

CONFIDENTIAL

Delhi Development Authority
(Work Advisory Board)

No: WAB 1(76) Vol.41/Secy./2017/ 4101

Dated: 22.8.17

Sub: Minutes of the 5th WAB (2017) meeting held on 18.07.2017 & 21.07.2017 at 2:30 PM in the Conference Hall, 1st floor, B-Block, Vikas Sadan, INA, New Delhi

Minutes of the 5th WAB (2017) meeting held on 18.07.2017 & 21.07.2017 at 2:30 PM in the Conference Hall, 1st floor, B-Block, Vikas Sadan, INA, New Delhi, are enclosed here with for favours of information & necessary action.

Encl:- As above

(N.K. Gupta)
Secretary (WAB)

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In Circulation to :

- i.) Chief Engineer (HQ), DDA.
- ii.) Chief Engineer (North Zone), DDA.
- iii.) Chief Engineer (Rohini Zone), DDA.

Copy to:-

- i) Sr. PS to VC, DDA for kind information of the latter.
- ii) AD to EM, DDA for kind information of the latter.
- iii) Sr. PS to FM, DDA for kind information of the latter.
- iv) Chief Engineer (QAC), DDA for kind information.
- v) Commissioner (Planning), DDA.
- vi) Chief Architect, DDA.
- vii) Chief Account Officer, DDA for kind information.
- viii) Chief Legal Advisor, DDA for kind information.
- ix) Chief Engineer (East Zone), for kind information.
- x) Chief Engineer (Dwarka Zone), for kind information.
- xi) Chief Engineer (South Zone), for kind information.
- xii) Chief Engineer (Elect. Zone), for kind information.
- xiii) Chief Engineer (Project Zone), for kind information.
- xiv) Sr. AO/CAU (North Zone), for kind information.
- xv) Sr. AO/CAU (Rohini Zone), for kind information.
- xvi) Sr. AO(W)-III/ DDA, for kind information.

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DELHI DEVELOPMENT AUTHORITY
(WORKS ADVISORY BOARD)

No. WAB1 (76)/Vol.41/Secy./2017/

Dated:

Subject: Minutes of the 5th WAB (2017) meeting held on 18.07.2017 & 21.07.2017 at 02:30 PM in the Conference Hall, 1st floor, B-Block, Vikas Sadan, INA, New Delhi. The List of officers, who attended this meeting.

Present(S/Shri)

1. Udai Pratap Singh	Vice-Chairman	Chairman
2. Dr. Mahesh Kumar	Engineer Member	Member
3. K. Vinayak Rao	FM/DDA	Member
4. Santosh Kumar	CAO	Member
5. A.K. Singh	Chief Engineer (QAC)	Member
6. N.K. Gupta	EO-III to EM	Secy. (WAB)

Others (S/Shri)


1. Ajay Gupta	CE(North)
2. S.N. Singh	CE(Dwarka)
3. S.K. Arya	CE(East)
4. Nahar Singh	CE(Rohini)
5. Ramesh Kumar	CE(South)
6. Sandeep Mehta	CE(Elect.)
7. Atul Kumar Garg	CE(Project)
8. Vinod Dhar	Chief Architect (HUPW)
9. H.K. Bharti	Director (Planning)
10. Anil Behki, Director (Works)	

Outside Expert as Special Invitee.

11. Shri D.K.Garg	Chief Engineer CE (D &DM)/CDO/CPWD, on behalf of DG/CPWD for item No.1
12. Prof. Jagan Shah	Director, National Institute of Urban Affairs, Ministry of Housing & Urban Affairs, Government of India for item No.2.

At the outset, with the permission of the chair, F.M. made the following observations:

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- (1) The agenda items are being submitted to members a day ahead of the meeting or in some cases just a few minutes before the meeting. This is not a good practice. It should be ensured that the agenda reaches the members at least 5 days in advance.
- (2) A number of cases are being put up to WAB for issues arising out of contracts, even though there are clear provisions within the contract agreement, and necessary powers have been delegated to concerned offices. Such cases should be dealt with at appropriate levels. No such case should be put up before WAB.
- (3) WAB was, perhaps, constituted with the approval of Authority under section 5(A) of DDA Act, 1957. The resolution passed by the Authority may be linked in this respect so that the role and functions of WAB can be made clear to all concerned.
- (4) It would be a good practice to fix the date for next meeting of WAB so that all concerned can work on their agenda items, and submit the agenda in time.
- (5) In future prior approval for inclusion of an agenda item in the WAB meeting should be taken from the Chairperson of WAB (i.e. VC/DDA).

The following agenda items were discussed.

1. Agenda Item No. 01/CE(NZ)

Subject: Running contracts of DDA – Situations of having issued new/revised codes after considerable lapse of time from date of contract agreement (IS:1893/Part 1-2016 and IS 13920-2016).

- A. The agenda note was circulated vide no. F1(3)/Misc./2017/Mon./3294 dated 13.07.2017 comprising 20 pages along with CP-1 to 17E & meeting notice issued vide no. WAB 1(76)/Vol.41/Secy./2017/3340 dated 17.07.2017 & was presented by CE(NZ)/DDA for seeking decision on above subject Sh. D.K. Garg CE (D &DM)/ CDO/ CPWD as special invitee, a nominee of DG/CPWD also attended the meeting.
- B. The agenda was presented by the CE (NZ) with the following observations based on the details given by other CEs:-
 - 1) Conditions as per the existing contract:
 - Large number of housing contracts amounting to Rs. 5518 crore approximately were awarded during the period between Sept., 2014 to May, 2016 on '**Design and Build- Turnkey basis**'. Majority of these works have been awarded prior to July 2015. Since these houses were awarded on '**Design and Build- Turnkey basis**', a period of 12 to 15 months has been allotted for preparation of design & drawings and getting approvals from statutory and local bodies by the contractors before actual execution of works at site. In all these cases design & drawings have been prepared as per the provisions of the contracts by the contractors and required approvals have also been obtained. The scheme approvals from various statutory authorities for majority of the above works have taken considerable time of more than 15 months.
 - He further informed that BIS has issued The sixth revision of Indian Standard IS:1893 (Part 1) and made effective w.e.f., 30th March 2017 and also IS 13920 was issued in July 2016 i.e. much later than the date of receipt of financial bids and by which time all design approvals were in place and mobilization of

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required equipments, machineries, moulds, formwork etc. by the agencies was also completed.

- The tenders for these works were invited on 'Design & Build' basis having specified detailed specifications of work and design basis norms. Contract agreement categorically stipulates various design provisions as well as applicable Indian Standards with specific year. The relevant design norms as stipulated in the tender as well as contract agreement are as per IS: 13920, IS: 1893 – 2002 (Part 1) and IS: 4326. However in case precast technology is to be used in the housing project the design considerations shall be as per components of Precast RCC structure shall be designed for loads in accordance with I.S. 875 (Parts I to 5) and IS 1893 - 2002 (Part 1).

- The IS codes as per above contract are as below:-

Sr. No.	Name of Code	IS Code No.
1.	Code of practice for Design loads (other than earthquake) for buildings and structures.	
	(i) Dead Loads	IS 875:1987 (Part I) (Re-affirmed 1997)
	(ii) Imposed loads	IS 875:1987 (Part II) (Re-affirmed 2008)
	(iii) Wind Loads	IS 875:1987 (Part III) (Second Revision)
	(iv) Snow Loads	IS 875:1987 (Part IV) (Re-affirmed 1997)
	(v) Special Loads & Load conditions	IS 875:1987 (Part V) (Re-affirmed 2008)
2.	Earthquake resistant design and construction of buildings- Code of practice	IS 4326:2013 (Third Revision)
3.	Ductile detailing of Reinforced concrete structures subjected to seismic forces- code of practice	IS 13920:1993
4.	Criteria for Earthquake Resistance Design of structures.(General Provisions and Buildings)	IS 1893(Part-1)-2002 (Fifth Revision)


- 2) As per tender condition and contract agreement clause, latest codes mean all amendments / revision in BIS up to the last date of receipt of revised financial bid which is much earlier (March 2015) than the issue dates (Year 2016-17) of revised codes.

In the present bid documents it is clearly mentioned that:

“The all amendments / revision in BIS/CPWD/Distt. Specification etc. up to the last date of receipt of revised financial bid shall be applicable. Cost adjustment for any modification/revision after last date of receipt of revised financial bid shall be made if it is decided to adopt the revision modification in specification/codes.”

- 3) CE (NZ) further informed that in the National Workshop held in New Delhi on 27th & 28th June, 2017 jointly organized by Bureau of Indian Standards and Indian Association

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of Structural Engineers on "NBC 2016 & Recently revised seismic codes – Impact on structural design, construction & safety of buildings", Dr. Sanjay Pant, Director & Head Civil Engg at BIS on being asked regarding use of the newly issued code and its use in existing contracts said, the gist of which is as follows:-

"The standards had been revised in the past as well when the ongoing works were continued as per the original version of codes prevalent at the time of design and not by the revised versions. The constructions done earlier are not going to be affected by the new code as the same is not warranted. All buildings which are designed and constructed as per prevalent code during contract period are "Code Compliant".

However, EM during the meeting stated that in the seminar it was stated that for the buildings for which construction has not been started should be as per new seismic codes."

- 4) Regarding the performance of building structures during past earthquakes viz. 1997 Jabalpur, 2001 Bhuj, 2002 Sumatra, 2006 Sikkim, 2011 Sikkim; it is on record that major causes of the failures were as under:
- i. Load bearing building structures having adopted non-engineered constructions
 - ii. RCC structures were designed only for gravity loads without having them checked for stipulated seismic design guidelines as prevalent in the codes present that time
 - iii. Asymmetrical constructions
 - iv. Floating columns
 - v. Strong beam, Weak Column
 - vi. Soft Storey failures
 - vii. Inadequate connection between RCC members (Pinned Joints)
 - viii. Building with overhanging upper stories over cantilevers beam and columns with corbels.
 - ix. Cold joint at the end of columns.

In the above running contracts of which building permissions have been obtained, these above issues have been well addressed in compliance with codal provisions prevalent at the time of NIT.

It is therefore to note that the building structures in running contracts have been designed adequately complying provisions of all relevant applicable codes including seismic as specified in contract agreement and as applicable at the time of obtaining building permits. Such construction therefore cannot be compared with those non-engineered constructions which suffered damages during earlier earthquake incidents.

5) Cost Implications / Time Overrun

In the running "Design – Build – Turnkey contracts" it is a fact that actual cost implications can only be worked out once the Contractor submits his detailed proposal incorporating required changes in the design covering newly revised Seismic Codes viz. IS1893 (Part-I) - 2016 and IS13920-2016. Certain revisions are necessary in architectural planning of buildings and layout due to additional requirements of shear walls, increased minimum dimensions of columns, increased separation gap between adjoining structures etc.

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Apart from this, mobilization of required plant, equipment, machinery, moulds etc. have been done based on the Codes mentioned in the contract agreement and this would also undergo changes due to revision in size of structural elements. Therefore, the cost implications are not only restricted to increase in the quantities of items i.e. direct items but also on account of indirect items:-

- i. Re-designing for Architectural, Structural and Other affected services
- ii. Idle charges for already mobilized items during re-designing and re-approval period
- iii. Additional interest on advances paid to the contractor during such idle period
- iv. Additional bank guarantee charges for such idle period
- v. Re-mobilization of new moulds, higher capacity handling and transporting equipments such as tower cranes, mobile cranes, concrete mixers, trailers etc.
- vi. Security, Watch & Ward expenses for such idle period
- vii. Escalation for extended contract period occurred due to delay in start of work.

It is further to mention that as per the agreement, the planning period is of 12 months allotted to cover following approvals:-

- a) Architectural wing of DDA & DDA's Screening committee
- b) Delhi Fire Services & Civil Aviation
- c) MCD / DJB / Service Provider (DISTCOM)
- d) DUAC
- e) EIA
- f) Structural vetting / approval from designated Institute
- g) Mobilization

The first mile stone of above technical closure has already been recorded / under record and these activities took almost more than 15 months as against envisaged period of 12 months.

Certain activities such as (a) & (f) can only be expedited being in full control of DDA by taking them on war footing so as to safeguard DDA's interest. The time required for revision in architectural/structural drawings is assumed as 4 to 6 months. However, for various approvals mentioned above which are not in full control of DDA time overrun is likely to be much more than 4 to 6 months. Time over run on various accounts will be there if the revision in the Architectural/ Planning/ Layout/ Approval/ Structural Design /Mobilization are asked to be incorporated in running contracts. The same could be more than 12 Months.

Apart from the time overrun, cost implications as worked out by concerned zones indicates that the cost of running contracts on account of direct and indirect factors and due to uncertain factors as mentioned above is likely to be in the range of 20% to 31% (rough indicative figure). The exact quantification can only be worked out once the concerned agencies executing running contracts submit their cost implications to the department.

C) **Comments of Chief Design Office, DDA:-** CE(Design) vide noting dated 16.06.2017 brought out comments as below:

→ On Page xxx of National Building Code-2016

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Important Explanatory Note for Users of the Code

In any Part/Section of this code, where reference is made to good practice. In relation to design, constructional procedures or others related information, and where reference is made to accept standard. In relation to material specification, testing, or other related information, the Indian Standards listed at the end of the Part/Section shall be used as a guide to the interpretation.

At the time of publication, the editions indicated in the standards were valid. All standards are subject to revision and parties to agreements based on any Part/Section are encouraged to investigate the possibility of applying the most recent editions of the standards.

→ As per IS 13920 :2016

Ductile design and detailing of reinforced concrete structures subjected to seismic forces- code of practice

→ REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:-

(i) As per IS 1893 (Part_ I): 2016

CRITERIA FOR EARTHQUAKE RESISTANT DESIGN OF STRUCTURES

Part I General Provisions and Buildings

REFERENCES

The standards listed below contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

(ii) The following in written in every Indian Standard


Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments on edition by referring to the latest issue of BIS Catalogue and Standards: Monthly Additions'.

The spirit of the codes is that once an amendment or revision of a code is issued it shall be followed from the date of issue.

“Structural safety has never been compromised in design of DDA works. The code relating to structural safety/design have been revised in past also. The same were implemented in DDA works immediately.

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→ Following are a few incidences when structural design was revised even in running works:

- (i) Failure of a load bearing housing block occurred in 1983 in Vikas Puri. A fact finding committee was constituted. The committee recommended that use of lime be banned in DDA works. All items in which use of lime was stipulated were substituted including Structural masonry. Structural masonry is a major component in load bearing construction. Thus to ensure structural safety a major substitution was ordered in all works of DDA.
- (ii) IS 4326 was revised in 1993. This code is regarding provisions of earthquake resistant design of structural masonry. The provision of Reinforcement, at corners and junctions of walls became applicable. The provision was implemented immediately and revision to structural drawings was issued by CDO. For Blocks which were not started yet this provision was made applicable.
- (iii) IS 13920 was introduced in 1993. This code is about ductility detailing of RCC structures. The code made a provision that min. grade of structural concrete shall be design mix M-20. The provision was implemented and Nominal mix concrete of 1:2:4 was substituted by design mix M-20 in all buildings works.
- (iv) IS456 was revised in 2000. This code is about use of plain and Reinforcement. Conc. Major changes were stipulated in this code related to Durability of Conc. And Fire Safety All the applicable changes were incorporated in the revised structural drawings immediately.
- (v) Based on IS 13920, 1993 and IS 456, 2000 CPWD issued revised specification for Cement concrete and RCC work. In these specifications a provisions was made that min. grade of structural concrete shall be design mix M-25. Even this provision was followed immediately.

To sum up the revised IS codes and specifications have been followed in DDA works immediately. Cost involved and contractual implication have never been a deterrent in implementing the provisions of codes relating to structural safety.

The instant case is no different the codes relating to structural safety against seismic forces have been updated in the light of knowledge and experience gained since issue of previous codes. DDA being a Govt. body constructing buildings for public it is mandatory that the revised codes be followed irrespective of cost involved or contractual implications.

Therefore, CDO is of the firm view that the revised codes be followed where construction has not started yet. Competent authority is requested to keep in view the above while arriving at a decision.

The provisions indicated of the agreement of the specific case relating to BIS specification reads as under:-

The all amendments / revision in BIS/CPWD/Distt. Specification etc. up to the last date of receipt of revised financial bid shall be applicable. Cost adjustment for any modification/ revision after last date of receipt of revised financial bid shall be made if it is decided to adopt the revision (Date of financial bid in this specific case is 20.03.2015).

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However, EM/DDA was of the view that Latest version of Seismic Codes should be made applicable for all the Housing Projects, where foundation work has yet not started in the present case of housing projects which are more than ten in numbers.

D). Comments of Finance Wing.

The Finance Department is of the view that the running contract should be executed as per the provisions contained in the Agreement and does not agree to the proposal for incurring of any extra expenditure on the works on account of amendments of standards on BIS etc. after the award of work. Attention is also invited to the Transparency principle (Chapter 1, 1.7 (I) manual for procurement of Goods, Ministry of Finance, Deptt. of Expenditure, Govt. of India).

“In essence Transparency principle also enjoins upon the procuring authorities to do only that which it had professed to do as pre-declared in the relevant published documents and not do anything that had not been so declared”.

In view of the above, the course of action proposed would be in violation of the transparency principle which is one of the five fundamental principles of public procurement.

E). OPINION OF EXTERNAL EXPERTS IN THE FIELD

CE (NZ) further informed that, **the opinions of (IIT, Roorkee, CBRI, BMTPC, IIT Bombay) etc.** technical bodies, seismic code committee members, Research Institutes and CPWD conclusively opine that the running contracts are to be executed in accordance with the provisions and terms of conditions of contract even in the situations of having issued new / revised codes during pendency of contract, since the codes are always implemented prospectively.

These opinions are summarized below

Technical Expert Shri D.K. Garg, CE, CDO representing MOUD stated that CPWD has already clarified that any corrections / issue of new standards by the BIS is effective with prospective date and do not vitiate the application of previous standard in existence. The contracts are entered based on certain agreed conditions (NIT) on a specific date. The applicability of standards has to be governed by the contract conditions only. Further, running contracts should be executed as per the provision contained in the agreement.

Dr. D.K. Paul, Former Professor and Head, Department of Earthquake Engineering, IIT Roorkee & Chairman of CED 39, Letter dated 17.05.2017.

- Whether approved and constructed under a previously adopted building code or constructed prior to adoption of a building code in the jurisdiction, existing building or ongoing construction are not required to upgraded to comply with the currently adopted building code.

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- The building was never occupied or used for its intended purpose or under construction and the original building permit has not expired, then the building code in effect at the time it was permitted may still be used.
- Construction of building should comply with the original codes which were used initially for design and construction of building as per your contract agreement even if the revised codes have been issued during execution of contract before the completion of construction of building.

Dr. Ajay Chourasia, Principal Scientist Structural Engineering Division, CBRI-Central Building Research Institute Roorkee – 247667 Letter dated 06.06.2017.

- Indian Standards are recommendatory guidelines which are transformed into local law when they are enacted by State Legislatures, thereby becoming Building Bye laws.
- The Building Bye Laws, Standards and Codes are never expected to be implemented retrospectively.
- Projects where permits / approvals have been issued prior to release of codes referred in your letter, the codes prevailing at the time of approval can only be enforced.
- Contractual obligations of using all relevant Indian Standards prevent on the day as defined in your respective contracts shall be adhered.

Dr. K.P. Jaya, Professor Division of Structural Engineering, Department of Civil Engineering, Anna University Chennai-600025 Letter dated 06.06.2017

- Situations of having revised standards are likely to occur at certain instances in different contracts since the standards are subjected to revision, frequently.
- It is also a fact that the new version of the standard to originally issued standard doesn't make any structure unsafe, per se, if it is designed and constructed as per the version of standard in existence when it was being planned and designed.
- National Building Code of India also substantiates International practice of continuing the work with the originally adopted building code i.e. 'Pre-Code' situations.
- Execution of various buildings in the ongoing construction contract shall comply with those Original codes which were used initially considered for the design and construction of building even in the situations where newer version of codes are issued before completion of construction of building during contract execution.

Dr. Shailesh Kr. Agarwal, Executive Director, BMTPC, New Delhi – 110 003 Letter dated 06.06.2017.

- Indian Standards are subjected to revisions which itself is a continuous process so as to keep abreast with current National and International practices.

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- Published standards are meant neither to discard the earlier / ongoing construction executed / being executed in the compliance with prevalent standards after the time of approvals nor to affect contractual deliveries.
- The standards are expected to be implemented prospectively and not retrospectively.

**Dr. R.S. Jangid, Professor, Department of Civil Engineering, IIT Bombay, Powai
Mumbai-400076 Letter dated 09.06.2017.**


- It is quite obvious that the situation of having two or even three versions of standards issued during construction contract period of certain projects taken up on mass scale may arise.
- As per Building Bye laws, the building permits once granted, based on designs finalized at the time of applying for permit, remains valid for a period for 3 to 5 years, during which it is obligatory to carry out the work in accordance with the designs, drawings confirming to the certificates of structural compliance as submitted while applying for bailing permission.
- If on- going building works are taken up for up gradation every now and then wherever newer versions of standards are released, there would be situations wherein the completion of projects will be delayed substantially, which is not intended.
- The Standards and Codes are not expected to be used retrospectively.
- Presence of new version of previous standard doesn't change the status of existing building / construction / ongoing works to 'non code compliant' provided they were designed and constructed as per original version of standard as prevalent at that time.
- The execution of various buildings in the construction contract can meet those approve designs carried out using versions of Standards / Codes which were prevailing and adopted while obtaining building permissions.

**Chief Engineer, CDO, CPWD Thro Superintending Engineer (D-III) CDO, CPWD,
224, A-Wing, Nirman Bhawan, New Delhi – 110 011 Letter dated 15.06.2017.**

- Any corrections / issue of new standards by the BIS is effective with prospective date and do not vitiate the application of previous standard in existence.
- The contracts are entered based on certain agreed conditions (NIT) on a specific date.
- The applicability of standards has to be governed by the contract conditions only.

Further, it is mentioned that running contracts should be executed as per the provision contained in the agreement.

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F). During the meeting of WAB on 18.07.2017, the Engineer Member has placed a written statement before the Board Members emphasizing that DDA should adopt revised version of BIS codes in the works which have been awarded before issue of these revisions but have not started at the ground. The verbatim is reproduced as under:-

- a. Earlier Codes were evolved many years back and now after experience of the earthquake of 1997 Jabalpur, 2001 Bhuj, 2004 Sumatra, 2008 Sikkim and 2011 Sikkim, the new codes have evolved.
- b. Based on the two seismic codes, we had one house Seminar in DDA on 02.02.2017 whereas in most of the works as given as under structural approval from IIT, Bombay is of dated 24.03.2017 (CP/2 of the agenda).
- c. There is a provision of Cost adjustment for any modification / revision of scope of work after the last date of the receipt of the financial bids in the Contract Agreement of DDA.
- d. More detailed reasons for the same have been given in the noting file which is also part of Agenda under consideration.

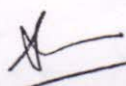
G). However for the sake of further clarity on the issue, above statement of the EM along with detailed WAB agenda was referred to the DG/CPWD by the VC vide No. PS/VC/DDA/2017/84 Dated 19.07.2017 for his expert opinion as DDA follows CPWD Manual and Codes for execution of the works. DG/CPWD vide his letter No. 27(16)Misc./CDO/SE(D)-III/2017/638 dated 21.07.2017 has rendered his opinion as under:-

- 1. In concluded contracts, the applicability of standards has to be governed by contract conditions only.
- 2. Any amendments / issue of new standards by the BIS is effective from prospective date and do not vitiate the application of previous tenders in existence. The existing standards are not declared ultra – virus or invalid by the BIS while issuing correction slips/new version of standard. The contracts are in turn based on certain agreed condition (NIT) on a specific date. Further it is mentioned that running contracts should be executed as per the standards in existence at the time of entering into the contract for efficient contract management and to avoid any contractual complications and disputes in future which may not only frustrate the execution of work but it may put the department at a loss in terms of delay in completion of work and paying the undue extra amount to the contractor in terms of interest payment as per possible arbitration..

(H). Other issues deliberated in the meeting are as under:

- i. All Chief Engineer present in WAB and also the External Experts i.e. Chief Engineer (CDO) of CPWD who attended the meeting on behalf of DG/CPWD on the request of DDA have stated that during the past earthquakes, none of the Engineering Building has collapsed. Only non engineering buildings which were not code compliant of particular time have collapsed.
- ii. In the Seminars lot of discussion takes place but they cannot be construed as a Law unless the recommendation of the seminars are accepted by the Government and enforced

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by executive orders or any code of law. While revising the code by the BIS none of the earlier code has been declared ultra-virus or invalid. It has been clearly opined by all external/ Technical Experts that the codes issued by the BIS are to be used prospectively and the contracts which have been finalized should follow the provisions of the contract.

- iii. The provision of the cost adjustment in the contracts has to be made applicable for the unavoidable expenditure. In this case from the opinion expressed by the Technical Independent Experts and the fact that the codes have to be used with prospective effects, incurring additional expenditure to the tune of 20- 30% is avoidable which is not proper for the cost adjustment to be paid to the agencies. Moreover, these are Design and Build Contract where design has to be provided by the Contractors. If the new codes are made applicable then the revision of cost has to be worked out as the difference between the design done with codes applicable, at the time of signing of the contract and the revised codes issued thereafter. The difference work out will always be subject to questioning by Audit as the agencies may try to increase the cost by designing the Building on much higher side.


Apart from above, the implementation of revised codes issued after the signing of the contract will not only result in time overrun but it will also result in cost overrun which will be unaffordable to the Department.

- iv. It was also pointed during the meeting that in earlier instances of 'Design-Build-Turnkey' contracts of DDA concluded for the work tendered in the year 2001 and was awarded to M/s Unity Infra Projects Limited on 7th February, 2002, contract was executed for Hazard Safety for Earthquake Protection as per the codes mentioned in the NIT only i.e. as per IS:1893-1984 "Criteria for Earthquake Resistant Design of Structures (Fourth Revision)" June 1986 and IS: 13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces Code of Practice" November 1993 although IS:1893-2002 and IS: 13920 edition 1.2 (2002-03) were issued during the design scrutiny period. During the pendency of this contract when structural design was being processed at CBRI, Roorkee, revised seismic codes viz. IS:1893 and IS:13920 were issued i.e. 5th revision of IS:1893 (Part1) in June 2002 and IS:13920 revised edition 1.2 (2002-03) in March 2002.

It is therefore a settled case in DDA to adopt the procedure of continuing with the work even in the year 2002 using those standards which are mentioned in the contract agreement, even though the revised standards were issued during running contract for "Construction of LIG Houses on Turnkey basis at Narela, Sector B-2 (Part), Pocket A,B,C & D, Group-I". This was done with the concurrence of CBRI and even in that case no actual physical work on site had commenced when the new standards were issued.

- v. CAG in its report No.17 Chapter V pertaining to performance audit on land management by DDA has commented on cost and time overrun in projects undertaken by DDA. Also, on the same issue, Ministry of Urban Affairs, GOI and Parliamentary Committees have expressed their concern from time to time.

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(I) **CONCLUSION:**

All the above points/views were discussed & deliberated and WAB noted the following:-

1. Any corrections / issue of new standards by the BIS is effective with prospective date and do not vitiate the application of the standards in existence. Issue of new version/ revision to existing Codes neither discard original codes nor declares the buildings constructed on the basis of earlier codes as '**Non-code compliant**'
2. It is also on record that majority of building failures occurred in India during past earthquakes are mainly on account of improper construction and bypassing the seismic codes prevalent at that time. The building structures which were adequately designed (**code compliant**) using then prevalent codes when executed under properly engineered construction standards have performed to the expectations.
3. The buildings which have been constructed based on earlier seismic codes cannot be considered as '**UNSAFE**' simply because certain new provisions have been introduced in revised codes.
4. It may not, therefore, be out of context to take a note that these running projects would take further 4-5 years to finish during which period, there is every likelihood of having new codes / revisions of standards issued. In such a case if WAB decides to incorporate provisions of new / revised codes in running contracts, then it cannot take a different stand in those situations arising in future when amendments in above stated codes or any new codes are issued / revised by BIS during construction period and the completion and final cost of projects would then be uncertain.

Based on the pre-ponderance of the facts coming out through the above discussions of the members, technical advice from various institutions and fields including DG, CPWD, practices followed, time and cost overrun, contractual obligations and observation of PAC, the Board concluded (though EM was of the view that the latest seismic codes should be made applicable for all housing projects where foundation work yet not started) and directed the Chief Engineers go ahead with execution of the works mentioned in the agenda on the basis of BIS standards prescribed in the contracts. However, the Board unanimously decided that the new tenders to be invited after issue of revised codes will have to be in accordance with revised version of BIS codes."

2. **Agenda Item No. 338/CE(NZ)**

Subject: Providing Consultancy to develop City level high density mix use Economic/Commercial/Residential hub at DDA, Vacant land at Narela, Rohini & Dwarka.

The agenda note submitted by CE(NZ) through the file No. F56(25)/A/c/ND-12/DDA/2016-17 and was presented by him in the meeting.

It was explained by him that the objective to invite the bids for above consultancy is to "Conceptualize an integrated mixed use state of development and prepare a Master Plan for City Level High Density Mixed Land Use for vacant land parcels available in

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Dwarka, Narela & Rohini to derive optimum product in accordance with MPD 2021 or with modifications that would be most suitable to the land parcel.

He further stated that while evaluating the bids received for Dwarka and Narela, it was observed different criteria were taken into account in evaluation and hence to avoid any subjectivity for interpretation the marking matrix needs to be more explicit. The objective of engagement of the consultant is to develop the balance vacant land as state of art development and the entire process of bidding should be transparent, open and fair where all the aspiring participants have equal opportunity to compete.

The committee constituted under Chief Engineer (NZ) along with Shri H.K.Bharti, Director (Plg.), Mrs. Kauser Firdos, Sr. Arch., Shri Raj Pal, the then Director (Finance) & Sh. Suresh Goel, EE/WD-9 /Dwarka have finalized the RFP. Now this Committee has finalized the Draft RFP with clear and firm objective based on the Manual for Procurement of Consultancy and Other Services, 2017" issued by the Department of Expenditure, Ministry of finance, GOI dated 18/4/2017 and has also removed the various discrepancies in the bid document.

After due discussion and deliberations, WAB decided that the bids received by the CE(NZ), CE (Dwarka) and CE (Rohini) on the basis of previous RFP documents be rejected. The WAB further decided that before recalling the bids, the draft bid document be reexamined in the light of the provisions of " Manual for Procurement of Consultancy and Other Services, 2017" issued by the Deptt. of Expenditure, Ministry of finance, GOI dated 18/4/2017. The Board also requested Sh. Jagan Shah, Director/NIUA to give his views on the document. WAB further directed that the revised documents be finalized after incorporating the observations of NIUA, and the same may be vetted by EM, FM and CLA. The RFP thereafter shall be floated by the concerned CEs.

3. WAB Agenda Item No. 446/1/CE(RZ)

Name of Work: C/o 18600 EWS Houses using prefab Technology (having Structural RCC Member i.e. columns, beams and slabs and all precast) in Dwarka, Rohini & Narela Delhi (A Turnkey Project)

Agency: M/s B.G. Shirke Construction Tech. Pvt. Ltd.

SH: Claim against deployment of security personal.

The agenda note submitted by CE(Rohini) through file no. F2(11)/AE II/WD-12/DDA& presented by CE(R) with the recommendation for seeking approval of claim against deployment of security personnel by the Agency beyond the stipulated period given in the contract. The said agenda item was placed before WAB by CE(R) in 2nd WAB (2017) meeting held on 03.04.2017 and decision of minutes of meeting is reproduced as below:

"After due discussions & deliberations, the board was of the opinion that DDA should calculate expenditure on security personnel actually deployed on unoccupied pockets through a committee consisting of two Chief Engineers, the said committee shall also negotiate with agency & bring down their claim on basis of DDA's calculation as

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per provision of agreement contained in clause 32 of contract. It shall be ensured that issue should not lead to arbitration.”

It is informed by the Chief Engineer (Rohini) that committee so constituted has calculated the amount on the basis of Circular No.510 dated 02.05.1997 issued by EM office as there is no other guideline for the same. According to above circular, the amount worked out is Rs.5,39,96,118/- against the claim of Rs.5,93,75,408/- up to May 2017. Agency has agreed to accept this amount. []

FM/DDA commented that this is not an issue which requires decision at the level of the WAB and can be easily covered under provisions of the extra item.

After due discussion and deliberation, the WAB was of the opinion that the issue can be decided under the provisions of the contract as extra item. WAB also directed that CEs should take adequate precaution so that such type of situation can be avoided. It was said that such type of circulars are only for preparation of estimates & not for actual payments to contractors. The security personnel to be provided/paid depend on site specific and actual deployment.

4. WAB Agenda Item No. 448/CE(RZ)

Name of Work:- C/o 18600 EWS Houses using prefab Technology(having Structural RCC Member i.e. columns, beams and slabs and all precast) in Dwarka, Rohini & Narela Delhi (A Turnkey Project)

Agency: M/s B.G. Shirke Construction Tech. Pvt. Ltd.
SH:- Revision of Extra Item/Substitute item on current market rate for Rohini Sites only.

The agenda note submitted by CE(Rohini) through file no. F54(06)/2010/A/EE/RPD-5/DDA& presented for seeking approval of revision of extra/substitute items. The said agenda item was placed before WAB by CE(R) in 2nd WAB (2017) meeting held on 03.04.2017 and decision of minutes of meeting is reproduced as below:

“After due discussion & deliberation, the board was of the opinion that regarding escalation payment on Extra/Substitute items, the matter should be referred to legal & finance. CE(R) is directed to pursue the case with legal & finance for getting their opinion within 15 days and then after CE(R) take necessary action accordingly.”

CE (Rohini) informed that as per the provision of the Clause No.44 of the agreement no escalation on extra/substitutes item is payable to the agency where the rates are derived on the current market rates. However, Agency's claim is based on the meeting held in the chamber of EM, DDA on 18.11.2014 and minutes of meeting issued by this office on 20.12.2014 vide office letter No.F.54(1541)A/C/ND-8/DDA/591 as per para 5, wherein a decision was taken that extra items and substitute items would be paid after considering the Cost Index for the work which are under progress at Rohini.

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He further informed that the works under Extra/Substitute items at Rohini sites could not be taken up due to Court cases. As such agency is entitled for revision of rates for Extra/Substitute items for these sites when these items were actually initiated.

Views of CLA and Finance (CAO/FM) have been taken. It is clear that in terms of the clause 44 of the contract, escalation relating to extra substitute items is not payable.

FM/DDA commented that CE(R) has to follow the clauses of the agreement and decide the case accordingly, and there is no reason as to why the case should be put up to WAB.

After due discussion & deliberation, the board directed that competent authority to decide the issue as per the provisions of contract agreement.

5. **Agenda Item No. 02/CE(HQ)**

Subject: Bid document for new housing projects on design and built basis.

Agenda note was circulated vide no. F1(3)/Misc./2017/Mon./3335 dated 14.07.2017 and presented by CE(HQ)/CE(QAC)/DDA for seeking approval on above subject.

CE(HQ)/CE(QAC) explained that the bid document on the basis of which tenders in year 2014-15 were called has been updated as per CPWD GCC 2014, CPWD circulars, Arbitration and Conciliation (Amendment Act 2015), GST Act 2017 after due deliberations & discussions with all Chief Engineers, Chief Legal Advisor, CAO, Director(Finance), Architecture wing, Planning wing in eight meetings held under chairmanship of Engineer Member.

CE(HQ)/CE(QAC) further stated that conditions like Table of Milestones, List of laboratories equipment's, List of Drawings, Development and Architectural controls/Norms, minimum acceptable specifications/ general specifications and condition of building work, internal development works, etc. shall be modified by Zonal Chief Engineer's on case to case basis.

Chief Architect stated that while finalizing the NIT, the CE of the zone shall take required inputs regarding Development Control Norms, Building Bye-Laws and clear height of floor and basement etc., from the concerned Architect to avoid any ambiguity vis a vis provisions of Master Plan and Building Bye-laws.

FM, DDA pointed out that clause 25 (A) (i) (portion in bold font in the draft) is not in line with the amended Arbitration Act and need to be corrected. Clause regarding "venue of arbitration shall be such as may be fixed by the arbitrator" contradicts provisions in Clause 25(A)(ii) and therefore the same may be deleted.

After due discussion & deliberation, the board directed that the bid document shall be approved at the level of CE concerned subject to making necessary corrections as discussed above.

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ADDITIONAL ISSUE.

Chief Engineer (NZ) during the WAB meeting dated 18.07.2017 requested modifications in the minutes of meeting of earlier WAB meeting held on dated 08.05.2017 in respect of subject mentioned hereunder:

Subject: Payment of Mobilization advance to M/s. B.G. Shirke Construction Technology Pvt. Ltd. Against three alternative sites provided to agency by DDA in lieu of the five disputed contractual pockets.

Name of Works: C/o 24,660 LIG & 4,855 EWS houses by using prefab technology (having structural RCC members i.e. columns, beams & slabs all precast) in Narela & Rohini, Delhi (A Turnkey Project).

Sub Head: 1) C/o 11,566 LIG & 2,276 EWS Houses i/c internal development & electrification at Sec. G-7 & G-8 Narela Sec. 34 & 35 Rohini (Group-I).

Agreement No. 01/EE/ND-12/DDA/2013-14 dated 25th April, 2013.

Alternate Site: C/o 5256 LIG (EWS-I) & 1160 (EWS-II) houses i/c internal development & electrification in pocket VI & VII at sector G7-G8 Narela.

Sub Head: 2) C/o 13,094 LIG & 2,579 EWS i/c internal development & electrification in Sec G-2 & G-6 & G-4 Narela (Group-II).

Agreement No. 02/EE/ND-12/DDA/2013-14 dated 25th April 2013.


Alternate site: C/o 6511 LIG (EWS-I) & 1420 EWS (EWS-II) houses i/c internal development & electrification in pocket XI at Sector G7-G8 Narela.

The decision of the WAB meeting held on 08.05.2017 in respect above agenda is re-produced below:

"After due deliberations and discussions, the Board agreed in principle with the recommendations of Chief Engineer (North Zone) to revise the tender cost of the work which has resulted due to increase in scope of work due to work of tender shifted to alternate pockets. Accordingly the clauses of the contract should suitably modified and Chief Engineer (North Zone) is authorized to operate the clauses of the contract. However, the responsibility of the correct calculations for increase in cost shall be the responsibility of the Chief Engineer (North Zone)".


CE (NZ) informed as the issue pertains to mobilization advance i.e. Clause No. 10B(ii)b only as he requested for the amendment. The above matter was discussed & deliberated in the WAB meeting held on 18.7.2017.

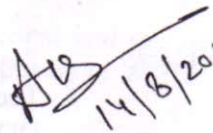
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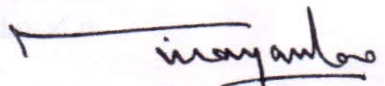
After due discussions and deliberations, Board accepted the recommendations of CE(NZ) to revise the tender cost of the work by the amount the increase has taken place due to increase of scope of work and accordingly authorized CE(NZ) to provide for enhanced mobilization advance as per revised contract value.

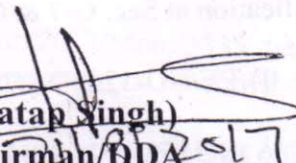
Board agreed to above request of CE(NZ).


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(Santosh Kumar)
Chief Account Officer

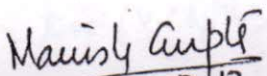

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(A.K. Singh)
CE (QAC)


(Dr. Mahesh Kumar)
EM/DDA


(K. Vinayak Rao) 11/8
FM/DDA


(Udai Pratap Singh)
Vice Chairman/DDA




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