राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280

National Education Society for Tribal Students
(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

File No: NESTS/M&R/01/2025-26 **Date: 10.04.2026**
Comp No.: 31787

To,
The Principals,
Eklavya Model Residential School.
(As per the list attached)

Subject: Maintenance & Repair Guidelines for the EMRS-regs

Sir/Madam,

Please find enclosed herewith the Repair and Maintenance Guidelines for compliance and necessary action. The guidelines will facilitate and require monitoring the Quality of the work, and also reflect the frequencies required for the maintenance of the various items as per the CPWD Manual.

Further, all the concerned are directed to adhere with the guidelines and ensure the R & M works as per the guidelines.

This issue with the Approval of the competent Authority.

Encls: As Above.

-sd-

(Bipin Chandra Raturi)
Joint Commissioner, NESTS

Copy To,

1. Nodal Officer, concerned State/UT EMRS Societies, for information and necessary action.
2. PS to Commissioner.
3. Guard File.

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
National Education Society for Tribal Students
(जनजातीय कार्य मंत्रालय के अंतर्गत एक स्वायत्त संस्थान), भारत सरकार
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MAINTENACE MANUAL

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EKLAVYA MODEL RESIDENTIAL SCHOOL
सा विद्या या विमुक्तये
NESTS-MINISTRY OF TRIBAL AFFAIRS

1.ACKNOWLEDGEMENT

We express our sincere gratitude to the **National Education Society for Tribal Students (NESTS)** and the **Ministry of Tribal Affairs (MoTA), Government of India**, for their guidance and support in the preparation of this Maintenance and Repair Manual.

This manual has been compiled to provide comprehensive technical guidance for the planning, execution, and monitoring of repair and maintenance works in **Eklavya Model Residential Schools (EMRSs)**, ensuring proper upkeep of school infrastructure in accordance with the standards prescribed by NESTS and MoTA.

We acknowledge the valuable inputs, suggestions, and recommendations received from officials, engineers, and staff members involved in the inspection, execution, and maintenance of school facilities. Their expertise has been instrumental in making this manual a practical and effective resource.\

2. INTRODUCTION

1. Importance of Maintenance

- Improves the life of structure
- Improved life period gives better return on investment
- Better appearance and aesthetically appealing
- Better serviceability of elements and components
- Leads to quicker detection of defects and hence remedial measures
- Prevents major deterioration and leading to collapse
- Ensures safety to occupants
- Ensures feeling of confidence on the user

2. Maintenance is a continuous cycle involves every element of building science namely: -

- Structural
- Electrical wiring
- Plumbing-water-supply-sanitation
- The Quality of the water must be Portable i.e. pH value ranging 7 to 8 and TDS should not be more than 300 ppm in any circumstances.
- The Frequency of Drinking **Water Testing from approved NABL Lab in every 6 months, if supply by Municipal Corporation & 3 Month, if water from Borewell.**
- **Overhead and Underground water storage Tank must be cleaned in every 6 months.**
- **Septic Tank, Sewer Lines & Storm water Drain must be cleaned once in every year. Note: Date of Cleaning must be entered in the Maintenance & Repair Register and also written with Paint on the overhead and like.**
- **Rain Water Harvesting Pit must be cleaned every year before Monsoon.**
- Finishes in floors and walls.
- Roof terrace
- Service platform/verandah,
- Lifts
- Doors windows and other elements

3. Repair

- Repair is the technical aspect of rehabilitation. Refers to modification of a structure partly or wholly which is damaged in appearance or serviceability.
- The Solar Panels must be kept clean adopting the guidelines of manufacturer.

4. Stages of repair

Repair of concrete structure is carried out in the following stages:

a. Removal of damaged concrete
b. Pretreatment of surfaces and reinforcement
c. Application of repair materials
d. Restoring the integrity of individual sections and strengthening of structure as a whole.

a) Removal of damaged concrete

- Prior to the execution of any repair, one essential and common requirement is that the deteriorated or damaged concrete should be removed.
- Removal of defective concrete can be carried out using tools and equipment the types of which depend on the damage.
- Normally, removal of concrete can be accomplished by hand tools, or when that is impractical because of the extent of repair, it can be done with a light or medium weight air hammer fitted with a spade shaped bit.
- Care should be taken not to damage the unaffected concrete portions.

- For cracks and other narrow defects, a saw-toothed bit will help achieve sharp edges and a suitable under cut.

b) Pretreatment of surfaces and reinforcement

- The preparation of a surface/pretreatment for repair involved the following steps:
- Complete removal of unsound material.
- Undercutting along with the formation of smooth edges.
- Removal of the cracks from the surface.
- Formation of a well-defined cavity geometry with rounded inside corners.
- Providing, rough but uniform surface for repair.

- The cleaning of all loose particles and oil and dirt out of the cavity should be carried out shortly before the repair. This cleaning can be achieved by blowing with compressed air, hosing with water, acid etching, wire brushing, scarifying or a combination. Brooms or brushes will also help to remove loose material.

c) Application of repair materials

- After the concrete surface has been prepared, a bonding coat should be applied to the entire cleaned exposed surface.
- It should be done with minimum delay.
- The bonding coat may consist of bonding agents such ass cement slurry, cement sand mortar, epoxy, epoxy mortar, resin materials etc.
- Adequate preparation of surface and good workmanship are the ingredients of efficient and economical repairs.

d) Repair procedure:

The repair of cracked or damaged structure is discussed under two distinct categories, namely, ordinary or conventional procedures; and special procedures using the latest techniques and newer materials such as polymers, epoxy resins etc.

A repair procedure may be selected to accomplish one or more of the following objectives:

- To increase strength or restore load carrying capacity.
- To restore or increase stiffness.
- To improve functional performance.
- To provide water tightness.
- To improve appearance of concrete surface.
- To improve durability.
- To prevent access of corrosive materials to reinforcement.

3. GENERAL GUIDELINES

The **National Education Society for Tribal Students (NESTS)** has prescribed detailed guidelines for the repair and maintenance (R&M) of infrastructure in **Eklavya Model Residential Schools (EMRSs)**. The guidelines aim to ensure the safety, durability, and functionality of school buildings and facilities. Key provisions include:

1. **Periodic Inspection:** All school infrastructure shall undergo regular inspection to identify maintenance needs and prioritize repair works.
2. **Preventive Maintenance:** Emphasis is placed on preventive measures to reduce major repairs and extend the life of buildings, furniture, and utilities.
3. **Repair Standards:** Repairs should conform to prescribed technical specifications, quality standards, and safety norms. Only approved materials and construction methods are to be used.
4. **Fund Utilization:** R&M funds allocated under the NESTS framework must be used judiciously, with proper documentation of estimates, approvals, and expenditure.
5. **Record Keeping:** Detailed records of maintenance works, including routine and special repairs, shall be maintained for accountability and future planning.
6. **Periodic Reporting:** Schools are required to submit periodic reports on maintenance activities to NESTS to ensure transparency and adherence to guidelines.

These guidelines serve as the framework for planning, executing, and monitoring repair and maintenance works, ensuring that school facilities remain safe, functional, and conducive to learning.

4. PREVENTIVE MAINTENANCES

Preventive Maintenance is essential to ensure that building services and assets remain in a safe, functional, and serviceable condition throughout their intended life cycle. Preventive maintenance shall be undertaken to avoid failure of services and components due to normal wear and tear by timely inspection, servicing, and replacement of parts that are prone to deterioration or are approaching the end of their service life.

Systematic and periodic inspections shall be carried out, with particular emphasis on services and components susceptible to higher rates of wear and tear or those nearing or having exceeded their designed service life. Special attention shall be given to thin structural members, members exposed to severe weathering conditions, components affected by leakage or seepage, and elements subjected to continuous water splashes.

The following items are of critical importance from the preventive maintenance point of view and shall be specifically inspected and attended to as indicated below:

i. Cleanliness of roofs, rainwater pipe inlets, khurras, tops of chajjas/sunshades, rainwater pipe outlets, plinth protection, and surface drains at least twice in a year and invariably before the onset of monsoon.
ii. Cracks in Gola portions and at the top of parapet walls.
iii. Cleanliness and condition of waterproofing treatment on mumty roofs.
iv. Leakage from overhead/terrace water tanks.
v. Damage to waterproofing systems due to installation of services on roofs such as dish antennas, solar panels, or due to weed growth/vegetation.
vi. Cracks in grit plaster, spalling of concrete, loosening or debonding of stone cladding from the substrate, etc.
vii. Occurrence of leakage and seepage in walls, roofs, and service shafts.
viii. Corrosion/rusting of GI pipes and fittings leading to seepage or leakage and cracking of CPVC pipes.
ix. Inspection of service shafts for leakage and seepage.
x. Sagging or distress in false ceiling systems.
xi. Areas affected by termite infestation, including wooden members and fixtures.
xii. Periodic cleaning of manholes and sewer lines and checking to ensure that rainwater is not entering or mixing with sewer lines.
xiii. Identification and removal/replacement of damaged electrical cables and abandoned service lines.
xiv. Annual inspection of electrical installations including main panels, distribution boards (DBs), terminations, tightening of nuts and bolts of bus bars, and bus-trunking systems.
xv. Inspection and testing of fire-fighting and fire-detection services, particularly during hot weather conditions, and assessment of electrical load due to addition of new services.
xvi. Verification to ensure that unprotected or unsafe electrical heaters or appliances are not in use, as these may pose a potential fire hazard.

Preventive maintenance activities shall be planned and executed in a structured manner so as to minimize breakdowns, enhance service life of building assets, and ensure safety and uninterrupted use of the facility.

5. DAY TO DAY MAINTENANCE & REPAIR (M&R)

Day-to-day / Routine Maintenance & Repairs shall mean works of a petty and recurring nature that are required to be attended on an immediate and regular basis for keeping the building services and infrastructure in a functional and habitable condition. These shall include, but not be limited to, the following:

i. Removal of choke-ups in drainage pipes, manholes, and sewer lines.

ii. Restoration of water supply including rectification of leakages in taps, angle valves, pipe joints and overhead tanks; replacement of defective taps, angle valves, PVC pipes and fittings.

iii. Replacement/repair of waste pipes; replacement of damaged sanitary fittings and fixtures; provision of missing or damaged manhole covers and gully trap covers.

iv. Replacement of damaged portions of walls.

v. Replacement/repair of damaged floor tiles.

vi. Repair of doors and windows, including replacement of damaged hardware, glass panes, curtain rods, etc.

vii. Patch repairs to plaster work (area not exceeding 2.5 sqm at any one location).

viii. Replacement of defective electrical switches, sockets, and drivers/chokes of fittings (excluding replacement of tube lights and lamps).

ix. Repair of ceiling and exhaust fans.

x. Replacement of damaged electrical wiring due to accidents or unforeseen circumstances.

xi. Horticulture and housekeeping related routine works such as watering of plants, lawn mowing, hedge cutting, sweeping and disposal of fallen leaves, etc.

xii. Any other minor works of routine nature necessary for maintaining the building and services in proper working condition.

6. ANNUAL REPAIR

Annual Repairs shall comprise works of a periodic and routine nature required for upkeep of buildings and services, such as whitewashing, colour washing, distempering, painting, etc. These works are generally planned and executed through the contract system and are undertaken at prescribed intervals to maintain the functional and aesthetic condition of the assets.

The scope of Annual Repair Works shall include, but not be limited to, the following:

i. Periodicity of various items of annual repairs shall be as prescribed in **Annexure-10-*(Page 19).*** of the Technical Circular.

ii. Patch repairs to plaster work involving areas exceeding 2.5 sqm at any one location.

iii. Minor repairs to building and service components such as replacement of damaged soil/waste pipe stacks and re-plastering of service shafts.

iv. Horticulture-related works including gap filling of hedges and perennial beds, replacement/replanting of trees and shrubs, painting of tree guards, planting of annual beds, trimming, pruning, and allied activities.

v. Works of non-emergent and routine nature which are not required to be attended on an immediate basis and can be planned, clubbed, and executed for a group of buildings/houses during a specific period of the financial year, depending upon administrative and site exigencies. Such works, if required, may also be attended under day-to-day repairs.

Guidelines for preparation of annual maintenance estimates for horticulture works shall be as laid down in **Annexure-18** of the Technical Circular. Planning and execution of Annual Repair Works shall strictly adhere to the prescribed provisions, periodicity, and financial norms to ensure effective maintenance and optimal utilization of funds.

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7. SPECIAL REPAIR

With the passage of time, buildings and their services undergo deterioration due to normal wear and tear, making major repairs and replacement of components inevitable. Special repairs are undertaken to arrest further deterioration, ensure safety of the structure and services, and restore the building to its original functional condition, as far as practicable ***(Annexure-Page 19).***

Special repairs are generally of the following two categories:

i. Periodic replacement of building components after completion of their service life.
ii. Major repairs arising out of excessive wear and tear or damage.

7A. Works generally covered under Special Repairs include:

i. Renewal/provision of waterproofing treatment to roofs.
ii. Repairs to internal roads and pavements.
iii. Replacement/renewal of flooring, skirting, dado, and plaster.
iv. Replacement of doors, windows, shutters, frames, and fittings.
v. Replacement of water supply and sanitary installations such as water tanks, WC cisterns, wash basins, sinks, and pipelines.
vi. Re-grassing of lawns/grass plots at prescribed intervals, with or without replacement of earth, as applicable.
vii. Replacement/replanting of hedges and shrubbery at specified intervals, including complete uprooting where required.
viii. Replacement of horticulture beds such as rose, perennial, and canna beds at their prescribed life cycles.
ix. Shifting of garden features within the building premises.
x. Replacement of electrical equipment and installations after expiry of their service life, as prescribed.
xi. Replacement of components shall be carried out only after detailed inspection and assessment confirming that the elements have outlived their useful life.

7B. Indicative service life of buildings under normal occupancy and maintenance:

i. Monumental buildings – 100 years
ii. RCC framed structures – 75 years
iii. Load-bearing structures – 55 years
iv. Semi-permanent structures – 30 years
v. Temporary structures – 5 years

(The above life spans are indicative and may vary depending upon location, usage, specifications, and level of maintenance.)

7C. Planning, Control, and Execution:

i. Annual yardsticks for Special Repairs for various types of buildings shall be as prescribed in the relevant Annexures and revised in accordance with the approved maintenance cost index.
ii. Estimated cost of Special Repairs shall normally remain within the prescribed yardstick.
iii. A condition survey of buildings shall be carried out at the beginning of each year to identify items requiring Special Repairs.

iv. Works relating to leakages and dampness shall be accorded priority and completed before the onset of monsoon.

v. Special Repairs to plastering, doors, windows, and flooring shall, as far as possible, be synchronized with Annual Repair works to avoid duplication of whitewashing/painting.

vi. Complaints requiring Special Repairs shall be properly recorded in the prescribed register.

7D. Register and Approval:

i. A separate register for Special Repairs shall be maintained in the prescribed format, with works classified under concrete, masonry, wood, steel, sanitary and water supply, waterproofing, Finishing/ Whitewashing, electrical works and Horticulture works.

ii. The necessity of Special Repairs shall be certified by the Executive Engineer, who shall record the same in the estimate prepared by the Junior/Assistant Engineer.

iii. Number of estimates shall be restricted to identified sub-heads to avoid fragmentation.

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8. EXTRA ORDINARY SPECIAL REPAIR

When the expenditure on Special Repairs proposed for a particular building exceeds the prescribed permissible yardstick, the work shall be classified as Extra-Ordinary Special Repairs, in accordance with the technical and financial guidelines of NESTS, Ministry of Tribal Affairs.

As per NESTS norms, expenditure on Special Repairs within the permissible yardstick may be sanctioned and incurred by the competent authority, subject to availability of funds and compliance with prescribed technical provisions. However, where the estimated cost exceeds the permissible yardstick, the proposal shall be treated as Extra-Ordinary Special Repairs and shall be processed with detailed technical justification, clearly bringing out the reasons for excess over the yardstick, such as structural distress, safety concerns, severe deterioration, or unforeseen site conditions.

Approval of Extra-Ordinary Special Repair estimates shall be obtained from the competent authority, NESTS. The scope of Extra-Ordinary Special Repairs shall be strictly restricted to works necessary for restoring the building to its original safe, functional, and habitable condition, without any addition, upgradation, or enhancement of specifications.

It shall be ensured that:

- The necessity of Extra-Ordinary Special Repairs is supported by detailed condition assessment/inspection reports, photographs, and technical justification.
- The number of such estimates is kept to the minimum, avoiding fragmentation of works.
- Expenditure is incurred only to the extent essential for structural safety and serviceability.
- Availability of funds under the relevant head is clearly certified.

The planning, sanction, and execution of Extra-Ordinary Special Repair works shall be carried out strictly in accordance with the technical guidelines issued by NESTS the approved yardsticks, and the applicable financial delegation and procurement procedures, ensuring transparency, technical soundness, and optimal utilization of funds.

9. ADDITION/ALTERNATION AND UP-GRADATION

9A. General

- Additions and alterations shall be carried out only after obtaining approved drawings and Prior approval of the Competent Authority, NESTS.
- No increase in FSI (Floor Space Index)/FAR (Floor Space Ratio) shall be undertaken without approval of the competent authority.
- All such works shall be taken up only after obtaining Administrative Approval and Expenditure Sanction (A/A & E/S).
- Up-gradation works not involving increase in FSI/FAR, including rehabilitation/retrofitting works approved by NESTS or in case of deposit/authorized works, may be executed as per approved/standard architectural drawings.
- All works shall comply with Prescribed Manual Provisions and Applicable fire safety norms.
- No additions/alterations shall be carried out in EMRS buildings, except temporary prefabricated works for special security purposes, which shall be removed on vacation by the allottee.
- No addition or alteration shall be carried out in EMRS buildings beyond provisions permitted under NESTS guidelines/OMs, without written concurrence of the Competent Authority, NESTS.

Note: *FSI and FSR are used interchangeably and indicate the ratio of the total built-up area to the plot area, as per applicable building bye-laws.*

9B. Addition / Alteration Works in Residential and Office Buildings:

- EMRSs buildings under NESTS are designed as per approved plinth area norms.
- No addition or alteration in plinth area will be carried out without approval of the Competent Authority, NESTS.
- Additions or alterations not covered under approved up-gradation norms will be carried out only with explicit approval of the Architect / Senior Architect / Chief Architect.

9C. Up-gradation Works

- Up-gradation works will be carried out strictly as per guidelines issued by NESTS from time to time.
- Records of upgraded items shall be maintained category-wise, both online and offline.
- Once a building or block is upgraded, no further up-gradation shall be undertaken without prior approval of the Competent Authority, NESTS.
- Where a single tender includes repair and up-gradation works, expenditure shall be booked under their respective heads of account.

9D. Energy Efficiency Measures

- Energy efficiency measures such as installation of LED lighting, energy-efficient fans and air conditioners, and solar rooftop systems shall be implemented as per directions issued from time to time.
- Replacement of conventional lighting with LED lighting is mandatory in all buildings.
- Air-conditioner temperature settings shall not be below 24°C in Government offices, in compliance with energy conservation guidelines.

10. COMPREHENSIVE MAINTENANCE

Comprehensive Maintenance shall be executed through an outsourced agency. The scope may include operation of service centres for receipt and monitoring of complaints, day-to-day maintenance, Annual Repairs, Special Repairs, housekeeping, security of vacant quarters/open areas, and operation and maintenance of facilities such as STP/organic waste converters, covering civil, electrical, and horticulture works.

The Competent Authority shall finalize the broad scope and sub-heads of Comprehensive Maintenance. Normally, up-gradation works shall not form part of Comprehensive Maintenance. However, considering site-specific conditions such as remoteness, small quantum of work, or operational exigencies, the Competent Authority may permit inclusion of such works in the Comprehensive Maintenance tender.

Scope of Outsourced Works:

10A. Day-to-Day Maintenance

- The agency shall deploy adequately trained manpower for day-to-day maintenance under the supervision of supervisors/engineers.
- Complaints shall be received through the prescribed complaint management systems and assigned to the Agency/Contractor, with complete records maintained as per agreement conditions.
- A detailed list of items covered under day-to-day maintenance shall be clearly defined and included in the tender.
- Manpower requirement shall be assessed based on prescribed maintenance yardsticks and rounded off to the nearest whole number for provisioning.

10B. Special Repairs

- Special Repairs shall be provided as separate sub-heads, with items of work clearly enumerated.
- Quantities shall be assessed based on execution data of previous years and the nature and volume of complaints received.

10C. Annual Repairs

- Annual Repair items such as whitewashing, painting, etc., shall be included as a distinct sub-head.
- Quantities shall be assessed as per the prescribed yardsticks applicable to the buildings.

10D. Up-gradation Works

- Up-gradation items, where permitted, shall be assessed based on the number of units upgraded in previous years.
- Up-gradation norms shall be strictly as approved by NESTS.
- Proper records of upgraded units shall be maintained and reported to the competent authority in the prescribed manner.

Scope and Structuring of Comprehensive Maintenance Tenders:

- The approving authority may include additional sub-heads and conditions as required, based on site conditions and directions issued by NESTS from time to time.
- Time limits for attending complaints and execution of approved works, along with provisions for recovery/penalty in case of non-compliance by the agency, shall be clearly stipulated.
- The Competent Authority shall decide the structure and coverage of Comprehensive Maintenance tenders, which may be framed client-wise, head-wise, location-wise, or subdivision-wise, or in suitable combinations, based on proposals submitted by the Principal EMRSs.

11. HORTICULTURE MAINTENANCE

11A. Receipt, Recording, and Disposal of Complaints

- The system for receipt and disposal of horticulture complaints shall be the same as that followed for other disciplines.
- Complaints relating to horticulture, civil, and electrical works shall be received at NESTS from Principal EMRSs.
- The **Principal /or Its Representative** shall ensure collection of horticulture complaint of work from the allottees.
- Agency/Contractor shall report daily with their note-books to the **Principal /or Its Representative and** obtain assigned complaints, and submit compliance reports at the end of the day.
- ***(Annexure-Page 33 to 37).***

11B. Categorization of Horticulture Works

Horticulture maintenance works shall be categorized as:

a) Day-to-day maintenance
b) Annual / Periodical maintenance
c) Special Repairs

Details of the above categories are indicated in the prescribed Annexures.

11C. Norms and Yardsticks

- Yardsticks for deployment of horticulture workers shall be as per the prescribed Annexures.
- Provisions for maintenance of EMRSs buildings, open spaces, non-residential complexes, hedges, trees, and plantations shall be as per the applicable norms and shall also serve as a Check-list for Inspection.
- Specific provisions for EMRS Campus, as notified, shall be followed.

11D. Surveys and Inspections

- Periodic surveys and inspections shall be conducted by the **Principal /or Its Representative** to identify items requiring day-to-day maintenance, annual repairs, and special repairs.
- Inspections shall be carried out using the prescribed check-lists, and observations on actual work vis-à-vis requirements shall be recorded.
- Difficulties noticed during inspections shall also be documented for remedial action.

11E. Works Programming

- The **Principal /or Its Representative** shall assess and project irrigation water requirements to the concerned **Agency/Contractor** for making necessary arrangements such as tube-wells, pumps, and allied infrastructure.
- Efforts shall be made to utilize treated water through **Sewage Treatment Plants (STPs)** for horticulture purposes, wherever feasible.

- An **annual action plan** for horticulture works shall be prepared, reviewed periodically, and supported by estimates in the prescribed format by **Principal /or Its Representative**.
- Provisions for indoor plants, cut flowers, and floral decorations shall not form part of general maintenance and shall be taken up only on specific demand, based on separate estimates and availability of funds from the user department.

11F. Monitoring and Control

- Monitoring systems followed for civil and E&M works shall also apply to horticulture maintenance.
- This shall include daily abstraction of complaints, verification of compliance with reference to workers' note-books and registers, segregation of complaints requiring annual or special repairs, communication of time-frames to users, and routine inspections.
- Feedback mechanisms shall be developed and utilized for improving maintenance quality.
- Online complaint monitoring systems, as adopted by **NESTS**, shall be utilized.
- Regular meetings with **Principal /or Its Representative** shall be conducted, preferably in a combined manner, to address all categories of maintenance issues.

11G. Register of Special Repairs and Up-gradation Works

- A separate record shall be maintained for horticulture works executed under **Special Repairs and Up-gradation**, indicating details of trees, shrubs, plantations, and locations.

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12. ENCHROACHMENT

12.1. General

- Encroachments on government land or public premises shall not be allowed.
- Principal as custodian of EMRSs buildings and land, is responsible for preventing, detecting, reporting, and removing unauthorized constructions/encroachments within EMRS campus under its jurisdiction.
- NESTS will act on reports from Principal regarding encroachments by allottees in EMRS Premises.
- Principal is responsible for unauthorized constructions by allottee/non-allottees and encroachments in common areas.

12.2 Responsibility for Detection and Removal

- Detection, reporting, and removal of encroachments lie with custodian (Principal) authorities.
- Principal EMRS are personally responsible for encroachments in their jurisdiction.
- On transfer, outgoing officers must prepare a list of existing encroachments and record actions taken/proposed in their handover notes.

12.3 Procedure for action:

1. Principal EMRS shall verify ongoing construction against approved plans. Unauthorized works must be immediately stopped or demolished.
2. For encroachments within premises allotted by NESTS/Tribal Department/EMRS Society, a report shall be sent to NESTS/Tribal Department/EMRS Society and the DC for immediate action.
3. If encroachments persist, notices under the P.P. (Eviction & Unauthorized Occupation) Act, 1971 shall be issued, and FIRs lodged with police if necessary.
4. Principal EMRS shall coordinate with NESTS or local authorities for removal.

Note: Principal EMRS must act immediately upon noticing encroachments, regardless of whether they pre-existed or occurred during the officer's tenure. Police assist only for security during removal; demolition logistics are the responsibility of Authorities. Demolition squads of local bodies may be utilized when necessary.

12.4. Role of Local Bodies

- Local Authorities, and similar agencies monitor and prevent unauthorized constructions within their jurisdictions.
- Construction plans must be approved by local authorities before execution.

12.5 Government Instructions to Local Bodies

Local bodies shall:

1. Take immediate action to stop or demolish constructions without approved plans, coordinating with local police to maintain law and order.
2. Register FIRs and initiate prosecution against non-compliant encroachers.

3. Ensure protection of parks, green spaces, and public areas; remove temporary structures after their permitted use. Costs shall be recovered from the concerned party if removal is delayed.
4. Protect lands from future encroachments via fencing, inspections, or deployment of private security if necessary.
5. Prevent use of government land for garbage dumping or other unauthorized activities.

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13. ANNEXURES (CPWD M&R Manual)

Annexure 3

REGISTER OF SPECIAL REPAIRS

Special Repair Group.....

S. No.	Complaint No.	House No./ Locality	Location of Repairs	Approximate Quantity	Repairs required in			Schedule of Repairs
					Less than 15 days	Within 1 month	Within 3 months	
1	2	3	4	5	6	7	8	9

Annexure 4

REGISTER OF PERIODICAL REPAIRS/ AR & MO

S. No.	Complaint No.	House No./ Locality	Request regarding		Due/not Due	Date planned for the work	Date of intimation to allottee	Date of completion of work
			White washing/ Distempering, Fans cleaning, Surface Dressing of lawn Vegetation cleaning etc.	Door/ window Painting, Painting of Fans, D.B Open metal conduits etc.				
1	2	3	4	5	6	7	8	9

Annexure 5

YARD STICK OF WORK CHARGED STAFF

YARDSTICK FOR CIVIL WORK CHARGED STAFF (RESIDENTIAL BUILDINGS)

S. No.	Categories	Building Type	Year of Construction	Plinth area in Sq. ft.
1	2	3	4	5
1.	Mason	Type 1,7, 8 MP flats and Officers hostels Type 2-6	Pre 1947 construction Post 1947 construction Pre 1947 construction Post 1947 construction	3.00 lakhs 3.75 lakhs 3.75 lakhs 4.50 lakhs
2.	Carpenter	Type 1-3 Type 4-6 Type 7, 8, MP flats & Officers Hostel		4.50 lakhs 5.25 lakhs 3.75 lakhs
3.	Plumber	All types		4.50 lakhs* * This does not include additional workers on night duty in selected areas.
4.	Sewerman	Type 1-3 Type 4-8		4.50 lakhs@ 6.00 lakhs@ @ This does not include addl. workers on night duty and seasonal Labour for cleaning branch sewers

Notes:

(1) One Beldar for each Carpenter and one for each Mason. In addition the strength of Beldar should be 150% above what is worked out on the basis of Carpenters and Masons.

(2) Mate and Blacksmith - No Mate or Blacksmith should be employed for maintenance of buildings.

(3) Painter and Upholsterer - No yardstick is prescribed in respect of
   (i) Painter including Furniture Painter and
   (ii) Upholsterer.

(4) Caneman - No Caneman should be employed in any Division, except one in 'B' Division and two in Parliament Works Division for urgent and emergent works. Canning should normally be got done through blind men.

YARDSTICK FOR CIVIL WORK CHARGED STAFF (NON-RESIDENTIAL BUILDINGS)

S. No.	Category	Parliament House	Other Monumental bldgs. (Plinth Area in sq. ft.)	Hospitals	Other Public Buildings like Schools, Courts Airport Terminal bldgs. etc. (Plinth Area in sq. ft.)	Office Buildings
1	2	3	4	5	6	7
1.	Mason	1 No.	7.5 lakhs	2.4 lakhs (Pre 1947 constn.) 3.0 lakhs (Post 1947 constn.)	4.5 lakhs	4.5 lakhs

S. No.	Category	Parliament House	Other Monumental bldgs. (Plinth Area in sq. ft.)	Hospitals	Other Public Buildings like Schools, Courts Airport Terminal bldgs. etc. (Plinth Area in sq. ft.)	Office Buildings
1	2	3	4	5	6	7
2.	Carpenter	1 No.	11.25 lakhs	4.5 lakhs	4.5 lakhs	7.5 lakhs
3.	Plumber	1 No.	11.25 lakhs	4.5 lakhs	4.5 lakhs	5.4 lakhs
4.	Sewerman	1 No.	11.25 lakhs	4.5 lakhs	9.0 lakhs	9.0 lakhs
5.	Beldar	Twice the number of workers in the categories of Mason and Carpenter				

Notes:

(1) Requisitioned buildings, if used for office purposes may be clubbed with 'Office Buildings', but if used for other purposes such as hospitals, schools etc., these may be clubbed with the respective head.

(2) For outsourcing of comprehensive maintenance, yardsticks of number of workers shall be 75% for all type of buildings.

YARDSTICK FOR ELECTRICAL WORK CHARGED STAFF

Type of Buildings	One Wireman for No. of points	Ratio of Wireman to Khallasi	One Painter for no. of points
1	2	3	4
(I) Residential			
(1) Type I to IV Qrs.	3300	2:1	15000
(2) Type V & above, MPs residences	3300	2:1	15000
(3) VIP/Ministers' bungalow	3300	2:1	15000
(II) Non- Residential Buildings			
(1) Monumental bldg.	2000	2:1	10000
(2) Multi-storeyed bldgs	2000	2:1	10000
(3) Hospital & Laboratories	2000	2:1	10000
(4) Schools, Colleges, Single/Double Storeyed Offices/Hutments	3300	2:1	10000
(5) Press bldgs., & Workshop	2500	2:1	10000

For outsourcing of comprehensive maintenance, yardsticks of number of workers shall be 75% for all type of buildings.

YARD STICK FOR HORTICULTURE STAFF

A. MALI

Sl. No.	Type of Area	Norms (1 Mali for)
1	Hon'ble V P House, PM House, Ministers Houses, MPs Houses, Secretary level and above Govt. Officers Bungalows	3035 Sqm or 0.75 acre
2	Residential Flats and Govt. Officers Bungalow	5058 Sqm Or 1.25 acres

Sl. No.	Type of Area	Norms (1 Mali for)
3	Office accommodation	5058 Sqm Or 1.25 acres
4	Open spaces	3.00 acres
5	Play grounds	8094 Sqm Or 2.00 acres
6	Public Parks	8094 Sqm Or 2.00 acres
7	Prestigious offices, Samadhies , Kartavya Path, Buddha Jayanti Park, San Martin Park, DDU Park and Other equivalent parks having well developed garden features like lawns, hedge, topiaries, shrubs beds etc.	4047 Sqm. Or 1.00 acre
8A	♦ Hedge cutting (Normal Hedge) upto1.2 mtr. height	3000 m.
8B	♦ Hedge cutting (Normal Hedge) above 1.2 mtr. to 2.4 mtr height	2000 m.
8C	♦ Hedge Cutting (Designer Hedge/ Edge)	1500 m.
9A	Potted plants at Nursery	2000 Nos.
9B	Potted plants in Flats/Bungalow/Offices at ground level	750 Nos.
9C	Potted plants (Cement) at Nursery and display	300 Nos.
9D	Potted plants in multistoried Buildings	250 Nos.
10A	♦ Topiary upto 1.2 mtr. height	250 Nos.
10B	♦ Topiary above 1.2 mtr. height	200 Nos.
11	♦ Kitchen garden	1000 Sqm
12	Vertical Garden	100 Sqm
13	Trees	
13A	Upto 3 years	250 Nos.
13B	3 to 8 years age	500 Nos.
13C	Beyond 8 years age	1200 Nos.
14	Maintenance of Shrubs Plants	500 Nos.
15	Sweeping of Kartavya Path Garden area	1.50 Acre per Sweeper
16	Sweeping of Public Parks	1.50 Acre/Per Sweeper
17	♦ Supervisor/Chaudhary One Supervisor /Chaudhary over 18 Malis	

Annexure 6A

PERFORMA FOR CALCULATION OF MAINTENANCE COST INDEX

REPAIR COST INDEX FOR DELHI WITH 01/04/2019 RATES AS BASE 100

S. No.	Description of Item	Unit	Rate as on 01.04.2019 (a)	Weightage (b)	Rates Revision as on -- (c)	Repair Cost index as on-- (bxc/a)
1.	Aggregate 10 mm & 20 mm average	Cum	1400.00	4.00		
2.	Cement	quintal	503.00	9.50		
3.	Acrylic Washable Distemper	kg	50.00	17.00		
4.	Acrylic Emulsion Paint	Litre	220.00	7.00		
5.	Paint (Synthetic enamel)	Litre	160.00	17.50		
6.	Fine Sand	Cum	900.00	4.00		
7.	Timber (2nd class Teak and Salwood in scantling)	Cum	69550.00	9.50		
8.	Beldar	Per day	584.00	21.50		(X)
9.	Mason/ Fitter/ Carpenter/ Painter	Per day	710.00	10.00		(Y)
	Total			**100**		(Z)

Annexure 6B

SERVICE COST INDEX FOR DELHI WITH 01/04/2019 RATES AS BASE 100

S. No.	Description of Item	Unit	Weighted Average Rates of Work Charged Staff and Out Sourced Worker as per strength as on 01.04.2019 as base 100 (a)	Weightage (b)	Rates Revision as on -- (c)	Service Cost index as on-- (bxc)/(a)
1	2	3	4	5	6	7
1.	Workers (i) Beldar/Unskilled (a) Work Charged (b) Out Sourced (ii) Mason/Carpenter/ Skilled (a) Work Charged (b) Out Sourced	 Per day Per day	 1167 584 1400 710	 24 30		

S. No.	Description of Item	Unit	Weighted Average Rates of Work Charged Staff and Out Sourced Worker as per strength as on 01.04.2019 as base 100 (a)	Weightage (b)	Rates Revision as on -- (c)	Service Cost index as on-- (bxc) (a)
1	2	3	4	5	6	7
2.	Minimum Wages Mason/Carpenter/ Plumber /Skilled Beldar/Unskilled	Per day	710.00 584.00 1294.00 Avg = Rs.647.00	11.50		
3.	Materials		Material costing for repairs cost index excluding labour component (Z- (X+Y) converting to 100% $\frac{Z-(X+Y)x\ 100}{68.5} = P$	34.50	$\frac{PX34.50}{100}$	
	Total			**100**		

Note:-

(1) For work charged staff daily rates are average monthly salary/30 (as collected from field units)

(2) Minimum wages as on 01.04.2019 as per CLC notification no. 1/8(3)/2019/LS-II dated 27.03.2019

(3) Weighted Average Rates of Work Charged Staff and Outsourced Workers rates shall be considered in the proportion of Work Charged and Out Sourced Staff as the case may be for column No. 4.
For example if there are 80 Nos. Skilled Work Charged Staff @ Rs. 1400/- per day and 20 Nos. Out Sourced Skilled Worker @ Rs. 710/- per day. Then the weighted average rate shall be
= (80x1400+20x710)/100 = Rs. 1262/- per day.

Annexure 7

(A) INSPECTION OF BUILDINGS (CIVIL)

(a) House No. and Type : (b) Location :
(c) Date of Last Inspection : (d) Date of present inspection :

S. No.	Item No.	Needs Repair			Needs Replacement		Priority		
		Action	Quantity	Cost	Quantity	Cost	Immediate	Annual	Routine *Repairs*
1.	**Walls**								
1.1	Cracks								
1.2	Repair to plaster								
1.3	Repair to brick work								
1.4	Dampness								
2.	**Floors**								
2.1	Cracks								
2.2	Settlement								
2.3	Slopes								
2.4	Skirting cracks								
2.5	Dados cracks								
3.	**Doors, Windows, Ventilators & Cupboards**								
3.1	Glass panes broken								
3.2	Panels in shutters broken								
3.3	Panels fit improperly								
3.4	Improper/missing fittings								
3.4.1	Hinges								
3.4.2	Handles								
3.4.3	Tower Bolts								
3.4.4	Aldrops								
3.4.5	Floor door stopper								
3.4.6	Knobs								
3.4.7	Cleats								
3.4.8	Hooks & Eyes								
3.4.9	Curtain Rods								
3.4.10	Stays								
3.4.11	Pelmets								
4.	**Roofs**								
4.1	Leakages/Damp patches								
4.1	Water proofing treatment								
4.2	Golas								
4.3	Khurras								
4.4	Brick drip course								
4.5	Rain water pipe								
4.6	Regrading								
4.7	Top Layer of tiles								
4.8	Parapet, coping								
5.	**Water Supply & Sanitary fittings**								
5.1	Leakages in pipe joints								
5.2	Functioning of washers								
5.3	Functioning of traps in fittings								
5.4	Functioning of floor traps								

S. No.	Item No.	Needs Repair			Needs Replacement		Priority		
		Action	Quantity	Cost	Quantity	Cost	Immediate	Annual	Routine *Repairs*
5.5	Functioning of overhead/low level cistern								
5.6	Air Locking								
5.7	Leakages in pipe joints								
5.8	Condition of overhead tank								
5.9	Cleaning of overhead tank								
5.10	Fittings								
5.10.1	Washbasin								
5.10.2	Soap container								
5.10.3	Mirror								
5.10.4	Glass shelf								
5.10.5	Towel rail								
5.10.6	Hangers								
5.10.7	Sinks								
5.10.8	Taps								
5.10.9	Pillar cocks								
5.10.10	Showers								
5.10.11	Cisterns								
5.10.12	Ball valves								
5.10.13	Seat cover								
5.10.14	Steps								
6.	**External Services**								
6.1	Manhole covers								
6.2	Covers to gully traps								
6.3	Cleaning of manholes								
6.4	Plinth protection								
6.5	Cleaning of storm water drain								
6.6	Approach roads								
6.7	Service lanes								
7.	**Finishing**								
7.1	White washing/colour washing/distemper								
	(a) When was it done last?								
	(b) When is it due?								
	(c) Existing condition.								
7.2	Painting								
	(a) When was it done last?								
	(b) When is it due?								
	(c) Existing conditions								
8.	**Common Areas**								
8.1	Railing to staircase								
8.2	Staircase steps								
8.3	Staircase nosing								
8.4	Shafts								

(B) INSPECTION OF BUILDINGS (ELECTRICAL)

(a) House No. and Type : (b) Location :

(c) Date of Last Inspection : (d) Date of present inspection :

S. No.	Item No.	Needs Repair			Needs Replacement		Priority		
		Action	Quantity	Cost	Quantity	Cost	Immediate	Annual	Routine *Repairs*
1.	**Switch Boards**								
1.1	Regulator								
1.2	Switches								
1.3	Fixing of tiles								
2.	**Fans**								
2.1	Canopy fixing								
2.2	Speed and noise								
3.	**Socket outlet points and connection**								
3.1	Tile								
3.2	Switch								
3.3	Outlet connection if any								
4.	**Fittings**								
4.1	Reflector								
4.2	Louvers/perspex cover								
4.3	Suspension rod								
5.	**Exhaust Fans**								
5.1	Speed and noise								
5.2	Louvers								
5.3	Connecting wires i/c. ceiling rose								
6.	**Call bells**								
6.1	Bell push								
6.2	Connecting wire								
6.3	Ball Buzzer								
7.	**Sub distribution boards/ DB/Main Board**								
7.1	Switch covers								
7.2	Fuse Kit Kats								
7.3	Earth connection								
7.4	Fuse rating								
7.5	Inter connection								
7.6	Boards								
	(C) INSPECTION OF BUILDINGS/GARDENS								
(A)	**Lawn :**								
	(i) Weeding								
	(ii) Patch repair								
	(iii) Renovation								
	(iv) Regrassing								
(B)	**Hedge :**								
	(i) Gap filling								
	(ii) Replacement								
(C)	**Pruning & Trimming :**								
	(i) Naturally required pruning								
	(ii) Pruning required for security purpose of building as well as occupant								

S. No.	Item No.	Needs Repair			Needs Replacement		Priority		
		Action	Quantity	Cost	Quantity	Cost	Immediate	Annual	Routine *Repairs*
(D)	**Planting Beds :**								
	(i) Needs Replacement								
	(ii) Gap filling								
(E)	**U/F Water Supply:**								
	(i) Matter to be reported to U/F Water Division after inspection.								
(F)	**Rockeries :**								
	(i) Gap filling of dead one								
	(ii) Replacement of damaged, weak								
	(iii) Replacement of stones								
	(iv) Thinning, trimming								
	(v) Redesigning of paths, Maintenance of paths								
(G)	**Kitchen Garden:**								
	(i) Change in site								
	(ii) Plan for planting of vegetables								
(H)	**Road Side Plantation :**								
	(i) Gap filling Nos.								
	(ii) Trimming, pruning								
	(iii) Tree Guards not required & to be removed/repair/painting etc.								
	(iv) Proposal for new plantation, Digging of holes etc.								
	(v) Misc.								
	(vi) MOU-Detailed report(performance & financial achievements)								

Annexure 10

Maintenance Norms/Frequency of Application of Finishing Items and Useful Life of Finishing Civil Items

A. Maintenance Norms/Frequency of Application of Finishing Items

S.No.	Item	Perodicity				
		Residential Bldg.	Office Bldg.	Hospitals	Laboratories	Schools
1	2	3	4	5	6	7
A.	Civil					
1.	Painting with plastic/Acrylic Emulsion paint, Acrylic Synthetic enamel paint, Oil bound distemper etc.	4 years	3 years	1 year Corridor O.T. Rooms 2 Years – Other areas	2 years	2 years
2.	Painting external surface with exterior emulsion or equivalent paint.	5 years	5 years	5 years	5 years	5 years
3.	Painting external surface with water proofing cement paint.	3 years	3 years	3 years	3 years	3 years
4.	Cleaning and disinfecting of water storage/distribution tanks, water mains.	6 months	6 months	3 months	3 months	6 months
5.	Cleaning of Manholes/Gully chambers and flushing of building sewers.	1 year	1 year	6 months	1 year	1 year
6.	Cleaning of storm water drains.	1 year	1 year	1 year	1 year	1 year
7.	Polishing wooden doors/windows with spirit polish/synthetic acrylic polish.	3 years	3 years	2 years	2 years	2 years
8.	Cleaning and tightening of terminals of DBs, electrical panel etc.	1 year	1 year	1 year	1 year	1 year
9.	Premix, semi dense/dense carpeting of roads.	5 years	5 years	5 years	5 years	5 years
10.	Collection of water samples for physical, chemical and bacteriological analysis of water.	6 months	6 months	3 months	3 months	6 months
11.	Cleaning & Checking of fans (checking of quarter pin, nut bolts, rubber reel, bearing etc.)	1 year	1 year	1 year	1 year	1 year
12.	Checking of Floats of overhead water tanks	1 month	1 month	1 month	1 month	1 month
13.	Earthing pit checking and earth testing	1 year	1 year	1 year	1 year	1 year
14.	Checking of Lightening arrestor	1 year	1 year	1 year	1 year	1 year

Note: Painting work will be done after expiry of the above mentioned period or change of tenancy whichever is earlier.

B. Expected Useful Life of Finishing Civil Items

Sl. No.	Description of Item	Life in Years
1.	Bathroom:	
	(i) Wall tiles	(i) 10 Years
	(ii) Floor tiles	(ii) 10 Years
	(iii) CP Fittings	(iii) 07 Years
	(iv) Bathroom fixtures	(iv) 07 Years
	(v) PVC Bathroom fittings	(v) 05 Years
2.	Kitchen	
	(i) Kitchen Cabinet	(i) 10 Years
	(ii) SS Wire Baskets	(ii) 10 Years
	(iii) Granite Stone	(iii) 15 Years
3.	Floor Tiles	10 Years
4.	Wooden Flooring	
	(i) Laminate/Engineered	(i) 10 Years
	(ii) Hard Wood Flooring	(ii) 20 Years
5.	Doors & Windows (Wooden, Aluminum & UPVC)	20 Years
6.	Cupboard/Wardrobe	10 Years
7.	External Pavement Tiles	10 Years
8.	Jali	
	(i) CC	(i) 10 Years
	(ii) GRC	(ii) 15 Years
	(iii) IRC fabric	(iii) 10 Years
9.	Temporary security fixtures/Bison board panels/ false ceiling	10 Years
10.	PGI sheet	15 Years

Annexure 11

CHECK LIST/NORMS FOR HORTICULTURE MAINTENANCE

Hon'ble VP House, PM House, Ministers Houses, MPs Houses, Secretary level and above Government Officers Bungalow

No.	Item of work	Nos./Qty./Frequency Required	Nos./Qty./Frequency Actually done	Comments of Inspection Officer
1	Irrigation	As per requirement		
2	(i) Manuring (ii) Fertilization	Seasonal in winter in summer and rainy season- As per requirement		
3	Lawn Mowing Summer Winter Rains	 Fortnightly Monthly Weekly		
4	Plant Protection	Need Based		
5	Pruning & Trimming of Trees/Shrubs Creepers etc.	Yearly/Need base with the permission of Forest department		
6	Cultivation & Weeding	As and when required		
7	Seasonal Plants Winter Summer Rains	 Need Based Need Based Need Based		
8	Top dressing with soil & /or manure	Once in a year and it can be done twice in a year as per site requirement		
9	Repair & replacement of plants, leveling etc.	As and when required		
10	Hedges Cutting Summer Rains Winter	 Fortnightly Fortnightly Monthly		
11	Any other item (Hort., Civil, Elect., U/F water supply) required for proper maintenance	On need basis		

No.	Item of work	Nos./Qty./Frequency Required	Nos./Qty./Frequency Actually done	Comments of Inspection Officer
12	Outdoor potted plants	Need based		
13	Indoor potted plants & planters	Need based		
14	Planter beds	Need based		
15	Ground cover as part of grass	Need based		
16	Kitchen garden	Need Based		
17	Floral Arrangement	Need Based		
18	Special requirement	Need Based		
	FOR TYPE V AND ABOVE FLATS DI, DII, CI, CII FLATS			
No.	**Item of work**	**Nos./Qty./Frequency Required**	**Nos./Qty./ Frequency Actually done**	**Comments of Inspection Officer**
1.	Irrigation	As per requirement		
2.	(i) Manuring (ii) Fertilization	Once in a year in winter - as per requirement in summer and rainy season- as per requirement		
3	Lawn Mowing Summer Winter Rains	 Fortnightly Monthly Weekly		
4	Plant Protection	Need Based		
5	Pruning & Trimming of Trees/Shrubs Creepers etc.	Yearly/Need base with the permission of Forest department		
6	Cultivation & Weeding	As and when required		
7	Seasonal Plants Summer Winter Rains	 Need Based Need Based Need Based		
8	Ground Covers	Need Based		
9	Top dressing with soil & / or manure	Yearly		

No.	Item of work	Nos./Qty./Frequency Required	Nos./Qty./ Frequency Actually done	Comments of Inspection Officer
10	Repair & replacement of plants	As and when required		
11	Hedges Cutting Summer Rains Winter	 Fortnightly Fortnightly Monthly		
12	Outdoor/Indoor potted plants	Need based		
13	Any other item (Hort., Civil, Elect., U/F water supply) required for proper maintenance	On need basis		

FOR RESIDENTIAL COLONIES TYPE IV INDIVIDUAL GARDENS ATTACHED TO FLAT

No.	Item of work	Nos./Qty./Frequency Required	Nos./Qty./ Frequency Actually done	Comments of Inspection Officer
1	Irrigation	On visit of Mali		
2	(i) Manuring (ii) Fertilization	Once in a year in winter in summer and rainy season- As per requirement		
3	Lawn Mowing Summer Winter Rains	 Monthly Monthly Monthly		
4	Plant Protection	Need Based		
5	Pruning & Trimming of Trees/Shrubs, Creepers etc.	Yearly/Need base with the permission of Forest department		
6	Cultivation & Weeding	As and when required		
7	Top dressing with soil & /or manure	Yearly		
8	Repair & replacement of plants	As and when required		

No.	Item of work	Nos./Qty./Frequency Required	Nos./Qty./ Frequency Actually done	Comments of Inspection Officer
9	Hedges Cutting Summer Rains Winter	 Fortnightly Fortnightly Monthly		
10	Indoor and Outdoor potted plants	Need Based		
11	Seasonal potted Plants	Need Based		
12	Seasonal Plants in flower beds	Need Based		
13	Any other item (Hort., Civil, Elect., U/F water supply) required for proper maintenance	On need basis		
	FOR RESIDENTIAL COLONIES TYPE I to III INDIVIDUAL GARDENS			
No.	**Item of work**	**Nos./Qty./Frequency Required**	**Nos./Qty./ Frequency Actually done**	**Comments of Inspection Officer**
1	Pruning & Trimming of Trees/Shrubs Creepers Etc.	Yearly/Need base with the permission of Forest department		
2	Hedges Cutting Summer Rains Winter	 Monthly Monthly Monthly		
3	Repair & replacement of plants	As and when required		
4	Any other item (Hort., Civil, Elect.) required for proper maintenance	On need basis		

FOR PARKS				
No.	**Item of work**	**Nos./Qty./Frequency Required**	**Nos./Qty./ Frequency Actually done**	**Comments of Inspection Officer**
1	Irrigation	As per requirement		
2	(i) Manuring (ii) Fertilization	Once in a year in winter in summer and rainy season- As per requirement		
3	Lawn Mowing Summer Winter Rains	 Weekly Fortnightly Weekly		
4	Plant Protection	Need Based		
5	Pruning & Trimming of Trees/Shrubs Creepers etc.	Yearly/Need base with the permission of Forest department		
6	Cultivation & Weeding	As and when required		
7	Seasonal Plants Winter Summer Rains	 Need Based Need Based Need Based		
8	Top dressing with soil & /or manure	Yearly or as and when required		
9	Repair & replacement of plants	As and when required		
10	Hedges Cutting Summer Rains Winter	 Fortnightly Fortnightly Monthly		
11	Ground covers	Need based		
12	Planter beds	Need based		
13	Annual plantation under Van Mahotsav/Green Action Drive	Once in a year (in monsoon)		
14	Any other item (Hort., Civil, Elect., U/F water supply). required for proper maintenance	On need basis		

Annexure 15

USEFUL LIFE OF VARIOUS ELECTRICAL EQUIPMENTS / INSTALLATIONS ETC.

Sl. No.	Description of Equipment/ Installation	Life in years
1.	2	3
A.	**Wiring of Electrical Installations**	
1	Conduit wiring non-coastal area	20
2.	Conduit wiring coastal area	15
3.	MS Pole	20
4.	GI Pole	25
5.	Outdoor luminaries	7
6.	Indoor luminaries	5
B.	**Fans**	
1.	Ceiling Fan AC	15
2.	Exhaust Fan AC	6
C.	**External Electrical Lines**	
1.	Permanent overhead line on steel / RCC poles	20
2.	Underground Cable Lines	20
D.	**Substation Equipment**	
1.	Switch gear LT/HT	20
2	Transformers	25
3.	Servo voltage stabilizer	10
E .	**Lifts**	
1.	Electric Lifts residential complex	15
2.	Electric Lifts Office building	20
3.	Hospital Lifts	15
4.	Escalators	15
F.	**Electric Motors and Pumps**	
1.	Electric Motors three phase	15
2.	(Diesel) Engine pump upto 10 H.P	10
3.	(Diesel) Engine pump above 10 H.P.	12
4.	Storm water pump	7
5.	Water supply Pump(Centrifugal)	10
6.	Sewage Pump	5
7.	Diesel Generator set upto 50 KW	12
8.	Diesel Generator set above 50 KW	15
G.	**Refrigerators, Coolers & Air Conditioners**	
1.	Refrigerators	6
2.	Cold storage plant with air-cooled condensing unit	8

Sl. No.	Description of Equipment/ Installation	Life in years
1.	2	3
3.	Desert Coolers (1500-2000 cfm) (Evaporative type)	4
4.	Water Coolers	5
5.	Window type / Split type Air-conditioning units with air cooled condensers	7
6.	Packaged type Air-conditioning units / VRV System with water cooled condensers	10
7.	Packaged type Air-conditioning units / VRV System with air cooled condensers	8
8.	Central chilled water system of air-conditioning plant with water cooled condensers	20
9.	Evaporative type air-cooling plant (upto 25,000 cfm.)	10
H.	**Mechanical Machinery**	
1.	Boilers	15
2.	Incinerator	15
I.	**Transport**	
1.	Motor Car (Diesel/CNG)	10 or 2 lakh kilometre whichever is earlier
2.	Motor Car (Petrol)	15 or 2 lakh kilometre whichever is earlier
J.	**Fire Alarm/ Fire Fighting Equipment**	
1.	Fire Alarm System	15
2.	Water bases wet riser / sprinkler system	20
K.	**Electronic Equipment**	
1.	**EPABX System**	7
2.	**Server/ Computer and accessories**	7
3.	**CCTV**	7
4.	**Solar PV Panel**	25

Annexure 17

LIFE SPAN OF FURNITURE ARTICLES

S.No.	Type & Name of the item	Life	Remarks
A	**DURABLE**		
I	**Heavier**		
1	Sofa Set	15 yrs.	
2	Dining Table	15 yrs.	
3	Almirah	15 yrs.	
4	Beds	15 yrs.	
5	Dressing Table	15 yrs.	
6	Side Board	15 yrs.	
7	Chest or Drawers	15 yrs.	
8	Central table	15 yrs.	
9	Book case	15 yrs.	
10	Writing table	15 yrs.	
11	Easy Chair	15 yrs.	
12	Santry Box	15 yrs.	
II	**Lighter**		
13	Chairs	10 yrs.	
14	Cabinets	10 yrs.	
15	Framed mirror	10 yrs.	
16	Peg Table	10 yrs.	
17	Stools	10 yrs.	
18	Tepoy	10 yrs.	
B	**NON-DURABLE**		
19	Grass matting	2 yrs.	At the time of change of occupancy or once in two years whichever is earlier.
20	Chicks	2 yrs.	-do-
21	Coir mattress	2 yrs.	-do-
22	Jute mattress	2 yrs.	-do-
23	Tepoy	2 yrs.	-do-
24	Cotton Durries	5 yrs.	Re-dying as described at least once in three years or change of occupancy at the time of use whichever is earlier.
25	Cotton Durries	5 yrs.	-do-
26	Cane Garden Chairs	2 years	
27	Dust bin	2 years	
28	Bath tubs	2 years	

S.No.	Type & Name of the item	Life	Remarks
29	Folding beds	2 years	
30	Foam mattresses	5 years	Change of tapestry as described or after 2½ years whichever is earlier.
31	Foam Cushion	5 years	Change of tapestry as described or after 2½ years which ever is earlier.
32	Cotton mattresses	5 years	Regular maintenance includes change of cloth in between as described.
33	Curtains	5 years	It may be considered whether it could be made concurrent with term of Lok Sabha / Tenure of the member of LS/RS.
34	Woollen carpets	10 years	
C	**UPHOLSTRY**		
35	Sofa sets	3 years	
D	**DRY CLEANING**		
36	Sofa		At the time of change of occupancy or once in a year whichever is earlier.
37	Sofa chair		-do-
38	Dining Chairs		At the time of change of occupancy or once in six months whichever is earlier.
39	Cotton Durries		At the time of change of occupancy or once in a year
40	Curtains		At the time of change of occupancy or once in six months whichever is earlier.
E	**PAINTING**		
41	Cane garden chairs		-do-
42	Tepoy		-do-
F	**POLISHING**		
43	Polishing		At the time of change of occupancy or once in 2 years which ever is earlier.

Annexure 18

GUIDELINES FOR VARIOUS PROVISIONS TO PREPARE ANNUAL MAINTENANCE ESTIMATES FOR HORTICULTURE WORKS

1	Sludge Manure/ Cattle Manure For HORs, GOBs, Type I to VI flats, Samadhis, Offices, Hospitals, Prestigious works, playground etc.	0.003 cum per sqm. Over the surface i.e 4000 x 0.003 per cum =12 cum per acre.
2	Good Earth: For HORs, GOBs, Type I to VI flats, Samadhis, Offices, hospitals, Prestigious works, playground etc.	0.003 cum per sqm over the surface i.e.4000 x 0.003 per cum = 12 cum per acre.
3	Fertilizers: For HORs, GOBs, Type I to VIII flats, Samadhis, Offices, hospitals, Prestigious works, playground etc.	A) N.P.K. @ 100kgs per acre/year B) Organic Manure, (mixture of manure, Oil cakes, Bone meal, Vermi Compost , Organic Compost, etc. as per specified proportion based on soil test report to be done annually)
4	Guidelines for Road side plantation Materials required Manure/Sludge/Cow dung Concentrated Organic Manure (Two applications)	 @ 5 cum for 100 trees @ 5 cum for 1200 shrubs @ 2 Quintal for 100 trees @ 2 quintal for 200 shrubs
5	Trees & Shrubs required for mortality replacement 1st 3 Years of plantation Beyond 3 years of plantation	 25% of the total plantation 10% of the total plantation
6	Replacement of Cement pots	20% of the total pots

14.CONCLUSION

Maintenance and repair are essential for ensuring the safety, durability, and overall performance of any structure. Regular inspections help in the early detection of defects, thereby reducing the extent of damage and minimizing repair costs. Timely maintenance prevents deterioration and protects the structure from major failures. Proper repair techniques, along with the use of suitable materials and good workmanship, help restore the strength, stability, and serviceability of damaged components.

In addition to structural benefits, maintenance improves the appearance and condition of the building, enhancing user safety, comfort, and confidence. Preventive maintenance is always more effective and economical than undertaking major repair works at a later stage. Continuous monitoring of structural, electrical, and plumbing systems ensures smooth and uninterrupted functioning.

A systematic approach to maintenance, supported by proper planning and documentation, significantly increases the lifespan of the structure. Overall, effective maintenance and repair practices contribute to long-term sustainability, safety, and value, ensuring that the structure performs efficiently throughout its intended life cycle.

EKLAVYA MODEL RESIDENTIAL SCHOOL
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NESTS-MINISTRY OF TRIBAL AFFAIRS