



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

(Ministry of Road Transport and Highways, Government of India)

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सत्यमेव जयते

NHAI/ Policy Guidelines/ Miscellaneous/ 2025

Policy Circular No. 18.111/2025 dated 21st October, 2025

{Decision taken on E-Office File No. DESIGN-23/20/2025-Design Division (Comp. No.296551)}

Sub: Guidelines to discontinue construction practices for; Gap Slabs between abutments and RS walls; Closing / back RS walls behind abutments; RS walls over 10 meters in height; RS wall panels in wing walls; Geo-composites behind RS walls - relating to construction of RS walls for Flyovers/ Underpasses/ ROB structures/ Viaducts reg.

Construction of RS wall structures with the construction of earthwork in layers, assembly and placing of reinforcing elements including fascia panels etc. has become an important & essential practice in construction of Highway Projects. However, frequent failure of RS wall structures such as excessive settlement with cracks of approach cum gap slabs due to inadequate compaction of approach fill specially near the inner face of RS walls / closing RS walls, ineffective functioning of Geo-composite layers as filters resulting into bulging of RS wall panels, bulging of closing/back RS wall panels due to vertical load transferred through approach cum gap slabs, sudden collapse of RS wall panels due to shear failure of corroded steel bar connector loops of fascia panels etc. within short period of time (even within 2 to 3 years) after the completion of construction of RS wall structures has become a problem for road safety measures as well as challenging task for their repair & rehabilitation works.

2. The matter has been carefully deliberated in capacity building sessions held on 17.05.2025 & 12.06.2025 and in 685th EC meeting held on 03.10.2025 in NHAI and it is decided to adopt following remedial / corrective measures to avoid the nature of failures presently happening w.r.to RS wall structures:


- (i) Construction practices for gap slabs, closing / back RS walls with column type abutments shall be avoided. Only earth retaining abutment with dirt wall i/c bracket to support the approach slab shall be provided.
- (ii) Construction of RS walls with partial height / surcharge shall be avoided. If required due to site constraints, only RCC retaining walls of either full height or partial height with surcharge shall be provided.
- (iii) Provision of RS walls as wing walls of grade separated structures or any other structures shall be avoided. Only RCC wing walls shall be provided.
- (iv) Placement of Geo-composite membrane (as a drainage layer) at the back of the facing RS walls shall be avoided. A drainage bay of minimum 600mm width at the back of the facing RS walls shall be provided as per gradation mentioned in Table:2 of IRC:SP:102.

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- (v) Construction of RS walls over 10m height (w.r.t. NGL) shall be avoided. Wherever, height of approaches in grade separated structures / ROB etc. is over 10m height, the length of viaduct portion shall be increased to achieve the maximum height limit of RS wall approaches i.e. 10m.
- (vi) To avoid transfer of vertical load of approach slab on RCC return wall, the approach slab shall not be provided on RCC return wall. The same shall be placed on abutment's dirt wall bracket and approach fill. The crash barrier to be cast along with RCC return wall independently without any overlapping support on/with approach slab.
- (vii) In case of RS walls approaches, the crash barrier with friction slab shall be provided as an independent unit without any monolithic/integral connection with RCC approach slab/PQC pavement. The friction slab of crash barrier shall invariably be provided below the approach slab, PQC pavement/road crust of flexible pavement.

Note - For all Ongoing Projects (bids received / awarded / works under construction): The application of above remedial measures shall be decided by Technical Divisions with the approval of Member concerned.

- 3. The above remedial measures is circulated herewith for compliance by all concerned.
- 4. This issue with the approval of Competent Authority.



(CS. Sanjay Kumar Patel)
I/c Chief General Manager (Coord.)

To:

All Officers of NHAI HQ/ ROs/ PIUs/ CMUs/ Site Offices

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