

CHAPTER – IV

Construction Activities - Issue Wise

Construction activities involve the overall planning, coordination and control of a project from beginning to completion in order to produce a functionally and financially viable project. This chapter contains audit findings in respect of 710 sanctioned works amounting to ₹ 3257.37 crore. An attempt was made to bring out deficiencies in all the stages of the lifecycle of a construction project and are described in that order in this chapter. These works were carried out by the executing agencies, and the onus for majority of the deficiencies pointed out rests with executing agencies. Aggregate picture and macro analysis of the observations in this chapter are presented PWO-wise (**Chapter-V**) and force-wise (**Chapter-VIII**) too.

The process of construction works starts from selection of executing agency after necessary approvals to handing/taking over of site after construction as depicted in a representative chart below. Main audit findings relating to construction work are explained subsequently.

Chart 4.1: Processes of Construction Works*

| Steps of construction works | Planning | Budgeting | Execution | Completion | Handing/Taking over |
|---|----------|-----------|-----------|------------|---------------------|
| Requisition for submission of PE | ■ | | | | |
| Preparation & Submission of PE | ■ | | | | |
| Accord of AA & ES | | ■ | | | |
| Authorization to CPWD/MoU with other PWOs | | ■ | | | |
| Submission of approvals from Layout Plans | | ■ | ■ | | |
| Issue of NIT and tendering process | | | ■ | | |
| Selection of contractor and award of work | | | ■ | | |
| Site Clearance and start of construction | | | ■ | | |
| Submission of bill by contractor | | | ■ | ■ | |
| Checking of bill by CAPF and release of payment | | | | ■ | |
| Completion of construction by contractor | | | | ■ | |
| Checking of work by CAPFs | | | | ■ | |
| Handing/Taking over of site after construction | | | | | ■ |

* Chart explain the different stages of construction works linked with activities of those stages

4.1 SUBMISSION OF PRELIMINARY ESTIMATES BY EXECUTING AGENCY

4.1.1 Assessment of requirement while preparing Preliminary Estimates (PE)

Audit noticed that proper assessment of requirement was not done in following cases which resulted in unfruitful expenditure of ₹ 40.82 crore:

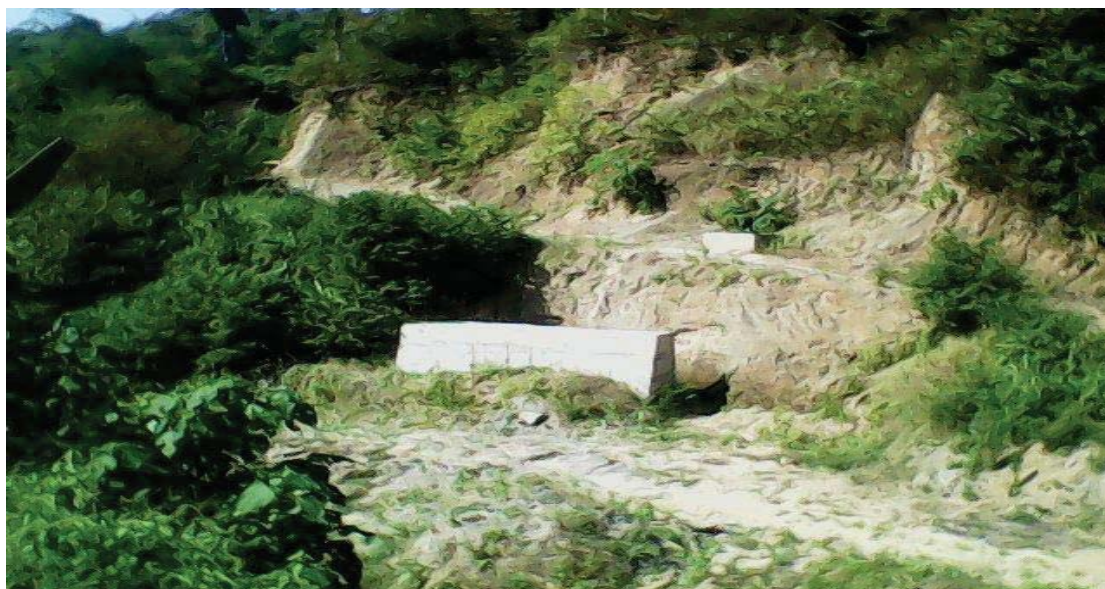
- MHA sanctioned work of construction of 108 residential quarters for CISF including 12 Type-V at CISF campus, Greater Noida, Uttar Pradesh in March 2010 at an estimated cost of ₹ 15.35 crore to be executed through NBCC. However, CISF conveyed sanction to NBCC of construction of only two Type-V quarters in May 2010. In June 2010, CISF revised the sanction of Type-V quarters from two to five. In February 2011, CISF again revised the sanction of construction of Type-V quarters from 5 to 12 as originally sanctioned by MHA. NBCC refused to construct the additional quarters at the same rate and stated that separate work was to be awarded. Accordingly, work of construction of seven type-V quarters was awarded in February 2012 at ₹ 2.31 crore which was 49 *per cent* above the cost index prevailing during that period. There was no justification available in files for changing the number of Type-V so many times. It resulted in avoidable expenditure of ₹ 68.88 lakh.

CISF stated (June 2015) that 12 type-V quarters were considered for Special Security Group (SSG) & Government Building Security (GBS) Group and phase wise construction work was taken up considering the availability of funds and the actual requirement of the recipient units. Reply was not acceptable as MHA originally sanctioned ₹ 15.35 crore for construction of 108 quarters which included 12 type-V quarters as per actual requirement of the recipient units of CISF.

- Assam Rifles (AR) submitted the requirement of Type-II, III and IV quarters (total 64 in number) in Delhi to MHA in its Annual Action Plan 2003-04 with an estimate of ₹ 4.50 crore. Audit noticed that AR has no field formations in Delhi. DGAR was asked for justification of family quarters in Delhi by MHA, but no reply was furnished by AR. However, MHA approved construction of residential quarters worth ₹ 33.30 crore in Delhi. Construction started in 2008-09 but was yet to be completed.

AR stated (June 2015) that the personnel of AR were from different parts of the country so it was decided to offset some accommodation from authorisation of family accommodation of AR in North East to Delhi and sanction was obtained from MHA. Reply was not acceptable as AR was mainly deployed as border guarding force for North East region and no unit had been deployed/posted in Delhi, so construction of residential accommodation for AR in Delhi was not justified.

- DG, ITBP in April 2013 accorded approval of six works for ₹ 76.52 lakh for a Transit Camp at Jalukbari, Guwahati. Out of six different sub-works, three works were dropped and instead another work of construction of additional suites was taken up, indicating the loose and arbitrary manner in which the estimates were drawn up.
- Hindustan Prefab Limited (HPL) in April 2010 took up the construction of 7 Kilometres original road with a bridge at Sukhovi, Nagaland for ₹ 13.87 crore. After completing the road work on either side of the bridge, HPL sought (March 2014) for additional fund of ₹ 1.42 crore to connect the road by constructing the bridge. This enhancement in the cost of the work was attributed to increased length of the bridge than that was envisaged in the preliminary estimates (PE). AR, however, decided (August 2014) to leave this un-connected road incomplete after incurring ₹ 6.06 crore as they assumed that requirement for same would occur only after 8 to 10 years (November 2014). Records also revealed that the road got damaged due to rain and was not in motorable condition any more as shown below:



Picture 4.1: Incomplete Bridge and unconnected road at Sukhovi in Nagaland

Assam Rifles stated (April 2015) that the said work was taken up in anticipation of additional training Battalion supposed to be sanctioned in 12th five year Plan. They further added that the road will provide access to the training battalion expected to come up in the area after 3-5 years time. Reply was not acceptable as the battalion was yet to be sanctioned by Government of India.

4.1.2 Failure in pre-construction stage survey

Audit scrutiny of records revealed that in the following works, proper planning by the client as well as executing agency was deficient:

Table 4.1: Details of works having deficient pre-construction stage survey

| S No | Particulars of work | Irregularity |
|------|---|---|
| 1. | Construction of magazine at GC, CRPF, Bilaspur by CPWD with estimated cost of ₹ 29.78 lakh. | CPWD did not mention about a high tension wire in the drawings which resulted in excess expenditure of ₹ 23.11 lakh for shifting the same. CPWD did not offer their comments. |
| 2. | Construction of 50 bedded hospital in Bhopal, for CRPF by CPWD for ₹ 1281.41 lakh | Safety provisions, power backup system, fire alarm, fire fighting system, refrigerator for mortuary, disposal of biochemical wastage etc. were not included during planning stage by CPWD. Separate preliminary estimate amounting to ₹ 1.98 crore has been prepared by CPWD for sanction of these works. CRPF in its reply stated that sanction was being accorded and in future all necessary provisions would be incorporated in preliminary estimate. CPWD did not offer their comments. |

4.1.3 Requisite approvals from local authorities

As per section 2.7 of CPWD Manual, Lay Out Plan (LOP) and drawings in respect of each establishment should be prepared as per the suitability/norms and approved by the competent authority of the client (CAPF). Municipal/Local Bodies/Development Authority were to be approached by the PWOs, well in time for obtaining necessary approvals prior to NIT/commencement of work. Further, any subsequent alterations in LOP and drawings also need approval from these authorities.

In 463¹ works, it was noticed that in 341 works (73.6 per cent) approval of drawings, lay out plans etc. from the local authority were not taken before issue of NIT by executing agencies. Further, in 234 works (68.6 per cent) contracts were awarded to contractors without taking approvals (**Annex-1.3**). Approval of local authorities for LOP was not obtained in 66 works even after their completion.

CPWD accepted the audit observation and stated (April 2015) that designs and drawings of buildings were prepared by Sr. Architect of CPWD and conforms to norms set by local bodies/authorities. Application for the approvals of designs and drawings of buildings were submitted to local authorities where the area falls within municipal limit. Reply was not acceptable because provisions of CPWD works manual had not been followed. Moreover, in absence of approval of LOP, possibility of declaring the completed

¹ 463 works out of total selected 710 works. The balance works does not require permissions as these works were not new works and mainly related to repair and renovation works.

construction as unauthorised by the local authorities later on could not be ruled out. PWOs except CPWD did not offer their comments.

Three examples are given below in which approvals from the local authorities were not secured in time.

Case Study - 4.1

Assam Rifle awarded a work of 32 quarters and hostels at Dwarka, New Delhi to EPIL in July 2003. Due to increase in cost index and scope of work, estimated cost was revised from ₹ 4.50 crore to ₹ 7.30 crore in December 2005. EPIL though did not seek the approvals from the local authorities, awarded the work to a contractor in June 2006. The contractor started the construction of boundary wall and insisted on approvals from the local authorities for taking up the work. EPIL failed in getting approvals in time. The approvals from the local authorities were received in July 2007 and by that time the contractor refused to work on the rates quoted in June 2006. MHA had to give revised sanction of ₹16.85 crore in February 2009 for the same work. Thus, poor planning resulted in price escalation of ₹ 12.35 crore and the work originally planned for completion in September 2007 was not handed over up to June 2015, by the EPIL.

Case Study - 4.2

In works of SSB² at Jawalamukhi with original estimated cost of ₹ 4.77 crore executed by CPWD, audit noticed that execution of work was started without obtaining mandatory approval of building plan from Nagar Panchayat as well as NOC from NHAI. After six months the works were foreclosed. Revised estimates amounting to ₹ 6.54 crore were prepared in February 2014 which resulted in cost escalation of ₹ 1.77 crore.

The executing agency admitted that delay in getting approvals from authorities lead to cost escalation. SSB in its reply stated that the approval from the NHAI was received in November 2010 and thereafter the approval to the plans & LOP was conveyed in January 2011 by the local body. Reply is not acceptable as SSB/CPWD should have pursued the necessary approvals well in time prior to NIT/commencement of work, as the delay in obtaining approvals had resulted in foreclosure of work and consequent cost escalation in subsequent tendering.

Case Study - 4.3

CPWD received a request from NSG for Construction of office and residential complex at Samalkha Camp, New Delhi in July 2002 with a request to obtain conceptual approvals from authorities simultaneously as obtaining approvals from local bodies was time consuming process. In response, CPWD submitted a Preliminary Estimate (PE) of ₹ 10.76 crore to the NSG in October 2002. The PE was for four storied (G+3) structure and for building works. It was noticed that PE was revised six times by CPWD primarily

² Construction of boundary wall, internal roads, underground water tank and other development works, Type-IV/04Nos. qtrs.(Double storied) at Jawalamukhi, Type-III/08Nos. qtrs. (Four storied) at Jawalamukhi and Type-II/20 qtrs

due to delay in obtaining approvals from Municipal Corporation of Delhi. Finally in March 2011, CPWD submitted revised PE of ₹ 47.42 crore which was sanctioned in July 2011. Approvals for construction of building having G+4 were still pending and the work was still incomplete (June 2015). Thus, due to delay in obtaining the approval of the MCD, the estimated cost of the building had increased from ₹ 10.76 crore to ₹ 47.42 crore and project started in July 2002 remained incomplete after 13 years.

NSG in its reply (June 2015) accepted the observation by stating that the work could not be started in time for want of approvals from local authorities. It further stated that it was not the client but the executing agency which was supposed to obtain approval from local bodies.

4.1.4 Preparation of incorrect Preliminary Estimate

Audit scrutiny revealed many shortcomings in the preparation of preliminary estimates (PEs) by executing agencies. CAPFs were also not following proper checks in analysing the PEs before according administrative approvals. The following instances depict the irregularities noticed in preparation of PEs:

Table 4.2: Details of works where incorrect PEs were prepared

| Irregularity | Audit observation |
|---|--|
| Adoption of incorrect rate by NPCCL | In the Delhi Plinth Area Rate (DPAR), separate rates are provided for different types of buildings e.g. school, hostel and residential. It prescribed two rates for 'higher specification items' and 'normal specification items'. Buildings of Assam Rifles come under 'normal specification items'. But in PE, NPCCL considered 'higher specification items' on some items arbitrarily. Due to this, PEs were inflated by ₹ 94.84 lakh. (Annex-4.1). NPCCL did not offer their comments. |
| Consideration of higher rate of Works Contract Tax (WCT) | In one work ³ executed in Manipur, NPCCL made provision for 'Works Contract Tax' at a rate of 12.5 per cent instead of prevailing rate of 5.6 per cent in the Manipur state. It resulted in inflated PE by ₹ 23.26 lakh. In reply, Assam Rifles admitted the audit observation by stating that the variation in deduction of WCT was due to late receipt of WCT notification from respective state government. |

³ Construction of 01 Block of 3 Nos Single Men Barrack for 06 NCOs and 60 Ors (G+II) and 01 no. Admn Block (G+1) for 21 AR

| Irregularity | Audit observation |
|---|---|
| Application of different cost index | Hindustan Prefabs Limited (HPL) applied different cost index while framing the PE for construction of two works ⁴ of AR in Manipur though both the works were executed at the same time. Due to this, the estimated cost of the work was pushed up by ₹ 21.66 lakh. HPL did not offer their comments. |
| Wrong calculation of Plinth Area by CPWD | <p>In the work construction of administrative and training block for Group Centre and Academy for CRPF at Kadarapur, Gurgaon, the CPWD had approved the PE for ₹13.10 crore in December 2002 taking into account the plinth area as 8771 square meter (sqm) based on conceptual architectural drawings prepared by the Senior Architect, CPWD in October 2002. The work was awarded to contractor by CPWD at the tendered cost of ₹ 9.28 crore. The work was temporarily suspended in March 2007 as the tendered cost was exhausted. The Contract was foreclosed in August 2008. Revised PE amounting to ₹ 24.62 crore, considering the final working drawings as 12322 sqm, was submitted to the CPRF by the CPWD in January 2007, the same was sanctioned by the MHA in March 2009. On being sought clarifications on wrong calculation of plinth area in preparation of estimate, the CPWD in their response stated that there was certain inadvertent error in calculation of floor area shown in conceptual drawings, which was approved by CRPF. It was further stated that PE for an amount of ₹ 13.10 crore was framed by taking area as 8771 sqm instead of the actual area of 12322 sqm. After receiving revised AA/ES, the balance work was awarded (August 2009) to another agency at their tendered cost of ₹ 4.14 crore, against which payment of ₹ 6.20 crore have been made and work stands completed in October 2010.</p> <p>CRPF in its reply (June 2015), accepted the observation and decided to issue advisories to the defaulting officers of CPRF as well as CPWD.</p> |
| Wrong inclusion of service tax on PMC | In 13 cases (Annex-4.2), excess provision of budget of ₹ 1.30 crore was made in the PEs on account of wrong inclusion of service tax on project management charges (PMC) charged by the PWOs as PWOs were exempted from service tax with effect from July 2012. NBCC did not offer their comments. |

⁴ Construction of 1.5 km internal road for AR housing project of dwelling units at Kangvai, Manipur; five dwelling units type-V quarters for AR in two blocks at Kangvai, Manipur

4.1.5 Non-inclusion of items in Preliminary Estimates

Scrutiny of PEs of construction works revealed that in some cases, important items were not included in the PE.

Table 4.3: Details of works with non-inclusion of items in PEs

| Irregularity | Audit observation |
|--|--|
| Absence of provision for facilitating items | Five works of AR involving ₹ 7.00 crore awarded during 2013-14 did not take off as of November 2014 though stipulated period for completion of the works were 60 to 67 <i>per cent</i> over. This was attributed to improper preparation of PE as no provision for approach road, dismantling of old building and site clearance was made. (Annex-4.3) . Assam Rifles admitted the audit observation (March 2015) stating that they would take due care to provide necessary provisions in the Preliminary Estimate. |
| Absence of provision for energizing | In one case, construction of 18 quarters (Jorhat, Assam) by NPCCL valuing ₹ 825.69 lakh could not be taken over by AR for 1½ years after its construction in July 2012 because no provision for energizing of 350 KVA transformers was kept in PE. Assam Rifles admitted the audit observation (March 2015) stating that they would take due care in preparation of PEs by incorporating provisions for all necessary services. |
| Absence of Water Harvesting | Audit examination revealed that the PWOs to whom AR entrusted their works did not comply with guidelines of AR to make provision in the estimate for water harvesting. This deficiency was observed in 100 <i>per cent</i> of the audited building works of AR (Annex-1.3) . |

CAPFs in their reply stated that due to mandatory cut of 16.6 *per cent* on residential and 18.5 *per cent* on office work over DPAR estimates by MHA, certain development items required as per site requirement were deleted/not included. Reply is not acceptable as it indicates that either the development items were not required or they were included to inflate the PE which was later deducted by MHA without giving any reasons.

4.1.6 Delay in submission of Preliminary Estimates

There were no norms/time limits fixed either by MHA or by the PWOs for finalisation of PEs. Audit scrutiny suggested that on an average, five months were taken in submission of PEs by the executing agencies to CAPFs. However, in 173 out of 651 cases⁵ (26.5 *per cent*) involving total sanctioned amount of ₹ 831.26 crore **(Annex- 1.3)**,

⁵ In 59 cases out of 710 works, data was not available.

CPWD/PWOs as well as CAPFs took more than five months for the submission/finalization of PE. This had a cascading effect on the subsequent milestones, pushing the project backwards by several months. The agency wise position of time taken was as follows:

Table 4.4: Details of works with delay in submission of Preliminary Estimates

(₹ in crore)

| Name of the PWOs | Number of cases where time taken was more than average i.e. five month | Name of Force | Amount |
|------------------|--|--|---------------|
| CPWD | 133 | BSF-30, CISF-16, CRPF-39, ITBP-18, NSG-2, SSB-28 | 515.25 |
| DEPARTMENTAL | 4 | AR-1, BSF-1, ITBP-1, NSG-1 | 0.95 |
| NBCC | 12 | CISF-1, CRPF-10, SSB-1 | 220.44 |
| NPCCCL | 20 | AR-20 | 59.92 |
| ECB | 1 | AR-1 | 0.72 |
| EPIL | 3 | AR-3 | 33.98 |
| Total | 173 | | 831.26 |

CPWD as well as PWOs did not offer their comments. However, CAPFs accepted (June 2015) the fact by stating that submission of PE well in time is the responsibility of the executing agencies. The Assam Rifles in their reply (April 2015) stated that they would fix a time limit of one month for the PWOs to submit the PE.

Some illustrative cases of delay in finalisation of PE in respect of BSF, CRPF and ITBP are detailed below.

Case Study 4.4:

For construction of Border Out Post for SSB at Maharajganj by CPWD, an Administrative Approval and Expenditure Sanction was issued (March 2012) for ₹ 421.82 lakh. Soil testing was carried out in October 2012. As per soil testing report, soil testing with variances needs to be carried out along with the comments from Banaras Hindu University (BHU). A fresh plan for soil testing was submitted in February 2013, by CPWD but sanction for revised proposal was not accorded by SSB even after lapse of 28 months.

SSB in its reply (June 2015) accepted the fact and stated that revised sanction was required in view of change in design of foundation due to poor soil condition but revised sanction could not be given due to limitation of Expenditure Finance Committee (EFC).

Case Study - 4.5

BSF did not furnish the details while requesting CPWD in January 2009 to undertake construction of Administration Block for BSF at Patgaon, Assam. CPWD on their part did not remind the BSF of their failure till February 2011. It took more than two years by BSF to provide the drawing to CPWD, which was attributed to the non-finalization of the same by BSF. In the intervening period the cost index increased by 28 *per cent*, pushing up the estimated cost of the work by ₹ 2.28 crore. Apart from the non-compliance with the codal formalities, the fact that the BSF did not ascertain the cause of non-preparation of preliminary estimate from CPWD for about 2 years indicated lack of monitoring by the BSF authorities.

BSF in its reply (June 2015) accepted the delay on its part and stated that efforts were being made to expedite early submission of PEs. It further stated that delay in this cited case was due to non-finalization of soil testing.

Case Study - 4.6

For construction of Combined Drill Shed one each at Raninagar and Baikuntapur, West Bengal, BSF returned the PE to CPWD for revision, 20 months and 17 months respectively, after the date of receipt. This was attributed to the modification in drawings prepared by BSF themselves. Owing to the upward revision of the cost index by 33 to 34 *per cent* in the intervening period (between the initial submission of the PE and the subsequent revision) there was increase in the estimated cost of the works by ₹ 1.50 crore.

Case Study - 4.7

For construction of Water Bound Macadam and re-carpeting of road at Lohitpur, Arunachal Pradesh, ITBP asked CPWD for submission of PE in March 2007 and again in January 2008. The Estimate for ₹ 1.93 crore prepared in July 2008 on the cost index of April 2007 was sanctioned in June 2009. The estimate had to be revised to ₹ 2.36 crore on the basis of cost index of April 2009, as tendered amount of the lowest bidder was higher than the sanctioned amount. The final PE was sent to ITBP in August 2009. These events delayed the project by more than 2 years and increased the cost of work by 22.27 *per cent*.

Case Study 4.8 :

Extension of Visitors Gallery and provision for various amenities at Attari Border (Wagah) was received from BSF by CPWD in June 2008. However, it was noticed that total five preliminary estimates were prepared and finally MHA issued sanction for ₹ 23.98 crore in October 2013. The technical sanction for ₹ 16.12 crore was issued by CPWD in May 2014. The work could not be started even after a lapse of six years of submission of proposal by BSF.

BSF accepted the observation and stated (June 2015) that due to improper response, the work was delayed and now the work has been awarded.

RECOMMENDATION:

CAPFs may fix time frame for furnishing of PEs by PWOs. This will help in reducing the time overrun during subsequent stages.



4.2 ADMINISTRATIVE APPROVAL & EXPENDITURE SANCTION

Administrative Approval (AA) is the formal acceptance of the proposals whereas 'Expenditure Sanction' (ES) is the sanction by the competent authority to incur expenditure. According to Rule 129 of GFR, no work should start without obtaining Administrative Approval & Expenditure Sanction (AA & ES), which is accorded on the basis of a PE prepared by an executing agency. No time limit has been prescribed by the MHA for according AA & ES.

Audit examination revealed deficiencies such as

- (i) Splitting up of work
- (ii) Delay in sanction of AA&ES
- (iii) Non-obtaining revised expenditure sanction, which are elucidated below:

4.2.1 Splitting up of main works

Rule 130 of GFR and CVC guidelines provide that a group of works which forms one project, shall be considered as one work. The necessity for obtaining approval or sanction of higher authority to a project which consists of such a group of work should not be avoided because of the fact that the cost of each particular work in the project is within the powers of such approval or sanction of a lower authority. The delegation of financial powers authorizes DsG and other officers of the respective forces like SDsG, ADsG and IsG to sanction projects related to construction activities up to a certain limit. The details are as follows:

Table 4.5: Delegation of financial powers in CAPFs for construction works

| Details of Work | MHA | DG | Spl. DG | ADG |
|--|-------------------------|------------------------|--------------------------|--------------------------|
| Major Works through CPWD or PWOs | ₹ 5 crore to ₹ 20 crore | ₹ 2 crore to ₹ 5 crore | ₹ 1.5 crore to ₹ 2 crore | ₹ 1 crore to ₹ 1.5 crore |
| Major works departmentally (where force has engineering wing) (Up to in each case) | - | ₹ 60.00 lakh* | ₹ 40.00 lakh | ₹ 25.00 lakh |
| Major works departmentally (where force has no engineering wing) (Up to in each case) | - | ₹ 10.00 lakh | ₹ 8.00 lakh | ₹ 5.00 lakh |

*Beyond ₹ 60.00 lakh, the works will be executed through PWOs.

It was noticed that instead of preparing one estimate for the project, it was split up into 2 to 8 works keeping the cost of each work within the limit of the delegated power of DG / MHA in order to avoid obtaining AA & ES from higher authorities.

Following works were split up by respective DsG of CAPFs/MHA in order to avoid the approval of higher authorities:

Table 4.6: Details of works split up to avoid approval of higher authorities
(₹ in crore)

| S. No. | Details of work | Amount of the sanction | Date of sanction |
|--------------|---|------------------------|--------------------------|
| 1. (i) | Upgradation of Quarters at NSG Garrison, Manesar | 0.39 | 28.05.2008 |
| (ii) | -do- | 0.40 | 26.05.2008 |
| 2. (i) | Construction of toilet blocks at Manesar | 0.07 | 04.02.2010 |
| (ii) | -do- | 0.60 | 04.02.2010 |
| 3. (i) | Upgradation of quarters during change of occupancy at NSG Garrison, Manesar | 0.47 | 02.02.2012 |
| (ii) | -do- | 0.48 | 22.03.2012 |
| 4. | Construction of Group Centre for CRPF at Bahalgarh, Sonipat Haryana. (Split up into seven works) | 166.00 | 24.09.2011 |
| 5. | Establishment of Battalion headquarter for BSF at Mathura, UP (Split up into eight works) | 38.21 | 09.05.2013 to 24.09.2013 |
| Total | | 206.62 | |

In case of construction of a new group centre for CRPF at Bahalgarh, Sonipat (S. No 5 above), consultant engaged by the NBCC for preparing the structural design treated it as a single work. Later, the work was split up into 7 works of similar nature for which seven sanctions were obtained from MHA in order to avoid approval of higher authorities i.e. Group of Ministers*.

NSG did not offer their comments for works at S. No 1 to 3 CRPF (for work at S. No. 4 above) stated (June 2015) that it sanctions project as per requirement/urgency at various/different locations keeping in view the availability of funds. Accordingly, sanctions are being accorded by the competent authority/MHA for individual building separately. NBCC stated that CRPF conveyed the sanction of estimates in phases and accordingly agreement with CRPF has been executed for each sanctioned work separately. Reply was not acceptable as Group of Ministers sanctioned the work as single project but MHA accorded the approval by splitting the works in order to avoid the approval of higher authority.

** Group of Ministers: ₹ 150 crore and above but less than ₹ 300 crore

BSF (for work at S. No. 5 above) stated (June 2015) that the sanction for each component was accorded keeping in view of priority as well as availability of fund. There is no splitting as each work was issued separate sanction. The reply was not acceptable as the eight works constituted a single project and splitting up of the single work contravened Rule 130 of GFR.

4.2.2 Delay in sanction of Administrative Approval and Expenditure Sanction

There was no norm/time limit fixed by CAPFs/MHA for according sanction of AA/ES. Our scrutiny of 710 works revealed that on an average, five months were taken for according sanction of AA/ES by CAPFs/MHA from the date of submission of PE by the executing agencies. Audit observed that out of 710 works, in 197 cases (26.76 per cent) involving total sanctioned amount of ₹ 1392.82 crore, CAPFs/MHA took more than five months (up to 76 months) for according sanction of AA/ES (**Annex-1.3**). The reasons for taking such a long time in according approval of AA/ES were not available in records. The force-wise position of time taken is as follows :

Table-4.8: Details of works with delay in sanction of AA & ES

| Name of the Force | Total number of cases | Number of cases where time taken was more than average i.e. five month | Amount involved for more than average cases (₹ in crore) |
|-------------------|-----------------------|--|--|
| AR | 132 | 12 | 173.77 |
| BSF | 155 | 42 | 158.01 |
| CISF | 61 | 14 | 140.11 |
| CRPF | 171 | 75 | 626.58 |
| ITBP | 102 | 17 | 69.57 |
| NSG | 14 | 3 | 51.88 |
| SSB | 75 | 34 | 172.90 |
| Total | 710 | 197 | 1392.82 |

Though there is no specified time period within which the AA & ES is to be accorded after the submission of the PE, undue delay in the grant of AA & ES can lead to an increase in cost of Detailed Estimate, rendering AA & ES irrelevant. This can be rectified by the forces as it comes under the direct influence of forces.

CPWD and CAPFs accepted the observation stating that the delay was mainly attributed to time lag in receipt of expenditure sanction from MHA/DG office and some mechanism is being devised to minimize the time taken.

RECOMMENDATION:

CAPFs may fix a time frame for accord of AA & ES of construction activities, as this process is within their complete control, devoid of any external influence.



4.2.3 Non-obtaining of revised expenditure sanction

Para 2.3.5, 2.4.2 & 2.16.2 of CPWD Works Manual and para 71 of CPWD Code stipulate that in case the actual expenditure exceeds 10 *per cent* of AA & ES, a revised AA & ES must be obtained from the authority competent to approve the cost so enhanced.

Audit noticed that in respect of 33 works, although total expenditure on the works exceeded 10 per cent of the AA & ES ranging from 10.16 to 114.07 *per cent*, no revised administrative approval was obtained from the competent authorities (**Annex-4.4**).

CAPFs other than BSF and AR in their reply stated that total expenditure/release of funds is within 10 *per cent* of the amount of AA & ES, while BSF stated that matter is being taken up with CPWD. Reply was not acceptable as it was noticed that the figures of final expenditure were higher by more than 10 *per cent* of the amount of AA & ES.

An illustrative case study was given below:

Case Study 4.9 :

Audit examination revealed that for construction of Airbase with provision of helicopter hanger for BSF at Srinagar, revised expenditure sanction for an amount of ₹ 689.21 lakh was received by the client department in June 2012. Against the revised sanction, an expenditure of ₹ 873.48 lakh was incurred by the executing agency on the work without any sanction having been received by either the client or CPWD. Thus, an expenditure of ₹ 183.67 lakh in excess of the sanctioned amount was incurred.

CPWD stated that revised estimates for AA & ES were being submitted to the client department. The reply was not acceptable in view of the fact that the funds were not available in the project and no approval was obtained before incurring expenditure over the sanctioned cost.

4.3 TENDERING PROCESS

Audit examination revealed lacunae in tendering process by the executing agency such as delay in award of work, absence of transparency in tendering, incompleteness of contractual documents, inappropriate selection of bidders etc. as explained in the succeeding paras :

4.3.1 Delay in tendering process

CPWD generally takes a time limit of three to six months (from the date of AA/ES) for award of work. This included (i) time for pre-tendering work such as preparation and obtaining of necessary sanction of design, drawing and detailed estimate etc. and (ii) time for tendering such as inviting tender, negotiation and award of work etc. Since there was no criterion available in this regard, audit adopted the upper limit of six months as generally accepted practice.

Audit noticed that out of 710 works checked, 681 works were awarded to the contractors, and for remaining 29 works⁶ even tenders were not invited after sanction of AA & ES as of December 2014. Audit examination of 681 works revealed that in 240 works (33.8 per cent) involving ₹ 1161.10 crore, there was delay in initiating tendering process ranging from seven to 90 months from the date of sanction of AA/ES (**Annex-1.3**). The agency-wise break up is given in following table:

Table 4.9: Details of works with delay in tendering process

(₹ in crore)

| Name of the PWOs | No. of works delay beyond 6 month to awarding the contract | Amount involved |
|------------------|--|-----------------|
| CPWD | 187 | 912.61 |
| DEPARTMENTAL | 26 | 9.99 |
| DMRC | 1 | 3.06 |
| EPIL | 5 | 102.36 |
| HPL | 1 | 1.55 |
| NBCC | 8 | 77.76 |
| NPCCL | 7 | 39.76 |
| UPJN | 5 | 14.01 |
| Total | 240 | 1161.10 |

The delay in award of works was attributed to the delayed receipt of decision/approval for the changes in LOP, delayed preparation of drawing and design/detailed estimate, non-availability of funds and re-tendering etc. CPWD and PWOs did not offer their comments.

An interesting case of delay in award of work by CPWD is given below as case study:

⁶ 29 works are shown in bold text in Annexure-1.3

Case Study 4.10

The work Construction of Border Out Post (BOP) of BSF at Nalka, Rajasthan, was awarded by CPWD in the 10th round of tendering after a delay of two and half years. In the 1st round (August 2011), lowest bid was ₹ 35.17 lakh but it was cancelled with a view to obtain rate within justification since estimated cost was ₹ 20.57 lakh. From second to fifth round, there was either no response or just one quote received, due to which it was cancelled. In the sixth round, (February 2012) rates were within justification, but tender could not be decided by CPWD within bid validity period i.e. in 90 days as CPWD took more time in preparing justification and analysis of rates. 7th to 9th rounds did not elicit any response. Work was finally awarded in 10th call with tendered cost of ₹ 51.32 lakh, resulting in cost escalation of ₹ 16.15 lakh (46 % of original offer).

BSF in its reply (January 2015) stated that that 1st call was cancelled in hope that in 2nd call, rate may be obtained within justification and in 6th call it was cancelled as newly enrolled Junior Engineer took more time in preparation of analysis of rates and justification.

4.3.2 Irregular award of work

Para 15.1(8) of CPWD Works Manual provides that for any work not covered under the purview of composite tendering, tenders for electrical and building works (including sanitary and water supply works) must be invited concurrently, or at an appropriate stage when they are required to be commenced. As per Para 15.1 of CPWD Works Manual, 2007 read with Section 95 of CPWD code, availability of clear site is desirable before approval of Notice Inviting Tender (NIT). Further, as per Clause-15 of instruction to the Executive Engineer for e-tendering, the Executive Engineer should invite tenders only after taking over the possession of land and when the site is free for construction.

Audit examination revealed that in 10 construction works with an expenditure sanction of ₹ 65.60 crore, various irregularities in the tendering process were found like improper justification of rates, receipt/sale of tender after due date etc. (**Annex-4.5**). A glaring example is as follows:

For construction of 102 quarters for AR at Chieswema, Nagaland with estimated cost of ₹ 11.28 crore, NPCCL in April 2008 invited tender through advertisement in the two news papers. Due to non-receipt of bids in the first four bidding during April-July 2008, NPCCL had to invite tender for the 5th time in August 2008. In response to the tendering for the 5th time held in August 2008, six local contractors (all registered with NPCCL) quoted exorbitant rate compared to the rate specified in the sanctioned estimate (₹ 11.28 crore). The lowest offer of ₹ 14.80 crore received in 5th bidding was found justified based on the revised cost index effective from July 2008. Due to this, the work was awarded at a cost which was ₹ 3.52 crore more than the original sanctioned estimate/amount put to tender.

Audit examination revealed that as per the newspaper advertisements, the eligibility criteria and other details of the tender were available on two web-sites (www.assamrifles.com and www.npccindia.com). Audit found that the web-site 'www.npccindia.com' belonged to a private agency (located in Bahamas) and other web-site 'www.assamrifles.com' did not exist at all. After inviting tender for the third time (June 2008), NPCCL gave the correct web-site address 'www.npcc.gov.in' in place of 'www.npccindia.com' by issuing corrigendum, but they did not change the non-existent web-site address 'www.assamrifles.com'. As such contractors (other than local contractors) were unable to participate in tendering.

It was seen that NPCCL in no other case invited tender with wrong web-address. Offers from local contractors were received only in the fifth time tendering held in August 2008 i.e. the very first tendering after the revision of cost index in July 2008 and the higher rates quoted by the contractors were found justified by NPCCL/AR on the basis of revised cost index of July 2008.

4.4 DETAILED ESTIMATE (DE) AND TECHNICAL SANCTION (TS)

Rule 129(1) (iv) of General Financial Rules (GFR) stipulates that no work shall commence or liability incurred unless an estimate containing the detailed specifications and quantities of various items have been prepared on the basis leading to deviations in the quantity of work executed, the Detailed Estimates (DE) should be supported with detailed drawing/design. Moreover, before preparation of DE, drawing and design, the executing agency needs to obtain assurance from the client department about the availability of site free from all encumbrances.

Further, the executing agency has to accord Technical Sanction (TS) to ensure that the design, drawings and specification as shown in the estimate are technically sound. As per Section 2.5.1 (a) of CPWD manual, DE supported by drawings and design are required to be prepared for TS. Further, for execution of any extra item not provided in the TS, approval of the competent authority needs to be obtained beforehand to ensure its appropriateness.

Audit examination found cases of incomplete in the preparation of DE leading to huge deviation in quantities during execution of works, absence of TS, execution of extra items without sanction, technical flaws etc. as detailed below:

4.4.1 Absence of Detailed Estimates and Technical Sanction

None of the PWOs other than CPWD to whom MHA/CAPF entrusted their building works prepared the DE properly as required in the GFR. Audit found that the PWOs just mentioned the number of various items to be executed without their quantity and the rate. MHA rectified this deficiency and included provision for the same in the revised format of MoU issued in May 2011. Despite MHA's instruction, the deficiency continued to persist.

Audit noted that in 107 works of CAPFs executed through PWOs i.e. NPCCL, HPL, EPIL and NBCC, involving cost of ₹ 381.37 crore (**Annex-4.6**), DEs were not prepared. Audit noticed that NBCC in its works prepared the bill of quantity (items and cost of works to be executed) without detailed drawings and designs and the cost of items was kept within the limit of expenditure sanction. This resulted in significant variations between the estimated quantity of works and their cost of actual execution. Similarly, in 10 cases (**Annex-4.7**), CPWD prepared DEs which were not supported by detailed drawings and design. Consequently, the works were held up by 39 days to 222 days.

It was also noticed that AR paid the portion of departmental charges (DC) of ₹ 38.58 lakh meant for the preparation of DE in 33 completed works, while the DEs were in fact not prepared. Besides, there would be a liability of ₹ 56.76 lakh in respect of 74 on-going works of AR and BSF on this account.

Assam Rifles, BSF and Chief Engineer, NEZ-I, CPWD accepted the audit observation stating that endeavor would be made to recover these charges and care would be taken to prepare realistic detailed estimates.

As none of the PWOs in 107 works prepared DE, audit had no evidence to substantiate whether the technical sanctions were accorded in these 107 works involving ₹ 381.37 crore (**Annex-4.6**).

Assam Rifles admitted the observation by attributing this to executing agencies. The Executing agencies viz. NPCCL, EPIL and HPL, on their part agreed to comply with the audit observation in future. NBCC stated that tender scrutiny committee was empowered to accord technical sanction. The reply was not acceptable as tender scrutiny committee was meant for scrutiny of tenders whereas technical sanction was accorded by a designated competent authority.

4.4.2 Execution of extra item without technical sanction

Audit found that in 12 works (**Annex 4.8**), CPWD in contravention of section 23.2.3 of CPWD Manual 2007 did not obtain prior concurrence of Technical Sanctioning authority before execution of extra items amounting to ₹ 2.13 crore.

CRPF stated that CPWD/PWO prepare detailed estimates later and technical sanctions are obtained by them from their competent authorities. Reply was not acceptable as in the above cases, extra items were executed without technical sanction from the competent authority.

4.4.3 No revision of Technical Sanction

As per para 2.5.2 of CPWD Works Manual, the technical sanction can be exceeded by up to 10 *per cent* beyond which revised technical sanction shall be necessary.

In seven works (**Annex-4.9**) executed by CPWD, it was noticed that although the expenditure incurred was beyond 10 *per cent* of the technical sanction, the revised technical sanctions were not obtained from competent authority in contravention of the aforesaid provisions. CPWD in its reply accepted the audit observation.

4.4.4 Preparation of flawed design

Preparation of flawed design for construction of building was noticed in CRPF work at Khatkhati, Assam which has been explained as case study below:

Case Study 4.11:

CRPF entrusted the work of construction of 180 barracks (three in number each having three stories) at Khatkhati, Assam to NPCCL. The work was awarded by NPCCL to a contractor in December 2006 at a tendered amount of ₹ 8.59 crore. However, the contractor suspended the work from November 2007 due to local insurgency problem, flood, heavy rain etc. and subsequently the contract was terminated by NPCCL in March 2008. The contractor had executed works valuing ₹ 92.87 lakh and the CRPF had paid ₹ 76.05 lakh to NPCCL against the total claim of NPCCL of ₹ 99.38 lakh including seven *per cent* departmental charges. Based on the drawings initially prepared by NPCCL and obtaining confirmation from CPWD about the suitability of the works done by the first contractor, the balance work was entrusted to CPWD at the sanctioned cost of ₹ 22.98 crore in November 2009. The balance work was awarded (November 2010) to a second contractor. However, CPWD in April 2011 informed CRPF that the foundation was structurally unsafe for taking up the load of three stories as it was constructed by NPCCL without necessary provision to withstand earthquake effect. It was finally decided to restrict the construction of the buildings to two stories and one three storied building had to be taken up additionally. The proposal was approved by MHA in July 2011. The second contractor refused (October 2012) to construct the additional block and the same was awarded in April 2013 to a third contractor.

It was observed in audit that

- Due to abandonment of the work, MHA had instructed the force to levy and recover compensation amounting to ₹ 86.35 lakh from NPCCL. Neither ₹ 86.35 lakh had been recovered nor the amount of ₹ 28.45 lakh already recovered by NPCCL from the first contractor had been refunded to the CRPF.
- Due to technical flaws in design and drawings prepared by NPCCL and certification of its soundness by CPWD without prior assessment, the work done by the first contractor up to plinth level was subsequently found structurally unsafe because of which CRPF would have to incur extra expenditure of ₹ 2.09 crore (Approx.)⁷
- Despite incurring an expenditure of ₹ 10.94 crore till October 2014, the work could not be completed even after expiry of over six years from the scheduled date of completion (March 2008) due to technical flaws.

CRPF in its reply (June 2015) stated that 98 *per cent* work of barrack at Khatkhati had been completed and case for recovery of LD for ₹ 86.35 lakh was under correspondence with NPCCL.

⁷ Awarded cost of three Buildings including plinth (initially G+2) = ₹ 15.21 crore. So, awarded cost of one building ₹ 15.21/3 i.e. ₹ 5.07 crore. Awarded cost of additional building including plinth (G+2) = ₹ 7.16 crore. Therefore extra expenditure due to construction of additional building = ₹ 2.09 crore (₹ 7.16 - ₹ 5.07) crore

The audit findings mentioned above covered preparatory work before the start of actual execution. The actual work of construction is done by the PWOs by contracting it out to third parties and monitoring it closely for quality and timely completion within the budget.

It can be seen that at all stages there were deficiencies, while delays were the foremost reason for problems, as summarised below:

| PE | AA & ES | DE and TS | Tendering | Execution |
|---|---|--|---|---|
| <ul style="list-style-type: none"> • Inadequate PE • Incorrect PE • Approval not obtained from local authorities • Delays in sanction | <ul style="list-style-type: none"> • Splitting up of work • Delays in sanction • Non obtaining of sanction | <ul style="list-style-type: none"> • Inadequate DE • Absences of DE • Flawed DE • Delays in sanction | <ul style="list-style-type: none"> • Delays in tendering • Irregular award of works | <ul style="list-style-type: none"> • Delays in commencement and coordination • Delay in completion • Deviations/extra/substituted items • Cost and time overrun |

4.5 EXECUTION OF WORK

Audit noted various deficiencies in execution of works viz. non-compliance with rules and contractual provisions, incomplete/faulty contractual provisions, delay in completion of works as well as payments of escalation on this account, non-maintenance/improper maintenance of documents etc. The details are explained in the succeeding paras:

4.5.1 Delay in commencement of work

- Examination of SSB work of construction of infrastructure at Yelki District-Hingoli (Maharashtra), sanctioned at a cost of ₹ 53.69 crore (September 2013) and awarded to NBCC for execution revealed that it was yet to take off due to non selection of site as of December 2014.

SSB in its reply (June 2015) accepted the observation and stated that handing over of site was never a problem and it was wrongly quoted by the NBCC. It stated that there was delay in tendering of work by NBCC which ultimately was awarded in November 2014 and work started in January 2015.

- Three works of AR for ₹ 5.31 crore were awarded during October 2013 to December 2013 at a total tendered value of ₹ 4.62 crore (**Annex-4.10**). These works were yet to take off as of November 2014 even though 67 to 80 *per cent* of the time specified for its completion had already elapsed. Further study in audit revealed that these works were awarded to those contractors who could not

complete the works awarded to them on earlier occasions. Thus, AR did not verify the past performance of contractors before award of work.

Assam Rifles (April 2015) admitted the audit findings by stating that they would direct the executing agency either to pursue the contractor to mobilise the resources or to go for retendering after cancelling the contract.

4.5.2 Deviated items

Deviation means deviation in quantities of items, i.e. where there is increase or decrease in the quantities of items of work in the agreement. Clause 12.2 and 12.3 of 'General Conditions of Contract' provides deviation limit beyond which the rate should be worked out by adopting the market rate for material and labour. The limits as specified in schedule-F of the contract is 30 *per cent* in case of building work and 100 *per cent* in case of foundation work. As per Para 24.1.2 (2) of CPWD works manual, deviation in quantities of individual item beyond the limit of + 10 *per cent* but within deviation limit as specified under clause 12 of the contract, will not require prior approval of technical sanction authority but total deviation (including initial + 10 *per cent*) shall be sanctioned by officers as per delegation of powers.

It was noticed that in respect of 241 works (**Annex-1.3**), there were deviations in items beyond the permissible limit ranging from -100 *per cent* to +10469 *per cent* which indicated that quantities of items of work mentioned in the detailed estimates were not realistically estimated, based on field survey and site conditions. Total amount of such items was ₹ 82.88 crore. The deviations occurred due to site condition, structural requirement as per drawings and change in scope by client.

CPWD stated that deviation was within financial limit. The reply was not convincing because the limit of deviation in quantity was not adhered to.

NBCC stated that in the detailed estimate, certain items were provisioned in anticipation of being carried out in the work to avoid execution of extra items beyond BOQ and avoiding subsequent approval of competent authority and execution was done as per actual requirement. Reply was not acceptable as detailed estimate should be prepared as per actual requirement. CAPFs in their reply accepted the observation and stated that the deviations beyond permissible limits were due to changes in the site requirement.

Executing agencies with number of works in which deviations were found along with force wise details of items deviated were given in following table:

Table 4.12: Details of works where deviation was beyond the permissible limit

(₹ in crore)

| Executing Agency | Total no. of works in which deviation found | Percentage of works against total number of works | Amount of deviation | No. of items where deviation was more than 30% and 100 % against the BOQ (both above or below) | Range of deviation (in per cent) | |
|------------------|---|---|---------------------|--|----------------------------------|-------------|
| | | | | | Minimum (-) | Maximum (+) |
| CPWD | 187 | 43 | 64.42 | 1 to 320 | (-) 100 | (+)10469 |
| DEPTT. | 20 | 22 | 1.17 | 1 to 64 | (-) 100 | (+) 2650 |
| EPIL | 2 | 12 | 7.27 | 4 to 18 | (-) 100 | 832 |
| HPL | 3 | 18 | 0.53 | 2 to 6 | (-) 100 | (+) 976 |
| NBCC | 7 | 14 | 2.47 | 2 to 181 | (-) 100 | (+)352 |
| NPCCL | 22 | 25 | 7.02 | 1 to 18 | (-) 100 | (+) 3900 |
| Total | 241 | | 82.88 | | | |

It was evident from above that in the works executed by CPWD and CAPFs departmentally, there were more deviations in items used in their works than in the works executed by PWOs.

Some illustrative case studies are given below:

Case Study 4.12

MHA in October 2007 sanctioned ₹ 3.25 crore for construction of boundary wall for a CRPF Group Centre at Agartala. Owing to huge deviation from DE ranging from -100 per cent to +761 per cent, CPWD in December 2008 declared the incomplete work as closed after incurring an expenditure of ₹ 3.07 crore as funds were also exhausted. Audit found that out of 87 items identified in the agreement, 70 were not at all executed. CPWD, in December 2008, submitted a revised estimate for ₹ 7.54 crore and CAPF/MHA took 1½ years to accord (July 2010) sanction of ₹ 6.54 crore. The balance work was awarded in April 2011 and was completed in May 2013. Had the first estimate been properly prepared, it could have saved ₹ 48.46 lakh. Moreover, the work conceived in October 2007 took 5¾ years to complete.

Assam Rifles stated that deviation occurred due to site / user requirement. The reply was not tenable as DE was not supported with requisite drawings.

Case Study 4.13

Audit found that in two works (**Annex-4.11**) of CISF and SSB, the contractors were paid at higher rate (market rate) than the agreement rate by CPWD, owing to the deviation in excess of the prescribed limit as specified in the agreement, leading to extra expenditure of ₹ 43.53 lakh against these works. PWOs did not offer their comments.

4.5.3 Extra items

As per section 24.2.3 (1) and 24.2.3(3) of CPWD Work Manual, no extra item should be executed or approved without the prior concurrence of its necessity by the authority that accorded the technical sanction. Further, no work of addition/alteration which involves structural changes in the residential buildings, or alters the aesthetics of the external facade, shall be carried out except with the approval of concerned architect. As per Para 24.1.2 (4) of CPWD works manual 2012, in case of deviations occurring in the quantities of substituted/extra items/deviation in quantity of any item already sanctioned, revised sanction should be taken from the competent authority.

Audit noticed that 305 works having extra items (ranging from 1 to 186 items) for ₹ 30.16 crore were executed by the executing agencies (**Annex-1.3**). Executing agencies with no. of works in which extra items were used along with force wise details of extra items are given in following table:

Table 4.13: Details of works where extra items used

| (₹ in crore) | | | | |
|------------------|---|---|-----------------------|--------------------|
| Executing Agency | No. of works where extra items used by executing agencies | Force-wise no. of works where extra items used | Amount of extra items | No. of extra items |
| CPWD | 235 (53%) | BSF-44, CISF-32, NSG-07 CRPF-90, ITBP-36, SSB-26 Total-235 | 23.62 | 1 to 186 |
| DEPTT. | 42 (45%) | AR-1,BSF-24, NSG-3, ITBP-5, SSB-9 Total-42 | 0.97 | 1 to 30 |
| DMRC | 01 (100%) | CISF-01 | 0.22 | 22 |
| EPIL | 01 (6%) | AR-1 | 0.03 | 1 |
| HPL | 02 (12%) | AR-2 | 0.28 | 1 |
| NBCC | 11 (22%) | BSF-1, CISF-3, CRPF7 Total-11 | 2.54 | 2 to 52 |
| NPCCL | 13 (15%) | AR-13 | 2.50 | 1 to 26 |
| TOTAL | 305 | 305 | 30.16 | |

It was evident from above that more extra items were used in the works executed by CPWD and CAPFs departmentally than in the works executed by PWOs. Reasons for execution of extra items were mainly relating to site conditions, sometimes items were not included in the agreement or because of structural requirement. CAPFs accepted (June 2015) the observation by stating that extra items were executed as per site requirement and demand of client department which were approved later by the competent authority.

Paras 3.6 and 4.7 of CPWD Works Manual 2012 provide that the scope of work should not be altered without written permission of the client.

Audit noticed that in 20 works (**Annex-4.12**) where extra items amounting to ₹ 159.33 lakh were used, executing agency had altered the scope of work but required permission was not obtained from client/competent authority.

Chief Engineer (CZ) CPWD, Bhopal stated (February 2015) that in principal approval could not be obtained prior to execution of items due to urgent nature as well as interconnected items, however as per verbal approval, extra items were executed and these items have been sanctioned by the competent authority later. The reply was not tenable because execution of extra items of work without technical sanction was contrary to provision stated *ibid*. Further progress of remaining works has not been received (March 2015).

4.5.4 Substituted items

132 works (**Annex-1.3**) involving substituted items (ranging from 1 to 24 items) for ₹ 10.80 crore, were executed by the executing agencies. Reasons for execution with substituted items were mainly site requirements, non-availability of items in the market and as per client requirement etc. Executing agencies with no. of works in which substituted items used along with force wise details of substituted items are given in following table:

Table 4.14: Details of works where substituted items used

(₹ in crore)

| Executing Agency | No. of works where substituted items used by executing agencies | Force-wise no. of works where substituted items used | Amount of substituted items | No. of substituted items |
|------------------|---|--|-----------------------------|--------------------------|
| CPWD | 109 (25%) | BSF-18, CISF-19, CRPF-51, ITBP-13, NSG-2, SSB-6 | 10.19 | 1 to 24 |
| DEPTT. | 17 (18%) | AR-1, BSF-11, ITBP-2, SSB-3 | 0.34 | 1 to 16 |
| NPCCCL | 1 (1%) | AR-1 | 0.03 | 1 |
| NBCC | 5 (10%) | CRPF-5 | 0.24 | 2 to 9 |
| Total | 132 | 132 | 10.80 | |

In the works executed by CPWD and CAPFs departmentally, more substituted items were used than in the works executed by PWOs.

CAPFs accepted (June 2015) the observation by stating that substituted items were executed as per site requirement and demand of client department which were approved later by the competent authority.

Chief Engineer (CZ) CPWD, Bhopal stated (February 2015) that in principal approval could not be obtained prior to execution of items due to urgent nature as well as interconnected items, however as per verbal approval, substituted items were executed and these items have been sanctioned by the competent authority later. The reply was not acceptable as execution of substituted items of work without technical sanction was contrary to provision stated *ibid*. Further progress of remaining works had not been received (March 2015).

4.5.5 Cost & time overrun

4.5.5.1 Cost overrun due to delayed execution

Audit noticed that in 129 completed works (**Annex-4.13**) with initial sanctioned cost of ₹ 335.88 crore, which was revised to ₹ 398.90 crore resulted in cost escalation of ₹ 63.02 crore. Audit also noticed that in 32 works (**Annex-4.14**) which were in progress and incomplete, with initial sanctioned cost of ₹ 130.41 crore, cost was revised to ₹ 215.44 crore which resulted in cost overrun of ₹ 85.03 crore up to December 2014. Thus, there was total cost overrun of ₹ 148.05 crore in total 161 works up to December 2014. The reasons for such revision of AA & ES and cost overrun was escalation of labour and materials cost, execution of extra/deviated/substituted items, change in scope of work etc.

Audit also found savings in 189 completed works with initial sanctioned cost of ₹ 766.83 crore, but actual expenditure incurred on these works were ₹ 477.75 crore, which resulted in saving of ₹ 289.08 crore (**Annex-4.13**). The savings were due to wrong calculation of plinth area by the department, modification of drawing, increase in plinth area, revision of estimate and site conditions etc. Though there were delays in completion of works executed by all the executing agencies, there were savings after completion of work. It was indicative of the fact that either estimates prepared by the executing agencies were inflated or items taken in the Bill of Quantities (BOQ) were not executed which resulted in huge savings. MHA and CAPFs also approved the overstated estimates without proper verifications, which indicate poor financial control in budgeting and expenditure sanctions.

CAPFs in their reply admitted the observations and stated that PWO authorities have been requested to avoid any escalation due to delay in execution. Some interesting cases of cost overrun are discussed below:

Table 4.15: Details of interesting cases of cost overrun

(₹ in lakh)

| S. No | Name of work | Executing Agency | AA&ES amount | Revised AA&ES/ Actual expenditure | Cost overrun | Audit observation |
|-------|--|------------------|--|---|--------------|---|
| 1. | C/o Boundary Wall at Group Centre, CRPF, Neemuch (MP) | CPWD | 302.91 September 2007 | 496.78 August 2010 | 193.87 | Due to delay of 22 months in start of construction work by CPWD, the cost of construction material abnormally increased, which resulted in cost overrun of the work by ₹ 193.87 lakh. |
| 2. | C/o Recreation hall, CRPF at Coimbatore | CPWD | 95.42 January 2008 Tendered cost ₹ 92.22 | 129.35 November 2010 | 37.13 | The estimate was prepared in December 2007 but due to delay of nearly 20 months in approving the drawings, resulted in increase in cost by ₹ 37.13 lakh due to cost index difference. |
| 3. | C/o Family Quarters for CRPF, at Hyderabad | CPWD | 1323.0 September 2004 | 1948.0 March 2009/ 1668.00 March 2010 | 345.0 | Delay in handing over of site and lack of follow-up resulted in inordinate delay of more than 3 years in execution of work, leading to a cost overrun of ₹345 lakh. |
| 4. | C/o Compound wall for 400 acres of land acquired for Central Training College-II, CRPF, Coimbatore | CPWD | 95.88 September 1995 | 127.08/ January 2005/209.44 December 2009 | 82.36 | Awarded for ₹ 95.88 lakh in January 1996. Boundary wall on 378 acres of land at a cost of ₹112.56 lakh was completed in June 1999. Remaining 22 acres of land was under dispute with forest department and it was identified by State Government in July 1997. C/o boundary wall on 20 acres was taken up after a lapse of seven years in January 2005 at the estimated cost of ₹ 31.20 lakh but could not be executed again as the stones were again found |

| S. No | Name of work | Executing Agency | AA&ES amount | Revised AA&ES/ Actual expenditure | Cost overrun | Audit observation |
|-------|--|------------------|------------------------|--|--------------|---|
| | | | | | | missing. After re-survey in 2008, the work was commenced in January 2009 and completed (December 2009) at a cost of ₹ 96.88 lakh. It resulted in cost overrun of ₹82.36 lakh. |
| 5. | Replacement of Overhead Electrical line by underground cables at CRPF Campus Pallipuram, Thiruvananthapuram. | CPWD | 69.54 December 2005 | 93.78 June 2010/ 94.49 December 2012 but final bill not paid so far | 24.24 | There was delay of more than three years in getting A.A. & E.S sanctioned and more than one year in tendering the work. |
| 6. | Renovation of Electrical Installation in 192 Quarters at Group Centre, CRPF, Pallipuram Thiruvananthapuram | CPWD | 57.87 March 2004 | 95.66 May 2009 (sanction awaited)/ 84.87 for remaining 72 quarters October 2014 (sanction awaited)/Actual expd. 61.52 work not completed | 122.66 | The delay of 18 months in according A.A.&E.S, 12 months in awarding the work and 49 months in completion of works and failure by CRPF in timely release of funds resulted in non-completion of work even after 10 years. This also resulted in cost escalation of more than 100 per cent. Beside these quarters could not be put to use so far. |

4.5.5.2 Unfruitful expenditure of ₹ 7.52 crore

During execution of works, instances were noticed where expenditure incurred/payments made to contractor were unfruitful. Details of some such interesting cases are discussed below:

Table 4.16: Details of works where expenditure was unfruitful

(₹ in lakh)

| S. No | Name of work | Executing agency | Stipulated/ actual date of completion | Actual expenditure | Audit observation |
|-------|---|------------------|---------------------------------------|--------------------|---|
| 1 | C/o storage tank and development of site for water supply schemes for SSB TC Sarahan (H.P). | CPWD | March 2010/ December 2014 | 124.00 | Work was completed after a delay of 5 years but the water supply scheme was non-functional resulting in unfruitful expenditure of ₹ 124 lakh. |
| 2 | C/o 1450 mt. Boundary Wall with gates and sentry posts for BSF Campus, 80 bn. BSF, Khemkaran under SHQ, BSF, Ferozpur | CPWD | 27-11-12 /4-12-13 | 128.00 | CPWD completed the construction of only 1266 metre out of total 1450 metre boundary wall after a delay of one year. The purpose of boundary wall to provide complete security was not achieved due to incomplete execution of the work which resulted in unfruitful expenditure of ₹128 lakh. |
| 3 | C/o Boundary Wall at Group Centre, CRPF, Neemuch (MP) | CPWD | August 2009/March 2010 | 500.17 | Due to rain (August 2010 and August 2011) 485 metre of boundary wall collapsed before the possession being taken over by CRPF from CPWD. Final payment was made to the contractors without getting it re-built. Purpose for which the expenditure of ₹500.17 lakh was incurred remained unachieved and unfruitful. CRPF accepted the observation and stated that revised sanction was accorded but collapsed boundary wall had not been completed/re-constructed by CPWD authorities yet through the contractor as it collapsed before handing over and was under defect liability period. |
| | | Total | | 752.17 | |

4.5.6 Delay in completion of work

Audit noticed that out of total 710 works, 29 works were not awarded to the contractors up to December 2014. Out of balance 681 awarded works, in 405 works (59 per cent) involving ₹ 1723.25 crore, there was delay of 14 months on an average (ranging from 1 month to 66 months) in completion of the works after the stipulated period (**Annex-4.13**). However, in 150 cases (37.4 per cent) involving ₹ 847.52 crore, the delay was more than 14 months. Agency wise breakup of the delay in execution is given in the following table:

Table 4.17: Details of delay in completion of works

(₹ in crore)

| Executing Agency | Number of works delayed | No. of Force-wise delayed works | Range of delay (in months) | Amount involved for cases of delay | Number of works where delay was above average | Amount involved for above average cases of delay |
|------------------|-------------------------|--|----------------------------|------------------------------------|---|--|
| CPWD | 254 (58%) | BSF-45, CISF-36 CRPF-96, ITBP-36 SSB-33, NSG-8 Total-254 | 1 to 66 | 932.20 | 82 (19%) | 362.58 |
| Deptt. | 61 (66%) | BSF-28, ITBP-12 NSG-05, SSB-13 AR-03 Total-61 | 1 to 31 | 22.13 | 16 (17%) | 4.98 |
| EPIL | 5 (31%) | AR-05 | 1 to 51 | 31.28 | 4 (25%) | 24.53 |
| HPL | 5 (29%) | AR-05 | 1 to 52 | 26.87 | 05 (29%) | 26.87 |
| NBCC | 32 (64%) | BSF-13, CRPF-12 ITBP-01, CISF-04 SSB-2, Total-32 | 1 to 64 | 473.23 | 13 (26%) | 273.48 |
| NPCCL | 44 (51%) | AR-44 | 1 to 45 | 213.10 | 27 (31%) | 143.57 |
| UPJN | 2 (33%) | AR-02 | 1 to 22 | 8.45 | 2 (33%) | 8.45 |
| DMRC | 1(100%) | CISF-01 | 29 | 3.06 | 1 (100%) | 3.06 |
| JKPCC | 1 (100%) | BSF-01 | 4 | 12.93 | - | - |
| Total | 405 | 405 | | 1723.25 | 150 | 847.52 |

It is evident that the works executed by CPWD and CAPFs departmentally were delayed more than the works executed by other PWOs. The delay in execution was mainly attributed to delay in handing over/non finalization of the site, non-availability of approachable site, change/non-preparation of drawing and building plan, change in Layout Plan, heavy rain, frequent bundhs, remoteness of site, labour crises, ban on migrant labour from other states and failure of contractors etc. CAPFs further added that they had granted extension of time after verifying the facts brought out by the PWOs. SSB and BSF also stated that where there was delay on the part of executing agency, they were penalised as per the contractual clause. In most of the cases, hindrances were

justified hence extension was granted as per CPWD Manual Clause. The reply was not acceptable as the delay occurred either on the part of CAPFs or PWOs.

Some interesting cases with respect to delays are:

Table 4.18: Details of some interesting cases of delay in works

(₹ in lakh)

| Sl. No. | Name of work | Executing agency | Stipulated date of completion | Actual expenditure | Audit observation |
|---------|---|------------------|--|--------------------|---|
| | C/o Sewage Treatment Plant (STP) at ITBP campus, Patiala | CPWD | 29-1-2010/ incomplete as on December 2014 | 26.61 | The work which was to be completed in January 2010 remained incomplete till date of audit (November 2014). The expenditure incurred on the STP was wasteful as the target of providing sanitation services in the ITBP Campus was not achieved. |
| | C/o residential and non-residential buildings at GC CRPF, Bhubaneswar | CPWD | August 2012/ Incomplete | 39.00 | Even after 2 years of award of work, it was not completed due to non-allotment of funds by CRPF to CPWD. |

4.5.7 Taking over of incomplete work /delay in handing over of Works

After completion of the construction work, CAPFs were required to appoint a Board of Officers to check the construction thoroughly as per specifications and requirements before taking over the site. However, following instances were noticed in handing/taking over of sites, where assets were takeover by CAPFs before works were complete in all respects.

Table 4.19: Details of taken over of assets by CAPFs before completion of work

(₹ in crore)

| Name of works | Executing agency | Sanctioned amount | Audit observation |
|--|------------------|-------------------|--|
| Five works for AR (i) C/o qtrs, allied services and development works for AR at Keithalmanbi. (ii) C/o Magazine Building and development Work at Kakching, Manipur | NPCCCL | 33.88 | "Side beams" on the road had to be provided to 3.96 Km of bituminous road in Manipur were taken over by AR without the same being constructed by NPCCCL. 3.20 Km of GI Pipe line for water supply running along the road was done without providing the required anti-corrosive paint coat. It was handed over by NPCCCL to AR. AR admitted the audit |

| Name of works | Executing agency | Sanctioned amount | Audit observation |
|---|------------------|-------------------|---|
| (iii) C/o Single JCOs accm., single men barrack, Admn. Block, Officers Mess with development work for AR | | | observations. |
| (iv) C/o Single Men Barrack with approach Road for AR | | | |
| (v) C/o Single JCOs accm., single men barrack, Admn. Block Officers Mess with development work for AR at Kakching, Manipur. | | | |
| C/o Barrack at Navi Mumbai for CRPF | CPWD | 0.60 | Work which was stopped due to court cases and legal issues, was taken over by the Force during October 2009, but could not be put to intended use and resulted in unfruitful expenditure of ₹ 57.38 lakh besides creating additional liability of ₹ 60.02 lakh to rectify the defects. |
| Providing internal roads, culverts etc for BSF at Karahalli, Bengaluru Rural district | CPWD | 0.20 | Road work in two stretches for a length of about 200 meters was yet to be executed since this stretch required construction of culverts. Though the original PE provided for construction and allied works of 10 culverts at a cost of ₹ 20.30 lakh, the said item was not included in the tender. Despite the incomplete road work for 200 meters, CPWD issued completion certificate to the agency. CPWD stated in reply that the items for the work of construction of culverts were left over in the revised PE due to oversight. A separate estimate was got sanctioned now. |
| C/o barracks of CRPF in Greater Noida, U.P. | NBCC | 14.48 | NBCC handed over the construction of barracks of CRPF in Greater Noida without carrying out the work of basic amenities like electricity and sewage. These basic amenities were temporarily arranged by NBCC at an expenditure of ₹4.22 lakh. |
| C/o Family quarters for CRPF, Pune | CPWD | 92.99 | Part of work was completed by NBCC in February 2010 and handed over to CRPF between November 2012 and March 2013 after a lapse of 33-37 months and remaining works involving an expenditure of ₹ 25.72 crore, completed in December 2012 with a delay of 14 |

| Name of works | Executing agency | Sanctioned amount | Audit observation |
|---------------|------------------|-------------------|---|
| | | | months were not handed over to the client department till December 2014. CRPF in its reply accepted the observation and stated that the defects pointed out were not being rectified by PWO promptly. |

Two interesting cases are discussed as case studies below:

Case Study 4.14 :

Unfruitful expenditure of ₹ 2.96 crore

The work of family quarters for CRPF, Chandrayanagutta, Hyderabad with AA&ES of ₹ 9.90 crore was awarded to a contractor in April, 2006 at a tendered cost of ₹ 7.39 crore with stipulated date of completion as April, 2007. The work was rescinded in January 2007 due to slow progress and was awarded to second contractor at tendered cost of ₹ 8.41 crore. The contractor completed 128 quarters valuing ₹ 8.22 crore and handed over these to CRPF by September 2013, leaving the balance work of 64 quarters incomplete at various stages as on December 2014. Later, the scope of the original work was increased from 180 to 192 quarters and the estimate was revised to ₹ 14.90 crore (September, 2013). This estimate



included an amount of ₹ 68.37 lakh on completed portion of the work which was not deleted while inviting tenders afresh. As on date (June 2015), the balance 64 quarters (192-128) were not completed and the expenditure of ₹ 2.96 crore remained unfruitful as CRPF staff couldn't move into their quarters even after a lapse of 6 years of estimated date of completion (April 2007). Besides, the Department was tied up in a requirement of more than ₹ 5 crore for completion of the pending works and an arbitration case filed by the first contractor.

CRPF accepted (June 2015) the observation and stated that extra fund is being demanded by the first contractor for same project and is under scrutiny.

Case Study 4.15:**Taken over of Quarters by AR without rectification of defects**

AR awarded the work of construction of 12 Type-III quarters and 48 Type-II quarters at Jorhat, Assam to EPIL. EPIL divided the same in 4 packages and awarded one package of 16 Type-II quarters to a contractor in May 2006. These quarters were constructed at a cost of ₹ 91.58 lakh and handed over to the AR in May 2011. Audit noted that several defects i.e. absence of roof treatment in any of the quarters, poor quality of plaster, doors and windows and substandard fly proofing, were detected (March 2012) by the AR after 09 months from the date of handing over. As a result, 2 quarters remained unoccupied (October 2014). Thus, due to absence of proper monitoring and quality checking by the force, the above defects were not noticed, 02 quarters could not be occupied yet and defects in other quarters were still to be attended.

Assam Rifles in their reply could not offer any explanation for these irregularities.

4.6 OTHER IRREGULARITIES**4.6.1 Commencement of work without work order/agreement**

As per Ministry of Finance's instruction under para 1.2.2 (vii) of Manual on Policies and Procedure for Procurement of Works (CVC instruction in 2002), no work shall commence until a work order has been issued. Audit found that NPCCL in 27 works (**Annex-4.15**) of AR and NBCC in 9 works (**Annex-4.16**) of BSF did not adhere to this instruction as they concluded agreement with the respective contractors only after 51 days to 567 days of commencement of the work. Moreover, in 11 works (**Annex-4.15**) payment of ₹ 8.89 crore was made before entering into a formal agreement.

PWOs did not offer their comments, however, Assam Rifles (April 2015) admitted the observation by stating that they would ensure compliance by incorporating suitable provisions in their future MoUs with PWOs.

4.6.2 Execution of unauthorized temporary work of ₹ 39.04 lakh

Audit Scrutiny of records of NBCC revealed that the construction activities of BSF at Mathura included expenditure of ₹19.60 lakh on construction of one temporary barrack and of ₹ 19.44 lakh incurred on one temporary toilet block. These works were not part of the original work and had not been sanctioned by the competent authority. Thus, expenditure of ₹ 39.04 lakh was irregular.

BSF accepted (June 2015) the observation and stated that the temporary structures at BSF campus Mathura were constructed by NBCC as per the requirement of BSF in order to keep their office and stores in safe custody. Reply is not acceptable as these works were neither part of the original work nor sanctioned by the competent authority.

4.6.3 Site not acquired for work

For construction of barrack at Jammu for BSF, administrative approval and expenditure sanction of ₹ 4.62 crore for the work was conveyed by the client department to CPWD in February 2014. Accordingly CPWD took up the matter with the BSF authorities for providing site for construction. The client department intimated that site for the work was not available and would take the department two more years in identifying the site. Thus, the BSF authorities without site identification forwarded the proposal to the MHA for expenditure sanction by showing that land was available, resulting in non construction of barracks.

BSF accepted (June 2015) the observation and stated that the sanction was issued with the presumption that land will be finalized by the time of award of work. But land was not finalized and alternate piece of land at Samba was being provided for construction of the barrack where work had started now.

4.6.4 Non-maintenance of Documents

Hindrance Register is maintained to keep a record of all the hindrances during the execution of work. Audit examination of records pertaining to works executed in North Eastern region revealed that out of 56 completed packages of AR in five works involving tendered amount of ₹ 36.13 crore, PWOs (NPCCL, EPIL, UPJN and HPL) did not maintain hindrance register. In 9 projects, the labour license of the contractor was not available on record. In many cases, fortnightly report was not available on record. As per CVC guidelines, payments to the contractor are to be made through e-payment. However, from the records furnished to audit, it was seen that the guidelines were not followed in many projects. Similarly, other documents like measurement books, inspection register, contractor ledger etc. were not maintained properly by the executing agencies in many cases.

PWOs did not offer their comments, however, Assam Rifles admitted the audit findings by stating that they had directed the PWOs to maintain Hindrance Register at the work site.

4.7 CONCLUSION

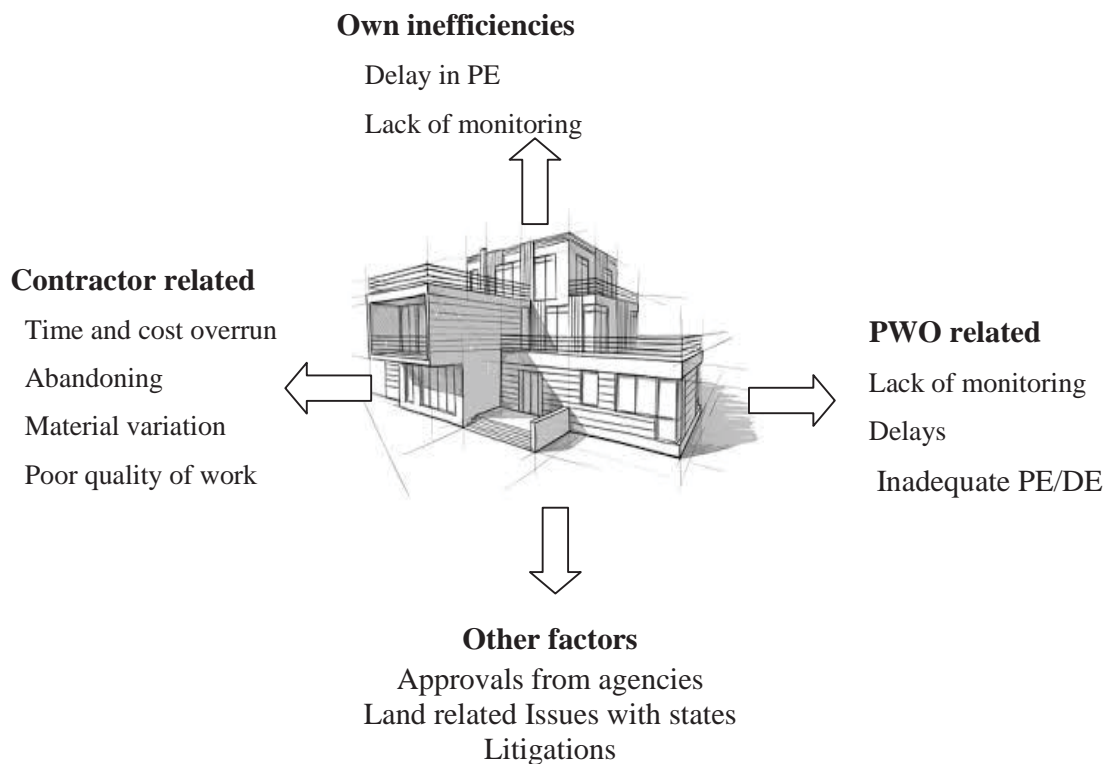
The process of construction works ranges from selection of executing agency after necessary approvals to handing/taking over of site after construction. Audit found deficiencies and delays at every step. Selection of executing agency for construction works was not based on any criteria and competition amongst the executing agencies was missing. Proper assessment and planning for the requirement was not done by the client as well as executing agencies which resulted in unfruitful expenditure/excess/avoidable payments as evident from the preceding paragraphs. Instances of works being awarded without preparation of proper detailed estimates, violation of GFR and MHA orders were noticed. Audit also noticed that approval of local authorities for lay-out plans and

drawings was not obtained even after the completion of works in many cases. It was noticed in many instances that instead of preparing one estimate for the project, splitting up of work was resorted to avoid A/A and E/S from higher authorities.

Audit found that CAPFs/PWOs failed to finalise preliminary drawings with complete scope and specification in reasonable time which increased the estimated cost of works and delayed execution. Estimates prepared by PWOs were higher, leading to overpayments. PWOs did not prepare realistic and firm detailed estimates supported by detailed plans, drawings and specifications which led to huge deviations at the time of execution. Large scale deviations in bill of quantities (BOQ) were noticed beyond the permissible limit ranging from (-) 100 per cent to (+) 10469 per cent which indicates that quantities of items of work mentioned in the detailed estimates were not realistic.

The main factors which contributed to the deficiencies in construction work can be grouped in to four clusters, as shown below.

Drag forces at work



Audit also noticed execution of large number of extra and substituted items during construction without taking requisite approvals of the client department. Undue benefits to contractors by substituting costlier items with cheaper items or execution of extra items citing site or structural requirements could not be ruled out. While monitoring, each milestone was not meticulously analyzed by the agencies involved. PWOs repeatedly failed to ensure documentation of requisite data for delay analysis which could benefit the

contractor. Audit also found that incomplete works without basic amenities viz. electrification, sewage work etc, were taken over by the CAPFs, due to which asset created remained unutilized for long time.

Thus, it can be seen that a sense of engagement between MHA/CAPFs/PWOs was missing while creating high value capital assets. MHA/CAPFs and executing agencies may take remedial measures to make necessary corrections in the system so as to ensure that the works are started and completed on time and intended benefits reached the end users on time.