

Government of India

**Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)**

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 4th June, 2024

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, PTI Building, New Delhi-110001.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: - Width of Shoulder (Paved & Earthen) for National Highways- Reg.

Reference: i) Ministry's Circular No. even dated 17.07.2020

ii) Ministry's Circular No: EFile /RW/NH-33044/10/2021-S&R (P&B) (Computer No.-192344) dated 06.02.2023

Madam/Sir,

Manual of Standards and Specifications for two/four/six laning (IRC:SP:73-2018/ IRC:SP:84-2019 / IRC:SP:87-2019) specifies 2.5 m wide paved shoulder and 1.5 m wide earthen shoulder for two/four/six lane Highways in open country with isolated built-up area in plain & rolling terrain. However, Ministry vide circular no. Efile/ RW/NH-33044/22/2020-S&R (P&B) dt. 17.07.2020 specified that for two lane National Highways, width of paved shoulder and earthen shoulder in open country and isolated built-up area in plain and rolling terrain should be 1.5 m and 1.0 m respectively.

2.0 IRC: 73-2023 "Geometric Design Standards for Non-Urban Roads" specifies 1.5 m wide paved shoulder and 1.0 m wide earthen shoulder for 2 lane highways in open country and isolated built-up areas in plain and hilly terrain whereas for 4/6/8 lane highways 2.0 m wide paved shoulder and 1.5 m wide earthen shoulder is specified.

3.0 It is highly desirable that the width of shoulder should be sufficient enough to provide lateral support for pavement and thereby prevent pavement edge break, storage space for errant/broken down vehicles, desirable offset for placing of safety barrier etc. To serve all the intended functions mentioned above in cost-effective manner, it has been decided that in two/four/six/eight laning of National Highways, width of paved shoulder

Bidur Kant Jha

and earthen shoulder shall be as detailed in **Annexure**. The width of paved and earthen shoulder mentioned therein shall be applicable also for access controlled National Highways but not for Expressways.

4.0 Clear width of Culverts (measured from inside of Head Wall to inside of Head Wall) should be equal to the overall roadway width of its approach (width of carriageway+ width of paved shoulder+ width of earthen shoulder+ width of median including shyness strip towards median as applicable).

5.0 It is utmost important to have continuity & uniformity of approach roadway width (carriageway width+ paved shoulder width+ earthen shoulder width + width of median including shyness for raised median /depressed median as applicable) on the deck of bridges/grade separated structures/RoBs to avoid vehicles crashes with parapets/crash barrier. Hence, clear deck width of bridges/grade separated structures/RoBs (measured from inside to inside of crash barrier) shall be equal to the roadway width (carriageway width+ paved shoulder width+ earthen shoulder width+ width of median including shyness for raised median /depressed median as applicable) in their approaches. Wherever footpath is provided on bridge/RoB, RCC crash barrier should be provided between footpath and carriageway and pedestrian guard rail at outer edges of the bridge/RoB. In case of footpath on bridge/RoB, the width of earthen shoulder shall be tapered at the rate of 1:15 so that the metal beam barrier in approaches remains in line with pedestrian guard rail on the bridge/RoB.

6.0 The above provisions shall be applicable in case of all new projects for which bids are received 60days after the date of issue of this circular. The contents of the circular may be brought into the notice of all concerned for needful compliance.

7.0 This issues with the approval of Competent Authority in supersession of earlier Guidelines of Ministry / IRC Manuals/IRC: 73:2023.

Yours sincerely,
Bidur Kant Jha
04/06/2024
(Bidur Kant Jha)
Director

(New Technology for Highway Development)
For Director General (Road Development) & Special Secretary

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. The Secretary General, Indian Roads Congress
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new"

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6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to ADG (SKN) / ADG (RP)/ ADG(DS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Annexure

Width of Shoulders in Plain and Rolling Terrain (2/4/6/8 Lane Highways)

Type of Section	Width of Shoulder (m)			Extra Earthen Width(m)
	Paved	Earthen	Total	
Open country with isolated built up area	1.5	1.0	2.5	1.0*
Built up area**	2.5	-	2.5	-
Approaches to grade separated structures/bridges/RoB with full height RS Wall/Retaining Wall**	2.5	-	2.5	-
Approaches to bridges/grade separated structures/RoB with free slope	1.5	1.0	2.5	1.0*

Width of Shoulders in Mountainous and Steep Terrain (Hilly Area)

Type of Section	Side	Width of Shoulder (m)			Extra Earthen Width(m)
		Paved	Earthen	Total	
Open country with isolated built up area	Hill Side	1.0	-	1.0	-
	Valley Side	1.0	0.5	1.5	1.0*
Built up area**	Hill Side	1.0	-	1.0	-
	Valley Side	1.0	-	1.0	-
Approaches to grade separated structures/bridges/RoB with full height RS Wall/Retaining Wall **	Hill Side	1.0	-	1.0	-
	Valley Side	1.0	-	1.0	-
Approaches to bridges/grade separated structures/RoB with free slope	Hill Side	1.0	-	1.0	-
	Valley Side	1.0	0.5	1.5	1.0*

Note 1:

* To have desirable offset for installation of W-Beam/Thrie Beam barrier along free slope stretches, placement of road signs on outer side of the crash barrier and provision of kerb and channel drain for chute drain on high embankment slope as per site requirement, additional 1.0m earthen width in all terrains shall be constructed. This additional earthen width is not to be considered for the calculation as specified in para 4.0 and 5.0 of the circular.

**Inclusive of 0.5m shyness width required for RCC crash barrier/parapet/drain side (in case of built-up area).

Note 2: Wherever, there is a change in width of paved shoulder, it shall be achieved with tapering of paved shoulder in 1:15.

Bider part 31a.