Name of the Project	**:**	**VISUAL INSPECTION OF ROB-377**
Location	**:**	**P O D U R U (NEAR KONDAGATTU)**
Location Co-ordinates	**:**	**18°38'37.0"N 78°56'20.4"E**
Date of Inspection	**:**	**30th NOVEMBER, 2019**

Summary:

a) Minor spalling and Reinforcement exposed at over hang portion of slab
b) Minor exposure of reinforcement at dirt wall
c) Leaching is observed in Slab and at Abutments-1, 2

Tests to be conducted:

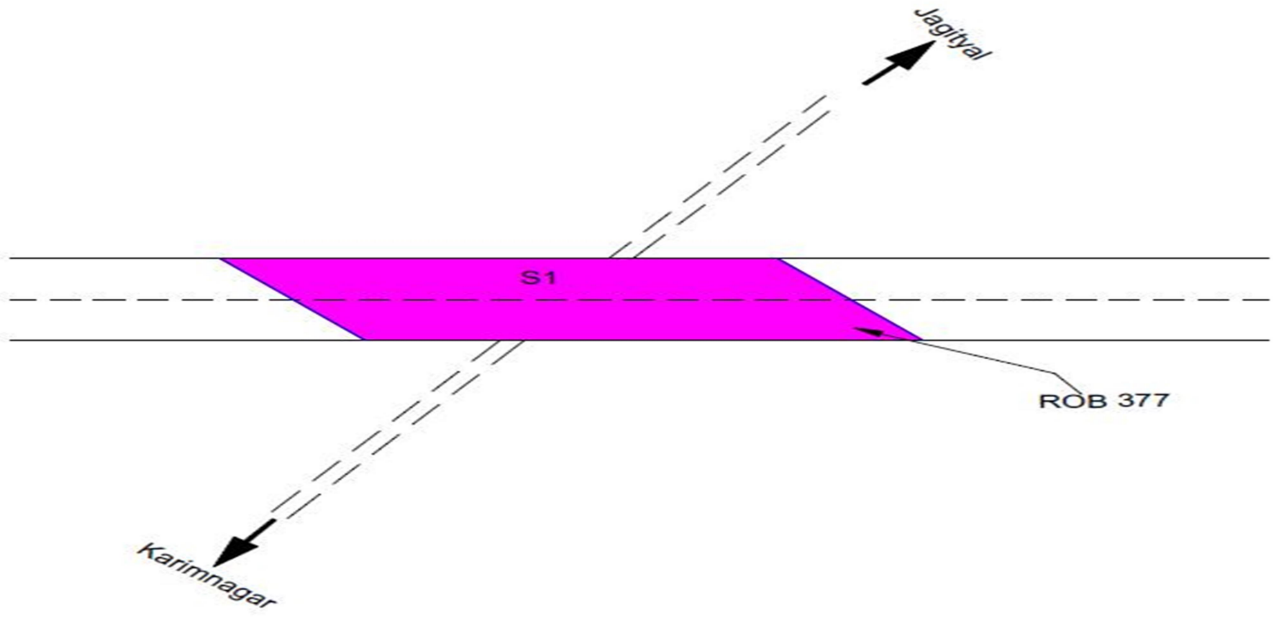
a) Rebound Hammer test to measure strength of the concrete.
b) Ultrasonic Pulse Velocity (UPV) Test to determine the Quality of concrete, such as uniformity and homogeneity of concrete, location of internal defects in concrete, porosity.
c) Profometer Test for the concrete cover and diameter of rebar.
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 377**
Location	**Poduru (Near Kondagattu)**
Date of Inspection	**30th November, 2019.**

PART 1 GENERAL INFORMATION AND OBSERVATION		
1.1	**Name of the Bridge**	ROB 377
1.2	**Location** **Location co-ordinates**	Near Kondagattu 18°38'37.0"N 78°56'20.4"E
1.3	**Type of Bridge**	RCC 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**	7.45 m
1.8	**Overall Deck Width**	10.65 m
1.9	**Average Skew**	32.7°
1.10	**Span arrangement (no x Span in meters)**	1 x 25.1 m
1.11	**No of Railway Lines Crossings**	1 track
1.12	**Vertical Clearance (from rail top to girder bottom)**	6.11 m
1.13	**Horizontal Clearance (Pole to Rail track)**	2.25m
1.14	**History of Repair/ Maintenance**	Not visible
1.15	**Original Structural Drawings**	Not available

1.16 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	Concrete	
	Maximum height of Abutment	6.2 m	
	Abutment width along the Track	11.1 m	
	Abutment thickness	Not accessible	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)	Leaching observed.	Minor spalling observed at dirt wall (Refer Fig-7)
	Efficiency of drainage of backfill Behind Abutments (Check functioning of weep holes, evidence of moisture on	Good	Weep holes functioning properly.
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		

2.4	**Bearing & Pedestal**		
	Type of Bearings	Elastomeric bearing	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of submersible bridges)		Bearings settled (Refer Fig-8)
	Type/ shape of Pedestal		No pedestal observed
	General condition (Check Corrosion, cleanliness, seizing of plates silting)		
2.5	**Super Structure (Concrete Girder)**		
	Type/Shape of Girder (I-beam, box-	I-Girder	
	Material of Girder	PSC	
	No of Girder	03 Nos.	
	Dimensions of Girder	1.63 x 0.8m	
	Structural System of Girder		Simply Supported
	Condition of Girder		Leaching has been observed (Refer Fig-6)
	Type/Shape of Secondary Girder	Rectangular	
	Material of Secondary Girder	RCC	
	No of Secondary Girders	5 Nos.	
	Condition of Secondary Girder		Secondary girders are in fair condition
2.6	**Slab**		
	Material of Slab	RCC	
	Thickness of Slab	250mm	
	Condition of Slab from Bottom		Leaching and minor spalling observed at overhang portion of slab.
	Condition of Slab from Top		Not visible, as covered with wearing coat
	Condition of Flooring/Wearing Coat		Minor pot holes observed (Refer Fig-9)
	Parapet wall/Railing		
	Type of Parapet wall/Railing	RCC wall	
	Height	1.8 m	
	Condition of Wall/Railing		No Accidental hit marks are observed on wall(Refer Fig-9)

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	**Location**	**Notes**
	Cracking in RCC components		No Cracks are observed.
	Water seepage		No water seepage is observed during visual inspection.
	Spalling	Slab	Minor spalling is observed.
	Reinforcement Exposure	Slab	Minor Reinforcement Exposure is observed.

Fig: 1 **Front View of ROB**

Fig: 2 **View of Abutments (A1 and A2)**

Fig: 3 B**ottom view of Bridge**

Fig 4: **Spalling at overhang portion of slab**

Fig 5: **Leaching observed at Abutment -1 & 2**

Fig 6: **Leaching observed at Slab**

Fig 7: Spalling observed at dirt wall

Fig 8: Bearing details

Fig 9: **Condition of Road surface & Parapet wall**