

BYELAWS RESIDENTIAL





ACKNOWLEDGMENT

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Following team of professionals from Technical Branch DHAP have dedicated their efforts in successful completion of Development and Construction Byelaws 2019 for DHAP.

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LIST OF ABBREVIATIONS

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Preliminary Chapter 1

DHA, PESHAWAR NOTIFICATION

No 5/ DHAP/ TP & BC/ 2019 – In exercise of the Powers conferred under Section 8 read with Section 22 of the Defence housing Authority Peshawar Act of 2009, the Defence Housing Authority is pleased to frame the following regulations Dated ____/July/2019 vide Special Executive Board Meeting, namely: -

The DHAP (Construction & Development) Regulations of 2019.

- **1.** Short title, Commencement and Scope:
 - These regulations may be called the Defence Housing Authority (Construction & Development) Regulations No 5 of 2019.
- **2.** They shall come into force at once.
- **3**. Same as otherwise provided in the Act, these regulations shall relate to the carrying out the additions to, or alterations in, or demolition of the existing buildings, or erection or re-erection of new buildings, town planning and Security parameters to be followed in Pakistan Defence Housing Authority Peshawar (DHAP).
- **4. Application:** These regulations shall have an optimistic impact on people living within the jurisdiction of DHAP Authorities.
 - a. Any member who intends to construct /carry out building works in DHAP Authorities shall strictly comply with the requirements of these Regulations.
 - **b.** Defaulting members are liable to disconnection of services and financial penalties.
 - **c.** The plot shall be strictly utilized for the purpose it has been allotted. NO DEVIATION SHALL BE PERMITTED.
 - **d.** Every member, within the limits of DHAP, intending to erect or reerect a building, carry out addition or alteration to existing building or demolish the existing building, shall comply with the requirements of these Regulations.
- 5. Interpretation of Regulations: In case of any ambiguity in interpretation of

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these Regulations, DHAP reserves the right to deliver/ implement the interpreted contents of these Regulations.

- **6. Modification/Amendments:** These Regulations shall be reviewed periodically and necessary amendments shall be incorporated as deemed appropriate by the DHAP Authorities from time to time.
- **7. Exemptions:** Application of these Regulations may be relaxed for buildings erected by or on behalf of the Government/ Semi Government bodies and DHAP, provided they are sound with respect to engineering, town planning and civic aspects.

1. Definitions: In these Regulations, unless there is anything repugnant in the subject or context: -

- **2.** "Addition": The addition of any unit or part or structure to any building or structure constructed in accordance with these Regulations.
- **3.** "**Alteration**": Any change made after the approval of building plan without affecting or violating any provision of these Regulations.
- **4.** "Amalgamation": The joining of two or more adjoining plots into a single plot in accordance with these Regulations.
- **5.** "Amenity Plot": A non-leasable plot allocated exclusively for the purpose of amenity such as worship places, burial grounds and recreational areas (parks and play grounds).
- **6.** "Ancillary Building": A building subservient to the principal building on the same plot e.g. servant quarters, garages and guardroom etc.
- **7.** "**Apartment**": An independent residential unit in a building consisting of at least one bedroom, a living room, a bathroom and a kitchen.
- **8.** "**Approved**": Approved in writing by the DHAP Authorities.
- **9.** "**Arcade**": A covered walk-way or a veranda between the shops and the road or street on which the shops abut.
- **10** "Architect": A person or a firm registered with Pakistan Council of Architects and Town Planners (PCATP) as an Architect or as an Architectural Firm.
- **11.** "Architectural Plan": A plan showing the arrangements of proposed building works, including floor plans, elevations and sections, in accordance with the requirements of these Regulations.
- **12.** "Area": The area of jurisdiction of DHA Peshawar as shown in the Master Plan of DHA Peshawar & including any extension or modification effected therein, from time to time.

13. "Attached Building": A building which is joined to another building on one or more sides.

- **14. "Authority"** means the Defence Housing Authority Peshawar established under "The Defence Housing Authority Peshawar Act, 2009 [(Khyber Pakhtunkhwa) Act No. of 2009]
- **15.** "Balcony": A roof or platform projection from the walls of the building surrounded with a railing or parapet walls.
- **16.** "Basement": Portion of the building partly or wholly below natural ground level or approach road level.
- **17.** "Bathroom": A bathroom is a room for personal hygiene activities, generally containing at minimum a toilet, sink, bathtub or tray and mirror.
- **18.** "Building Line": A line up to which any part of a building from its lowest level, including any and all foundations, or other structure, abutting on a public street or a road, planned future public street, may extend, provided always that such line is within the property line of such building or cut line as provided in these Regulations of such plots.
- **19.** "Building": A house, outhouse, stable, latrine, shed but or other roofed structure whether of masonry, brick, wood, metal or other material and any part thereof, and includes a wall (other than a boundary wall not exceeding ten feet in height and not abutting on a street) but does not include a tent or other portable and temporary shelters.
- **20.** "Building Plans": The plans showing the proposed details of the arrangements of intended building works within the property line.
- **21.** "Building Works": Site excavation, erection or re-erection of a building or making addition/alteration to existing building.
- **22.** "Byelaw (DHAP)": A set of laws essentially required to regulate, all types of Development and Construction activities within legal bounds of DHAP, to be implemented by all persons and DHAP Authorities.

23. "Carpet Area": The net floor area within a habitable, rent-able or saleable unit excluding the area of peripheral walls but including the area of internal walls and columns.

- **24.** "Car Porch": A shelter or a shed for a car/vehicle, which is permanently open on at least two sides. Car porch having height not more than eight feet from floor to ceiling of the porch is a Low Car porch.
- **25.** "Commercial Area and Corporate Bay": These are zones in DHAP, which are the hub for all business & commercial, office, retail, residential, leisure & recreational activities.
- **26.** "Commercial Building / Plot": A building / plot where retail & office activities (including shops, Shopping Malls / Centers, show-rooms, stores / godowns, ware-houses, hotels, clubs, cinemas, petrol / gas filling stations) are allowed and no residential activity is allowed except bachelor room accommodation for the guard.
- **27.** "Commercial Mixed-use Building / Plot": A building / plot constructed for combination of commercial and residential usage in which on ground floor & basement, retail / commercial activity is allowed whereas on upper floors, only residential accommodation (apartments /pent house) are allowed.
- **28.** "Community Area": It is the area which consists of different amenities as well as commercial and mix use buildings to serve surrounding population of neighborhood.
- **29.** "Competent Authority": President Executive Board / Administrator of DHA Peshawar or any other officer empowered by the Authority to

approve (new, revised, addition etc.) and cancellation of the plans and to control all aspects of building activities in DHAP.

- **30.** "Completion Plan": An "As Built Plan" submitted to the Board for the purposes of obtaining approval and occupancy certificate.
- 31. "Compulsory Open Space (COS)": Minimum part of a plot which is to be left

completely and compulsorily open to sky under the Regulations, over which no structure or any integral part of the building shall be permitted except ramp downward, permissible projections, basement, steps, septic tanks, soakage pits, water reservoirs and lines for sewage, water, electricity, gas, telephone etc., or those structures required by civic agencies such as electric sub-station permitted in these Regulations.

- **32.** "Corner Plot": A plot situated on minimum two vehicular streets and will have chamfer as per these Regulations.
- **33.** "Covered Area" (for the purpose of determining the floor area): The sum of the gross horizontal areas of the floor/floors, including verandas, 25 percent of the area covered by pergolas, but excluding shades/projections (not exceeding the maximum permissible limits).
- **34. Cultural Zone / Area**": It is designated area for cultural, amusement & entrainment activities such as recreation, educational studios for culture & art development / performance, theatres, cinemas, clubs, cafes, libraries, museums, exhibition halls, etc.
- **35.** "**DHAP**": Defence Housing Authority Peshawar.
- **36.** "Detached Building": A building not joined to another building on any side.
- **37.** "**Downtown**": It is an area consisting of public institutions with an administrative, cultural, educational and commercial character. Dividing the first unit from the other at all levels with separate entrances / gates is called a Duplex.
- **38.** "Duplex": Two identical residential housing units existing under the same roof with a common wall
- **39.** "Efficient Energy Use": To reduce the amount of energy required to provide products and services.
- **40.** "**Ekistics**": A science with human settlements including regional, city, community planning and dwelling design. The study involves every kind of human settlement with particular attention to geography, ecology, human psychology,

anthropology, culture, politics and occasionally aesthetics. Drawing on the research and experience of professionals in various fields such as architecture, engineering, city planning and sociology.

- **41** "Engineer": A person currently registered with Pakistan Engineering Council (PEC) as an engineer.
- **42.** "Erection of Building": Construction of building in defined premises/boundaries which may include the structural alterations for making any additions to an existing building.
- **43.** "Existing Building": A building existing on the date of the commencement of the plan.
- **44.** "External Wall": Any outer wall of a building abutting on an external or internal open space on adjoining property lines.
- **45.** "Extra Land": Any additional piece of land existing adjacent to any type of Plot will remain the property of DHAP.
- **46.** "Fire Escape/ Exit": An emergency exit from a building that may be used in the event of fire.
- **47.** "Flats": Block / blocks of buildings consisting of a number of residential units built in a horizontal or vertical manner exclusively designed for human habitation in the Residential/ Commercial Area. Walls but excluding ancillary covered spaces and projection allowed under these Regulations.
- **48. "Floor Area"**: Horizontal area of floor in a building covered with roof, whether or not enclosed by.
- **49.** "Floor Area Ratio (FAR)": The total floor area of a building as permissible under these Regulations divided by the area of the plot.
- **50.** "**Footprint**": The portion of a plot of land covered, at any level, by a building or part thereof other than basement.
- **51. "Form"**: Form appended to these Regulations.

52. "Foundation": A structure made of Reinforced Cement Concrete (RCC) or any other building material, designed to bear and distribute the load of building, also catering seismic parameters, onto the ground through columns, pillars, beams or walls made of RCC or any other building material.

- **53. "Frontage of Corner Plot"**: In case of plots abutting on more than one road will be with reference to the road mentioned in the allotment/transfer letter.
- **54.** "Gallery": An open or covered walkway or a long passage.
- **55.** "**Grey water**": It is all wastewater generated in households or office buildings from streams without fecal contamination, i.e. all streams except for the wastewater from toilets.
- **56.** "Half Bath": A bathroom is a room for personal hygiene activities, generally containing at minimum a toilet and sink.
- **57.** "Handicap": A mental or physical disadvantage, such as blindness or a missing leg or a body part etc., that disables a person in some way.
- **58.** "**Head Room**": The clear vertical distance measured between the finished lower level and the underside of lowest obstruction such as ceiling or rafter, whichever is lower.
- **59.** "Height of Building": The vertical measurement from the mean level of the ground adjoining the building to the highest part of the roof.
- **60.** "**Height of a Room**": The vertical distance measured between the finished floor level and under side of the ceiling.
- **61.** "House or Bungalow": An independent residential unit for the use of people, a family having at least one habitable room, a kitchen, a bath, and a toilet.
- **62.** "HVAC (Heating, Ventilating, and Air-Conditioning)": It is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
- **63.** "Industrial Building": A building constructed on a plot allotted exclusively

for the purpose under these Regulations.

- **64.** "Inter Floor": A floor provided between two main floors of the building.
- **65.** "LED (Light Emitting Diode)": It is a two-lead semiconductor light source.
- **66.** "License": Permission granted by the DHAP Authorities to perform such functions as allowed under these Regulations.
- **67.** "Licensee": An individual or firm holding authorized license to work in DHAP.
- **68.** "Licensed Architect": A person or an architectural firm authorized by PCATP (Pakistan Council of Architects and Town Planners) and permitted to work in field after registration.
- **69.** "Licensed Engineer": A person or a firm authorized by PEC (Pakistan Engineering Council) and permitted to work in field after registration.
- **70.** "Light Industries": Building (s) providing work place free from any obnoxious industries / trade such as chemicals, explosives, noise producing and smoke/smell emitting industries, etc.
- 71. "Light Reflectance Value (LRV)": It is a measure of visible and usable light that is reflected from a surface when illuminated by a light source.
- **72.** "Loft": A horizontal slab used only for storage purposes, which shall be allowed in kitchens, baths, corridors and store rooms or shops with access from inside only up to five feet clear height between the loft floor and ceiling above.
- **73.** "Low Car Porch": Car porch having height not more than eight feet from floor to ceiling of the porch.
- **74.** "Mezzanine": Any floor inter-posed between ground and first floor of a building and having head room not less than 6 feet.
- **75.** "**Mixed-use Zone**": A zone dedicated having mixed-use buildings with specific number of floors allocated to each building type as per the Master plan.

76. "Mumty": A structure with a covering roof over a main staircase and its landing built to enclose the stairs for the purpose of providing protection from weather along with room/s allowed as per these Regulations.

- 77. "Obnoxious Industries / Trade": It includes, amongst others, bricks kilns, coke ovens, salt glazing, Sulphur working, making of cellulose lacquer, pitch bitumen, charcoal burning, gut scraping, tannery, glue making, fish meal, soap boiling, tallow making, skin dyeing and those which may be specified as Obnoxious Industries by the Industries Department from time to time.
- **78.** "Open Staircase": A staircase in a single story or two stories (ground and first floor) building of which the roof must be fully open to the sky and of which at least two sides must be fully open and clear of any adjoining walls of the building.
- **79.** "Owner": A person registered as member in DHAP holding title to a piece of land with or without construction thereupon.
- **80.** "Park": A recreational area, develop as such having greenery i.e. plantation/grass which may include all or any of the following facilities.
 - Jogging track/Walk-ways.
 - **b.** Water features like lakes, fountains, gushers etc.
 - **c.** Restaurants or cafeterias or food stalls.
 - **d.** Aviary.
 - e. Tube wells.
 - Public toilets.
 - g. Lawn / Green land.
 - **h.** Play land.
 - i. Any other outdoor / covered recreational facility.
- **81.** "Parapet": A dwarf wall whether plain, perforated or paneled along the edge of a roof, balcony, verandah or terrace.
- 82. "Pergola": A structure of which the roof must be at least seventy-five

percent open.

83. "Playground":

 All open spaces designated for indoor or outdoor sports activities of all types

- **b.** All structures serving sports activities like sports complex, gymnasiums, swimming pools, stadium, race course, golf course and sports club of all kinds.
- **84.** "**Plinth**": The height of the finished floor level of the ground floor, measured from the top of the finished surface of the road serving the plot, taken from the center of the property line of the plot along the road. In case of more than one road serving the plot, the plinth will be measured from the road providing principal access. The height of the plinth shall be limited to four feet as mentioned in specific Residential/Commercial category, except on plots where the natural contours are more than four feet over at least (forty percent) of the plot area as measured from the point at the center of the property line of the road adjacent to it, the plinth level shall be determined as per the site conditions.
- **85.** "**Proof Engineer**": An engineer registered with the Pakistan Engineering Council (PEC) as Consulting Engineer (Structural Design) and with minimum of 10 years" experience of structural design of building works.
- **86.** "**Property Line**": The Plot boundary which separates a private property from public property or a private property from another private property.
- **87.** "Public Building": Means a building designed for public use such as dispensary, post office, police station, Town Hall, library or recreational buildings, etc.
- **88.** "Registered Architect": A person or a firm registered with Pakistan Council of Architects and Town Planners (PCATP) as an Architect or as an Architectural Firm with minimum 5 years" experience in case of individual and having minimum one architect with minimum 10 years" experience in case of a firm and is on the approved panel of DHAP Authorities.
- 89. "Registered Proof Engineer": A qualified engineer registered with the

Pakistan Engineering Council (PEC) as Consulting Engineer (Structural Design) and with minimum of 10 years" experience of structural design of building works and whose name is listed on the panel of proof engineers maintained by DHAP.

- **90.** "Registered Geo-Technology Consultant": A qualified person or a firm registered with PEC (Pakistan Engineering Council) with minimum 5 years" experience as Geo-Technologist in case of an individual and with at least one Geo-Technical engineer with at least 10 years" experience and is on the approved panel of geo-tech consultants maintained by the DHAP.
- **91.** "Registered Structural Engineer": A qualified person or a firm registered with PEC (Pakistan Engineering Council) with minimum 5 years" experience as Structural engineers in case of an individual and with at least one structural engineer with at least 10 years" experience and is on the approved panel of DHAP Authorities.
- **92.** "Registered Town Planner": A qualified person or a firm registered with Pakistan Council of Architects and Town Planners (PCATP) as an Architect or as an Architectural Firm) with minimum 5 years" experience as Town Planner in case of an individual and with at least one Town Planner with at least 10 years" experience and is on the approved panel of DHAP Authorities.
- **93.** "Renewable Energy": It is generally defined as energy that is collected from resources, which are naturally replenished, on a human timescale, such as sunlight, wind, rain, tides, waves and geothermal heat. Renewable energy often provides energy in four important areas: electricity generation, air and water heating/cooling, transportation, and rural (off- grid) energy services.
- **94.** "Repair or Renovation": Repair work to services, painting, white-washing, plastering, flooring, paving, replacement of roof of corrugated sheets or of T-iron or girders or wooden roof with RCC slab without change in the cubical capacity or structure approved by the DHAP
- **95.** "Residential Building": A building or part thereof designed, adopted or used for human habitation.
- **96.** "Residential Zone": A zone earmarked for buildings exclusively designed

for human habitation and in no case shall include its use in whole or a part thereof for any other purpose e.g. shops, clinics, offices, schools, workshops, store or godowns or any other commercial activity.

- **97.** "Revised or Amended Plan": Previously approved drawings or plans resubmitted for approval with amendments in accordance with the provision of these Regulations.
- **98.** "Roof Top of Commercial and or Mixed-use Building": Roof of Highest or topmost floor of the commercial and or mixed-use building, to house the common facilities like overhead water tank, stair tower, solar energy, lift well, etc and is shared by all inmates of the building.
- **99.** "Scrutiny Fee": A fee to be determined and levied in pursuance of provisions of these Regulations by DHAP.
- **100.** "Septic Tank": A tank in which sewage is collected and decomposed, before its discharge into the public sewer or soakage pit.
- **101.** "Shop": It includes any room or part of a building used, wholly or mainly, for the purpose of trade or business but shall not be used for any activity as may cause noise and nuisance in the neighborhood.
- **102.** "Site Engineer": A qualified engineer engaged to supervise building operations at the site and registered with the Pakistan Engineering Council (PEC) as registered or professional engineer.
- **103.** "Soakage Pit": A pit filled with aggregate, boulders or broken bricks and intended for the reception of wastewater or effluent discharged from a Septic Tank.
- **104.** "Solar Reflectance Index (SRI)": It is a measure of the solar reflectance and emissivity of materials that can be used as an indicator of how hot they are likely to become when solar radiation is incident on their surface.
- **105.** "Special Purpose Plot": A leasable plot allocated exclusively for the purpose of Health, Education institutions or any other use as per DHAP master

plan.

106. "Stores/Go-downs": Building/buildings meant for storage of material or finished goods at the ground floor, provided these goods are not of inflammable or of objectionable character.

- **107.** "Structural Changes": Any change in the structure of a building
- i.e. supporting members of a building such as load bearing walls, columns, beams, slabs etc.
- **108.** "Sub-Division": The division of land held under the same ownership into two or more plots.
- **109.** "Sub-Division Plan": A layout plan depicting proposed sub- division duly approved by the DHAP Authorities as provided in these Regulations.
- **110.** "Sunshade": An un-habitable outside projection from a building at lintel level to provide protection from weather.
- **111.** "Sustainability": Sustainable development is a process for meeting human development goals while sustaining the ability of natural systems to continue to provide the natural resources and ecosystem services upon which the economy and society depends.
- **112.** "Sustainable Master Plan & Image Concept (SMPIC)": A development plan for an area providing short terms and long-term policy guidelines for a systematic and controlled growth for Business & Commercial activities including the façade and architectural elevations of the buildings and the overall area of the DHAP.
- **113.** "**Temporary Structure**": A structure constructed purely on temporary basis, wholly within the plot with the approval of DHAP for a specific period which shall be demolished within approved period i.e. shall be demolished before the last day of the specified approval.
- **114.** "Thermal Bridge": It is an area of an object (frequently a building) which has a significantly higher heat transfer than the surrounding materials resulting in

an overall reduction in thermal insulation of the object or building.

115. "Thermal Insulation": It is the reduction of heat transfer (the transfer of thermal energy between objects of differing temperature) between objects in thermal contact or in range of radioactive influence.

- **116.** "Thermal Transmittance": It is the rate of transfer of heat (in watts) through one square meter of a structure divided by the difference in temperature across the structure.
- **117.** "**Toilet**": A fixture that consists usually of a water-flushed bowl and seat and is used for defecation and urination.
- **118.** "**Total Floor Area**": The-sum of the floor areas of all the floors of all the buildings on a plot, less exemption as permitted in these Regulations.
- **119.** "**Town Planner**": A person or a firm currently registered as such with the Pakistan Council of Architects and Town Planners (PCATP).
- **120.** "Urban Heat Island (UHI)": It is a city or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities.
- **121.** "Ware House": A building in which goods are stored.
- **122.** "Zone": The area earmarked for a particular purpose.

- **1.** These regulations have been framed with a view to facilitate construction by the members, and shall apply to all types of plots, buildings and land usage.
- **2.** Construction of ramp, stairs/steps leading to the first basement is permitted within in the side and rear COS without any super structure over them.
- **3.** In case of two basements, the ramp leading to the 2nd basement shall only be constructed within the allowable footprint of the building.
- **4.** 3 ft wide balcony allowed towards roadside and maximum length of 20 ft Bay window in front COS is permitted with one door.
- **5.** Maximum projection of sunshades over streets beyond 16 ft height and in compulsory open space shall not exceed 2 ft width at lintel level.
- **6.** Underground water tank and septic tanks / grey water tank to be kept 3 ft away from boundary walls.
- 7. Remaining within the allowable (prescribed) covered area of stair

tower any space becoming available beyond the requirement of stair tower may be utilized for storage purposes. Construction of room, servant quarters and bath rooms/lavatories will not be allowed, however, the same shall only be allowed as a special case with following conditions: -

- **a.** Subject to fulfillment of renewable energy requirements as mentioned in the Regulations.
- **b.** As a special provision for plots falling on cul-de-sac (round type).
- **8.** Pitching of guard's tents/cabins outside the property line on DHAP land or using the open plot for guard living is strictly prohibited. However, in special circumstances DHAP authorities may allow temporary construction of a room along with a toilet not exceeding 125 sft in front COS in addition to guardroom.
- **9.** Whatever additional land is available between allotted plot boundary and sector limits for not more than 4 feet depth, the said land may be allotted on payment to the owner on request. In this case building rules of the original category

shall be applicable. However, in case land is more than 4 feet, change in area of the allotted Plot will govern as per the Regulations.

- **10.** Where the park is planned in the rear or on the side of the allotted plot, owner is not allowed any opening even a pedestrian way in the park, being a public property.
- **11.** Removal of division wall between two plots is allowed provided both the plots have same ownership or close blood relations.
- **12.** Members to ensure clean environment in front / around the property.

13. Exemptions from Floor Area Ratio (FAR)

- a. Parking spaces (at any floor/level)
- b. Recreational facilities and prayer places up to maximum 5% Arcades
- c. Ramps and driveways
- d. Escalators/Lift towers
- e. Stairs and stair towers
- f. Open balconies over streets
- g. Passages around voids
- h. Underground / Overhead water tanks
- i. Electric Sub Stations
- j. Electrical/Mechanical plant rooms / solar energy plant room
- **14.** Service areas including service duct for cabling to the extent of 100 Sft per floor.
- **15.** A service floor may be allowed in high rise buildings (designed as per FAR).
- **16.** Any other alternate energy item

- **17.** All other requirements as mentioned in related Regulations with respect to Handicap Accessibility and Utility requirements for commercial/mixed use buildings shall be followed.
- **18. Corner Plot:** The owner of corner plot shall be required to pay additional charges as laid down by DHAP Authorities.
- 19. Over/Under Size Plots: Plots having less area of specified category shall be considered as per original allotment category, however if area of plot is less than 95% then DHAP Authorities shall compensate the owner as per prescribed rates. For plots measuring more than the allotment category, Owner shall be required to pay for the extra/additional area as per the prescribed rates decided by DHAP Authorities from time to time. In case plot owner does not agree for payment of additional charges then owner may exercise any of the following options:
 - **a.** DHAP Authorities may facilitate the owner for payment of extra land through installments.
 - **b.** Alternate plot of that allotment category shall be offered in any sector having compatible market prices as decided by the DHAP Authorities.
 - **c.** DHAP Authorities may buyback the plot as per prescribed rates.
- **20.** Annexation of Adjacent Extra / Trapped Land: In case where extra land is available adjacent to the plot, it may be purchased by the member. Rates and permission of such cases is subject to approval by DHAP Authorities.

21. Bifurcation and Amalgamation of Plots

- **22.** Bifurcation / Sub division is not allowed in any type of category of residential, commercial and amenity plots.
- 23. Amalgamation of residential plots (Maximum up to 4 Kanal) and commercial plots (Maximum up to 32 Marla) shall be allowed upon payment of additional charges as laid down by DHAP authorities from time to time, provided that the allotment conditions of the plots are similar.
- **24.** Amenity Plots will not be considered for amalgamation.

- **25. Leveling of Plots:** The plot owner shall be responsible for leveling in case of any ditch, shrubs, debris, unevenness or abnormality in the plot.
- **26. Chamfering for Corner Plots:** Boundary wall corners of end plots abutting two roads/streets will be chamfered as under: -

a. Residential Plots

- (1) Junctions of roads 60 ft wide and above 10 ft x 10 ft
- (2) All other junctions 5 ft x 5 ft
- **27.** In case where radius is given at the corner of the plot the same shall be followed as per approved plan.
- **28.** Services: The DHAP Authorities will provide roads including all services and the members are required to plan extension of these services to their buildings accordingly. Further extension of the services to other users is strictly disallowed. Defaulting members are liable to disconnection of services and financial penalties.

29. Water Supply

- a. Application for water connection shall be made on the prescribed form to the DHAP Authorities, before commencing any work and no water connection/work is to commence before approval.
- **b.** No person is permitted to install motor/pump on the water supply line. Only one connection shall be provided for each building.
- **c.** DHAP Authorities has no obligation for provision of water for swimming pool.
- **d.** Disposal of water from swimming pool shall not be allowed to be drained in the sewer lines.

30. Residential

- **a.** No water point/ tap will be left outside the boundary wall.
- **b.** Construction of under-ground water tank is mandatory but not on the slope side and be so located / designed such that bowzer filling is facilitated.
- **c.** Member found violating the instructions on water supply shall have to pay violation charges as prescribed by DHAP Authorities.

- **d.** Washing of car on the road is not allowed.
- **e.** Flow of water through car porch on the road is not allowed.
- **31.** Boring of any type for the purpose of water, sewerage, drainage etc. is strictly prohibited. However, where found necessary DHAP Authorities may allow in special circumstances by giving special permission.
- **32**. Sewerage/Manhole: Regulations regarding house connection to main sewer are as under.
- **33.** Washing Closet (WC) discharge is to be connected with the DHAP manhole through septic tank.
- **34.** Wash room and kitchen drainage shall be connected direct to the over flow manhole of septic tank. It must not be connected to the inlet of septic tank.
- **35.** Rain water/storm water is to be disposed of in open drains or on the adjacent roads as per design of the said Phase. It must not be connected to the sewer lines.
- **36.** Members are required to construct proper man holes and septic tanks (RCC construction only). However, DHAP Authorities can assist them by providing standard designs.
- **37.** Members are required to get their septic tanks inspected before covering the tops.
- **38.** Connection to the main sewer line shall be allowed by DHAP Authorities on completion of house/building and member will not tamper with main sewer line. Defaulters will be charged as per DHAP Authorities policy issued from time to time.
- **39.** Where a resident/member excavates basement as per his requirement and decides to have bath rooms/toilets, the sewerage disposal will be through mechanical pumps by the resident.

40. Gas/Telephone/Electric/ICT

- **a.** The services have been laid by DHAP Authorities and individual connection to houses be obtained from respective departments in accordance with respective departmental Regulations.
- **b.** On completion of construction and before main electrical connection is provided to the building/house, the member shall submit test report of electrical system issued by a government/PESCO/ or DHAP Authority's approved wiring Inspector.
- **c.** An independent earth pit will be provided in the building/house. The earth resistance of the pit must be less than 5 ohms.
- **41. Damages:** Damages to roads and utility service is strictly prohibited. In case of extension of services; if any damage is likely to be caused to road, sewer line, rain water line etc., such work shall not be undertaken without prior approval of DHAP. In case of damages, DHAP Authorities will impose penalties and cost of repair work will be recovered from member.
- **42. Bearing Capacity Test:** Bearing capacity tests will be arranged by the member through a DHAP Authorities approved laboratory. The approved list is available in TP & BC Department.
- **43. Termite Proofing:** Members will ensure quality termite-proofing treatment before commencement of construction work.
- **44. Blockage of Street:** All construction material shall be stored/kept within property line. No part of street / road or footpath shall be used in connection with any construction activity like:
 - **a.** Storage of construction material.
 - **b.** Disposal of demolished material.
 - **c.** Mixing of concrete or cement mortar.
 - **d.** Erection of construction frames / supports / formwork.
 - **e.** Excavation of street / road for access to utility service, except with prior permission of DHAP.
- **45. Structures on Roof:** Following structures of permanent nature may be constructed on roofs provided they are designed and built to the satisfaction of the Authority:
 - **a.** Chimneys, air conditioning and other ducts, vents and wind catchers.

- **b.** Water tank.
- **c.** Four feet high Parapet wall or railing is mandatory in case of accessible roof.
- **46.** Stair tower and Mumty (applicable as per related Regulations).
- **47.** Lift machine rooms, Sky light, etc.
- **48.** Alternate Energy Solutions such as Solar and wind, etc.
- **49.** Other structure, which the DHAP Authorities may permit by general or specified order.
- **50.** No mobile phone antennas and billboards are allowed on roof of residential unit. However, may be allowed for commercial unit subject to approval of DHAP Authorities.

51. Lighting and Ventilation

- a. Size of External Openings: Every room, other than rooms used predominantly for the storage of goods, shall be provided with natural light and natural ventilation by means of one or more openings in external walls. These openings shall have a combined area of not less than 10% for habitable rooms and 7.5% for other rooms of the floor space of such opening, whole of such openings shall be capable of allowing free and uninterrupted passage of air. Area for openings in case of warehouse, godown, storage places etc. shall not be less than 5% of the floor area unless the space is mechanically ventilated.
- b. Size of Internal Openings: Unless the light and ventilation requirements are met by an air well or ventilation duct, all internal habitable rooms must have openings in internal air wells in addition to door openings not less than 7.5% of the floor area of such room. Access for maintenance of shaft be provided at level from where the shaft commences.

Internal Air Wells: -

- (1) Habitable rooms may receive daylight and natural ventilation from internal air wells which shall conform to the following minimum sizes: -
 - (a) For buildings up to 2 storeys, 20 Sft with minimum width of well 5ft.
 - **(b).** For buildings with 3 to 5 storeys, 100 Sft with minimum

width of well 8 ft.

- (c). For buildings higher than 5 storeys, 100 Sft plus 10 Sft for each additional floor over storeys and minimum width of well 10 ft.
- (d). Where only kitchens, WC and bathrooms receive daylight and ventilation from air wells, the size of wells shall conform to the following minimum widths: -
 - (i) For building up to 2 storeys, 20 Sft with minimum width of well 3ft.
 - (ii) For buildings with 3 to 5 storeys, 40 Sft with minimum width of well 5 ft.
 - (iii) For building higher than 5 storeys, 40 Sft plus 5 Sft for each additional floor with minimum width of well 5 ft.
- **c.** Permanent Openings in Kitchen: Every kitchen shall have openings for permanent ventilation into the external air space not less than 15 % of its floor area.
- d. Water Closet, Bath Room & Ablution Places: Every water closet, urinal stall and bath room and ablution area shall be provided with natural lighting and ventilation by means of one or more openings in external walls having a combined area of not less than 2 Sft (1 ft x 2 ft) per water closet, urinal or bathroom except where adequate and permanent mechanical ventilation is provided which discharges into an open space.

Garages: Every garage shall be provided with opening of not less than 5% of the floor area for ventilation and lighting incorporated in a wall or in the door.

- **e. Staircase:** All staircases which are enclosed shall be provided with adequate lighting and ventilation from openings not less than 7.5% of the staircase area.
- f. Mechanical Ventilation and Central Air Conditioning Waiver-Minimum Requirement
 - (1) Where undertaking for central air conditioning and permanent mechanical ventilation is provided, the relevant clauses of these Regulations dealing with natural ventilation, lighting and heights of rooms may be relaxed depending upon the duct size of AC

- (2) Where permanent mechanical ventilation in respect of lavatories, water closets, bathrooms or corridors has been provided for and maintained in accordance with the following clauses, conditions relating to natural ventilation and natural lighting under these Regulations may be relaxed for such lavatories, water closets, bathrooms or corridors.
- **52. Blasting:** Use of explosive material for construction & demolition work is not allowed in DHAP.
- **53. Inflammable Material:** Storage of inflammable material is strictly prohibited in DHAP except where allowed by the respective government agencies / departments and DHAP Authorities.
- **54. Disputes:** No member is allowed to stop the construction activity of other members. Any dispute/interpretation of Regulations shall be referred to DHAP Authorities.
- **55. Possession of Plots:** Following procedure is laid down:
 - **a. Site plan:** DHAP Authorities shall provide the Site Plan indicating measurements, size and location of Main Gate of the Plot to the member upon providing NOC from Transfer and Finance Branch.
 - **b. Building Plan:** For preparation of building plans (new or alteration) the member should engage a licensed architect and structural engineer, existing on the panel of approved consultants of DHAP.
 - **c. Submission of Drawings:** Members are responsible to submit the following drawings in accordance with
 - **d.** DHAP Regulations. **Architectural Drawings:** Member shall submit five sets of architectural drawings and a soft copy along with application form, covering following details: -
 - (1) All drawings shall be submitted on sheet size of 30 x 40 inches and all details be given at a minimum scale of 1/8" = 1'-0".
 - (2) The plans of basement, ground floor, upper floors and roof along with stair tower/Mumty.
 - (3) Two points perspective view in color with material finishes (showing front and side).
 - (4) All elevations, two sections along x and y axis passing through stairs providing maximum details.

- (5) Site plan /key plan showing plot dimensions, width of the road(s), detail of neighboring plots, location of gate(s), position of underground water tank, septic tank, grey water tank and location of North.
- (6) Elevation and section of boundary wall, gate(s), ramp and water channel with respect to adjoining road/street.
- (7) External dimensions of building.
- (8) The clear dimensions of all rooms and position of doors, windows and ventilators in each room at every story.
- (9) The position and dimensions of all projections beyond the walls of the building.
- (10) Roof plan showing the location/dimension of overhead water tank, stair tower/Mumty.
- (11) Total height of building with reference to reference point including level of finished floor, and split-levels (levels be indicated on plans also).
- (12) Location of reference service manhole and its invert level and
- (13) location of water connection shall be clearly shown on submission drawing.
- (14) Details of alternate energy solutions on roof/roof top with dimensions and heights.
- (15) Location and size of overhead and underground tank (for commercial/mixed use plots: show domestic and firefighting water in a section along with its calculations).
- (16) The sewerage line and waste water/soap line should be laid independently and marked properly on the plan. The soap water should not be connected directly to the septic tank. It should be connected to underground grey water tank or directly to the main sewer line.
- (17) A water channel minimum 6-inch x 6-inch would be constructed along the main gate line. This drain would be suitably connected to over flow manhole of Septic Tank or Storm Water Drain through a minimum 4-inch dia pipe.
- (18) Schedule of open / covered areas. Schedule of doors and windows. Covered area calculation block plan.
- (19) Compliance of architectural features for elevations as per Sustainable Master Plan Image Concept (SMPIC).

- (20) Signature of Owner and the Licensed Architect on drawings along with required forms.
- (21) Drawings must be of acceptable Architectural standards.
- (22) All documents as per checklist relating to the plot shall be provided with the application.
- **56. Structural and MEP drawings:** On receipt of approval of architectural drawings, the owner shall submit complete structural and MEP drawings and calculations with 5 x sets of hard copies on sheet size of 30-inch x 40 inch and two soft copies (1 x AutoCAD & 1 x PDF) as per following details:
 - a. Soil investigation report (one hard copy and one soft copy in PDF) along with structural drawings, duly signed by the DHAP's approved structural engineer along with a certificate on letter head that the structure is safe catering seismic design along with structural calculations. The drawings showing layout and sectional details of foundations, beams, columns, lintels, slabs, underground and overhead water tanks. This set of drawing is only for DHAP record and Authority has no responsibility regarding the stability / safety of the structure. In case of any building over G+2 story, the structural design should be duly vetted by the DHAP approved vetting engineer.
 - **b.** Security charges as per DHAP's approved rates, which will be refunded at the time of issuance of completion certificate after deduction of charges / penalty (if any) imposed on violations during the course of construction.
- 57. Scrutiny of Drawings: Following procedure shall be followed:
 - **a.** Member shall submit the plans with DHAP for approval as per the Regulations.
 - **b.** Plans not conforming to these Regulations shall be returned by mail or by hand.
 - **c.** Members can collect approved drawings along with Approval letter.
 - **d.** On approval of Architectural plan, owner shall submit Structural drawings for approval as per procedure of Residential and Commercial buildings.
 - **e.** After approval, member can proceed for demarcation.
- **Oversight in Scrutiny of Drawings:** Any oversight in the scrutiny / NOC of documents and drawings at the time of approval and sanctioning of the building plan does not entitle the member to violate the Regulations. If found at any stage

during construction, the member will be responsible to rectify the violation as per the Regulations, at his own risk & cost.

- 59. Responsibility for Structural Stability: For any building constructed at DHAP, the structural engineer shall be liable for the design part, whereas the contractor shall be responsible for the structure stability being the constructor of the building. DHAP Authorities shall not be liable for structure stability of any building. In case of structural failure, procedure laid under dangerous buildings shall be followed.
- **60. Inspection Card for Construction:** Inspection card shall be provided by DHAP Authorities to the member along with prescribed demarcation proforma. Inspection card shall be held by owner, ensuring safe custody with up to date entries of different inspection stages by DHAP official.
- **61.** It is the responsibility of member to ensure that the inspection of work on each stage of construction is carried out as per Inspection Chart/ schedule duly signed by building inspector of DHAP. If any anomaly is identified at a later stage, member will be held.
- **62.** Prescribed charges will also be levied for issuance of new inspection chart, in case of loss.
- **63. Demarcation of Plot:** After approval of Architectural, Structural and MEP drawings, member is required to apply for demarcation of Plot. On receipt of Demarcation letter, member is advised to follow steps given below for physical demarcation of plot before undertaking construction and thereafter for confirmatory check by survey team of DHAP:
 - a. Step-I: Member to deposit the inspection card prescribed by DHAP and arrange following items for demarcation on site at coordinated time: -
 - (1) Four pieces of 4-inch Dia PVC pipe having length of 2-1/2 ft each.
 - (2) Cement, aggregate and water along with its batching preparation items.
 - (3) Required skilled labor. Member/ Contractor will get the

Demarcation Pillars grouted / installed at the location indicated by DHAP survey team in their presence. Demarcation Pillars shall not be disturbed or removed till the final demarcation of boundary wall up to DPC level.

- b. Step-II: Inspection Card will be forwarded to DHAP Authorities for inspection of building construction activities after completion of initial demarcation. Member shall ensure demarcation for second time on laying of lean concrete after excavation of the boundary wall before applying issuance of Plinth Level NOC on the inner building in case of no basement. However, in case of basement(s), member shall ensure demarcation for second time on laying of lean concrete and third time at DPC level of boundary wall whenever the basement is completed.
- c. Step-III: Before start of construction of boundary wall, member must intimate DHAP Authorities for final demarcation of lean/ DPC level. DHAP Authorities will also ensure that the plot is finally demarcated on lean / DPC level of boundary wall before under taking any further construction.

*Notes:

- a. The steps mentioned above are laid down for the convenience of members / contractors in order to avoid any violation at later stage. These SOP may be followed strictly otherwise members will be held responsible of any violation.
- **b.** In case of disturbance of pillars, demarcation will be done again and prescribed charges will be levied.
- **64. Approved Drawings:** The member/contractor must keep one full set of approved drawings (architectural, structural and MEP) on site, which may be made available to DHAP staff during inspection. In case of non-availability of approved drawings; penalty would be imposed as per policy of DHAP at prescribed rates from time to time.
- **65. Inspection of Building at Various Construction Stages:** Inspection of building shall be carried out by team of DHAP and documented as per the procedure laid in the inspection card. Inspection shall be carried out at following stages, however, construction stages may increase/ decrease depending on the demand of time/ resources/ technology:
 - **a.** In case basement is to be constructed then: -
 - (1) On ground demarcation of area to be dug in.

- (2) Lean/Foundation.
- (3) Roof level before pouring roof.
- **b.** Ground floor at Finished Floor Level including boundary wall.
- **c.** On attaining roof height of Ground Floor before pouring in of roof.
- **d.** On raising of structure/ pillars one (1) foot above floor level of first floor and upper floors.
- **e.** On attaining roof height of first floor and upper floors.
- **f.** On attaining roof height of water tank and Mumty, whichever is higher (if applicable).
- **g.** On completion of Septic Tank prior to putting their cover.
- **h.** Air & water pressure quality test of Plumbing lines (for commercial buildings).
- i. Structural Engineer has to submit quality control and quality assurance proforma at different stages during the course of construction so that DHAP Authorities can give the go ahead for next step ((DHAP Form No. 6 as per Appendices).
- j. Members who are found violating the Regulations of DHAP during the course of construction will be charged as approved by DHAP Authorities from time to time and these charges will be deducted from security deposit.
- **66. Deviations:** All Construction activities shall be processed as per approved building plans. However, if owner desires to make any changes during the construction, then a deviation plan shall be submitted for approval of DHAP Authorities prior to modification at site. Subsequent construction can proceed as per approved deviation plan. Any construction other than approved building plan or deviation plan shall be considered unauthorized and subject to penalty as per prescribed rates.

67. Completion of the Building

a. The member will ensure completion of residential Building (maximum in 2.5 yrs) and commercial building (maximum within 4 yrs) within the stipulated time frame from the date of approval of submission drawings. Any member not ensuring completion as per the allowable duration will be liable to pay the late completion penalty as per prescribe rates. DHAP authorities may allow extension in time up to maximum one-year meriting justified reasons, if applied by the owner,

- one month prior to date of completion. Another one-year extension may also be granted in extreme justified reasons and late completion penalty as per prescribed rates will be levied after this period as per prescribed rates.
- b. For Buildings designed on FAR and special purpose buildings, owner will get the completion time approved prior to start of the construction activities from DHAP Authorities. If timelines are not approved specifically for a project than above mentioned completion time will be applicable and late completion penalty will be imposed accordingly.
- c. In case member intends to construct the building in phases, the sequence of construction in phases duly numbered shall be indicated on the submission drawings along with structural drawings (foundation plan) conforming the complete building design of all phases.
- **68. Completion Plan:** The member shall submit completion plans to obtain a completion certificate within 30 days of completion of entire work. Any member not submitting completion drawings within due date will be liable to a penalty as per prescribed rates.
- 69. The documents to be attached with completion plan are as under.
 - **a.** 5 x set of drawings.
 - **b.** Prescribed dues as decided by DHAP Authorities from time to time.
 - **c.** Inspection Card, duly signed by the concerned Officers.
 - **d.** All respective forms for adherence to Regulations & quality control in construction, respectively duly signed by the respective consultants as provided below: -
 - (1) Architect (DHAP Form No. 5 as per Appendices).
 - (2) MEP Consultant (Mechanical, Electrical, Plumbing) (DHAP Form No. 6 as per Appendices).
 - (3) Structural Engineer (DHAP Form No. 6 as per Appendices).
 - (4) Details of Alternate Energy Solutions Installed (DHAP Form No. 9 as per Appendices) With Photographs.
 - (5) Contractors certificate for structure stability.
 - (6) Fire Safety Precautions Adherence

- **e.** Two sets of Soft copy of drawings (1 x PDF, 1 x AutoCAD each).
- **f.** After the receipt of completion drawings, DHAP Authorities technical staff shall arrange to inspect such work before Completion Certificate.
- **g.** In case of violations, completion plan shall be returned unsanctioned with an order for demolition of un- authorized construction.
- f. In case of no violation, completion case shall be put up to the Completion Board of Officers detailed by DHAP Authorities for final approval.

70. Occupancy of Building

- **a.** Buildings shall only be occupied after obtaining Occupancy Certificate which will be issued after approval of completion plan.
- b. If the member wants to occupy partly completed building then he should submit completion plan as per the completed portion with an application showing justified reasons for subsequent occupation of the building. However electrical metering at commercial rates will apply till obtaining of completion NOC from TP & BC Department.
- **c.** For purpose of obtaining occupancy certificate of a building, the minimum requirement is completion of ground floor in all respects.
- **d.** If member occupies the building without getting approval from DHAP Authorities, penalty would be imposed as per prescribed rates.
- **e.** Membership of respective DHAP Sector Clubs will be granted after Occupancy Certificate as per the prescribe rates and membership certificate shall be required to be submitted with completion plan.
- f. Illegal occupants and violators will not be entertained with social & civic facilities of DHAP Authorities.

71. Addition, Alteration and Renovation of Building after Approval of Completion Plan and Execution of "B" & "C" Lease

- a. Such addition, alteration and renovation may be done to building after obtaining approval for proposed works from DHAP Authorities. Addition and alterations, executed after the approval shall be followed by submitting completion plans and other required documents as per checklist.
- **b.** Failing to get approval of addition and alterations on proper completion plan and undertaking such additions and alterations without prior approval of DHAP Authorities, the unauthorized construction shall be demolished at the risk and cost of the owner.
- **c.** In case any resistance in demolition of unauthorized construction, it

- shall be considered as illegal and plot file will be freeze by DHAP Authorities for any further transactions till removal of violation.
- **d.** In case of B/C lease of such premises is liable to be cancelled.
- **72. Revised Building Plan:** Submission of revised building plans shall be mandatory in the following conditions:
 - **a.** Structural changes required during construction.
 - **b.** After approval of completion plan, if changes / modification is more than 40% of total constructed area.
 - **c.** In case of time barred during construction.
- **73. Revised Completion Plan:** Revised completion plan will be mandatory in following conditions:
 - **a.** After approval of revised building plan.
 - **b.** After completing the partially constructed building.
- 74. All utility services such as water supply, sewerage system, sewer treatment plant, drainage, electricity, gas, telecom, internet, etc. shall be developed by DHAP Authorities, in due course of time directly or through other departments/organizations and the development charges for utility services shall be charged to the owner on pro-rata basis from time to time which shall be payable immediately by the owner of plots. In case of non-payment or delay in payment of development charges by the owner of the plots, the allotment/transfer may be cancelled on sole discretion of DHAP Authorities.
- **75.** Any plot owner who is not following the agreed payment schedule is liable to get his/her plot cancelled or re-located as per discretion of DHAP Authorities.
- **76.** For special plots, in case the party to whom the plots are allocated, are not following the agreed Construction plan (approved), construction schedule, allotment of such plots is liable to be cancelled.
- **77. Special Use Plot:** Special use plot reserved for the specific purpose shall not be utilized for any other purpose.

- **78. Residential Plots:** Residential plot shall not be utilized for any other purpose.
- **79. Commercialization of plots:** Conversion of residential plot into commercial shall be allowed only according to a uniform commercialization policy formulated and revised from time to time with the approval of the Competent Authority through notification on the basis of comprehensive study of various urban areas under pressure for commercialization. Individual plots outside the policy will not be considered for commercialization. Procedure to be followed is as under:
 - **a.** DHAP shall issue a public notice for the change of land use of the plots in accordance with the provisions of these Regulations and the expenses shall be borne by the applicant.
 - **b.** DHAP shall give due consideration to the objections from the public, if any, in light of the Regulations.
 - **c.** Final No Objection Certificate (NOC) of change of land use shall be issued by the DHAP Authorities.
 - **d.** The applicant shall pay the prescribed fees and other charges to DHAP.

- General Conditions: The following conditions shall apply:
 - a. No construction shall be allowed in the compulsory open space, (hereinafter referred to as COS) except a pergola for car porch in side COS, spiral stair in rear COS and a guardroom in front COS not exceeding 60 Sft with clear overall height up to maximum 8 ft above the floor of car porch (from 4050 to 7200 Sft plots).120 Sft with clear overall height up to maximum 8ft above the floor of car porch shall be allowed for guardroom with toilet (for above 7200 Sft plots). As mentioned in these Regulations, additional guardroom may also be allowed as a special case.
 - **b.** Sub division shall not be permitted for any size of the plot.
- 2. Amalgamation of residential plots will only be permitted as under:
 - a. Amalgamation of residential plots (Maximum up to 4 Kanal) and commercial plots (Maximum up to 32 Marla) shall be allowed, provided that the original allotment conditions of the plots are similar, and COS will be applicable as per new size.
 - **b.** Prescribed fee of amalgamation will be charged.
 - c. Amalgamation of plots one constructed, one or both partly constructed, is allowed provided COS conditions of bigger size plot is met.
 - **d.** Amalgamation of plots both constructed is allowed by removing central wall, in this case COS of original plots will remain same.
- **3.** Minimum size of car porch will be 10 ft x 14 ft.
- **4.** Stairs/steps outside the boundary wall shall be strictly prohibited except ramp up to 4 ft (in horizontal length) and steps of wicket gate.
- **5.** Erection of hoardings and antenna towers on residential buildings are strictly prohibited.
- **6.** For odd or irregular shaped plots, the requirement of footprint area shall prevail over COS. However, COS in front shall be left as per provision of these Regulations.

- **7.** COS on non-rectangular shaped plots shall be measured as average space between buildings and property line. At least 50% permissible COS shall be ensured.
- **8.** Detached car porch in front of COS, where applicable, is allowed in cul-desac plots only.
- **9.** For residential buildings, the maximum riser of stair steps shall be 7 inches and the minimum tread will be 11 inches.
- **10.** Swimming pool is permitted and to be built on plots of 4500 Sft or above after fulfilling following conditions:
 - **a.** Maximum Allowed Size is 40' x 20' x 6.5' and to be constructed in the basements or on the Ground floor ensuring sound structural design duly certified and documented by the Registered Structural Engineer.
 - **b.** To be appropriately protected for privacy.
 - **c.** Not to be constructed in compulsory open space.
 - **d.** Change/shower room is mandatory.
 - **e.** Proper filtration plant will be installed.
 - **f.** Holding tank of appropriate capacity to be provided.
 - **g.** Any damage caused to neighboring structure will be made good by owner constructing swimming pool.
- **11.** Removal of swimming pool water shall be done by owner and water shall be discharged in the Storm Water drains but not in the sewer line. Pipe network for the same up to discharge point should be provided by the owner.
- **12.** Placement of generators and electro-mechanical equipment with proper structural arrangements as may be required is allowed on the roof tops and anywhere in the front COS subject to sound structural design duly verified/ certified and documented by registered structural engineer, provided the following is satisfied:
 - a. Smokeless and noise free.
 - **b.** Sound resistance canopy.

- **c.** Should have proper electro-mechanical connections of permanent nature.
- **d.** Covering of the Generator having architectural element not exceeding boundary wall height and protruding maximum one foot on sides of Generator, may be allowed.
- **e.** Anti-vibration pads should be provided under Generator.
- **13.** Compulsory open space shall always be free from any erection or obstruction except following:
 - a. Boundary walls.
 - **b.** Steps leading to ground floor.
 - **c.** Stairs leading into basement in the rear and side(s) COS not exceeding half the width of COS.
 - d. One/ two columns and beams inside COS to support car porch, connecting the two picked up columns in line with boundary wall restricting the height of wall up to 10 ft from road level.
 - **e.** Car porch will be allowed as a special case in the side COS with a pergola (75% open) on it. However, covering of pergola with transparent material is allowed.
 - f. Two/ Three columns for gate in line with boundary wall and not exceeding the height of boundary wall.
 - **g.** Guard room in front COS as per specified sizes of various plots.
 - h. Underground water & septic tank.
 - i. Dog / Bird's cage in the front or rear COS.
 - **j.** Electric cabinet, motor / pump cabinet in the front COS. Covering of these having architectural element".
 - **k**. Covering of service pipes with architectural elements.
 - Covering of the Generator set having architectural element not exceeding boundary wall height and protruding maximum one foot on sides of Generator in front COS.
 - **m.** A wooden / metallic open Spiral stair in the rear COS to climb up to first floor and rooftop.
 - **n.** Water body, fountain, rockery, Bar B Q Counter, walk ways, elevated flower beds up to 2 ft in COS, not exceeding half the width of COS.

- **o.** Benches, gazebo/ canopy (temporary), rockery in front COS.
- **p.** Water taps, ablution area and washing area in side COS, not exceeding half the width of COS.
- **q.** Temporary covering having three sides open over the steps / air wells leading to basement/ windows.
- **r.** Swimming pools in front COS, where applicable as per these Regulations.
- **s.** Landscaping with plants.
- **t.** Grill gates and railing for pets, etc. up to height of boundary wall.
- **u.** Ramp leading into basement in the side COS leaving 3 ft spare towards boundary wall for COS connectivity.
- v. Rear and back side COS up to maximum 50% of its width may be utilized for ventilation and light of the basement commonly termed as "open to sky". A fiber glass shade (3 sides open) may be constructed over the open well to stop the rain water. Stairs leading to basement may also be constructed in the open well. Side COS (not less than 10 feet) may also house the open well including stairs from the basement. In cases of plots where level difference is such that basement could be designed as lower ground floor, special permission may be granted by DHAP Authorities for lowering the full COS of back and sides with proper design of services.
- **14.** High car porch is not allowed with columns resting over the boundary wall. They can however be permitted if kept clear of the COS.
- **15.** A water channel of cross-section 6-inch x 6-inch size will be constructed in line with a boundary wall under the gate. This will have suitable covering on top (grating) to ensure that water from inside the house does not come on the road. This drain will be suitably connected to the manhole.
- **16.** Construction of barsati with maximum of 6ft projection from the stair tower with three sides open is permitted.
- **17.** In-house plumbing, electric, gas, ICT and alternate energy works should be executed from approved/ licensed contractors.
- **18.** Servant quarters shall not be allowed in compulsory open space. All servant quarters shall be part of the main building.

- **19.** For any landscaping outside property line, permission shall be obtained from DHAP authorities.
- **20.** Kitchen, toilet and bathroom are allowed in basement with mechanical means of disposal and exhaust where required in houses.
- **21.** Overhead water tank above stair tower / Mumty is not allowed.
- **22.** Shops, offices and godowns of any description for storing or exhibiting for sale, any merchandise of any type or any commercial/ industrial use are strictly prohibited in residential building plots.
- **23.** Residential Buildings will not be used as regular place of assembly/ worship including Masjid, Jamaat Khana, Imam Bargah, Azzan Khana, Church, Temple, marriage or other social ceremonies and concerts etc.
- **24.** Any commercial activity including establishing the offices, parlors, tuition center, etc. will NOT be allowed in the residential buildings.
- **25.** Inter floor in residential units may be permitted on top of bathroom/ dress provided the clear height below 7'-0".
- **26.** The parameters for level variations while scrutinizing and evaluating submission plans are as under:
 - **a.** Plots measuring 9000 Sft and above wherein provision of two main gates is allowed in Regulations; if the variation in the plot levels between minimum and maximum exceeds 5 ft, then, any one gate may be planned against minimum level. If, however, level variation is less than 5 ft, both the gates would be placed according to the road in front.
 - **b.** Due to variation in level or encountering hard strata, wherein excavation becomes difficult, split level plinth may be planned duly supported by the contour plan.
 - c. If the contour of a plot depicts level variation of 5ft and above, encompassing up to 40% of the plot area and plot falls on more than one road/ street, the bottom of the basement or part thereof, may be planned with respect to one of the road, having direct access to it from the abutting road provided:-
 - (1) It does not interfere with the overall security system /master

plan of the area.

- (2) It does not fall on the main road.
- **27.** Owner of the plot (4500 Sft and above) will make an arrangement by constructing an underground tank for collection of gray water, (after septic tank) which can be used for lawn, plants and flowerbeds etc.
- **28.** The height of area between edge of the road and property line (residential/commercial) shall not be raised. Blocking of such area by placing stones / blocks is not permitted.
- **29.** Construction of "Duplex" of any design is strictly prohibited on any size/ type of plot.
- **30.** No structure of any kind will be allowed on roof except Stair Case/ Mumty, Over Head Water Tank, Solar Panels, Solar/ Electric

Water Heaters. Any other alternative energy solution may be allowed subject to approval of DHAP Authorities fulfilling all structural, safety and environmental requirements.

- **31.** All alternative energy solutions shall not be considered in the overall height of the allowable height of the building.
- **32. Stair Tower:** The area of stair tower shall be governed as under: -

Table 1: Area of Stair Tower

Type of stairs		Plots up to 6300Sft	Plots of above 6300 Sft
(a)	Box Stairs	225 sft	250 sft
(b)	Dogleg Stairs	180 sft	200 sft
(c)	Straight Flight	150 sft	180 sft
(d)	Spiral Stairs	120 sft	150 sft

The stair tower shall be strictly restricted to the periphery of stairs and in no case be utilized for any kind of living purpose.

Construction of barsati with maximum of 6ft projection from the stair tower with three sides open is permitted.

- **33. Open Stairs:** Open stairs (Spiral) would be allowed subject to the following:
 - **a.** These stairs are provided for servant room located at first floor and for access to roof top for maintenance only.
 - **b.** Spiral stairs of Maximum 4'-6" dia allowed in rear COS starting from building line. Stair tower / Mumty cannot be constructed over these stairs.
- **34. Mumty:** Mumty should be adjacent to the primary or secondary stair case. Mumty area may house, bed rooms with bathroom, storage, servant room including bathroom. No window will be allowed on sides of neighboring plot. Internal clear height of Mumty will not be more than 8 ft from top of 1st floor slab.
- **35.** Mumty shall only be allowed as an incentive to those plot owners as per the following two conditions:
 - a. Cul De Sac Plots (If any)

Room Size 14' x 16' with bathroom 8' x 10' (Maximum).

- **b.** Plot owners who will provide atleast 40% of their electrical loads on alternate energy solutions. The details of mumty areas allowed in this condition:-
 - (1) Plots from 4500 Sft and above 400 Sft
 - (2) Plots between 2275 Sft and 4500 Sft 300 Sft
 - (3) Plots from 2275 Sft and below 150 Sft

<u>Note:</u> Provision of Mumty is an incentive and as such is only applicable in any one of the above two conditions. In no case, **both** incentives will be applicable at the same time.

- **36. Basement for Residential Plots:** Basement shall be permitted up to allowable footprint of ground floor while ensuring safety of adjoining buildings. Any damage occurring to neighboring property or the DHAP property shall be made good by the owner or builder to the satisfaction of the DHAP. Indemnity Bond shall be obtained from owner before issuing approval of building plan.
- **37.** Additional basement may be permitted subject to ground conditions. In this case, owner shall be required to submit contour plan and photographs

substantiating the requirement. In no case any commercial activity shall be allowed in basement(s).

- **38.** In case of open basement or COS less than 5 ft, owner shall submit a method statement showing the precautionary measures to be taken by the owner for safe guarding the adjacent property and obtain a NOC from DHAP, prior to any excavation activity.
- **39.** Front COS will be left untouched.
- **40.** Sides and rear COS may be dug till the plot line ensuring safety of the neighboring property.
- **41.** Construction of ramp, stairs/ steps leading to the basement is permitted within the side and rear COS without any super structure over them leaving 3ft clear space
- Clear height of the basement shall not be less than 8 feet 6 inches and more than 10 feet.
- **43.** Basement walls adjacent to completed houses should be completed within 15 days from the date of commencement of excavation.
- **44.** All the retaining walls of the open/closed basement should be of RCC.
- **45.** If services, such as bath and kitchen etc., are provided in the basement, the owner must provide mechanical disposal from the basement to the upper level in all cases (irrespective of levels of DHAP mains), so that there is no possibility of back flow in case of choked sewer lines. DHAP will not be responsible for the consequences in any case. Cost of additional services work shall be borne by the member.
- **46.** Closed Basement, vaults, cellars and other structures, wholly or partly below the ground level/ approach road level, shall be allowed by the Authority provided minimum 1 x Emergency exit is provided.
- **47.** Parking in basement is allowed.

48. Entry Gates

- **a.** Position / Location of the gate(s) will be kept as per approved site plan.
- **b.** Standard width of main gate including wicket gate excluding pillars should not be more than 20'. However, if member desires to increase the width, gate up to 25' may be allowed by paying additional subscribed charges as one-time measure but services such as transformer, DBs etc. would not be shifted.
- c. For plots having level difference of 7 feet or above in frontage of 50 feet can change the main gate location after the approval from Competent Authority, however no services such as transformer, DBs etc. will be shifted.
- **d.** Additional gate with car porch and independent guard room shall be permitted only for plot measuring 9000 Sft and above on title road with special permission.
- **e.** Additional gate may also be allowed in case of corner plots with special permission.
- f. For corner plots measuring 4500 Sft and above, additional gate shall be allowed up to 15 ft with special permission on the road other than the title road.
- **g.** For corner plots measuring 2700 Sft and above having COS on road side, additional gate shall be allowed up to 12 ft with special permission.
- h. In no case, additional gate will be allowed on the main roads and roads bearing main traffic load connecting sectors.
- **I.** Provision of any kind of arch/ design element over the gate is not allowed.
- **49. Ramp:** Drive way is to have four independent conduits having minimum 6" dia for laying services like telephone, gas, water supply etc. under it. This should be indicated in the plan of the house. The slope of ramp should be as under:
 - a. Where no footpath exists, the ramp may be extended maximum up to the outer edge of drain kerb stone/ plot line. The height of ramp at start of property line should be maximum 18" or in a slope of 1:7. The height of ramp would be taken from intersection of gate center line & reference road crown.
 - b. Where footpath exists, the ramp start point may be taken from outer edge of footpath. The height of ramp at start of property line should be maximum 18" or in a slope of 1:7. The height of ramp would be

taken from intersection of gate center line & reference road crown.

- **c.** Pavement as per Approved design in service corridor in front of Gate.
- **50. Residential Buildings Standards:** All residential houses or bungalows shall comply with the following standards: -

Table 2: Residential Building Standards

	Allowable Covered	Allowable			S/Compuls	•
Plot Area (Marla)	Area G.F	Covered Area	Front	Rear	Side	Side
	(incl car	(F.F)	(ft)	(ft)	along Car	(ft)
	porch)				Porch	
					(ft)	
Up to 6	85%	F.P of G.F area	5	3	Nil	Nil
Above 6 up to 9	75%	F.P of G.F area	7	3	3	Nil
Above 9 up to 15	70%		10	5	5	Nil
Above 15 up to 25	68%	After leaving COS 90% of G.F incl	15	7	5	5
Above 25 up to 35	65%	car porch area OR F.P of G.F less	18	10	6	6
Above 35 up to 60	60%		20	12	8	8
Above 60	55%	car porch	30	15	10	10

Note:

Allowable covered area and COS will be governed by type and category of plot.

- Shade will not be counted in Covered area & Maximum fall of shade should not be more than the specified limits.
- Guard rooms at gate allowed (Plot size above 15 Marla up to 32 Marla) (max 60 Sft with 8ft height) -
- Guard rooms at gate allowed (Plot size above 32 Marla)(max 120 Sft with 8ft height) -

- ➤ Front Setback for standard plots is relaxed up to 2ft on payment of fol regularization charges by member
 - ❖ Up to 1ft (up to 10 Marla)
 - Up to 2 ft (10 Marla & Above)
- **51. Minimum Residential Buildings Cubical Capacity Standards:** The following shall be minimum cubical capacity standards for residential buildings: -

Table 3: Minimum Residential Buildings Cubical Capacity Standards

Description	Area (Sft)	Width (ft)	Clear Height (ft)
Living rooms	110	9'-6"	9'-6"
Kitchen	48	6'-0"	9'-6"
Powder Room	15	3'-0"	7'-6"
Bath room	24	4'-0"	7'-6"
W. C only	15	3'-0"	7'-6"
Servant room/quarter	80	8'-0"	9'-6"
Guard room(s) on the gate only	36	6'-0"	8'-0"
Passages, Corridors Galleries etc	-	3'- 6"	7'-6"
Main stair case	-	3'-6"	7'-0"

52. Residential Buildings Height Standards: The following shall be the height standards for residential buildings: -

Table 4: Residential Buildings Height Standards

Description	Allowable Heights (ft)		No of Floors
	Min	Max	
Porch from Finished Road Level (F.R.L)	1'-0"	2'-0"	
Clear height of basement	8'-0"	12'-6"	
G.F (Plinth Level) from F.R. L	1'-0"	3'-6"	
G.F clear height	8'-0"	12'-6"	
1st Floor clear height	8'-0"	12'-6"	
Total Height of Bldg. (incl Top roof Slab)	22'-6"	28'-6"	
Stair Hall Height	7'-0"	10'-0"	B+G+1
Stair Tower with elevator shaft	-	12'-0"	
Overall height of Bldg. incl Stair hall from F.R.L	30'-0"	37'-0"	
Parapet Wall (excl roof treatment)	3'-0"	4'-0"	
Parapet Wall incl Fence or Safety Railing	5'-6"	6'-6"	
Boundary wall from F.R. L	5'-6"	8'-0"	
Overhead water tank (Over top Roof Slab), not allowed over Mumty	5'-0''	6'-6"	

Note: 2ft high iron protective barrier over boundary wall may be permitted by the Authority under special circumstances with the prescribed additional charges.

53. Structural design and vetting is compulsory for all types of residential buildings irrespective of height.

- **54.** Specified charges will be levied by DHAP for processing the case for vetting of Building Plans and Structural drawings. These rates are subject to the determination by the DHAP from time to time.
- **55. Residential Buildings Mumty/ Stair Tower Standards:** The following shall be the Covered area standards for Mumty/ Stair Tower of residential buildings: -

Table 5: Mumty/ Stair Tower Standards

Plot Size	Allowable Mumty Area	Extension
Up to 5 Marla	200 Sft	Fixed
Up to 8 Marla	200 Sft	Up to 250 Sft
Up to 10 Marla	250 Sft	Up to 300 Sft
Up to 1 Kanal	300 Sft	Up to 400 Sft
Up to 2 Kanal & Above	400 Sft	Up to 700 Sft

Note: Extension in Mumty covered area may be permitted by the Authority under special circumstances with the prescribed additional charges.

56. Water Storage Standards The following shall be the Storage standards for Underground & Overhead Water Tanks for residential buildings: -

Table 6: Water Storage Standards

Tank	Plot Size	Max Allowable Storage Capacity	Max Allowable Size		
2		Gallons	Length (Ft)	Width (Ft)	Height (Ft)
UG Water tank	Up to One Kanal	1500	6'-0''	6'-0''	5'-6"
lank	Above One Kanal	2000	7'-0''	6'-6"	5'-9"
O.H Water	Up to One Kanal	900	6'-0''	5'-0''	4'-0''
tank	Above One Kanal	1200	6'-6"	5'-6"	4'-6"

Note: Only one underground & one Overhead water tank is allowed

- Water tank Should be located in such a way that bowzer filling for water tank may be facilitated from the outside
- Tanks should be constructed in RCC
- ➤ Boring of any type for the purpose of water, sewerage, drainage etc. is strictly prohibited in the territory of DHAP except where found necessary
- **57.** Prior to the construction activity, member should remove the tiles from the walkways and stack it at a safe place as these will be reused once the structure is completed.
- 58. Only manual excavation is allowed for basements near DHAP service / utilities areas and adjacent constructed buildings. Member will have to obtain NOC from neighboring building members if 5' space is not left from adjoining property. In case of damage to the adjacent building, the owner of the plot shall be sole responsible.
- **59.** Excavated Material can only be dump in the adjacent vacant plot. Make sure that only one plot is used for the dumping of excavated Material.
- **60.** After the excavation, member will immediately remove the excavated Material from the site and dispose of it at the designated sites for dumping.
- **61.** During the course of construction, building material can only be dumped or stacked in the adjacent vacant plot. Only one plot will be allowed to be used for this purpose.
- **62.** Approval of Exterior Finishes (color, paints, materials etc.) is mandatory from TP & BC. Upon violation, fine as prescribed by the Authority from time to time will be charged. Rectification of violation will be done by the client at his / her own expenses
- **63.** Porch Levels should be strictly followed as per approved Plans
- 64. Only Spiral Stairs are allowed in the Set Backs
- **65**. Fiber Glass shade is not allowed in the COS which are open to roads

- **66.** Fencing is not allowed along the green belts outside the houses
- **67.** Benches are not allowed in green belts and outside the houses
- **68.** Barbed wire/Razor wire is not allowed at boundary walls
- **69.** One Underground and One Over Head Water Tank is mandatory to be constructed as per the laid regulations.
- **70.** Frontal set-back can be dug up to 3 ft only provided that adjacent property is secured.
- **71.** In any case the overall building should look like Two storey and the total height of building from the reference point shall not be more than 37 ft.
- **72.** Two (2) car porches shall be allowed for corner plots, plots with two entries and non-corner plots having frontage 70 ft and above.
- **73.** Plots having area equal or less than 15 Marla, porch columns shall not extend beyond the front building line, however projection from porch column towards front can extend up to 2 ft 6 inches.
- **74.** Plots having area above 15 Marla and Below 35 Marla, porch columns shall have a clear distance of at least 12 ft from the outer edge of front boundary wall, however projection of 3 ft-wide towards front only is allowed.
- **75.** Plots having area above 35 Marla, porch columns shall have a clear distance of at least 15 ft from the outer edge of front boundary wall, however projection of 3 ft-wide towards front only is allowed.
- **76.** Maximum two electric meters will be provided for each plot
- 77. In case extra land is equal to or more than the respective set-back building line can be extended up to plot line. However, it will be decided considering the category of extra land on case to case basis.
- **78.** One temporary shade is allowed at rear compulsory open space for laundry only.

1. Connection to Public Sewer: A sludge water shall be conveyed through septic tank to public sewer. Sewer connections shall not be granted without septic tanks.

2. Trenches for Drains and Private Sewers

- a. Where any drain or sewer is constructed adjacent to a load bearing part of a building, such precaution shall be taken to ensure that the trench should not impair the stability of the building.
- b. Except where the nature of the ground makes it unnecessary, where any drain or private sewer is adjacent to a wall and the bottom of the trench is lower than the foundation of the wall, the trench shall be filled in with concrete to a level which is not lower than the bottom of the foundation of the wall by more than the distance from that foundation to the near side of the trench less than twelve inch.
- c. In case, where the trench is within three feet of the foundation of the wall, the trench shall be filled in with concrete to the level of the underside of the foundation.
- **3. Sanitary Provisions:** The minimum sanitary provisions as prescribed shall be followed as under:
 - a. **Single rooms:** For every five (5) single room units or servant quarters, there shall be one (1) wash basin, one (1) WC and one (1) bathroom shall be provided.
 - b. Boarding or Guest Houses: For every ten (10) bedrooms or less in a boarding house or guest house, there shall be at least two (2) WC's, two (2) wash basins and two (2) showers.
 - c. Dormitory or Hostels: For every twenty (20) persons in a dormitory and hostel, there shall be at least three (3) WC's, three (3) wash basins and three (3) showers, and for every ten (10) additional persons one (1) WC, one (1) wash basin, and one (1) shower is to be added.
 - d. Office: In an office with twenty (20) persons (calculated at a rate of one person per one hundred square feet (100 Sft), there shall be minimum of two (2) WC's., two (2) wash basins and one (1) urinal. For every additional twenty persons (20) there shall be one (1) WC, one (1) wash basin and one (1) urinal. One (1) wash basin or equivalent washing space per twenty-five (25) or less persons shall

be provided for ablution purposes.

- **4. Shopping Center:** A minimum of three (3) WC's, one (1) urinal, and one (1) wash basin shall be provided for 3000 sft total floor area. For every additional 2000 sft floor area, one (1) WC, one (1) wash basin and one (1) urinal shall be provided.
- **5. Public Assembly Building:** Two (2) WC's, one (1) wash basin, and three (3) urinals shall be provided for 1500 Sft total floor area and for every additional 1500 Sft total floor area one (1) WC, one (1) wash basin and two (2) urinals shall be provided.
- **6. Masjid:** Eight (8) ablution spaces for 100 Namazi's, two (2) WC's., one (1) shower room shall be provided. For every additional 100 Namazi's, the number of ablution spaces will be extended by 8, 6 and 4 respectively. In addition to this, special arrangement for female worshippers having a capacity of 100 Namazi's, three (3) ablutions and one (1) WC shall be provided.
- **7. School:** four (4) WC's and two (2) wash basins per 100 students and for every additional fifty (50) students, one (1) WC and one (1) wash basin shall be provided.
- **8. Hospital:** For every ten (10) beds in a general ward, there shall be at least one (1) water closet, one (1) washbasin, one (1) ablution tap and one (1) bathroom with shower. One (1) kitchen sink shall be provided in each ward.
- **9. Restaurants:** For fifty (50) seats of restaurant, one (1) water closet, one (1) urinal, one (1) wash basin shall be provided.
- **10.** All fixtures shall be divided proportionately amongst the genders.
- **11.** Two (2) urinals may be replaced by WC, while proportionately dividing the fixtures for ladies.

12. Special / handicapped Persons

a. Provision of one (1) WC for special (disabled) persons shall be provided in all Public Buildings like Shopping centers, Masjid, Clubs, hotels, restaurants and Schools.

1. Size of External Openings

- a. Every room, other than rooms used for the storage of goods, shall be provided with natural light and natural ventilation by means of one or more openings in external walls. These openings shall have a combined area of not less than ten percent of floor area for habitable rooms and seven and half percent for other rooms, and the whole of such openings shall be capable of allowing free and uninterrupted passage of air.
- b. Area for openings in case of warehouse, godown, storage places etc. shall not be less than five percent of the floor area unless the space is ventilated mechanically.
- **c. Garages:** Every garage shall be provided with opening of not less than five percent of the floor area for ventilation and lighting.
- **d. Staircase**: Seven and half percent of the staircase area shall be provided with opening for adequate lighting and ventilation.

2. Size of Internal Openings:

a. Unless the light and ventilation requirements are met by an air well or ventilation duct, all internal habitable rooms must have openings in internal air wells in addition to door openings not less than seven and half percent of the floor area of such room. Access for maintenance of shaft be provided, at the level, where the shaft commences.

3. Internal Air Wells:

- **a.** Sizes of internal air wells for daylight and natural ventilation of habitable rooms shall be: -
 - (1) Building up to two storeys, 40 Sft with minimum width of well as 5 ft.
 - (2) Buildings up to five storeys, 80 Sft with minimum width of well as 8 ft.
 - (3) Each additional floor over five storeys, 80 Sft plus 10 Sft for each story with minimum width of well as 10 ft.
- **b.** Sizes of internal air wells for daylight and natural ventilation of kitchen, WC and bathroom shall be: -

- (1) For building up to two storeys, 20 Sft with minimum width of well as 3 ft.
- (2) For building with 3 to 5 storeys, 40 Sft with minimum width of well as 5 ft.
- (3) For buildings higher than five storeys, 40 Sft plus 5 Sft for each additional floor with minimum width of well 5 ft.
- (4) Access for maintenance of each such shaft shall be provided at lowest level of the shaft.
- (5) The above 20 and 40 sft natural ventilation well shall not be enforced in case mechanical ventilation is provided and substantiated with calculations.
- **4. Permanent Openings in Kitchen:** Every kitchen shall have openings for permanent ventilation into the external air space not less than fifteen percent of its floor area.

5. Water Closet, Bath Room and Ablution Places

- a. Every appliance including water-closet, urinal stall, bathroom or ablution area shall be provided with natural lighting and ventilation with openings in external walls having a combined area of not less than two square feet per appliance except where adequate and permanent mechanical ventilation is provided which discharges into open space.
- b. Water closet, bathroom and ablution place for handicapped persons please refer handicapped accessibility chapter.
- 6. Promote and Support Acoustic Comfort and Control: For all commercial and mixed use buildings where FAR is applicable along with all healthcare and educational buildings where central air conditioning is used, the acoustic performance relating to Internal Noise Criteria from External Noise Sources, Internal Noise Criteria from Mechanical Services Noise, Internal Airborne Sound Insulation Guidance Values, and Internal Impact Sound Pressure Levels meet the control requirements as set out as per prevalent ASHRAE requirements.
- **7. Promote indoor air quality** in air-conditioned buildings with mechanical ventilation.

- 1. Loads and Design: Structure analysis, design, detailing and loading shall be in accordance with the requirements of current Uniform Building Code hereinafter referred to as UBC and American Code or British Relevant Code or any other Code. Structure shall however be designed by only one approved Code.
- **2. Seismic Design:** Seismic Risk Zone for Peshawar will be Zone-2B (with reference to UBC-97) which is equivalent to Peak Ground Acceleration (PGA) of 16% g to 24% g.
- 3. Sub Soil Investigation: In view of the structural design in seismic hazard zone, type of sub-soil for foundation should be thoroughly ascertained by geotechnical investigation under the direct supervision of qualified and experienced geo-technical engineers. The soil report should correlate sub-soil type with UBC-97, or current sub-soil list.
- **4. Wind Load:** Wind load should be based on the velocity and gust factors data from local Meteorological Department.
- **5. Erection on Reclaimed Site:** Erection on reclaimed site will be avoided. However:
 - a. No building foundation shall be erected upon a site reclaimed by town sweepings or other refuse, except on recommendation of geo-technical and structural engineer.
 - b. No building plans shall be approved on open nullah public sewers and the like.
- **6. Protection of Existing Services:** During the making of an excavation in connection with a building works or services, adequate precautions shall be taken to secure the existing services.
- 7. **Foundation near Drains:** Where a building is to be erected adjacent to existing buildings, or near a drain or nullah, or an excavation at a distance less than depth of the said drain or nullah or excavation, or such as to affect the stability of drains or nullahs, the owner through a structural engineer shall satisfy the Board that the foundations of the building have been carried down to a level safe guarding its stability.

- **8. Specifications:** Specifications of material quality control and workmanship will be of high quality and in accordance with the requirements of ACI Building Codes, Uniform Building Code (UBC) and ASTM Standards.
- **9. Testing of Materials:** Regular testing will be carried out of materials such as aggregates, cement, concrete, reinforcing steel and all architectural materials, the quality control and quality assurance criteria laid down in standards of FIDIC, American Standard Testing method (ASTM), ACI or UBC and project specifications. Quality assurance program of architect or engineer may also be followed.
- **9. Supervision:** Construction supervision and quality assurance will be responsibility of the Owner/Builder full time Engineers who will supervise the work and under the guidance of Consultant on full time or top supervision, supervising engineers, and inspectors, etc., as required in these Regulations. Contractors, Builders or Developers will arrange full time supervisory staff shall carry out supervision and quality control for the category of buildings in these Regulations.

- 1. Sustainable Master Plan & Image Concept (SMPIC): DHAP Authorities is first smart, sustainable and green city of Pakistan, also have aesthetic consisting different architectural styles.
- 2. Similar Façade Elements: In order to have an aesthetic consistency, different architectural styles are adopted for different sectors under similar façade policy as provided herein.
- **3. Similar Façade Elements.** All buildings are to be developed based on the façade policy of each sector and Architects should ensure that the Design elements as provided herein are part of the façade.
- **4. Architectural Styles of Buildings:** Architectural styles of building are planned keeping in view old and modern concept.
 - a. Modern Styles: Modern styles have following major features: -Major Features
 - (1) Straight, Square or Rectangle openings
 - (2) Flat Roofs
 - (3) Smooth surfaces with minimal variety of materials
 - (4) Straight lines with no decoration in elevation



b. Spanish Styles: Spanish styles have following major features: -

Major features

- (1) Tapered Tiled Roof (Terrace tiles)
- (2) Round Arch Windows (openings)
- (3) Iron over the Framework exterior
- (4) Fluted and decorated classical
- (5) Columns
- (6) Wall finish with textured plaster
- (7) Classical column with Flute and sculptural decorations
- c. Ottoman Styles: Ottoman styles have following major features: -

Major Features

- (1) Pointed/ Round arches
- (2) Tapered and curved building Profile
- (3) Bands of alternate color stones and bricks
- (4) Distinct pencil shaped minarets style
- (5) Ornate tile / stone decoration
- (6) Spires on roof tops of building
- (7) Wide roof with over hangs supporting brackets
- d. Post Modern: Post Modern style have following major features: -

Major Features

- (1) Variety in Forms, Textures and Opening
- (2) Combination of Contrasting
- (3) Diverse Roof Profile
- (4) Variety in façade elements
- **5. Sustainable Façade Elements:** Based on the Sustainable Master Plan and Image Concept (SMPIC) of DHAP, buildings are required to have sustainable façade which includes the following:

- a. Windows: Windows should have the following: -
 - (1) All windows used in all buildings at DHAP shall be required to have Aluminum or UPVC (white) double glazed windows and ventilators (including curtain wall).
 - (2) Frames for all windows & ventilators are required to be anchored on masonry with hardened rubber sandwich in between, apart from using silicon for water proofing purposes.
 - (3) In case of sliding windows, rubber gasket should be used between the sliding panels & edges of panels.
 - (4) In case of curtain wall, all mullion joiners should be of aluminum. All aluminum sections should be inclusive of builtin architrave / beading (commonly known as collar windows).
- b. Window Glass: Window glass should have following criteria: -
 - (1) All Glass to be used shall be double glazed with color to match the scheme of the particular sector (similar facade element) conforming 60% reflective, high performance glass for heat.
 - (2) All double glazed window spacers should be of aluminum/UPVC.
 - (3) It is mandatory to use tempered glass in commercial, mix use and special purpose buildings (where FAR is applicable), to avoid accidents.
 - (4) In case the total glazed elements in an external wall which let in light is up to forty percent (40%) of the external wall area, then the glazing elements must meet the following performance criteria of Thermal Transmittance (summer U value) => U = 2.1 W/m 2K (Max.) and Shading Coefficient (SC) = 0.2 (Min.) and Light Transmittance = 0.2 (Min.).
 - (5) In case the total glazed elements in an external wall which let in light is within a range of forty percent (40 %) to sixty percent (60%) of the external wall area, then the glazing elements must meet the following performance criteria of Thermal Transmittance (summer U value) => U = 1.9 W/m2K (Max) and Shading Coefficient (SC) = 0.32 (Min) and Light Transmittance = 0.1 (Min) or as approved by DHAP Authorities.

- **6. External Walls Cladding (Ground Floor):** In commercial buildings, on Ground Floor (where applicable), maintenance free lighter color granite stone/color Crete shall be provided on front and rear elevations and all three sides in case of corner plot.
- **7. External Wall Cladding (Upper Floors):** External wall cladding on upper floors should have following:
 - a. On upper floors of all commercial buildings, robust & maintenance free aluminum cladding (similar façade element)/reflective paint / color Crete is required to be used.
 - Aluminum cladding used shall be fire resistant. Any other sustainable
 - and maintenance free material may also be allowed with special permission by DHAP Authorities provided that the approved color scheme of that area along with its overall ambience is not affected.
- **8. External Walls (Insulated):** All external walls shall be provided with Insulation on hollow blocks, light weight insulation blocks or blocks with insulation etc. on south and west facades of all commercial buildings for energy conservation with emphasis on Following:
 - a. Minimum Envelope Performance Requirements: For all new commercial buildings, exterior building elements must have average thermal transmittance (also known as U Value) and Shading Coefficients (SC) that does not exceed the values specified and Light Transmittance greater than or equal to the values specified.

9. External Walls and Floors

- a. Building elements forming the external walls and floors (where one side of the floor is exposed to ambient conditions) must have an average thermal transmittance (U Value) which does not exceed U = 0.57 W/m²K.
- b. Where the floor is in contact with the ground, the insulation should be applied up to one meter (1m) below from the top most point in contact and shall be all around perimeter of the building.
- 10. Plumbing & Other Services: To ensure that the buildings will look

aesthetically pleasing, no pipes are to be visible on front and back elevations. Independent pipe chases, ducts or shafts shall be required to be provided.

- **11. Side Walls:** In case plot on which the construction is proposed has an empty plot/s adjacent to it, the plot owner shall ensure to provide side walls to be plastered with grooves and to provide paint (similar color of cladding or paint) and to keep it maintained.
- **12. Corner Plots:** All sides of a corner plot are to be treated as front elevation i.e. no visible plumbing, no external air conditioning units to be placed on any elevation. All external air conditioning units to be placed on roof, balcony or in ducts via pipe chases.
- **13. External Air Condition Units:** No external AC units to be placed on any elevation of the commercial buildings and all external units to be placed on roof balcony in duct via pipe chase.

14. Signboards

- a. To control defacing of buildings in DHAP, all signboards on all commercial buildings are to be in-line with the DHAP Signboard Policy. Signboards sizes and shapes are to be first submitted to TP & BC Directorate on A3 paper (in triplicate) showing the signboards shapes & sizes shown in color prior to installation. After installation, a photograph on A4 size is to be submitted also for the record of TP&BC. Signboards for shops in commercial buildings will be of size having length covering entire length of the shop or, part thereof, width of 3 ft and 1 ft raised from the wall. For display of the name of the Commercial building, Group etc. size will be 10 ft x 4 ft x 1 ft.
- b. However, DHAP Authorities may allow variant size of the sign board based on aesthetics corresponding the size of the building, building front, shape of the building. Signboards may be allowed more than one depending upon size, shape and view from different sides of the building.
- **15. Glazing:** Ratio of glazing on front & back elevations are to be minimum thirty percent (30%) for structure to look visually de-massed with following requirements:
 - a. Glazed Elements Fenestration Requirements: In case the total

area of external walls that let in light is up to thirty percent (30%) of the external wall area, then the glazing elements must meet the following performance criteria: -

- (1) Thermal Transmittance (Summer U Value) U = 2.1 W/m²K (max)
- (2) Shading Coefficient (SC) 0.4 (max)
- (3) Light Transmittance 27 %
- b. In case the total area of external walls that let in light is between thirty percent (30%) and seventy percent (70%) of the external wall area, then the glazing elements must meet the following performance criteria:
 - (1) Thermal Transmittance (Summer U Value) U = 1.9 W/m²K (max.)
 - (2) Shading Coefficient (SC) 0.32 (max.)
 - (3) Light Transmittance 20%

Note: The owners are required to submit with completion plan certification from glass supplier/manufacturer that the glass used in the said building is fulfilling the requirements numerated above

- **16. Balcony Parapets:** All Balcony parapets are either to be of block masonry with aluminum cladding on it or in case railing is used, it is to be of stainless steel or any other maintenance free non corrosion material.
- 17. Green and Insulated Roofs: Building roofs should have following:
 - a. All roofs shall be provided with water proofing membranes along with insulation / Insulated tiles or green roof to ensure minimum envelope performance requirements to ensure an average Thermal Transmittance (U Value) which does not exceed a U Value = 0.3 W/m²K.
 - b. Also, where Green roofs are provided, they should be provided with proper root barrier and drainage and irrigation systems. The owner shall be required to provide documentary proof of the same to DHAP Authorities.
- 18. Solar Water Heaters (SWH): Building should have: -

- **a.** For all commercial buildings, use of Solar Water Heaters (SWH) with automatic Electric backup system and/or Electrical Heater is mandatory. All SWH works to be done by specialist vendors.
- b. All Pipe materials to be used for SWH, plastic materials shall preferably be used, which are resistant to UV radiation and to the temperatures up to 95°C. All hot water pipes connected to SWH are preferably to be insulated to reduce heat losses from hot water mains.
- **c.** Integration of backup system is also mandatory (electrical or gas, however, electrical is mostly recommended backup system as only electrical rod is required with no extra piping will be required).
- d. At the time of submission of plans, the owner is required to submit backup systems which he is planning to use, for the approval of TP & BC, DHA. Also, at the time of completion of plans, the owner is required to submit pictures of the roof showing the installed SWH on the commercial building.
- **19. Water Saving Devices:** It is mandatory to use water saving faucets, showers fittings, and flushing devices (water conservation) in all new commercial buildings.

20. Water Efficient Fittings (for all commercial buildings)

Water efficient system and fitting shall be used.

a. Water-conserving fixtures must be installed, meeting the following criteria.

(1)	Showerheads	8 Liters per minutes
(2)	Hand wash basins	6 Liters per minutes
(3)	Kitchen sinks	7 Liters per minutes
(4)	Dual flush toilets	6 Liters full flush, 3 Liters part flush
(5)	Urinal	1 Liter per flush or waterless

- **b.** Dual Flush toilets must be used.
- **c.** Automatic (proximity detection) / push button faucets must be installed in all public facilities.
- d. Cisterns serving single or multiple urinals in commercial buildings must be fitted with manual or automatic flush controls that are responsive to usage patterns. Only sanitary flushing is acceptable during building closure or shutdown.

21. Sustainability

a. Mixed Use Buildings only:

- (1) To promote and support the use of low emitting, at least 5% of the total vehicle parking spaces reserved for low-emitting, fuel-efficient vehicles
- (2) To promote and support the use of bicycles, they should be provided within the building or within a shaded area located no more than 30 meters from a building entrance within the plot limit.
- **b.** Minimum one motor vehicle parking space shall be provided for every 1500 Sft of floor area for hospitals.
- **c.** Where car lifts are provided there shall be a minimum of two car lifts with facilities of standby generator where-ever so required.
- **22. Energy**: Energy conservation have to be kept in all designs.
 - **a.** To promote sustainable design:
 - (1) Provide adequate natural daylight to reduce reliance on electrical lighting and to improve conditions for the occupants.
 - (2) Residential and public buildings must provide direct line of sight (views) to the outdoor environment
 - **b.** To ensure high quality indoor spaces:
 - (1) All ventilation system outdoor air intakes must be located at suitable distance from potential sources of contamination to reduce the possibility of odor or air contaminants entering the ventilation.
 - (2) Exhausted air must be discharged in a manner to avoid it being drawn back into the building.
 - (3) Indoor air quality testing must be carried out prior to

occupancy.

- Air Quality testing must be carried out by an air testing (4) company or laboratory accredited by the Administration.
- Testing equipment must have initial and periodical calibration (5) certificate from an external calibration facility accredited by the Administration.
- Air Quality Test report must be provided with completion plan (6) of all commercial buildings.

Sampling Type of Maximum Sampling Schedule Duration Samples Acceptable < 0.08 parts per Formaldehyde 8-hour million (ppm) continuous Total Volatile Organic monitoring (8 < 300 Pre- Occupancy |Compound (TVOC) hours' time micrograms/m³ Weighted Suspended < 150 average [TWA])

Table 7: Maximum Limit for Air Containment

Air protection systems for hazardous fumes: Where activities C. produce hazardous fumes or chemicals, spaces must be provided with separate air extraction systems to create negative pressure and exhaust the fumes or chemicals to ensure they do not enter adjacent rooms.

micrograms/m³

- d. **HVAC maintenance standards:** The cleanness of HVAC systems must be maintained and all parts must be inspected and cleaned by licensed specialized maintenance companies by DHAP Authorities.
- Air quality in parking spaces: Mechanical ventilation must be e. provided to ensure that the Carbon Monoxide (CO) concentration in the enclosed parking area is maintained below fifty (50) parts per million (ppm) by: -
 - Providing a minimum of six (6) outside air changes per hour, (1)
 - (2) Installing a variable volume ventilation system controlled in response to input from a minimum of one CO sensor per

Particulates (<10

microns)

four hundred square meters (400 m²) floor area of parking.

- f. To establish energy efficiency in the building sector, all buildings should acquire an energy certificate indicating energy class and consumption.
- g. To enhance building envelope performance: -
 - (1) Building elements forming the external walls, roofs, and floors (where one side of the floor is exposed to ambient conditions) must have an average thermal transmittance (U Value) which does not exceed specific values.
 - (2) Double glazed units for windows and roof lights must meet specific performance criteria.
- h. To minimize Thermal Bridges: -
 - (1) Thermal Bridges must be eliminated or insulated to reduce the amount of heat transfer. For this reason, the use of External Thermal Insulation Composite Systems shall preferably be installed.
 - (2) Other than houses, all regularly used air-conditioned entrance lobbies must be protected by a door design which acts as a barrier to the loss of conditioned air.
- To Eliminate Urban Heat Island Effect and promote thermal and occupant comfort: -
 - (1) All opaque external roofing surfaces must comply with a minimum Roof Solar Reflective Index (SRI) value for a minimum of 75% of the roof area.
 - Normal occupied spaces should have an average air velocity between (0.2 0.3) m/s.
 - (3) HVAC system must be capable of providing a range of conditions as follows for 95% of the year.
- j. To optimize lighting features, for optimum and efficient lighting ceilings should be able to reflect light back into the space. The reflective ability of a ceiling is indicated by its Light Reflectance or LR value. High light reflectance or Hi-LR ceilings should be used with an LR of 0.83 or higher.
- **k.** To promote energy efficient lighting features:

- (1) All light fixtures intended for the general illumination of interior or exterior spaces must be fitted with Fluorescent Lamps or Light Emitting Diodes (LED).
- (2) High frequency electronic ballasts must be used with fluorescent lights and metal halide of 150 W and less. High frequency electronic ballasts must be labeled as conforming to an international standard approved by the local Administration.

I. To increase energy efficiency of lighting system

(1) The average Lighting Power Density for the interior connected lighting load for specific building types must be no more than the watts per m² of gross floor area given in the Table.

Table 8: Maximum Average W/m² Requirements across total building area

Building Type	Maximum average W/m² across total building area
Commercial/Public: Offices, Hotels, Resorts, Restaurants	10
Educational Facilities	12
Manufacturing Facility	13
Retail Outlets, Shopping Malls, Workshop	14
Warehouses	8

- (2) Lighting Power Densities for building types not listed in the above Table should be no greater than those values given in ASHRAE 90.1-2010 or equivalent as approved by the Administration.
- **m.** To increase energy efficiency of lighting in outdoor spaces: -
 - (1) The average Lighting Power Density for the exterior connected lighting load for specific building types must be no more than the watts per m² of gross floor area given in the Table.

Table 9: Maximum Average W/m² Requirements across total building area

Building Area	Maximum W/m² or linear meter
Uncovered parking lots and drives	1.6 W/m²
Walkways less than 3 meters wide	3.3 W/linear meter
Walkways 3 meters wide or greater	2.2 W/m²
Outdoor Stairways	10.8 W/m²
Main entries	98 W/linear meter of door width
Other doors	66 W/linear meter of door width
Open sales areas (including vehicle sales lots)	5.4 W/m²
Building Facades	2.2 W/m² for each illuminated wall or surface or 16.4 W/linear meter for each illuminated wall or surface length
Entrances and gatehouse inspection stations at guarded facilities	13.5 W/m²
Drive-up windowsat fast food restaurants	400 W per drive-through

- (3) Lighting Power Densities for building types not listed in the above Table should be no greater than those values given in ASHRAE 90.1-2010 or equivalent as approved by local Administration.
- **n.** Increase energy efficiency through lighting control:
 - (1) Occupant Lighting Controls must be provided so as to allow lighting to be switched off when daylight levels are adequate or when spaces are unoccupied and to allow occupants control over lighting levels.

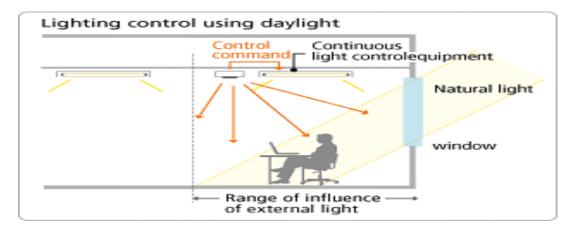


Figure 1: Lighting Control using daylight

- (2) Corridors and lobbies should reduce lighting levels to no more than 25% of normal when unoccupied.
- (3) In offices and education facilities all lighting zones must be fitted with occupant sensor controls capable of switching the electrical lights on and off.
- (4) To Increase energy efficiency through lighting control: -
 - The artificial lighting in spaces within 6 meters in depth from exterior windows must be fitted with lighting controls incorporating photocell sensors capable of adjusting the level of electric lighting to supplement natural daylight only when required.

Light Controller LR/S x.16.1 Setpoint Control value 1 - 10 V Actual value = sensor value \$8\$6\$6\$6 Light Sensor Brightness value LF/U 2.1 artificial lighting share Absorption and Detected reflection properties brightness value of the room Brightness value daylight share

Figure 2: Energy Efficiency through Light Control

- ii. The combined artificial and daylight must provide an illumination level at the working plane between 400 and 500 lux. When there is 100% daylight, the lux levels may exceed 500 lux.
- o. Achieve energy efficiency in HVAC systems (in accordance with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1-2010, Section 6.4.3. or equivalent as approved by Administration).
 - (1) Sub-division of systems into separate control zones to correspond with each area of the building that has a significantly different solar exposure, or cooling load, or type of use.
- **p.** All separate control zones must be capable of:
 - (1) Independent temperature control;
 - (2) Inactivation when the building, or part of building served by the system, is not occupied.
 - (3) The operation of central plant only when the zone systems require it.
- **q.** To minimize heat loss and prevent condensation:
 - (1) Pipes and ducts passing through conditioned spaces must be insulated in accordance with BSI British Standard BS 5422:2009 or other insulation standards approved by the Administration.
 - (2) Insulation materials used must meet the requirements of Regulations, Thermal and Acoustical Insulation Materials or BS 5422:2009, whichever is the more stringent. All insulation installations must have a suitable vapor barrier and protection from UV light.
- **r.** To minimize heat loss and prevent condensation, Pipes passing through outside or unconditioned spaces must be insulated with the minimum insulation thickness:

	Temperature of contents (°C)							
	10° C	5° C			0° C			
Steel pipe	Minimum Insulation Thickness (mm)							
nominal pipe size (mm)	λ = 0.018	λ = 0.038	λ=	λ = 0.038	λ = 0.018	λ = 0.038		
	W/mK	W/mK	0.018	W/mK	W/mK	W/mK		
15	50	30	45	30	45	30		
20	60	30	55	30	45	30		
25	60	40	55	35	55	30		
32	65	40	55	35	55	30		
40	65	40	60	35	55	30		
50	70	45	60	40	60	30		
65	70	45	60	40	60	40		
80	75	45	65	40	60	40		
100	75	45	65	40	70	40		
150	90	50	80	45	75	40		
200	90	55	80	45	75	45		
250	100	55	80	55	75	45		
300+	100	80	100	75	80	70		

- **23.** To provide accurate records of electricity consumption:
 - **a.** Additional electrical sub-metering must be installed in all buildings with a cooling load of at least 1MW or gross
 - **b.** Sustainable Master Plan & Image Concept (SMPIC). Floor area of 5,000 m² or greater. All major energy consuming systems with a load of 100kW or greater, must be sub-metered.
 - **c.** Each individual tenancy shall have a sub-meter installed.
 - **d.** Meters used must be specifically designed for the measurement of chilled water rather than for hot water.
 - e. All meters must be capable of remote data access, have data logging capability and be used for demand management and cost allocation purposes.

24. Small to Medium Scale Embedded Generators: When a building incorporates on-site generation of electricity from small or medium scale embedded generators using renewable energy sources; the equipment, installation and maintenance of the system must be stand- alone (off-grid) or, if connected to the local Electricity grid, comply to all specifications and standards set by the electricity utility company and the manufacturer.

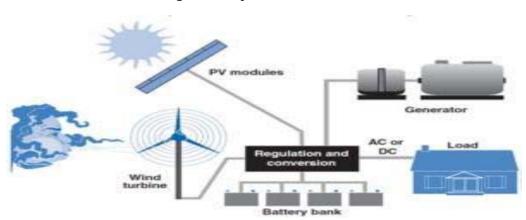


Figure 3: Byelaw and Conversion

25. Operation of Solar Water Heating System: For all new houses and sports facilities, a solar water heating system must be installed to provide 75% of domestic hot water requirements. Solar water heating installations must be fitted with insulated storage tanks and pipes, sized and fitted in accordance with the solar panel manufacturers requirements for each specific application. The supplementary heating system shall be controlled so as to obtain maximum benefit from the solar heater before operating.

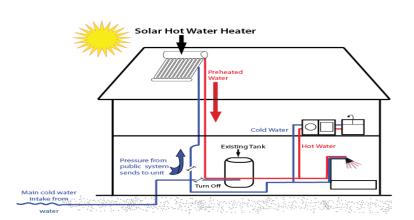
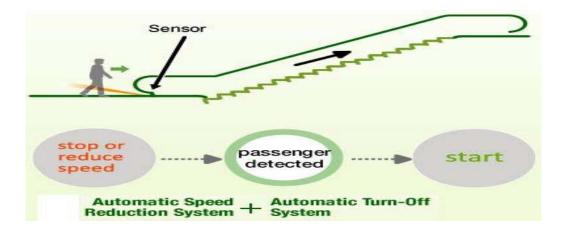


Figure 4: Solar Water Heating System

26. Energy efficient elevators and escalators

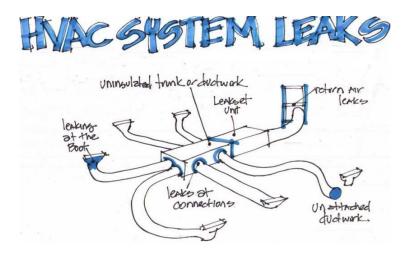
a. Escalators shall change to a slower speed or when no activity has been detected for a period of a maximum of 3 minutes and shall shutdown for 15 minutes inactivity. Energy efficient soft start technology should be used. The escalator shall start automatically when required; the activation shall be by photocells installed in the top and bottom landing areas.

Figure 5: Energy efficient elevators and escalators



- **b.** Elevators should use AC Variable-Voltage and Variable- Frequency (VVVF) drives on non-hydraulic elevators. Energy efficient lighting inside the elevator including controls to turn lights off when the elevator has been inactive for a period of a maximum of 5 min.
- 27. Minimize Duct Work Air Leakage: Ductwork with its equipment with an external static pressure exceeding 250Pa and all ductwork exposed to external ambient conditions or within unconditioned spaces must be pressure tested prior to occupancy in accordance with a method approved by local Administration and a compliant amount of air leakage achieved.
- **28. Ductwork leakage testing:** Must be carried out by a company approved by local Administration to conduct commissioning of buildings.

Figure 6: HVAC system leaks



29. Set HVAC maintenance standards

- **a.** HVAC systems must be accessible for regular inspection, maintenance and cleaning of the equipment.
- b. A maintenance manual and schedule should be developed by the manufacturers or suppliers of equipment or according to the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 62.1 – 2010 or equivalent as approved by local Administration.
- c. Service records including details of both preventative and corrective maintenance must be kept onsite and be readily available for inspection by local Administration.
- **30.** Ensure the proper operation of Building Services in new buildings with a cooling load of 1MW or greater.
- **31.** Commissioning must be carried out in accordance with the **CIBSE Codes** listed below or any other commissioning Standard or Code approved inspection by local Administration:
 - **a.** Commissioning of buildings must be carried out by a licensed company of DHAP Authorities.
 - b. Commissioning results must be recorded and available for inspection by local Administration. A systems manual must be developed and provided to the building owner or facilities operator following commissioning.

Table 10: Chartered Institution of Building Services Engineers Codes

CIBSE Codes The Chartered Institution of Building Services Engineers (CIBSE) Commissioning Code, Air Distribution Systems, Code A-2006" Restaurants "CIBSE Commissioning Code, Water Distribution Systems, Code W-2003" "CIBSE Commissioning Code, Lighting, Code L-2003" CIBSE Commissioning Code, Automatic Controls, Code C-2001" for central control and Building Management System (BMS)

"CIBSE Commissioning Code R: 2002 Refrigeration Systems"

"CIBSE Commissioning Code B: 2002 Boilers"

- **32.** Ensure the proper operation of Building Services in existing buildings with a cooling load of 2MW or greater. The re-commissioning of ventilation, water systems central plant, lighting and control systems must be carried out at least once every 5 years.
- **33.** Provide full central control of all the buildings technical systems
 - **a.** For all new buildings with a cooling load of 1 MW or gross floor area of 5,000 m² or greater, the building must have a central control and monitoring system capable of ensuring that the buildings technical systems operate as designed and as required during all operating conditions, and that the system provides full control and monitoring of system operations, as well as diagnostic reporting.
 - **b.** At a minimum, the system must control the chiller plant, HVAC equipment, record energy and water consumption and monitor and record the performance of these items.



Figure 7: Building Energy Management System

a. Water

- (1) To promote water conservation:
 - i. Water-saving fixtures should comply with minimum flow rates given.
 - ii. Dual Flush toilets, Automatic (proximity detection) / push button faucets in public spaces and Cisterns with manual or automatic flush controls should be installed.
- (2) Faucets installed as a component of a specialized application may be exempt from the flow rates upon application to Administration.

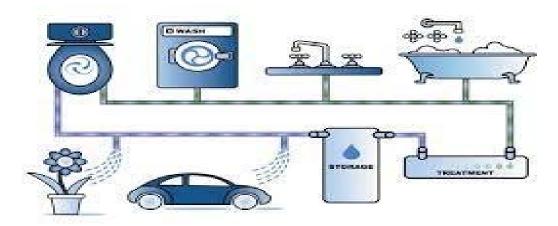
Table 11: Minimum Flow Rate

Fixture Type	Maximum Flow Rate
Showerheads	8 Liters Per Minute
Hand wash basins	6 Liters Per Minute
Kitchen sinks	7 Liters per minute
Dual Flush Toilets	6 Liters Full flush, 3 Liters Part flush
Urinal	1 Liter per flush or waterless

(3) To promote water recycling, For all new buildings with

cooling loads equal to or greater than 400kW, condensate water from all air conditioning equipment units handling outside air, or a mixture of return air and outside air where the outside air is not preconditioned, must be recovered and used for irrigation, toilet flushing, or other onsite purpose where it will not come into contact with the human body.

Figure 8: Water Recycling System



- **b.** To promote water efficiency in irrigation:
 - (1) 100% of the total exterior landscaping must be irrigated using non-potable water or drip or subsoil water delivery systems.
 - (2) All irrigation systems must incorporate, at any point that they connect to a portable water supply, backflow prevention devices which must be checked 12 months. Testing must be in line with the manufacturers recommended practice for field testing or any other testing regime approved by local Administration.

Figure 9: Water Efficiency in Irrigation



c. To achieve water conservation and savings through water

metering:

- (1) For all buildings with a cooling load of at least 1 MW or gross floor area of 5,000m² or greater, additional water metering must be installed.
- (2) The building operator shall be responsible for water entering.
- (3) All meters must be capable of remote data access and must have data logging capability and complying with international and local specifications.
- (4) Water metering should be integrated into BMS where it exists.
- (5) Sub-meters should be used for demand management and cost allocation purposes.
- **d.** To promote Grey water reuse:
 - (1) The building must be dual-plumbed for the collection and recycled use of grey water. Pipes which transport grey water must be color- coded differently from pipes that are used for potable water and be labeled "Not Suitable for Drinking."



Figure 10: Grey Water Collection & Recycle Process

- (2) There must be a minimum air brake of 25mm between any potable water sources and grey water collection systems.
- (3) Grey water must not be used for purposes where it will come

- into contact with the human body. It must be treated to the standard required by local Administration.
- e. To Promote health and safety, All Water Features with a water storage volume of over 1,000 ltrs and which create a water spray or aerosol including but not limited to waterfalls, ponds, streams etc., must be maintained, cleaned, disinfected and checked periodically to minimize the risk of Legionella bacteria or germs contamination and not exceed the maximum limits outlined in the technical guidelines issued by the Administration.

f. Waste

- (1) To promote recycling:
 - i. Domestic kitchens must have a minimum storage facility of two 10 liters waste receptacles clearly labeled for recyclable" and "non- recyclable".
 - ii. All new apartment, office, educational and recreational buildings must have a garbage room with a minimum area of 7.5 m² (80.72 sq. Ft) where non-recyclable and recyclable waste can be stored until collected. This facility must be easily accessible and sized as a percentage from the total Built Up Area (BUA) of the building in accordance with the following Table.

Table 12: Minimum Requirement for Storage of Recyclables

Built Up Area (BUA)	Minimum Space for Storage of Recyclables
Less than 500 m ²	7.5m ²
50 m ²	1.5% of BUA
1,000 m ²	0.8% of BUA
5,000 m ²	0.35% of BUA
10,000 m ² or greater	0.25% of BUA

g. To Support waste management, for all new apartment, office, educational and recreational buildings, an area must be provided for occupants to place items of bulky waste such as furniture. The area provided must cover an area of approximately 10 m² (107.63 Sft) and be reachable but not restrict access to the building.

h. Materials

- (1) To promote occupants" health and safety through thermal and acoustical insulation materials:
 - i. Insulation manufactured without the use of Chlorofluorocarbons (CFC"s), non-toxic and not release toxic fumes during combustion, have a Threshold Limit Value (TLV) of 0.1 or less of Individual VOCs and be fire resistant in accordance with the local requirements.
 - **ii.** They should achieve all the requirements of the approved specifications by local Regulations.
 - **iii.** All thermal and acoustical insulation must be installed as per the manufacturer's instructions.
- i. To improve indoor air quality and protect occupants" health: -
 - (1) All paints and coatings used should not exceed locally allowed limits of Volatile Organic Compound (VOC). Paints, coatings, adhesive bonding primers, adhesive primers, sealants and sealant primers must be accredited/ certified from specialized labs or any source approved by the Administration.
 - (2) To Support waste management, for all new apartment, office, educational and recreational buildings, an area must be provided for occupants to place items of bulky waste such as furniture. The area provided must cover an area of approximately 10 m² (107.63 sft) and be reachable but not restrict access to the building.

j. Materials

- (1) To promote occupants" health and safety through thermal and acoustical insulation materials:
 - i. Insulation manufactured without the use of Chlorofluorocarbons (CFC"s), non-toxic and not release toxic fumes during combustion, have a Threshold Limit Value (TLV) of 0.1 or less of Individual VOCs and be fire resistant in accordance with the local requirements.
 - **ii.** They should achieve all the requirements of the approved specifications by local Regulations.
 - iii. All thermal and acoustical insulation must be installed

as per the manufacturer's instructions.

- **k.** To improve indoor air quality and protect occupants" health:
 - (1) All paints and coatings used should not exceed locally allowed limits of Volatile Organic Compound (VOC).
 - (2) Paints, coatings, adhesive bonding primers, adhesive primers, sealants and sealant primers must be accredited/ certified from specialized labs or any source approved by the Administration.
 - (3). Recycled content must account for at least 5% of the total volume of materials used in the construction of the building.

PRODUCT LIFECYCLE

PRODUCT LIFECYCLE

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Figure 11: Product Lifecycle

34. Open Spaces

- **a.** To protect the local ecosystem, a minimum of 25% of the total planted area of a building plot, including vegetated roofs, must utilize plant and tree species indigenous or adapted to the local climate and region.
- **b.** To minimize exterior lighting pollution: -
 - (1) All exterior light fixtures must be shielded so that all of the light is projected below the horizontal plane passing through the lowest part of the fixture.
 - (2) Wall washing lights must spill no more than 10% of the lighting past the building façade.
 - (3) Downward directed lighting must be used for lighting of signage.

- (4) All exterior lighting must be fitted with automatic controls to ensure that lights do not operate during daylight hours.
- **c.** To Optimize construction of paved areas, 50% of the hardscape of the development must: -
 - (1) Demonstrate a Solar Reflective Index (SRI) of at least twenty nine (29), or
 - (2) Use an open grid pavement system, or
 - (3) Be shaded by vegetation or
 - (4) A combination of the above.
- d. To Promote solar control in outdoor spaces, in all buildings -other than houses- all pedestrian linkages within the plot area must be shaded using materials with an SRI equal to or greater than those specified in the table.

Table 13: Minimum Roof SRI Requirements

	Minimum Roof SRI	
Steep Sloped Roofs (slopes steeper than 1:6)	≥ 29	
Flat and Low Sloped Roofs	≥ 78	

1. Notice for Erection/Re-erection of Building

- a. Every person intending to erect, re-erect or make additions or alterations to a building shall apply to DHAP and shall pay immediately on demand, fee for the scrutiny of Building Plans as prescribed by DHAP, from time to time and shall at the same time submit five copies, duly signed by himself/herself and his/her Architect and a soft copy on CD as per checklist. Every person intending to erect, re-erect or demolish, or carry out additions or alterations in a building shall engage an architect and structural engineer as applicable, for all types of buildings.
- b. A registered professional as specified in these Regulations, shall give notice of his having undertaken the preparation of plans and supervision of building works, in Prescribed Forms. When the person so engaged ceases to be incharge of such building works before the same is completed, further such work shall forthwith be suspended until a fresh appointment is made and a certificate on Prescribed Form, duly signed by the previous professional, shall be obtained by the owner and submitted to the DHAP to the effect that the professional has ceased to be incharge of the work and that the work carried out under his supervision was to his entire satisfaction.
- 2. Oversight in Scrutiny of Drawings: Any over sight in the scrutiny of documents and drawings at the time of approval and sanction of the building plan or NOC does not entitle the owner to violate the Regulations.
- 3. Site Plan: The site plan shall indicate the following:
 - **a.** The direction of North.
 - **b.** The boundaries of the site on which it is proposed to erect or alter the buildings.
 - **c.** Location of gate(s).
 - **d.** The names, if any, and width of all streets on which the site abuts, together with numbers of adjoining houses or premises.
- **4. Building Plan:** Building plan to a scale not less than eight feet to an inch and the scale used shall be indicated on plan which shall include sections, elevations and shall inter alia indicate: -

- **a.** The external dimension of the main building.
- **b.** The basement, ground floor, upper floor, if any, and the roof.
- **c.** The position and dimension of all projections beyond the walls of the building.
- **d.** The position of underground water tank, overhead water tank and fire fighting tank.
- **e.** The position of septic tank and grey water tank.
- **f.** Levels of Compulsory Open Space (COS) for rain/storm water drainage.
- **g.** The clear dimensions of all rooms and position of doors, windows and ventilators in each room at every storey.
- **h.** The material to be used in the foundation, walls, floors and roofs.
- i. The purpose for which it is intended to use the building.
- j. Roof plan showing the location, dimension and levels of overhead water tank, lift machine room and stair tower/ Mumty, generator pad, solar water heater, solar panel, water tap/connection, skylight openings, green roof details etc. The details should also be shown in the elevation.
- **k.** Contour plan, if the difference in level of plot varies more than 5 ft.
- I. Every building plan submitted shall bear the signature of the licensed architect signifying its having been prepared under his supervision as per DHAP Regulations.
- **m.** Elevation and cross section of boundary wall, gate, ramp and water channel with respect to adjoining road/street.
- **n.** Level and width of foundation and level of ground floor with reference to the level of the centre of the road/street on which the front of the proposed building is to abut.
- **o.** Building corners on roadside are chamfered properly as prescribed in Regulations.
- p. All fresh/new proposed building plans shall be prepared with standard color i.e. black. However, for proposed revised building plan, deviations and addition/alteration, distinct colors and key (legend) to the color, shall be given thereon as under: -
 - (1) Proposed work Red(2) Existing work Black

(3) Demolition

- Yellow
- q. All Building plans consisting of Architectural and Service drawings prepared and signed by a Registered architect and a Registered engineer of DHAP, if engaged as envisaged shall be submitted (five copies computer print and one soft copy on CD/USB).
- **r.** All drawing for plot measuring up to 500 sq yds shall be submitted on a sheet of 20 X 30 inches and on sheet 30 X 40 inches for plot over 500 sq yds.
- s. All title documents relating to the plot showing his right to carry out such works, shall be accompanied with application (one set) as per checklist.
- **t.** Any other information or document required by the DHAP.

5. Structural Drawings: -

- a. Soil test report will be got prepared by the owner or by registered structural engineer on behalf of the owner, from registered geo tech consultant.
- **b.** Detailed structural drawings and calculations, on the basis of soil investigation report, are required for residential, commercial and all other projects.
- c. Structural drawings will be submitted by the owner after approval of the building plan. DHAP Authorities shall confirm receipt of structural design for residential building having Basement, Ground and First Floor and accord approval of construction of the building. For Multistoreyed buildings having Basement, Ground Floors and Upper Floors, on receipt of structural design, DHAP Authorities shall arrange vetting of the design from Proof Engineer, and shall accord approval for construction after vetting of the structural design. Demarcation will be issued after receipt or approval of the same.
- **d.** These drawings showing layout and x sectional details of foundations, columns, lintels, beams, slabs, underground and overhead water tanks, stairs, lift shafts, construction/expansion joints etc at each level, shall be provided.
- e. Buildings having configuration basement, ground and first floor, one set of structural drawings on A3 sheet along with soft copy duly signed by the DHAPs registered structural engineer will be provided by the owner for DHAP record purpose. Registered structural engineer will

- render a certificate that the structure is safe catering seismic design on Prescribed Form as required under these Regulations.
- f. Multi storey buildings having configuration more than one storey i.e. basement, ground and upper floors, 2 x sets of structural drawings on A3 sheet along with soft copy duly signed by the DHAP Authorities registered structural engineer will be provided by the owner. Registered structural engineer will render a certificate that the structure is safe catering seismic design on Prescribed Form as required under these Regulations. DHAP will analyse/vetting of the structural drawings from registered proof engineer. Registered proof engineer will render a certificate that the structure has been vetted and is safe catering seismic design on Form as required under these Regulations. Demarcation will be issued after approval of the structural drawings.
- For multi-storey buildings, the owner will ensure execution of the g. project is according to code of construction practice as well as monitored by registered structural engineer preferably the one who designed the project. After approval of the structural drawings, registered structural engineer will analyse and point out any observation, will get its clarification and seek guidance from the proof engineer, thereby ensuring the soundness of design. Registered structural engineer will supervise and ensure that all the works on site is being executed as per approved design and specifications and will keep the owner update for all proceedings. In case of any discrepancy with respect to design as well as execution, the owner shall seek advice/guidance from DHAP authorities, which will be rendered keeping on board the proof engineer, structural engineer and the owner. The owner will be responsible for any failure at the later stage.
- **6. Period of Approval:** After the receipt of an application for permission to carry out building works, DHAP shall vet the plans as per category (fee charges). If the building plans are not according to the Regulations then it will be returned to owner/ architect for resubmission after Removal of anomalies. Construction shall commence within one year and completed within 2.5 years from the date of approval by DHAP. Construction period may be further extended by up to one year by the DHAP Authorities.
- **7. Evidence of Permission:** Wherever under any of these Regulations the doing of or omitting to do a thing or the validity of anything depends upon the

sanction, permission, approval, direction, requisition, or any satisfaction of the DHAP, a written document signed by the Administrator DHAP or a person duly authorized by him purporting to convey or set forth his sanction, permission approval, order, direction, requisition, notice or satisfaction shall be sufficient prima facie evidence thereof.

- **8.** Cancellation of Permission: If any time, after permission to carry out building work has been granted, the DHAP is satisfied that such permission was granted due to any defective title of the applicant, material misrepresentation or fraudulent statement contained in the application therewith in respect of such building, such permission may be cancelled and any work done, shall be deemed to have been done without permission. Any oversight in approved building plan does not entitle the owner to violate the Regulations.
- **9. Compliance of Conditions of Approval:** Every person who carries out building works or demolition works shall comply with the directions and conditions accompanying the sanction and the relevant Regulations of DHAP.
- 10. Submission of Deviation Plans: During the currency of the work, if the owner desires to make deviations from approved building plan then he should submit deviation plan duly marked with the changes to DHAP authorities. Any work thereto shall proceed after approval of the deviation plan. Subsequently completion plan will be submitted for approval of DHAP authorities according to approved deviation plan. Deviations warranting changes in structural design will not be processed through Deviation plan and Revised building plan will be mandatory in this case. Where a person has erected or re-erected a building which is not in conformity with the sanctioned building plans such person shall, together with the report of completion of the building, submit a completion plan showing the building exactly completed and the deviation made in the building from the sanctioned building plan on Prescribed Form for consideration of the DHAP.
- **11. Availability of Forms and Checklists:** The Forms prescribed in these Regulations shall be obtainable from the office of DHAP Authorities on payment of prescribed charges. DHAP can make changes to the format of the Forms for public convenience.

- **12.** Works executed contrary to the Approved Building Plan: In case of any building works are commenced or carried out contrary to the approved building plan, DHAP shall:
 - **a.** Through a written notice, notify the owner, who is carrying out such building works, to stop all activities forthwith.
 - b. If the owner/such person fails to show sufficient cause to the satisfaction of the concerned Authority, why such building work or part thereof shall not be removed or altered, the concerned Authority may take the following actions: -
 - (1) Require the person who has carried out the works against the provisions of these regularizations/approved building plan or any other statute to demolish the whole building or part thereof.
 - (2) In case of failure of the owner to demolish the unauthorized work, DHAP will demolish such work at the risk and cost of the owner.
 - (3) In case of non-compliance, the defaulting members are liable to disconnection of services, financial penalties, cancellation of membership and cancellation of the plot as deemed appropriate by the DHAP authorities.
- **13. Demarcation Certificate:** Owner should apply for demarcation of his plot after obtaining building plan duly approved by DHAP. DHAP staff will give the physical demarcation at site which will be verified at site after physical erection of boundary pillars by the owner.
- 14. Notice of Verification of Building Lines: Every person who commences any building work under these Regulations shall give notice through the licensed architect on Prescribed Form to the DHAP in writing on completion of plinth of the building and plinth of the boundary wall or foundation of the basement in case of basement on prescribed Form and shall not proceed further until verification certificate is obtained from DHAP.
- 15. Inspection of Building at Various Construction Stages: Owner will get

the work inspected and obtain a No Objection Certificate (NOC) at the following stages in General and Specifically according to the given Inspection Card: -

- **a.** Prior to excavation for foundation of basement (if applicable).
- **b.** After excavation and before laying of lean of basement foundation.
- **c.** Foundation slab of basement level and before any further activity (if applicable).
- **d.** At plinth level.
- **e.** At bottom level of main gate(s).
- f. At ground floor slab level.
- **g.** At the time of digging of underground water tank.
- **h.** At mezzanine floor slab level if approved in building plan.
- At first floor slab level.
- **j.** At second and every subsequent floor slab level if approved in building plan.
- **k.** At the time of pouring of stair tower.
- I. Construction of septic tank.
- **m.** Construction of grey water tank and its allied connection arrangements (if applicable).
- **n.** Completion of Electric Works especially earthing (as per approved load).
- **o.** Completion of lightening conductors' arrangements (where applicable for high rise building).
- **p.** Completion of Plumbing Works for Gas, Water and Sewerage.
- **q.** For commercial buildings, the owner will arrange inspection at the time of water/air pressure test) for plumbing works for Gas, Water and Sewerage.
- **r.** Completion of Elevation Works.
- Completion of Handicapped Accessibility.
- **t.** Completion / Testing of Firefighting / Fire Alarm Systems.
- **u.** Completion / Testing of Elevator Works.

- **16. Failure to obtain NOC:** In case of failure to obtain NOC, owner shall be liable to pay the penalty as per prevailing rates prescribed by the DHAP Authorities.
- 17. Completion Plan: Every person who carries out and completes building works under these Regulations shall within 30 days of the completion of the entire work deliver to the DHAP at its office in writing on the prescribed Forms as the case may be of such completion together with a certificate or certificates on the prescribed Form duly signed by the licensed architect, etc., engaged under these Regulations together with the certificates as mentioned in Regulations and documents as per checklist:
 - a. No person shall occupy any such building or use any part affected by the erection or re-erection of such building until thirty days notice of completion is given to the DHAP and the permission under these Regulations has been granted by the DHAP.
 - **b.** After the receipt of the notice of completion DHAP shall arrange to inspect such work and after such inspection either approved or disapproved or regularized deviations as per Regulations.

18. Addition, Alteration and Renovation to Buildings after Approval of Completion Plan: -

- a. Permission for addition, alteration, placing of generator set on roof top and lift will be accorded by DHAP Authorities duly marked on approved completion plan along with other documents as per checklist. Permission for addition and alteration will be granted up to forty percent (40%) of approved covered area within allowable limits in completion plan for each floor.
- b. Permission for repair, renovation and boring will be accorded after submission of application by the owner along with documents as per checklist.
- c. Failing to get approval of addition, alteration, repair and renovation on approved completion plan or Undertaking such works without prior approval DHAP, DHAP reserve the rights to impose penalties as applicable.

- **19. Revised Completion Plan:** Revised completion plan will be submitted after execution of approved revised building plan.
- **20. Demolition of Un-Approved Construction:** Construction executed on any plot in DHAP, without approval of DHAP shall be demolished at the risk and cost of the owner. If the member fails to regularize (within three months) under the prevalent policy of DHAP.

- 1. Commercial Activity: No Commercial / semi commercial activity is allowed in the residential area.
- 2. Clubs /Guest Houses: No Clubs, Guest House, Guest Room or Hostel etc, to be established in residential Areas.
- **3. Utilization of Vacant Plots:** Vacant plots/ Open areas not to be used for any function/ gatherings except funeral gathering.
- **4. Fire Works / Discharge of Arms:** Display of fireworks (Aatish Bazi) and discharge / testing of arms (Hawai firing) are strictly prohibited in DHAP Authorities.
- 5. **Distinctive Marking / Flags:** Flags / Banners showing Political / Religious/
 Sectarian affiliations are not allowed on both residential and commercial buildings in DHAP.
- **6. Grave Yard:** Burial in DHAP grave yards will only be carried out after formal approval and procedures from DHAP Authorities.
- 7. **Hiring of House/Shop/Apartment:** Any tenant hiring of house/ shop/ apartment will be required to get NOC from DHAP Authorities before occupation.
- **8. Guard Rooms:** Security Check Post/ Guard Room within plot line up to maximum defined size will be allowed after approval from Competent Authority. No check post will be allowed outside property line.
- **9. Vehicles Stickers:** All the Residents in DHAP are required to get their vehicles sticker from DHAP Authorities.
- 10. Traffic Rules: All the residents are required to drive within speed limits

specified by DHAP Authorities. Driver caught over speeding / wreck loss driving will be dealt with traffic laws. Driving without License strictly prohibited. Similarly, riding a motorbike without safety helmet is not allowed within DHAP.

- **11. Servant Passes:** Member / Residents to get passes for all domestic servants from DHAP after proper registration.
- **12. Hazardous Materials / Chemicals:** Storage of any kind of hazardous materials, chemicals, explosives etc is prohibited.

- 1. Site Hoardings: No member shall start construction of building work on a site abutting on a street without having first arranged hoarding or barriers to the satisfaction of the DHAP along the peripheral length of such site so as to prevent danger/injury/mishap to the public or the persons employed at the site. However, that these Regulations do not apply in the case of building works in connection with structures situated at least 15 ft away from a public street and being not more than 25 ft in height.
- 2. **Neighbors Safety:** If entire plot is excavated for the foundation, it is essential for the owner to ensure that adequate safety measures are taken against possible damage to neighboring compound walls, foundations and structures etc. A safety distance of 5 ft is to be left while excavating the basement(s). Any damage occurring due to excavation shall be made good by the owner of under constructed property who started excavation for basement. Work may be stopped by DHAP Authorities if the owner fails to take remedial action.
- 3. Use of Public Streets: No part of any street shall be used in connection with the construction, repair or demolition of any building except with the written permission of the DHAP Authorities. Any person holding such permission shall put up and maintain to the satisfaction of the DHAP Authorities, fences of barriers in order to separate the building work from such street. Where such separation is not possible member shall make arrangement for the security of public to the satisfaction of DHAP Authorities.
- **4. Caution Light's for Obstructions:** Any person causing any building material or other things to be deposited, any excavation to be made or any hoarding to be erected shall at his own expense cause sufficient and adequate red lights to be fixed upon or near the same while such materials, hoardings, things or excavation remain. In addition to above red flags of reflective material shall be provided during day time.
- 5. Utility Services not to be Obstructed: All materials, hoarding, fences or other obstructions on any street shall be kept clear of any fire hydrants of any and other utility services installation or alternative arrangements shall be made and precautions shall be taken according to the laid down procedure of the utility

agencies and to the satisfaction of the DHAP Authorities to divert and to keep clear of obstruction of any roadside or other drain during the period of temporary obstruction.

- **6.** Removal of Obstruction after Completion of Works: All obstructions shall be removed within seven days of the completion of the construction work and the street and all drains and public utility installation made clean, tidy and serviceable conditions.
- 7. Dangerous Obstruction: If any material, hoarding, excavation or any other thing near or on any street shall be in the opinion of the DHAP Authorities dangerous to the passers-by along such street, the DHAP Authorities shall cause the same to be removed, protected or enclosed so as to prevent danger there from and shall be entitled to recover the expenses thereof from the owner of such materials or from the person who made such hoarding, excavation or other thing to become dangerous.
- 8. Stability of Adjacent Building: No excavation, dewatering, earthwork or demolition of a building which is likely to affect the failure of adjacent building shall be started or continued unless adequate steps are taken before and during the work to prevent the collapse or damage of any adjacent building or the fall or any part of it.
- **9. Filling of Excavated Site:** A site once excavated shall not be kept open and idle for a period beyond the validity period of building plan failing which DHAP shall not revalidate the plan and in case of any mishaps the owner shall be responsible for life and property of the effectees. Excavated site shall be filled in by DHAP Authorities at the risk and cost of owner, if found appropriate.

10. Adequate Safety Measures: -

- a. Adequate safety measures shall where necessary be provided and used to protect any person from falling on earth, rock or other material of or adjacent to any excavation or earth work.
- **b.** Material shall not be placed or stocked near the edge of any excavation so as to endanger persons working below.

- c. No load shall be placed or moved near the edge or any excavation where it is likely to cause a collapse of the side of excavation and to endanger any person.
- d. Where vehicles or machineries are used close to any excavation there shall be measures to prevent the vehicles or machineries from over-running and falling into the excavation or causing collapse of any side of the excavation.
- e. In all buildings of greater than twenty feet height temporary rails, scaffolding or barriers shall be installed during construction at the edge of slabs and around all openings such as lift or stairwell, etc.
- **11. Supervision of Demolition Work:** The demolition of a building and the operations incidental thereto shall only be carried out under the direct supervision of a professional.
- **12. Safe Loading:** No roof, floor or other part of the building shall be loaded at the demolition and construction with debris or materials as to render it unsafe.

13. Scaffolds: -

- a. Suitable and sufficient scaffolds shall be provided for all work that cannot safely be done from the ground or from part of the building or, from a ladder or other available means. Support and sufficient safe means of access shall be provided to every place at which any person has to work at any time.
- b. Every scaffold and means of access and every part thereof shall be adequately fabricated with suitable and sound material and of required strength to ensure safety. All scaffolds, working platforms, gangways, runs and stairs shall be maintained to ensure safety and security.
- c. All vertical members of scaffolds on ground level facing roadside should be adequately wrapped with spongy material up to a height of at least seven feet. Any horizontal member if used, up to a height of seven feet from ground, should be wrapped all along its length with such material.

14. Roadside Protection: -

a. To ensure adequate safety of the pedestrian and other road users, all buildings having a height of more than ground + two floors should have adequate arrangement by way of providing protective

- covering of suitable material.
- **b.** Adequate provision of safe passage for pedestrian shall be provided, in case the scaffolding covers part of the road or footpath.

15. Working Platform:

- a. Every working platform, which is more than seven feet height from which a person is liable to fall, shall be at least two feet wide provided the platform is used as a working platform only and not for the deposit of any material.
- **b.** A clear passage-way at least one and half foot wide shall be left between one side of any working platform and any fixed obstruction or deposited materials.
- **16. Guard Rails:** Every side of a working platform height, gangway and stair shall be provided with a suitable guardrail of adequate strength, up to at least one meter above the platform, gangway or steps.

17. Ladders: -

- **a.** Every ladder shall be of good construction, sound material and adequate strength for the purpose for which it is used.
- **b.** Every ladder shall be securely fixed when in use and shall not have any missing or defective rungs.
- **18. Work on Slopping Roofs.** Where work is to be done on the slopping surface of a roof, suitable precautions shall be taken to prevent persons employed from falling off:
 - **a.** Suitable and sufficient ladders or wooden planks, securely supported, shall be provided and used to avoid concentration of loads.
 - b. Where persons are employed in a position below the edge of sloping roof and where they are in position of being endangered by work done on the roof, proper protection shall be taken to prevent tools or materials falling from such roofs so as to endanger such persons or passers-by.
- **19. Precautions for Raising and Lowering Loads:** For raising or lowering loads or for suspending those by hand or power operation, every precaution shall be observed to ensure safety of human and materials on the construction site.

1. Emergency Fire Exits

- **a.** Emergency fire exits of non-combustible material shall be provided in all commercial and public use buildings.
- **b.** Complete Civil Defence drawings for Fire Safety Precautions shall be required to be submitted for approval of DHAP prior to construction.

2. Portable Fire Extinguishing in Buildings: These shall be provided: -

- **a.** Two extinguishers in stage area, in each dressing room and one immediately outside each entry in theatres;
- **b.** One extinguisher in each 2000 square feet of area of public assembly buildings, but not less than one on each occupied floor, and not less than one in each lab, workshop or vocational room;
- c. At least one extinguisher on each floor at stairway landing and in corridor at each lift or group of lifts in mixed use and commercial buildings.

3. Fire Escapes/ Emergency Staircase

- **a.** Every Building in DHAP 400 square yards and above shall have at least two emergency staircases.
- b. Emergency Staircase shall be designed with Fire Rated Doors (1 ½ hours rated), Fire resistance rated floor or commonly known as fire door within 2 hours rated walls and shall be naturally ventilated. It will exit towards open space on ground floor.
- **c.** At Least one emergency staircase will be located within 100 ft of any point on a floor for building larger than 600 Sq yds.
- **d.** All elevators / lifts should be equipped with functions for emergencies like power failure, fire and earthquake.
- **e.** All elevators / lifts should have in-built emergency landing devices, so that upon power failure, a car automatically moves to the nearest floor using a rechargeable battery to ensure that the lift door is opened to facilitate the safe evacuation of passengers.
- f. In case of an earthquake, seismic sensors installed in elevator should detect the earthquake and move the elevator car to nearest floor and open to the doors for safe evacuation of passengers.

- **g.** Door Safety sensors, emergency light, emergency call button / phone, all required safety features for the stability of the elevator system, safety brakes.
- **h.** All elevators should be in Handicapped Accessibility compliant as per the following ADA requirements as a minimum: -
 - (1) Elevator hall and car buttons should be mounted at 42 inches height with call buttons minimum 0.75 inches in diameter, with illumination levels for buttons.
 - (2) Braille plates next to buttons and at entrance jambs.
 - (3) Two way communication in elevator cab / car so that Deaf / Blind users can utilize it effectively.
 - (4) Chimes / verbal announcements that indicate floor passing and the next arrival floor.
 - (5) A car / cab large enough to accommodate a wheelchair and a 360-degree turn.
 - (6) Door protective / re-opening devices that will re-open the door without physical contact.
 - (7) Emergency control that is grouped at the bottom of the elevator control panel and have their center lines not less than 36 inch above the finish floor.
 - (8) Handrails to be provided at a height of 30-inches.

4. Stand Pipe Equipment (Hose Reel)

- **a.** For the purpose of prevention and fire extinguishments, every multistoreyed building shall be equipped with stand pipes as under: -
 - (1) From four to eight storeys in height shall be equipped with not less than 2.5-inch dia pipes;
 - (2) Over eight storeys in height shall be equipped with not less than 4-inch dia stand pipes.
- **b.** The number of standpipes shall be such that all parts of every floor area are at a maximum distance of one hundred and twenty feet from the stand point.
- **c.** Insofar as practicable, standpipes shall be located with outlets within

stairway enclosures, but if these are not available, the standpipes shall be located in a common corridor. In any case one shall be located in the main.

- **d.** The construction of standpipes be of galvanized iron/gun metal.
- **e.** Stand pipe risers shall extend from the lowest to the top most storey of the building or part of building which they serve.
- **f.** When more than one stand pipe is required, they shall be interconnected at their bases by pipes equal in size to that of the largest riser.
- g. Every standpipe or stand-system in case of interconnected standpipes, shall be equipped with a fire department approved in-let connection of corrosion resistant metal (e.g. gunmetal) located on an outer building face nearest to street approximately twenty to thirty feet above finished ground and suitably marked "fire department connection- standpipe."
- h. Standpipes shall be provided in every storey with a one and half inch dia flexible hose not less than one hundred feet long, with a half inch nozzle, being in an approved rack or cabinet.
- i. The standpipe shall be fed by an overhead water tank reserved solely for this purpose. The minimum capacity of this tank shall not be less than five thousand gallons, with a minimum of seven feet head above the highest discharge point.

5. Dry Riser

- a. For each commercial and mixed use building, 18 meter tall, a dry riser (supply system intended to distribute water to multiple levels or compartments of a building, as a component of its firefighting systems) shall be provided to ensure that firstly a fixed distribution system within the building is provided that requires no fire service resources or equipment. Secondly, to maintain, the compartmentation of the building.
- b. Dry risers are building Regulations requirement in occupied buildings over 18 meters tall. The designers or architects may opt for the superior protection of wet risers. Wet risers are a building Regulations requirement in buildings over 50 meters. Dry risers may also be found in environments where access is limited or compartmentation is an issue i.e. multilevel basements, car-parks or hospital corridors etc.

e. Dry riser shall consist of 3 components to meet BS 5041 BS 5306, BS 9990 or other National Fire Protection association (NFPA) equivalent.

6. External Inlets

a. Inlets enable connection of fire service water supplies shall be required to be provided with an external cabinet or enclosure marked "DRY RISER INLET". Within this enclosure, a collecting head with at least 2 BS Instantaneous male couplings shall be provided. In this cabinet, a drain down valve to enable the dry riser to be emptied of water following fire service operations or testing shall also be provided. These enclosures should be secure from vandalism but should be designed for immediately accessible with a breakable area in the door to facilitate urgent fire service connection.

7. Pipe Work

- a. All required pipe work shall be provided to make it functional by ensuring that the pipe is maintained EMPTY of water. The designer should ensure that the pipe work of dry riser distribution systems is of Galvanized steel pipe based on British standards laid down requirements for the pipes internal diameters or equivalent National Fire Protection association (NFPA) requirements.
- b. In buildings over 18 meters provide single outlets on each floor (100 mm or 4 inch internal diameter pipe work fitted). For taller buildings and for situations where multiple outlets on floors are required, 150 mm or 6 inch internal pipe work is fitted. Where larger diameter dry riser pipe work is required, the same should be accompanied by a 4 way inlet collecting head. The pipe work is usually enclosed within fire resisting enclosures or shafts.
- **c.** The top of the pipe work should be provided with vent pipe to allow the air in the dry riser to be expelled when it is charged with water.

8. Outlet Points

a. Outlets (Landing Valves) - the connection points for enabling the fire service, are to be attached and advance its hose lines within a building. Each outlet should consist of a single or double BS instantaneous female outlet, under the control of a gate valve. Also, outlets should be protected by enclosures with a breakable area in the door to facilitate urgent Fire Service connection. Outlets are to be situated in a protected lobby, stairway or cupboard, one of a buildings fire escape staircases, enclosures or lobbies. Provision is

to be made at roof level for an additional "testing" outlet, where possible.

- **9. Automatic Sprinkler System:** Automatic sprinkler system shall be provided in:
 - **a.** Every public use / institutional building which serves restrained or handicapped persons.
 - **b.** Covered car parking areas in building of which upper storeys are designed for other uses when such parking area exceeds five thousand square feet.
 - **c.** Out garages or terminals for passengers serving more than four buses at a time.
 - **d.** All building compartments used for cottage manufacturing display or sale of combustible materials and products which are more than 7500 square feet in covered area.
 - f. All areas of theatres except auditorium, music hall and lobbies.
 - g. All building areas used primarily for storage of goods, and materials including areas clearly specified for storage of incombustible materials and goods, which are more than 1000 square feet in area.
 - **h.** Sprinkler provision shall be made in the immediate vicinity of generators or any electrical equipment.
 - i. For all generators or any electrical, Information and Communications Technology (ICT) equipment FM-200 (Clean Agent and IFC 227 ea system) or any other clean, colorless and environment friendly fire suppression agent that is electrically non-conductive and safe for humans is allowed.
- **10. Construction of Sprinkler System:** Sprinkler pipes, hangers and sprinkler heads shall be protected from corrosion.
 - a. Every sprinkler system shall be equipped with a fire department approved inlet connection located on an outer building face nearest to street approximately twenty to thirty feet above finished ground and suitably marked "Fire department connection-Automatic sprinklers".
 - b. Automatic sprinkler system from the incoming supply along with automatic fire booster pump set, shall be connected to a buildings RCC water storage tanks. This tank shall be of enough capacity to meet the daily storage requirements of the building's occupancy along with the

- minimum water storage requirement as recommended by NFPA. There shall be minimum pressure (3 bars or 20 PSI) above the highest discharge point according to NFPA.
- **c.** Automatic sprinkler system shall set off automatic alarm system simultaneously.
- **d.** Every sprinkler system shall be provided with a readily accessible outlet valve to control all sources of water supply.

1. Removal or Prevention of Violation

- a. DHAP shall take other appropriate measures to ensure compliance with these Regulations. For compliance of the Regulations, DHAP shall carry out inspections of any Residential as well as Commercial premises. Inspections shall be carried out on periodic basis, on occasional, on any observation, or on any complaint from the neighbors. Owner/Occupant of the property shall arrange the inspection of the premises by DHAP for detailed inspection team, whenever asked for, through writing (notice), verbal or Telephonic conversation. However, owner shall have the right to verify the identification of DHAP inspection team before allowing entry of the team to the premises. Owner/ occupant or his representative shall accompany the DHAP Inspection Team during the inspection.
- b. If DHAP finds that any of the provisions of the Regulations, or any rules relating thereto, or any conditions of a general or special permit, are being or have been violated, it shall serve a notice in writing to the owner / occupant responsible for the violation.
- c. The notice shall indicate the nature of the violation and DHAP may order such action as it may deem appropriate to bring it in line with Regulations which may include but not limited to the following: -
 - (1) Discontinuance of any illegal work being done on, or activities being conducted in relation to, building;
 - (2) Requiring the owner or builder who are carrying out or have carried out such building works, on or before such day as shall be specified in such notice, by a statement in writing subscribed by him or by an agent duly authorized by him and addressed to DHAP, to show sufficient cause why such building works or such part thereof shall not be removed or altered to comply with these Regulations;
 - (3) If such person fails to show sufficient cause to the satisfaction of DHAP why such building works or part thereof shall not be removed or altered. DHAP may take following actions: -
 - Require the person who has carried out the works against the provisions of these Regulations to alter or cessation of the whole or part of construction works thereof;

- **II.** Any other measures authorized by these Regulations, or with the conditions of permit.
- d. The order shall specify the period within which the violation shall be corrected and in the event of non-compliance with the order, DHAP may take appropriate measures under the relevant Byelaw or Act to be taken to effect compliance. The expenses shall be recoverable from the owner in the manner provided for the recovery of arrears of revenues or taxes.
- e. The giving of notice and making and serving of an order under this clause shall not be a prerequisite to the initiation of, and shall not bar, any prosecution under any applicable law, and DHAP may take action under this clause whether or not a prosecution has been initiated.
- 2. Enforcement by DHAP: Administrator/Secretary DHAP may direct the concerned officer (under whose jurisdiction violations have occurred) to take action under these Regulations with respect to any violation including entering upon and sealing of premises.

3. Appeals

- a. Within thirty days from the date of receipt of any order of DHAP under these Regulations or of its determination on an appeal under the preceding sub-Regulations, the aggrieved person so served may appeal to the Administrator, which may give him an opportunity to be heard, if deemed appropriate or worth hearing, and any dispute to be cleared within One Month.
- b. Administrator, may arrange hearing of the person by himself or depute an officer for the purpose. The deputed officer or officers shall report, may be written or verbal, along with recommendations to Administrator.
- c. DHAP after considering a report and any recommendations of the hearing officer, may affirm, modify or amend the order or determination.
- **4. Finality of Orders or Determination:** Unless an appeal has been admitted as provided by Regulations an original or appellate order, or determination of the Administrator shall be final.

1. Planning Guidelines

- **a. Gated Community:** DHAP is a Gated Community that would provide more secure environment inside
- **b. Environment Control:** It is the earnest endeavor of DHAP to provide congenial environment with economy of resources. The residents on their part shall be required to conceive their building with proper designs incorporating all comforts and safety precautions: -
 - (1) Shading Devices. People are encouraged to employ shading devices for trees plantation and insulation on exposed surfaces of habitable rooms that face direct sun, to balance temperature within. These shall be incorporated in proposals and shown on submission drawings.
 - (2) Landscaping. Outdoor spaces shall be properly landscaped to reduce glare and reflective heat energy.
 - (3) Natural Ventilation. Natural lighting and ventilation in all habitable rooms / area shall be ensured by providing windows to outside or to internal ventilating ducts as prescribed in these Regulations.
 - (4) Air-Conditioning. All air-conditioning units shall meet minimum energy standards (Energy Efficiency Ratio) EER ≥2.9.
- **2. Power Efficiency:** Every member shall follow the power policy set forth by DHAP.
 - a. Power Supply. In order to supplement power generation, owners of commercial plots and of residential plots having area of more than 500 sq yds shall be required to install solar power systems in their buildings. The system shall produce min. 30% of their peak demand. This power shall be used to energies external lights, water and sewerage pumps. Any excess power, if generated shall be purchased by the Authority for re-distribution.
 - **b.** Wind, Gas and solar energy shall be used as alternative energy sources.
- **3. Water Efficiency:** DHAP will have dual water supply system i.e. potable water and non-potable water: -

- **a.** Internal water supply system shall be designed to cater for both accordingly i.e. separate lines and separate water tank shall be kept.
- **b.** Non-potable water shall be used for flushing & gardening.
- **4. Septic Tank:** Every building / plot shall have a septic tank constructed as per approved design with a retention capacity for at least seven days before disposal.
- **5. Sewerage System:** Every member shall install two pipe systems for conveyance of sewage and sludge separately. Sludge shall be conveyed directly to mains whereas sewage shall be collected in septic tank for decomposing and use for gardening or disposal to mains.
- **6. Solid Waste Management:** Every building / household shall be required to keep dry, wet and metal trash in separate bags that should be distinguished by their color.
- **7. Solar Water Heater:** Solar Water Heaters (SWH) with automatic electric backup system or electric/gas heater is mandatory.
- **8. Designs of Utility Services:** Design of building shall include services designs viz., mechanical, electrical and plumbing (MEP) designs.
- **9. Building Materials:** There has been tremendous development and changes in construction industry within recent past. We may make use of the same to our advantage to improve sustainability and maintain quality. There are methods to be adopted for aesthetic & functionality.
- **10. Wind Catcher:** It may be allowed as per design of building and required by the owner.
- **11. Roof Gardens:** Construction of roof Garden will be encouraged in DHAP provided appropriate arrangements for seepage water retention have been made.

- **1. General:** All such buildings or structures which are declared as dangerous by the Evaluation Committee will be Categorized in two Categories:
 - a. Category 1: Any building or structure whose strength stability, serviceability, robustness or durability has been impaired due to any reason such as improper structural design and detailing, faulty or poor construction, decay, dilapidation, obsolescence, natural disasters or leading to abandonment due to all these reasons to a level, where it cannot be restored to its original status, shall classify as "Dangerous Building Category-1", and shall be liable to be demolished.
 - b. Category 2: Any building or structure or part thereof whose strength, stability, robustness, serviceability or durability has been impaired due to all such reasons as cited in paragraph a to a level, where it could by way of strengthening, appraisal and restoration be brought partially or wholly near to its original status, shall be classified as "Dangerous Building Category-2".

2. Constitution of Evaluation & Dispute Resolution Committee is as follows: -

- a. President ADHA
- b. Members (1) Chief Engineer
 - (2) Director/DD TP&BC
 - (3) Director Legal
 - (4) Assistant Director (Civil/ Electrical)
 - (5) Nominated Senior Architect(s) registered with PCATP & DHAP
 - (6) Nominated Senior Structure Engineer(s) registered with PEC & DHAP

3. Notices for Dangerous Buildings

a. If in the opinion of any member of the evaluation committee, a building or part thereof has become dangerous for human habitation, the evaluation committee shall give at least twenty-four hours' notice to the owner or occupants (who need not to be named) for inspection of such buildings by the technical representative of the Evaluation Committee.

- b. In case the evaluation committee considers a building or a part thereof, repairable or modifiable without causing danger to human life or property, it may issue such orders to the owner, occupant or tenant of such building accordingly.
- c. If the evaluation committee finds such building dangerous, ruinous or unsafe after proper inspection and investigation by technical representative, the DHAP shall serve to the owner of such building or structure, a written notice stating the defects thereof, and shall require the owner or person in-charge of the building or premises to carry out either the required repairs, improvements, alterations, or demolition and removal of the building or structural portion thereof as the case may be, and all such works shall be done and completed within the period specified by the Evaluation Committee in the notice.

4. Buildings Unfit for Human Habitation and Notice of Prohibition

- If for any reason it shall appear to the Evaluation Committee that a. any building or part thereof intended or used for human habitation or human occupation for any purpose whatsoever is unfit for such uses, it shall signify its intention to prohibit the further use of such building or part of a building and call upon the owner or occupiers or tenants to state in writing their objections (if any), to such prohibition within fifteen days after the receipt of such notice. If no objection is raised by such owner or occupier within the prescribed period or if any objection which is raised, appears to the evaluation committee to be invalid or insufficient, the evaluation committee may prohibit by an order in writing, the further use of such building or part thereof. The owner or occupier of the building shall be given an opportunity of appearing before the President of Evaluation Committee in person or through an agent to plead in support of his/ her objection, if he/she so desires. A Public Notice to this effect will be published by DHAP in leading Urdu and English daily newspapers.
- b. A thirty days' notice of such prohibition shall be served in person or by any courier service, mail, or by pasting at site in the presence of an officer authorized by the Evaluation Committee, before which every such person shall remove himself and his property from the said building or part thereof; failing compliance the evaluation committee may cause him/her and his/her property to be removed at his/her risk and cost. In case of imminent danger twenty-four hours' notice may be issued by the Evaluation Committee.

c. When a building or part of a building has been vacated under clause 20.2.2 the owner shall display at each entrance at prominent places to such building a notice to read "DO NOT ENTER, UNSAFE TO OCCUPY" in English and Urdu. Such notice shall remain displayed until the required repairs, demolition, or removal are completed.

5. Alteration, Modification or Repairs of Dangerous Buildings

- At any time after a building or part of a building has been vacated, if a. the Evaluation Committee considers that it can be rendered fit for human habitation by the structural alterations, repairs or modification and updates or repairs before or after the vacation of habitants from such buildings, the Evaluation Committee may by notice in writing, call upon the owner to commence through professional, within such time as may be specified (but not less than thirty days), and to complete within the period as specified in the notice but not more than ninety days from the date of receipt of such notice, such structural alterations, modifications, up-dates or repairs, as deemed necessary. If within the aforesaid period such alterations, modifications, updates or repairs have not been completed to the satisfaction of Evaluation Committee, it shall issue to the said owner a notice in writing ordering the demolition within thirty days from the date of receipt of such notice. In case of Noncompliance of the instructions in the notices, DHAP may order complete vacation of Building and then proceed with demolition at risk and cost of the owner.
- b. If the Evaluation Committee considers it impracticable to render such building or part thereof fit for human habitation, the DHAP, may by notice in writing call upon the owner to demolish it in a period specified by the Evaluation Committee.
- 6. Demolition of Dangerous Building on Expiration of Notice Period: If at the expiration of the period specified in the notice and order to demolish a building or part of a building issued under clause 20.4.2 has not been complied with, the DHAP may direct, by an order in writing, the demolition thereof through an approved contractor who has on his roll at least one professional responsible for undertaking all necessary safety measures during the process of demolition as per procedure laid down by the Evaluation Committee.
- **7. Extension of Period for Repairable Buildings:** For sufficient causes, the Evaluation Committee may extend the time allowed as required.

8. Evacuation of Dangerous Buildings

a. If in the opinion of the DHAP, any building, wall, or structure or

anything affixed thereto is in a hazardous or dangerous state, DHAP may, by notice in writing, require the owner or occupier thereof forthwith either to remove the same or to cause such repairs to be made thereto as the DHAP considers necessary for the public safety, and if the danger appears to be imminent, the DHAP may forthwith take such steps as may be required to avert such danger, including the evacuation without notice from such building of all the occupiers thereof.

- **b.** Any expenses incurred by the DHAP shall be paid by the owner concerned.
- c. When the owner of any building, wall, structure or anything affixed thereto fails to execute the repairs required from him by the DHAP, the tenant or occupant of such building, wall, structure or anything affixed thereto may, with the previous approval of the DHAP, carry out such repairs.
- **e.** Except with the permission in writing from DHAP no person shall enter into or remain in any building from which the tenant or occupant has been remove

Day 1-7

Step 1 – NOC for Possession

- Obtain NOC from Transfer Branch (Form 1)
- Obtain NOC from Finance Branch (Form 1)
- Submit this NOC to TP & BC at site and get Possession

Step 2 – Submission of Drawings & NOC for Construction

 After Possession, submit drawings to TP & BC (Form – 2), undertaking by the owner (Form – 2A) and payment of dues (Form – 3)

Day 8 - 65

Step 3 - Drawings Approval

- TP & BC will notify member of any amendments/ corrections, if needed
- NOC for construction (Form 4) will be granted within 2x months of submitting drawings / amendments/ corrections
- Registered Architectural Consultant certificate (Form 5), Registered Engineer
 Certificate (Form 6) and Structural Soundness Certificate (Form 7) are mandatory along with Drawings.
- Swimming Pool Indemnity Bond (Form 8)
- Alternate Power Proposal (Form 9)

After Day - 65

Step 4 – Construction Inspection Card & Temporary Service

- Apply Temporary Electrical Meter (Form 10), after obtaining Construction NOC
- Get construction Inspection Card (Form 11) from TP & BC Team after obtaining
 NOC for Construction

Note. For details, DHAP Byelaws and list of Charges/ Fines may be consulted, available on www.dhapeshawar.org.pk

Appendices

REQUEST FOR NOC/NDC POSSESSION

To:	The Director (B Defence Housin	uilding Control)			PESHAWA BUILDING DREAM
	Peshawar.	g Munority,	Date	:	
Subje	ect: REQUEST FO	OR NDC/NOC FOR POSSESSION			
I hav	e decided to const	ruct my house at Plot No. / Property No	Sec	tor	Phase
Mem	bership No	File No	Reg	gistere	d in the name of
Mr /]	Mrs / Miss				
S/o I	D/o W/o	CNIC			
Cell 1	No	·			
		missible dues on account of possession for my that NOC/NDC may please be issued.	above me	ntione	ed plot / property.
Note	I have read the ins	structions over leaf and deposited the document	nts as requ	ired.	
				Date	Yours Sincerely
		FOR OFFICE USE ONLY			
		NOC BY TRANSFER BRANCH			
It is cope	erty of Mr / Mrs. er process of NDC	Plot No is r and possession may be initiated.	Sect	or any li	Phasetigation/ caution.
					Dir Transfer
				Date:	//
Recei	ived on//	FOR FINANCE BRANCH USE ON	LY		
All d	ues are cleared by t	the applicant. Possession process may be com-	menced.		
					Dir Finance
				Dat	e:/
	FOR TO	WN PLANING/ BUILDING CONTROL (<u>ONLY</u>		
Recei Hand	ived on// over Possession Ph	nysically.			Building Control

DOCUMENTS REQUIRED FOR NOC (No Objection Certificate)

- 1. Copy of NIC.
- 2. Copy of Allocation / Intimation / Allotment / Transfer Letter.
- 3. Customer shall be bound to deposit any sum payable even if identified after issuance of NOC/NDC

VALIDITY PERIOD OF NOC: 90 Days

- 1. NOC will be prepared within Seven days (On receipt of complete documents).
- 2. NOC can be applied by allottee / file holder only.

	POSSESSION CERTIFICATE (MEMBER'S COPY)	\bigwedge
<u>Particulars</u>		[*] N*
Plot No Sector No Street No Phase No Owner CNIC NO	- - -	KEY PLAN
Longer Side (1)(2)	Bounded By PLOT/ STREET NO Bounded By PLOT/ STREET NO Bounded By PLOT/ STREET NO	A GE
Shorter Side	Bounded By PLOT/ STREET NO	
	DateSign	
(1) It is Certified that the O (2) All Dues are Cleared by	, <u>.</u>	
Chief surveyor	AD TP & BC	DY Dir TP & BC

	From
	Name of Owner
	Membership No:
	Address
	Tel:
	Dated:
То:	DEFENCE HOUSING AUTHORITY PESHAWAR
Subject:	Approval of Drawings
1. B	uilding plans in quintuplicate (5 copies) along with necessary documents in respect of
	Street Phase are enclosed herewith for further necessary action.
	documents are attached: -
a b	
C	
d	
е	
f.	Copy of Site Plan/Possession.
g	Copy of NIC.
h	Soft copy of drawings. (Auto Cad Format & PDF Format)
i.	Bearing capacity test report.
j.	Undertaking by owner.
k	,
i.	Attorney certificate (If applicable)
	ne building plans conform to the Building Bye-laws of DHA Peshawar. After approval, kindly return of approval plan.
one cop,	Thanking you.
laat or a la	Owner's Signature
Date of c	wg receiving Date of dwg Handover
	Receipt
Received	Building plan (Working Ammonia Copies) in respect of Plot No Street No
	Phase Please report on for collection of approval plan.
	Signature:
	Name:
	Dated:
Di-	
Phone #	091-5613814 ext =

DEFENCE HOUSING AUTHORITY PESHAWAR

UNDERTAKING BY THE OWNER

CERTIFIED THAT: -

- I HAVE READ AND UNDERSTOOD the Building Bye –Laws of DHA Peshawar and will abide by them.
- 2. I will make the construction according to approved plan. I will not do any addition / alteration prior to approval of revised drawings.
- 3. I will ensure design of my house as per the bearing capacity of the soil.
- 4. I will take boundary wall up to plinth level before starting the construction house.
- 5. I will get checked all construction activities progressively and will get signed the Inspection Card on regular basis from the concerned authority.
- 6. I will apply for Sewer connection at the time of occupying the house and will not connect it myself, falling which, I will be liable to punitive action as per the rules.
- 7. I will apply for water connection and will not connect it myself, failing which I will be liable to punitive action as per the rules.
- 8. I will not undertake construction or installation of steel stair in clear space and keep it as such forever except as permitted in Byelaws.
- I will not cut the road for any purpose without getting written Permission from DHA Peshawar.
- 10. I will not use road for dumping the materials, mixing mortar and cutting steel bars etc.
- 11. I will not put earth outside the boundary wall and will not erect fencing / hedging /thick vegetation on road shoulder.
- 12. I agree that till DHAP Services are not Engaged, I will use Construction Bore for water supply, Temporary Electrical meter for Electricity after Construction Completion and Once DHAP services are active I will discard the same.

Note:

- A. In case of repeated failure to observe rules / regulations, the water supply may be disconnected/plugged by concerned staff. Either the violation will have to be demolished or will be dealt with according to the Bye- laws.
- B. Any oversight in scrutiny of Drawings does not create member's right to construct the house by violating authority Bye-laws. Any such omission is liable to be changed at any stage of construction.

Signature:
Name of Owner:
CNIC:
Plot No:
Street No:
Phase:

Dated:

BC/TP Branch Copy

DEFENCE HOUSING AUTHORITY PESHAWAR



PAYMENT CHALLAN

Askari Bank Limited Fakhar-e-Alam Road, Peshawar Cantt

Account No	CNIC	<u>.</u>
Plot No	Challan No	3
Name:		
Initial Remarks		
S. No.	Particular	Amount (Rs)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
		'
Amount in Words: (R	upees	
	-	
Asstt Accountant	Customer Signature	Signature Bank Stam _l

To			
Defence Housing A	uthority		
Peshawar			
Subject: Collection	of Approved Drawin	<u>gs</u>	
H		¥	
Plot No	Street No	Sector	Phase
I undertake that I h	ave received following	approved drawings for	rom BC/TP branch. From now
	be responsible for any		
and onward i Shall	be responsible for any	ioss/damage to thesi	e drawings.
 1x Set of 	Submission Drawings		
1x Set of	Structure		
		_	
		(S	ignature of Owner)
		_	
		(1)	lame of Owner in Block Letters)
			•
			Леmbership No)

REGISTERED ARCHITECT CERTIFICATE

(To be accompanied with Form 2) This certify that the building plans submitted is to by for Plot No.____ have been prepared by me/us and that I/we undertake to supervise the proposed construction as per specifications submitted herewith. I/We further undertake that if I/We discontinue supervision of the work, I/We shall give immediate intimation thereof, as required under the above Byelaws. Name & Signature of Architect_____ Registration No. of PCATP Category of Registration: DHAP Registration No:

SPECIFICATIONS ATTACHED:

Date: / / .

- 1. Nature of the soil below foundation
- 2. Specification of foundation
- 3. Specification of plinth
- 4. Specification of superstructure
- Specification of floor
- 6. Specification of roof
- 7. Method of drainage and sewerage
- Kind of slab

REGISTERED ENGINEER"S CERTIFICATE

(To be accompanied with Form 2)

			certify			building for Plot No		submitted have
beer cons if I/V	n prepare truction as Ve discon	d by s per tinue	me/us and specification	that I/ ns subr of the	we und nitted he work, I/\	ertake to : erewith. I/W	supervise /e further u	the proposed undertake that iate intimation
			Name & Sig Civil Engine			gineer		
			Registration	No. of I	PEC			
			Category of	Registra	ation:			
			DHAP Regis	stration	No:	.		
Date	: <u> </u>	/	<u>~</u>					
SPE	CIFICATION	ONS	ATTACHED	:				
4. 5.	Specificat Specificat Specificat Specificat Specificat	tion o tion o tion o tion o tion o	f superstruct f floor	ure				

Kind of slab

CERTIFICATION OF STRUCTURAL SOUNDNESS OF BUILDING

I/we certify that:

1.	Mr./ of th	e have been appointed as consulting Structural Engineer by //Mrs./M/sfor the structural design ne building on Plot NoDHAP orDHAP or
	situ	ated on DHAP on
		ated on DHAP on Which:
	a. b. c.	Is likely to be constructed from / / /
	d. e.	Stage of construction No. of storeys designed
2. rationally		structure designed has been based on following codes/ Regulations oled with Engineering knowledge and judgment where necessary.
	a.	The sub-surface investigation was carried out by M/son //
	b.	A design bearing capacity ofTons/Sft was adopted based on
4.	Our	/my contractual responsibilities were / are limited to:
	a. b. c. d.	The state of the s
5.	The a. b. c. d.	following documents are attached: Set of working structural drawings. Set of bar bending schedule. Set of design calculations. Set of specifications relevant to structural work.
		Name of Structural Engineer: Signature: PEC Regn No. DHAP Regn No.

CONSTRUCTION OF SWIMMING POOL (INDEMNITY BOND)

(For Swimming Pool) On Rs.100/- Stamp Paper

1.	ļ,	S/o, D/o, W/o
Muslim,	Adul	t, R/o House No
solemnly	affirr	mation that I am the owner of Plot No, measuring
st	ft loc	cated in Defence Housing Authority. That I have applied for
permissio	on to	construct building on the said plot. I intend to construct a swimming
pool on th	he sa	me plot for which I undertake to fulfill the following conditions:-
	a.	Proper filtration plant will be erected.
	b.	The swimming pool will be properly covered for privacy.
	C.	The same will not be constructed on the compulsory open space.
	d.	If any damage is done to the neighboring structure due to our
		swimming pool, it will be our responsibility to make good the losses
		or in the event of our failure to do so, the owner/DHA may good
		such repair at our cost or any other measures as deemed fit by the
		Defence Housing Authority.
	e.	It will be structurally designed and signed by approved Structura
		Engineer.
2.	That	t the above declaration is true and correct to the best of my
knowledg	je an	d belief.

DEPONENT

SUBMISSION OF ALTERNATIVE POWER PROPOSAL OF BUILDING PLAN

To,								
DHA Peshawar.								
I/We M/S							ertify	that
we/our consulting	g MEP Engir	eer Mr./Mrs.	/M/s				29	
had submitted of	drawings/doo	cuments as	per the a	attache	d RE F	rofor	ma for	the
alternative pow	ver (solar/w	ind) install	ation on	my	house	on	Plot	No.
situated on			DH	IAP on				***
Home Owner								
Dated: / /								

Nan	ne:	House No:			
Buil	ding Category:	□ Residence □ Co	ommercial 🗆 N	/lixed use	
1. 2.		sft ity connected load capacit ough Alternative Renewal			
3.	RE power system has b Metering	een grid connected for Ne	et □Yes	□ No	
4.	I plan to install:	□ Solar	□ Wind	□ Both	
5. 6. 7.	I plan to install: Solar PV Power Installe Solar PV Manufacturer:	ed Capacity	□ Hybrid KW.		
8. 9. 10.	I plan to use following B		d system:-		
	Safety switches/ Cut our I plan to install Wind Por a. Manufacturer b. Type: c. Pole Material d. Controller: e. Inverter:		□ Vertical Ax	tis	
Not					

- For Minimum Required alternative RE Power see Appendix "I"
- Only DHA Authority's approved Net Meters are allowed.
- Only net metering capability of hybrid inverters are allowed
- On grid inverter power line shall be connected to the Main Breaker of Distribution Box (DB) although hybrid inverter can be connected to the desired distributed breakers in the DB.

То	
Defence Housing Authority	
Peshawar	
Subject: Provision of Services	
Plot No Street No	Sector Phase
I notify that my house has been (Design request that following services may be Temporary Permanager Permanager Permanager Permanager Permanager Permanager Permanager Permanager Permanager Permanager	
Electrical connection	
Water connection	
Sewer connection	
Gas connection	
Fiber optical Connection	
2. I undertake to pay Installations fee and	Charges regularly as per rules
	(Signature of Owner)
	(Name of Owner in Block Letters)
	(Membership No)
<u>For Of</u>	fice Use Only
Sewer connection open on	Water connection open on
Site Supervisor	Site Supervisor
Owner's confirmation	Owner's confirmation
Clerk for Billing/Record	Clerk for Billing/Record



INSPECTION CARD

BUILDIN	G DREAMS Owner's Name		_Plot No_	St	reetSecto	orPha	ase
S.No	Description	Comments	Violatio	n Rectified	Building	Date	Signature
			Yes	No	Inspector Name		
1	Demarcation of Site						
2	Before Excavation Contact B.C. D						
3	Layout of Building						
4	Layout of Building With Set Backs						
5	Construction of Boundary Wall Up to D.P.C						
6	D.P.C Level with Set Back Porch Level from Center of Road						
7	Under Ground Water Tank (Size Only)						
8	Basement Floor / Slab Steel Fixing & Shuttering						
9	Ground Floor Window Lintel Shuttering						
10	Ground Floor Slab Steel Fixing & Shuttering						
11	Porch Slab Steel Fixing & Shuttering, Slab Height from P. L						
12	Layout of First Floor						
13	First Floor Window Lintel Shuttering						
14	First Floor Roof Slab Steel Fixing & Shuttering						
15	Over Head Water Tank (Size Only)						
16	Layout of Mumty						
17	Mumty Slab Steel Fixing & Shuttering						
18	Rear Elevation						
19	Roadside Elevation						
20	Ramp 8" High from Road Level & Laying of 3" DIA Three Pipes Outside Gate for Services						



INSPECTION CARD

21	Septic Tank (Size & Location only)			
23	Internal Drainage (For Rain Water) Should be Connected to Road/Drain			
24	Front Boundary Wall Design			
25	Side Boundary Wall			
26	Rear Boundary Wall			
27	Grey Structure Before Finishes			
28	In Case of Corner Plot Boundary Wall should be Chamfered			
29	Exterior Finishing (Material/Color)			
30	Gas/Electric Meters Installation + Service Ducts			
31	Site Clearance + Spiral Stairs on Set Backs			

General Notes

1	To be kept at site for entries by building inspector.
2	Every stage must be informed to Building Control Department one day earlier before execution.
3	Before Start of Excavation please inform Building Control Department. Client will be Fined Rs.50,000/- If they Do Not Contact BCD Before Excavation.
4	Completion certificate will not be issued unless filled inspection card is deposited in building control dept along with certificate from the Concerned Site engr
5	Before starting construction of building it is mandatory that Boundary Wall be Built-Up to D.P.C Level & get checked from DHAP Service, Survey Section
6	AC Outdoor units must be placed/installed on top of the buildings.
7	Drainage lines should not be connected with sewer lines.
8	Plinth Protection and to stop ingress of water to foundation will be the responsibility of the Owner/Contractor.
9	Rs. 10,000/- charge for stages missing on inspection card.
10	Rs.50,000/- if inspection card is misplaced / lost during construction by Owner of Plot.

То		
Defence l	e Housing Authority	
Peshawar	<i>r</i> ar	
Subject: #	Application for Construction Completion NOC	
Plot No	Street No Sector Phase	
	that my house construction has been completed. I also undertake that I Informed to all the Bye-Laws of DHA Peshawar. Following documents and the complete in the Bye-Laws of DHA Peshawar.	
٠	Photo copy of approved submission drawing	
•	Prescribed Dues (Rs.5000/-) and un-paid charges if any) to Fin brai	nch (Challan
	form attached)	
•	Inspection card duly signed by the concerned officer during constru	ction
•	Copy of site plan/possession	
	(Signature of Own	er)
	(Name of Owner i	n Block Letters)
	(Membership No)	

			Ser No: - DHAP/P/St/Se
	CERTIFICATE O	F COMPLETION	
This Certificate is presented to:	HOU	SINC	SAUX.
Name (Owner)	S/O, D/O, W/O	CNIC	DHA Membership No
Resident of	Tel No(s): Mobile		ResidentialOffice
As per the TP & BC Regulations 2019,	or the successful completion of th	e House/Shop/Flat/Office	etc. on
Plot NoStreet	Sec	Phase	
Awarded on			HAWAR
BU	ILDIN	GD	REAMS
Signed By			Signed By

То			
Defence Housing Authority			
Peshawar			
Subject: Provision of Services			
Plot No Street No_		Sector	Phase
I notify that my house has leading request that following serviors Temporary		vided.	Construction completed) therefore
Electrical connection			
Water connection			
Sewer connection			
Gas connection			
Fiber optical Connection			
2. I undertake to pay Installati	ions fee and Ch	narges regu	larly as per rules
			(Signature of Owner)
			(Name of Owner in Block Letters
			(Membership No)
	For Office	Use Only	
Sewer connection open on_		Water co	nnection open on
Site Supervisor _		Site Sup	ervisor
Owner's confirmation _		Owner's	confirmation
Clerk for Billing/Record _		Clerk for	Billing/Record



<u>DEFENCE OFFICERS HOUSING AUTHORITY PESHAWAR</u> REGISTRATION FOR DHA SECURITY – RESIDENTIAL

Serial #																										1200	L					_
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Owner Detail																																_
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NOTICE OF DISCONTINUANCE

The Administrator DHA Peshawar.
I hereby give notice of my discontinuance from the building works with effect from/ as the Registered Architect/Civil Engineer/Structural Engineer in respect of Plot No DHAP. It is certified that the following building work on the said plot has been carried out under my supervision and to my entire satisfaction.
Name & Signature(s) of Architect/ Civil Engineer/ Structural Engineer Registration No. of PEC/PCATP Category of Registration: DHAP Registration No:
Date: / / _ /
Description of the work:
1. 2. 3. 4. 5.
Copy to:-
(Owner's Name)
(Owner's Address)

REGULARIZATION OF WORKS CARRIED OUT WITHOUT PERMISSION

The Adm DHA Pes	inistrator, shawar.					
1. No	Whereas I/We has shown on the plar	ve constructed_	located	at	on P	lot
DHAP as	shown on the plar	attached here v	vith.	-		
2. letter No	Whereas I/We had be of construction of	ve made deviati	ons from buildi c teration and a	ng plans san lated dditions to th	ctioned e buildi	vide in ng as
	n the plans attached					Ü
the said and also regularize of Byela	Whereas I/We are structure so as to willing to pay ation of illegal conws. It is, therefore tion as per law and	make it consist the compositi struction/deviati s, requested tha	stent with the on fee impo ons from app t plans may t	permission of sed by the roved plan of oe regularize	of the [DHAF r in vio d by w	HAP for lation ay of
	Owner's	s Signatures & A	ddress			
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has beer certify the	n fully and correctly at the building is s attached herewith	/ shown on the tructurally stable	plan submitted	d by me. And	I/We fu	urthei
	Registered Archite Signature: CBC License No. PEC/PCATP Reg DHAP Registration	istration No.	ngr:			

Abbreviations

DHAP - Defence Housing Authority Peshawar

SMPIC - Sustainable Master Plan Image Concept

COS - Compulsory Open Space

PEC - Pakistan Engineering Council

PCATP - Pakistan Council of Architects and Town Planners

FAR - Floor Area Ratio

HVAC - Heat Ventilating and Air Conditioning

LED - Light Emitting Diode

LRV - Light Reflective Value

SRI - Solar Reflectance Index

TP&BC - Town Planning & Building Control

UHI - Urban Heat Island

RCC - Reinforced Cement Concrete

ICT - Information Communication Technology

UBC - Uniform Building Code

WC - Water Closet

MEP - Mechanical Electrical and Plumbing

NOC - No Objection Certificate

PVC - Poly Vinyl Chloride

DPC - Damp Proof Course

SOP - Standard Operating Procedure

LPG - Liquid Petroleum Gas

CNG - Compressed Natural Gas

ASME - American Society of Mechanical Engineers

Abbreviations

COP - Car Operating Panel

ASHRAE - American Society of Heating Refrigerating and Air

Conditioning Engineers

ASTM - American Society for Testing and Materials SWH

SWH - Solar Water Heater

VVVF - Variable Voltage and Variable Frequency

TLV - Threshold Limit Value

VOC - Volatile Organic Compound

ODP - Ozone Depletion Compound

NFPA - National Fire Protection Agency

CIBSE - Chartered Institute of Building Service Engineers

BF - Basement Floor

GF - Ground Floor

FF - First Floor

GWP - Global Warming Potential