

EXECUTIVE SUMMARY

1. Why did we do this performance audit?

In order to facilitate effective border management, security and development of infrastructure in inaccessible areas adjoining the China Border, a total of 73 strategically important roads were identified by the Government as Indo China Border Roads (ICBRs). Out of these 73 ICBRs, execution of 61 roads having a total length of 3409.27 km with estimated costs of ₹ 4644 crore were entrusted to Border Roads Organisation (BRO) with their targeted completion by 2012. The balance 12 roads were entrusted to other agencies such as CPWD, NBCC and State PWDs for execution.

During the course of regular audit of BRO, it was observed that inspite of significance imparted to ICBRs, completion of roads was considerably delayed and the work executed faced various technical, financial as well as quality issues. Considering the strategic role of these roads in border management, we undertook the audit of ICBRs to assess the performance of BRO keeping in view the economy, efficiency and effectiveness in planning and execution of road works as well as financial and resource management.

2. What does this performance audit cover?

We took up the performance audit covering the period from 2012-13 to 2015-16 to obtain reasonable assurance that:

- planning for designing, preparing estimates and execution of road projects was in accordance with the requirement;
- quality and timeliness of execution of work either departmentally or through contracts;
- adequacy and utilization of budgetary allocation;
- timely procurement and efficient utilization of resources *viz.* plant and machinery, stores *etc.* by BRO and deployment of sufficient manpower to execute the works; and
- adequacy and enforcement of quality/ internal control mechanism to ensure that the roads and bridges were constructed as per the planned specifications and users' satisfaction.

3. Audit Findings

Inadequate Reconnaissance, Survey and Trace Cut

Reconnaissance, Survey and Trace Cut (RSTC) is conducted with the objective to collect sufficient data to determine the route alignment, prepare the project documents and approximate project estimates. We observed some instances wherein RSTC was not carried out properly as the gradient, soil classification, alignment of the road taken at the time of carrying out RSTC were at wide variance with the conditions encountered during the execution. These variances adversely affected the execution of the ICBRs and led to delay as well as cost over-runs.

(Paragraph 2.1)

Delay in approval of Annual Works Plan

Timely preparation of Annual Works Plan (AWP), which reflects the targets of works to be executed by Border Roads Organisation, is an essential prerequisite to ensure realistic budget estimates and optimum mobilization of resources. We observed that there were delays in submission and approval of AWP. As a result, Budget Estimates (BEs) for each year were prepared on an *ad-hoc* basis and the jobs were executed even before the approval of AWP by the Border Roads Development Board basing it on the AWP projections

(Paragraph 2.2)

Reduction and non-achievement of targets

The initial targets fixed in Annual Works Plan (AWP) with respect to individual component of a road *viz.* formation, surfacing, permanent works and bridge works were never achieved during the period 2012-13 to 2015-16. Even the reduced targets at the Revised Estimates stage could not be achieved during the years 2012-13, 2013-14 and 2015-16 and the shortfall in achievement ranged to the extent of 79 *per cent* (with respect to formation). This indicates that the physical targets in the AWP and even the revised targets prepared after six months of execution of works were framed disregarding the ground realities and constraints rendering the whole exercise of AWP meaningless.

(Paragraph 3.1)

Non completion of ICBRs

All 61 ICBRs included in Border Roads Development Board's programme were planned to be completed by 2012. We, however, observed that out of 61 ICBRs planned to be completed by 2012, only 15 roads had been completed by 2012. Out of the balance 46 roads, only 07 roads were completed by March 2016 extending the Probable Date of Completion (PDC) of balance roads up to the year 2021. Thus 22 roads (36 percent) had only been completed up to March 2016, despite incurring an expenditure of ₹ 4536 crore (98 percent) against estimated cost of ₹ 4644 crore for 61 ICBRs.

Further, out of 24 ICBRs selected for audit, four roads were completed by March, 2012 and two were completed by March 2016. Thus only 06 roads (25percent) costing Rs. 164 crore were completed up to March 2016, despite incurring an expenditure of ₹ 2713.76 crore for 24 selected ICBRs.

(Paragraph 3.2)

Delay in execution of works

BRO executes works related to construction of roads by sanctioning a number of jobs for a specific stretch component wise viz. formation, surfacing, permanent works and bridge works. We noticed that against 24 selected roads, a total 329 jobs were sanctioned till March 2015. Out of them, only 123 job works were completed by March 2015 and the balance 206 jobs including 66 jobs sanctioned during the period 2012-15 were still in progress. One job, sanctioned in 1991, was yet to be completed even after a lapse of 25 years.

(Paragraph 3.3)

Improper Execution of works

Audit noticed numerous instances of defective construction of roads on account of unsuitable design/specifications, steep gradient, defective alignment, turning problems, improper contract management, poor riding conditions, inadequate drainage facilities, non-connectivity of roads and abandonment of executed works. This had not only resulted in delay in completion of strategic roads but also an infructuous expenditure of ₹ 63.20 crore on account of corrective action/realignment of roads. The non-completion/ faulty specifications of works have a serious bearing on the operational capability of the armed forces in strategically sensitive areas.

(Paragraph 3.4, 3.5, 3.6, 3.7, 3.8 and 3.9)

Weakness in Financial Management

We observed that the financial provisions were much lower than the requirement of permanent works, formation and surfacing works provided in physical targets of six roads. Further, financial provisions made at the initial Budget Estimates, revised stage and the actual expenditure incurred were not proportionately changed with physical reduction, increase in RE/actual achievement of the various components of work.

In certain cases expenditure was incurred in excess of the sanctioned amount without approval of Revised Administrative Expenditure (RAE) and pending financial closure of the jobs, which provided scope for booking of expenditure even after completion of the jobs.

(Paragraph 4.1, 4.2 and 4.3)

Human Resource Management

Deployment of General Reserve Engineering Force (GREF) personnel was done in remote and hazardous working locations without adequate facilities.

(Paragraph 5.3 and 5.4)

Users dissatisfaction on construction of ICBRs

Users expressed their dissatisfaction as the road works executed by BRO did not adequately meet the users' requirement. Users' feedback indicated that there were issues like improper gradient, undulating surface, improper turning radius, minimum passing places and unsatisfactory riding comfort in the 17 roads out of 24 selected for audit. Even six roads which had been completed at a cost of ₹ 164 crore, were not fit for running of specialized vehicles/equipments such as Smerch, Pinaka and Bofors due to above limitations.

(Paragraph 6.1)

Key Recommendations

- Proper Reconnaissance, survey and trace cut for selection of suitable alignment and soil classification of the road should be carried out to facilitate the completion of roads timely. The Department should expeditiously implement the plan for adoption of newer technologies like LiDAR (Light Detection and Ranging) and high resolution space technology for this work.

- Realistic Annual Works Plan for execution of work should be framed taking into account the resources, terrain, climatic conditions and limited working season. MoD should also take up with the Finance Division/ Ministry of Finance about synchronizing the availability of funds with the working seasons which means that the annual outlay should be spread not uniformly throughout the year but be concentrated on the limited working season.
- The construction of roads and mid-way correction of roads as per the requirement of the users should be attended to expeditiously.
- The availability of requisite Vehicles/Equipment/ Plants like MCRD (Medium Crawler Rock Drill) needs to be ensured to carry out works as per the Plan.
- Prompt approval of Revised Administrative Expenditure (RAE)/ Completion Report Part-'A' and 'B' should be ensured to avoid any improper financial adjustments.
- Since the department has been designated to function in hard conditions, action needs to be taken to sort out the problems faced by the GREF personnel by providing them the requisite facilities to improve their working conditions and boost their morale. The statutory benefits of contractors' employees also need to be ensured by BRO as principal employer.
- Quality Control mechanism for monitoring quality of works needs to be enforced scrupulously by deploying adequate staff and through third party inspections.
- Proper and timely action should be taken to resolve the defects/problems pointed out in Chief Technical Examiner reports. Court of Inquiry should be concluded and acted upon expeditiously as these not only have deterrent effect on erring officials, but also help in diagnosing the deficiencies in technical design and execution of the works.