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PROJECT : ICICI BANK ICMC, INDORE

CLIENT : ICICI BANK LTD.

AUDIT REPORT

PART 1

REF. RCCPL - ICICI BANK ICMC, INDORE / ICMC, 340/1/1to3, In Agrawal Bhawan, Musakhedi, Nemawar Main Road, INDORE (MP). / AR - 037

DATE - 2024-08-28

PROJECT: ICICI BANK ICMC, INDORE

CLIENT: ICICI BANK LTD.

While visiting the site 'ICMC INDORE' we observed a lot of points on various aspects as listed in the attached observation sheet in detail and submitted herewith our views/opinion in brief & in elaborated form with visual aids (wherever, necessary) to M/S ICICI Bank Ltd, for their needful. We feel that this report will help ICICI BANK to take necessary Corrective/Preventive measures in time & wherever required to take appropriate decisions on the relocation / remodeling, or necessary rectification works, etc.

This is a newly constructed building and therefore problems are less in comparison to other ICMC locations.

Most of the points out of observation points are on seepages, cracks, bad workmanship & ignorance in construction sequences & processes. Basic construction norms are not followed. This is a newly constructed RCC frame structure building with configuration of GF + FF and bank occupied in 2023 after construction as per bank records (details given by ICMC).

The vault room was observed well planned, well ventilated, well organized newly constructed area.

BUILDING TITLE: **RENTED***

MAJOR OBSERVATIONS & ANALYSIS:

1. It is observed that most of the problems out of the observed points are quality related issues, construction work was not executed correctly at few locations, there was inadequate technical supervision, so the quality, construction sequences and the basic construction norms could not be followed. And this may cause the bank recurring exepenses on maintenance in future.
2. As built drawings were not available for the building at almost all the locations of audit conducted.
3. The building floor level inside the premises is on higher side by almost a difference of approximately 6' to 7' from level of road out side. So, seems to be in safer side from flooding situation point of view.
4. Tests on floor were conducted/done at two locations in addition to the 5 points in RCC walls & columns of vault room & results are Good as per test reports..
5. Leakage/seepage incidences were observed at few places, which are most likely due to the poor wormenship & bad construction/installation quality. Technically correct supervision perhaps not done at the time of construction/installation.
6. All along the length of the building at driveway level a planter was observed. This planter in coming time will start giving problems of seepages in side the building also. It is not advisable to have this type of planter just adjacent to the building wall.
7. The entire outer wall surface of the corridor all around the vault room was observed OK on physical/visual inspection, except few locations, where seepages & vertical cracks were observed. However, on the vault room wall no such problems were observed except the cracks near emergency window & vault room main entry door. These cracks are explained in more elaborative pattern in respective observation point in the observation sheet.
8. At the terrace area few parapet columns & some stretches of parapet wall are observed with micro cracks/cracks, which may result in rusting of inside steel of parapet columns & parapet walls. On the terrace portion at some places weather treatment done was observed started getting damaged/uprooted because, the terrace treatment was not done technically correct. The developed pits sizes will increase gradually and increase the rainwater entry percolation/penetration in the slab/beams. This may cause the rusting of slab/beam steel rods in long run and may result causing seepages in below floor ceiling areas + it will also affect the strength of building.

9. It was observed that at terrace the slope was not maintained as needed by rainwater down take points & hence at some locations the rainwater staganation was observed. This stagnated water then find it's own way to the below slab/beams through weaker points of weather/terrace treatment done, to ultimately result in rusting of steel inside.

10. At some places cracks were observed as per the locations mentioned in observation sheet, which may be due to settlement or inferior quality masonry and may increase if the problem is not attended timely.

11. Outer & Inner surfaces of cement plastered walls of '**VAULT ROOM**' were observed in '**GOOD CONDITION**'. Means no hollow sound in plastered surface, no disintigration or loosening of bonding etc. was observed. And the test results are also good, confirming the concrete strength/grade as per test report.

12. **'NDT Rebound Hammer'** Tests & **'USPV'** Tests were conducted on the vault room walls for in total 5 locations & 2 locations on floor. Normally these tests are conducted to know the quality of concrete and on new/base/fresh concrete surfaces. But here the vault room concrete walls are cement plastered from both side and the concrete surface had to be prepared removing the cement plaster. However, in this way prepared surface does not come as smoothly as desired for the tests some times, so results are likely to be affected.

13. Test Results of '**NDT Rebound Hammer'** test are not uniform but good. The variation is observed from '**39 N/sq mm to 70 N/sq mm'**.This indicates the '**QUALITY OF CONCRETE IS NOT CONSISTENT**', but Good. However, it is coming in the category of good to excellent results as per test report. This also indicates that high garde concrete is poured knowingly or unknowingly.

14. Test results of '**Ultrasonic Pulse Velocity Test'** are also not uniform but good & variation is observed from '**4.2 KM/S to 7.10 KM/S'**. This indicates concrete is '**GOOD**' but '**QUALITY NOT CONSISTENT'.** This also indicates that high garde concrete is poured knowingly or unknowingly.

15. In all the toilet areas the tiling joints in floor & walls not provided with spacers & '**EPOXY GROUTING**', so the water seepages through the tiling joints are suspected travelling below the floor & likely to cause seepages at above skirting areas in other areas in coming time.

16. It was observed that the staircase mumty is not covered by slab rather it is covered with profile sheet, which is not desirable. It should have been closed with mumty slab. Column dowels above mumty are left non-protected & therefore started rusting in the rainy season. Some vertical & horizontal cracks were also observed in the mumty room walls due to settlement or inadequate treatment of joint between masonry & RCC columns.

17. The lift lobby at terrace level was observed not done properly nor aluminium glazing was done correctly. Kindly check the related observation point also.

LIMITATIONS OF THE TESTS (NDT REBOUND HAMMER & USPV):

1. Observations & analysis on ICICI Bank desired NDT Hammer & USPV tests are liImited to the test locations ONLY. Because the consistency of the quality of concreting may vary from location to location in the entire pour of concrete due to various reasons (like inadequate compaction, inadequate proportion, bad quality of construction material (raw material), bad workmenship etc.). But here it is assumed that the test results will hold good for other areas also and interpretations & recommendations are made based on the test result's assumed applicability on entire surface areas.

2. The suggested test results (NDT Rebound Hammer & USPV) normally are advised to be conducted on new concrete surface/mother concrete surface for better results. When the cement plastered concrete surface is exposed as a part of surface preparation using the mechanical means (grinder/cutter, hammer, chiseling etc.) then the original concrete surface is likely to damage and hence some times the surface is not achieved as good & smooth as it is desired for the test. And in this way the conducted tests may give unrealistic results/vaules also some times.

RECOMMENDATION:

1. TEST RESULTS ARE GOOD, SO NO MAJOR RECTIFICATION IS NEEDED AS OF NOW.
2. *IT IS ADVISED FOR ALL ICMCs, WHERE THE VAULT ROOM IS LOCATED IN THE BASEMENT OR AT GROUND FLOOR, A 2-2.5' HIEGHT LONGITUDINAL RCC PEDESTALS CAN BE COSTRUCTED FOR UP LIFTING THE ENTIRE ROW OF LOCKERS, AS PER NEED OF THE BANK AS A STANDARD PRACTISE.*
3. *MOST OF THE PROBLEMS ARE OBSERVED DUE TO THE LACKING IN TECHNICAL SUPERVISION WHILE EXECUTION WAS DONE. ATLEAST NOW FOR RECTIFICATION WORK THE PROPER TECHNICAL SUPERVISION IS ADVISED TO BE ENSURED & IN FUTURE WHILE CONSTRUCTION ITSELF THE TECHNICAL SUPREVISION NEEDS TO BE ENSURED FOR CORRECT EXECUTION. THE EXECUTION OF WORK DURING THE NEW CONSTRUCTION & IN RECTIFICATION WORK AS WELL SHOULD NOT BE LEFT ON THE DISCRETION OF VENDORS OR LABOURS OF VENDORS. IF THE QUALITY IS MAINTAINED THEN IT WILL HELP BANK REDUCING THE MAINTENANCE COST DRASTICALLY.*
4. IT IS ADVISED TO GENERATE/CREAT A RECORD OF AS BUILT DRAWINGS FOR ALL BRANCHES/ROs/ICMCs etc. FOR FUTURE REFERENCE. THIS WILL HELP BANK TO REDUCE COST OF STRUCTURAL ANALYSIS & OTHER BUILDING RELATED ISSUES & FOR REFERENCE AS AND WHEN NEEDED.
5. IT IS ADVISED TO CONSULT THE INDUSTRY EXPERTS BEFORE CONCLUDING UPON THE TYPE OF TESTS REQUIRED FOR A BUILDING EVALUATION. EXACTLY FOR WHAT PURPOSE/OUTCOME (AS RESULTS) THE TESTS ARE BEING PROPOSED. THIS WILL HELP MORE IN APPROPRIATION OF APPLICABLE TESTS OR DECIDING THE APROPRIATE TESTS.
6. IT IS ADVISED TO SCRAPOUT THE ENTIRE AFFECTED PLASTER AND REDONE WITH THE RMP MATERIAL, WHEREVER NEEDED.
7. SOME RECTIFICATION WORK IS NEEDED IN THE BUILDING AS MENTIONED IN THE OBSERVATION SHEET POINTS. SO THE BANK IS ADVISED TO TAKE THE RECTIFICATION WORK AS EARLY AS POSSIBLE.
8. KOTA STONE SLAB THERAPY IS ADVISED FOR PARAPET COLUMNS & WALLS.
9. IN THE TOILET AREAS TILING JOINTS IN THE FLOORS AND IN WALLS SHALL BE PROVIDED WITH 3 MM SPACER & WITH EPOXY GROUTING.
10. THE CRACKS IN WALLS WHEREVER OBSERVED SHALL BE TREATED WITH THE SUGGESTED CRACK THERAPY.
11. OHWT ARE ADVISED TO PLAN WITH WELL PLANNED OVERFLOW DESIGNED SYSTEM TO ENSURE NO OVERFLOW OF WATER & THE RAIN WATER ACCUMULATION/STAGNATION TAKES PLACE ON THE TERRACE + PROPER SLOPE SHALL BE PROVIDED ON THE TERRACE IN WEATHERING OR TERRACE TREATMENT TOWARDS THE RAIN WATER DOWNTAKE POINTS.
12. ON THE TERRACE THE WATER PROOFING LAYER NEEDS TO BE PROTECTED WITH A PROTECTIVE LAYER, WHICH CAN BE SCREED CONCRETE OR RICH CEMENT MORTAR PLASTER OR ANY OTHER WEATHER TREATMENT. THIS WILL REDUCE THE RECURRING EXPENSES ON WATER PROOFING.
13. PROPER PLINTH PROTECTION IS ADVISED ALL ALONG THE BUILDING LENGTH BOTH SIDES & THEN A L SHAPED WATER PROOFING SHALL BE DONE.
14. LIFT LOBBY AT TERRACE LEVEL IS ADVISED TO BE DONE PROPERLY AS ADVISED IN THE RESPECTIVE OBSERVATION POINT.

PREVENTIVE MEASURES:

Following preventive measures are recommended generally to reduce the threat to structural stability and save the cost of maintenance & improve the quality of work in any proposed new or old building, where relocation is not planned.

1. A proper building audit shall be conducted by the industry expert before buying or taking any premises on lease. The building shall be evaluated on all necessary parameters related to structural stability, plumbing work, seepages, water leakages, cracks,

settlement etc. & shall be ensured of required safety from the end use/business point of view.

2. Standardizing the Type of Maintenance Related Problems & Solutions for a better & quick understanding of IFMs & Vendors.
3. Making an Operation Manual with the help of Industry Expert Designed Methodologies, Guide Lines & Check Lists, etc. so that IFMs will get ready solutions & procedures for different type of problems.
4. A strict quality control in technical supervision is advised, while construction/rectification work in progress to ensure the correct construction & construction sequence to minimise the recurring maintanance cost.
5. Clear Guide Lines on UGWT & OHWT Connections & Other Plumbing Works including Rain Water Down Take Piping System, shall be prepared for reference to IFMs & Vendors.
6. Maintenance Check List & Monitoring of House Keeping Staff's Work more attentively & on a daily basis.
7. Annually one Lecture on Maintenance Related Problems & Solutions by Industry Experts for IFMs & Vendors.
8. Inclusion of some important clauses in the agreement document between land lord & ICICI Bank to ensure the scope of work of landlord in terms of maintanance.
9. Generating a Record of "As Built Building & Services Drawings" for all Branches, ICMCs, ROs, etc. for future reference.
10. Once in a 3 years building audit is advised to reassure the building condition is good & safe to work there.

A set of "AS BUILT DRAWINGS" of the building premise shall be maintained/asked in easy traceability mode for the following streams.

- Architectural Drgs.
- Structural Drgs.
- MEP Services Drgs.
- Networking related Drgs.

***CORRECTIVE MEASURES*:**

Following corrective measures are recommended to reduce the risk & in the view of safety of staffs working there along with customers, if this premises are opted to take on/continue on lease.

1. ALL mentioned checkpoints (in the checklist) and observation points (in the observation sheets) need to be read & well understood for taking the rectification execution work. The execution shall be carried out as per the methodologies suggested & under strict technical supervision. In civil work most of the issues occur at later stages because of lacking of technical supervision at the time of construction, therefore at least the rectification work should be carried out under strict technical supervision ONLY.
2. Scrapping out of the entire internal/external plaster of affected wall/ceiling areas for redone using the RMP material after the water source is closed.
3. Other rectifications as advised in respective areas of the building and shown with photographs in the observation sheets pointwise, shall be taken up.

4. Plumbing/Piping System - vertical pipes to be kept away from wall surface by 2".
5. Water accumulation & continious moist enviornment at terrace & on other areas needs to be totally stopped.
6. As per recommendation longitudinal RCC pedestals may be cast to up lift the lockers by 2-2.5' & accordingly the functional floor level between the two rows of lockers can also be planned accordingly keeping in to the emergency situation in mind.
7. All toilet tile flooring & wall is to be done with epoxy grouting using 3 mm spacer.
8. All points as mentioned in the recommendations, shall be attended as per need of the bank.
9. Where the cracks are observed proper crack therapy is advised using the suggested methodology for this.
10. The terrace water proofing system needs to be protected by a protective layer of weather/terrace treatment (which can be screed concrete or rich cement mortar or any tiling system) as per need of the bank.
11. The slightly damaged terrace parapet wall (Cracked) needs to be rectified properly & applied with Kota Stone Slab therapy on the top.

***SPECIALIZED MATERIALS SUGGESTED*:**

1. Crack Seallers
2. RMP (Ready Mix Plaster) Materials.
3. Epoxy Grouting Material.
4. Cement.
5. Sand.
6. Sikatop Armatec - 108 Plus (Anti Corrosive Coating).
7. Kota/Stone Slabs.
8. Fibermesh.
9. Granite Slabs for Lift Lobby at Terrace.
10. PCC (Plain Cement Concrete).
11. Water Proofing Material.
12. Epoxy Grouting.

NOTE:- If any help is needed in getting these materials, we may be contacted. The above materials are prescribed for reference only, however, other companies' similar results-giving materials can also be used.

***METHODOLOGY*:**

RMP PLASTER THERAPY | ANTI-CORROSIVE COATING | CRACK THERAPY | EPOXY GROUTING | RAINWATER DOWN TAKE PIPES PLANNING | KOTA STONE SLAB THERAPY | RCC PEDESTAL | TERRACE TREATMENT/SCREED CONCRETE/TILING WITH THERMAL INSULATION VALUES

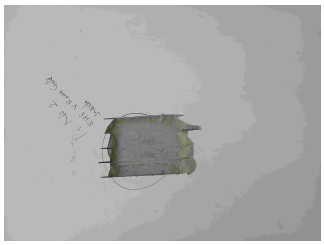
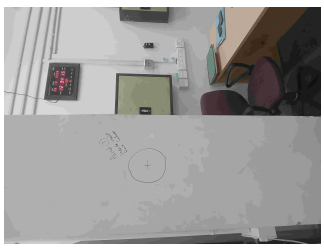
Note:-

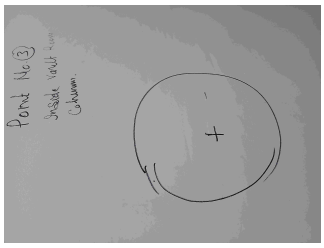
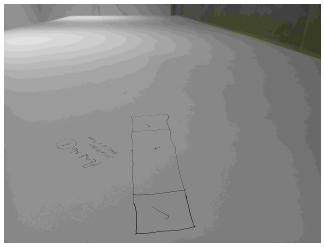
1. The test report for different tests conducted at the site can be submitted as and when needed with in one month of the report submission.
2. If ICICI Bank needs any help in interpretation of recommendations, observation, analysis, corrective - preventive actions, may kindly contact us and we will be happy to help.

PART 2

PROJECT OBSERVATION SHEETS

PROJECT: ICICI BANK ICMC, INDORE CLIENT: ICICI BANK LTD.

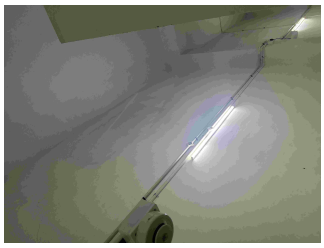
AUDIT OBSERVATION SHEET					
Reference / Rev. No			OBS / 79 (ICICI BANK ICMC, INDORE) / August 28, 2024	DATED	2024-08-28
S.No.	OBSERVATION POINTS	DATE	CORRECTIVE / PREVENTIVE MEASURES SUGGESTED	PHOTOGRAPHS	STATUS (For Client Only)
1	For rebound hammer and ultrasonic pulse velocity test near the vault room main entry gate RHS from inside surface preparation is completed. This is designated point number 2 for conducting tests.	2024-08-28	Results are 'GOOD'. As such no rectification is needed as of now.		
2	This is LHS of vault room main entry gate inside the vault room and designated point number 1. Surface preparation is in process for cinducting the rebound hammer & ultrasonic pulse velocity tests.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
3	This is designated as point number 3 on the RCC column inside the vault room for surface preparation & thereafter conducting the rebound hammer & ultrasonic pulse velocity tests.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		

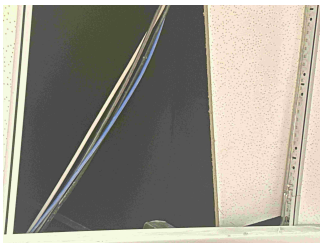
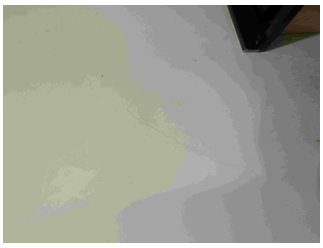
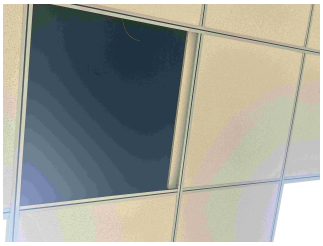
4	This is marking on the floor inside the vault room for surface preparation to conduct the rebound hammer & ultrasonic pulse velocity tests.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		
5	Same as above	2024-08-28	Same as above		
6	This is point is designated point number 4 near the emergency window in side the vault room, for conducing the rebound hammer & ultrasonic pulse velocity tests.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		
7	This is other side of the points number 3 on the column inside vault room. Surface preparation will be done for conducting rebound hammer and ultrasonic pulse velocity tests.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		
8	This is designated as point number 7 out side the vault room in corridor on the vault room wall on RHS.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		

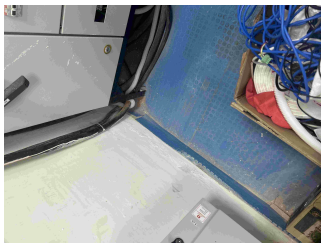
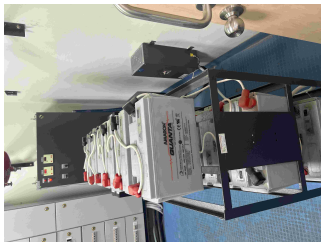
9	There is a vertical crack was observed in the right side corridor on outer wall of corridor. This type of cracks are normally due to following reasons: 1. There may be some conduit running inside the plaster. 2. This can also be due to the improper treated joint of column & masonry in the wall.	2024-08-28	Normal Crack therapy is advised.		
10	Same as above.	2024-08-28	Same as above.		
11	This is designated as point number 4 out side the vault room corridor on the vault room wall rear side near emergency window. Surface preparation will be done for conducting the both tests as desired.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		

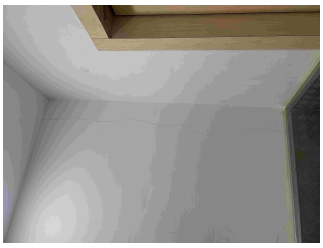
12	This is emergency window location in the corridor of vault room in the rear side wall of vault room. There is a crack developed around the emergency window. It seems the cutout left for fixing of emergency window was bigger than required & it was grouted after fixing the emergency window. 1. This type of cracks are developed due to improper joint treatment of old & new concrete. A coating of bonding agent should have been applied between the new & old concrete before grouting the gap. 2. This crack also can happen due to unequal thermal expansion of concrete & masonry joint.	2024-08-28	It is advised : 1. Please remove the plaster and check whether the gap between emergency window frame earlier done concreting is filled up with masonry or concrete. 2. If it is done with masonry then the entire masonry shall be removed and redone the gap filling with concrete or appropriate grout. 3. If it is concrete then injection grouting is advised for filling up the cracked portion. 4. If the crack is in plaster only then normal crack therapy can be applied.		

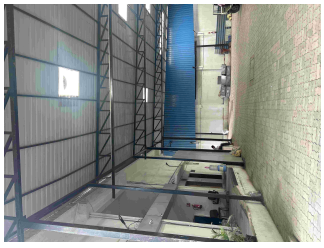
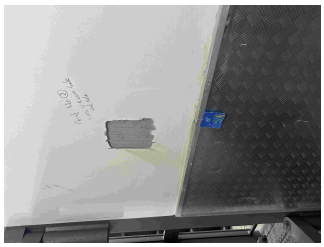
13	This is vault room corridor outer wall, where, upper portion, right hand side, and rear side corner of the corridor a diagonal crack was observed. This type of diagonal cracks can develop due to settlement also at the same time it can be due to improper masonry underneath the plaster.	2024-08-28	It is advised for: 1. Scrapping out the plaster both sides of crack till masonry and check whether the crack is plaster only or it is observed in the masonry also. 2. If it is in masonry also then normal crack therapy is advised first in masonry & then in plaster as well. 3. However, once using/applying the ordinary crack sealler, first it can be observed for some time (5-6 months) if crack is not reappeared, then scrapping of plaster will not be required.		

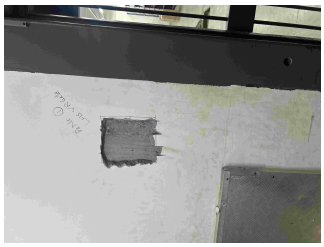
14	This is patch up work done on the outer wall of vault room corridor towards right hand side, showing crack all around the closed opening. It seems here there was some cutout for ventilator or smoe other purpose & later it was closed in masonry. But the joint treatment could not be done technically right and hence this crack is developed. There should have been applied the fiber mesh or chicken mesh at the joint of old and new masonry. These type of cracks once developed may cause the seepages also due to water entry from out side.	2024-08-28	For this type of problem a normal crack therapy is advised at both sides on out & inner surfaces. That means a proper joint treatment is to be done, providing fibre mesh at the joint of old and new masonry joint. Then proper plastering need to be done after crack therapy.		
15	This is vault room corridor right hand side, outer wall surface in upper portion is showing huge seepages. From outer wall surface rain water is entering through the wall and causing seepage inside. This type of problems occure due to improper/inferior quality masonry work also some times.	2024-08-28	It is advised first to treat the outer surface for no entry of rainwater through the wall and then scrapping out of the entire affected plaster area on the inside wall surface, then read done with RMP material.		

16	This is ICMC head's cabin room inside,where the ceiling was checked removing the grid ceiling & it was observed in a good condition. There seems no problem.	2024-08-28	As such no rectification is needed as of now.		
17	This is office area hall where after removing the grid ceiling, the actual ceiling of the building was checked & observed in good condition.	2024-08-28	As such no rectification is needed as of now.		
18	This is pantry area where at left side wall was observed with a diagonal crack. It may be due to improper joints in the brickwork masonry below the plaster. It can also be due to settlement as well.	2024-08-28	It is advised to apply the crack therapy on both sides of the wall.		
19	This is receipts & payment zone room. It was checked after removing the grid ceiling also and observed in good condition the ceiling and other wall/column areas.	2024-08-28	As such no rectification is needed as of now.		
20	This is security guard room area inside portion at the entry to ICMC. A diagonal crack was observed on the wall near server room. These type crcaks can be due to settlement or inferior quality of masonry work done.	2024-08-28	Normal crcak therapy is advised.		

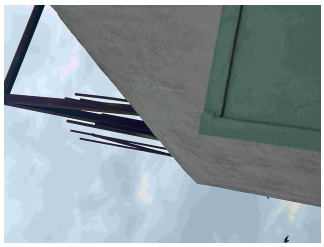
21	This is battery and server room, where above skirting seepage was observed near the electrical. This also some times happen due to acid fumes deteriorating the plaster surface when withstand the acid fumes for longer period.	2024-08-28	1. It is advised to scrap out the affected area and redone with RMP (Ready Mix Plaster) material. 2. A barrier is advised between the batteries and wall plaster. It can be some cement sheet or some thing, which can serve the barrier purpose.		
22	Battery placement is done very systematically on a movable trolley stand. Here it may not be affecting platered wall due to acid fumes. This battery stand can be removed from its place for cleaning/house keeping or any other reason.	2024-08-28	As such no major rectification required as of now.		
23	This is guard room inside toilet area. It is observed that epoxy grouting is not done in the floor & wall tiling. It may cause the seepage through 0-0 tiling joints spreading below the tile flooring to cause the seepages in walls above skirting areas at later stage.	2024-08-28	It is advised to do rather fix the tile on floor and walls giving 3MM spacer and then done with epoxy grouting.		

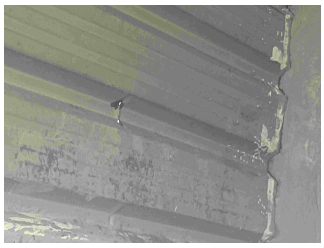
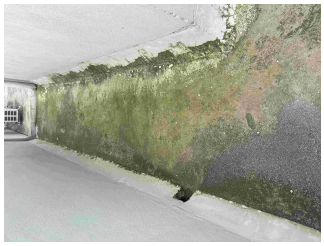
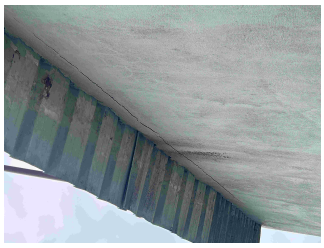
24	This is buffer area at the main entry to ICMC and on the right hand side vertically up down crack was observed. This type of cracks can develop due to some conduiting inside the wall plaster or it may be due to incorrect masonry joints as well.	2024-08-28	However, normal crcak therapy is advised for this.		
25	This is main entry of ICMC Indore. In the pic point number one is showing the functional level inside the building around 1.5 feet higher from the entrance level of guard sitting area and point number two is showing around two and half feet from the outer development driveway area means the inside functional floor level is approximately 4 feet above the outer, driveway level area, so it seems building is safe from the flooding situation point of view. And not only this the outer development driveway area is around 1.5'-2' higher than outer road level. That means the road level is almost six and half to seven feet lower than the inside functional floor level. This is a very good situation.	2024-08-28	It is a good situation and as such no rectification is needed from this point of view.		

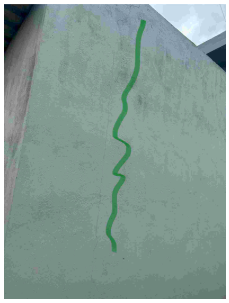
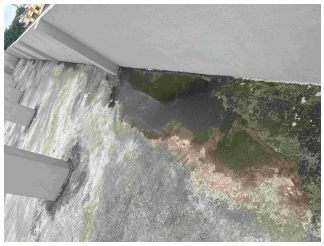
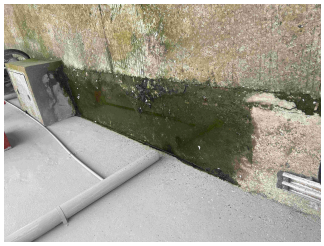
26	This is driveway area outside the building along the length of the building at the junction of the outer driveway floor and building wall joint a green belt is created. Plantations are done in entire length of the building, which in a long run certainly will start causing the huge seepage in the building wall & start deteriorating the outer plaster of the building, if proper water proofing is not done earlier at the wall and driveway joint.	2024-08-28	It is advised : 1. To remoe the entire plantation along with the earth & then do a proper plinth protection. 2. Then a L shaped water proofing shall be done at the junction of wall and plinth protection.		
27	This is outer area towards the main entry of ICMC building. A very good shed area is created which is safe from rain criteria.	2024-08-28	As such no rectification is needed.		
28	This is above washroom wall portion in the right hand side of main entry to ICMC building. This diagonal crack is undesirable. It may be due to settlement also.	2024-08-28	It is advised to do a proper crack therapy here as a corrective measure.		
29	At the main entry to the vault room. This is designated point number two on the right hand side surface & preparation is ready for conducting rebound hammer and ultrasonic pulse velocity tests.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		

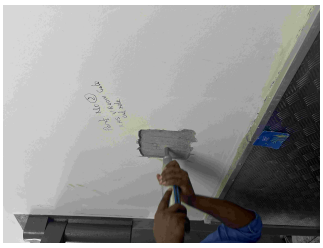
30	This is designated point number 1 at main entry to the vault room left hand side surface preparation is done for conducting the rebound hammer & ultrasonic tests.	2024-08-28	Surafe preparation was done and tests conducted. Test Results are 'GOOD'. As such no rectification is needed as of now.		
31	These are parapet columns at the terrace, although it is a good condition as of now since this is a new construction building. The top of these parapet columns & walls are not applied with stone slab therapy and therefore in some time when rain water starts entering in the columns & walls through micro cracks developed due to weathering effect, the steel rods inside these columns and walls will start rusting.	2024-08-28	Kotra Stone Slab therapy is advised for all the parapet columns & entire length of parapet wall.		
32	Parapet wall at some locations observed with a vertical crack. This crack will allow rainwater inside the parapet wall and it will further increase the crack width and more water will go inside further start rusting the steel rods and increase the crack width to further detriorate the situation.	2024-08-28	1. Crack therapy is advised on the vertical cracks. 2. Kota Stone Slab Therapy is advised on the top of parapet length.		

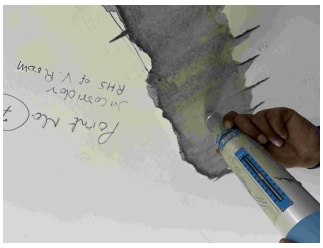
33	Parapet wall is also observed without kota stone slab therapy. This causes entry of rainwater into vertical cracks somewhere developed in the parapet wall and that further will detriorate the situation.	2024-08-28	“Stone Slab therapy is advised on the parapet top. In fact, this therapy is a stone slab projecting inside with slope slightly inside with a groove below called as (TAPAK) so that rainwater never travels on the wall surface. It directly falls on the terrace and the paarpet walls will be always in good condition.		
34	This is terrace portion the weather treatment was also done on the terrace floor, but it has started damaging/uprooted now, because the terrace treatment was not done correctly. Now these pits sizes will increase gradually and increase the rainwater entry percolation/penetration in the slab. This may cause the rusting if slab/beam steel rods in long run and may result causing seepages in the ceiling of below floor.	2024-08-28	It is advised to patch up this locations immediately so that further situation will not deteriorate. However, if permanent solution is saught then it is advised to scarp out the entire terrace treatment done earlier & redone the same technically correct.		
35	Terrace treatment is also done, but it is not done properly designed and executed. So at a lot of places within one year of the construction span, the damages have started. This will further deteriorate the situation with time.	2024-08-28	A proper terrace treatment therapy is advised so that age of the building will increase and there will be no problem on the last floor occupants due to seepages.		

36	Column rods dowels leftover at the monty level are likely to start rusting due to rain and weathering effect. This steel rods will also allow the rainwater entry into the columns, which will further start rusting the inside steel part of steel rods & may develop the crcaks in the columns. These crcaks in the columns reduces strength of the columns and hence building.	2024-08-28	It is advised to apply the anti-rusting coat on these dowel so that whenever any future Construction will be taken up, then this steel will remain in good condition. Also the topportion of the columns should be treated properly, so that rainwater does not enter into the column.		
37	This is terrace lift lobby entry area. The lift lobby with aluminium glazing is observed done on the terrace itself, while in fact it should have been done on a lift lobby raised floor area.	2024-08-28	It is advised to make a pedestal/raised floor for lift lobby with the proper stone flooring. And then on this stone flooring the glazing shall be done.		
38	This is terrace portion lift lobby area where the aluminium glazing and the chhajja portion is showing a huge gap in between, this causong rainwater and other dust inside the lift lobby. This lift lobby is not provided with door.	2024-08-28	It is advised to close this gap with appropriate silicone sealant, so that water will not enter and dust as well. This lift lobby should be provided with a door also.		

39	Staircase mumty room is covered with sheeting only in fact in the normal construction practice, this portion is done with RCC slab but here it is done with profile sheeting and that sheet also is showing holes/gaps, so rainwater enters through these holes/gaps and cause rain water seepages in the below areas.	2024-08-28	It is advised to cast a designed slab here so that all these small problems will not rise.		
40	This is a passage between the parapet wall and staircase mumty area on the terrace. Improper slope in the weathering/terrace treatment is causing water stagnation, then this stganed water finds it's own way to ..... and that is spoiling the terrace treatment. It also starts formatio of alge on the terrace, which further may results into vegetation growth also.	2024-08-28	It is advised to scrap out this portion and redone with proper slope towards the rainwater down take piping system (Khurra) installed at terrace.		
41	A huge horizintal crack is observed below the chhajja sheeting of staircase multi area at terrace. This crcak may be due to improper jointing in the masonry or at the junction of concrete and masonry.	2024-08-28	It is advised to do the proper seating or RCC slab on the mumty room, so that there will be no such problems occur in future also. As a corrective measure crcak therapy can be applied.		

42	A vertical crack is observed in the mumty room wall right from top to the terrace level. This is it seems between the RCC column and masonry joint. It seems a proper joint treatment is not applied here using the chicken mesh or fiber mesh, which causing this crack.	2024-08-28	It is advised to scrap out the joint both side 3-3 inches and then apply the fiber mesh treatment and redo with the cement plaster using RMP material. This is part of crack therapy only.		
43	This is Terrace whether Treatment done, but the terrace slope is not designed executed properly towards the rainwater down. Take piping system which is causing this stagnation of rainwater at lot of locations near parapet wall. In the due course, this will start causing CP outside and the last floor ceiling also.	2024-08-28	a proper weather treatment with proper terrace. Slope towards the rainwater down. Take piping system is advised.		
44	This is ground floor situation on the right side of the entire building open area where water stagnation is observed at the junction of wall and driveway floor. This stagnated water may start causing seepages inside the building in due course.	2024-08-28	It is advised for proper cleaning & plinth protection with outside slope so that the wall junction will not be subjected to the water stagnation.		
45	This is left hand side of vault room gate point number one and rebound hammer testing is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		

46	This is point number two, right hand, side of vault room gate outside, where rebound hammer tesing is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
47	Ultrasonic pulse velocity test is in process at point number one left hand side of vault room main entry gate.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
48	Rebound hammer test is in process at point number three inside the vault room on column.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
49	This is point number four near emergency window, where rebound hammer testing on the vault room wall, is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
50	This is the floor point number one inside the vault room, where rebound hammer testing is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
51	This is second point on floor inside the vault room, where rebound hammer testing is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		

52	This is point number seven in the corridor right hand side of the vault room, where rebound hammer testing is in process.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		
53	This is inside the vault room, where ultrasonic pulse velocity test is in process on the column.	2024-08-28	Test Results are 'GOOD'. As such no rectification is needed as of now.		

PART 3

CHECK LIST

VISIT DATE: 2024-08-28

PROJECT: ICICI BANK ICMC, INDORE CLIENT: ICICI BANK LTD.

S.NO	OBSERVATION POINTS FOR SITE INSPECTION	RATING SCALE	RATING	DETAILED DESCRIPTION	LOCATION	REMARI
1	Site History	5	3	It is a new RCC building constructed recently in 2023, as per the information provided by ICMC, Indore.	Musakhedi Agrawal Bhawan	
2	Visual Inspection of Over all Building from Structure Stability Point of View.	5	3	OK, Since, it is a new building, so there seems no special observation on this.	Musakhedi Agrawal Bhawan	

3	External Side Observation, if any.	5	3	1. Planters were observed all along the length of the building on plinth protection areas causing seepages chances in coming time inside the building. 2. Outer area functional driveway level is approximately 2'-3' higher than the road level, while the main ICMC entry (guard sitting area) is approximately 2'-2.5' higher than the outer area driveway level. And inside the ICMC building the inside functional floor level is further approximately 1.5' - 2' higher than the guard sitting area finally resulting the inside the building functional floor level higher by 6' - 7' from outer road level.	Musakhedi Agrawal Bhawan	
4	Frequency of Building Inspection - Check for Regular Visual Inspections (Annually or Biannually).	5	3	It seems this is the first inspection after construction in 2023.	Musakhedi Agrawal Bhawan	
5	Frequency of Building Inspection - Check for Structural Assessment - Once in 3 to 5 Years depending upon the age of the building.	7	4	It is first inspection after construction in 2023.	Musakhedi Agrawal Bhawan	
6	Check for Building Plans/Drawings availbility.	5	1	Drawings could not be made available while inspection/audit.	Musakhedi Agrawal Bhawan	
7	Check for necessary Permits with latest renewal done (FIRE NOC etc.)	3	0.5	Did not made available while inspection/audit.	Musakhedi Agrawal Bhawan	

8	Check for regular maintanance records.	2	1	It is a new building so maintenances did not observed.	Musakhedi Agrawal Bhawan	
9	Building Functional Level Status.	5	4	Functional level inside the ICMC building was observed approximately 6'-7' higher than outer area road level. Which is a good observation from flooding situation point of view.	Musakhedi Agrawal Bhawan	
10	Check for Plaster Strength (Intact or not) - Lighting Hammering Action.	5	3	Seems OK, it is a new building.	Musakhedi Agrawal Bhawan	
11	Floor - Visible Up Rooting, If Any	5	3	Not Observed as of now.	Musakhedi Agrawal Bhawan	
12	Plaster - Visible Up Rooting in Ceiling Areas, If Any	5	3	Not Observed as of now.	Musakhedi Agrawal Bhawan	
13	Plaster - Visible Up Rooting in Walls Areas, If Any	5	3	Not Observed as of now.	Musakhedi Agrawal Bhawan	
14	Any Vegetation Causing Moisture/Cracks.	3	1	Not Observed at terrace and near the building except the planter area all along the building wall in main driveway area.	Outer Area Driveway.	
15	Terrace Area Checking in General.	5	2	OK, Except the treatment on parapet walls & columns using stone/slab therapy for completely stopping the rain water entry in to these items in long run, which will other wise start rusting of inside steel.	Terrace Area.	

16	Observation on Cold Joints in concrete structure, if Any.	5	2.5	Not Observed.		
17	Observation on concrete honey combing, if Any.	5	2.5	Not Observed.		
18	Basement Observation from inside.			NA		
19	Basement Observation from outside.			NA		
20	Check for easy Access to all Areas.	3	1.5	Seems, OK.		
21	Check for Clear Pathways for Inspection.	2	1	OK.		
22	Check for Utilities (Electricity Functionality).	3	1.5	Seems OK.		
23	Check for Electrical DB/MCB & cabling wiring.	2	1	Needs more systematization in few areas.	Battery/Server Room.	
24	Check for Utilities (Water Supply Functionality).	3	1.5	Seems, OK.		
25	Check for Utilities (Cooking Gas Supply & Functionality).			NA	Pantry Area.	
26	Check for Safety Concerns - Loose Handrails, Broken Steps, Other Hazards, if any.	5	3	Not Observed, it is a new building.		
27	Check for Healthy Business Enviornment.	5	3	OK.		
28	Observation on Foundation.	5	3	It is a new building & there seems no problem as of now.		
29	Settlement Cracks in Walls.	10	5	Yes, at or two places.	Vault Room Corridor RHS upper portion.	
30	Settlement Cracks Floors	10	6	Not Observed as of now.		
31	Visible Concrete Deterioration in Slabs, If Any	5	3	Not Observed. It is a new building.		
32	Visible Concrete Deterioration in Beams, If Any	5	3	Not Observed, it is a new building.		

33	Visible Concrete Deterioration in Columns	5	3	Not Observed, it is a new building.		
34	Any Refurbishment is needed in Columns/Beams/Slabs/Other RCC elements.	10	6	No, Not Observed as of now.		
35	Visible Cracks / Deterioration in Stone Patti Roofs, If Any			NA		
36	Visual Stability Check for Parapet Walls, if any.	5	2.5	In General it is OK, but at some locations, vertical cracks were developed.	Terrace Area.	
37	Visual Stability Check for Projections / Partitions if any (Horizontal)			NA		
38	Observation on sagging check for RCC beams, if any.	10	6	Not Observed as of now.		
39	Observation on sagging check for RCC slabs, if any.	10	6	Not Observed as of now.		
40	Observation on RCC columns buckling or crack, if any.	10	6	Not Observed as of now.		
41	Observation on Hairline Cracks in Slabs and slab soffits, if Any.	5	3	Not Observed as of now.		
42	Observation on exposed steel reinforcement due to insufficient concrete cover.	10	6	Not Observed.		
43	Observation on column misalignment due to bad formworks during casting.	5	3	Not Observed.		
44	Moisture / Dampness Visibility in Ceiling Areas.	5	2	Yes, at one place in the vault room corridor right hand side rear side at upper corner area.	Vault Room Corridor RHS upper portion.	
45	Moisture / Dampness Visibility in Walls Areas	5	2	Same as above.	Basement Corridor around vault room.	

46	Moisture / Dampness Visibility above Skirting Areas.	5	1.5	Yes, in battery & server room.	Battery/Server Room.	
47	Water Leakage through RCC Column / Beam / Slab, if any	10	6	Not Observed as of now.		
48	Water leakage through Masonry Structure	7	3	Yes, at one or two locations in the vault room corridor right hand side.	Vault Room Corridor RHS.	
49	Position of Over head Water Storage Tanks & Plumbing Connection Status.	5	2	OK, but over flow is not planned.	Terrace Area.	
50	Plumbing Connection Status in Toilets/Pantry Area.	5	1.5	Seems OK, except epoxy grouting is not done.	Toilet Block.	
51	Rainwater Downtake Piping System Status.	5	2	Observed Poor & Needs to be improved. At least 2" gap should be provided between piping system & wall surface & at ground floor it is to be planned properly for channelization.	Outer Area Driveway.	
52	Position of under ground water tank & observation on this.			NA		
53	Observation on NDT Rebound Hammer Test.	10	7	Test report will be submitted.		
54	Observation on NDT USPV Test.	10	7	Test report will be submitted.		
55	Observation on NDT Concrete Half Cell Potential & Resistivity Test.			NA		
56	Observation on Concrete Scanning Test.			NA		
57	Building Functional Level Status.	10	7	It is in safer being the level difference higher by 6'-7'.		
58	Check for Unauthorised Modifications, if any done.	5	3	Not reported as of now.		

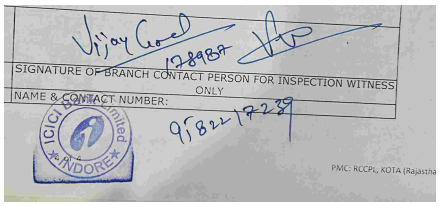
TOTAL RATING SCALE : 290

TOTAL RATING : 160.5

RATING INDEX: 0.55

RECOMMENDATION : As mentioned in the recommendations given in the part 1 of the audit report.

SIGNATURE OF AUDITOR



SIGNATURE OF BRANCH CONTACT PERSON FOR INSPECTION WITNESS ONLY

VIJAY GOYAL

9582217239

TEST REPORT

Doc No.-QR/08, Issue Date- 01.01.2014
Rev. No.-02, Rev. date- 30.11.2022

ULR-TC807724000001270F
LRL\2024\644

Issue Date: 29.08.2024

1. Name of Customer & Address : Rajshree Consolidated Consulting Pvt. Ltd.
   No. 101, Shakun Elegance, Karneshwar Housing Yojna,
   MBS Road, Kota (Raj.) - 324005
2. Name of Client : ICICI Bank Ltd., ICMC, Jaipur (Raj.)
3. Name of Work/Project : -
4. Material Identification : Reinforced Concrete Structure
5. Source/Location : ICICI BANK LTD.
   Agrawal Bhawan, 340/1, 340/1/2, 340/1/3/1, Musakhedi,
   Nemawar Main Road, Palda, Indore-452020 Madhya Pradesh, India
6. Sample Condition when Received : -
7. SRF/Letter Reference : SRF Dated 28.08.2024
8. Date of Sample Receipt : -
9. Date of Sample Tested : 28.08.2024
10. Environmental Conditions : -
11. Test Performed at : Site

I. Non-Destructive
A. Building Materials-Reinforced Concrete Structures

TEST RESULTS

Non-Destructive Test by Ultrasonic Pulse Velocity & Rebound Hammer

S. No.	Location	Ultrasonic Pulse Velocity Analysis (IS-516 (Part-5/Section-1)- 2018			Rebound Hammer Analysis (IS-516 (Part-5/Section-4)- 2020		
		Direction of Transmission	Average Pulse Velocity (km/sec)	Concrete Quality Grading	Direction of Testing	Average Rebound Index Value	Compressive Strength (Mpa)
1	Vault Room Gate Outside (LHS)	Direct	4.2	Good	Horizontal	49	58
2	Vault Room Gate Outside (RHS)	Direct	7.1	Excellent	Horizontal	55	70
3	Inside Column Vault Room	Indirect	5.9	Excellent	Horizontal	46	53

For Landmark Material Testing And Research Laboratory Pvt. Ltd.

(Dr. Anil Dixit)
Authorised Signatory

(Harsh Chittora)
Technical Manager

Note:

- This Test Report shall not be reproduced wholly or in part and cannot be used as an evidence in the court of law without written approval of M/S Landmark Material Testing And Research Laboratory Pvt. Ltd.
- The results listed refer only to the tested sample and applicable parameters. The results apply to the sample as received.
- The sample will be stored up to one month from the date of issue of test report unless otherwise specified.
- Total liability of this laboratory is limited to the invoiced amount.

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CIN No. U73100RJ2011PTC034607, PAN No. AABCL9797K, GST No. 08AABCL9797K1ZN

S. No.	Location	Ultrasonic Pulse Velocity Analysis (IS-516 (Part-5/Section-1)- 2018			Rebound Hammer Analysis (IS-516 (Part-5/Section-4)- 2020		
		Direction of Transmission	Average Pulse Velocity (km/sec)	Concrete Quality Grading	Direction of Testing	Average Rebound Index Value	Compressive Strength (Mpa)
4	Inside Vault Room Wall Emergency Window	Indirect	4.6	Excellent	Horizontal	52	64
5	Inside Vault Room Floor Point One	Indirect	4.5	Good	Vertical Downward	38	44
6	Inside Vault Room Floor Point Two	Indirect	4.7	Excellent	Vertical Downward	35	39
7	In Corridor RHS of Vault Room Wall	Indirect	4.5	Good	Horizontal	54	68

Note: Based on the above results, the compressive strength of the R.C.C. wall varies from 53Mpa to 70Mpa.

For Landmark Material Testing And Research Laboratory Pvt. Ltd.

(Dr. Anil Dixit)
Authorised Signatory

(Harsh Chittora)
Technical Manager