

Name of the Project	:	VISUAL INSPECTION OF ROB (8B)
Location	:	NEAR GOOTY RAILWAY STATION
Location Co-ordinates	:	15°06'49.4"N 77°37'56.1"E
Date of Inspection	:	25th NOVEMBER, 2019



Summary:

- a) Cracks & Spalling has been observed at overhang portions of the slab.
- b) Cracks, Spalling & Reinforcement exposure is observed at columns top of the Piers.
- c) Leaching & Cracks are observed at Slab & Piers.
- d) Spalling & Reinforcement exposure is observed at Railings.
- e) Patching and Jacketing / Shotcreting observed in Slab & Pier of the bridge.
- f) Moderate vibrations are observed in the Bridge.
- g) Remaining spans of ROB are also in distressed condition.

Tests to be conducted:

- a) Rebound Hammer test to measure surface strength of the concrete.
- b) Ultrasonic Pulse Velocity (UPV) Test to determine the Quality of concrete, such as uniformity and homogeneity of concrete, location of internal defects in concrete, porosity.
- c) Profometer Test for the concrete cover and diameter of rebar.
- d) Half-cell Potential Meter to measure the probability of corrosion.
- e) Micrometer/card comparator is to determine the Crack width and depth.
- g) Tests for Carbonation, pH and Chloride Content to determine the extent of chemical attack on concrete.

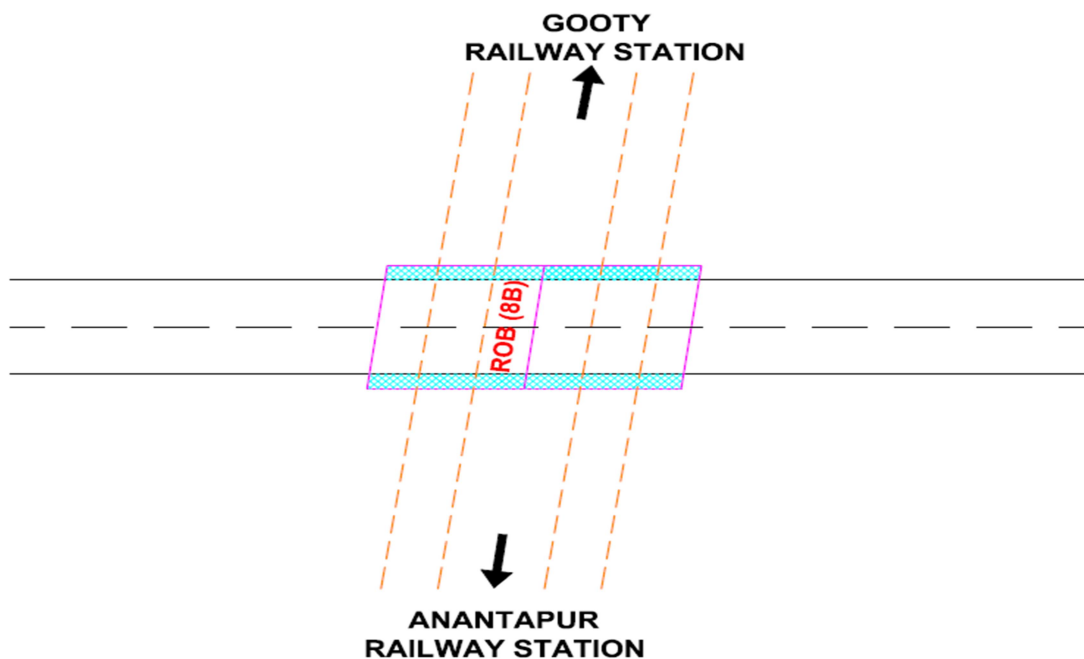
VISUAL INSPECTION OF ROAD OVER BRIDGE

Name of the Project	Visual inspection of ROB 8B
Location	Near Gooty Railway station
Date of Inspection	25 th November, 2019.

PART 1 GENERAL INFORMATION AND OBSERVATION

1.1	Name of the Bridge	ROB 8B
1.2	Location Location co-ordinates	Near Gooty Railway station 15°06'49.4"N 77°37'56.1"E
1.3	Type of Bridge	RCC Slab Bridge
1.4	Year of Construction	Data Not Available
1.5	Grade of Concrete (Slab)	Data Not Available
1.6	Design Load	Data Not Available
1.7	Carriageway Width	7.5 m
1.8	Overall Deck Width	10.8 m
1.9	Average Skew	15°
1.10	Span arrangement (no x Span in meters)	2 x 6.4 m
1.11	No of Railway Lines Crossings	02 tracks
1.12	Vertical Clearance (from rail top to girder bottom)	6.125 m
1.13	History of Repair/ Maintenance	Yes , Patch works Jacketing / shotcreting done
1.14	Original Structural Drawings	Not available

1.15 Key Plan



PART 2 STRUCTURAL SYSTEM OF THE BRIDGE			
			Notes
2.1	Foundation details		Not visible at site
	Type of foundation		
	Foundation Details (if available...)		
	Foundation Status (Check Settlement, abnormal Scour and Tilting, if any etc....)		
	Type Of Damage (Check cracking, disintegration, decay, erosion, Cavitation's etc.,)		
2.2	Abutment (A1 & A2)		
	Type	-NA-	
	Maximum height of Abutment from Ground level	-NA-	
	Abutment width along the Track	-NA-	
	Abutment thickness	-NA-	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)	-NA-	
	Efficiency of drainage of backfill Behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc.)	-NA-	
2.3	Pier	03 Nos.	
	Type (Shape)	Portal Pier	Portal Piers with 3 rectangular columns are provided. Cracks, Spalling, Reinforcement exposure has been observed on Piers. (Refer Fig-5 & 7) Patching/Jacketing/Shotcreting works have been done. (Refer Fig-3 & 4)
	Material	RCC	
	No. of Piers in a row/column	03	
	Maximum Height of Pier	5.7 m	
	Pier Diameter/Dimension	(1.0 x 0.75) m	
	Pier Cap Material	RCC	
	Pier Cap Condition	Distresses Found	
	Pier Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other Damages etc...)	Distresses Found	

2.4	Bearing & Pedestal		
	Type of Bearings	No Bearings Provided	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of Type/ shape of Pedestal	No Pedestals Provided	
	General condition (Check Corrosion, cleanliness, seizing of plates silting)	-	
2.5	Super Structure (Concrete Girder)	No Girders	
	Type/Shape of Girder (I-beam, box-	-	
	Material of Girder	-	
	No of Girder	-	
	Dimensions of Girder	-	
	Structural System of Girder	-	
	Condition of Girder	-	
	Type/Shape of Secondary Girder	-	
	Material of Secondary Girder	-	
	No of Secondary Girders	-	
	Condition of Secondary Girder	-	
2.6	Slab		
	Material of Slab	RCC	
	Thickness of Slab	0.7 m	
	Condition of Slab from Bottom		Cracks & Leaching has been Observed. (Refer Fig-4)
	Condition of Slab from Top		Not visible, as covered with wearing coat
	Condition of Flooring/Wearing Coat	Poor	Cracks and Potholes observed (Refer Fig-9)
	Parapet wall/Railing		
	Type of Parapet wall/Railing	RCC Railing	
	Height	1.1 m	
	Condition of Wall/Railing		Cracks and Reinforcement exposure has been observed (Refer Fig-10)

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	Location	Notes
	Cracking in RCC components	Slab & Piers	Cracks are observed on Slabs & Piers
	Water seepage	-	Water seepage is not observed.
	Spalling	Slab & Piers	Spalling is observed on Slab & Piers
	Reinforcement Exposure	Piers	Reinforcement Exposure is observed on Slab & Piers



Fig.1: Rob Front View



Span 1



Span 2

Fig.2: Spans of the Bridge



Fig.3: Patch works observed at Columns

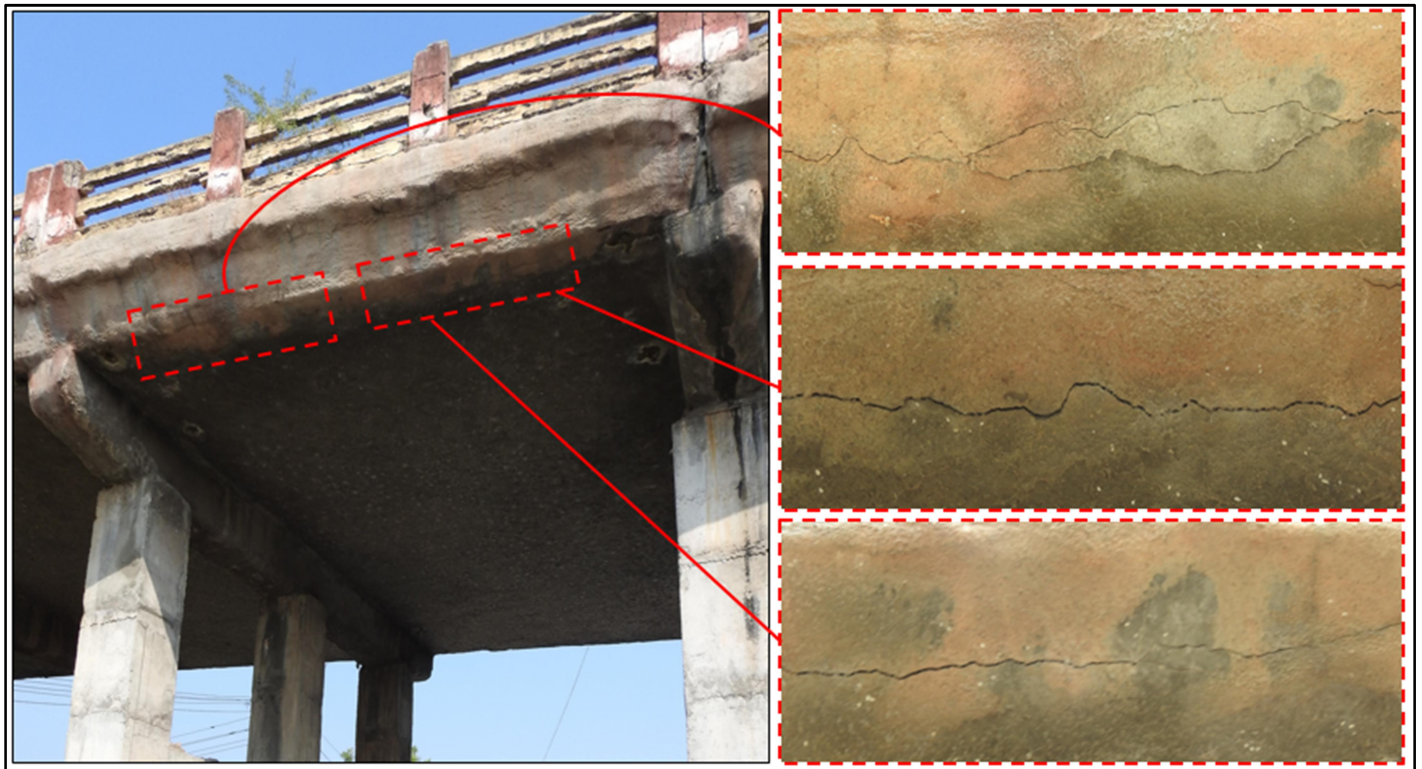


Fig.4: Spalling and Cracks at slab bottom of span 2



Fig.5: Spalling and leaching observed at columns and cap of pier-1.

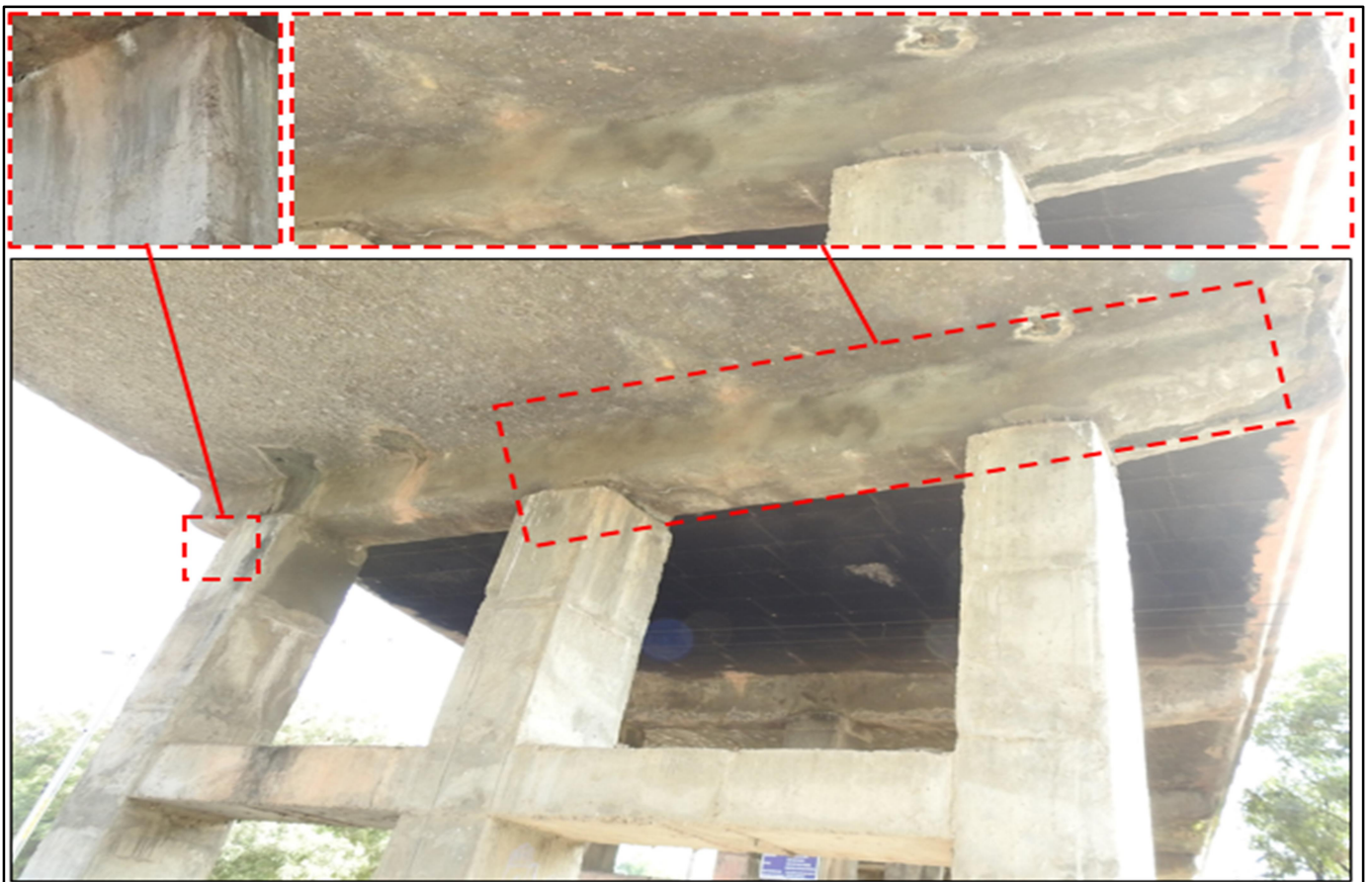


Fig.6: Cracks and patch works is observed at pier-2.



Fig.7: Cracks and leaching is observed at pier-3.



Fig.8: Reinforcement exposed and distresses at other spans of ROB.



Fig.9: Wearing coat & ROB Top View.



Fig.10: Spalling & Reinforcement exposed on Railings.