

Name of the Project	:	VISUAL INSPECTION OF ROB No 1216A NEAR YADGIR RAILWAY STATION
Location	:	YADGIR
Location Co-ordinates	:	16°44'47.6"N 77°07'40.4"E
Date of Inspection	:	23rd NOVEMBER, 2019



Summary:

- a) Structural Cracks have been observed in slab.
- b) Spalling and Reinforcement exposure is observed at the bottom of slab.
- c) Corrosion is observed at the steel concrete joints of Exterior Support Truss.
- d) Cracks and spalling observed at parapets of bridge.

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

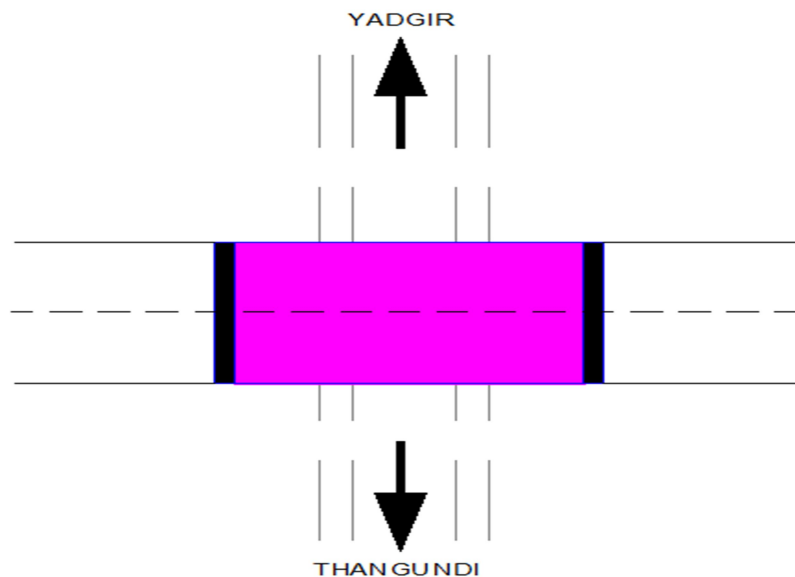
VISUAL INSPECTION OF ROAD OVER BRIDGE

Name of the Project	Visual inspection of ROB near Yadgir Railway station
Location	Yadgir
Date of Inspection	23 rd November 2019.

PART 1 GENERAL INFORMATION AND OBSERVATION

1.1	Name of the Bridge	ROB (1216A)
1.2	Location Location co-ordinates	Near Yadgir railway station 16°44'47.6"N 77°07'40.4"E
1.3	Type of Bridge	Composite Girder 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	7.3 m
1.8	Overall Deck Width	11.5 m
1.9	Average Skew	Bridge not in skew
1.10	Span arrangement (no x Span in meters)	1x 16.5 m (No skew)
1.11	No of Railway Lines Crossings	2 tracks
1.12	Vertical Clearance (from rail top to girder bottom)	5.56 m
1.13	History of Repair/ Maintenance	Yes , Patch work observed
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	Stone masonry	
	Maximum height of Abutment from Ground level	5.8m	
	Abutment width along the Track	15.8m	
	Abutment thickness	Not Available	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)		Cracks are observed at abutments due to pointing Failure (Refer Fig:10)
	Efficiency of drainage of backfill Behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc.)		Weep holes are in dry condition. (Refer Fig:3)
2.3	Pier		
	Type (Shape)		There is no Pier, as bridge is having only one span.
	Material		
	No. of Piers in a row/column		
	Maximum Height of Pier		
	Pier Diameter/Dimension		
	Pier Cap Material		
	Pier Cap Condition		
	Pier Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other Damages etc...)		
	Efficiency of drainage of backfill behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc...)		

2.4	Bearing & Pedestal		
	Type of Bearings	Metal plate bearings	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of submersible bridges)		Debris accumulated at all bearings
	Type/ shape of Pedestal		There is no Pedestal provided
	General condition (Check Corrosion, cleanliness, seizing of plates silting)		
2.5	Super Structure (Concrete Girder)		
	Type/Shape of Girder (I-beam, box-Girder etc.)	Plate-Girder	The Bridge is supported on 4 Longitudinal Plate girders and 2 Exterior support trusses
	Material of Girder	Steel	
	No of Girder	4 Nos.	
	Dimensions of Girder		Total Depth = 1.25m Width of the bottom flange = 0.35m
	Structural System of Girder		Simply Supported
	Condition of Girder	Fair	The girders are in fair condition as recently painted
	Type/Shape of Secondary Girder		Angle cross bracings
	Material of Secondary Girder	Steel	
	No of Secondary Girders	7 Nos.	
	Condition of Secondary Girder	Fair	The girders are in fair condition as recently painted (Refer Fig:2)
2.6	Slab		
	Material of Slab	RCC	
	Thickness of Slab	0.6m	
	Condition of Slab from Bottom	Distresses Found	Spalling & Reinforcement exposure has been Observed. (Refer Fig:8)
	Condition of Slab from Top		Not visible, as covered with wearing coat
	Condition of Flooring/Wearing Coat	Fair	
	Parapet wall/Railing		
	Type of Parapet wall/Railing	Parapet wall	
	Height	1.1 m	
	Condition of Wall/Railing		Cracks and spalling observed

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	Location	Notes
	Cracking in RCC components	Slab & Parapet	cracks are observed in Slab (<i>Refer Fig:9</i>) & Parapet (<i>Refer Fig:6 and Fig:7</i>)
	Water seepage		No water seepage is observed
	Spalling	Slab & Parapet	Spalling is observed in Slab & Parapet. (<i>Refer Fig:6 and Fig:7</i>)
	Reinforcement Exposure	Slab	Reinforcement Exposure is observed in Slab (<i>Refer Fig:8</i>)
	Corrosion	Steel-Concrete Joints	Corrosion is observed at steel concrete joints of Exterior Support Truss (<i>Refer Fig:11</i>)



Fig: 1 View of ROB



Fig: 2 Abutment (A1 and A2) Stone Masonry



Fig: 3 Bottom view



Fig: 4 View of Longitudinal & Cross Girders

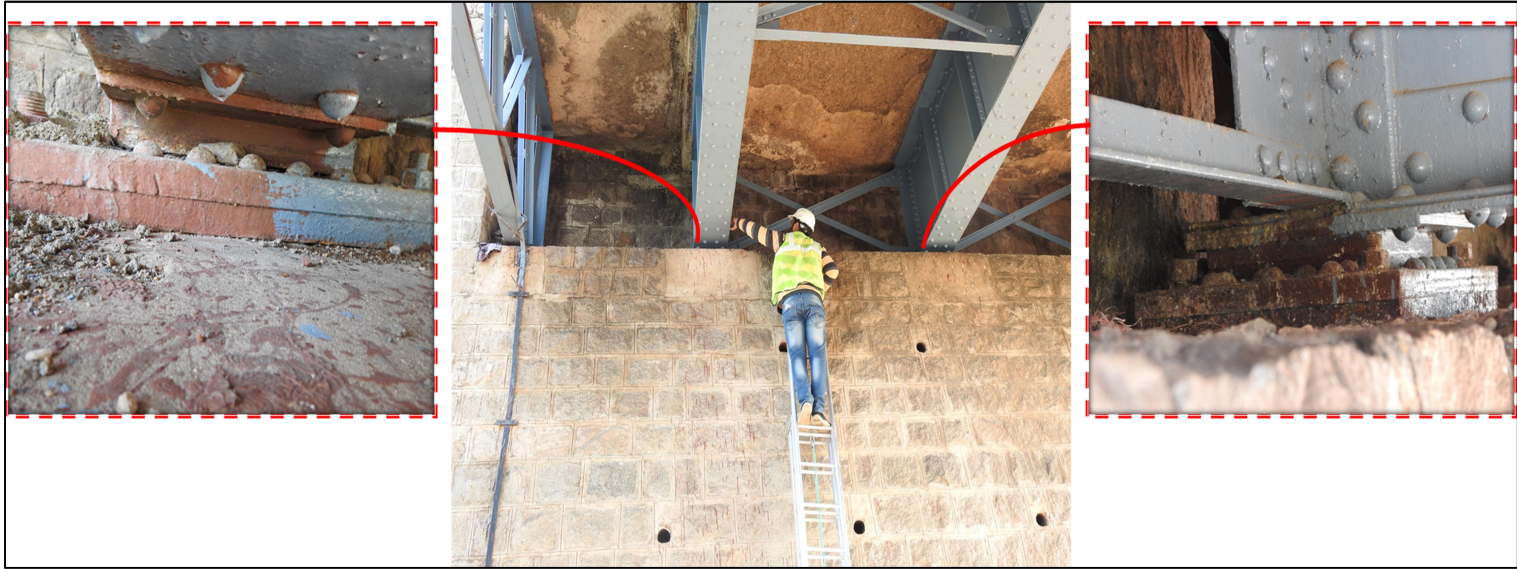


Fig: 5 Metal plate bearings



Fig: 6 Patch work observed in Slab



Fig: 7 Patch work observed in Parapet wall





Fig: 8 Leaching and exposed reinforcement in slab



Fig: 9 Cracks and patch work observed in slab.



Fig: 10 pointing and vegetation on Abutments on both sides



Fig: 11 Corrosion at the steel concrete joints of Exterior Support Truss.