

Success Story

1.Title:-Construction of Major Submersible bridge across Shirnandagi river on Mangalwedha Khomnal Bhalwani Nimboni Mariaai chowk Bavachi Salgar road MDR 73 at km 22.100 Tal-Mangalwedha Dist:-Solapur

2. Background / Problem Statement :-

Before execution of this project, Bavachi village and nearby habitations in Mangalwedha Taluka were facing persistent connectivity issues due to the presence of a **submersible causeway** across the Shirnandagi River.

During monsoon season, the causeway frequently got submerged due to high discharge in the river, completely interrupting traffic movement. This situation caused serious inconvenience and safety risks to farmers, students, local residents, and emergency services.

The existing crossing was inadequate to handle increasing traffic volume and flood conditions, thereby necessitating the construction of a permanent bridge.

3.Key Issues Identified:

- Submersible causeway becoming unusable during monsoon
- Risk to life and property due to flooding
- Interruption to daily commuting and emergency services
- Difficulty in transportation of agricultural produce
- Disruption to education, healthcare, and economic activities

4. Project Overview :-

Construction of High-Level Bridge across Shirnandagi River near Bavachi, Tal. Mangalwedha, Dist. Solapur (NABARD-29)

- **Location:** Shirnandagi River near Bavachi Village
- **Latitude / Longitude:** 17.336983 N, 75.475558 E
- **Implementing Agency:** Public Works Department
- **Bridge Length:** 70.00 m
- **Configuration:** 7 spans of 10.00 m each
- **Type of Structure:** RCC High-Level Submersible Bridge
- **Foundation:** Open foundation with RCC piers and abutments
- **Road Level (Deck Level):** 500.835 m
- **Approach Roads:**
 - Mangalwedha side – 200 m
 - Bavachi side – 320 m
 - Total – 520 m

5. Challenges Faced :-

- High river discharge during monsoon season
- Execution difficulties in riverbed conditions
- Maintaining access for villagers during construction
- Transportation of construction materials in rural terrain
- Working within limited seasonal construction window

6. Innovative Solutions / Action Taken :-

- Replacement of submersible causeway with a high-level bridge
- Proper hydraulic design based on scientific catchment analysis
- Execution of major works during non-monsoon period
- Use of standard quality materials as per SSR and specifications
- Continuous supervision and quality control at site

7. Implementation Process :-

- **Planning:** Detailed survey, hydrological studies, and technical approvals
- **Execution:** Systematic construction of foundations, piers, superstructure, and approaches
- **Monitoring:** Regular inspections by engineering staff
- **Quality Control:** Testing of materials and workmanship as per standards

8. Result & Impact :-

The project has delivered substantial and long-term benefits:

- Safe and uninterrupted connectivity throughout the year
- Elimination of traffic disruption during monsoon
- Improved access to schools, healthcare facilities, and markets
- Smooth transportation of agricultural produce
- Enhanced road safety and riding comfort
- Socio-economic upliftment of Bavachi, Jangalgi, Salgar bk and surrounding villages

9. Beneficiary Feedback / Human Angle :-

“Earlier, the causeway used to submerge every monsoon and we were cut off from nearby villages. After the construction of this bridge, transportation has become safe and reliable throughout the year. It has greatly improved our daily life and safety.”

— Residents of Bavachi Village

10. Conclusion :-

The construction of the high-level bridge across the Shirnandagi River near Bavachi village has successfully addressed a long-standing infrastructure challenge. The project has ensured reliable all-weather connectivity, enhanced public safety, and supported sustainable rural development.

This bridge stands as a model example of technically sound and socially impactful rural infrastructure development in Mangalwedha Taluka, Solapur District.



