be highlighted in the summary sheets by drawing a firm line in red around the figures in the appropriate column.

6.2. The information collected in the daily summary sheets should be transferred to the weekly traffic summary form shown at Plate III. The average daily traffic for the week should then be determined and indicated in the space provided for that in the form.

6.3. The daily and weekly traffic summaries should be prepared in quadruplicate so that one copy could be kept by the Executive Engineer incharge of maintenance of the road and the other copies sent to the planning division at the headquarters office which in turn would remit this information to the other agencies concerned, e.g., the Roads Wing of the Ministry of Shipping and Transport in the case of National Highways. The field data sheets should be preserved as permanent record for at least five years.

6.4. An index map indicating the location of the census site should be attached to the traffic summary sheets.

PLATE 1

TRAFFIC CENSUS
FIELD DATA SHEET

DATE AND DAY OF ...

DIRECTION OF TRAFFIC : UP / DOWN ... FROM ... TO ...

ROAD CLASSIFICATION : ...

KILOMETRAGE/MILEAGE : ...

ROUTE NO (IF ANY) : ...

DISTRICT ... STATE ...

HOUR OF COUNT / TYPE OF VEHICLES	CARS, JEEPS, VANS THREE WHEELERS ETC	BUSES	TRUCKS	MOTOR CYCLES AND SCOOTERS	ANIMAL DRAWN VEHICLES **	CYCLES	OTHERS (Specify)	REMARKS, INCLUDING WEATHER CONDITIONS
	2	3	4	5	6	7	8	9
FROM ... HRS* TO ... HRS								
HOURLY TOTAL								
FROM ... HRS* TO ... HRS								
HOURLY TOTAL								
FROM ... HRS* TO ... HRS								
HOURLY TOTAL								
FROM ... HRS* TO ... HRS								
HOURLY TOTAL								

NOTES –

1 RECORD TRAFFIC VOLUME IN COLUMNS 2 TO 8 BY MAKING TALLIES IN THE FORM OF VERTICAL STROKES FOR FIRST FOUR VEHICLES AND DRAWING AN OBLIQUE STROKE FOR EVERY 5TH AS SHOWN WITHIN BRACKETS(IIII).

2 SOME ROADS CARRY APPRECIABLE VOLUME OF OTHER TRAFFIC LIKE CYCLE RICKSHAWAS. RECORD THE VOLUME OF SUCH VEHICLES IN COLUMN 3 AFTER SPECIFYING THE VEHICLE TYPE.

* THE HOUR OF COUNT SHOULD BE ENTERED BEFORE THE START OF ENUMERATION. PM HOURS SHOULD BE RECORDED AFTER ADDING 12 TO THE ACTUAL HOUR, FOR EXAMPLE 2 PM SHOULD BE RECORDED AS 14.00 HRS.

** IF FELT NECESSARY BY HIGHWAY AUTHORITY, THIS COLUMN COULD BE SUB DIVIDED INTO TWO FOR RECORDING THE VOLUME OF "PNEUMATIC-TYRED" AND "IRON-TYRED" VEHICLES SEPARATELY.

NAME AND SIGNATURE OF ENUMERATOR WITH DATE ...

NAME AND SIGNATURE OF SUPERVISOR WITH DATE ...

TRAFFIC CENSUS
DAILY TRAFFIC SUMMARY

FROM _____ HRS ON* _____ TO _____ HRS ON* _____

DIRECTION OF TRAFFIC: FROM _____ TO _____ (UP)

FROM _____ TO _____ (DOWN)

ROAD CLASSIFICATION _____

A LONGTRAGE/MILEAGE _____

ROUTE NO (IF ANY) _____

DISTRICT _____ STATE _____

COUNT HOUR	FAST VEHICLES											SLOW VEHICLES									REMARKS
	CARS, JEEPS, VANS, THREE WHEELERS ETC		BUSES		TRUCKS		MOTOR CYCLES AND SCOOTERS		TOTAL FAST			ANIMAL DRAWN VEHICLES		CYCLES		OTHERS (SPECIFY)		TOTAL SLOW			
	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	TOTAL COL 10 & 11	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	TOTAL COL 19 & 20	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
0000 - 0700																					
0700 - 0800																					
0800 - 0900																					
0900 - 1000																					
1000 - 1100																					
1100 - 1200																					
1200 - 1300																					
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2200 - 2300																					
2300 - 2400																					
0000 - 0100																					
0100 - 0200																					
0200 - 0300																					
0300 - 0400																					
0400 - 0500																					
0500 - 0600																					
TOTAL																					
TOTAL UP & DOWN FOR VEHICLE TYPE																					

* ENTER DATE AND DAY OF WEEK

NAME AND SIGNATURE OF SUPERVISOR WITH DATE

PLATE III

TRAFFIC CENSUS
WEEKLY TRAFFIC SUMMARY

FROM _____ (DATE) TO _____ (DATE)

NO. & L.S. OF CENSUS POINT - _____

ROAD CLASSIFICATION - _____

KILOMETRAGE/MILEAGE -

ROUTE NO (IF ANY) :- _____

DISTRICT _____ STATE _____

PERIOD				FAST VEHICLES					SLOW VEHICLES				REMARKS
FROM		TO		CARS, JEEPS, VANS, THREE WHEELERS	BUSES	TRUCKS	MOTOR CYCLES & SCOOTERS	TOTAL (COL 5 TO 8)	ANIMAL DRAWN VEHICLES	CYCLES	OTHERS (SPECIFY)	TOTAL (COL 10 TO 12)	
DATE	HOUR	DATE	HOUR										
1	2	3	4	5	6	7	8	9	10	11	12	13	14
TOTAL FOR THE WEEK													
AVERAGE DAILY TRAFFIC FOR THE WEEK													

NAME AND SIGNATURE OF SUPERVISOR WITH DATE _____