NOVEMBER 2022

OCEAN
NINETY9

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

OCEAN NINETY 9

RESIDENTIAL-CUM-COMMERCIAL BUILDING PROJECT

M/S TM ASSOCIATES

EMC Pakistan
Private Limited

TM Associates

Environmental Impact Assessment (EIA)

Ocean Ninety 9

Residential-cum-Commercial Building Project

November 2022
Ref: EIA/18/11/22

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Executive Summary

This Environmental Impact Assessment (EIA) report presents the assessment of environmental aspects that may arise due to the development of proposed "**Ocean Ninety 9**" Residential-cum-Commercial Building Project, Karachi, having plot area of about 8107.00 SQ YDS (Gross covered area: 818,677.11 SQ FT; Net area after exemptions: 432,050.38 SQ FT), and will be developed by **M/s TM Associates**.

This document has been prepared in compliance with the mandatory requirement of the Section 17 of Sindh Environmental Protection Act (SEPA) 2014. As per Sindh Environmental Protection Agency (Environmental Assessment) Regulations 2021, the project falls in Schedule III: Projects Requiring an EIA, Category (I) Urban Development and Tourism, (2) Residential, Commercial High rise buildings subject to compliance of building bylaws of relevant organizations more than 500,000 sq.feet.

The Project falls in to the appropriate category that permits the designated land-use by the relevant authority. Siting of the proposed project at Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi, by M/s TM Associates is duly authorized.

The plot area of the project is about 8107.00 SQ YDS, comprises Basement (ARS + Project Parking + Services) + Ground Floor (Shops + Services) + 1st to 2nd Floor (Project Parking + Services) + 3rd Floor (Visitors Parking + Services) + 4th Floor (Recreation area + Project Parking + Flats) + 5th to 18th Floor (Flats) + Roof (Solar Panels + Battery Room + Services) only.

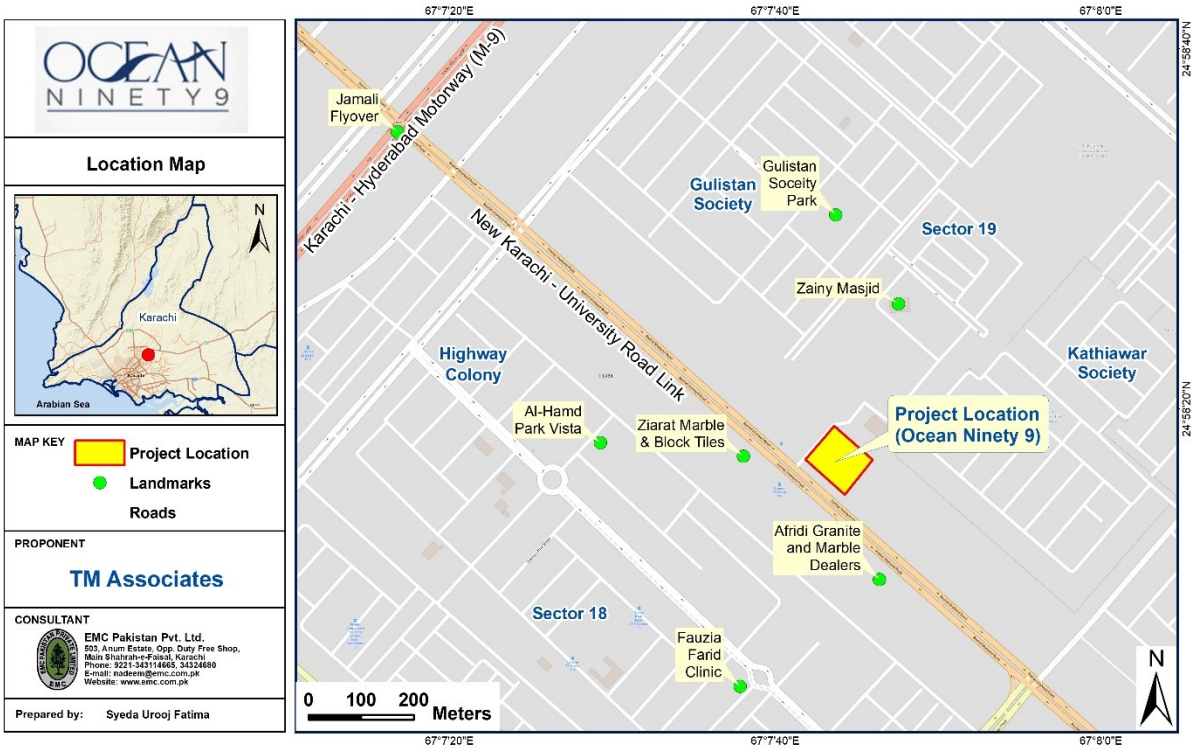

Figure ES.1: Location of the Project

The project is planned in the environs of Gulistan Society. The project site is accessible by Maulana Ubaidullah Sindhi Road which connects the project site with New Karachi – University Link Road and Karachi Hyderabad Motorway (M-9). Multiple housing societies are present in the surrounding of proposed area including Zeenatabad, Kathiawar Society, Teachers Society, Highway Colony and others.

All the infrastructure facilities will be provided at the site as per the applicable national and international standards and codes. Facilities like energy efficient lighting, drainage system and hour security system has been carefully incorporated into the project design for providing comfortable and healthy living environment. The project is featured by CCTV Camera Monitoring, High Speed Lifts in buildings, Audacious Parking Space, Global Standard Fixtures and Finishing, Recreational Area and Community Hall.

The environmental conditions, ambient air quality in the area is satisfactory at the project site and complies with SEQS limits. The microenvironment has no sensitive areas such as protected sites including wildlife sanctuaries, game reserves or national parks, or any archaeological, historical or cultural heritage in its immediate neighborhood; as such its siting would have no sensitivity in this regard. No significant flora and fauna will be disturbed.

The social team from EMC initiated consultations in the project area during the third week of November, 2022. The following major issues and concerns were raised by the primary stakeholders:

- The area was perilous few years ago due to separateness from the main city. Now it's a peaceful neighborhood, many new projects and societies are under development. Many Buildings are completed and populaces from different districts of Karachi are accommodated here.
- The residents were mostly happy, environment of the area is clean, new societies are developing under the proper management. Mr. Usaid raised a concern that new developments might put pressure on the available water supply, sewerage and drainage system of the area.
- Mr. Abbass Bohri is the owner of Saifee Bohrani General Store as well as the resident of Bohrani Nagri Apartments Building expressed his view that the immediate neighborhood of the proposed project is dominated by Bohri Community, other community members are not allowed in their society but Ocean Ninety 9 seems likely to be available for everyone.
- Mr. Safeer Khan owner of Shah Marble and Granite mocked the social team by saying that the proponent has to buy all the flooring marble from them. He was basically saying business opportunities will increase with the increase of new developments.
- The available road conditions need improvement. The proposed project is ideal. There are 4 different roads that connects the area with Super-highway said by a resident.
- Sewage and Waste facility is available in the vicinity said by the member of Building Union Mr. Sharyar of “Sumaira Sky Tower & Shopping Mall.”
- A real estate agent mention that there are less hardware shops in the area as mega projects are under construction, laborers need to go to “Safoora Goth” to get construction material.

The proposed project will have back-up power generation, water supply supplemented by filtration system and sewage disposal system through septic tanks, in addition to provision of parking space. Option for recycling of the wastewater and regeneration of the potable water from groundwater resources by adequate treatment may also have to be explored in case of absence of reliable water supply from authorities.

Realizing that the city has overgrown its sustainability limits, it is imperative that the proponent takes cognizance of the cumulative effect of the current pace of rapid development. Consequently, each project is required to keep the sustainability principles in view and go an extra mile beyond the present approach which is confined to bare survival.

Based on the findings of the EIA it is concluded that the environmental impacts of the construction and operation of the project are manageable and can be mitigated by implementing the Environmental Management and Monitoring Plan which forms an integral part of EIA document. The screening process has through review of literature, primary as well as secondary baseline data, and expert judgment, made assessment of the potential impacts of said activities on the physical, biological, and socioeconomic environment of the Project. Mitigation measures have been proposed to reduce, minimize or compensate for the identified potential negative impacts and their adoption has been recommended. The study therefore recommends that the Environmental Impact Assessment (EIA) report should be approved with the provision that the suggested mitigation measures will be adopted and the Environmental Management Plan will be followed in letter and spirit.

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Chapter 1 Introduction

1.1. General

This Environmental Impact Assessment (EIA) report presents the assessment of environmental impacts that may arise due to the development of proposed "**Ocean Ninety 9**", Residential-cum-Commercial Building Project which will be developed by M/s **TM Associates**. This document has been prepared in compliance with the mandatory requirement of the Section 17 of Sindh Environmental Protection Act (SEPA) 2014, requires that "no proponent of a project will commence construction or operation unless he has filed with the Agency an environmental impact assessment, and has obtained from the Agency approval in respect thereof".

M/s EMC Pakistan Private Limited has been commissioned by M/s TM Associates to assess the project's environmental and social viability through various environmental components like air, water, noise, including land, biological along with the parameters of human interest and to prepare Environmental Management Plan (EMP) for mitigation of adverse impacts along with chalking out of post project environmental monitoring program.

1.2. Overview of Project and Proponent

1.2.1. The Proponent: TM Associates

TM Associates is known of pioneering industry standard for performance and technical innovation in construction projects. The company possesses a reputation built on the high-quality performance and endow with the most modern and inventive solutions on the widest range of versatile and high-profile projects. TM Associates is focused on building and maintaining quality infrastructure for everyday life.

Table 1.1: Contact Details

Project Proponent	EIA Consultant
M/s TM Associates Contact Person: Mr. Abdur Rahim S/o Muhammad Tariq Rafi (Owner/Attorney) CNIC: 42201-0409988-5 Phone: 0092-213-5166521-04 Address: Office No. 27th Floor, Ocean Tower, Main Clifton, Karachi.	**EMC Pakistan Private Limited** Suite # 503, Anum Estate, Opp. Duty Free Shop, Main Shahrah-e-Faisal, Karachi Tel: (+) 92 21 34382860 Fax: (+) 92 21 34311467 Email: mail@emc.com.pk Website: http://emc.com.pk/

1.2.2. Overview of Project

The plot area of the project is about 8107.00 SQ YDS (Gross covered area: 818,677.11 SQ FT; Net area after exemptions: 432,050.38 SQ FT), with following features:

- Basement (ARS + Project Parking + Services)
- Ground Floor (Shops + Services)
- 1st to 2nd Floor (Project Parking + Services)
- 3rd Floor (Visitors Parking + Services)

- 4th Floor (Recreation area + Project Parking + Flats)
- 5th to 18th Floor (Flats)
- Roof (Solar Panels + Battery Room + Services) only

A detailed overview of the submission plan other details along with dimensions are provided in annexures of this report.

1.2.3. Objectives of the Project

In launching the Project, the proponent aims to achieve the following objectives:

- To provide an organized residential-cum-commercial building structure conducive to the current demand of fast degrading environment;
- To promote development in the buildings infrastructure which at present is among the worthwhile contributors to the growth of GDP; and
- To meet the increasing demand of residential and commercial accommodation in urban Karachi.

1.3. Location of the Project

The Project falls in to the appropriate category that permits the designated land-use by the relevant authority. Siting of the proposed project at Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi, by M/s TM Associates is duly authorized. Land approvals for the proposed project site are attached in the annexures.

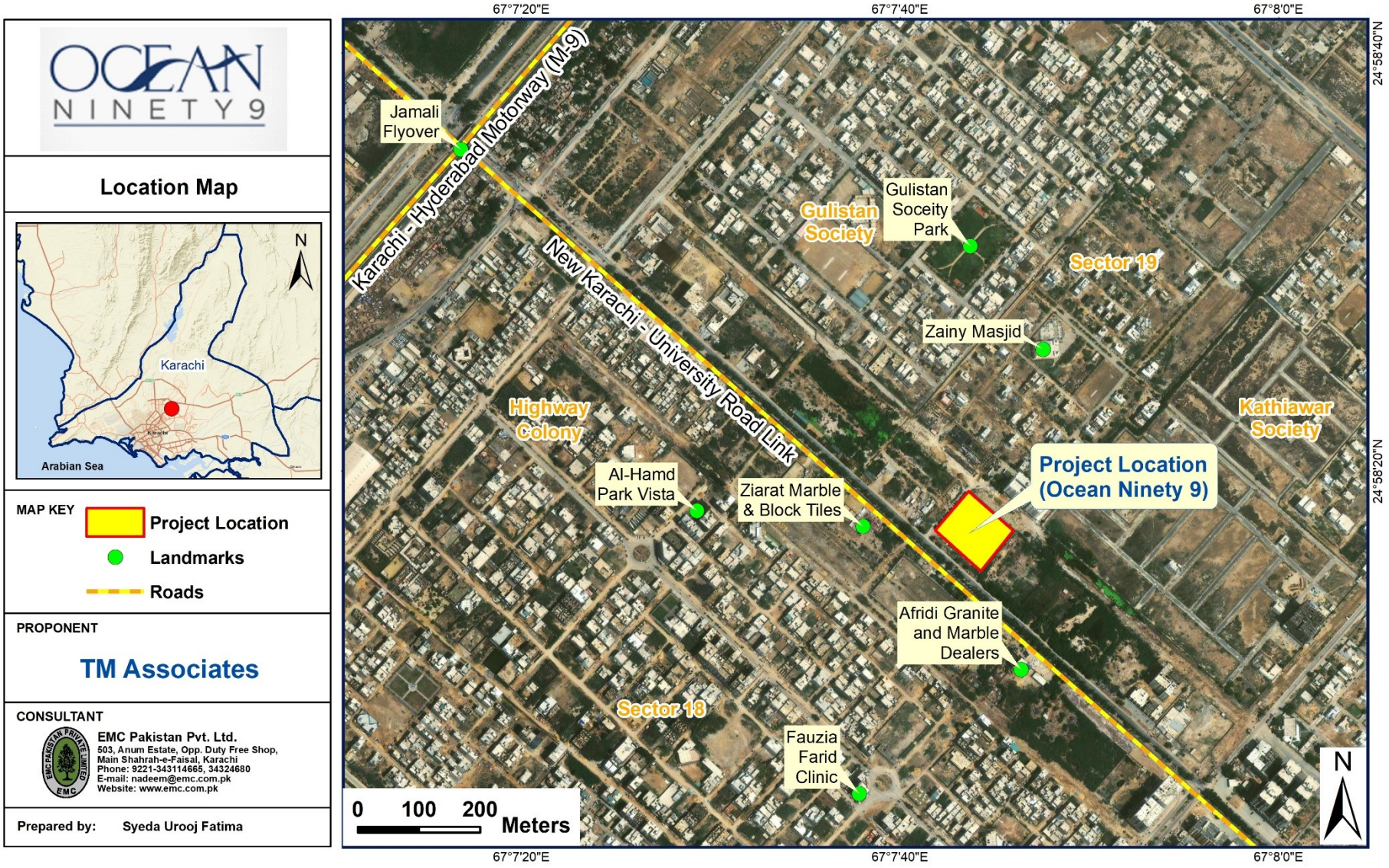

Figure 1.1: Project Location

1.4. Project Categorization

According to Sindh Environmental Protection Agency Environmental Assessment Regulations, 2021, a project falling in any category listed in Schedule III shall file an EIA with the Sindh Environmental Protection Agency (SEPA). This specific project can be categorized as:

Schedule III: Projects Requiring an EIA

Category (I) Urban Development and tourism

(2) Residential, Commercial High rise buildings subject to compliance of building bylaws of relevant organizations more than 500,000 sq.feet.

1.5. Objectives of Environmental Assessment

This EIA study is conducted in the preliminary stage of the project in order to acquire approval for initiating project construction works. The main objective of EIA is to identify the environmental and socio-economic impacts both positive and negative that may result from the location of the project. This EIA provides recommendations to mitigate negative impacts and maximize benefits on all aspects of the surrounding environment (physical, biological and social). The objectives outlined for this EIA study are given below:

- To identify and describe elements of community and environment likely to be affected by the proposed developments and / or likely to cause adverse impacts to the project, including natural and man – made environment;
- Develop a baseline of its current environmental scenario as well as socioeconomic conditions;
- Identify potential impacts that may arise;
- To identify any potential losses or damage to flora, fauna and natural habitats;
- To identify any damage to land and water drainage patterns present on the site;
- Determine social aspects and environmental resources which are particularly sensitive to impacts and categorize impacts on the basis of their severity;
- Evaluate impacts due to construction and operation activities of the project with the relevant environmental regulations of Pakistan;
- Evaluation of impacts severity / degree and providing necessary mitigation measures;
- Provide recommendations and suggestions for the environmental monitoring and management of social and physical environment in the surroundings of project area; and
- Ensure that all the impacts of the project have been taken care and all the relevant stakeholders are aware of the impacts.

1.6. Methodology for Environmental Assessment

This environmental assessment (examination and evaluation) is based on comparative evaluation of the environmental quality before and after establishment of the project. For this purpose, the baseline of the profile project area was developed by collecting data, records and information on

physical, ecological as well as socioeconomic environment, in particular the surrounding areas in its neighborhood. An assessment of impact at the different phases of the project, i.e., pre-construction, construction and operation stages. The changes anticipated in the critical environmental aspects e.g., in the ambient environmental parameters that may be significant have been identified. This leads to identification of significant impact, for which necessary mitigation measures have been proposed.

1.6.1. Scoping

A scoping exercise was undertaken to identify the potential issues that are to be considered in the EIA. The scoping exercise included the following tasks:

Data Compilation: A generic description of the proposed activities relevant to this environmental assessment was compiled with the help of the Project Proponent.

- **Review of Published literature:** All available published and unpublished information pertaining to the micro & macro environment of the study area was obtained and reviewed. It included the earlier studies conducted in the study area, environmental & social baseline and impact assessment studies conducted by different consultants in past. Secondary data was very helpful in understanding the issues that were identified by other consultants.
- **Review of applicable Legislation:** Information on relevant legislation, regulations, guidelines, and standards was reviewed and compiled.
- **Identification of potential impacts:** The information collected in the above procedures was reviewed and potential environmental issues identified.
- **Initial site visit:** An initial site visit was conducted to get an overview of site conditions and the surrounding areas.

1.6.2. Acquiring Project Specific Data

This was the very first step to embark on the study initiated through meetings held with the officials of the proponent. In the meetings, discussions were made to clarify the nature and location of project in environmental perspectives. Basic information on the form of raw input received from the proponent was analyzed by the experts to comprehend the project and to assess its influence on the environment.

1.6.3. Literature Review

While the project details were being acquired, desktop study was also initiated simultaneously to draft environmental baseline information of the project area. The desktop study comprised of literature review, collection of updated authenticated published/printed data on the physical and social environment related to the focused area. The same was also used to delineate the scope of surveys.

1.6.4. Reconnaissance and Detailed Surveys

Preliminary surveys of project location were organized by EMC in which experts visited the area and assessed the physical scenario for the EIA stage. The relevant surveys were carried out under

the supervision of environmental experts. Preliminary socio-economic evaluation was also undertaken.

Detailed and comprehensive surveys will be conducted in detailed EIA study stage to investigate various domains of environment and socio-economic sector to highlight various issues, and concerns that may lead to the identification of aspects and subsequent assessment of impacts.

For having an over view of the project area and to assess the existing infrastructure and socio-economic activities, a detailed groundwork investigation was carried out around the microenvironment of project area.

1.6.5. Aspects Identification

The EIA process requires development of an inventory of all possible environmental and socio-economic aspects of the project, which provide the basis of categorization and evaluation of impacts and their likelihood to occur due to the materialization of the project. Aspects are those which are the causes of positive or negative impacts.

Those aspects are primarily associated with activities performed during construction and operation phases of the Project.

1.6.6. Impact Assessment and Mitigation Measures

Based on the developed aspects inventory, experts analyzed the aspects for their logical outcome as potential impacts on the physical and social environment. These impacts have been identified, assessed and weighed for different activities during construction, commissioning and operational phases of the Project.

Mitigation and control measures were also proposed for various activities of Project in order to minimize the potential impacts during the life span of the Project.

1.6.7. Environmental Management and Monitoring Plan

In the light of impacts identified and mitigations proposed an Environmental Management Plan (EMP) has been developed which has a pivotal role in assigning tasks to personnel for the environmental management and implementation of mitigation measures as well as to monitor its effectiveness throughout the life cycle of the project. It also provided monitoring plans/procedures to be followed for checking and compliance maintenance of environmental quality and legal requirements through suggested mitigation measures.

1.6.8. Documentation Review and Conclusion

This is the final step to complete the environmental assessment and compile all the work done in shape of an EIA report. Report writing started just after the initiation of environmental assessment.

The report has been written by experts of EMC and compiled by the office staff in coordination with the experts. At the end of the study, the entire report is reviewed by the team leader followed by recommendations and conclusion in the light of the assessment.

1.7. Structure of EIA Report

The EIA report has been structured on the standard format, prescribed by the EPA. The Report has been presented in the following sections:

- **Chapter 1:** Provides an introduction and overview of the project
- **Chapter 2:** Gives an overview of policy and legislation along with international guidelines relevant to the project
- **Chapter 3:** Includes the project description, its objective, location of the project area and construction /operation related details
- **Chapter 4:** Provides description of the microenvironment and macro environment of the project area. This chapter contains description of the Physical, Biological and built environment of the Site.
- **Chapter 5:** Describes the involvement of major stakeholders and consultation with the primary and secondary stakeholders.
- **Chapter 6:** Describes screening of environmental and social impacts and appropriate mitigation measures.
- **Chapter 7:** Presents the Environmental Management Plan and Monitoring Program for the project
- **Chapter 8:** Summarizes the report and presents its conclusions.

The main text of the report is supported by a series of Annexures which provide auxiliary information including.

1.8. EIA Study Team

This EIA report has been prepared by EMC Pakistan organized and coordinated with the team of experts mentioned in table below for the purpose of conducting environmental assessment and preparation of the report:

Table 1.2: List of EIA Team Members

S#	Name	Position in EIA Study Team
1.	Mr. Syed Nadeem Arif	Project Manager / Team Leader
2.	Mr. Muhammad Haseeb	Director / Environmental Specialist
3.	Mr. Ahmed Zohair Siddiqui	Environmental Engineer
4.	Mr. Tanveer Arif	Head of Social Department
5.	Mr. Syed Muhammad Omar Arif	Environmental Engineer
6.	Ms. Syeda Urooj Fatima	Environmental Scientist
7.	Mr. Fahad Afzal	Environmental Scientist
8.	Mr. Ehtisham Ahmed	Sociologist

Chapter 2 Regulatory Framework

This section provides synopsis of policies, legislation, and guidelines that may have relevance to the proposed Project and describes the current legal responsibilities of the Proponent in the context of the environment and sustainable development, and the institutions that exist in the province that may influence the environmental management of the Project.

The constitution of Pakistan contains provision for environmental protection and resource conservation. The constitution mentions environmental pollution and the ecology as a subject in the concurrent legislative list, meaning that both the provincial and federal government may initiate and make legislation for the purpose.

Legislative assembly of Sindh province of Pakistan passed the bill on 24th February 2014 to enact Sindh Environmental Protection Act 2014. The Act envisages protection, improvement, conservation and rehabilitation of environment of Sindh with the help of legal action against polluters and green awakening of communities. It equally lays emphasis for the preservation of the natural resources of Sindh and to adopt ways and means for restoring the balance in its ecosystem by avoiding all types of environmental hazards.

A detailed review of these legislations and guidelines will be made part of the EIA study. Below is the list of the applicable legislations / guidelines:

2.1. Administrative and Statutory Framework

The constitution of Pakistan contains provision for environmental protection and resource conservation. The constitution mentions environmental pollution and the ecology as a subject in the concurrent legislative list, meaning that both the provincial and federal government may initiate and make legislation for the purpose. Article 9 of the Constitution defines the right to life as a "fundamental right" in these words "No person shall be deprived of life or liberty save in accordance with law". The Supreme Court of Pakistan in its judgment in the case Shehla Zia and others vs WAPDA (1994) declared that the right to a clean environment is part of the fundamental constitutional right to life.

Several laws exist for the protection of the environment. Some of these laws are Federal and the rest Provincial in character. The promulgation of the Environmental Protection Ordinance 1983 was the first codifying legislation on the issue of environmental protection. This was indeed a consolidated enactment to plug the gaps and remove defects/deficiencies in the legislation. The promulgation of this ordinance was followed, in 1984, by the establishment of the Pakistan Environmental Protection Agency, the primary government institution dealing with environmental issues. Significant work on developing environmental policy was carried out in the late 1980s, which culminated in the drafting of the Pakistan National Conservation Strategy. Provincial environmental protection agencies were also established at about the same time. The National Environmental Quality Standards were established in 1993.

Prior to the 18th Amendment to the Constitution of Pakistan in 2010, the legislative powers were distributed between the federal and provincial governments through two 'lists' attached to the

Constitution as Schedules. The Federal list covered the subjects over which the federal government had exclusive legislative power, while the 'Concurrent List' contained subjects regarding which both the federal and provincial governments could enact laws. The subject of 'environmental pollution and ecology' was included in the Concurrent List and hence allowed both the national and provincial governments to enact laws on the subject.

However, as a result of the 18th Amendment this subject is now in the exclusive domain of the provincial government. The main consequences of this change are as follows: i) The Ministry of Environment at the federal level has been abolished. Its functions related to the national environmental management haves been transferred to the provinces. The international obligations in the context of environment will be managed by various ministries and departments of the federal government, ii) The Pakistan Environmental Protection Act 1997 (PEPA 1997) is technically no longer applicable to the provinces. The provinces are required to enact their own legislation for environmental protection.

The Provincial Environmental Protection Agencies are formed by the respective Provincial Governments. A Director General who exercises powers delegated to him by the Provincial Government heads each Provincial EPA. IEEs and EIAs are submitted to provincial EPAs for approval.

The Government of Sindh (GOS) has designated its Ministry of Environment Climate Change & Coastal Development, to administer matters related to the environment in Sindh. The Sindh Environmental Protection Agency (SEPA) is directly under the Ministry of Environment Climate Change & Coastal Development.

2.1.1. Sindh Environmental Protection Act, 2014

Legislative assembly of Sindh province of Pakistan passed the bill on 24th February 2014 to enact Sindh Environmental Protection Act 2014. The Act envisages protection, improvement, conservation and rehabilitation of environment of Sindh with the help of legal action against polluters and green awakening of communities.

It equally lays emphasis for the preservation of the natural resources of Sindh and to adopt ways and means for restoring the balance in its eco-system by avoiding all types of environmental hazards.

Environmental Protection Council (EPC): It has been formed consisting of Chief Minister as Chairman with Minister in charge of Environment Protection Department, Addl. Chief Secretary, Planning & Development Department, Government of Sindh and Secretaries of Environment, Finance, Public Health Engineering, Irrigation, Health, Agriculture, Local Government, Industries, Livestock & Fisheries Forest & Wildlife, Energy, Education Departments Government of Sindh and Divisional Commissioners of Sindh. Non-official members are also included (i.e. representatives of Chamber of Commerce & Industry and from medical or legal professions etc.) along with DG, EPA & two Members of Provincial Assembly also form part of EPC.

The functions and powers of EPC include coordination & supervision of provisions of Act, approving provincial environmental & sustainable development policies & SEQS, provide

guidance for protection & conservation, consider annual Sindh Environmental Report, deal with interprovincial and federal provincial issues, provide guidance for bio safety and assist Federal Government in implementation of various provisions of UN Convention on laws on Seas (UNCLOS).

Sindh Environmental Protection Agency (SEPA): SEPA would be headed by Director General (DG) with the aim to exercise the powers and perform the functions assigned to it under the provisions of this Act and the rules and regulations made there under. The Agency shall have technical and legal staff and may form advisory committees.

The Agency shall administer and implement the provisions of this Act and rules and regulations. It shall also prepare environmental policies, take measures for implementation of environmental policies, prepare Sindh Environment Report and prepare or revise Sindh Environmental Quality Standards. SEPA shall also establish systems and procedures for surveys, surveillance, monitoring, measurement, examination, investigation research, inspection and audit to prevent and control pollution and to estimate the costs of cleaning up pollution and rehabilitating the environment and sustainable development. SEPA would also take measures for protection of environment such as to promote research; issues licenses for dealing with hazardous substances, certify laboratories, identify need for or initiate legislation, specify safeguards etc. SEPA would also encourage public awareness and education regarding environmental issues.

SEPA would have powers to enter or inspect under a search warrant issued by Environmental Protection Tribunal or a Court search at any time, any land or building etc. where there are reasonable grounds to believe that an offence under this Act has been or is being or likely to be committed. SEPA may also take samples, arrange for testing or confiscate any article in discharge of their duties.

This act has also provided for Sindh Sustainable Fund derived from various sources such as voluntary contributions or fees generated etc. This fund is utilized for protection, conservation or improvement of environment.

Salient Features of the Sindh Environmental Protection Act

Section-11: No person shall discharge or emit or allow the discharge or emission of any effluent waste, pollutant, noise or adverse environmental effects in an amount, concentration or level which is in excess to that specified in Sindh Environmental Quality Standards.

Section-12 & 13: No person shall import hazardous waste into Sindh province and handle hazardous substances except under licenses etc.

Section 14: No person shall undertake any action which adversely affects environment or which lead to pollute or impairment of or damage to biodiversity, ecosystem, aesthetics or any damage to environment etc.

Section 15: This section deals with regulation of motor vehicles banning emission of air or noise pollutants being emitted from them in excess of allowable standards.

Section 17: This section states that no proponent of a project shall commence construction or operation unless he has filed with the Agency an initial environmental examination or environmental impact assessment and has obtained from Agency approval in respect thereof. SEPA shall review the IEE & EIA and accord approval subject to such terms and conditions as it may prescribe or require. The agency shall communicate within four (04) months its approval or otherwise from the date EIA is filed failing which the EIA shall deemed to have been approved.

Section 21: Where agency is satisfied that the discharge or emission has occurred in violation of any provision of this act or rules etc. then it may, after giving an opportunity to person responsible, by order direct such person to take such measures within specified period. The agency under this section has been empowered to immediately stop, prevent or minimize emission, disposal etc. for remedying adverse environmental effects.

Section 22: The person who fails to comply with section 11, 17, 18 and 21 shall be punishable with a fine which may extend to five million rupees, to the damage caused to environment and in the case of a continuing contravention or failure, with an additional fine which may extend to one hundred thousand rupees for every day during which such contravention or failure continues. And, where a person convicted under sub-sections 1&2 had been previously convicted for any contravention of this Act, the Environmental Protection Tribunal (EPT) may, in addition to punishment, award imprisonment for a term that may extend up to three years, or order confiscation or closure of facility etc.

Section 23: Where any violation of this Act has been committed by any of employee of any corporate body, then, that employee shall be considered to be guilty of environmental pollution.

Section 25: This section allows for establishment of Environmental Protection Tribunals.

2.1.2. Sindh Environmental Protection Agency (Environmental Assessment) Regulations 2021

The Sindh Environmental Protection Agency (Environmental Assessment) Regulations 2021, revised from the preceding document introduced in 2014, define Schedules (I, II, & III) of projects falling under the requirement of an Environmental Checklist, IEE, or EIA respectively.

Schedule I: A project falls into Schedule I if it is considered as having minimal environmental impact, and the screening of the project through a checklist, documents its environmental compliance.

Schedule II: A project falls in Schedule II if it is likely to have adverse environmental impacts, but of lesser degree or significance and all the mitigation measures to handle the impact is manageable. Such types of projects need IEE report inducing EMP.

Schedule III: Projects are categorized in Schedule III if they generate significant adverse environmental impacts that require a comprehensive management plan, or if the project is located within or passes through: a) Areas declared by the Government of Pakistan as environmentally sensitive (National Parks/Sanctuaries/Game Reserve), b) Areas of international significance (e.g.

protected wetland as designated by the RAMSAR Convention), or c) Areas designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as cultural heritage sites.

According to Sindh Environmental Protection Agency Environmental Assessment Regulations, 2021, a project falling in any category listed in Schedule III shall file an EIA with the Sindh Environmental Protection Agency (SEPA). This specific project can be categorized as:

Schedule III: Projects Requiring an EIA

Category (I) Urban Development and tourism

(2) Residential, Commercial High rise buildings subject to compliance of building bylaws of relevant organizations more than 500,000 sq.feet.

Filing: Regulation 9 requires submission of two hardcopies and two electronic copies accompanied by an application form (schedule-V), copy of receipt of payment of review fee, NOC from relevant departments (where applicable).

Preliminary scrutiny: Regulation 10 states that at any time after the submission of the report, the agency shall review the report and inform the proponent for submission of the need for any additional information at any time.

Review: The agency shall review the report after issuing confirmation of completeness as per Regulation 9.

Validity: Regulation 15 defines the validity period of approval of an IEE or EIA to be three years from date of construction and must start within three years of report approval. A three-year extension at a time may be granted upon the agency's discretion with or without the submission of a fresh IEE or EIA.

2.1.3. Sindh Environmental Quality Standards (SEQS)

With the SEPA Act, 2014 the Sindh EPA revised the Environmental Quality Standards (EQS) with full consultation of the private sector, industrialist, trade and business associations and NGOs and approval of Sindh Environmental Protection Council has developed Sindh Environmental Industrial Wastewater, Effluent, Domestic Sewerage, Industrial Air Emission, Ambient Air, Noise for vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015 vide Notification No.EPA/TECH/739/2014.

This Project will comply with SEQS 2016. A monitoring plan is attached with the EIA study which will monitor the compliance of SEQS for any pollutant streams. Concerns of unchecked fuel, oil & lubricant spills in soil & waterways cannot be ruled out. Drifts of such spills may become dangerous to the eco-system. Safe practices and proper disposal of waste petrochemicals will be proposed in the EMP. Project Proponent and all Contractor are committed to comply with the applicable Sindh-EQS in letter and spirit.

The Tables are of SEQS are presented below:

Table 2.1: Sindh Environmental Quality Standard for Ambient Air			
Pollutant	**Time-weighted average**	**Concentration in Ambient Air**	**Method of measurement**
Sulfur Dioxide (SO_2)	Annual Average*	80µgm^3	Ultraviolet Fluorescence Method
	24 hours**	120µgm^3	
Oxides of Nitrogen as (NO)	Annual Average*	40µgm^3	Gas Phase Chemiluminescence
	24 hours**	40µgm^3	
Oxides of Nitrogen as (NO_2)	Annual Average*	40µgm^3	Gas Phase Chemiluminescence
	24 hours**	80µgm^3	
O_3	1 hour	130µgm^3	Non dispersive UV absorption method
Suspended Particulate Matter (SPM)	Annual Average*	360µgm^3	High volume Sampling, (Average flow rate not less than 1.1m^3/minute)
	24 hours**	500µgm^3	
Respirable Particulate Matter (PM10)	Annual Average*	120µgm^3	B Ray absorption method
	24 hours**	150µgm^3	
Respirable Particulate Matter (PM2.5)	Annual Average*	40µgm^3	B Ray absorption method
	24 hours**	75µgm^3	
Lead (Pb)	Annual Average*	1µgm^3	ASS Method after sampling using EPM 2000 or equivalent Filter paper
	24 hours**	1.5µgm^3	
Carbon Monoxide (CO)	8hours**	5mg/m^3	Non Dispersive Infra Red (NDIR) method
	1hours	10mg/m^3	
*Annual arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.			
**24 hourly / 8 hourly values should be met 98% of the in a year. 2% of the time, it may exceed but not on two consecutive days.			

Table 2.2 shows the standards for motor vehicle noise.

Table 2.2: The Motor Vehicle Noise		
Parameter	**Standards (maximum permissible limit)**	**Measuring method**
Noise	85dB(A)	Sound-meter at 7.5meter from the source

Table 2.3 shows the SEQS for noise.

Table 2.3: Sindh Environmental Quality Standard for Noise					
S. No.	**Category of Area / Zone**	**Effective from 1st January, 2015**		**Effective from 1st January, 2015**	
		Limit it in dB(A) Leq*			
		Day Time	Night Time	Day Time	Night Time
1	Residential area (A)	65	50	55	45
2	Commercial area (B)	70	60	65	55
3	Industrial area (C)	80	75	75	65
4	Silence Zone (D)	55	45	50	45
Note: 1	Day time hours: 6.00 a. m to 10.00 p. m				

2	Night time hours: 10.00 p. m to 6.00 p. m
3	Silence zone; Zone which are declared as such by competent authority. An area comprising not less than 100 meters around hospitals, educational institutions and courts.
4	Mixed categories of areas may be declared as one of the four above-mentioned categories by the competent authority.
*dB(A)Leq	Time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

The SEQS for effluents are shown in Table 2.4.

Table 2.4: Sindh Environmental Quality Standard for Municipal & Liquid Industrial Effluents

S. #	Parameter	Into Inland Waters	Into Sewage Treatment	Into Sea	unit
1	Temperature or Temp. increase	<3	<3	<3	^oC
2	pH value (H^+)	6-9	6-9	6-9	
3	Biological Oxygen Demand $(BOD)_5$ at 20^oC	80	250	80	mg/l
4	Chemical Oxygen Demand (COD)	150	400	400	mg/l
5	Total Suspended Solids (TSS)	200	400	200	mg/l
6	Total Dissolved Solids (TDS)	3500	3500	3500	mg/l
7	Oil and Grease	10	10	10	mg/l
8	Phenolic Compounds (as Phenol)	0.1	0.3	0.3	mg/l
9	Chloride (as Cl^-)	1000	1000	SC	mg/l
10	Fluoride (as F^-)	10	10	10	mg/l
11	Cyanide (as CN^-)total	1.0	1.0	1.0	mg/l
12	An-ionic detergents (as MBAS)	20	20	20	mg/l
13	Sulphate(SO_4^{2-})	600	1000	SC	mg/l
14	Sulphide (S^{2-})	1.0	1.0	1.0	mg/l
15	Ammonia (NH_3)	40	40	40	mg/l
16	Pesticides	0.15	0.15	0.15	mg/l
17	Cadmium	0.1	0.1	0.1	mg/l
18	Chromium (trivalent and hexavalent)	1.0	1.0	1.0	mg/l
19	Copper	1.0	1.0	1.0	mg/l
20	Lead	0.5	0.5	0.5	mg/l
21	Mercury	0.01	0.01	0.01	mg/l
22	Selenium	0.5	0.5	0.5	mg/l
23	Nickel	1.0	1.0	1.0	mg/l
24	Silver	1.0	1.0	1.0	mg/l
25	Total toxic metals	2.0	2.0	2.0	mg/l
26	Zinc	5.0	5.0	5.0	mg/l
27	Arsenic	1.0	1.0	1.0	mg/l
28	Barium	1.5	1.5	1.5	mg/l
29	Iron	8.0	8.0	8.0	mg/l
30	Manganese	1.5	1.5	1.5	mg/l
31	Boron	6.0	6.0	6.0	mg/l
32	Chlorine	1.0	1.0	1.0	mg/l

The SEQS for drinking water quality are shown in Table 2.5.

Table 2.5: Sindh Environmental Quality Standards for Drinking Waters (mg/l)					
S.#	**Properties / Parameters**	**Standard Values for Pakistan**	**S.#**	**Properties / Parameters**	**Standard Values for Pakistan**
Bacterial			Chemical		
1	All water intended for drinking (E. coli or Thermo tolerant Coliform bacteria)	Must not be detectable in any 100 ml sample	Essential Inorganics (mg/liter)		
			3	Aluminum (Al) mg/l	≤ 0.2
			4	Antimony (Sb)	≤ 0.005
2	Treated water entering the distribution system (E. coli or thermo tolerant coliform and total coliform bacteria)	Must not be detectable in any 100 ml sample	5	Arsenic (As)	≤ 0.05
			6	Barium (Ba)	0.7
			7	Boron (B)	0.3
3	Treated water in the distribution system (E. coli or thermo tolerant coliform and total coliform bacteria)	Must not be Detectable in any 100 ml sample. In case of large supplies, where sufficient samples are examined, must not be resent in 95% of the samples taken throughout any 12 month period.	8	Cadmium (Cd)	0.01
			9	Chloride (Cl-)	< 250
			10	Chromium (Cr)	≤ 0.05
			11	Copper (Cu)	2
			Organic (mg/L)		
			12	Phenolic compounds	<0.0002
			Toxic Inorganics (mg/liter)		
			13	Cyanide (CN)-	≤ 0.05
			14	Fluoride (F)	≤ 1.5
			15	Lead (Pb)	≤ 0.05
			16	Manganese (Mn)	≤ 0.5
Physical			17	Mercury (Hg)	≤ 0.001
4	Color	< 15 TCU	18	Nickel (Ni)	≤ 0.02
5	Taste	Non objectionable/ Acceptable	19	Nitrate (NO_3)-	≤ 50
6	Odor	Non objectionable/ Acceptable	20	Nitrite (NO2)-	≤ 3
7	Turbidity	< 5 NTU	21	Selenium (Se)	≤ 0.01
8	Total Hardness as $CaCO_3$	< 500 mg/l	22	Residual Chlorine	0.2-0.5 At consumer end 0.5-1.5 at source
9	TDS	<1000			
10	pH	6.5-8.5			
Radioactive					
11	Alpha Emitters bq/L	0.1	23	Zinc (Zn)	5.0
12	Beta emitters	1			

The SEQS for industrial gaseous emissions are shown in Table 2.6.

Table 2.6: Sindh Environmental Quality Standards for Selected Gaseous Pollutants from Industrial Sources (1)			
S. No.	**Parameter**	**Sources of Emission**	**Standards** (mg/Nm^3 unless defined otherwise)
1	Smoke	Smoke opacity not to exceed	40% or 2 on Ringelmann Scale

2	Particulate Matters [2]	Boilers and furnaces:	
		Oil fired	300
		Coal fired	500
3	Hydrogen Chloride	Any	400
4	Chlorine	Any	150
5	Hydrogen Fluoride	Any	150
6	Hydrogen Sulfide	Any	10
7	Sulphur Oxides [3]	Sulphuric acid / sulphonic acid plants	1700
8	Carbon Monoxide	Any	800
9	Lead	Any	50
10	Mercury	Any	10
11	Cadmium	Any	20
12	Arsenic	Any	20
13	Copper	Any	50
14	Antimony	Any	20
15	Zinc	Any	200
16	Oxides of Nitrogen [4]	Gas fired	400
		Oil fired	600
		Coal fired	1200

Notes:
[1] All values are in mg/Nm^3, unless otherwise defined
[2] Based on the assumption that the size of the particulate is 10 microns or more.
[3] Based on 1% Sulphur content in fuel oil. Higher content of Sulphur will cause standards to be pro-rated
[4] In respect of emission sulfur dioxide and nitrogen dioxide. The power plants operation on oil and coal as fuel shall comply with the following Standards:

2.2. Other Relevant Laws & Regulations

2.2.1. Sindh Prohibition of Child Employment Act, 2017

Article 11(3) of the Constitution of Pakistan prohibits employment of children below the age of 14 years in any factory, mines or any other hazardous employment. In accordance with this Article, the Prohibition of Child Employment Act (PCEA) 2017 disallows the child labor in Sindh. The PCEA defines a child as a person who has not completed his/her fourteenth years of age, and an adolescent means a person who has completed fourteenth year of age but has not completed eighteenth years of his age. No child shall be employed or permitted to work in any establishment including construction but an adolescent can be employed or permitted to work under strict guidelines provided in the PCEA and rules. An adolescent shall not be employed in any hazardous work included in the schedule to the PCEA.

2.2.2. The Sindh Occupational Safety and Health Act, 2017

The Sindh Occupational Safety and Health Bill 2017 has been approved by the Provincial Assembly of Sindh (Ref. Sindh Bill No. 27 of 2017) and enacted as the Sindh Occupational Safety and Health Act, 2017. The Act makes provision for Occupational Safety and Health conditions at all workplaces for the protection of persons at work places against risk of injury arising out of the

activities at work places and the promotion of safe, healthy and decent working environment adapted to the physical, physiological and psychological needs of all persons at work.

2.2.3. Pakistan Penal Code 1860

The Pakistan Penal Code deals with offences where public or private property and/or human lives are affected due to the intentional or accidental misconduct of an individual or body of people. In the context of environment, the Penal Code empowers the local authorities to control noise, noxious emissions and disposal of effluents. The NEQS enforced by the EPAs supersede the application of this legislation on industries and municipalities. The Penal Code, however, can provide a basis for the client to coordinate its activities with the local authorities to ensure that its construction activities do not become a cause of public nuisance or inconvenience.

2.2.4. Sindh Solid Waste Management Board Act, 2014

The SSWMB Act, 2014 was enacted to establish a Board for collection and disposal of all solid waste, to arrange effective delivery of sanitation services, to provide pollution free environment and to deal with other relevant matters. The Board established under the Act headed by the Chief Minister or his nominee and constitutes of thirteen other ex officio members of other relevant departments. Some of the salient features and functions of the Board are; it has the right over the solid waste related issues, assets, funds and liabilities of the Councils and shall possess sole rights on all kinds of solid waste within the limits of all Councils established under the Local Government Act 2013, it has the authority to grant permission to individuals, institutions industries, factories, workshops, furnaces, compost making and power generation from the solid waste, for segregation of the recyclable material from the waste, collection, treatment, sale and purchase, recycling or disposal of any kinds of waste.

The solid waste and wastewater generation during the construction and operation phase of the project will be managed and safety measures will be implemented accordingly as defined in the Environmental Management Plan.

2.2.5. Disaster Management Act, 2010

This Act was enacted to provide for the establishment of a National Disaster Management System for Pakistan. Sindh Disaster Management Authority enforces the Act. The Act defines ‘disaster’ as a catastrophe or a calamity in an affected area, arising from natural or man-made causes or by accident which results in a substantial loss of life or human suffering or damage to, and destruction of, property. Disaster management includes preparedness and response. The Act provides establishment of disaster management authorities at national, provincial and district levels. The authorities require preparing and implementing disaster management plan for their area.

2.2.6. Sindh Drinking Water Policy, 2017

Public Health Engineering & Rural Development Department, Government of Sindh, with the approval of Chief Minister Sindh issue the drinking water policy on 3rd May 2017.

Principles: The main principles of Sindh Drinking Water Policy, adopted from the National Drinking Water policy 2009, and aligned with the Sustainable Development Goals, are as follows:

- Access to safely managed drinking water is a fundamental right of every citizen and that it is the responsibility of the Government to ensure its provision to all citizens,
- Water allocation for drinking purpose shall be given priority over other uses,
- In order to ensure equitable access, special attention shall be given to removing the existing disparities in coverage of safe drinking water and for addressing the needs of the poor and the vulnerable on priority basis.
- Recognizing that inadequate and unsafe water supply and sanitation are a major cause of diarrhea and nutritional deficiency in children, which as a consequence contribute towards child mortality. Safely managed drinking water supply and sanitation shall be integrated in health, nutrition and school health programs.
- Access shall be increased to high quality nutrition-sensitive services, including access to water, sanitation facilities, and hygiene.
- Key hygiene actions (safe drinking water, hand washing with soap, safe disposal of excreta, food hygiene) shall be integrated as essential components in all nutrition programs.
- Realizing the fact that access and availability of safe drinking water affects all aspects of life of a citizen, a multi sectoral approach, involving different departments of the government, shall be adopted to address the issues related to safe drinking water.
- Being cognizant of the fact that women are the main providers of domestic water supply and maintainers of hygienic household environment, their participations in planning, implementation, monitoring and operation & maintenance of water supply systems shall be ensured, and WASH shall be integrated in maternal and neonatal health programs.
- Responsibilities and resources shall be delegated to local authorities to enable them to discharge their assigned functions with regard to provision of safe water supply.
- A supportive policy framework shall be developed that encourages alternate options through private provision, public private partnerships, the role of NGOs and community organizations
- The execution of component-sharing model for government programs and projects shall be promoted to ensure financial sustainability and community and private sector involvement in development and O&M.
- Low cost technologies in water and sanitation, that are easy and cost-effective to maintain shall be developed and used.

Goals and Objectives: The goal of the Sindh Drinking Water Policy is to improve the quality of life of people of Sindh by reducing morbidity and mortality caused by water-borne diseases through provision of safely managed and potable drinking water to the entire population that is located on premises, available when needed, and free from contamination, affordable and of sufficient quantity, and in a way, that is efficient, equitable and sustainable.

- ✧ Introduce legislative measures and regulations to create an enabling framework for safely managed drinking water supply, regulation of water usage, extraction, treatment, transportation and distribution.
- ✧ Ensure that all drinking water resources and supply systems are protected with community involvement.
- ✧ Develop district level drinking water availability plans for urban and rural areas to ensure improved planning for equitable access.

- Enhance the coverage of safely managed drinking water supply in the province to achieve the Sustainable Development Goals (SDGs) targets of universal access.
- Develop criteria for installation of new drinking water supply schemes and ensure that all new schemes are safely managed, rationalized and constructed through need-based criteria so that all areas and communities are served.
- Develop standardized service delivery models for both urban and rural drinking water supply schemes to improve efficiency, cost-effectiveness, monitoring & sustainability.
- Develop mechanisms for reuse, recycle and recharge of wastewater for other municipal and productive uses.
- Ensure that all drinking water supply systems are designed and constructed in line with the national drinking water quality standards and all municipal discharges comply with National Environment Quality Standards (NEQS).
- Install water treatment plants at existing drinking water supply schemes where required and incorporate water treatment facilities in all new drinking water supply schemes.
- Ensure development of water safety plans for all drinking water supply systems.
- Develop and sustain regular drinking water quality monitoring & surveillance, and institute mechanisms for remedial action.
- Increase public awareness about water borne and water related diseases (including polio), nutrition and hygiene, and enhance the role of communities for household water treatment/storage, water safety and conservation, and safe hygiene practices.
- Ensure that drinking water supply projects are nutrition sensitive and integrated in health, nutrition and school health programs.
- Institutionalize Water, Sanitation & Hygiene (WASH) in schools (infrastructure and 3 starts) and introduce curricular change to incorporate health, nutrition and hygiene and improve safe water and sanitation practices among school children.
- Institute adaptation measures and disaster risk reduction and mitigation strategies to minimize the impact of climate events on drinking water supply system.

The proponent shall ensure supply of clean drinking water to the construction staff.

2.2.7. Sindh Sanitation Policy, 2017

The goal of the Provincial Sanitation policy is to ensure that the entire population of Sindh has access to a safely managed sanitation service and sanitary environment that is also nutrition-sensitive and hygienic. The motto of the policy was ‘Saaf Suthee Sindh’ (Neat and Clean Sindh).

The key targets of this policy are:

- To eradicate open defecation from Sindh province by 2025, while 70%villages 0f 13 high priority districts achieve the status of open defecation free by 2020.
- That 100% household in Sindh have access to and use sanitary latrines by 2025, while 70% of rural households in high priority districts will achieve this by 2020.

- To strengthen and implement liquid waste management with sewer lanes and covered/improved drains with 85% coverage of urban areas and 60% coverage in rural areas.
- To create and develop wastewater treatment mechanisms to cover 75% of urban areas and 40% rural areas by 2025.
- To implement integrated solid waste management with 100% coverage in urban area and 60% in rural areas by 2025.

2.2.8. Archaeological Relics

After the Eighteenth amendment in the constitution the subject of "Ancient and historical monuments, archaeological sites and remains" the entry No.37 of the concurrent legislative list has also devolved to provincial legislations. There are two laws that are directly relevant for archaeological relics. The first is The Antiquities Act, 1975, which ensures the protection of Pakistan's cultural resources. The Act defines "antiquities" as ancient products of human activity, historical sites or sites of anthropological or cultural interest, national monuments, etc. The Act is designed to protect these antiquities from destruction, theft, negligence, unlawful excavation, trade, and export. The law prohibits new construction in the proximity of a protected antiquity and empowers the GoP to prohibit excavation in any area that may contain articles of archaeological significance. Under the Act, the Project proponents are obligated to ensure that no activity is undertaken within 61 m (200 ft.) of a protected antiquity, and to report to the GoP's Department of Archaeology any archaeological discovery made during the course of the project. The second is The Sindh Cultural Heritage (Preservation) Act, 1994, which is the provincial law for the protection of cultural assets. Its objectives are similar to those of the Antiquity Act. Heritage Foundation has catalogued 600 historic buildings declared heritage sites under the Sindh Cultural Heritage (Preservation) Act, 1994.

No such sites exist in the vicinity of project.

2.2.9. Laws and Regulations on Urban Development

Sindh Government also has some laws and regulations for building control:

- Buildings Control Ordinance, 1979
- Karachi Building Control Licensing Regulations, 1982
- Sindh Regulation & Control (Use of Plots & Construction of Buildings) Ordinance, 2002

Karachi Building Control Authority (KBCA) has been established under these ordinances, in order to implement and enforce the above regulations. The Government of Sindh on 14th February 2011 notified extension of the jurisdiction of KBCA to the whole of Sindh and renamed the KBCA to Sindh Building Control Authority (SBCA). The SBCA (Karachi region) is responsible to oversee that the land development process & construction activities do not violate the Karachi Building and Town Planning Regulations, 2002.

Karachi Building and Town Planning Regulations, 2002 is the fundamental regulation for 'Building & Town Planning' for the whole City District of Karachi, except for the cantonment areas and the

projects of National Security declared by the Federal Government, which supersedes 'Karachi Building and Town Planning Regulations-1979'. Eight (8) public agencies are individually designated as 'Concerned Authorities for respective areas and purposes', following City District Government Karachi (CDGK), such as:

- Cantonment Boards of the Ministry of Defense
- Karachi Port Trust (KPT)
- Pakistan Railways (PR)
- Ministry of Works, Government of Pakistan (GOP)
- Sindh Industrial Trading Estates, Karachi (SITE)
- Sindh Katchi Abadis Authority
- Board of Revenue

For reference, there are many agencies holding lands in Karachi and no dominant ones. An outline of existing condition of land holdings in Karachi is illustrated as follows.

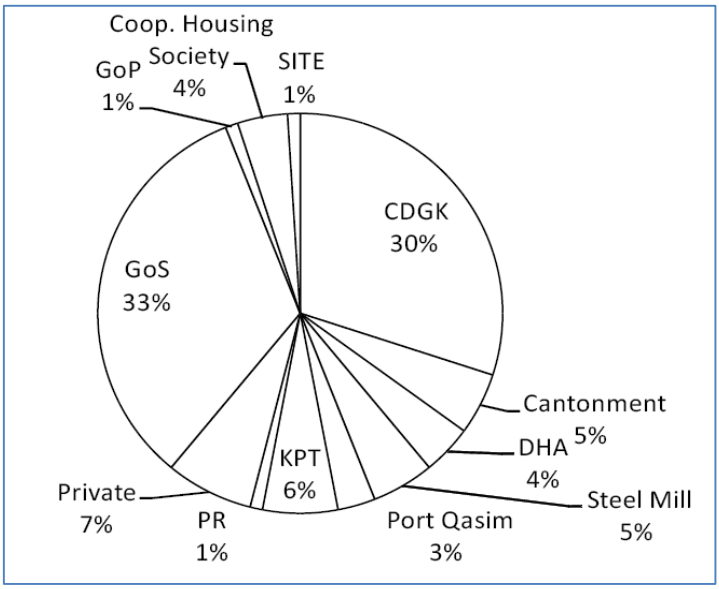

Figure 2.1: Land Holdings by Agency in Karachi
(Source: KMP 2020)

The above-mentioned regulations have been quite frequently amended as needs arose, since its commencement, especially among the detailed provisions.

2.2.10. Building Code of Pakistan, Fire Safety Provisions 2016

The Building Code of Pakistan-Fire Safety Provisions-2016 provide rules for fire prevention, life safety in relation to fire and fire protection of building and structures as prescribed. All the federal and provincial governments, organizations, authorities, both public and private are mandated to adopt and implement Building Code of Pakistan-Fire Safety Provisions-2016, as notified. Any construction and modification of buildings in violation of Building Code of Pakistan (Fire Safety

Provisions-2016) shall be considered as violation of professional engineering works as specified under clause (xxv) of section 2 of the Act.

The implementation and enforcement of this bye-law shall vest with the Authority Having Jurisdiction (AHJ) within their respective jurisdictions and circles as follow:

- Building Control, Housing and Development Authorities
- District Administration
- Tehsil or Town Administration
- Municipal Administration
- Station Headquarters (Army, Air Force and Navy)
- Cantonment Administration
- Union Council Administration
- Autonomous Bodies
- Industrial Estates
- Directorates of Civil Defense
- Export Processing Zones
- Other Federal/Provincial Authorities as and when notified

This Bye-law shall come into force upon being notified and all the concerned AHJs shall implement the same immediately in the prescribed manner.

All relevant AHJs shall ensure compliance and implementations of this Code and accordingly adopt or amend their relevant regulations, Bye-laws or rules as the need be.

This Bye-law shall apply to both new and existing buildings.

- buildings permitted for construction after the adoption of these Provisions shall comply with the provisions stated herein for new buildings forthwith.
- existing buildings constructed prior to adoption of these provisions shall comply with the provisions stated herein as soon as possible but not later than three years of notification of these provisions; and
- minimum fire protection requirements such as provision of fire alarm and detection system, fire extinguishers, emergency response plans and fire drills shall however be in place as soon as possible but not later than one year of notification of these provisions.

Any person who fails to comply with this Bye-law or fails to carry out an order made pursuant to these provisions, or violates any condition attached to a permit, approval, or certificate shall be subject to the penalties in accordance with the regulations of AHJ.

In operational phase, the fire safety provisions will be followed accordingly.

2.3. National Environmental Guidelines

2.3.1. Pakistan Environmental Assessment Procedures

The Federal EPA has prepared a set of guidelines for conducting environmental and social assessments. The guidelines derive from much of the existing work done by international donor agencies and NGOs. The package of regulations, of which the environmental and social guidelines form a part, includes the PEPA 1997 and the NEQS. These guidelines are listed below followed by comments on their relevance to proposed project:

Policy and Procedures for Filing, Review & Approval of Environmental Assessments, Pakistan Environmental Protection Agency, September 1997: These guidelines define the policy context and the administrative procedures that govern the environmental assessment process from the project pre-feasibility stage to the approval of the environmental report. The section on administrative procedures has been superseded by the Sindh IEE/EIA Regulations 2014. The package of regulations prepared by PEPA with relevance to this EIA includes:

- Policy and Procedures for Filing, Review and Approval of Environmental Assessments;
- Guidelines for the Preparation and Review of Environmental Reports;
- Guidelines for Public Consultation

Policy and procedures for filing, review and approval of environmental assessments: These guidelines define the policy context and the administrative procedures that will govern the environmental assessment process, from the project pre-feasibility stage, to the approval of the environmental report. According to the procedures laid out in the policy guidelines, IEE's or EIA's are to be filed with the EPA of the province where the project is to be implemented. The PEPA has, however, been given the right to review any environmental report at any time and the power to revoke the decision of the provincial EPA, if it deems this to be necessary. Projects have been classified in the policy guidelines by expected degree of adverse environmental impacts.

Those projects having potential environmental impacts are listed in Schedule-II. Projects which have comparatively small environmental issues and can be managed by less extensive analysis are included in Schedule-I.

Guidelines for the preparation and review of environmental reports: It requires proponents to prepare terms of reference for the environmental assessment reports. It requires that all studies should contain baseline data on the area and must contain an assessment of the potential environmental impacts and the recommended mitigation measures.

Guidelines for public consultation: These guidelines are intended to provide assistance throughout the environmental assessment of project by involving the public which can lead to better and more acceptable decision-making. Public involvement, undertaken in a positive manner and supported by a real desire to use the information gained to improve the proposal, will lead to better outcomes, and lay the basis for ongoing positive relationships between the participants.

The guidelines define the "objectives of consultation" as follows: Public involvement is a feature of environmental assessment and can lead to better and more acceptable decision-making. It can

be time consuming and demanding, yet without it, proposals are seldom soundly based, and there is likely to be antagonism from affected people, Public involvement, undertaken in a positive manner and supported by a real desire to use the information gained to improve the proposal, will lead to better outcomes, and lay the basis for ongoing positive relationships between the participants.

The Guidelines for Public Consultation introduces effective ways to inform the contents of the project to the general public during the planning stage & that eventually consensus building toward the implementation of project is reached.

Incorporating public involvement into the stages of environmental assessment is explained in the guidelines that public consultation meeting has to be carried out after the works on "developing options, and assessing and mitigating impacts" for comments and assessment.

2.4. International Environmental Guidelines

2.4.1. IFC General EHS Guidelines

The EHS guidelines published by IFC are technical reference documents that address IFC's expectations regarding the industrial pollution management performance of its projects; however, these guidelines have been benefited from for other projects as well. They are designed to assist managers and decision makers with relevant industry background and technical information. This information supports actions aimed at avoiding, minimizing, and controlling EHS impacts during construction, operation, and decommissioning phase of a project or facility. Environmental issues associated with the construction and maintenance activities may include, among others, noise and vibration, soil erosion, and threats to biodiversity including habitat alteration and impacts to wildlife.

Examples of the impacts addressed in the General EHS Guidelines include:

- Construction site waste generation;
- Soil erosion and sediment control from materials sourcing areas and site preparation activities;
- Fugitive dust & other emissions (e.g. from vehicle traffic, land clearing activities, & materials stockpiles);
- Noise from heavy equipment and truck traffic;
- Potential for hazardous materials and oil spills associated with heavy equipment operation and fueling activities.

Chapter 3 Project Description

3.1. The Project

The proposed "**Ocean Ninety 9**", Residential-cum Commercial Building Project, is proposed by M/s TM Associates. The Project will present a vibrant commercial atmosphere with a safe and nutritious ambience. The project would reflecting "best practices" in urban and regional development which will provide optimum environment for visitors while respecting and incorporating traditional Pakistani values.

3.2. Project Details

Salient Features of the Project are provided below:

Table 3.1: Salient Features of the Project	
Project Name	Ocean Ninety 9
Project Nature	Residential-cum-Commercial Building Project
Proponent	M/s TM Associates
Plot Area	8107.00 SQ YDS (1.67 acres)
Gross covered area	818,677.11 SQ FT
Net area after exemptions	432,050.38 SQ FT
Storeys	B+G+18
Location	Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi
Basement Plan (ARS + Project Parking + Services)	Parking (73 cars and 95 motorcycles), Air Raid Shelter, Underground Water Tank for Potable, Non-Potable, Fire Fighting and Septic, and other services.
Ground Floor Plan (Shops + Services)	Shops (23), Fire / Emergency Escape Staircase, Ramp and Disable Ramp, Wide Arcade, Storage Room, Guard Room and Reception, Sub-station, Funeral Parlor, Garbage Collector and other services
1st Floor Plan (Project Parking + Services)	Parking (103 cars and 119 motorcycles), and others services
2nd Floor Plan (Project Parking + Services)	Parking (103 cars and 119 motorcycles), and others services
3rd Floor Plan (Visitors Parking + Services)	Parking (103 cars and 119 motorcycles), and others services
4th Floor Plan (Recreation area + Project Parking + Flats)	Parking (48 cars and 105 motorcycles), Flats (15), Recreation Area, and others services
5th to 16th Floor Plan (Flats)	Flats (30x9=270) and other services
17th to 18th Floor Plan (Flats)	Flats (20x2=40) and other services

Roof Plan (Solar Panels + Battery Room + Services)	Solar Panels, Emergency Stairs, Overhead Water Tank for Potable, Non-Potable and Fire Fighting, Battery and Machine Room, and other services
Total Parking	Total Project Parking: 279 cars and 333 motorcycles Total Visitors Parking: 103 cars and 119 motorcycles
Totals Flats	Total 325 Flats
Total Shops	23 Shops
Height of the Building	206'-6" Above Ground Level (AGL)

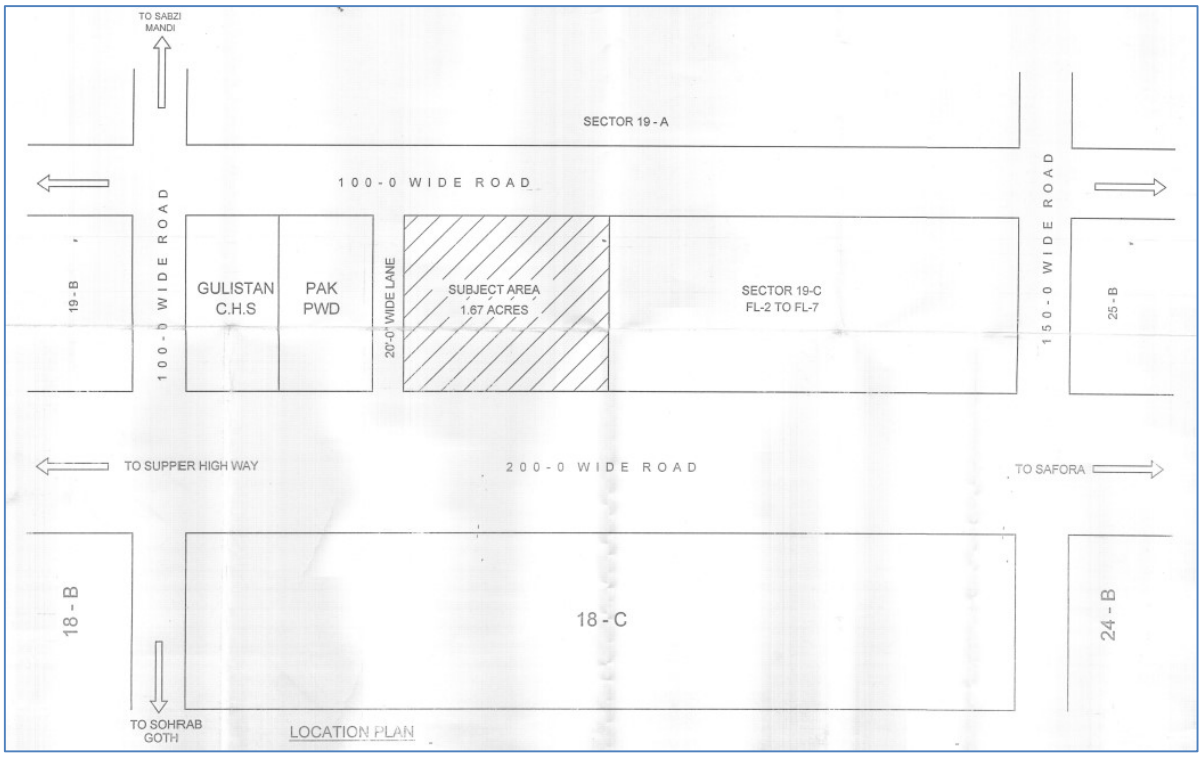

Figure 3.1: Site Plan of the Project

Figure 3.2: Conceptual View of the Proposed Project

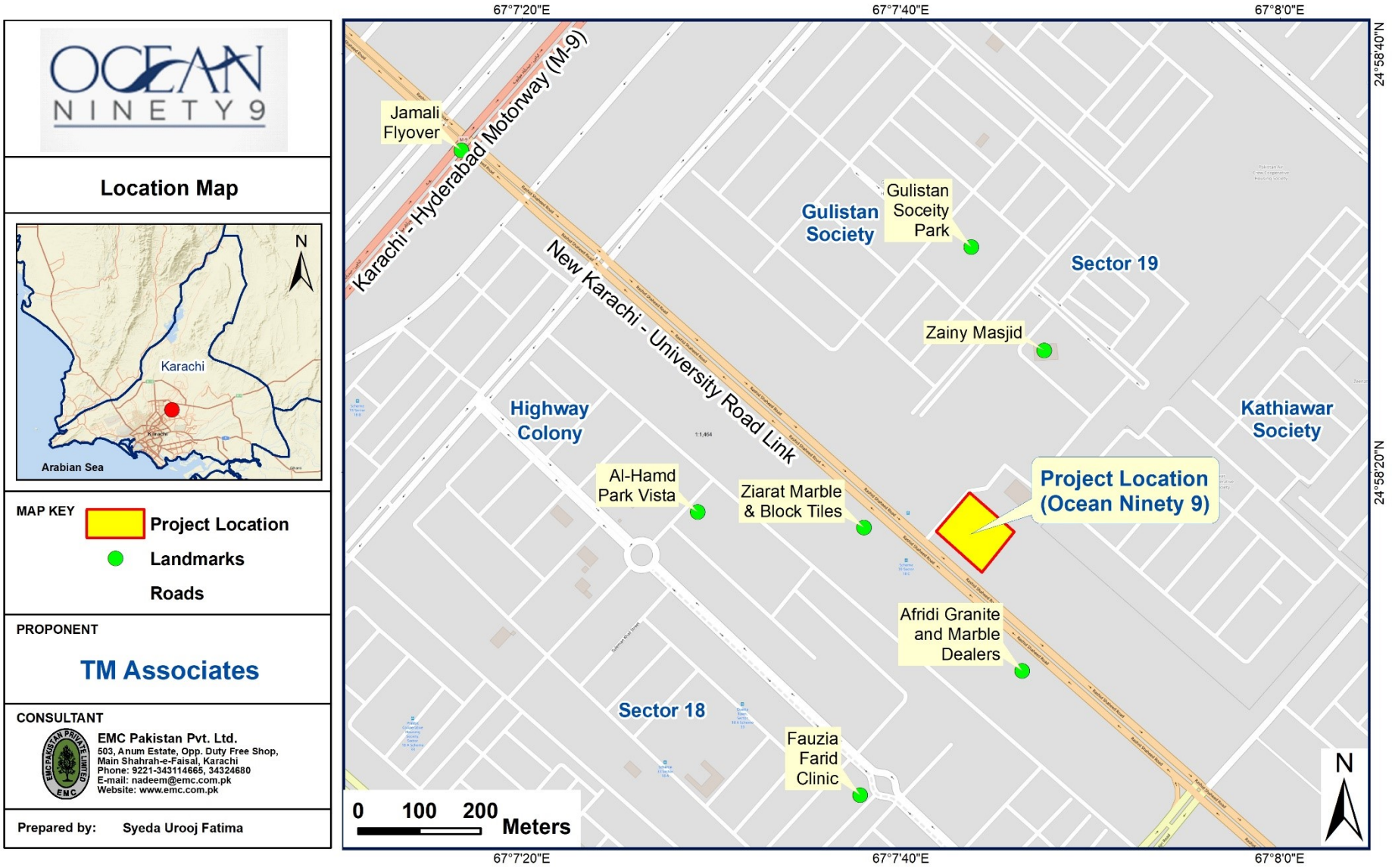

Figure 3.3: Project Location Map

3.3. Construction & Commissioning

3.3.1. Construction Schedule

The construction & commissioning phase will consist of following major activities:

- Construction of campsite including facilities and mobilization of contractors
- Construction of foundations and auxiliary structures (piling, civil works etc.)
- Internal and External finishing
- Mechanical, electrical and other works
- Demobilization and site restoration

3.3.2. Pre-Construction/Design Phase

This, the essential phase provides the basis for the construction program, the methodology to be adopted and the technologies to be involved. The project site has been assessed in terms of its geology, seismicity and seismo-tectonics. The pre-construction activities will involve earthworks & excavations.

3.3.3. Construction Activities

The sequence of construction should be as follows:

- Construction of earth retaining structure (secant pile wall, contiguous pile etc.)
- Drilling and installation of dewatering wells
- Excavation of plot upto groundwater level
- Dewatering
- Excavation upto Raft bottom level
- Construction of raft foundation followed by construction of substructure.

Standard and environmentally compatible construction materials (cement, sand, steel reinforcement, bricks etc.) & techniques/construction practices will be employed besides adopting Standard Operating Procedures (SOPs) set-out in the Environmental Management Plan.

3.3.3.1. Construction office & Camp

The construction contractor will develop his own camp & offices for construction purposes within the project site. Development of campsite will include the following activities:

- Leveling and compaction of the area for office and campsite
- Provision of drainage works in and around the campsite
- Laying and compaction of the gravel topping in the office and campsite
- Construction of fuel storage tank area and water tank
- Provision of fence, access and emergency gates

- Construction of septic tanks
- Installation of membrane liner for fuel storage
- Installation of security guard cabins
- Installation of sewerage pipeline with manholes for the septic system & connecting it with Sewer line
- Provision of signage for each activity center

3.3.3.2. Foundations

Excavation for the foundations work will be made in accordance with the standards. Excavated material will be disposed of off-site via trucks and sent to approve sites. The excavated soil will be sent to road construction contractors for appropriate utilization.

3.3.3.3. Building Shell and Core Construction

Construction of the exterior enclosure or "shell" of the building include construction of the building's framework (installation of beams and columns), floor decks, facade (exterior walls and cladding), and roof construction. These activities require the use of, compressors, personnel and material hoists, front-end loaders, concrete pumps, on-site bending jigs and a variety of hand-held tools, in addition to the delivery trucks bringing construction materials to the site. At the same time, infrastructure connections are built. These include lines for water, sewer, storm water, electricity & telecommunications.

3.3.3.4. Interior Construction and Finishing

This stage includes the construction of interior walls, installation of lighting fixtures and interior finishes (flooring, painting, etc.), as well as mechanical & electrical works such as the:

- Internal and external pipe works
- Fire protection & Life safety systems
- Car Park Ventilation
- Electrical Distribution
- Emergency Lighting installations
- Lightning Protection

3.3.3.5. Civil Works

Civil works involves excavation, piling, formwork, reinforcement, concreting, masonry, plastering, painting, and also waterproofing work with gas-flame sticking, construction of light separating walls, hung ceilings, flooring, lining and facing.

3.3.3.6. Construction Equipment & Machinery

Conventional machinery and equipment will be used for construction activities. The equipment and machinery may include dozers, excavators, loaders, mobile crane, lorry, dump trucks, back hoe, bar bending machine, water bowzers, material hoist, passenger hoist, concrete placement booms & power generators.

3.3.3.7. Construction Material and other Supplies

Main construction material to be used during the construction phase will include ready mix concrete that will be sourced through reputable companies. Additionally, paints, glass, wood, tiles, aluminum, PVC/GI pipes, concrete/cement pipes, electric cables, etc. will be used during the different phases of construction. The materials will be transported by trucks to the project site, where they will be stored until moved to different locations as and when required. Materials including paving stone, crush, gravel and sand will be brought from commercial quarries located in the Sindh Province.

3.3.3.8. Site Restoration

On the completion of the construction phase, the entire site will be built-up thus no site restoration to original condition is required. External sites are not being used.

3.4. Utilities

3.4.1. Plumbing System

3.4.1.1. Design Codes & Standards:

The plumbing system is based on the following codes & standards:

- International Plumbing Code 2018.
- American Society for Plumbing Engineers (ASPE) Handbook – 2010.

3.4.1.2. Plumbing Fixtures Requirements:

The plumbing system has been designed to meet the minimum plumbing fixture requirements for space occupancy as per International Plumbing Code.

3.4.1.3. Scope of Plumbing System:

The scope of plumbing services is as follows:

- Domestic Water Supply
- Hot Water Supply
- Soil & Waste Water Drainage
- Storm Water Drainage
- Natural Gas Supply

The storm water drainage system shall be designed keeping in view the developed levels of the project area & shall be terminated from the building up to the road.

Fire protection system shall comprise of building fire hydrants, Fire hose reels, Fire sprinkler and portable fire extinguishers of various type as per appropriate needs and requirements. The fire water shall be provided through a separate pressurized main. The relevant codes and standard have been being followed in calculation and design of various parameters of the water supply, selection of equipment for the water supply, sanitary / plumbing, sewage disposal and fire

protection systems. The related sections of following codes and standards shall be followed in the design of the above stated works.

ASTM	American Society for Testing and Material
NFPA	National Fire Protection Association (USA)
NPC	National Plumbing Code
ANSI	American Plumbing Code.
ASME	American Society of Mechanical Engineer
AWWA	American Water Works Association
BCP	Building Code of Pakistan

3.4.2. Water Supply

Water supply system shall consist of underground water storage tanks, water supply network & the internal plumbing works.

3.4.2.1. Source of Water

- Water will be provided from city supply connection. In case of water supply shortage, options to use groundwater and water tankers may be explored.

3.4.2.2. Design of Water Supply System

- Pipe material used for water shall be of PPRc for internal plumbing works & G.I for external water supply network, pipe sizes shall be designed on the basis of total fixture units connected to the section.
- Table used to ascertain maximum numbers of fixture units that can pass through a pipe are adopted from National Plumbing Code USA.
- Conversion of plumbing fixture unit's ratings applicable to building units is adopted from Fundamental of Plumbing Design Volume.

3.4.2.3. Water Requirement

The estimated water demand for the entire project is about **57,715** Gallons/day.

Water consumption				
S. #	**Nature of Use**	**Minimum Quantity of Water Per User (US Gallons/day)**	**No. of Users/unit**	**Total Quantity of Water (US Gallons/day)**
For Residential Units				
1	Residential Units 325 Nos.	35	5	56875
For Commercial Unit				
2	Shop 23 Nos.	15	2	690
For Recreational Area				
3	Recreational Area (Community Hall / others)	15	10	150
Total				**57,715**

3.4.2.4. Sewerage System:

Estimated sewage water generation from project is about 49,060 Gallons/day.

- ✧ Two-Stack drainage system.
- ✧ Separate soil stack– direct to main sewer after septic tank.
- ✧ Separate waste stack – to in-house treatment plant for re-cycling.
- ✧ Separate drainage lines for kitchen.

3.4.2.5. Storm Water Drainage:

The storm water drainage shall be achieved through purpose made built-in slopes in the ground all around the structures and shall be terminated on gravity towards the Storm Water catchments / gully's at the road side.

- ✧ Gravity drainage from building roofs to septic tank.
- ✧ Discharge of septic sank into nearby drain / *nallah*.

Following design criteria shall be adopted in his design of storm water drainage system.

- ✧ Local climate i.e., rainfall rate.
- ✧ Site conditions, elevation, water level and location of other utilities etc.

3.4.3. Fire Detection & Protection Systems

Fire protection system shall comprise of building fire hydrants, fire hose reels, fire sprinkler and portable fire extinguishers of various kind/types. The fire water shall be fed through a pressurized main to be installed all around the individual building/ block. Fire hydrant system including fire hose connection point hoses and nozzles to provide a readily accessible water supply for fire department or occupants of the project area to combat fire instantly.

3.4.3.1. Fire Detection & Alarm System:

Fire detection & alarm system shall be designed as per scope of works & in line with the design requirements and is covered in the electrical system design.

3.4.3.2. Fire Protection Systems:

- ✧ Fixed Fire Protection System
- ✧ Portable Fire Protection System
- ✧ Fire sprinkler system

3.4.3.3. Design Codes & Standards

The following standards have been followed in the design of fire suppression system.

- ✧ NFPA-10 – Standard for Portable Fire Extinguisher.
- ✧ NFPA-13 – Standard for the Installation of Sprinkler Systems.

- NFPA-14 – Standard for the Installation of Stand Pipe, Private Hydrant, & Hose Systems.
- NFPA-20 – Standard for the installation of Stationary Pumps for Fire Protection.
- Building Code of Pakistan – BCP 2016

3.4.4. Electrical & Allied Works

The electrical design development of the Project has been carried out in accordance with the prevailing international standards and local regulatory authorities to ensure the ease of maintenance, economy and safety from shock and fire hazards.

3.4.4.1. Scope of Services

- Utility Power Supply from K.E
- Backup Generator Supply
- Power Distribution including Small Wiring and accessories
- UPS / Emergency Supply
- Lighting and Controls
- Earthing & Grounding
- Lightning Protection System
- Fire Alarm and Detection System
- CCTV Surveillance System
- Audio / Audio-Video Intercom System

3.5. Solid Waste Generation

The solid waste generate on site will be collected daily by a solid waste contractor who will dispose it off in a responsible manner. Numbers of trash bins will be located inside the building and people will be appointed for collection of solid waste. Provision of garbage chute system is built in the project design.

Chapter 4 Description of Environment

This section details the natural and socioeconomic environment conditions of the micro- and macro environment of the Project area as defined in figure below. Discussion on the natural environment covers the physical areas including geography, geology, seismology, climate conditions, water resources and air quality and noise. Overview of vegetation and natural habitats are included in the ecological section. Discussion on the socioeconomic environment presents the data on administrative divisions falling within the project area, socioeconomic conditions of the communities living near the project area and built-up infrastructure present in the locality.

4.1. Project Location and Surroundings

The project is located at Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi. The project is planned in the environs of Gulistan Society. The project site is accessible by Maulana Ubaidullah Sindhi Road which connects the project site with New Karachi – University Link Road and Karachi Hyderabad Motorway (M-9). Multiple housing societies are present in the surrounding of proposed area including Zeenatabad, Kathiawar Society, Teachers Society, Highway Colony and others.

4.2. Geology

Karachi and adjoining areas have plains, hills, rivers, valleys and coasts as diversified physical features. Rocks ranging in age from Eocene to recent, deposited under shallow marine to deltaic conditions are exposed. Karachi is a part of major synclinorium stretching from Ranpathani River in the east to Cape Monze in the west. Mehar and Mol mountains lie in the north. Within the synclinorium a number of structures such as Pipri, Gulistan-e-Jauhar, PirMangho and Cape Monze are exposed. The presence of concealed structures under the Malir River Valley, Gadap and Mauripur plains can fairly be deduced. The geology of Karachi consists of sedimentary rocks having two ranges known as Kirthar range and Pub range. The soil of Karachi city are classified into two types, the loamy sandy and gravelly soils of river valleys and alluvial cones near the coast line and shallow loamy gravelly soils and rock outcrops plateau.

4.3. Geomorphology

Karachi is located in the south of Sindh, on the coast of the Arabian Sea. It covers an area of approximately 3,600 km^2, comprised largely of flat or rolling plains, with hills on the western and northern boundaries of the urban sprawl. The city represents quite a variety of habitats such as the sea coast, islands, sand dunes, swamps, semi-arid regions, cultivated fields, dry stream beds, sandy plains, hillocks. Classified according to physiographic features, Karachi City District can be divided into three broad categories:

- Hilly Region (Mountain Highland),
- Alluvial Plain (Piedmont Plain), and
- Coastal Areas (Valley Floor).

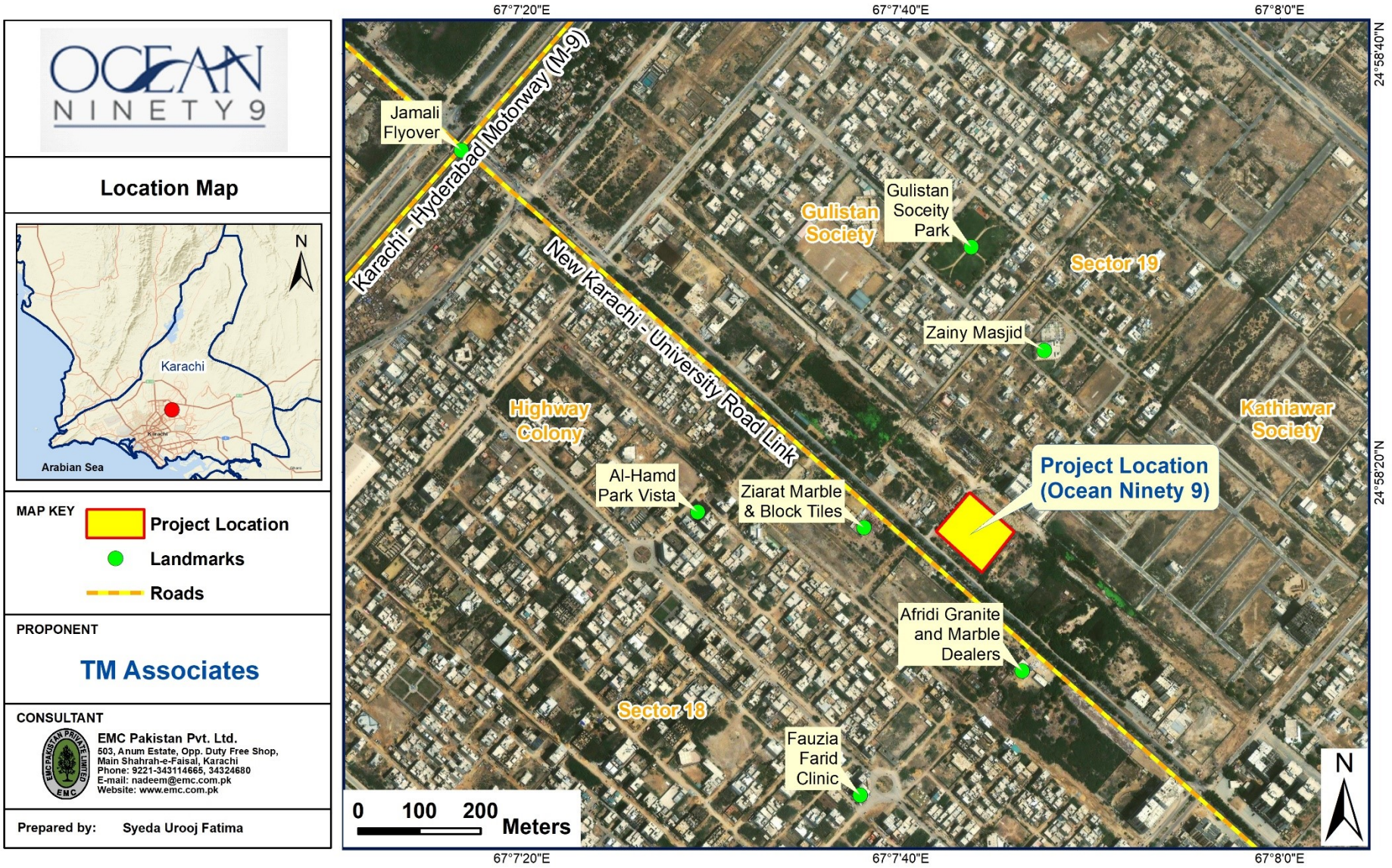

Figure 4.1: Project Location

Figure below the geomorphological features of the Project surroundings and macroenvironment.

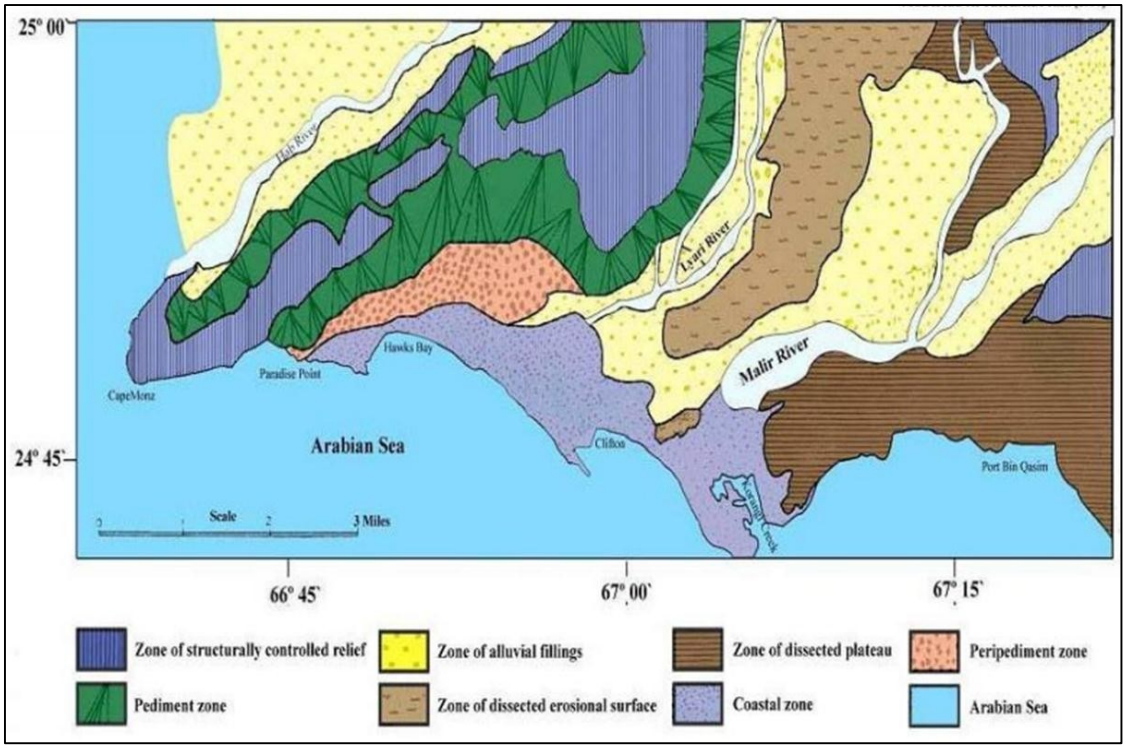

Figure 4.2: Geomorphological Zones of Karachi Region
(Source: Hamid et al., 2019[1])

4.4. Seismicity

Seismotectonic Study for macroenvironment of Project site aims at elucidating the impact of tectonic movement induced seismicity on the microenvironment. Karachi is Pakistan's largest city with population exceeding 18 million and is amongst the top five most congested cities in the world. Karachi has experienced no earthquake related damage in the recorded history of past ~ 175 years. Yet, Karachi is located in a seismically active tectonic setting often compared to Los Angeles with active plate boundary faults and triple junctions within a radius of ~ 150 km. This discrepancy in earthquake history and seismotectonic setting has led to diverse seismic hazard assessments for Karachi ranging from assignment of seismic hazard zones I (least severe) to IV (most severe). Recent assessment adopted in Building Code of Pakistan (2007) assigns an intermediate seismic hazard value of 0.16–0.24 g (Zone IIB) to Karachi, which is broadly accepted but sometimes criticized to be an underestimation.

A recent study entitled "*Seismic sources for southern Pakistan and seismic hazard assessment of Karachi*"[2], based on a new active faults compilation and seismic sources definition together with incorporation of maximum possible information on historical earthquakes (up to 893AD), has led

[1] Hamid et al. (2019). Soil Classification as a Tool for Evaluating Soil Behavior as Foundation Materials. International Journal of Economic and Environmental Geology, 41-46.
[2] Waseem, M., Khan, M. A., & Khan, S. (2019). Seismic sources for southern Pakistan and seismic hazard assessment of Karachi. *Natural Hazards*, *99*(1), 511-536.

to a re-assessment of seismic hazard for Karachi using probabilistic and deterministic seismic hazard assessment approaches. The main findings of this study are:

- Karachi is assessed to be prone to ground motions ~ 0.25 g with metropolitan areas having hazard values between 0.21 and 0.25 g for 10% probability of exceedance in 50 years (475-year return period).
- The deterministic seismic hazard analysis suggests maximum that peak ground acceleration (PGA) varies from 0.19 to 0.99 g in Karachi and its higher values are concentrated around the Nagar Parker fault that is controlling and hazardous for Karachi.

Despite a safe seismic history spanning past about 175 years, Karachi is located in a tectonic setting, which is considered amongst the most active in the world. The active Chaman transform fault marking plate boundary between the Indian and Eurasian plates is located only 120 NW of Karachi. Karachi itself is located at the southern tip of N–S trending Kirthar active foreland thrust-fold belt at the western deformed edge of the Indian plate. The triple junction between the Indian, Arabian and Eurasian Plates is located 110 km to the SW of Karachi.

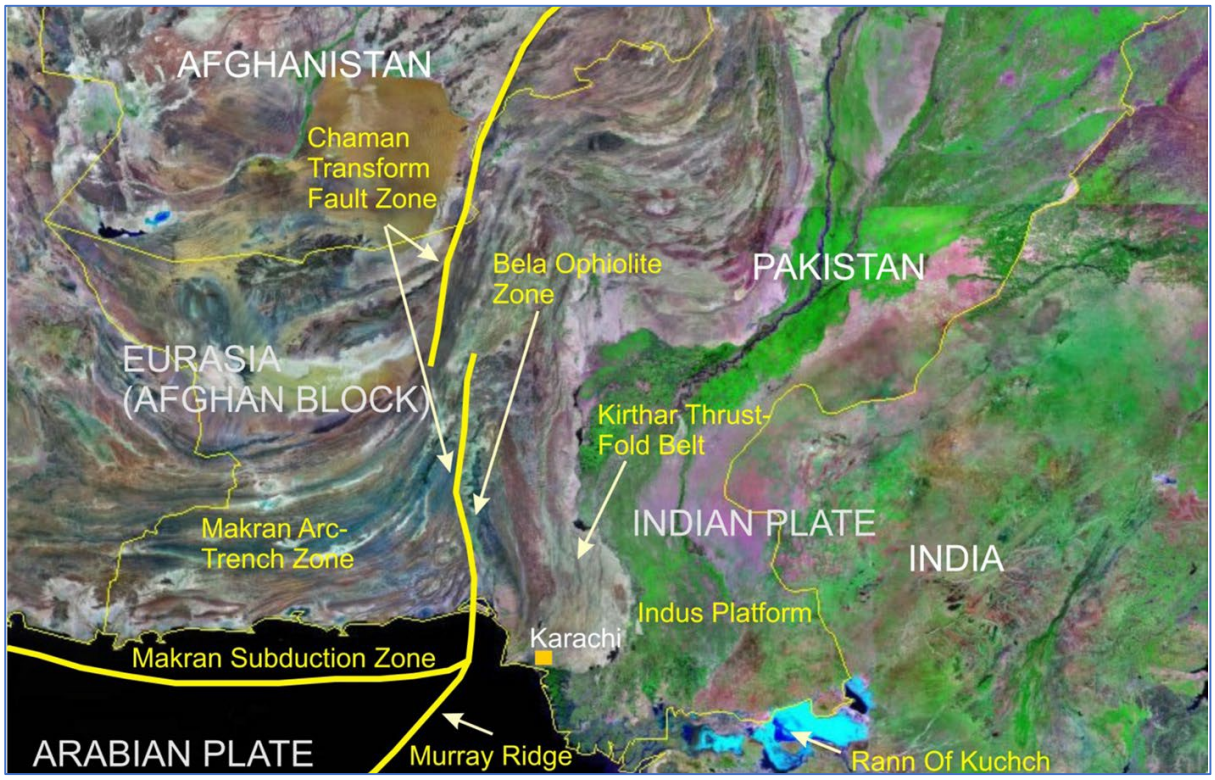

Figure 4.3: Tectonic setting of Karachi

Seismic activity in the region is the result of the triple junction as well as the Karachi Arc, located in southeastern Pakistan, as a large fold and thrust belt that shows Neogene thin-skinned eastward movement. Seismic activity in and around the region shows that the Karachi Arc has been active since long in prompting the eastward movement of the delta. It is possible that the movement is related to the rebound that takes place after mass shift. Sarwar has suggested that

the eastward creep of Karachi Arc is directly related to active subsidence of the Hyderabad graben that underlies it and also defines the northern and southern limits of the Karachi Arc.[3]

It may be added that subsidence such as that on Southern coast of Sindh, occurs naturally as a result of plate tectonic activity above active faults, and in places where fluid is expelled from underlying sediments and is common at river deltas that may have receded. Earthquakes arise and result from the release of the force along the growth fault plane. As a result, many different growth faults are created as sediment loads shift basinward and landward.

4.4.1. Earthquakes

Historically the coastal region has suffered a number of earthquakes. Detailed review of the geological history including the modern time reveals the occurrence of deep-sea earthquakes at different times, throughout history in the North Arabian Sea, as presented below:

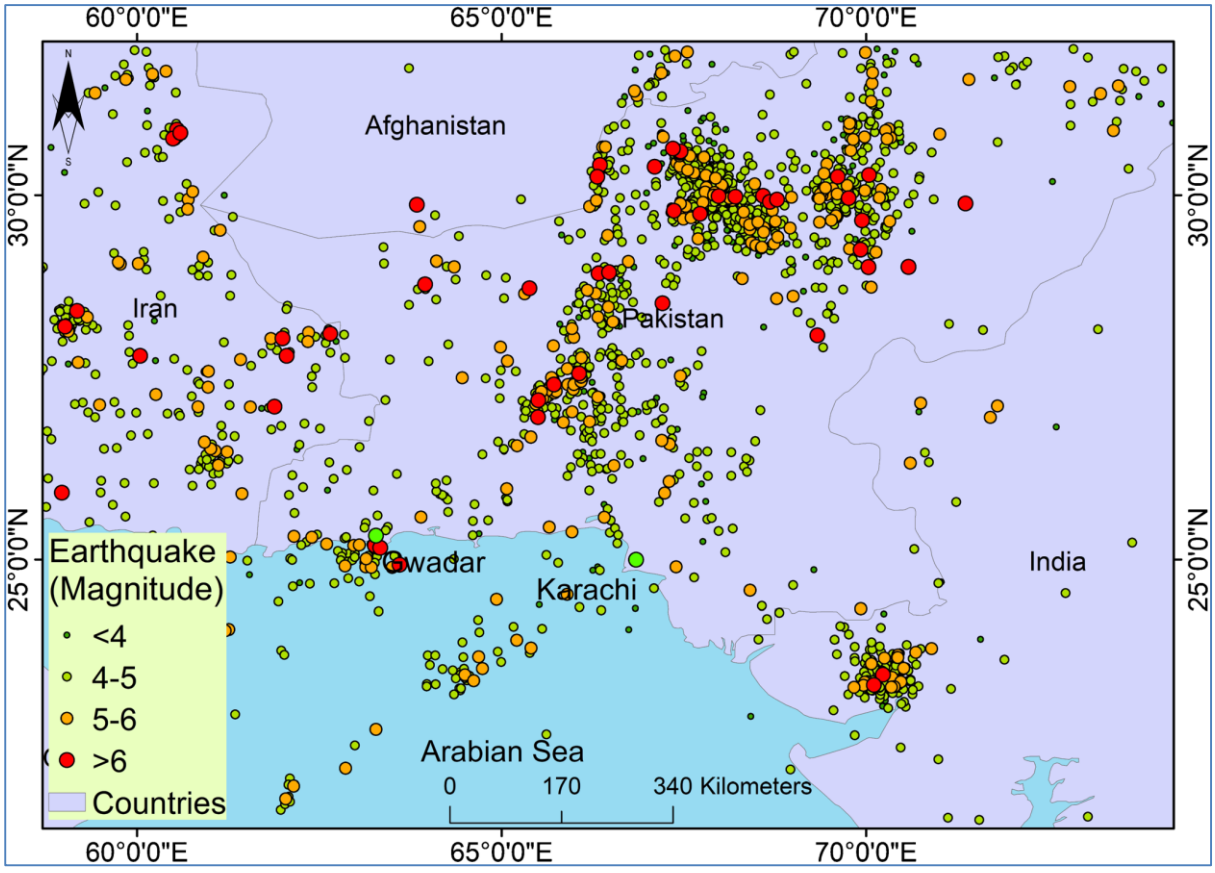

Figure 4.4: Earthquake recorded (1950–2019) in the Arabian Sea and its surroundings[4]

4.4.2. Seismicity of the Site

According to the Uniform Building Code (1997), Karachi and its adjoining areas fall in Seismic Zone-2B.

[3] (Sarwar, G., 2004. Earthquakes and the Neo-Tectonic Framework of the Kutch-Hyderabad-Karachi Triple Junction Area, Indo-Pakistan. Pakistan Journal of Hydrocarbon Research, 14, 35-40).
[4] Aslam, B., Ismail, S., & Maqsoom, A. (2020). Geospatial mapping of Tsunami susceptibility of Karachi to Gwadar coastal area of Pakistan. *Arabian Journal of Geosciences*, *13*(17), 1-12.

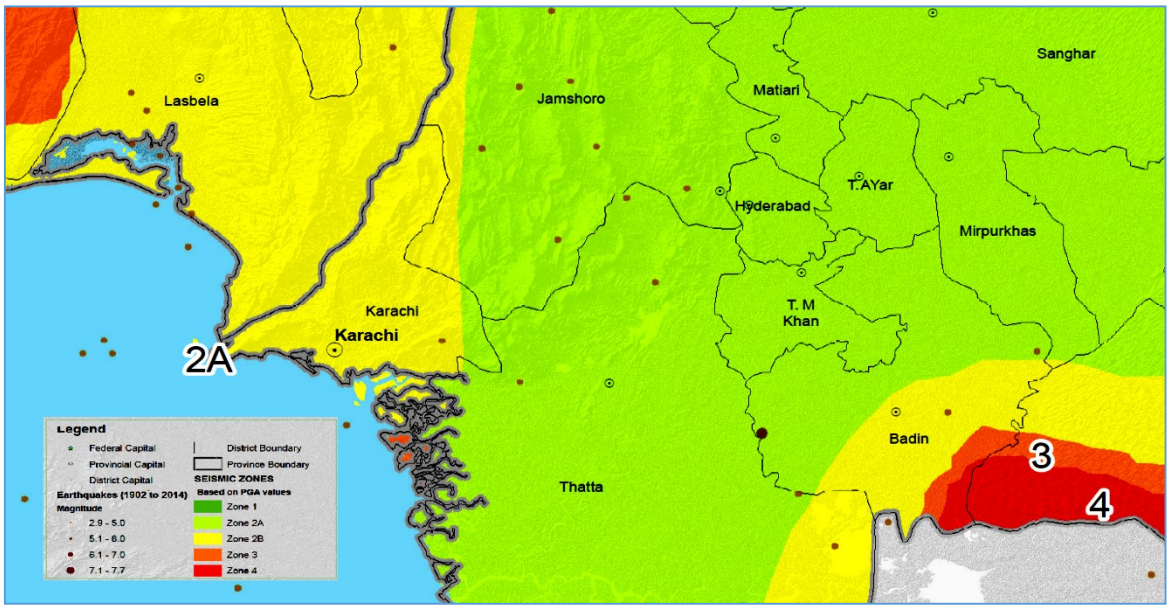

Figure 4.5: Seismic Zones in Karachi[5]

4.4.3. Liquefaction Features Caused by Earthquake

Liquefaction is a total loss of strength due to undrained restructuring. Disturbance, by shearing or vibration, destroys soil skeleton, with loss of grain contact and decrease of porosity, soil load is transferred to pore water, water pressure>normal stress=0, and soil acts as a liquid. Drainage reduces pore water pressure, allows grain contact and thixotropic recovery of strength[6]. Strong shaking produces liquefaction in the fine sands and silts during the earthquake. This causes the mineral grains to settle and expel their interstitial water to the surface. If the pore-water pressure rises to a level approaching the weight of overlying soil, the granular layer behaves as a viscous liquid rather than a solid and leads to collapse of even engineered structures. Liquefaction has been abundant in areas, where groundwater lies within 10 meters of the ground surface[7]. Investigators typically have designated sites as "Liquefied" on the basis of the presence of surficial liquefaction features, such as venting of sediment to the surface (i.e., sand boils), ground cracking associated with liquefaction (e.g., lateral spreading), or surface settlements. Other evidence of liquefaction includes tilting or settling of overlying structures and floating of underground structures[8]. A study investigated the "sinking" of a water tower in 2006 near Clifton area and speculated about liquefaction due to mild earthquakes[9].

[5] Map data source(s): PMD, GSP, Pakistan Engineering Council – Prepared by Al Hasan Systems Private Ltd.
[6] Waltham, T. (2009). *Foundations of engineering geology*. CRC Press.
[7] Hussain, V., Sheikh, S. A., Tabrez, A. R., & Anjum, S. (2004). Liquefaction effects of Bhuj earthquake on Thar, Indus delta region of Sindh, Pakistan. *Segmite International*, *1*(1), 39-42.
[8] Olson, S. M., & Stark, T. D. (2002). Liquefied strength ratio from liquefaction flow failure case histories. *Canadian Geotechnical Journal*, *39*(3), 629-647.
[9] Mahmud, S. A., & Sheikh, S. A. (2008). Earthquake Shocks and Liquefaction Threat to DHA and Clifton areas, Karachi Pakistan. A Case Study. In *Geotechnical Engineering for Disaster Mitigation and Rehabilitation* (pp. 398-405). Springer, Berlin, Heidelberg.

4.5. Hydrology

4.5.1. Surface Water Resources

Hydrogeologically, the city of Karachi lies in the Hub River Basin and the Malir River Basin. The Malir River Basin is drained by the Malir River and the Lyari River. The aquifer of Karachi is, therefore, mainly recharged by seepage from Hub River, Hub Dam as well as the Malir and the Lyari Rivers. The Hub River lies on the western frontier of Sindh and for some distance the boundary between Sindh and the Baluchistan provinces. It located about 30 km to the west of Karachi, along the Karachi- Lasbela boundary. It falls into the Arabian Sea near Cape Monze, with a total drainage course length of 336 km.

During the past several years, a number of pumping wells have been installed to meet requirements for the irrigation-water supply (to raise vegetables, fruits, dairy and poultry) and drinking-water supply for Karachi. Excessive pumping of groundwater and continuous lowering of water-table is likely to result in intrusion of seawater into the Malir Basin under natural seepage conditions and under artificially induced conditions of recharge of saline seawater in the coastal aquifer(s) of Karachi.

Five possible water-sources are contributing to the groundwater recharge in Karachi. The first possible source is the rainfall. As the city of Karachi suffers from deficit of precipitation (only rainfall), the contribution to shallow groundwater storage from rain is very little. However, rainfall in the hinterlands and other areas surrounding Karachi may significantly contribute to the groundwater flow-system. The two freshwater sources are the Hub Lake/Hub Dam and the Indus River. Water from Hub Dam and the Indus River, through Keenjhar Lake, is piped to various residential zones in Karachi for drinking and irrigation purposes. The spring water discharges into Malir River and Lyari River and the municipal/industrial waste effluents added to these rivers are also contributing to groundwater storage as a fourth recharge source. Seawater intrusion along Karachi coast is the fifth possible source.

4.5.2. Water Quality

Drinking water quality is one of the greatest factors affecting human health. However, drinking water quality in many countries, especially in developing countries is not desirable and poor drinking water quality has induced many waterborne diseases. The shortage of water in Karachi city due to rapid increase in population and industrial activities, has forced people to meet their water requirements from alternative supplies such as privately-owned ground water sources which extract, process and sell groundwater at a very high commercial cost[10]. However, the quality of groundwater is very poor in Karachi mainly due to the excessive pumping of groundwater by farmers, seepage of domestic wastewater in groundwater, huge amounts of chemical constituents in industrial wastewater and sea water encroachment, rendering it medically unfit for human consumption if consumed without prior treatment.

A study conducted by PCRWR in 2015-2016 to assess of the water quality of cities of Pakistan revealed that out of 28 samples collected from surface and groundwater of Karachi, 24 were found contaminated with *E. coli*. This constitutes almost 86 per cent of the total water sources of Karachi

[10] KWSB. (2010). Environmental Management Framework-Karachi Water Supply and Sewerage Improvement Project.

rendering it unfit for consumption[11]. The most probable source of bacterial contamination is the sewerage discharge, which is usually flowing in pipelines parallel to that of drinking and household water and poor maintenance and breakages in pipelines lead to the mixing of water supply with the sewerage water[12]. Also, no significant improvement in the water quality was observed from the year 2002-2015[11].

Another study analyzed the surface and groundwater samples of Karachi and found that almost 88 percent of the samples/sources had led higher than the WHO recommended guidelines[13]. According to a World Bank study conducted in Karachi, blood lead levels greater than WHO guideline were found in 89 per cent of the samples. Increased lead levels have been related to learning disabilities in children resulting in reduced income in later life[14].

Because of unsafe and insufficient water supply and low sanitation coverage, as well as people's poor hygiene habits, around 60 percent of children suffer from diarrhea that is fatal if not treated in time. Concerns have been raised by various quarters about contamination in drinking water supply in the distribution network and possible linkages with water borne diseases in the city.

These findings suggest that the water as received by the residents is not safe for drinking. Although water quality has not been tested yet, groundwater pollution by nitrates, pesticides, heavy metals and hydrocarbons discharged into the environment is not negligible. The salinity of groundwater in Southern Sindh, particularly in the coastal areas has increased since over pumping has induced seawater to flow in, causing what is known as seawater intrusion. The fact, also acknowledged by KW&SB that 150 mgd (681,900 m^3/day) of water supplied to the consumers is chlorinated and bypasses the KW&SB filter plants is an important indicator of the need of addressing this issue on a priority basis.

4.5.3. Water Supply, Demand and Sewerage System

Recent studies suggest that population will grow by 30 per cent from 2017 to 2030 in Karachi. This will translate in an increased water demand which will in turn put pressure on the already scarce water resources. The Water supply provided by Karachi Water and Sewerage Board (KWSB) is approximately 665 MGD against a demand of 820-1200 MGD resulting in a shortfall of 155-535 MGD. Unfortunately, an estimated 35 per cent (232 MGD) of the supplied water is lost during transmission thus decreasing the water availability to a mere 433 MGD[15].

The water supplied to Karachi fails to meet the water demand of the city. Therefore, the use of groundwater has increased for certain domestic and industrial purposes within the city. The available groundwater resources are mostly saline in nature as the city is located near coastal belt and excessive extraction of groundwater has resulted in seawater intrusion into the available water

[11] PCRWR (2016). Water Quality Status of Major Cities of Pakistan (2015-2016)
[12] Muhammad, Syed & Nadeem, Syed & Saeed, Rehana. (2014). Determination of water quality parameters of water supply in different areas of Karachi city. European Academic Research. 12.
[13] N. Ul-Haq, M.A. Arain, N. Badar, M. Rasheed & Z. Haque. (2011). Drinking water: a major source of lead exposure in Karachi, Pakistan. Eastern Mediterranean Health Journal
[14] World Bank Group. (2018). Transforming Karachi into a Livable and competitive Megacity
[15] WWF. (2019). Situational Analysis of Water Resources in Karachi. https://d2ouvy59p0dg6k.cloudfront.net/downloads/report___situational_analysis_of_water_resources_of_karachi.pdf

aquifers located in the areas near the sea[16]. The table below shows water supply and demand gap till the year 2017.

Table 4.8: Water Supply and Demand Gap till the Year 2017				
Year	Population (Million)	Demand (MGD)	Supply (MGD)	Gap (MGD)
1998	11.3	567	410	157
2017	16.02	820	650	170
Source: WWF (2019)[15]				

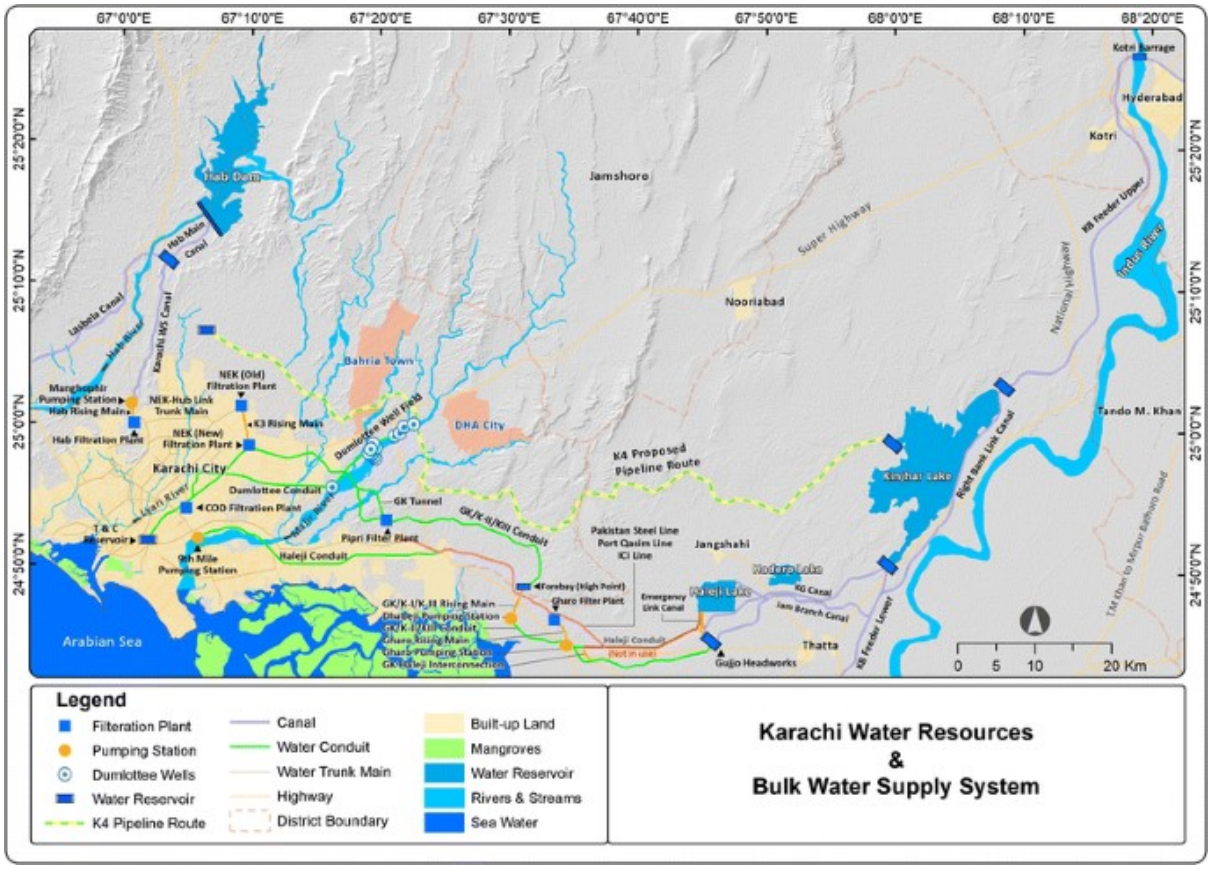

Figure 4.6: Water Resources in Karachi
(Source: Ihsanullah, 2009[17])

Karachi generates an estimated 1.8 million cubic meters per day of sewage[18] (KWSB 2018). This amount indicates high system losses given that typically less than 10 percent of urban water supplied is consumed. There are three wastewater treatment plants (combined capacity of 0.6 million cubic meters per day), of which two are functional (treating 0.2 million cubic meters per day). Thus, around 1.6 million cubic meters per day of wastewater is discharged untreated into

[16] Khattak, M. I., & Khattak, M. I. (2013). Ground water analysis of Karachi with reference to adverse effect on human health and its comparison with other cities of Pakistan. *Journal of Environmental Science and Water Resources*, 2(11), 410-418.
[17] Ihsanullah (2009) Evaluation and prospects of scientific management of water resources in Karachi city: A GIS perspective. Department of Geography, University of Karachi, Karachi, Karachi
[18] *"Young, William J.; Anwar, Arif; Bhatti, Tousif; Borgomeo, Edoardo; Davies, Stephen; Garthwaite III, William R.; Gilmont, E. Michael; Leb, Christina; Lytton, Lucy; Makin, Ian; Saeed, Basharat. 2019. Pakistan: Getting More from Water. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/31160 License: CC BY 3.0 IGO."* https://openknowledge.worldbank.org/handle/10986/31160

the Arabian Sea or freshwaters close to Karachi. The Karachi sewerage system is extensive, with 5,670 kilometers of sewers, six major pumping stations, and 32 minor pumping stations (KWSB 2018). However, the system is in very poor condition. Inadequate stormwater drains are clogged with solid waste and overloaded with sewage and industrial effluent, undermining their capacity to drain stormwater from flood-prone areas (World Bank 2018).

4.6. Basic Characteristics of Climate and Meteorology

The climate of the macroenvironment can be characterized by dry, hot and humid conditions and in general terms it is moderate, sunny and humid. Climatic conditions of the whole region are influenced in summer by the monsoon winds from the West and in winter by winds from North (Quetta). There is a minor seasonal intervention of a mild winter from mid-December to mid-February followed by a long hot and humid summer extending from April to September, with monsoon rains from July to mid- September. The average annual rainfall is about 160 mm, of which 70% to 80% falls during the monsoon months of July, August and September. The annual maximum rainfall varies from 2.5 mm to 487 mm. The maximum rainfall recorded in one day is 205 mm in July 2009 and maximum annual rainfall is 487 mm in 1994. The summer temperatures are high, rising to over 46°C on some days. The winters are mild, although the night temperatures are quite low (up to 1.3°C) when the northern winds invade the area. The mean sea level (MSL) average atmospheric pressure during June to August is around 1000 mbar. From Nov to Feb average MSL pressure rises up to 1018 mbar. The relative humidity ranges from about 90% in the morning during May-September to 24% in the evening during December-January.

4.6.1. Temperature

The air temperature in Karachi Division is generally moderate throughout the year due to presence of sea. Climate data generated by the meteorological station at Karachi Air Port represents climatic conditions for the region. The mean monthly maximum and minimum temperatures, recorded during the last 21 years in Karachi to describe the weather conditions are shown in Table below respectively. The Tables indicate that the mean monthly maximum temperature in Karachi ranged between 32°C to 33.6°C during the 2001-2021 periods, while the mean monthly minimum temperature ranged between 21.5ºC to 22.5°C.

Table 4.1: Mean Monthly Maximum Temperature °C

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2001	27.2	29.6	33.1	34.6	35.1	34.9	32.2	32.3	33.1	36.0	33.5	30.4	32.7
2002	27.0	28.2	33.3	35.4	35.6	35.1	32.2	31.6	31.4	36.5	32.7	28.1	32.3
2003	27.6	28.5	32.4	36.6	35.7	34.9	34.1	32.6	32.5	37.0	32.2	28.3	32.7
2004	26.6	29.9	36.2	35.4	36.8	35.6	33.8	32.7	32.8	33.7	33.1	29.4	33.0
2005	24.9	26.3	31.5	35.3	35.4	36.0	33.2	32.2	34.2	35.2	33.1	28.4	32.1
2006	26.0	31.3	31.8	34.0	34.6	35.3	33.8	31.0	34.2	35.0	33.4	26.3	32.2
2007	26.9	29.4	31.4	37.7	36.0	36.4	N/A	N/A	N/A	N/A	N/A	N/A	33.0
2008	24.4	26.9	34.3	34.4	33.9	35.1	33.5	31.9	34.7	35.5	32.5	27.2	32.0
2009	26.2	29.8	33.0	36.0	36.8	35.7	34.5	33.0	32.8	35.9	33.0	28.6	32.9
2010	27.5	29.2	34	35.7	36.5	34.7	34.6	33.2	34.5	35.9	32.7	28	33.0
2011	26.9	28.5	33.2	35.8	35.3	35.3	34.2	32.8	32.9	N/A	N/A	N/A	N/A
2012	25.7	26.9	31.7	35.1	35.5	34.6	33.2	32.7	33.2	35.0	32.7	28.2	32.0
2013	26.7	28.0	33.3	34.0	35.1	36.5	33.8	32.1	33.0	35.7	32.3	28.3	32.4

2014	25.5	28.0	31.7	35.1	35.9	36.5	34.0	33.7	33.8	36.3	32.9	28.7	32.7
2015	26.3	28.9	31.5	35.9	36.0	37.7	34.1	32.3	34.6	35.8	33.0	28.6	32.9
2016	27.8	30.3	33.3	34.7	35.7	36.1	33.6	33.0	32.9	34.0	33.3	31.0	33.0
2017	25.4	30.2	32.8	35.5	36.2	36.3	33.1	33.8	33.4	36.6	32.3	28.2	32.8
2018	28.5	30.4	34.4	36.2	38.7	35.4	33.8	31.9	32.6	36.8	33.8	28.2	33.4
2019	26.3	26.8	31.3	35.4	36.0	37.2	34.7	32.5	35.7	35.8	31.5	27.1	32.5
2020	24.3	30.1	31.2	36.2	36.6	37.3	36.7	34.6	35	36.2	31.4	28.1	33.1
2021	26.6	31.3	34.6	37.3	37.5	36.1	34.5	32.6	36.3	34.8	34.0	27.6	33.6
Source: Pakistan Meteorological Department													

Table 4.2: Mean Monthly Minimum Temperature °C

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2001	11.5	14.9	19.6	23.8	28.1	29.0	27.1	26.5	25.9	24.4	18.6	15.8	22.1
2002	12.8	13.8	19.5	23.9	27.0	28.2	29.6	25.6	24.8	22.5	17.7	14.9	21.7
2003	12.7	16.9	19.8	24.2	26.5	28.2	23.6	27.0	25.3	20.9	15.2	12.0	21.0
2004	12.9	14.5	19.1	24.8	27.3	28.8	27.5	26.3	25.3	22.4	18.0	15.4	21.9
2005	12.3	11.3	20.3	23.0	26.4	28.3	27.2	26.6	26.6	22.9	18.9	13.0	21.4
2006	11.7	18.1	19.6	24.5	27.5	28.5	28.3	26.3	26.8	25.7	19.4	14.0	22.5
2007	13.0	17.3	19.7	24.7	27.6	28.6	N/A	N/A	N/A	N/A	N/A	N/A	21.8
2008	10.1	11.1	19.6	24.0	27.3	29.1	27.9	26.8	26.6	23.8	17.6	14.9	21.6
2009	14.7	16.5	20.8	23.8	27.6	28.7	28.1	27.5	26.5	22.6	17.0	13.9	22.3
2010	12.2	14.7	21.3	25.1	28	28.2	28.3	27.2	25.8	23.9	17.4	11.1	21.9
2011	11	14.5	19.7	23.1	27.1	28.8	27.8	28.6	26.5	N/A	N/A	N/A	N/A
2012	11.2	11.9	19.1	24.5	27.2	28.0	27.9	26.9	26.4	22.7	18.6	14.2	21.5
2013	11.6	15.1	19.2	24.2	27.1	29.3	28.0	26.6	25.5	25.4	18.1	13.0	21.9
2014	9.9	13.1	18.9	24.4	27.0	29.2	28.3	27.1	26.8	23.3	19.5	13.1	21.7
2015	12.6	16.4	19.2	25.7	27.7	29.8	28.4	26.9	26.3	24.9	18.6	12.6	22.4
2016	14.8	14.9	21.7	24.6	27.9	27.9	28.1	27.1	26.4	24.0	17.1	15.5	22.5
2017	12.5	18.2	20.3	24.4	27.8	29.2	27.7	27.0	26.2	23.5	16.8	13.0	22.2
2018	12.9	15.8	20.9	25.3	27.7	28.8	28.1	26.3	25.5	23.0	19.3	13.1	22.2
2019	13.3	15.3	19.0	24.0	26.6	28.9	28.1	26.8	27.2	24.0	19.4	13.7	22.2
2020	10.8	15.3	19.1	24.7	27.7	29.7	29.4	28.1	27.3	22.7	16	12.5	21.9
2021	9.2	15.0	21.6	25.1	28.9	29.6	28.5	27.4	28.0	23.1	17.6	13.9	22.3
Source: Pakistan Meteorological Department													

4.6.2. Precipitation

The main source of precipitation is rainfall which is received mostly in the months of July to September during SW Monsoon winds. It is very erratic as some years are very dry and there is no rain. The record for rainfall of PMD at Karachi Airport (2001-2021) suggests that July and August are the wettest months and that the maximum rainfall recorded in Karachi during 2001-2021 period was 366.8 mm during the month of August 2020, and the maximum annual rainfall was 474.2 mm during the same year 2020.

Table 4.3: Monthly Amount of Precipitation (mm) at Karachi Airport													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
2001	0.0	0.0	0.0	0.0	0.0	10.6	73.6	16.2	N/A	0.0	0.0	0.0	100.4
2002	0.0	2.4	0.0	0.0	0.0	N/A	N/A	52.2	N/A	0.0	0.5	0.4	55.5
2003	6.4	21.8	0.0	0.0	0.0	16.3	270.4	9.8	N/A	0.0	0.2	0.0	324.9
2004	13.7	0.0	0.0	0.0	0.0	N/A	3.0	5.6	N/A	39.3	0.0	4.3	65.9
2005	6.6	12.8	N/A	0.0	0.0	N/A	N/A	0.3	54.9	0.0	0.0	17.1	91.7
2006	N/A	0.0	N/A	0.0	0.0	0.0	66.2	148.6	21.9	0.0	3.1	61.3	301.1
2007	0.0	13.2	33.4	0.0	0.0	110.2	N/A	N/A	N/A	N/A	N/A	N/A	156.8
2008	8.0	Trace	1.1	0.0	0.0	0.0	54.0	37.5	Trace	0.0	0.0	21.0	121.6
2009	3.0	Trace	0.0	Trace	0.0	2.6	159.9	44.0	68.9	0.0	0.0	1.5	279.9
2012	0.2	0.0	0.0	0.0	0.0	Trace	Trace	8.1	121.0	0.0	0.0	22.8	152.1
2013	Trace	20.0	2.8	30.0	0.0	Trace	5.5	105.4	4.0	1.2	0.0	0.0	168.9
2014	Trace	0.0	12.4	0.0	1.3	Trace	1.1	9.9	1.4	0.0	4.6	0.0	30.7
2015	0.3	2.1	2.8	0.0	0.0	Trace	46.6	1.4	Trace	0.0	0.0	0.0	53.2
2016	3.1	0.0	Trace	0.0	0.0	65.8	1.9	96.9	Trace	0.0	0.0	0.0	167.7
2017	41.5	Trace	0.0	0.0	0.0	58.8	33.3	65.6	26.4	0.0	0.0	6.6	232.2
2018	0.0	0.0	0.0	0.0	0.0	10.6	73.6	16.2	Trace	0.0	0.0	0.0	0.8
2019	0.0	2.4	0.0	0.0	0.0	Trace	N/A	52.2	Trace	0.0	0.5	0.4	367.3
2020	Trace	2.6	0.5	0	0	Trace	101.2	366.8	Trace	0	3.1	0	474.2
2021	0.0	0.0	0.0	0.0	0.0	Trace	45.4	Trace	88.3	17.2	0.0	16.9	167.8
Source: Pakistan Meteorological Department													

4.6.3. Humidity

The relative humidity typically ranges from 25% (dry) to 70% (humid) over the course of a year, rarely dropping below 20% (very dry) and reaching as high as 90% (very humid).

Table 4.4: Mean Monthly Relative Humidity (Mean) at 1200 UTC (%)													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
2014	25.0	27.0	35.0	47.0	57.0	61.0	64.0	61.0	60.0	36.0	36.0	31.0	45.0
2015	38.0	41.0	37.0	45.0	60.0	56.0	69.0	67.0	56.0	47.0	28.0	31.0	47.9
2016	46.0	25.0	41.0	47.0	60.0	60.0	68.0	70.0	63.0	57.0	34.0	38.0	50.8
2017	38.0	25.0	36.0	44.0	59.0	62.0	70.0	67.0	63.0	44.0	29.0	20.0	46.4
2018	36.0	37.0	33.0	45.0	46.0	65.0	65.0	68.0	63.0	40.0	32.0	30.0	46.7
2019	40.4	33.9	36.6	48.0	55.6	58.8	64.8	72.6	67.6	41.1	34.6	29.7	48.6
2020	29.9	28.1	34.2	44.4	57.1	56.8	65	74.8	62.4	38.1	32.9	29.1	46.1
2021	31.3	34.1	41.2	43.3	54.3	60.3	67.5	64.5	63.0	46.5	27.6	38.7	47.7
Source: Pakistan Meteorological Department													

4.6.4. Wind Speed & Direction

The wind direction and speed between the summer and winter monsoon seasons are rather unsettled and large variations are noted both with respect to speed and direction. The wind velocity record (2001-2021) indicates that the velocity varies and ranges between 1.0 m/s to 13.4 m/s. The Tables below show the wind speed and the direction.

Table 4.5: Wind Speed (m/s) at 12:00 UTS													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
2001	2.6	3.4	4.3	5.6	7.5	8.1	6.8	7.3	5.5	3.7	2.0	2.4	4.9
2002	3.6	3.9	4.0	6.5	8.5	8.2	9.8	7.3	7.7	3.3	2.9	3.2	5.7
2003	4.0	5.0	5.4	5.2	7.7	8.8	6.7	7.1	6.0	3.2	3.1	3.0	5.4
2004	3.4	3.7	4.0	6.0	8.0	9.0	10.0	9.5	7.3	3.8	1.0	2.5	5.7
2005	3.6	4.2	4.8	5.1	7.1	7.5	9.0	6.9	6.4	3.9	2.0	1.5	5.2
2006	2.0	3.0	3.0	6.2	8.0	7.7	8.3	6.2	4.7	4.2	2.2	3.0	4.9
2007	2.0	3.7	4.0	4.0	6.0	6.3	N/A	N/A	N/A	N/A	N/A	N/A	4.3
2008	4.3	7.6	8.2	10.5	12.6	7.6	11.0	9.3	8.7	6.6	5.1	3.9	7.9
2009	7.0	7.2	7.9	9.3	9.8	9.7	9.5	9.3	9.1	6.1	5.0	3.9	7.8
2012	5.8	6.6	9.3	9.8	12.3	12.8	13.1	11.2	8.4	7.1	5.7	5.8	9.0
2013	5.2	6.9	9.0	10.3	11.5	10.8	12.0	11.2	10.3	7.7	5.1	4.5	8.7
2014	5.9	8.9	8.6	11.5	12.4	13.4	12.8	11.6	11.7	8.3	6.0	4.5	9.6
2015	6.9	10.3	10.1	11.5	12.8	12.3	13.7	12.3	10.5	8.7	5.6	5.8	10.0
2016	7.5	8.7	4.8	1.1	13.0	11.7	11.8	10.5	12.1	9.2	5.5	5.2	8.4
2017	7.0	8.0	10.8	12.1	12.8	11.5	12.1	10.3	8.7	8.5	5.4	7.4	6.9
2018	3.2	3.6	4.9	5.2	5.6	5.7	6.3	6.4	6.3	4.5	3.1	3.5	4.8
2019	3.4	4.6	5.2	6.0	6.2	6.0	7.0	4.7	4.4	4.1	3.5	3.8	4.9
2020	4.6	4.8	4.6	5.4	6.8	5.6	5.2	4.6	4.8	3.8	3.2	2.8	4.7
2021	6.1	7.6	9.7	8.5	11.7	12.7	12.6	11.1	8.8	8.1	6.7	6.6	9.2
Source: Pakistan Meteorological Department													

Table 4.6: Wind Direction at 12:00 UTS												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2001	S54W	S43W	S42W	S45W	S46W	S45W	N52W	S59W	S44W	N56W	S45W	S06W
2002	S67W	S52W	S51W	S55W	S51W	S42W	S54W	S45W	S48W	S56W	N54W	S41W
2003	S60W	N50W	S45W	S48W	S45W	S68W	S60W	S47W	S43W	S54W	S50W	S27W
2004	N27E	S46W	S53W	S49W	S52W	S54W	S54W	S62W	S56W	S47W	S45W	N86E
2005	N63E	S51W	S50W	S52W	S63W	S48W	S54W	S49W	S87W	S54W	S52W	N23W
2006	S48W	S62W	S50W	S57W	S64W	S60W	S67W	S78W	S51W	S53W	S49W	N79E
2007	S30W	S62W	S47W	S55W	S58W	S47W	S41W	S55W	S60W	S48W	S48W	N45E
2008	N45E	S47W	S54W	S51W	S52W	S39W	S50W	S52W	S46W	S39W	S38W	N
2009	N45E	S45W	S41W	S58W	S46W	S46W	S56W	S49W	S56W	S42W	S39W	S45E
2012	S3E	N56E	S62W	S46W	S61W	S51W	S66W	S51W	S53W	S41W	S41W	N9W
2013	N39W	S54W	S56W	S54W	S61W	S40W	S53W	S52W	S55W	S47W	S17W	N50W
2014	S72E	S54W	S43W	S46W	S46W	S45W	S54W	S48W	S85W	S45W	S49W	S45E
2015	S72E	S54W	S43W	S48W	S50W	S40W	S54W	S55W	S50W	S41W	S	S58W
2016	S43W	S36W	S48W	S54W	S54W	S45W	S48W	S36W	S51W	S45W	S43W	S36W
2017	S83E	S56W	S51W	S45W	S45W	S44W	S66W	S57W	S48W	S51W	S59W	N45E
2018	S54W	S43W	S42W	S45W	S46W	S45W	N52W	S59W	S44W	N56W	S45W	S06W
2019	S67W	S52W	S51W	S55W	S51W	S42W	S54W	S45W	S48W	S56W	N54W	S41W
2020	N31E	S12W	S52W	S55W	S49W	S44W	S47W	S55W	S47W	S38W	S4E	N35W
2021	S21W	S38W	S44W	S42W	S52W	S53W	S55W	S48W	S40W	S41W	S22E	S40E
Source: Pakistan Meteorological Department												

4.7. Ambient Air Quality and Noise

The ambient air quality and noise monitoring was conducted at the project site and monitoring reports are attached in the annexures of this EIA Study. The monitoring results depict that ambient air quality and noise levels at the project site are satisfactory and following the guidelines prescribed in SEQS.

Table 4.8: Ambient Air Quality

Date	CO (mg/m^3)	NO ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SPM ($\mu g/m^3$)
Minimum	-	16.7	20.3	26.6	102	29	289
Maximum	-	31.2	37.8	48.8	141	63	364
Average	1.19	23.9	30.3	38.5	121.3	44.8	326.8
SEQS	**5**	**40**	**80**	**120**	**150**	**75**	**500**

Table 4.9: Noise Level Test Results

#	Location/Source	SEQs Limits 65 dB (A) Leq		
		Min	**Max**	**Average**
1	Front Side Right Corner	60	61	60.5
2	Front Side Left Corner	62	63	62.5
3	Back Side Right Corner	64	65	64.5
4	Back Side Left Corner	63	64	63.5

SEQS = Sindh Environmental Quality Standards (Outside Noise Level)
dB (A) Leq = Time weighted average of the level of sound in decibel on scale which is relatable to human hearing.

4.8. Ecological Baseline

Ecological risk of high order has been induced by land clearance and removal of natural vegetation from the plains during the urban sprawl to make room for urbanization. This has degraded the physical environment & the biological environment. Flora species was recorded in the project area such as ***Conocarpus***, ***Acacia nilotica*** **(Sindhi Babur),** ***Capparis decidua*** **(Kirar),** ***Ficrus religiosa*** **(Pepul),** ***Azadirachta indica*** **(Neem),** ***Prosopis juliflora*** **(Devi) and** ***Saveda fruticosa*** **(Lani)**. Horticulturists and tree activists have declared Conocarpus as harmful as the eucalyptus trees planted in the past. Eucalyptus was planted in huge numbers across the city only to be cut down for its negative impact on the environment. The same mistake was repeated with Conocarpus. In response to the growing concern against planting Conocarpus, district governments have put tremendous efforts in recent years towards plantation of Neem trees and other native species in the city. The impoverished as well as degraded environment resulting from non-availability of surface as well as groundwater and discharge of untreated wastewater into Lyari and Malir River has irreversibly reduced the biodiversity of the indigenous as well as introduced vegetation and hence it offers very little chance for the survival / growth of fauna in the macroenvironment of project area. There are even otherwise no habitats of large and small animals, birds or reptiles within the surveyed area.

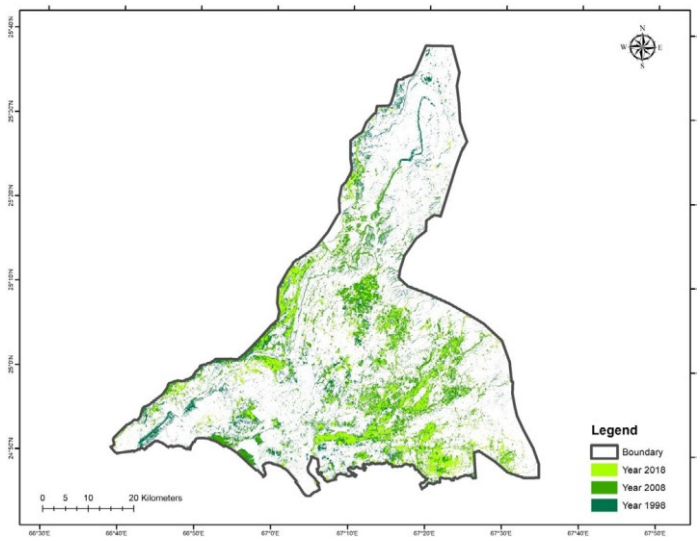

Figure 4.7: Vegetation Trends in Karachi[19]

4.9. Socioeconomic Environment

The social baseline chapter provides a comprehensive review of the socio-economic conditions of the project area. This socio-economic profile is based on a literature review and several primary data gathering activities including site visits, sample socio-economic survey of stakeholders in the area, and consultations with primary and secondary stakeholders. This social baseline provides an overview of the socio-economic conditions of the people who reside and work in the project vicinity. It also includes an assessment of the public utilities and social services (education and health facilities) in the area.

In 2017, the global indicator framework was developed and agreed upon by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs). Indicator 11.3 of Goal 11 of UN Sustainable Development Goals (SDGs) focuses on achieving sustainable development of cities through improvement in urban planning and management in participatory and inclusive ways by 2030. For the sustainable development of Karachi, it is essential to integrate the design of the proposed project into the rapidly transforming landscape of the city by mitigating or improving the social impacts that may arise due to this project.

The social baseline chapter helps in understanding the existing socioeconomic conditions of the project area as well as the district under which the project is falling. The data in this chapter will be used for the development of a Social Management Plan to mitigate or improve the social impacts arising from the proposed development. The social baseline is divided into the macro and microenvironment of the project area. The macro-environment encompasses District East under which the project area is falling. The macro-environment covers the administrative setup, demography, education, and health profile of the area. The immediate neighborhood of the project

[19] Change detection map of Karachi Division vegetation for the years 1998, 2008 and 2018. Adapted from "Raza, D., Karim, R. B., Nasir, A., Khan, S. U., & Zubair, M. H. (2019). Satellite Based Surveillance of LULC with Deliberation on Urban Land Surface Temperature and Precipitation Pattern Changes of Karachi. *Pakistan. J Geogr Nat Disast*, *9*(237), 2167-0587".

area has been considered as the micro-environment of the project. The microenvironment covers the land use, education, health, and utility profile of the area.

4.10. Macro Environment

4.10.1. Administrative Context

The proposed project is planned for development on Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi, by M/s TM Associates which will serve as residential cum commercial building project., Gulzar-e-Hijri Sub-division which falls under the jurisdiction of District East Karachi. District East covers a total area of 139 sq. km while Gulzar-e-Hijri covers a total area of 79 sq. km, approximately half of the total district area. A total of 4 sub-divisions falls under District East Karachi which include Ferozabad sub-division, Gulshan-e-Iqbal sub-division, Gulzar-e-Hijri sub-division, Jamshed Quarters sub-division.

4.10.2. Land Use

The project area has a mixed-use environment i.e., it is used for both residential and commercial purposes. Most of the residential societies surrounding the project area belong to lower- and middle-class households. There are a few *Goths* (villages) located adjacent to the project area. Most of the residential developments comprise of one or two-story houses with a few high-rise buildings. Most of the plots in the area are vacant and are either under development or still not developed. Few big hospitals are operating in the area, which has been built over large stretches of land

4.10.3. Demography

After the latest delimitation, District East has lost many of its areas to District Korangi. However, the district's vicinity remains a complex mixture of posh and slum areas with poor infrastructure. District East is the third-largest district in Karachi according to the population and number of registered voters. A large piece of the district is posh such as KDA Overseas, six blocks of Gulshan-e-Iqbal, KDA Officers Housing Society, Askari Cantt, Darul Aman Society, Delhi Mercantile Society, Sindhi Muslim Society, Teen Hatti, Jamshed Road, Binori Town, Soldier Bazaar, and Tariq Road. Additionally, illegal encroachments, slums, and narrow lanes can also be found in the district.

Table 4.7: Demographic Change (1998-2017)

1998 census population	2017 census population	Change (%)
Distric East		
1,447,529	2,875, 315	98
Gulzar-e-Hijri Sub-Division		
130,066	792,451	540
Source: Pakistan Bureau of Statistics		

According to the 1998 census, the total population of District East was 1,447,529 which, increased to 2,875,315 in the 2017 census, showing an increase of 98% or an average annual growth rate of 5 % between the two censuses (nearly two decades). Similarly, the total population of Gulzar-

e-Hijri Sub Division was 130,066 according to the 1998 census which, increased to 792,451 according to the 2017 census, showing an increase of 540% or an average annual growth rate of 27%. Several ethnic groups are residing in the area including, Urdu Speakers, Punjabis, Sindhi's, Balochi's, Bohris, Gilgiti's, and Pashton's. The following table provides a comparison of the population between 1998 and 2017 census.

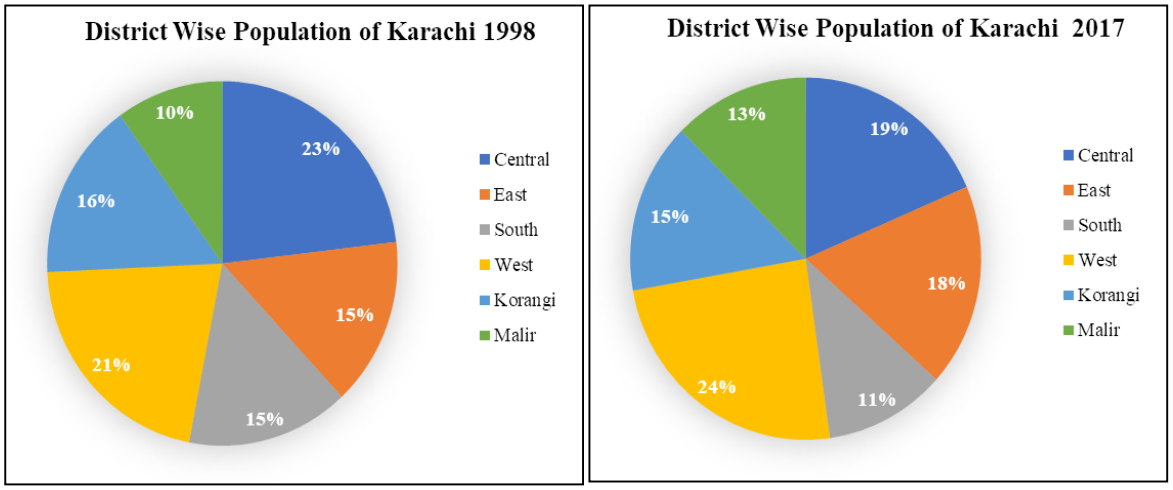

Figure 4.8: District wise Population according to the 1998 and 2017 Census

According to the 1998 census, District East comprised 15% of the entire city population. According to the latest census, the populace of District East contains 18% of the city population. It's now the less populated district in comparison with District West and Central. The populace of District East is expected to increase in the upcoming years, due to the construction of many high-rise buildings in the vicinity. Over time, many low-income settlements in the district now home to many residential and commercial establishments. People from different regions of Sindh and Pakistan who have made Karachi their second home came residing here.

4.10.4. Educational Facilities

The educational infrastructure in Karachi East is well developed. The government is providing maximum possible educational facilities to provide a fair opportunity to the people of the district to enhance their human capital. There are several schools, colleges, and institutes in the district. Dubbed as the hub of education, District East is host to some of the city's highest public sector universities and higher educational institutions, such as the University of Karachi, NED University, and the Federal Urdu University of Arts, Science, and Technology.

Table 4.8: District Wise Number of Schools, Enrollment and Staff for Karachi (2016-17)

District Name	No. of Schools				Enrollment			Teacher		
	Boys	Girls	Mixed	Total	Boys	Girls	Total	Male	Female	Total
Central	117	141	348	606	44,822	58,510	103,332	1,803	4,996	6,799
East	51	64	163	278	23,022	29,106	52,128	870	2,271	3,141
South	70	87	173	330	26,122	35,824	61,946	1,079	2,496	3,575
West	128	101	340	569	38,562	45,454	84,016	1,443	1,909	3,352
Malir	136	113	414	663	34,548	32,333	66,881	1,540	1,148	2,688

Korangi	97	94	220	411	35,192	46,918	82,110	1,025	3,082	4,107
Sindh Education Management Information System (SEMIS),2016-2017										

The number of schools, enrollment, and teachers shows here the active involvement of the residents of the District East in the education sector. The following table illustrates that according to School Education Statistics 2016-17, District East Karachi has a large number of schools with electricity, washrooms, drinking water, and boundary facilities. The data also shows that people of District East who are more educated and well aware of the importance of education are prepared to pay exorbitant school and college fees for the education of their children.

Table 4.9: District wise Basic and Advance Facilities in Karachi (2016-17)

District	Schools	Electricity	Washroom	Drinking Water	Boundary Wall	Lab/Science Lab	Library
Central	607	447	484	507	529	121	56
East	264	223	241	219	238	59	25
South	482	383	426	356	432	49	49
West	363	232	301	256	340	82	27
Korangi	550	397	431	391	509	46	37
Malir	591	240	398	302	479	56	21
Sindh Education Management Information System (SEMIS), 2016-17							

4.10.5. Health Facilities

District East provides health facilities not only for its inhabitants but also for the resident of its adjoining districts. Adding to the significance of the district is the presence of two major hospitals - the Aga Khan University Hospital and the Liaquat National Hospital and Medical College. In addition to this, the number of dispensaries is also functioning at different places in the district under the supervision and administrative control of K.M.C / D.M.C East.

Apart from the Government-run health institutions, dozens of private hospitals from the project. Ashfaq Memorial Hospital, M. Rab Medical Centre, Samdani Hospital, Al-Mustafa Medical Centre, Patel Hospital, Hill Park General Hospital, Adamjee Eye Hospital, and Ibn-e-sena Hospital are a few to be mentioned here along with many private clinics are also functioning in the district.

The following table shows the number of health practitioners and paramedical personnel in Karachi.

Table 4.10: District wise Government Medical and Paramedical Personnel in Karachi 2017

District	Doctors	Nurses	L.H. V	Dispensers/Dressers	X-Ray Technicians	Lab Technicians	O.T Technicians	X-Ray Assistants	Lab. Assistants	O.T. Assistants	Midwives
Central	579	207	15	82	12	17	25	0	3	12	26

South	324	115	4	51	14	23	33	0	8	8	2
East	245	18	22	26	4	0	3	0	4	1	6
West	356	83	19	67	12	14	22	5	12	15	19
Malir	234	25	14	53	9	4	6	0	10	5	18
Korangi	252	90	38	-	-	-	-	0	8	8	25
Source: BOS, Government of Sindh (Development Statistics of Sindh-2018).											

Table 4.11: District wise Government Health Facilities with Bed Capacity in Karachi 2017

District	Hospital		Hospital Beds		Dispensaries		R.H Centers		T.B. Centre		B.H. Units		M.C.H.C	
	Teaching	Civil, Specialized & Taluka	Teaching	Civil, Specialized & Taluka	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds
Central	-	-	3,150	-	5	-	-	-	8	-	2	-	3	6
South	2	4	-	960	5	-	-	-	10	5	-	-	-	-
East	-	-	361	-	5	-	-	-	5	97	4	-	4	-
West	1	1	-	248	14	15	4	20	8	-	7	14	5	6
Malir	-	1	-	48	7	-	2	8	4	-	14	22	6	-
Korangi	-	7	-	724	8	-	-	-	7	-	8	16	4	41
Source: BOS, Government of Sindh (Development Statistics of Sindh-2018).														

The public health facilities in Karachi are highly centralized in a few locations and cannot cater to a large part of the population. The above-mentioned public health facilities data is not uploaded, in the government records, therefore subject to some shortcomings. The health care facilities of district East Karachi is better than other districts of Karachi division because there is the number of existing good government and private hospital

4.11. Description of Microenvironment

The proposed site is located in a relatively under-developed area of Karachi, in the court of Sector 19 C of Scheme 33 having Sumaira Sky Tower and Shopping Mall in its immediate neighborhood followed by Kathiawar Society, Karim Bhai Cooperative Housing Society and Burhani Nagar Apartments Building. It is located in the midst of several housing projects.

4.11.1. Education Facilities

There are few government and many private schools in the project area. The area residents have access to excellent educational facilities Montessori, primary, secondary level schools and, intermediate colleges. The educational schools include Highway Colony School (313m), Think School (727m), Green Valley Grammar School (861m), The SET School North East Campus (887m) and The Educators School Campus 7 (857m). Govt. College Sachal Goth (2.21km), Memon Medical Institute (3.36km) and Dow University Ojha Campus (3.23km) is also located in the area which is recognized by the World Health Organization. Several international students are also enrolled in the institute.

4.11.2. Healthcare Facilities

There are some well-known private hospitals Such as Kiran (Karachi Institute of Radiotherapy and Nuclear Medicine) Hospital (2.96km), Memon Hospital (3.36km), Dow University Of Health Sciences Hospital (3.23km) and clinics in the project area and one major government hospital. The most common diseases reported in the area include Malaria, hypertension, fever, and Typhoid. The residents of the area mostly avail the facility of private hospitals and some go to government hospitals. The major health problem in the area recently has been blood pressure.

The private clinics in the area only cater to basic health problems. In case of a serious problem, the residents have to go to Dow Hospital and Memon Medical Hospital. The residents prefer to checkup in good private hospitals.

KIRAN is a cancer hospital under the administrative control of the Pakistan Atomic Energy Commission. It was established for the treatment of poor cancer patients especially those from the rural areas of Sindh and Baluchistan at a subsidized cost. Dow University Hospital is a university hospital with a total of 600 beds.

Memon Medical Institute Hospital (MMIH) is a 332-bed tertiary care hospital project with state-of-the-art infrastructure that is designed according to international standards. It is a 100% donor-funded project that aims to serve people regardless of their caste, creed, color, religion, or ability to pay. It has a Patients' Welfare Program to support the needy.

4.11.3. Waste Management

Sindh Solid Waste Management Board (SSWMB) is responsible for the waste management in the nearby vicinities. The condition of solid waste in the project area is somewhat satisfactory. The infrastructure for solid waste management in gated societies and apartment buildings is managed by hired sweepers while in slum areas people usually dump their waste directly in empty plots in the surroundings by themselves.

4.11.4. Water Supply and Drainage

The water supply in the area falls under the jurisdiction of the Karachi Water and Sewerage Board (KWSB). There is a shortage of water supply in the area, especially during the summer season. The residents use bore water to meet household demands due to a shortage of water. The

drainage system is somewhat satisfactory in the project area. The residents shared that they face obstacles during heavy rains when the drain water overflows onto the streets.

4.11.5. Electricity & Gas Supply

K-Electric supplies electricity to the area and the residents are quite satisfied with the electricity except a few power outages that happens throughout the city to meet the demands. Gas supply is available in the area and the residents are satisfied with the gas supply in the area.

4.11.6. Traffic Condition

The project is directly facing the Maulana Ubaidullah Sindhi Road which connects with the Super Highway (M-9) from one end and Main University Road on the other end via Saadi Town Rd. The main road of the project's site is approximately 5.5km long and 70 feet wide double road have a wide median covered with trees, traffic flow is frequent along with heavy trucks of construction material due to which some portions of road are damaged and have water puddles. There are no street lights on the road and residents hesitates to travel late at night.

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Chapter 5 Information Disclosure, Consultation & Participation

Stakeholder consultation has become an integral requirement of the EIA study after the enactment of the guidelines for public consultation under the Pakistan Environmental Protection Act (PEPA) 1997. After the 18th Amendment to the Constitution, the Government of Sindh passed the Sindh Environmental Protection Act 2014, which also stresses the importance of engaging with the concerned primary and secondary stakeholders during the EIA study.

The proposed "Ocean Ninety 9" project is located in Sector 19 C of Gulzar-e-Hijri Scheme 33, Karachi, where many commercial showrooms, shops and residential apartments are currently being planned. The vicinage has many unoccupied plots and is not compactly populated. Novel developments in the vicinity will change the general landscape of KDA Scheme 33 creating both challenges and opportunities for the existing and new residents and commerce in the area. While in the short-term, the impacts might be felt only in the microenvironment of the project, in the long-term, the effects may also spread to other neighbourhoods. To substantiate these presuppositions, relevant engagement with the environs stakeholders has been conducted to identify the probable positive and negative bearings. Assess the magnitude of these outcomes from a social perspective, and prescribe a solution that identifies the Best Management Practices (BMPs) in the construction and operation phase of the proposed multi-storey edifice project.

In this chapter, an overview of different stakeholder's interventions, concerns and suggestions has been stated.

5.1. Stakeholder Mapping

In order to better understand several stakeholder groups for this project, a stakeholder mapping exercise has been carried out whereby different stakeholder clusters and their interests in the project are discussed in this section:

Local People/Neighborhood: Individuals or groups in the locale of the project site are apprised about the project background and context. Due to their propinquity to the site, they are often utmost vulnerable stakeholders, and thus, consultations with these stakeholders are directed throughout the project phase. The consultation exercise provides an opportunity to appraise the stakeholders regarding the consultation process, identify likely project impacts, and record concerns of local communities. Moreover, intensive stakeholder engagement during the planning stage of the project provides a basis for reducing the trust deficit and encourages confidence-building.

Proponents: The main aim of the project proponent is to accomplish the objectives of the project through cost-effective and sustainable project activities. To this end, the project proponent has to recognize that strong associations and responsive relations with stakeholders would go a long way to achieve the project objectives. Therefore, the proponent has to strive to engage stakeholders at all levels from the outset; inform them regarding project goals, design, and alternatives. Moreover, they have to keep trying to create public understanding and acceptance of the proposal through a commitment to implement the promised objectives. They have to

accomplish the project through general acceptance of the design and keep improving through the use of public inputs on alternatives and mitigation measures.

Government Agencies: The government agencies involved in the EIA (Environmental Impact Assessment) process is mandated to have their policy and regulatory responsibilities addressed in impact analysis and mitigation consideration. For the competent authority, an effective public involvement program will have to be ensured regarding project proposal that effectively incorporates environmental and social concerns. Moreover, in line with international standards, SEPA (Sindh Environmental Protection Act) stresses the proponent for evidence of CSR (Corporate Social Responsibilities) activities in the past and proposals for CSR activities in the project vicinity. All through the EIA review primary concern for SEPA is a transparent public consultation process and an efficient stakeholder engagement plan that can address the concerns and suggestions of all stakeholders.

NGOs/Interest groups: Comments from NGOs and specific interest groups often provide a useful policy perspective on the project's methodology and implementation mechanisms. For example, due to the vast exposure of certain NGOs and interest groups, alternative measures for reaching the project goals may be advised that are more eco-friendly and socially acceptable. Their Insights are also helpful in developing CSR activities and later in monitoring and evaluations.

Other Groups: Other interest groups are those experts in particular fields whom can make a significant contribution to the EIA study. The advice and knowledge of relevant institutions who are directly concerned with the project are often sought. More often than not, a range of experts from these groups are consulted and their input is solicited based on the project requirements.

5.2. Primary and Secondary Stakeholders

Primary stakeholders are those whom share a zone with the project which includes residents, commercial entities, and institutions falling in the project extent. Secondary stakeholders include the relevant government agencies and public interest groups which may indirectly influence or be influenced by the project. The matters and input from both primary and secondary stakeholders are important to identify the issues arising from the construction or operation phase of the project. Also propose mitigation measures that amend the negative impressions and enhance the positive ones.

Within the purlieu of the proposed "Ocean Ninety 9" project which falls in the limits of Kathiawar Society. There are few primary stakeholders including the occupants of Sumaira Sky Tower & Shopping Mall, Karim Bhai Cooperative Housing Society and Bohrani Nagar Apartments Building. The commercial interests in the locale include Saifee Burhani General Store, Shah Marble & Granite, Green Garden Nursery and Abdul Haq Brick Works. The secondary stakeholders for this project include the utility companies that provide gas; electricity and water in the area are K-Electric, SSGC, and KWSB. Furthermore the regulatory authorities mandated to ensure environmental protection in the city that falls under the remit of SEPA and compliance with building and construction laws which is looked after by SBCA. The complete list of the primary and secondary stakeholders for Ocean Ninety 9 has been stated in the table below:

Table 5.1: Primary Stakeholders for Ocean Ninety 9	
Neighborhood	Residential Interests • Kathiawar Society • Karim Bhai Cooperative Housing Society • Borhani Nagar Apartments Building • Sumaira Sky Tower & Shopping Mall Commercial Interests • Saifee Burhani General Store • Shah Marble & Granite • Green Garden Nursery • Abdul Haq Brick Works
Proponent	• M/S TM Associates
Government Agencies & Other Service Providers	• Sindh Environmental Protection Agency (SEPA) • Karachi Water & Sewerage Board (KWSB) • K-Electric • Sui Sothern Gas Company (SSGC) • District Municipal Corporation, East • Sindh Building & Control Authority (SBCA)
NGOs/Interest groups	• Shehri-CBE • National Forum for Environment & Health (NFEH) • Citizens for Environment (NGO)

5.3. Consultation Approach & Methodology

5.3.1. Consultation with Primary Stakeholders

A Neighbourhood Survey was conducted to identify residential and commercial interests in the surrounding that may face direct impacts from the proposed development. The survey was conducted in two stages. In the first stage, several site visits were made to identify all stakeholders that either reside or work in the project environs and conducted an initial identification of potential positive and negative effects. Relevant public service institutions directly involved in service provision in the ranges were also identified.

During the second stage, a social survey field team from EMC Pakistan used a pre-designed semi-structured template to engage the residents, commercial interests, and public service institutions. Those stakeholders, who were not available at the first attempt, were re-visited on the same day or followed-up for their comments during the next few days. During each meeting, the project team introduced the project to the stakeholders, recorded their concerns and suggestions, and provided contact details to enable stakeholders to share further comments over email or in writing. Moreover, the survey team inquired about the current situation of the area such as the status of utilities, security, environment, community and law order situation in the locality. Several open-ended questions were also included in the questionnaire to ensure that the respondents could openly share their opinions and suggestions relevant to the study.

Consultation with primary stakeholders both residential and commercial entities in the proximity of the site are mentioned in; (Table 5.2).

Table 5.2: Consultations with Primary Stakeholders				
S. No	Respondents	Stakeholder	Stakeholder Type	Date
1	Mr. Usaid (Resident)	Residential	Karim Bhai Cooperative Housing Society	15-11-2022
2	Mr. Abd-e-Ali (Union Head)	Residential & Management		
3	Mr. Abbass (Resident)	Residential	Borhani Nagar Apartments Building	
4	Mr. Ali Asghar (Resident)	Residential		
5	Mr. Sharyar (Union Head)	Management	Sumaira Sky Tower & Shopping Mall	
6	Mr. Abdul Rehman (Resident)	Residential		
7	Mr. Abdullah (Resident)	Residential	Kathiawar Society	
8	Mr. Abbas Bohri (Owner)	Commercial	Saifee Burhani General Store	
9	Mr. Safeer Khan (Owner)	Commercial	Shah Marble & Granite	
10	Mr. Mehro Khan (Security Guard)	Commercial	Green Garden Nursery	
11	Mr. Abdul Haq (Owner)	Commercial	Abdul Haq Brick Works	

5.4. Consultation Feedback

The comments, concerns, and suggestions received from stakeholders during the neighborhood survey have been collated in this section. The comments solicited from stakeholders were helpful in the screening of the potential environmental & social aspects of the project.

5.4.1. Concerns & Suggestions: Neighbourhood Survey

The social team from EMC initiated consultations in the project area during the third week of November, 2022. The following major issues and concerns were raised by the primary stakeholders:

- The area was perilous few years ago due to separateness from the main city. Now it's a peaceful neighborhood, many new projects and societies are under development. Many Buildings are completed and populaces from different districts of Karachi are accommodated here.
- The residents were mostly happy, environment of the area is clean, new societies are developing under the proper management. Mr. Usaid raised a concern that new

developments might put pressure on the available water supply, sewerage and drainage system of the area.

- Mr. Abbass Bohri is the owner of Saifee Bohrani General Store as well as the resident of Bohrani Nagri Apartments Building expressed his view that the immediate neighborhood of the proposed project is dominated by Bohri Community, other community members are not allowed in their society but Ocean Ninety 9 seems likely to be available for everyone.
- Mr. Safeer Khan owner of Shah Marble and Granite mocked the social team by saying that the proponent has to buy all the flooring marble from them. He was basically saying business opportunities will increase with the increase of new developments.
- The available road conditions need improvement. The proposed project is ideal. There are 4 different roads that connects the area with Super-highway said by a resident.
- Sewage and Waste facility is available in the vicinity said by the member of Building Union Mr. Sharyar of "Sumaira Sky Tower & Shopping Mall."
- A real estate agent mention that there are less hardware shops in the area as mega projects are under construction, laborers need to go to "Safoora Goth" to get construction material.
- Another resident Mr. Abbas has raised a concern that gas and water supply is not available in the slum areas (Katchi Abades) of Scheme 33, Gulzar-e-Hijri.

Consultation Pictures with Primary Stakeholders

Consultation with the Residents of Kathiawar Society

Consultation with the Residents of Karim Bhai Cooperative Housing Society

Consultation with the Owner/Resident of Saifee Burhani General Store/ Borhani Nagar Apartments Building

Consultation with Owner, Abdul Haq Brick Works

Consultation with Security Guard & Gardener, Green Garden Nursery

Consultation with Owner, Shah Marble and Granite

Chapter 6 Screening of Potential Environmental and Social Impacts and Appropriate Mitigation Measures

This section presents the screening process that identifies the environmental aspects and makes assessment of impact of different activities on the physical, biological and social environment. The screening process has, through review of literature, primary as well as secondary baseline data, and expert judgment, made assessment of the potential impacts of said activities on the physical, biological, and socioeconomic environment of the Project. Mitigation measures have been proposed to reduce, minimize or compensate for the identified potential negative impacts and their adoption has been recommended.

The project located at Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi, is duly authorized. The environmental aspects of the project as identified by situation analysis are related to the following:

- Physical environment,
- Biological environment, and
- Socio-economic environment.

Description of microenvironment and macroenvironment in the previous chapters have provided a classification of the micro-site based on assessment of impact using both primary and secondary data on climate, air quality & noise, hydrology, geology, geomorphology, soil characteristics and seismicity, ecology, built environment including road network and traffic movement, and the socioeconomic aspects pertinent to siting of the project and its adaptation in the emerging situation of intense construction activity in Karachi. Mitigation measures have been proposed wherever required.

Screening of potential environmental impacts on the physical environment is related to:

- Siting of the Project
- Topography, Geology and Seismicity of the microenvironment
- Vulnerability of soil to liquefaction
- Availability of utilities in the area
- Vulnerability of site to flooding and storm water drainage Air, water and noise pollution and other forms of nuisance during construction at site, and in the microenvironment (neighborhood) and macroenvironment of site
- Burden on Infrastructure
- Capacity of adjoining roads, traffic movement, and congestion

6.1. Screening of Environmental Aspects related to Siting of Project

The project is located at Plot # 1Acre 27 Ghuntas (1.67 Acres), Deh Songal Tapo Gujro, Sector-19-C, KDA Scheme 33, Karachi, the site falls in the appropriate category that permits the designated land-use by the relevant authority. The project responds to the need of the segment of population that is seeking home, safety, security and improvement in quality of life. Availability of infrastructure facilities for establishment of residential complex and its location ideally suited the siting of project. Advantage of this aspect has already been taken by other town planner and developers who have gone ahead with the construction of such projects in Karachi and outskirts.

6.2. Assessment of Impacts at the Construction and Operation stages of the Project

6.2.1. Demolition of Structure(s)

The site is an open land with no significant permanent structure at the site. No demolition will therefore be required.

6.2.2. Structural Stability

The seismic zone map of Pakistan has divided the country into 4 seismic zones ranging in term of major, moderate, minor and negligible zones with respect to ground acceleration values. Under this zoning the proposed project site lies in the moderate to high hazard zone with minor to moderate damaging impact.

The recently developed guidelines for earthquake design of house and buildings in Karachi have assigned an expected Peak Ground Acceleration (PGA) value of 0.20.

6.2.2.1. Mitigation Measure

- ✧ During the construction, it will be important to maintain the stability of excavated area.
- ✧ During monsoons it will be essential to protect the excavation walls with shoring/bracing.

6.2.3. Erosion of Soil

Generally, the exposed soil after site clearance, road development and excavation for foundations is vulnerable to erosions and runoff by rains. Such a situation will be of temporary nature and short duration and lasts during construction phase.

6.2.3.1. Mitigation Measure

- ✧ Covering the open soil during the construction phase till such time that the foundations will adequately concreted.
- ✧ Intensification in fugitive dust emission caused by erosion of soil will be mitigated by appropriate measures to reduce the level of impact to minor significance.
- ✧ Control of air emission during construction will be ensured by adopting sound operating procedures such as:

- Exposed surface will be regularly wetted to effectively keep airborne dust levels to minimum
- Stockpiles of fine material will be wetted or covered with tarpaulin especially during windy weather conditions.
- Site workers will be mandated to wear dust masks especially during dry & windy weather conditions.

6.2.4. Excavation

The provision of foundations will require excavation below ground level. Once removed, the void space is likely to impact the integrity of the soil in the surrounding. To maintain the stability of excavation and to protect foundations of adjacent structures, retention measures such as bracing or shoring can be used to retain the soil during the construction of basement. It is essential to keep the excavation dry and excavation should be performed during dry season. It is imperative that system should have adequate water proofing to make sure moisture doesn't ingress into the retention system and basement.

6.2.4.1. Mitigation Measure

- Fencing and obscuring the construction site to reduce the perception impact was undertaken.
- It would be advisable to monitor the excavation cuts and if found necessary, shoring/bracing may be employed. It should be ensured that the excavation is done in dry season.
- The neighborhood will be notified with adequate signage at the very start of the project. Sites will be appropriately covered all around to contain the fugitive dust emission within the microenvironment. The impact of the activity will be continuously monitored by third-party since it is apprehended that the residents in the immediate neighborhood are likely to be exposed to dust fall hazards.

6.2.5. Construction Waste

Typical solid waste generated during construction includes wasted concrete, steel and wooden scaffolding, cement bags, excavated soil, wood remains etc. It is envisaged that the quantum of earth fill material will be significant. The waste generated has the potential to cause adverse impact on the surroundings if not properly managed and disposed to approved dumpsites by approved waste contractors. The excavated waste has the potential to block nearby drainage channels that could ultimately cause localized flooding, particularly during the monsoon season. Irregular storage of this waste may pose health hazards to the workers at site and more so to the school going children and residents in the neighborhood.

The following measures have been recommended for management of the excavation procedure and disposal of construction wastes:

6.2.5.1. Mitigation Measure

- Sites will be properly cordoned off by placing curtains all around.

- Unusable wastes will be transported to approved dumpsites.
- Excavated soil will be disposed of through the regular channel of the approved disposal contractor.
- Proper solid waste containers of adequate capacity will be provided to cater to daily waste generation.

6.2.6. Topography and Geology

The Project is not likely to impose additional stress on topographical parameters and hence no significant impacts are envisaged. The siting of the project demands careful planning and evaluation of load bearing capacity of the soil to ensure the stability of the proposed structure. As such the stability of the project is ensured and is not likely to impose additional stress on the sub-soil structure and hence no significant impacts are envisaged.

6.2.7. Air Quality

The major source of air pollution during the construction phase will be dust emission due to earth works and gaseous emissions from construction equipment. The major source of air pollution during the operation phase when the Project is functional will be the pollutant emissions from vehicles and stand-by generators.

Impacts from each source and proposed mitigation measures are likely to be as follows:

6.2.7.1. Dust Emission

Particulate matter emitted during construction activities results in deterioration of ambient air quality in the vicinity of the source and is usually a nuisance to the neighborhood and the communities in the neighborhood besides the construction workers. Dust emission from construction site is a concern particularly if the site is near residential areas. The main health hazards emanate from particles smaller than 10 microns (PM_{10}) in particular $PM_{2.5}$ as they are respirable. These particles are sufficiently charged to assume the properties of aerosols which on reaching the receptors have heavy impact on the respiratory system and on the surface of furnishings of the living environment. The impact on the environment would be considered significant if there is an increase in suspended particulate matter within and beyond the boundaries of the project site due to activities at the site, or if the dust affects local property or results in complaints from the community.

- Potential sources of particulate matter emission during construction activities include earthworks (dirt or debris pushing and grading), exposed surfaces/storage piles, truck dumping, hauling, vehicle movement on unpaved roads, and concrete mixing and batching. The quantity of dust that is generated on a particular day depends on the magnitude and nature of activity and the atmospheric conditions prevailing on the day. Availability of Ready-mix on commercial scale has considerably reduced the level of emission of fugitive and construction sites are no longer required to have a batching plant.

6.2.7.1.1. Mitigation Measure

The following mitigation measures have been recommended:

- Water sprinkling and monitoring to ensure adequate suppression of dust will be a regular activity as long as the excavation activity lasts.
- Dust emission from soil piles and aggregate storage stockpiles will have to be reduced by appropriate measures like keeping the material moist by sprinkling of water at appropriate frequency and regularly monitored by IMC. Availability & use of ready-mix on commercial scale will considerably reduce the level of emission of fugitive at the project site.
- Construction materials that are fragile and vulnerable to raising visible dust will be transported only in securely covered trucks to prevent dust emission during transportation.
- The exposure of construction workers to dust needs to be minimized by provision of dust masks and mandating the workers to wear them.

6.2.7.2. Vehicle and Equipment Exhaust

Combustion exhaust from vehicles and construction equipment can affect the ambient air quality of the site surroundings. The impact would be potentially significant when the ambient air quality deteriorates due to emissions from construction equipment and machinery or the construction generators etc. beyond the guidelines especially at the environmental receptors in the neighborhood. The exhaust emissions will include particulate matter, hydrocarbons, oxides of nitrogen, sulphur, and carbon.

6.2.7.2.1. Mitigation Measure

- All vehicles, generators and other equipments used during the construction will be properly tuned and maintained in good working condition in order to minimize emission of pollutants.
- The stack height of the generators during operation phase will be vented through vertical stacks to minimize exposure at ground level.
- The noise and air emission from the Project as a whole will be contained within its microenvironment by measures engrained in the development of infrastructure and other facilities in town. The mechanical area will be provided with noise abatement devices. Generator's emissions will be controlled to acceptable levels by segregating their locations and timely maintenance.
- In order to compensate for the increase and footprint of carbon and water vapor it would be desirable for proponent of project to undertake plantation of large number of trees with dense canopy at the nearest public park/green belt in consultation with the Independent Monitoring Consultant (IMC).

6.2.8. Construction Noise

Depending on the construction equipment used and its distance from the receptors, the commuters and residents in the neighborhood may be exposed to intermittent and variable noise levels. During the day such noise results in general annoyance and can interfere with sleep during the night.

In general, human sound perception is such that a change in sound level of 3 dB is clearly noticeable, and a change of 10 dB is perceived as a doubling or halving of sound level. The noise

in the project area will increase during construction and completion of the proposed project and may result in disturbance to the nearby receptors unless it is contained within the appropriately fenced and covered site of the Project.

Baseline noise measurements were obtained through continuous monitoring for a 24-hour period at the project site. It was found from the noise monitoring that the typical average noise level in the project area was >70 dB (A). The Sindh Environmental Quality Standards for noise require that the sound level in residential and commercial areas should not exceed 55 dB (A) and 65 dB (A) respectively during day time and 45 dB (A) and 55 dB (A) respectively during the night time.

6.2.8.1. Mitigation Measures

- Restraining the use of noisy equipment to suit to the conditions of the living environment namely 65 dB (A) during the day and 55 dB (A) during the night.
- Reducing equipment noise at source by proper design, regular maintenance & repair of construction machinery and equipment.
- Minimizing noise from vehicles and back-up power generators by use of proper silencers and mufflers.
- Use noise-abating devices wherever needed and practicable.

6.2.9. Water Sourcing

Water required for the numerous construction activities would not be of such order as to result in its reduced availability for other activities for the living environment. Conservation practices would nevertheless be adopted during the entire course of construction and operation.

Water will generally be obtained from the KWSB water supply system. The availability of ready-mix on commercial scale has greatly resolved the problem of availability of water in the initial stages. The drinking water need will be fulfilled through bottled from a bottled water supplier of repute.

Option for recycling of the wastewater and regeneration of the potable water from groundwater resources by adequate treatment may have to be explored. Water bowsers may also provide be obtained in case of water supply issues.

6.2.9.1. Mitigation Measures

- A complete record of water consumption during the construction and operation phase will be maintained.
- Water conservation practices will be adopted to prevent wastage of water.
- The water supply lines will be checked and repaired for leaks, if any, in order to reduce wastage of water.
- Use of water efficient sanitary fittings such as low flush toilets, water efficient shower heads, and aerators on faucets will be ensured throughout the Project cycle.

6.2.10. Soil Contamination

The contractor shall be mandated to follow the SOPs with regard to handling, storage, transfer, use and final disposal of contaminants, if any by the proponent. The following measures will be adopted during the construction stage to reduce the chances of soil contamination:

6.2.10.1. Mitigation Measure

- Fuel oils, lubricants, and chemicals will be stored in covered dyked areas, underlain with impervious lining. The construction site(s) will be provided with hard cover or tarpaulin lining to prevent contamination of soil.
- Washing and maintenance of vehicles and equipment will only be carried out at designated areas.
- Regular inspections will be carried out to detect leakages in construction vehicles and equipment.
- Appropriate implements such as shovels, plastic bags and absorbent materials will be made available near fuel and oil storage areas for removal of oil and contaminated soil.
- Contaminated soil will be removed and properly disposed after treatment such as by incineration by SEPA certified contractor.
- Hazardous Substances Rules 2014 will be adhered to for storage, transfer, subsequent handling and final disposal of any chemicals/substances during the operation stage.

6.2.11. Wastewater Generation & Disposal

6.2.11.1. Construction Phase

Disposal of domestic effluent from the construction site has to be adequately managed so that the wastewater flows into the regular channel and does not contaminate the soil and groundwater of the site or its surrounding.

6.2.11.1.1. Mitigation Measures

The following mitigation measures will be adopted during stages of construction:

- Wastewater generated will be routed to the nearest drain / sewerage system through multi-chamber Septic tank.
- Sewage will not be mixed with any other waste.

6.2.11.2. Operation Phase

Small quantities of hazardous wastewater may be produced during the maintenance activities in the project site (such as oily water etc.). The source of wastewater will include toilets, washrooms, laundry and kitchen. This wastewater would comply with the SEQS values provided that other hazardous wastes (i.e., paints etc.) are not mixed with it. The discharges from kitchen, canteen and other sources will be provided grease traps to separate the oily waste that will be disposed of responsibly through EPA approved contractor.

6.2.11.2.1. Mitigation Measures

Following mitigation measures will be adopted for effective management of wastewater during the operation stage of project:

- Sewage water shall be treated into sewage treatment plant, comprising at least of primary and secondary treatment before discharge into allocated drain. Option shall also be explored to reuse the treated water for irrigation purpose within the town.
- Option may also be explored to separate grey and soil water streams.
- Waste segregation measures would be employed to minimize entry of solid waste into the wastewater stream.
- Water conservation strategies will be employed to avoid wastage of water.

6.2.12. Solid Waste Generation and Management

6.2.12.1. Construction Phase

- The construction phase of the project is expected to generate wastes including; packing waste; scrap, excess construction materials and debris, domestic wastes from construction camp, empty containers and drums, used lubricating oils and chemicals etc.
- The impact of solid waste disposal would be significant if the waste management is not carried out appropriately. This may adversely affect the health of workers, cause soil pollution, and deteriorate the quality of surface water and groundwater. Also, if excessive wastes are generated, recyclable wastes are not recycled, wastes are scattered, handling of wastes will result in contamination, and wastes are improperly disposed of, the result would be serious degradation of the environment.
- Waste generated as a result of construction activity will be inherently less reactive and chemically inert under normal conditions however, its handling and storage may pose adverse impacts of minor nature which could be controlled by employing the recommended mitigation measures in the EMP.

6.2.12.1.1. Mitigation Measures

A waste management plan will be developed for the construction stage of the project. The following will be the key elements of the waste management system:

- Separate bins will be placed for different type of wastes - plastic, paper, metal, glass, wood, and cotton.
- Recyclable material will be separated at source. The recyclable waste will be sold to EPA certified waste contractors for recycling.
- Non-hazardous non-recyclable wastes such as kitchen wastes will be disposed of in landfill site managed by municipal administration or approved waste manager/contractor such as SSWMB.
- No wastes will be dumped at any location outside the site boundary.

- All hazardous waste will be separated from other wastes. Hazardous wastes will be stored in designated areas with restricted access and proper marking. Hazardous wastes will be disposed of through approved waste manager/contractor.
- Surplus construction materials including partially filled chemical and paint containers will be returned to suppliers. Inert construction wastes will be disposed of onsite as fill material or sold as scrap to contractors.
- Records of all waste generated during the construction period will be maintained. Quantities of waste disposed, recycled, or reused will be logged on a Waste Tracking Register.
- Training will be provided to personnel for identification, segregation, and management of waste.

6.2.12.2. Operation Phase

- The project will generate solid waste from residential and commercial units of the project.
- If not properly managed and disposed of this can pose serious environmental threat of pollution not only to the residents and visitors to the complex but also to the surrounding settlements.
- Solid waste management however remains an unresolved problem in Karachi. Several options have been proposed and also implemented but none of them could resolve the problem. The solution perhaps lies now in the attempts that the Sindh Solid Waste Management Board has launched on. The SSWMB has taken a holistic view of the situation and has integrated a number of options that may at least partly alleviate the heavy impact which Karachi is faced with.

6.2.12.2.1. Mitigation Measures

The following measures would reduce the negative impacts of solid waste disposal:

- The solid waste shall be collected through garbage chute at dedicated site.
- All solid waste shall be segregated into organic and recyclable waste at source and then collected, stored, and transported for ultimate safe disposal.
- Handling & disposal of solid waste shall be managed by a dedicated waste management contractor.
- The solid waste management plan developed will be implemented and facilities for collection, storage and transportation will be established and organized.

6.2.13. Operation of Vehicular Traffic

Vehicular traffic management will have to be undertaken seriously to restrain unnecessary traffic jams that may cause annoyance to the commuters travelling on the roads surrounding the project.

6.2.13.1. Mitigation Measures

The following mitigation measures will be adopted to remove the constraints to smooth flow of traffic:

- Heavy traffic during construction; phase will come to the project site during late night hours. Project vehicles shall not be fitted with pressure horns.
- Speed of vehicles will be regulated during construction phase.
- Designated parking areas will be provided for different type of project vehicles within and around the project site.
- Traffic management plan will be introduced to manage smooth flow of vehicular traffic and to avoid traffic jam and long queues.
- Traffic management plan will be implemented and monitored.
- Vehicles will be parked at designated parking areas during operational phase.
- Parking of vehicles alongside the road would be prohibited at all time.

6.2.14. Seismic Hazards

The area presents a moderate to high hazard potential for earthquake activity. The recently developed (after the October 2005 earthquake) seismic zone map of Pakistan has divided the country into 4 seismic zones ranging in term of major, moderate, minor and negligible zones with respect to ground acceleration values. Under this zoning the project site lies in the moderate to high hazard zone with minor to moderate damaging impact.

The recently developed guidelines for earthquake design of house and buildings in Karachi have assigned an expected Peak Ground Acceleration (PGA) value of 0.20g for larger buildings. This would place the project site within Uniform Building Code (UBC) Zone 2B. The expected intensity according to the Modified Mercallis Scale (MM) would be VIII and higher.

6.2.14.1. Mitigation Measures

No specific mitigation measures other than construction of the proposed project in accordance with the UBC Zone 2B are recommended.

6.2.15. Fire Hazards and Life Safety

Fire is one of the major hazards in dwellings and commercial units. Fire can cause loss of life and property. However, at the same time fire have the potential to severely harm the people in the vicinity and affect the living environment.

6.2.15.1. Mitigation Measures

Risks involved with fire hazard can be reduced by adopting following measures:

- A dedicated fire tender shall be available at Project Site.
- For all engineering designs, NFPA (National Fire Protection Association) codes needs to be followed.
- Standard fire and smoke detection and protection devices such as alarms, fire hoses and hydrants to be provided in all critical areas.
- A detailed emergency and evacuation plan shall be prepared that will be regularly drilled to make sure that the responsible staff remains trained at all times.

- Firefighting equipment such as fire extinguishers and hydrant systems will be maintained at strategic locations e.g., schools, commercials centers and residential areas within the scheme.
- Regular inspection and servicing of the extinguishers will be undertaken by a reputable service provider and record of such inspections should be maintained.
- Signs such as “NO SMOKING” will be prominently displayed within the premises, especially in parts where fuel storage is involved.

Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere.

6.2.16. Energy use

Electricity during construction phase will be produced from diesel generators, whereas during operation phase, power supply from KE shall be made available.

A back up diesel operated generator will also be installed in case of emergency or suspension of power supply from the mains. Since energy produced from non-renewable resource results in COx, SOx, and NOx emissions, it is important to ensure that energy is used prudently and best management practices are adopted.

6.2.17. Materials Selection

General specification/details have been worked out in respect of type of structures, concrete, and all other materials required for the construction of facilities in town. The following measures will be adopted to ensure sustainable development of the Project:

6.2.17.1. Mitigation Measures

- The structures and materials will, in the construction stage, conform to recommended standards and follow standard practice of civil works.
- Materials including paving stones, crush, gravel and sand will be brought from commercial quarries located in Sindh province. Environmentally sound materials and goods will be selected, with priority being accorded to products meeting national and international standards.
- Traditionally well-tried materials and components will be selected and selection of construction materials would be based on sustainable source.
- The production, use and disposal of concrete materials during the construction stage of the project will utilize considerable amount of energy and resources; all attempts will be made towards efficient consumption and minimization of wastage of water, energy and materials
- Best practice of energy efficiency will be adopted in the infrastructure development in town. The residential house and other facilities would be constructed with high level of thermal insulation
- The environmental impacts arising from selection of materials and components would take account of the environmental issues during the materials selection process, and introduce Recycling strategies such as Reuse and Reduction of Wastewater.

6.2.18. Disturbance to Wildlife

The project site does not have any designated wildlife habitat or endangered species. Therefore, no significant impacts are envisaged on the wildlife during the project construction and operation phase.

6.2.19. Potential Impacts on Socio-economic Environment

- Health, Safety and Environment are major components of the Environmental Management Plan (EMP) of which monitoring of the environmental performance is an integral part. The proponent has to ensure strict adherence to the measures and guidelines stated in the EMP and the contractor must be made to follow the Standard Operating Procedures (SOPs) for construction activities.
- It is not unusual to observe that construction workers are left on their own to protect themselves from imminent hazards. Accidents usually occur at unprotected sites and are incident on unprotected workers. HSE considerations require that precautions must be taken against even the most insignificant impacts.
- Major social concerns during the construction stage arise when: i) the stakeholders are not informed about the project or its schedule of operations; ii) the site is not appropriately cordoned off to restrain outsiders from entering the site; iii) construction crew invariably ignores or sidetracks the mandatory requirement of wearing PPEs; iv) construction crew is not pre-trained to be aware of the likely hazards during various stages of the project; v) even if they are trained on awareness and provided the PPEs the lukewarm attitude of the supervisors does not oversee the follow-up of HSE procedures/SOPs.
- Safety risk assumes substantial proportion in densified areas of urban centers. Under the circumstances there is need for strict compliance with the HSE procedures and accidents incident on non-observation of HSE procedures must be keenly monitored and recorded to ensure the safety of both workers and citizens. For this purpose, the contractor will be required to maintain a record of procedures on Health, Safety and Environmental Management Plan and Standards Operating Procedures in addition to the following:
    - Provide alternative traffic arrangement/detours, if necessary, so that traffic can be distributed and move on different roads; and, ensure that public/residents association is informed about such traffic diversions;
    - Provide information to the public through media – daily newspapers and local cable television (TV) services about the need and schedule of work, and alternative routes;
    - Maintain transparency of the project, public information/caution boards must be provided at the work site – information shall *inter-alia* include: project name, cost and schedule; executing agency and contractor details; nature and schedule of work; traffic diversion details, if any; entry restriction information; competent official's name and contact information for public complaints.
    - Restraining access to the public from the site by enclosing/barricading the construction area; providing warning boards and sign boards and positioning security guards throughout the day and night, 07/24;

- Ensuring provision of PPEs (helmet, hand gloves, boots, masks, safety hoists when working at height, etc.) and making sure that all workers do wear them;
- List the code of conduct and standard operating procedures (SOPs) to be followed during different stages of construction;
- Employ an Environmental, Health and Safety (EHS) expert on site;
- Provide on-site Health and Safety Training for all site personnel;
- Report accidents to the authorities promptly, and maintain records on regular basis
- Temporary inconveniences due to construction works will be minimized through planning and coordination with community members and organizations e.g. Traffic Management Authorities.
- Maintain the service roads in good condition to allow smooth traffic movement; provide necessary personnel to guide and control the traffic.

✧ The proposed Project will create employment during its construction and operation phase. The Project will create employment opportunities after completion. This also includes staff directly involved in the operation and management of the facilities that include the project management, the staff engaged by the residential flat owners, shop owners, domestic servants, security personnel, and drivers.

✧ Most of the workforce will consist of local people. The generation of employment is likely to be a major positive impact arising from the proposed development.

✧ The Table presented below illustrates an analysis of the socioeconomic impacts on the two domains of socioeconomic environment viz. macroenvironment and microenvironment. It may be seen from the Table that both domains have impact that are positive. The Project would promote economic uplift and raise the status of the commercial enterprises and social status as well as lifestyle of the community resident in the microenvironment of project area. Creation of jobs and promotion of business and commercial activities is an additional feature of the proposed Project.

Table 6.1: Nature and Degree of Positive Socioeconomic Impacts

Nature of positive impact	Degree of impact	Description
I. Construction Phase:		
Job opportunity	Positive Impact	Generate unskilled, semi-skilled and skilled jobs as construction laborers and other service providers.
Wider economic impact	Positive Impact	Economic impact in terms of generating opportunities for other business-like sourcing of man and material supplies for specialized jobs.
II. Operation Phase		
Job opportunity	Major Positive Impact	Generate large number of jobs in various positions both in managerial, supervisory and subordinate positions.
Improvement in quality of life	Major Positive Impact	Provide safe and secure environment for social, cultural, and commercial activity
Enhancement of quality of environment	Major Positive Impact	Benefit the macroenvironment by adopting Public Park/greenbelt as a social responsibility

6.2.20. Cultural Resources

There are no protected or otherwise cultural or archaeological sites in the microenvironment of the project site and hence no impact of the project will occur on cultural or archaeological resources.

6.2.21. Land-use and Aesthetics

The development of town would affect the change in the existing land use of the area, which is vacant land, however the overall aesthetics of the area will be improved due to the development of the site.

6.2.22. Impacts Rating

The following Checklist for the Project provides the screening of potential environmental impact on different components of ecosystem:

Table 6.2: Potential Environmental Impact during Different Stages of the Project and Mitigation Measures

Actions Affecting Environmental Resources & Values	Damage to Environment	Recommended Mitigation Measures	Significance of Impact			
			None	Small	Medium	Major
Environmental Problems during Construction Phase						
Soil Erosion	Loss of fertile soil	Careful planning of land excavation.		✓		
Contaminated Land	Soil and water pollution	Implementation of Waste management plan and provision of septic / soak pits.		✓		
Construction Waste	Soil contamination, water and air pollution	Implementation of Waste management plan. Adequate monitoring during construction			✓	
Change in Ambient Air Quality	Nuisance due to dust esp. by PM_{10}, spoil property and cause visibility issues.	Water sprinkling. Careful planning to minimize air emissions.		✓		
Wastewater Generation & Disposal	Deterioration of surface and ground water quality, disturbance to flora and fauna as well as contamination of soil surface	Provision of septic / soak pits. Careful monitoring of effluent discharge			✓	
Solid Waste Generation & Disposal	Effect the health of the workers, cause soil and water pollution	Implementation of Waste management plan. Careful planning to minimize the problem.			✓	
Noise & Vibration	Nuisance problem	Careful planning and management of noise producing activities		✓		

Vehicular Traffic	Environmental degradation	Careful planning and management. Implementation of Traffic management plan during construction.		✓		
Occupational Health & Safety	Over exertion, slips and falls as well as site hazards	Implementation of appropriate procedures			✓	
Environmental Hazards during Operation Phase						
Inadequate management and monitoring of operation	Environmental degradation, waste of resources and time	Properly programmed operations and their monitoring		✓		
Wastewater Generation & Disposal	Deterioration of surface and ground water quality, disturbance to flora and fauna as well as contamination of soil surface	Careful monitoring of sewage discharge.		✓		
Solid Waste Generation & Disposal	Effect the health of the workers, cause soil and water pollution	Careful monitoring to minimize the problem. Proper disposal of waste as well as management.		✓		
Energy Consumption	Utilization of natural resources	Careful monitoring to save the natural resources.		✓		
Illumination	Cause of light pollution for the neighbourhood	Careful planning to solve the problem.		✓		
Emergency situation; fire hazard	Occupational hazard, possible environmental degradation	Provision of firefighting system		✓		
Environmental Aesthetics	Loss of environmental aesthetics	Careful planning	✓			

Chapter 7 Environmental Management Plan

7.1. Introduction

7.1.1. General

The Environmental Impact Assessment (EIA) for the proposed development activities of Project has identified potential impacts that are likely to arise during the construction and operation phases. The EIA has examined in detail both negative and positive impacts of each stage of the operation. Where adverse impacts have been identified, the EIA has recommended mitigation measures; include management and monitoring practices, physical controls, or compensation in monetary terms. The mitigation measures proposed are based on a good understanding of the sensitivity and behavior of environmental receptors, past experience, case studies, legislative controls, guidelines, & expert advice. For the effective implementation and management of the mitigation measures and monitoring requirements an Environmental Managements Plan (EMP) has been prepared and presented in this section. For any residual impacts (impacts remaining after applying the recommended mitigation measures) or for impacts in which there has been a level of uncertainly in prediction, monitoring measures have been recommended. Advice on monitoring measures required was sought from experts involved in the EIA and case studies of similar development activates at international level.

7.1.2. Objectives

The EMP provides a delivery mechanism to address adverse impacts, to enhance project benefits and to introduce standards of good practice to be adopted for all project works.

The primary objectives of the EMP are to:

- Outline mitigation measures recommended in the EIA and define the responsibility and timing for the implementation of these measures;
- Develop monitoring mechanism & identify parameters that can confirm the implementation of the mitigation of these measures;
- Define roles and responsibilities of the project proponent for the implementation of EMP and identify areas where these roles & responsibilities can be shared with other stakeholders and
- Define the requirements necessary for documenting compliance with the EMP and communicating it to all concerned regulatory agencies.

For each impact, or activity, which could give rise to an impact, the following information is presented:

- Mitigation measure that will be implemented;
- The person(s) responsible for ensuring full implementation of the mitigation measure;
- The parameters that will be monitored to ensure effective implementation of the mitigation measure;

- The timing for the implementation of the action, to ensure that the objectives of the mitigation are fully met.

7.2. Structure of the EMP

The EMP consists of the following section.

- Legislation and guidelines.
- Organizational structure and roles and responsibilities;
- Mitigation management's matrix
- Environmental monitoring program
- Change management plan
- Training Program

7.3. Legislation and Guidelines

The EIA has discussed in detail all the legislation and guidelines (chapter 2) which has relevance to the project. The proponent shall ensure that the construction and operation of project is conducted in conformance to relevant legislations and guidelines and guidance is sought as and when required. The proponent shall also ensure that the key project management staff is aware of these legislations and guidelines. SEQS for municipal and industrial effluents, selected gaseous pollutants from industrial sources and motor vehicle exhaust and noise have been provided in Chapter 2.

7.4. Organizational Structure and Roles and Responsibilities

7.4.1. Organizational Structure

The proposed project includes the following main organization:

- The project proponent and owners of the EMP.
- The construction contractor as well as contractor required during the operational phase (e.g. waste contractor) as the executors of the EMP.

These organizations will have the following roles and responsibilities during the project activities.

7.4.2. Roles and Responsibilities

A. General

Project Proponent: Project proponent will be responsible for ensuring the implementation of the EMP. A person holding a senior position will be responsible for the overall environmental performances during the proposed project. The person will be responsible for ensuring the implementation of the EMP by the proponent and all project contractors. The proponent's Site Representative (SR) will be responsible of implementation of the EMP and liaison with project contractor and stakeholders at site regarding environmental issues during the construction phase.

Further the person holding a senior position in the proponent team will also be responsible for monitoring EMP's compliance and provided technical support in environmental issues.

Project Contractors: For the proposed project, the proponent will appoint construction contractor for different field operations. Various contractor will also be hired during the operation phase of the facilities in town (e.g. waste contractors). The contractors will be responsible for implementation of, or adherence to, all provisions of the EIA and the EMP and with any environmental and other codes of conduct required by the proponent. Overall responsibility of the contractor's environmental performances will rest with the person holding the highest management position within the contractor's organization reporting to their management. The contractor's site managers will be responsible for the effective implementation of the EIA and the EMP. The contractor's HSE officers will have functional responsibilities to ensure implementation of or adherence to the EMP.

B. Planning and Design of the Operations

Details of project Activities: Details of the project activities are provided in section 2 of the EIA report. Following approval of the EIA, any changes to the proposed activities will be handled through the change Management Plan provided in this EMP.

Approvals: No-objection Certificate (NOC)/Approval from SEPA will not relieve the proponent of other legal obligation and hence the proponent and project contractors will obtain all other relevant clearance and necessary approvals required by the Government of Sindh and Relevant departments prior to commencing the respective operations.

Contractual Provision: Adherence to the requirements of the EIA and EMP in terms of environmental mitigation will be required from all project contractors and thus EMP will form part of their contractor with the proponent.

C. Implementation of the Operation

Co-ordination with Stakeholders: The proponent will ensure that co-ordination with the regulators and other stakeholders on environmental & social matters is maintained throughout construction & operation phase of the project.

Monitoring: The proponent and the contractors will ensure that monitoring of the project activities is carried out throughout the project. The site representative will monitor all project activities during the construction and operation phase. He will keep a record of all non-conformances observed and report these along with actions to the proponent management in Karachi for further action. The site representative will also report any impacts anticipated along with his recommendation for further action.

Emergency Procedures: The proponent and the contractors will prepare contingency plans to deal with any emergency situation that may arise during the construction and operation e.g. major oil spills, medical evacuation & communicate these to the regulatory agencies if required by these agencies.

Approvals: The project contractor will be responsible for obtaining all relevant approvals such as approvals for waste contractors, water source & others as specified in Mitigation Management Matrix.

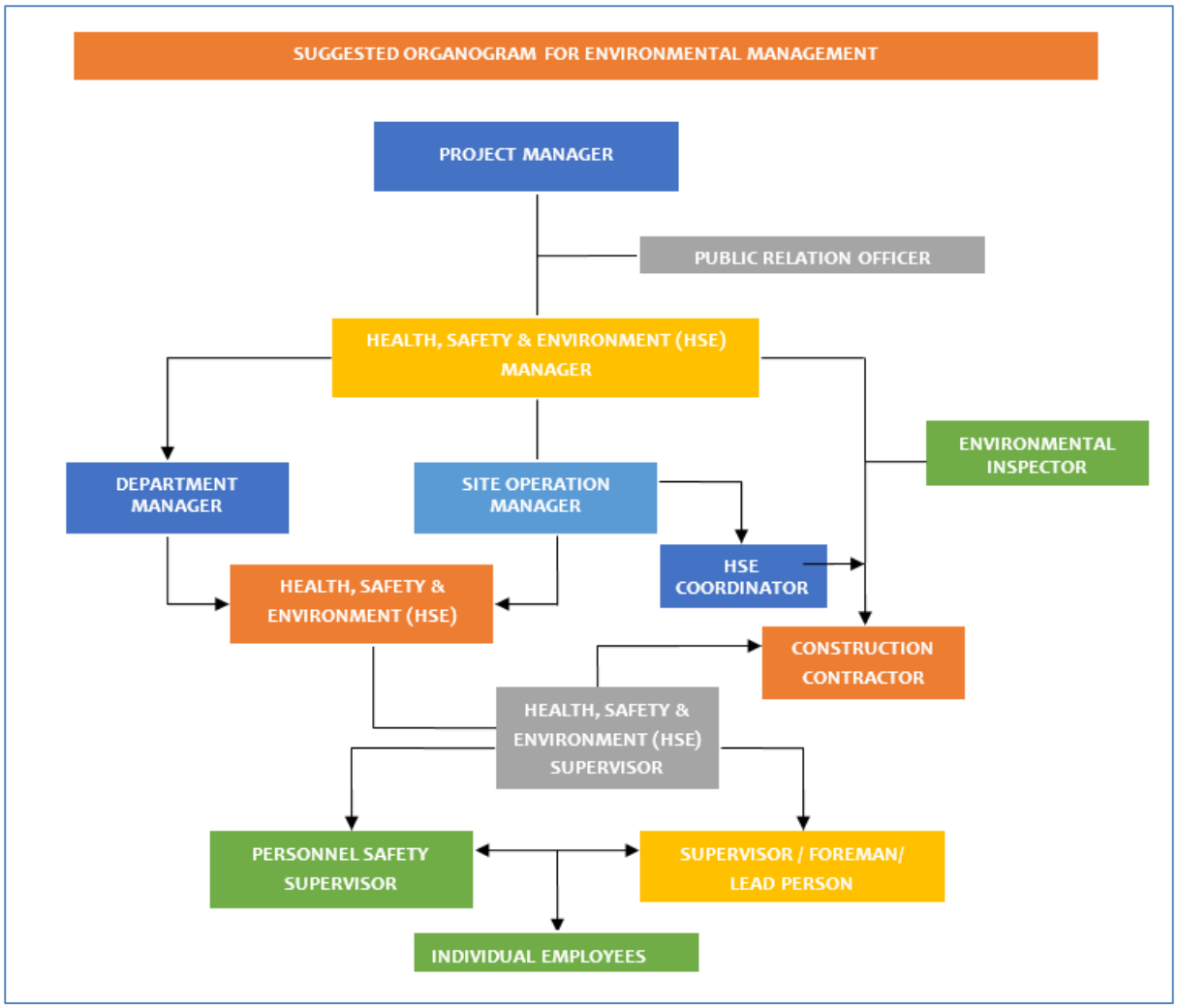
Trainings: The project contractors will be responsible for the selection and training of their staff capable of completing the project activities properly and efficiently. The contractors will be responsible for providing training to their staff members according to the training programme. The training programme is discussed briefly in section 6.7.3.

D. Communication and Documentation

The proponent and the contractor will ensure that the communication and documentation requirements specified in the EMP are fulfilled during the construction and operation phase.

Change Management: The EIA for the proposed project recognizes that changes in the operation or the EMP may be required during the project activities and therefore provides a Change Management Plan to manage such changes. Overall responsibility for the preparation of change management statements will be with Proponent's site representative.

Restoration: The proponent along with the construction contractor will be responsible for the final restoration of work areas.



7.5. Maintenance of the EMP

EMP needs to be revised on timely basis to keep up-to-date as per the requirements comes up regularly. Therefore, outlining the responsibilities and activities associated with the maintenance of the EMP is essential. The responsibilities of the Construction Contractor should be detailed and procedures for requesting EMP revisions should also be outlined. EMP revision procedures must include requirements for notification of the appropriate government and municipal agencies so that their role is also played in the overall management process.

7.6. Environmental Health and Safety Management System

Environmental, Health and Safety Management System is essential for the care of EHS issues which should outline mitigation measures and best management practices. This management system recommends carrying out a complete assessment, evaluating, monitoring, identifying and control all potential hazards and risks arise during the construction and operation phases of the proposed project. It needs to ensure that the Health and Safety Plan (HSP) along with the Health and Safety Rules is established and enforced. The Plan should outline roles, responsibilities and expected outcomes with respect to the environmental health and safety management of the construction & operation phase of the Project. These measures should be implemented to ensure that no significant adverse environmental, health and safety impacts are created by activities associated with the construction of the project.

Protection of the public and workforce health and safety during both construction and operations is the prime responsibility of proponent. Utilizing expert personnel and the Environment, Health and Safety Management System (EHSMS), the potential health and safety hazards and risks will be identified and assessed, then the subject of substantial planning, organization, procedures for various facility are developed.

7.6.1. Health and Safety during Construction Phase

Worker Health & Safety Management Plan will also be outlined to implement mitigation measures and best management practices. The plan should be implemented to ensure that no significant adverse worker's health and safety issues arise from activities associated with the construction of the project.

Potential hazards for workers in construction include:

- Falls (from heights);
- Trench collapse;
- Scaffold collapse;
- Electric shock and arc flash/arc blast;
- Failure to use proper personal protective equipment; and
- Repetitive motion injuries.

7.6.2. Health and Safety during Operation Phase

Since the project is high-rise development, occupational health & safety issues need to be addressed and managed effectively to ensure safety of its occupants in particular and the neighborhood in general.

7.7. Emergency Response Plan

Emergency may be defined as a sudden event causing or has the potential to cause serious human injury and/or environmental degradation of large magnitude. The best "cure" for an emergency is, of course, "prevention". The probable emergency situation can be:

- Serious fire or explosion
- Major gas leakage.
- Major Spillage
- Natural calamity such as heavy rain, flooding, dust storm or earthquake, cyclone, etc.
- Bomb threat or any sabotage/terrorist activity
- Any other incident involving all or large part of the premises and its workers.

Emergency Response Management is provided by a small team of senior managers (the "Control Committee") who in turn will direct all response activities through the Emergency Response Unit.

7.7.1. Objectives

The main objective of this plan is to establish the general guidelines for the actions to be taken in the event of fires, explosion, emergencies, accidents, disasters and sabotage, aimed at minimizing their effects and consequences, in order to protect:

- The lives of own or third-party personnel present in the project facilities.
- The lives of the occupants of the Project
- The lives of the nearby residents & communities coming into the direct influence of the project area.
- The lives of the ecological systems located in the surroundings of the Project.

7.7.2. Emergency Response Manuals

Based on the Risk Assessment the proponent should prepare written emergency preparedness and response plans/procedures for the project facilities to cover emergency situations that could occur. It may be required that Emergency Response Manuals will be developed for various situations arising.

7.8. Environmental Compliance Reporting, Documentation and Trainings

The management will be responsible for the regular audit and review of the environmental management and monitoring plan. This will include both on-site auditing and review of performance reports. Additional onsite inspections and investigations will be undertaken in the event of significant environmental incidents. These will be undertaken in conjunction with the IMC. The management will participate in the audits and inspections and investigations. The management will also be responsible for regular review of the environmental performance of the site and site personnel, and for the reporting on the implementation of commitments made in the EMP.

In particular, there will be:

- Periodic audit reports.
- A review and improvement of the EMP.

Management recognizes that periodic external compliance audits and inspections will be made through a third-party consultant (IMC) to monitor, assess and validate the level of performance and compliance pursuant to the commitments made in the accepted Environmental Management Plan. The monitoring reports shall also be submitted to Sindh Environmental Protection Agency (SEPA) on regular intervals.

Training: It an important step for the implementation of the EMP. All the employees will require to be trained to work appropriately on EMP. EHS Manager will organize trainings in consultation with HSE Officer. It will make sure that employees understand the Environment, Health and Safety issues. Trainings should be arranged on regular basis with notification that it should be attended all respective employees.

HSE Officer will determine the training requirements during both phases. Induction will be the basis of all training courses for contractor & subcontractor during construction phase.

Trainings identified in EMP are given below:

- Site induction course
- Training for emergency response and preparedness
- Training for familiarization with site environmental controls

7.9. Mitigation Management Matrix

The Mitigation Management Matrix will be used as a management & monitoring tool for implementation of the mitigation measures required by the EIA. Mitigation management matrix for construction and operation is provided in the table 7.1. The matrix lists down the following:

- The mitigation measure recommended in the EIA.

- The person/organization directly responsible for adhering to or executing the required mitigation measures.
- The parameters which will be monitored to ensure compliance with the mitigation measures;
- The timing at which the mitigation or monitoring has to be carried out.

It is highlighted that although responsibilities for executing and monitoring mitigation measures have been delegated to different persons, the proponent will hold the primary and overall responsibility for ensuring full implementation of the EMP.

7.10. Environmental Monitoring Programme

The objective of the environmental monitoring during the construction & operation phase will be as follows:

- To check compliance of the contractors with the EMP by monitoring activities of the project on a daily basis. This will be called compliance monitoring.
- To monitor impacts of the operation in which there has been a level of uncertainty in prediction such as impacts of noise, water abstraction etc. and to recommend mitigation measures if the impacts are assessed to be in excess of or different from those assessed in the EIA. The aim will be attained through effects monitoring.
- To achieve these objectives, the following monitoring programme will be implemented.

7.10.1. Compliance Monitoring

Compliance monitoring will be carried out to ensure compliance with the requirements of the EIA and to document and report all non-compliances. The mitigation management matrix provided in the EMP will be used as a management and monitoring tool. The contractor's HSE Officer will be responsible for monitoring the compliance of their organization with the relevant EMP requirements. Proponent's site representative will monitor the contractor's compliance and will also ensure that during construction each activity system and plan is in place for effective compliance monitoring.

The site representative will make regular checks on the contractor's works; keep records of all non-compliances observed during the execution of the project activities; & the details of all remedial actions taken to mitigate the project impacts.

7.10.2. Effects Monitoring

An independent monitoring consultant (IMC) will be responsible to carry out the required effects monitoring during the construction and operation phase.

7.10.3. Environmental Reporting

A. Final Monitoring Report (Construction Phase)

After completion of construction phase, a final monitoring report will be prepared by Proponent's site representative. The report will include the following:

- Introduction.
- Details of the Project Activities.
- Natural Resource used during the Project.
- List of Non-compliances recorded.
- Effects of the Project on Communities and Physical Resources.
- Photographic Records
- Approvals provided during the project
- Change managements statements
- Trainings
- Conclusions

B. Annual Environmental Monitoring Reports (Operation Phase)

The project proponent shall prepare annual environmental monitoring reports describing the conduct of the operation phase for project along with details of the effects monitoring conducted annually during the operation phase of the project. The report shall be submitted to the SEPA.

7.11. Change Management Plan

The EIA for the proposed project recognizes that changes in the operation or the EMP may be required during the construction and operation and therefore provides a Change Management Plan to manage such changes. The management of changes is discussed under two separate headings, Additions to the EMP and Changes to the Operation and the EMP.

7.11.1. Changes to the EMP

The EIA and the EMP have been developed based on the best possible information available at the time of the EIA study. However, it is possible that during the conduct of the proposed operation additional mitigation measures based on the findings of environmental monitoring during the operation may have to be included in the EMP. In such cases following actions will be taken:

- A meeting will be held between the proponent and the concerned project contractors. During the meeting, the proposed addition to the EMP will be discussed and agreed upon by all parties.
- Based on the discussion during the meeting, a change report will be produced collectively, which will include the additional EMP clause and the reasons for the addition.
- The report will be signed by all parties and will be filled at the site office: A copy of the report will be sent to the proponent and contractor head offices.

- All relevant project personnel will be informed of the addition.

7.11.2. Changes to the Operation

The change management system recognizes three orders of changes:

A. First Order

A first order change is one that leads to a significant departure from the project described or the impacts assessed in the EIA and consequently require a reassessment of the environmental impacts associated with the change. Example of first order change includes change in location of proposed project. Action required in this case will be that the environmental impacts of the proposed change will be reassessed by the proponent and sent to the SEPA for approval.

B. Second Order

A second order change is one that does not result in the change in project description or impacts that are significantly different from those detailed in the EIA. Example of second order changes includes extension in the site area. Action required for such changes will be that the proponent will reassess the impact of the activity on the environment & specify additional mitigation measures if required and report the changes to SEPA.

C. Third Order

A third order change is one that does not result in impacts above those already assessed in the EIA, rather these may be made site to minimize the impact of an activity such as:

- Increase in project workforce;
- Change in layout plan.

The only action required for such changes will be to record the change in the Change Record Register.

7.12. Training Programme

Environmental training will form part of the environmental management system. The training will be directed towards all personnel for general environmental awareness.

7.12.1. Objectives

The key objective of training program is to ensure that the requirements of the EMP are clearly understood and followed throughout the project. The trainings to the staff will help in communicating environmental related restrictions specified in the EIA and EMP.

7.12.2. Roles and Responsibilities

The contractors will be primarily responsible for providing environmental training to all project personnel on potential environmental issues of the project. The contractors will be responsible to arrange trainings and ensure the presence of targeted staff.

7.12.3. Training Programme

The environmental awareness, EIA and EMP training will be carried out during the project activities.

A. Training log

A training log will be maintained by tine contractors. The training log will include:

- Topic
- Date, time and location
- Trainer
- Participants

B. Training Needs Assessment

In addition to the training specified in the training log special/additional trainings will be provided during the project activity. The criteria to assess the need of training will be based on the following:

- When a specified percentage of staff is newly inducted in the project
- When any non-compliance is repeatedly reported refresher training will be provided regarding that issue.
- When any incident/accident of minor or major nature occurs. Arrival of new contractor/sub-contractor.
- Start of any new process/activity.

C. Training Material

The contractors will develop & prepare training material regarding environmental awareness, sensitivity of the area, EIA, EMP and restrictions to be followed during the project. Separate training material will be prepared for each targeted staff.

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Table 7.1: Environmental Management Plan (EMP)				
S.#	**Impact and Mitigation Measures**	**Responsibilities**	**Monitoring**	**Timing**
1	**Land Use and Soils**			
1.1	The construction activities will be planned to minimize disturbance to soil	Proponent, CC	Monitoring compliance	During construction phase
1.2	To the extent possible, equipment and materials would be staged in areas that have already been disturbed	Proponent, CC	Monitoring compliance	During construction phase
1.3	Movement of construction equipment will be restricted to work areas only to avoid unnecessary disturbance to soil	CC	Monitoring compliance	During construction phase
1.4	Routes of water tankers, dumper trucks and other project vehicles will be monitored for any signs of soil disturbance & road damage	CC	Monitoring compliance	During construction phase
1.5	Area showing signs of unstabilised soil conditions will be compacted and watered	Proponent, CC	Monitoring compliance	During construction phase
1.6	The assessment of settlement within affected zone due to dewatering will be conducted prior to dewatering	CC	Monitoring compliance	During construction phase
1.7	The affected zone of settlement, if identified will be monitored regularly during dewatering activity	Proponent, CC	Monitoring compliance	During construction phase
1.8	Proper drainage will be provided to construction camp, construction site, especially near excavations and around proposed facility	CC	Monitoring compliance	During construction phase
1.9	Vehicle speed will be regulated and monitored to avoid excessive dust emissions	CC	Monitoring compliance	During construction phase
1.10	Total land uptake by the project and associated facilities will be kept to the minimum	Proponent, CC	Monitoring compliance	During construction phase
1.11	Periodic trainings will be provided to drivers on mitigation measures related to off-road travel and speed limits	Proponent, CC	Check training records	During construction phase

1.12	The Project will have a storm water collection system so that the storm water effluent has minimal sediment load	Proponent, CC	Monitoring compliance	During design and construction phase
2	**Air Quality**			
2.1	**Dust Emissions**			
2.1.1	Water will be sprinkled daily or when there is an obvious dust problem on all exposed surfaces to suppress emission of dust. Frequency of Sprinklings will be kept such that the dust remains under control, particularly when wind is blowing towards the receptors	CC	Monitoring compliance	During construction phase
2.1.2	Dust emissions from soil piles and aggregate storage stockpiles will be reduced by appropriate measures. These may include: → Keeping the material moist by sprinkling of water at appropriate frequency → Erecting windshield walls on three sides of the piles such that the wall project 0.5m above the pile, or → Covering the pile, for example with tarpaulin or thick plastic sheets, to prevent emissions. → Locating stock piles out of the wind direction	CC	Monitoring compliance	During construction phase
2.1.3	All roads within the proposed Project will be paved as early as possible after the commencement of construction work. Until the roads are paved, they will be sprinkled regularly to prevent dust emission. Other temporary tracks within the site boundary will be compacted and sprinkled with water during the construction works.	Proponent, CC	Monitoring compliance	During construction phase
2.1.4	Project traffic will maintain a maximum speed limit of 20km/hr on all unpaved roads within the proposed site area.	Proponent, CC	Check speed of vehicles	During construction phase

2.1.5	Construction materials that are susceptible to dust formation will be transported only in securely covered trucks to prevent dust emission during transportation.	CC	Monitoring compliance	During construction phase
2.1.6	The exposure of construction workers to dust will be minimized by provision of dust masks.	CC	Check for dust masks	During construction phase
2.2	**Vehicle Equipment and Exhaust.**			
2.2.1	All vehicles, generators and other equipments used during the construction will be properly tuned and maintained in good working condition in order to minimize emission of pollutants.	Proponent, CC	Maintenance records of vehicles and equipment	During construction phase
2.2.2	The stack height of the generators during operation phase will be vented through vertical stacks to minimize exposure at ground level	CC	Monitor compliance	During construction phase
2.3	**Generator Emissions**			
2.3.1	The option of using natural gas as fuel in the back-up generators should be explored.	Proponent, Generator Vendor	Monitor compliance	During design phase
2.3.2	The generator will be properly tuned and maintained in good working condition in order to minimize exhaust emissions	Proponent	Check maintenance records	During operation phase
2.3.3	The diesel generator should be used for a very short duration with the power switched back to the main power supply as quickly as possible.	Proponent	Monitoring compliance	During operation phase
2.3.4	NOx emission reduction techniques should be employed on a regular basis	Proponent	Monitor NOx emissions	During operation phase
3	**Construction Noise**			
3.1	Reduce equipment noise at source by proper design, maintenance and repair of construction machinery and equipment	Proponent, CC	Check maintenance records	During construction phase
3.2	Minimize noise from vehicles and power generators by use of proper silencers and mufflers.	Proponent, CC	Monitor compliance	During construction phase

3.3	Use noise-abating devices wherever needed and practicable.	Proponent, CC	Monitor compliance	During construction phase
4	**Water Sourcing**			
4.1	A complete record of water consumption during construction and operation phase will be maintained	Proponent, CC	Check water consumption records	During construction and operation phase
4.2	If a new water well is to be installed, it will be designed to abstract water preferably from deep aquifer not being used by local communities	Proponent, CC	Monitor compliance	During construction phase
4.3	Water conservation program will be initiated to prevent wastage of water.	Proponent, CC	Monitor compliance	During construction and operation phase
4.4	The water supply lines will be checked and repaired for leaks in order to reduce wastage of water.	Proponent, Maintenance Contractor	Check maintenance records	During operation phase
4.5	Recycle grey water for use for toilet flushing	Proponent	Monitor compliance	During operation phase
4.6	Ensure that water efficient sanitary fittings are used throughout the development e.g. low flush toilets, water efficient shower heads, and aerators on faucets	Proponent, CC	Monitor compliance	During construction and operation phase
5	**Soil Contamination**			
5.1	Fuels, lubricants, and chemical will be stored in covered bounded areas, underlain with impervious lining	Proponent, CC	Monitor compliance	During construction phase
5.2	Maintenance of vehicles and equipment will only be carried out designated areas. The area will be provided with hard surface or tarpaulin will be spread on the ground to prevent contamination of soil	Proponent, CC	Monitor compliance	During construction phase
5.3	Vehicles will only be washed at designated areas.	CC	Vehicle Inspection record	During construction phase

5.4	Regular inspections will be carried out to detect leakage in construction vehicles and equipment	Proponent, CC	Check inspection / maintenance records	During construction phase
5.5	Appropriate arrangements, including shovels, plastic bags and absorbent materials, will be available near fuel and oil storage areas	CC	Monitor compliance	During construction phase
5.6	Contaminated soil will be removed and properly disposed after treatment such as incineration etc.	Proponent, CC	Monitor compliance	During construction phase
6	**Traffic**			
6.1	Heavy traffic during construction phase will come to the project site during late night hours.	Proponent, CC	Traffic record	During construction phase
6.2	Project vehicles shall not be fitted with pressure horns	CC	Monitor compliance	During construction phase
6.3	During construction, regulate speed of vehicles	Proponent, CC	Monitor compliance	During construction phase
6.4	Designated parking areas will be provided for different type of project vehicles within and around the project site	Proponent, CC	Monitor compliance	During construction phase
6.5	Manage vehicle movement to avoid traffic jam and long queues	Proponent, CC	Monitor compliance	During construction and operation phase
6.6	Prepare, implement and monitor the traffic management plan	Proponent	Monitor compliance	During construction and operation phase
6.7	Vehicles to use designated parking areas during operational phase.	Proponent	Monitor compliance	During operation phase
6.8	Parking of vehicles alongside the road should be prohibited at all time.	Proponent	Monitor compliance	During construction and operation phase
7	**Wastewater Generation**			
7.1	**Wastewater Generation During Construction**			

7.1.1	Wastewater generated at the campsites will be stored temporarily in septic systems comprising of septic tanks from where it will be routed to a nearest drain/sewerage system.	Proponent, CC	Monitor compliance	During construction phase
7.1.2	At the time of restoration, septic tanks will be dismantled in place and backfilled with at least 1m of soil cover above the surrounding natural surface level	CC	Monitor compliance	After the completion of construction phase
7.2	**Wastewater Generation During Operation**			
7.2.1	The grey water will be recycled to be re-used again in toilets and kitchens etc.	Proponent	Monitor compliance	During operation phase
7.2.2	Black water will be temporary stored in septic tanks and will be discharged into a nearby out fall sewer via trunk sewer	Proponent, CC	Monitor compliance	During design, construction & operation phase
7.2.3	Waste segregation measures would be employed to minimize entry of solid waste into the wastewater stream	Proponent	Monitor compliance	During operation phase
7.2.4	Water conservation strategies will be employed to avoid wastage of water	Proponent	Monitor compliance	During operation phase
8	**Solid Waste Generation and Management**			
8.1	**Solid Waste Generation and Management During Construction**			
8.1.1	Separate bins will be placed for different types of wastes- plastics, paper, metal, glass, wood, and cotton.	Proponent, CC	Monitor compliance	During construction phase
8.1.2	Recyclable material will be separated at source. The recyclable waste will be sold to waste contractors for recycling	Proponent, CC	Monitor compliance	During construction phase
8.1.3	Non-hazardous non-recyclable wastes such as construction camp kitchen wastes will be disposed off in landfill site through municipal administration or approved waste contractor.	Proponent, CC	Monitor compliance	During construction phase

8.1.4	No waste will be dumped at any location outside the proposed site boundary.	Proponent, CC	Monitor compliance	During construction phase
8.1.5	All hazardous waste will be separated from other wastes. Hazardous wastes will be stored in designated areas with restricted access and proper marking. Hazardous wastes will be disposed off through approved waste contractors.	Proponent, CC	Check hazardous waste disposal records	During construction phase
8.1.6	Surplus construction materials including partially filled chemical and paint containers will be returned to suppliers. Inert construction wastes will be disposed of onsite as fill material or sold as scrap to contractors.	Proponent, CC	Check waste records	During construction phase
8.1.7	Records of all waste generated during the construction period will be maintained. Quantities of waste disposed, recycled, or reused will be logged on a Waste Tracking Register	Proponent, CC	Check waste record register	During construction phase
8.1.8	Training will be provided to personnel for identification, segregation, and management of waste	Proponent, CC	Check training records	During construction phase
8.2	**Solid Waste Generation and Management During Operation**			
8.2.1	Waste generation will be minimized by adopting waste management strategy of reduce, reuse and recycle	Proponent	Monitor compliance	During operation phase
8.2.2	A waste management plan will be prepared, implemented and monitored for the safe collection, storage and treatment/disposal of the waste	Proponent	Monitor compliance	During operation phase
8.2.3	Records of all waste generated will be maintained. Quantities of waste disposed, recycled, or reused will be logged on a Waste Tracking Register	Proponent	Check waste tracking register	During operation phase
8.2.4	Training will be provided to personnel for identification, segregation, and management of waste	Proponent	Check training records	During operation phase

8.2.5	All inert and non-hazardous construction wastes will be disposed to the existing tipping sites within or outside of the city limits	Proponent, Waste Contractor	Monitor compliance	During operation phase
8.2.6	Hazardous wastes will be disposed of through waste management contractors who will identify suitable disposal options for these wastes such as recycling, metal recovery, incineration or bioremediation etc.	Proponent, Waste Contractor	Monitor compliance	During operation phase
8.2.7	Various waste containers for waste collection should be placed at appropriate locations in the vicinity	Proponent	Monitor compliance	During operation phase
8.2.8	Waste storage areas should be located within the facility and sized to the quantities of waste generated, with the following design considerations: Hard, impermeable floor with drainage, and designed for cleaning/disinfection with available water supply, Secured by locks with restricted access designed for access and regular cleaning by authorized cleaning staff and vehicles Protected from sun, and inaccessible to animals/Rodents Equipped with appropriate lighting and ventilation Segregated from food supplies and preparation areas Equipped with supplies of protected clothing, and spare bags/containers	Proponent, CC	Monitor compliance	During operation phase
9	**Seismicity**			
9.1	No specific mitigation measures other than to construct the facility in accordance with UBC Zone 2B	Proponent, Structure Design Consultant, CC	Monitor compliance	During project design phase
10	**Sustainability**			
10.1	Best practice of energy efficiency will be incorporated in the town development	Proponent, CC	Monitor compliance	During project design phase
10.2	Houses and other facilities to be constructed with high levels of thermal insulation	Proponent, CC	Monitor compliance	During project design phase

10.3	Ensure that HVAC system, refrigeration equipment and fire suppression equipment do not contain HCFC's or Halons	Proponent, CC	Monitor compliance	During project design phase
11	**Socio-Economic Impacts**			
11.1	Deliveries should be programmed to arrive and routed to minimize disturbance to residential areas, hospitals and offices.	Proponent, CC	Monitor compliance	During construction phase
11.2	Designated parking areas will be provided for different type of project vehicles within and around project site	Proponent, CC	Monitor compliance	During construction & operation phase
11.3	Areas earmarked for amenity and commercial infrastructure will not be used for other purposes after construction	Proponent	Monitor compliance	During construction & operation phase
11.4	Employment preference will be given to residents of the project area	Proponent, CC	Monitor compliance	During construction & operation phase
11.5	Local contractors will be given preference for hiring equipment and machinery during operation	Proponent, CC	Monitor compliance	During construction & operation phase
11.6	Ensure maximum quantity of water to be treated and reused in order to lessen its burden on the existing sewerage system.	Proponent	Monitor compliance	During design, construction & operation phase
11.7	Locals, surrounding business and city government are kept on the same page during all stages of the development of the project.	Proponent	Monitor compliance	During construction phase
11.8	A complaint register will be maintained on site during construction to record complaints of the nearby residents.	Proponent	Provision of complaint register	During construction phase

Table 7.2: Environmental Monitoring Plan

Ambient Air Quality Sampling Plan					
Phase	**Parameters**	**Locations**	**Frequency**	**Duration**	**Standards**
Construction	SOx, NOx, CO, O3, PM2.5, PM10 Lead, SPM	At the interface of project site and residential community	Monthly	Continuous for 8 hours* in a full working day	SEQS
Operation	SOx, NOx, CO, O3, PM2.5, PM10 Lead, SPM	At the interface of project site and residential community	Quarterly	Continuous for 8 hours* in a full working day	SEQS
Drinking Water Quality Sampling Plan					
Stages	**Parameters**	**Locations**	**Frequency**	**Duration**	**Standards**
Construction	Heavy metals, TDS, TSS, pH, Total Coliform, Faecal Coliform	Ground water source and other sources	Monthly	Grab sampling	SEQS for drinking water
Operation	Heavy metals, TDS, TSS, pH, Total Coliform, Faecal Coliform	Drinking water sources	Quarterly	Grab sampling	SEQS for drinking water
Wastewater Quality Sampling Plan					
Stages	**Parameters**	**Locations**	**Frequency**	**Duration**	**Standards**
Construction	BOD, COD, DO, TSS, TDS, pH, NO_3, SO_4, Oil & Grease)	Camp site discharge points into drains	Monthly	Grab sampling	SEQS
Operation	BOD, COD, DO, TSS, TDS, pH, NO_3, SO_4, Oil & Grease)	Effluent from wastewater treatment plant	Monthly	Composite sampling / Grab sampling	SEQS
Noise Level Sampling Plan					
Stages	**Parameters**	**Locations**	**Frequency**	**Duration**	**Standards**
Construction	Decibels [dB(A)Scale]	At the interface of project site & residential community	Monthly	Continuous for 8 hours in a full working day	WHO Noise Guidelines

		7 m from the equipment at construction site			
Operation		At the interface of project site & facing road	Quarterly		SEQS for Noise
		7 m from the equipment at construction site			
Solid Waste					
Stages	**Parameters**	**Locations**	**Frequency**	**Duration**	**Standards**
Construction	Waste generation rate, waste composition; recyclables and non-recyclables, hazardous waste	At main solid waste collection point from where the waste is transported from site	Monthly	24-hour sample collected during week days	Best Practices
Operation	Waste generation rate, waste composition; recyclables and non-recyclables, hazardous waste	At waste transfer facility of the project site prior to off-site disposal	Quarterly	24-hour sample collected during week days and holidays	Best Practices

Table 7.3: EMP Implementation Cost		
Activity	**Cost (Rupees PKR)**	**Remarks**
Training Program	500, 000	Refer section 7.12
Environmental Monitoring		
Ambient Air (Construction)	(40,000 * 12) = 480,000	Cost for 1-year monitoring at 01 location @Rs.40,000/per location.
Ambient Air (Operation)	(40,000 * 4) = 160,000	Cost for 1-year monitoring at 1 location @Rs.40,000/per location
Drinking Water Quality (Construction)	(20,000 * 12) = 240,000	Cost for 1-year monitoring at 1 sample @Rs.20,000 for all primary parameters
Drinking Water Quality (Operation)	(20,000 * 4) = 80,000	Cost for 1-year monitoring at 1 sample @Rs.20,000 for all primary parameters
Wastewater (Construction)	(50,000 * 12) = 600,000	Cost for 1-year monitoring at 1 location @Rs.50,000/location
Wastewater (Operation)	(50,000 * 12) = 600,000	Cost for 1-year monitoring at 1 location @Rs.50,000/location
Noise Levels (Construction)	(1,000 * 4 * 12) = 48,000	Cost for 1-year monitoring at 04 locations @Rs.1,000/location
Noise Levels (Operation)	(1,000 * 4 * 4) = 16,000/-	Cost for 1-year monitoring at 04 location @Rs.1,000/location
Solid Waste (Construction/Operation)	10,000	Estimated cost for 1 year
Gaseous Emissions (Construction)	(1,500 * 1 * 6 * 4) = 36,000	Cost for 1-year monitoring at 1 location for 06 parameters @Rs.1,500/parameter
Gaseous Emissions (Operation)	(1,500 * 2 * 6 * 4) = 72,000	Cost for 1-year monitoring at 2 location for 06 parameters @Rs.1,500/parameter
Mitigation Measures (Construction)	500,000	Initial estimates
Mitigation Measures (Operation)	1,000,000	Initial estimates
Reporting	1,000,000	Initial estimates
Contingencies (5% of EMP cost)	500,000	-
Grand Total	**5,342,000**	-
Grand Total (in words)	**Five Million Three Hundred Forty-Two Thousand**	-

Chapter 8 Conclusion

Realizing that the city has overgrown its sustainability limits, it is imperative that the builders and developers takes cognizance of the cumulative effect of the current pace of rapid development. Consequently, each project is required to keep the sustainability principles in view and go an extra mile beyond the present approach which is confined to bare survival. Their projects have so far been profit-oriented, now they will have to share the profit with net zero energy and net zero discharge approach in the project design.

Based on the findings of the EIA it is concluded that the environmental impacts of the construction and operation of "**Ocean Ninety 9**" Project are manageable and can be mitigated by implementing the Environmental Management and Monitoring Plan which forms an integral part of EIA document. The screening process has through review of literature, primary as well as secondary baseline data, and expert judgment, made assessment of the potential impacts of said activities on the physical, biological, and socioeconomic environment of the Project. Mitigation measures have been proposed to reduce, minimize or compensate for the identified potential negative impacts and their adoption has been recommended. The proposed project is a self-contained building having its own back-up power generation, water supply supplemented by filtration plant and sewage treatment, recycling and disposal system in addition to commitment for the provision of required parking space. This being a positive impact would be an indicator of achievement of the objectives of the Project.

The study therefore recommends that the Environmental Impact Assessment (EIA) report should be approved with the provision that the suggested mitigation measures will be adopted and the Environmental Management Plan will be followed in letter and spirit.

ANNEXURES

Annex I: NOCs / Approvals

.SINDH BUILDING CONTROL AUTHORITY
ONE WINDOW CELL

No. Sch-33/PC-10/OWC/Arch:&Planning/Construction Permit/2022/ 139 Dated: 14/09/2022

M/S. TM Associates (BL-3124)
Mr. Abdur Rahim, (Owner/Attorney)
CNIC : 42201-040998888-5,
Office No. 27th Floor, Ocean Tower, Main Clifton, Karachi.

Area of plot: 8107.00 sq.yds
Gross covered area: 818677.11 Sq.fts
Net area after exemptions:432050.38 Sq.fts
Category: Resedential-cum-Commercial

Professional Team:-
1. **Lic. Arch Haris Shaheen (AL-01-810)**
2. **Lic. Engr. Moiz Ali (SE-06-264)**
3. **Lic. Site Engr: Awshique Ali Ismaly (Civil/ 08772)**
4. **Membership of ABAD: (F.M. 1495)**

Above professionals will be fully responsible for safe & sound construction in accordance with approved plan and standard specifications and ensuring all safety measures during construction for the safety of workers, neighbors and pedestrians at site as defined in KB & TPR-2002 (As amended).

SUBJECT: CONSTRUCTION PERMIT ON PLOT NO. 1 ACRES 27 GHUNTAS (1.67 ACRES) DEH SONGAL, TAPPO GUJRO, SECTOR:19-C, SCHEME-33, KARACHI.

Reference:- PROP-20220520-6, dated: 30-05-2022

No. of Stories: Basement (ARS + Project Parking + Services) + Ground Floor (Shops + Services) + 1st to 2nd Floors (Project Parking + Services) + 3rd Floors (Visitor Parking + Services) + 4th Floor (Recreation Area + Project Parking + Flats) + 5th to 18th Floors (Flats) + Roof (Solar Panel + Battery Room + Services) only.

- Architectural Concept Plan (Not valid for construction) vide No. Sch-33/PC-10/OWC/Arch:&Planning/2022/96, Dated: 04-07-2022.
- Structure NOC No. SBCA/DD/(STR)/2022/171, Dated: 09-09-2022.
- Approved Layout Plan issued by Assistant Director, (UD-II) SMPA/MPD vide letter No. URP-33-800/SMPA/Court/2022/2572/L, Dated:21-6-2022.
- Verification of title documents and status of land issued vide No. PROP-20220520-6, dated: 30-05-2022, by the Assistant Director, One Window Cell/Town Planning Section, SBCA, a reply has been received vide letter No. DC/K/E/Rev.Br/1227/2022, dated:01-06-2022, issued by the Additional Deputy Commissioner-I, For Deputy Commissioner Karachi East, along with letter No. A.C/G.H/SCH-33/822/22, Dated: 31-05-2022, issued by the Assistant Commissioner, Gulzar-e-Hijri (Scheme-33) Karachi East and vide letter No. MUKH/G.H/SCH-33/591/2022, dated: 31-05-2021 issued by the Mukhtiarkar, Gulzar-e-Hijri (Scheme-33) Karachi East.

1. The building plan for the above mentioned plot attached herewith is hereby approved and you are Permitted to carry out construction on the said plot accordingly.
2. Provided that it does not entitle you to build on land not lawfully conveyed to you and land or road of City District Government, Karachi or any other local Authority.
3. Provided that right of easement is a matter between the concerned parties with which this Authority has not concern.
4. Provided that it holds good only if the work is started within **ONE YEAR** from the date where after it shall be deemed to have lapsed.
5. A full time site engineer registered with PEC shall be deputed by the owner/builder during the execution of work.
6. Provided that rain water spouts from balconies, shops, windows doors of the building shall not Project or over hanged on public streets or the land belonging to the CDGK or local Authority.
7. Provided that the construction shall be carried out under the supervision of Lic. Engineering and Lic. Architect started above.
8. The Lic. Architect, Lic. Engineer/Owner shall be jointly and severally responsible for all the structural design and standard specification to be provided for the execution of the work.
9. Provided that plinth cornice shall not project more than 2" on any public street for ornamental purpose.

AND

10. Provided that premises shall not be used for the purpose other than the use approved by the Authority and according to the terms and condition of allotment / lease.
11. Subject to the condition that if any violation is found during / after construction, the same shall be demolished.
12. Provided that the quality control and stability of the structure slab be the responsibility of the owner /attorney and Lic. Architect / Lic. Engineer.

OFFICIAL COPY FOR OWNER'S USE

14. Subject to condition that all the constructional activities supervision etc shall jointly be the responsibility of professionals & owner.
15. Fire-fighting and safety arrangements shall be provided as per existing regulations and also in accordance with international standard.
16. This approval is granted with the condition that owner / builder shall mandatory design / provide the provision for utilization of at-least 5% for solar energy.
17. This approval is granted with the condition that owner / builder shall design / provide the provision of Broadband wiring which is MANDATORY as per Clause 25-1.9.3 of KB&TPR-2002.
18. Owner shall obtain the plinth verification through licensed professionals on prescribed form (ZP-4) upon completion of foundation as per KB&TPR from concerned Town.
19. The owner and professionals shall submit to the authority floor certificate (form ZP-5) at the time of casting of slab of each floor as per KB&TPR in concerned Town.
20. In case of any complaint / dispute or any court matter, the **SBCA** shall not be a party and shall not be responsible.
21. If at any later stage, it is found that the approval of Proposed plan was obtained with mis-representation of facts, the same will be withdraw / cancelled.
22. Owner / Attorney is bound to get the completion / occupancy plan approved from this Authority before occupation as per KB&TPR.
23. Air Raid Shelter (ARS) provided in **Basement** shall not be misused under any circumstances.
24. Parking as provided on **Basement, 1st Floor, 2nd Floor, 3rd Floor & 4th Floor** shall not be misused under any circumstances.
25. Recreation area as provided at **4th Floor** shall not be misused under any circumstances.
26. All the construction work to be carried out strictly as per Administrative Instruction and as per KB & TPR-2002 (Amended to date) with maintaining the shear wall / columns etc. as per structure drawings.
27. Owner & License professionals will take all the precautionary measures as per KB & TPR-2002 (Amended to date) and also follow the specifications / notes mentioned by Dy. Director Structure Section, SBCA in the approval letter / structural drawings during excavation and further construction to avoid any mishap to the adjoining / surrounding buildings.
28. In case of any complaint / evidence regarding Sale / Booking of Units without Sale NOC, approval of building plan should be withdrawn and builder license shall be cancelled by the Authority.
29. As per Notification No. SBCA/Secy. to DG/2016/503 Dated: 18-05-2016, owner / builder shall obtain NOC from Environment & Building Services Section, SBCA as and when made functional.
30. NOC for Sale & Advertisement shall be obtained from Design Section, SBCA as per Notification No. SBCA/PS CE/2020/06, dated 23.07.2020.
31. To achieve quality concrete of required strength for sale, sound and stable structure, the owner / builder shall use ready mix concrete from batching plant which is mandatory under clause 11-11of KB&TPR-2002 and amended up to date.
32. This approval is granted by One Window Cell/Town Planning Section only planning point of view, all other aspects like ownership/court case/complaint/dispute implementation of construction activities according to KB & TPR shall be the responsibility of concerned Town.
33. At any stage, any ambiguity / error found in the approval of building plan, the same shall be conveyed accordingly by the Town concerned.
34. The owner is required **NOC for Height Clearance (Applied)** before issuance of NOC for sale & advertisement and before commencement of construction at site.
35. The owner/builder shall conduct Environmental Impact Assessment (EIA) Study from **SEPA** through consultants and accordingly report shall be submitted to SBCA well before commencement of construction.
36. Before commencement of construction, the owner / builder shall obtain the requisite approval / NOC from the SEPA.
37. Owner/builder/Lic.Architect will produce all required NOCs and documents which are mentioned above Sale NOC within 90 days from issuance of this final construction permit otherwise the said plan will be Withdrawal / cancelled automatically without any notice.
38. SBCA reserve the right to obtain all fees / charges / taxes / dues remaining to owner / builder subsequently. (if applicable)

Encl:

- Approved Proposed Building Plans.

19/9/22

Assistant Director
One window Cell / Architectural & Planning
Head Quarters, SBCA

19/09/22

Copy for information to:-

1. Director, (District East), SBCA.
2. Director, Design, SBCA.
3. Director, Vigilance Section, SBCA.
4. Director, I.T, SBCA.
5. Chairman, ABAD, Karachi.
6. Secretary to DG, SBCA.

Copy

Sindh Building Control Authority

Civic Centre, Annexe University Road,
Gulshan-e-Iqbal, Karachi-5(Pakistan)
Phones: Tel: 021-9923029
Fax: 021-99230326
www.sbca.gos.pk

No: SBCA/DD (PSA&C)/144/Adv-159 /2022
Dated: 30 -09-2022.

Mr. Abdur Rahim S/o Muhammad Tariq Rafi
CNIC No. 42201-0409988-5
Owner/Proprietor/Partner of
M/s T.M Associates
Head Office 26th Floor, Ocean Tower
Plot No. G-3 Block-9, KDA Scheme
No. 5, Main Clifton Karachi.

Basement (ARS + Project Parking + Services) + Ground Floor (Shops + Services) + 1st to 2nd Floors (Project Parking + Services) + 3rd Floors (Visitor Parking + Services) + 4th Floor (Recreation Area + Project Parking + Flats) + 5th to 18th Floors (Flats) + Roof (Solar Panel + Battery Room + Services) Only (Admeasuring 8107.00 Sq. Yds).

DATE OF COMPLETION OF PROJECT: 01-01-2027

SUBJECT: **NO OBJECTION CERTIFICATE** FOR SALE & ADVERTISEMENT OF **FLATS & SHOPS** FOR PROJECT **"OCEAN-99"** ON PLOT NO. 1 ACRES 27 GHUNTAS (1.67 ACERS) DEH SONGAL TAPPO GUJRO SECTOR 19/C, SCHEME-33, DISTRICT EAST KARACHI.

Reference: Your application dated: 02-09-2022

I have been directed to convey the approval of the subject noted NOC. The copies of Approved Draft of Advertisement, Terms and Conditions and Specifications for Construction are enclosed. No addition or alteration is allowed in the approved documents at any stage:-

THIS NOC IS BEING ISSUED WITH THE FOLLOWING CONDITIONS:

1. This NOC is being issued on the basis of Pay Order in favour of SBCA bearing # **No. 0111.04193674,** amounting to **Rs. 1,65,11,899/-** issued by **M/s. Meezan Bank (0111) Shahrah-e-Faisal, Branch, Karachi Pakistan**, against the 50% of 1% Security Deposit.

2. This NOC is being issued on the basis of Approval of Building Plan / Valid Construction Permit approved by **One Window Cell / Town Planning Section Head Quarters, SBCA vide No: Sch-33/PC-10/OWC/Arch. & Planning / 2022/139, Dated: 14-09-2022.** In case of any litigation / dispute pertain to land status / ownership / violation of approved building plan, the PSA&C Section will not be a party and this NOC will be treated as withdrawn / cancelled.

3. As per undertakings dated: **01-08-2022** submitted by the builder.

4. That the Builder shall follow the terms & conditions for allotment of units as prescribed in Chapter 5-1 of KB & TPR-2002 as amended up to date and Section-12 of SBCO 1979 amended up to date.

5. This NOC is being issued only for Advertisement & Marketing purpose only. PSA&C Section is not responsible for violation in approved plan / delay in completion of project.

6. In case of any misrepresentation of facts and any violation/deviation of the NOC/Approval will be treated as withdrawn without any notice.

7. In case of any dispute in ownership or enquiry / litigation, the owner and lessor would be responsible. SBCA will not be liable for it.

8. The concerned District (District East) is liable for the compliance of conditions in respect of NOC for Sale and Advertisement.

No: SBCA/DD/(PSA&C)/144/Adv-459 /2022 Dated: 30 -09-2022

PROJECT SUMMARY

TYPE	FLOOR	COVERED AREA	NOS	UNIT PRICE
1	4th to 18th	2233.02	58	RS. 2,23,30,000/-
2	4th to 18th	2132.63	29	RS. 2,13,30,000/-
3	4th to 18th	1205.51	29	RS. 1,20,50,000/-
4	4th to 16th	1898.04	25	RS. 1,89,80,000/-
5	4th to 16th	1887.96	25	RS. 1,88,80,000/-
6	4th to 16th	977.06	25	RS. 97,70,000/-
7	4th to 18th	1956.27	29	RS. 1,95,60,000/-
Shops	Ground	30229.21	26	@RS. 30,000/-PSF

The above mentioned prices do not include the documentation/Transfer fee/Corner/West Open/Road Facing charges.

Enclosure:
As above.

30/9/22

Assistant Director
Public Sale Advertisement & Complaints, SBCA

Copy to: -

- Director (PSA&C), SBCA.
- Deputy Director (District East), SBCA, with the request to provide site progress report on quarterly basis Look after the Terms & Conditions of NOC for Sale and not to be issued Plinth Verification Certificate without clearance from Public Sale Advertisement & Complaints, SBCA.
- Deputy Director (OWC/Town Planning Section), SBCA.
- Deputy Director (I.T), SBCA.....with request to please insert QR Code & uploaded in wed site.
- Secretary ABAD.

NO. SCH-33/PC-10/OWC/ARCH: & PLANNING/2022/96 Dated:04-07- 2022

NOC FOR SALE& ADVERTISEMENT NO SBCA/ DD/PSA&C/ /ADV / Dated:- -20

M/ST.M ASSOCIATES

PRESENTING A PROJECT IN SCHEME-33, AT PLOT NO: 1 ACRES 27 GHUNTAS (1.67 ACRES) DEH SONGAL TAPPO GUJRO SECTOR: 19-C, SCHEME-33, KARACHI CONSISTING BASEMENT (ARS + PROJECT PARKING + SERVICES) + GROUND FLOOR (SHOPS + SERVICES) + 1ST TO 2ND FLOORS (PROJECT PARKING + SERVICES) +3RD FLOORS (VISITOR PARKING + SERVICES) + 4TH FLOOR (RECREATION AREA + PROJECT PARKING + FLATS) + 5TH TO 18TH FLOORS (FLATS) + ROOF (SOLAR PANEL + BATTERY ROOM + SERVICES) ONLY DIFFERENT TYPES AND SIZES SHOWROOMSATTACHED BATH APPROVED AMENITIES SECURITY SYSTEM,SPEEDY LIFT, INTERCOM, GENERATOR, SOLAR PANNEL BEAUTIFUL LOCATION ALL AMENITIES ALREADY AVAILABLE

COPY

OCEAN-99

PLOT NO:1ACRES 27 GHUNTAS (1.67 ACRES) DEH SONGAL TAPPO GUJRO SECTOR: 19-C, SCHEME-33, KARACHI

Dy: Director (Design-II)
Sindh Building Control Authority
Civic Centre Annexe,
University Road,
Gulshan-e-Iqbal, Karachi.

SUMMARY

TYPE	FLOOR	COVERED AREA OF EACH UNIT IN SQ.FT	NOS	EACH UNIT PRICE IN Rs/-
1	4th to 18th	2233.02	58	Rs. 2,23,30,000/-
2	4th to 18th	2132.63	29	Rs. 2,13,30,000/-
3	4th to 18th	1205.51	29	Rs. 1,20,50,000/-
4	4th to 16th	1898.04	25	Rs. 1,89,80,000/-
5	4th to 16th	1887.96	25	Rs. 1,88,80,000/-
6	4th to 16th	977.06	25	Rs. 97,70,000/-
7	4th to 18th	1956.27	29	Rs. 1,95,60,000/-
Shops	Ground	30229.21	26	@ Rs. 30,000/-PSF

Deputy Director (Public Relations Section) S.B.C.A.

NOTE: PAYMENT ACCORDING TO THE SCHEDULE APPROVED BY SBCA.
THE ABOVE MENTIONED PRICE DO NOT INCLUDE THE DOCUMENTATION, CORNER, WEST OPOEN & ROAD FACING CHARGES THESE EXTRA CHARGES ARE FOLLOWING.

Documentation Charges As per Clause 5-1.13 of KB&TPR 2002 -2022 to be clearly mentioned in schedule of payment.

1- Corner Charges=2% of unit Price
2- West open =2% of unit Price
3- Road Facing =1% of unit Price
4- Transfer Fee = 2% of unit Price

ENGINEER: MOIZ ALI Lic No: SE-06-264	DATE OF COMPLETION 01-01-2027	ARCHITECT:HARIS SHAHEEN Lic No: AL-01-810

M/ST.M ASSOCIATES

HEAD OFFICE 26TH FLOOR, OCEAN TOWER PLOT # G-3,
BLOCK-9 KDA SCHEME NO.5, MAIN CLIFTON,KARACHI.
PHONE # 92-2135166521-04

Annex II: Submission Drawings

Site

292'-0"

SECTOR 19 - A

100'-0" WIDE ROAD

PAK PWD

20'-0" WIDE ROAD

SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

A G
AREA 01 - 27

PLOT NO - FL - 7

250'-0"

200'-0" WIDE ROAD

SECTOR 19 - C

SITE PLAN

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

292'-0"

100'-0" WIDE ROAD

20'-0" WIDE ROAD

230'-0"

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No: SBA33/PC-10/2022/ [illegible] 1/2022 for BP COS
DATED: 14/09/2022

19/9/22
Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/09/22

272'-0"

20'-0" WIDE OPEN TO SKY

PLOT NO - FL - 7

250'-0"

200'-0" WIDE ROAD

BLOCK PLAN
1ST , 2ND & 3RD. FLOOR PLAN

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

N
E
W
S

NORTH POINT

TO SABZI MANDI

SECTOR 19 - A

100-0 WIDE ROAD

19 - B

100-0 WIDE ROAD

GULISTAN C.H.S

PAK PWD

20'-0" WIDE LANE

SUBJECT AREA
1.67 ACRES

SECTOR 19-C
FL-2 TO FL-7

150-0 WIDE ROAD

25 - B

TO SUPPIER HIGH WAY

200-0 WIDE ROAD

TO SAFORA

18 - B

18 - C

24 - B

TO SOHRAB GOTH

LOCATION PLAN

LIST OF DRAWING	
SB-1	SITE PLAN AND LOCATION PLAN
SB-2	AREA BLOCKS PLAN
SB-3	DETAIL OF AREA AND BLOCK PLAN FOR BASEMENT
SB-4	BASEMENT PLAN (PARKING) AND AIR RAID SHELTER
SB-5	GROUND FLOOR PLAN FOR SHOPS
SB-6	1ST. FLOOR PLAN (PARKING)
SB-7	2ND. FLOOR PLAN (PARKING)
SB-8	3RD. FLOOR PLAN (PARKING)
SB-9	4TH FLOOR PLAN APARTMENT , RECREATION & PARKING AREA
SB-10	5TH. TO 16TH. FLOOR PLAN FOR , APARTMENTS
SB-11	17TH. FLOOR PLAN (FOR , APARTMENTS)
SB-12	18TH. FLOOR PLAN (FOR , APARTMENTS)
SB-13	ROOF PLAN
SB-14	SECTION A-A
SB-15	200'-0"&100'-0" ROAD FACING ELEVATION

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

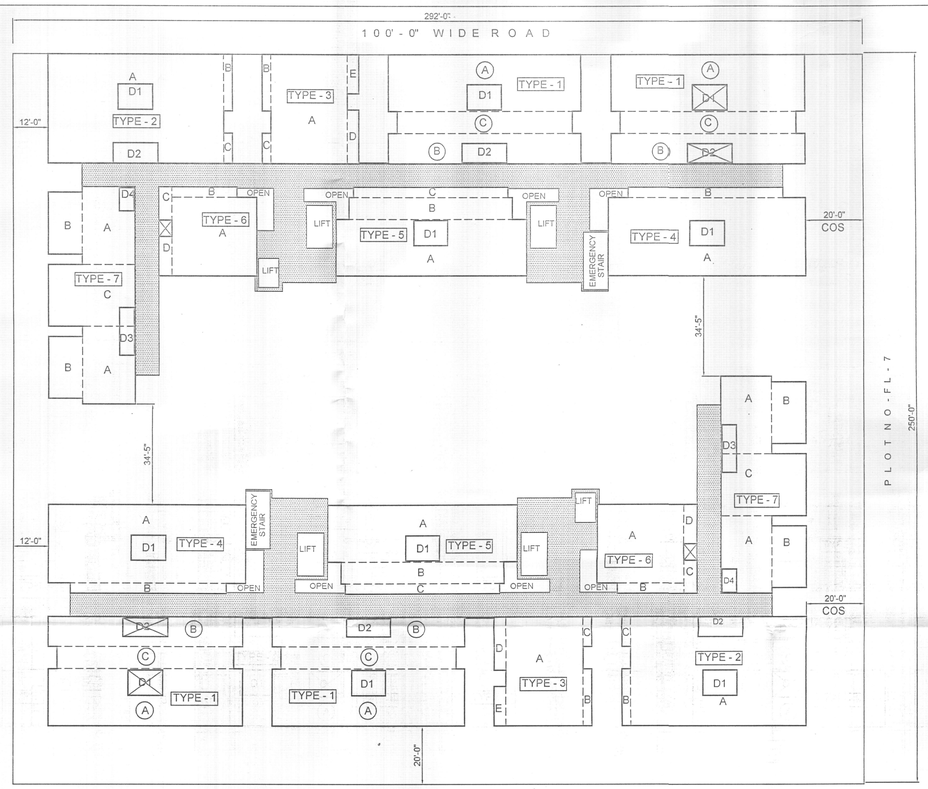
TITLE:
SITE PLAN AND LOCATION PLAN

OWNER

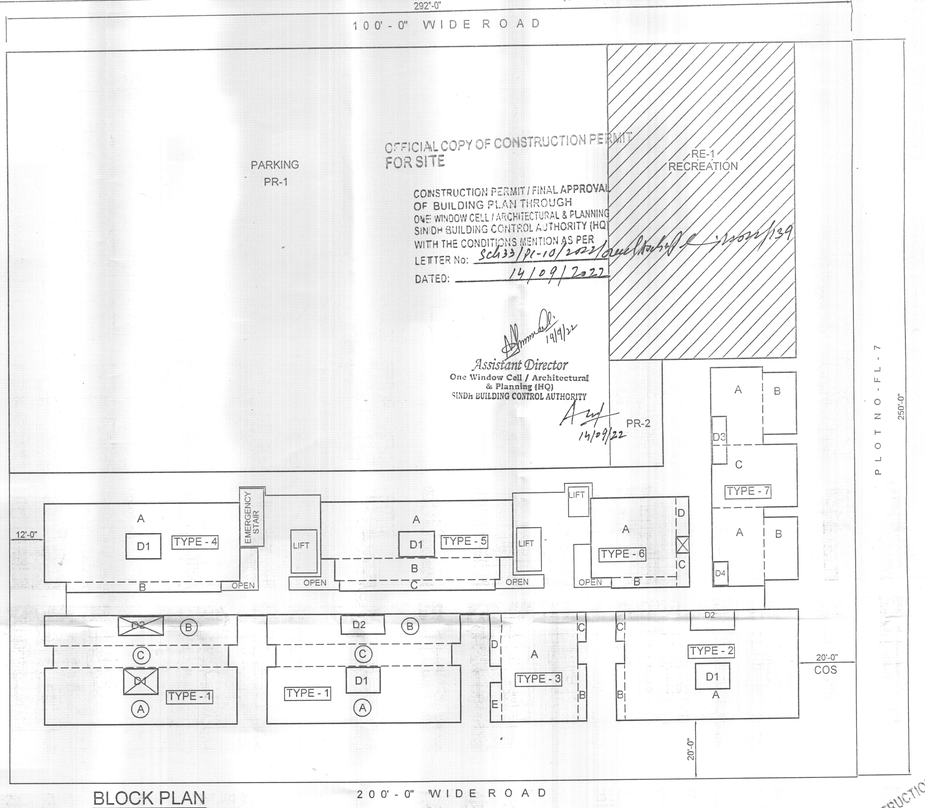
ARCHITECT

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-06-264
Suite # 306,3rd Floor,
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

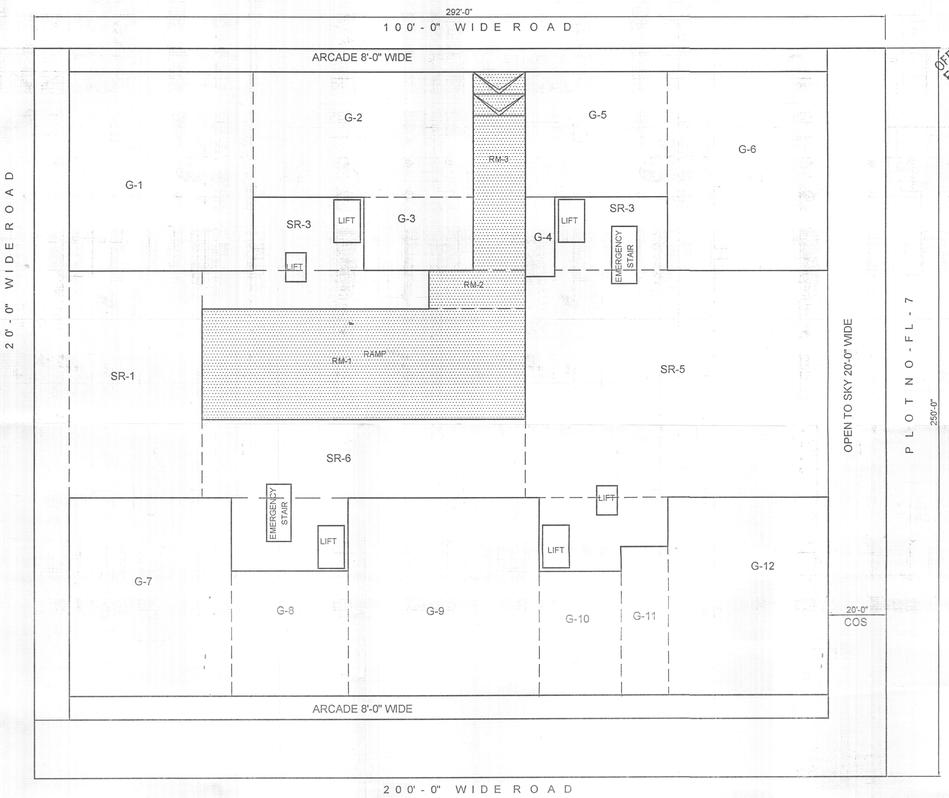
NEXT DRG.	SB-2
DRAWN	DRG NO. SB-1
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	



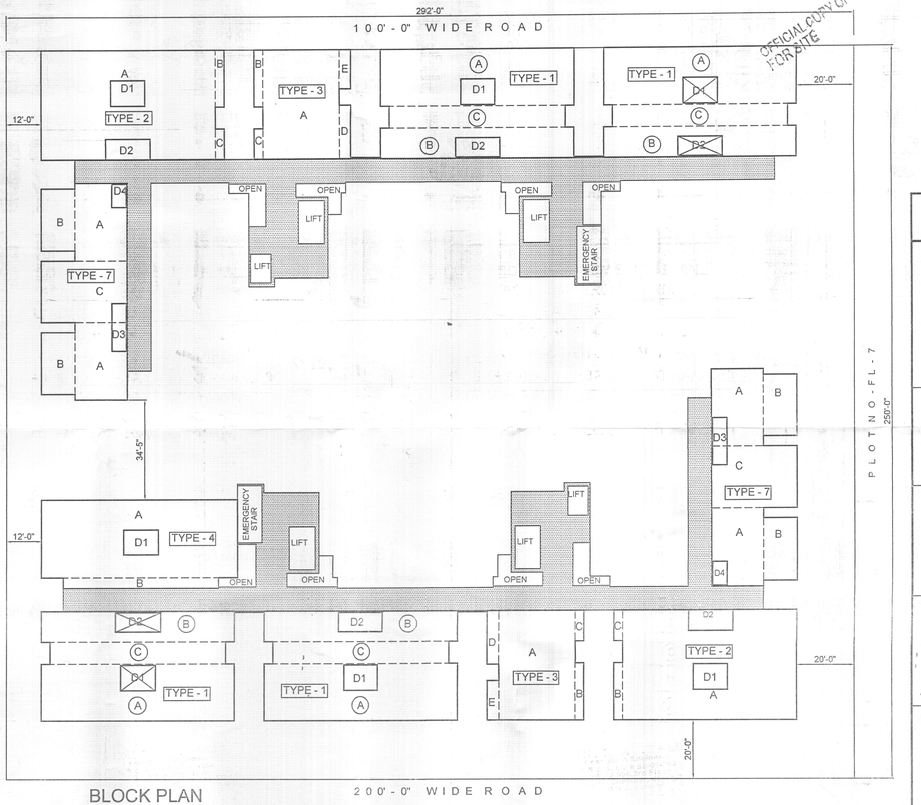
BLOCK PLAN
5TH. TO 16TH. FLOOR PLAN



BLOCK PLAN
4TH. FLOOR PLAN



BLOCK PLAN
GROUND FLOOR PLAN



BLOCK PLAN
17TH. & 18TH. FLOOR PLAN

NORTH POINT

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
AREA BLOCKS PLAN

OWNER

ARCHITECT
HAPIS SHAMEEN
ARCHITECT
CP&A License No. A-01-810
P.C.A.T.P.-A-04173

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.S.C.A. Lic # SE-06-264
Suite # 206,3rd Floor
Khayam Chmber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-3
DRAWN	DRG NO. SB-2
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

SCHEDULE OF AREA

TOTAL AREA OF PLOT =	A G 01 - 27	= 72963.00 SQ FTS OR 8107.00 SQ YDS
FOOT PRINT AREA (G.FLOOR) 65%		= 47425.95 SQ YDS
FOOT PRINT AREA (T.FLOOR) 55%		= 40129.65 SQ YDS
FAR 1:5.5 (72963 X 5.5) 401296.50 + 30760.88		= 432057.38 SQ FTS
SERVICE AREA ALLOW (30%)		= 129617.21 SQ FTS
RECREATION AREA ALLOW (2%)		= 8641.14 SQ FTS
ADDITION VISITORS PARKING AREA (61521.76) 50% USE (IN REGULAR AREA)		= 307060.88 SQ FTS
PROPOSED COVERED AREA		= 434415.66 SQ FTS

DETAILS OF AREA AIR RAID SHELTER

ALLOW (3% FAR) 12901.72 SQ FTS
AREA (58'-8"X204'-6") = 11995.97 SQ FTS

DETAILS OF BASEMENT AREA (PARKING)

PK-1 = 272'-0"X230'-0"	= 62560.00 SQ FTS
DEDUCTION AREA	= 11995.97 SQ FTS
TOTAL	= 50564.03 SQ FTS

(AIR RAID SHELTER)
58'-8"X204'-6" = 11995.97 SQ FTS

DETAILS OF AREA GROUND FLOOR

G-1 = 63'-0"X68'-0"	= 4284.00 SQ FTS
G-2 = 75'-9"X43'-0"	= 3257.25 SQ FTS
G-3 = 37'-10"X25'-0"	= 945.75 SQ FTS
G-4 = 10'-0"X27'-3"	= 272.50 SQ FTS
G-5 = 48'-6"X42'-10"	= 2077.25 SQ FTS
G-6 = 54'-10"X68'-0"	= 3728.44 SQ FTS
G-7 = 55'-5"X68'-0"	= 3768.56 SQ FTS
G-8 = 40'-0"X42'-10"	= 1713.20 SQ FTS
G-9 = 65'-10"X67'-10	= 4465.24 SQ FTS
G-10 = 28'-0"X42'-5"	= 1187.76 SQ FTS
G-11 =15'-11"X50'-11"	= 810.64 SQ FTS
G-12 = 54'-9"X67'-11"	= 3718.62 SQ FTS
TOTAL	= 30229.21 SQ FTS

DETAILS OF RAMP AREA OF GROUND FLOOR

RM -1 = 111'-3"X38'-0"	= 4227.50 SQ FTS
RM -2 = 33'-3"X13'-3"	= 440.56 SQ FTS
RM -3 = 18'-0"X68'-0"	= 1224.00 SQ FTS
TOTAL	= 5892.06 SQ FTS

DETAIL OF ARCADE AREA

AR -1 = 260'-0"X8'-0"X2 = 4160.00 SQ FTS

DETAILS OF SERVICE AREA GROUND FLOOR

SR-1 = 45'-5"X78'-3"	= 3554.11 SQ FTS
SR-2 = 12'-0"X230'-0"	= 2760.00 SQ FTS
SR-3 = 38'-0"X25'-0"X2	= 1900.00 SQ FTS
SR-4 = 78'-0"X13'-3"	= 1033.50 SQ FTS
SR-5 = 103'-4"X78'-3"	= 8085.57 SQ FTS
SR-6 = 111'-3"X27'-0"	= 3003.75 SQ FTS
SR-7 = 40'-0"X25'-0"	= 1000.00 SQ FTS
SR-8 = 28'-0"X25'-0"	= 700.00 SQ FTS
SR-9 = 16'-0"X17'-0"	= 72.00 SQ FTS
TOTAL	= 22108.93 SQ FTS
DEDUCTION	= 1009.77 SQ FTS
TOTAL	= 21099.16 SQ FTS

DEDUCTION AREA (GROUND FLOOR)
EMERGENCY STAIR & LIFT

D1 = 9'-0"X14'-8"X4	= 527.76 SQ FTS
D2 = 7'-0"X6'-2"X2	= 86.24 SQ FTS
D3 = 9'-6"X20'-10"X2	= 395.77 SQ FTS
TOTAL	= 1009.77 SQ FTS

DETAILS OF ARCADE AREA

AR-1 = 260'-9"X8'-0"X2 = 4160.00 SQ FTS

SUMMARY OF GROUND FLOOR

SHOPS AREA	= 30229.21 SQ FTS
ARCADE AREA	= 4160.00 SQ FTS
SERVICES AREA	= 21099.16 SQ FTS
RAMP AREA	= 5892.06 SQ FTS
TOTAL	= 61380.43 SQ FTS

DETAILS OF 1ST FLOOR AREA (PARKING)

PK-2 = 272'-0"X230'-0"	= 62560.00 SQ FTS
DEDUCTION AREA	= 1038.24 SQ FTS
TOTAL	= 61521.76 SQ FTS

DETAILS OF 2ND FLOOR AREA (PARKING)

PK-2 = 272'-0"X230'-0"	= 62560.00 SQ FTS
DEDUCTION AREA	= 1038.24 SQ FTS
TOTAL	= 61521.76 SQ FTS

DETAILS OF 3RD FLOOR AREA
ADDITIONAL VISITORS PARKING FLOOR

PK-2 = 272'-0"X230'-0"	= 62560.00 SQ FTS
DEDUCTION AREA	= 1038.24 SQ FTS
TOTAL	= 61521.76 SQ FTS

DETAIL OF AREA (4TH FLOOR)

TYPE - 1

A = 66'-5"X19'-5"	= 1289.87 SQ FTS
B = 66'-5"X10'-5"	= 692.09 SQ FTS
C = 60'-5"X7'-6"	= 453.15 SQ FTS
TOTAL	= 2435.11 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2233.02 SQ FTS
TOTAL 2233.02 X 2	= 4466.04 SQ FTS

DEDUCTION AREA OF TYPE - 1

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 2

A = 60'-0"X37'-5"	= 2245.20 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
TOTAL	= 2334.72 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2132.63 SQ FTS

DEDUCTION AREA OF TYPE - 2

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 3

A = 26'-5"X37'-5"	= 988.63 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
D = 4'-0"X18'-5"	= 73.68 SQ FTS
E = 4'-0"X13'-5"	= 53.68 SQ FTS
TOTAL	= 1205.51 SQ FTS

TYPE - 4

A = 67'-5"X26'-10"	= 1808.87 SQ FTS
B = 53'-4"X3'-7"	= 190.92 SQ FTS
TOTAL	= 1999.79 SQ FTS
DEDUCTION	= 101.75 SQ FTS
TOTAL	= 1898.04 SQ FTS

TYPE - 5

C = 53'-4"X3'-7"	= 190.92 SQ FTS
B = 56'-5"X7'-5"	= 418.63 SQ FTS
A = 65'-10"X19'-5"	= 1278.41 SQ FTS
TOTAL	= 1999.79 SQ FTS
DEDUCTION	= 101.75 SQ FTS
TOTAL	= 1887.96 SQ FTS

TYPE - 6

A = 29'-2"X26'-11"	= 784.98 SQ FTS
B = 22'-4"X3'-7"	= 79.94 SQ FTS
C = 4'-6"X11'-5"	= 51.39 SQ FTS
D = 4'-6"X13'-6"	= 60.75 SQ FTS
TOTAL	= 977.06 SQ FTS

TYPE - 7

A = 18'-0"X26'-7"X2	= 956.88 SQ FTS
B = 11'-8"X21'-2"X2	= 493.44 SQ FTS
C = 29'-8"X21'-2"	= 627.60 SQ FTS
TOTAL	= 2077.92 SQ FTS
DEDUCTION	= 121.65 SQ FTS
TOTAL	= 1956.27 SQ FTS

TOTAL AREA OF ALL TYPES APPARTMENT
FOR 4TH FLOOR

TYPE - 1	= 4466.04 SQ FTS
TYPE - 2	= 2132.63 SQ FTS
TYPE - 3	= 1205.51 SQ FTS
TYPE - 4	= 1898.04 SQ FTS
TYPE - 5	= 1887.96 SQ FTS
TYPE - 6	= 977.06 SQ FTS
TYPE - 7	= 1956.27 SQ FTS
TOTAL	= 14523.51 SQ FTS
SERVICE AREA	= 3496.55 SQ FTS
TOTAL	= 18020.06 SQ FTS

SCHEDULE OF PARKING AREA

PR-1 207'-6"X143'-9"	= 29828.12 SQ FTS
PR-2 18'-2"X36'-6"	= 662.84 SQ FTS
TOTAL	= 30490.96 SQ FTS

SCHEDULE OF RECREATION AREA

RE-1 = 64'-6"X107'-2"	= 6911.82 SQ FTS
TOTAL	= 6911.82 SQ FTS

SUMMARY OF 4TH FLOOR

APARTMENT AREA	= 14523.51 SQ FTS	
SERVICES AREA	= 3496.55 SQ FTS	
RECREATION AREA	= 6911.82 SQ FTS	= 7221.46 SQ FTS
PARKING AREA	= 30490.96 SQ FTS	
TOTAL	= 55422.84 SQ FTS	

DETAIL OF AREA (TYPICAL FLOOR)
(5TH TO 16TH FLOOR)

TYPE - 1

A = 66'-5"X19'-5"	= 1289.87 SQ FTS
B = 66'-5"X10'-5"	= 692.09 SQ FTS
C = 60'-5"X7'-6"	= 453.15 SQ FTS
TOTAL	= 2435.11 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2233.02 SQ FTS
TOTAL (2233.02 X 4)	= 8932.08 SQ FTS

DEDUCTION AREA OF TYPE - 1

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 2

A = 60'-0"X37'-5"	= 2245.20 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
TOTAL	= 2334.72 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2132.63 SQ FTS
TOTAL (2132.63X2)	= 4265.26 SQ FTS

DEDUCTION AREA OF TYPE - 2

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 3

A = 26'-5"X37'-5"	= 988.63 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
D = 4'-0"X18'-5"	= 73.68 SQ FTS
E = 4'-0"X13'-5"	= 53.68 SQ FTS
TOTAL	= 1205.51 SQ FTS
TOTAL(1205.51X2)	= 2411.02 SQ FTS

TYPE - 4

A = 67'-5"X26'-10"	= 1808.87 SQ FTS
B = 53'-4"X3'-7"	= 190.92 SQ FTS
TOTAL	= 1999.79 SQ FTS
DEDUCTION	= 101.75 SQ FTS
TOTAL	= 1898.04 SQ FTS
TOTAL (1898.04 X 2)	= 3796.08 SQ FTS

TYPE - 5

C = 53'-4"X3'-7"	= 190.92 SQ FTS
B = 56'-5"X7'-5"	= 418.63 SQ FTS
A = 65'-10"X19'-5"	= 1278.41 SQ FTS
TOTAL	= 1999.79 SQ FTS
DEDUCTION	= 101.75 SQ FTS
TOTAL	= 1887.96 SQ FTS
TOTAL (1887.96 X2)	= 3775.92 SQ FTS

TYPE - 6

A = 29'-2"X26'-11"	= 784.98 SQ FTS
B = 22'-4"X3'-7"	= 79.94 SQ FTS
C = 4'-6"X11'-5"	= 51.39 SQ FTS
D = 4'-6"X13'-6"	= 60.75 SQ FTS
TOTAL	= 977.06 SQ FTS
TOTAL (977.06 X 2)	= 1954.12 SQ FTS

TYPE - 7

A = 18'-0"X26'-7"X2	= 956.88 SQ FTS
B = 11'-8"X21'-2"X2	= 493.44 SQ FTS
C = 29'-8"X21'-2"	= 627.60 SQ FTS
TOTAL	= 2077.92 SQ FTS
DEDUCTION	= 121.65 SQ FTS
TOTAL	= 1956.27 SQ FTS
TOTAL (1956.27 X2)	= 3912.54 SQ FTS

TOTAL AREA OF ALL TYPES APPARTMENT
(5TH TO 16TH FLOOR) FOR EACH FLOOR

TYPE - 1	= 8932.08 SQ FTS
TYPE - 2	= 4265.26 SQ FTS
TYPE - 3	= 2411.02 SQ FTS
TYPE - 4	= 3796.08 SQ FTS
TYPE - 5	= 3775.92 SQ FTS
TYPE - 6	= 1954.12 SQ FTS
TYPE - 7	= 3912.54 SQ FTS
TOTAL	= 29047.02 SQ FTS
SERVICE AREA	= 6993.10 SQ FTS
TOTAL	= 36040.12 SQ FTS

SUMMARY OF 5TH TO 16TH FLOOR
(EACH FLOOR AREA)

APARTMENT AREA	= 29047.02 SQ FTS
SERVICES AREA	= 6993.10 SQ FTS
TOTAL	= 36040.12 SQ FTS

DETAIL OF AREA (TYPICAL FLOOR)
(17TH TO 18TH FLOOR)

TYPE - 1

A = 66'-5"X19'-5"	= 1289.87 SQ FTS
B = 66'-5"X10'-5"	= 692.09 SQ FTS
C = 60'-5"X7'-6"	= 453.15 SQ FTS
TOTAL	= 2435.11 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2233.02 SQ FTS
TOTAL (2233.02 X 4)	= 8932.08 SQ FTS

DEDUCTION AREA OF TYPE - 1

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 2

A = 60'-0"X37'-5"	= 2245.20 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
TOTAL	= 2334.72 SQ FTS
DEDUCTION (D1,D2)	= 202.09 SQ FTS
TOTAL	= 2132.63 SQ FTS
TOTAL (2132.63X2)	= 4265.26 SQ FTS

DEDUCTION AREA OF TYPE - 2

D1 = 11'-9"X8'-8"	= 101.75 SQ FTS
D2 = 15'-3"X6'-7"	= 100.34 SQ FTS
TOTAL	= 202.09 SQ FTS

TYPE - 3

A = 26'-5"X37'-5"	= 988.63 SQ FTS
B = 3'-0"X19'-5"	= 58.26 SQ FTS
C = 3'-0"X10'-5"	= 31.26 SQ FTS
D = 4'-0"X18'-5"	= 73.68 SQ FTS
E = 4'-0"X13'-5"	= 53.68 SQ FTS
TOTAL	= 1205.51 SQ FTS
TOTAL(1205.51X2)	= 2411.02 SQ FTS

TYPE - 7

A = 18'-0"X26'-7"X2	= 956.88 SQ FTS
B = 11'-8"X21'-2"X2	= 493.44 SQ FTS
C = 29'-8"X21'-2"	= 627.60 SQ FTS
TOTAL	= 2077.92 SQ FTS
DEDUCTION	= 121.65 SQ FTS
TOTAL	= 1956.27 SQ FTS
TOTAL (1956.27 X2)	= 3912.54 SQ FTS

TOTAL AREA OF ALL TYPES APPARTMENT
(17TH TO 18TH FLOOR) FOR EACH FLOOR

TOTAL AREA OF ALL TYPES APPARTMENT
(17TH TO 18TH FLOOR) FOR EACH FLOOR

TYPE - 1	= 8932.08 SQ FTS
TYPE - 2	= 4265.26 SQ FTS
TYPE - 3	= 2411.02 SQ FTS
TYPE - 7	= 3912.54 SQ FTS
TOTAL	= 19520.90 SQ FTS
SERVICE AREA	= 6993.10 SQ FTS
TOTAL	= 26514.00 SQ FTS

SUMMARY OF TYPICAL FLOOR
(17TH TO 18TH) EACH FLOOR

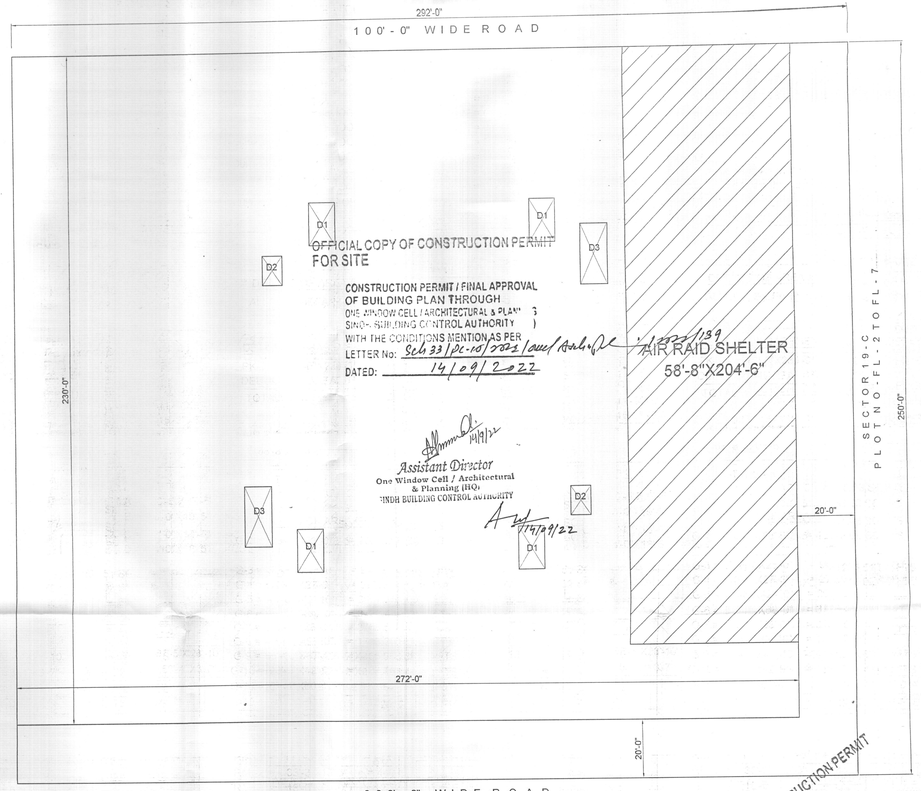
APARTMENT AREA	= 19520.90 SQ FTS
SERVICES AREA	= 6993.10 SQ FTS
TOTAL	= 26514.00 SQ FTS

DETAIL OF SERVICE AREA FOR ALL FLOORS
ALLOWABLE SERVICE AREA (30% FAR)
130307.21 SQ FTS

GROUND FLOOR SER. AREA	= 21106.95 SQ FTS
4TH. FLOOR SER. AREA	= 3496.55 SQ FTS
5TH. FLOOR SER. AREA	= 6993.10 SQ FTS
6TH. FLOOR SER. AREA	= 6993.10 SQ FTS
7TH. FLOOR SER. AREA	= 6993.10 SQ FTS
8TH. FLOOR SER. AREA	= 6993.10 SQ FTS
9TH. FLOOR SER. AREA	= 6993.10 SQ FTS
10TH. FLOOR SER. AREA	= 6993.10 SQ FTS
11TH. FLOOR SER. AREA	= 6993.10 SQ FTS
12TH. FLOOR SER. AREA	= 6993.10 SQ FTS
13TH. FLOOR SER. AREA	= 6993.10 SQ FTS
14TH. FLOOR SER. AREA	= 6993.10 SQ FTS
15TH. FLOOR SER. AREA	= 6993.10 SQ FTS
16TH. FLOOR SER. AREA	= 6993.10 SQ FTS
17TH. FLOOR SER. AREA	= 6993.10 SQ FTS
18TH. FLOOR SER. AREA	= 6993.10 SQ FTS
TOTAL	= 122506.90 SQ FTS

130307.21 -122506.90 = 7800.31 REMAINING

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE



BLOCK PLAN FOR BASEMENT

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

SUMMARY OF MAIN AREA

1:	BASEMENT FLOOR	= 62560.00 SQ FTS	
2:	GROUND FLOOR AREA (SHOPS , ARCADE & SERVICE AREA)	= 61380.43 SQ FTS	277744.83
3:	1ST FLOOR (PARKING AREA)	= 61521.76 SQ FTS	
4:	2ND FLOOR (PARKING AREA)	= 61521.76 SQ FTS	
5:	3RD FLOOR (VISITORS PARKING AREA)	= 30760.88 SQ FTS	
6:	4TH FLOOR AREA (APARTMENT ,PARKING,RECREATION & SERVICE)	= 55731.22 SQ FTS	540932.28
7:	5TH FLOOR AREA	= 36040.12 SQ FTS	
8:	6TH FLOOR AREA	= 36040.12 SQ FTS	
9:	7TH FLOOR AREA	= 36040.12 SQ FTS	
10:	8TH FLOOR AREA	= 36040.12 SQ FTS	
11:	9TH FLOOR AREA	= 36040.12 SQ FTS	
12:	10TH FLOOR AREA	= 36040.12 SQ FTS	
13:	11TH FLOOR AREA	= 36040.12 SQ FTS	
14:	12TH FLOOR AREA	= 36040.12 SQ FTS	
15:	13TH FLOOR AREA	= 36040.12 SQ FTS	
16:	14TH FLOOR AREA	= 36040.12 SQ FTS	
17:	15TH FLOOR AREA	= 36040.12 SQ FTS	
18:	16TH FLOOR AREA	= 36040.12 SQ FTS	
19:	17TH FLOOR AREA	= 26514.00 SQ FTS	
20:	18TH FLOOR AREA	= 26514.00 SQ FTS	
TOTAL		= 818677.11 SQ FTS	
LESS AREA		= 386626.73 SQ FTS	
TOTAL		= 432050.38 SQ FTS	

FAR	PROPOSED	BALANCE
432057.38 -	432050.38	= 7.00 SQ FTS

SCHEDULE OF CAR PARKING AREA
FOR MAIN BUILDING

TOTAL ALLOWABLE (FAR) AREA = 432057.38 SQ FTS
TOTAL NOS OF CARS 432057.38 / 1000 = 432 CARS

CAR OF HANDI CAP = 1 CAR
TOTAL CARS REQUIRED = 432 + 1 = 433 CARS

16 % OF TOTAL CAR PARKING SPACE FOR MOTOR CYCLES
= 432 X 16 / 100 = 69 X 6 = 372 MOTOR CYCLE

ONE CAR = 6 MOTOR CYCLES = 69X6 = 372 MOTOR CYCLES.
NET CARS FOR PARKING = 433 - 69 = 364 CARS.

REQUIRED CARS	= 364
REQUIRED MOTER CYCLE	= 372
PROVIDED CARS	= 430
PROVIDED MOTER CYCLE	= 462

SCHEDULE OF JOINERY.

W.	4'-0"X4'-0"	D.	3'-6" X 7'-0"
W1.	6'-0"X4'-0"	D1.	3'-3" X 7'-0"
W2.	5'-0"X4'-0"	D2.	3'-0" X 7'-0"
V.	2'-0" X 2'-0"	D3.	2'-6" X 7'-0"

DETAILS OF LESS AREA

1:	BASEMENT FLOOR (272'X230')	= 62560.00 SQ FTS	
2:	GROUND FLOOR AREA (RAMP , ARCADE & SERVICE AREA)	= 31151.22 SQ FTS	247515.62
3:	1ST FLOOR (PARKING AREA)	= 61521.76 SQ FTS	
4:	2ND FLOOR (PARKING AREA)	= 61521.76 SQ FTS	
5:	3RD FLOOR (PARKING AREA) (VISITORS PARKING AREA)	= 30760.88 SQ FTS	
6:	4TH FLOOR	= 41207.71 SQ FTS	139111.11
7:	5TH FLOOR AREA	= 6993.10 SQ FTS	
8:	6TH FLOOR AREA	= 6993.10 SQ FTS	
9:	7TH FLOOR AREA	= 6993.10 SQ FTS	
10:	8TH FLOOR AREA	= 6993.10 SQ FTS	
11:	9TH FLOOR AREA	= 6993.10 SQ FTS	
12:	10TH FLOOR AREA	= 6993.10 SQ FTS	
13:	11TH FLOOR AREA	= 6993.10 SQ FTS	
14:	12TH FLOOR AREA	= 6993.10 SQ FTS	
15:	13TH FLOOR AREA	= 6993.10 SQ FTS	
16:	14TH FLOOR AREA	= 6993.10 SQ FTS	
17:	15TH FLOOR AREA	= 6993.10 SQ FTS	
18:	16TH FLOOR AREA	= 6993.10 SQ FTS	
19:	17TH FLOOR AREA	= 6993.10 SQ FTS	
20:	18TH FLOOR AREA	= 6993.10 SQ FTS	
TOTAL		= 386626.73 SQ FTS	

SCHEDULE OF ADDITIONAL VISITORS CAR PARKING AREA

(FOR 3RD. FLOOR)

3RD FLOOR PUBIC PARKING AREA = 61521.76
TOTAL NOS OF CARS 61521.76 / 1000 = 61.52 CARS
OR SAY 62 CARS

ADDITIONAL VISITORS PARKING FACILITIES

PROVIDED CARS	= 103
PROVIDED MOTER CYCLE	= 119

REGULAR PARKING MAIN BUILDING

PROVIDED CARS	= 311
PROVIDED MOTER CYCLE	= 343

TOTAL PARKING MAIN BUILDING & ADDITIONAL PARKING

PROVIDED CARS	= 430 NOS
PROVIDED MOTER CYCLE	= 462 NOS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
DETAIL OF AREA
AND BLOCK PLAN FOR BASEMENT

OWNER

ARCHITECT
HARIS SHAHEEN
ARCHITECT
CP&A License No. AL-01-810
P.S.C.P.A.A. 6172

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-05-264
Suite # 306,3rd Floor
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-4
DRAWN	
CHECKED BY	
SCALE	3/32"=1'-0"
DATED	28-06-2022
DRG NO.	SB-3
RACK NO.	
FILE NO.	

292'-0"

100'-0" WIDE ROAD

NORTH POINT

20'-0" COS

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (SBCA) WITH THE CONDITIONS MENTION AS PER LETTER No: SBCA/33/Per-10/2022/ONE/Addl.Dir/12022/139 DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning HQs
SINDH BUILDING CONTROL AUTHORITY

20'-0" WIDE ROAD

MOTORCYCLE DRIVE WAY 12'-0" WIDE

230'-1"

POTABLE WATER TANK
86'-6"X18'-6"X8'-0"
77725 GALLON

DRIVE WAY 18'-0" WIDE

FIRE FIGHTING WATER TANK
42'-0"X18'-0"X8'-0"
37739 GALLON

POTABLE WATER TANK
62'-0"X18'-6"X8'-0"
55710 GALLON

LIFT 9'X7'
LIFT 9'X7'
CARGO LIFT 7'X10'
SUM PIT 6'X6'X4'
UP
DN

DRIVE WAY 18'-0" WIDE

AIR RAID SHELTER
57'-8"X203'-6"

203'-6"

18'-0"
38'-0"
LEV-5'-0"
LEV-4'-0"
LEV-3'-0"
LEV-2'-0"
LEV-1'-0"
LEV-6'-0"
LEV-7'-0"
RAMP UPTO GROUND

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

57'-6"

PLOT NO-FL-7

250'-0"

SUM PIT 6'X6'X4'

DRIVE WAY 18'-0" WIDE

LIFT CARGO 7'X10'

SEPTIC TANK
58'-6"X17'-0"X8'-0"

DRIVE 18'-0" WIDE

84'-5"

POTABLE WATER TANK
86'-6"X18'-6"X8'-0"
77725 GALLON

DRIVE WAY 18'-0" WIDE

NON-POTABLE WATER TANK
42'-0"X18'-0"X8'-0"
37739 GALLON

POTABLE WATER TANK
68'-9"X18'-0"X8'-0"
61776 GALLON

A

A

20'-0"

200'-0" WIDE ROAD

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

BASEMENT PLAN (PARKING)
AND AIR RAID SHELTER

TOTAL NOS OF CARS = 73 NOS
TOTAL NOS OF MOTORCYCLE = 95 NOS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

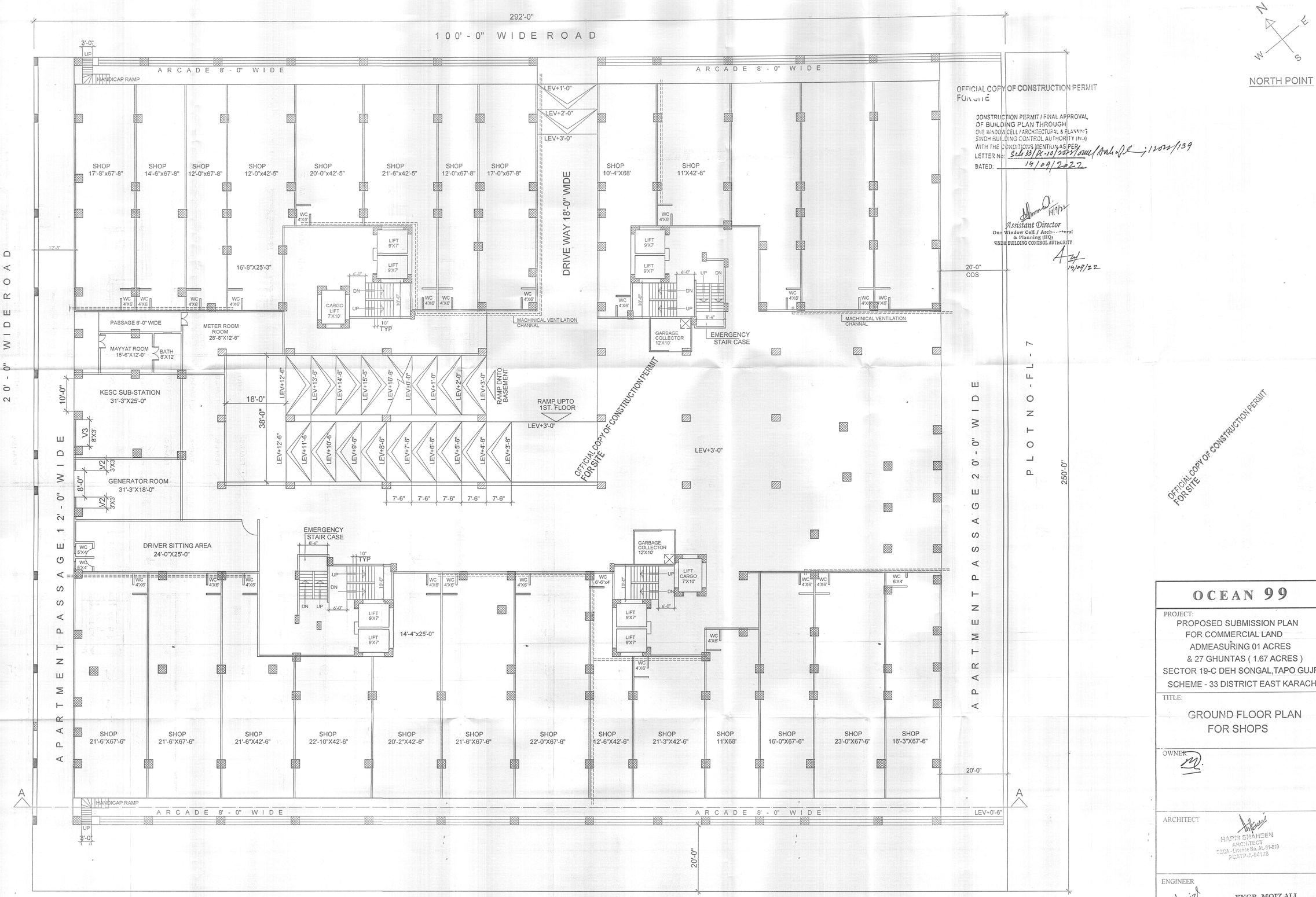
TITLE:
BASEMENT PLAN (PARKING)
AND AIR RAID SHELTER

OWNER

ARCHITECT
HAMID SHAHEEN
ARCHITECT
CBCA-Licence No. A-01-610
PCATP-S-040178

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-05-264
Suite # 306,3rd Floor
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-5
DRAWN	DRG NO. SB-4
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	
DATED 28-06-2022	FILE NO.



OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (SBCA) WITH THE CONDITIONS MENTIONED AS PER LETTER No: SBCA 33/PK-10/2022/Amd/Arch.Cell/12022/139 DATED: 14/09/2022

14/9/22
Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/09/22

GROUND FLOOR PLAN
FOR SHOPS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

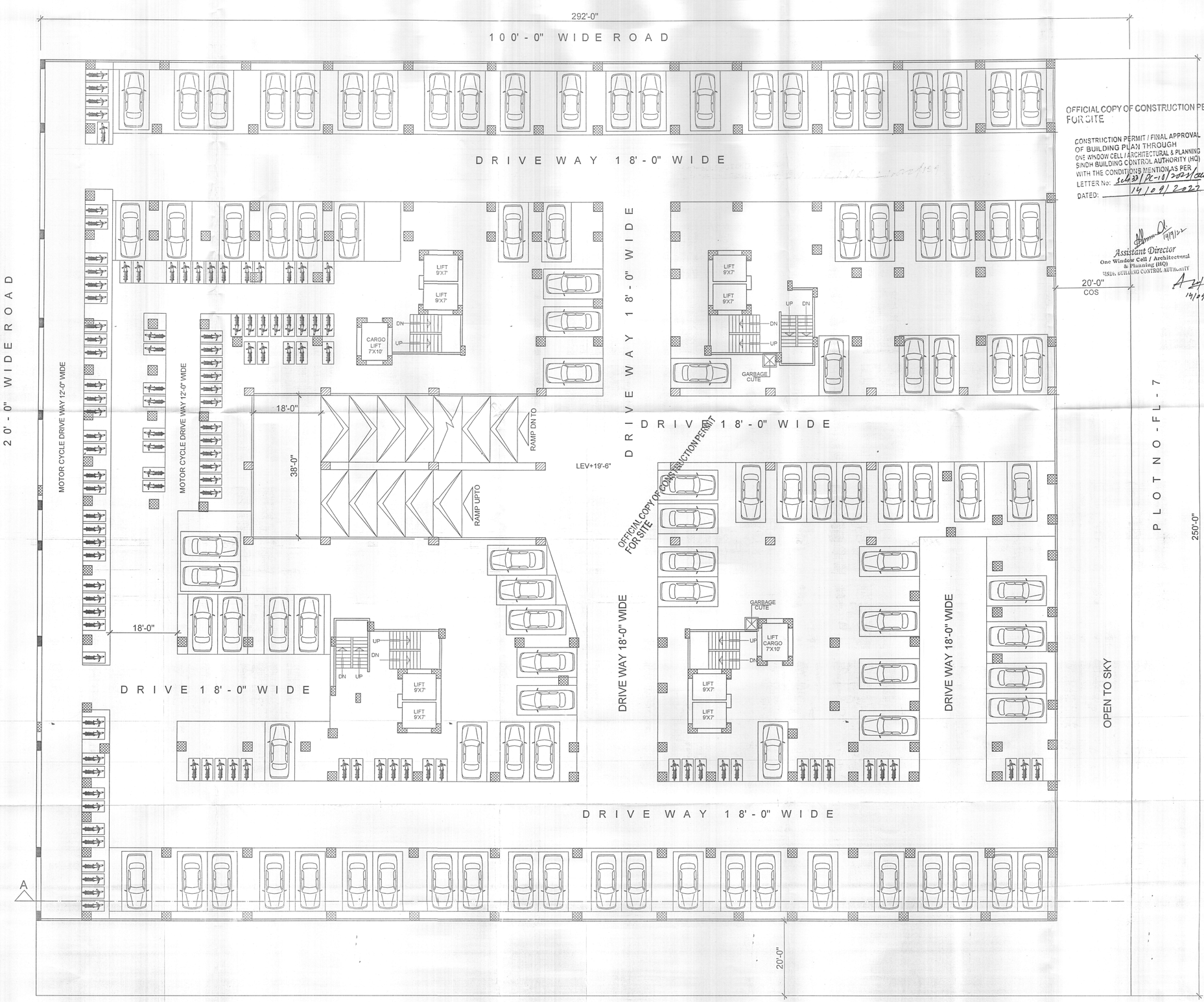
TITLE:
GROUND FLOOR PLAN
FOR SHOPS

OWNER

ARCHITECT
HARIS SHAHEEN
ARCHITECT
SBCA - License No. AL-01-810
PCATP-A-04176

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-06-264
Suite # 306,3rd Floor,
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-6
DRAWN	DRG NO. SB-5
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	



NORTH POINT

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (HQ) WITH THE CONDITIONS MENTIONED AS PER LETTER No: SBCA/SE-18/2022/Cell/Arch.-Pl-1/1022/139 DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/9/22

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

1ST. FLOOR PLAN (PARKING)

TOTAL NOS OF CARS = 103 NOS
TOTAL NOS OF MOTORCYCLE = 119 NOS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

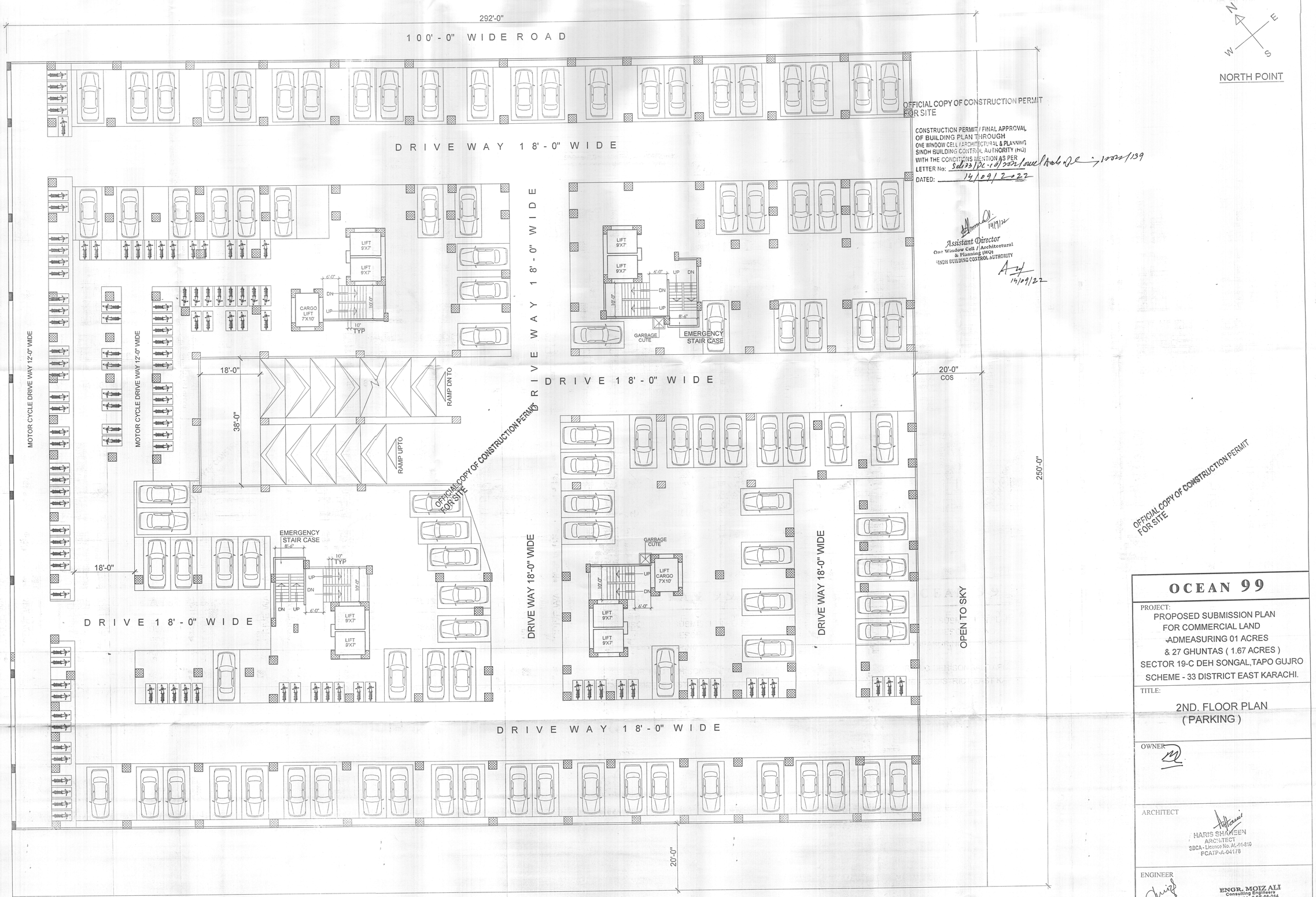
TITLE:
1ST. FLOOR PLAN
(PARKING)

OWNER

ARCHITECT
HARIS SHAHEEN
ARCHITECT
SBCA - Licence No. AL-01-316
PCATP-A-04178

ENGINEER
ENGR. MOIZ ALI
Consulting Engineer
K.E.C.A. Lic # SE-06-264
Suite # 306,3rd Floor
Khayam Chmber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-7
DRAWN	DRG NO. SB-6
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	



NORTH POINT

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (HQ) WITH THE CONDITIONS MENTION AS PER LETTER No: SBCA/DC-10/2021/1044 Rev-02 → 10021/139

DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/9/22

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OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
2ND. FLOOR PLAN
(PARKING)

OWNER

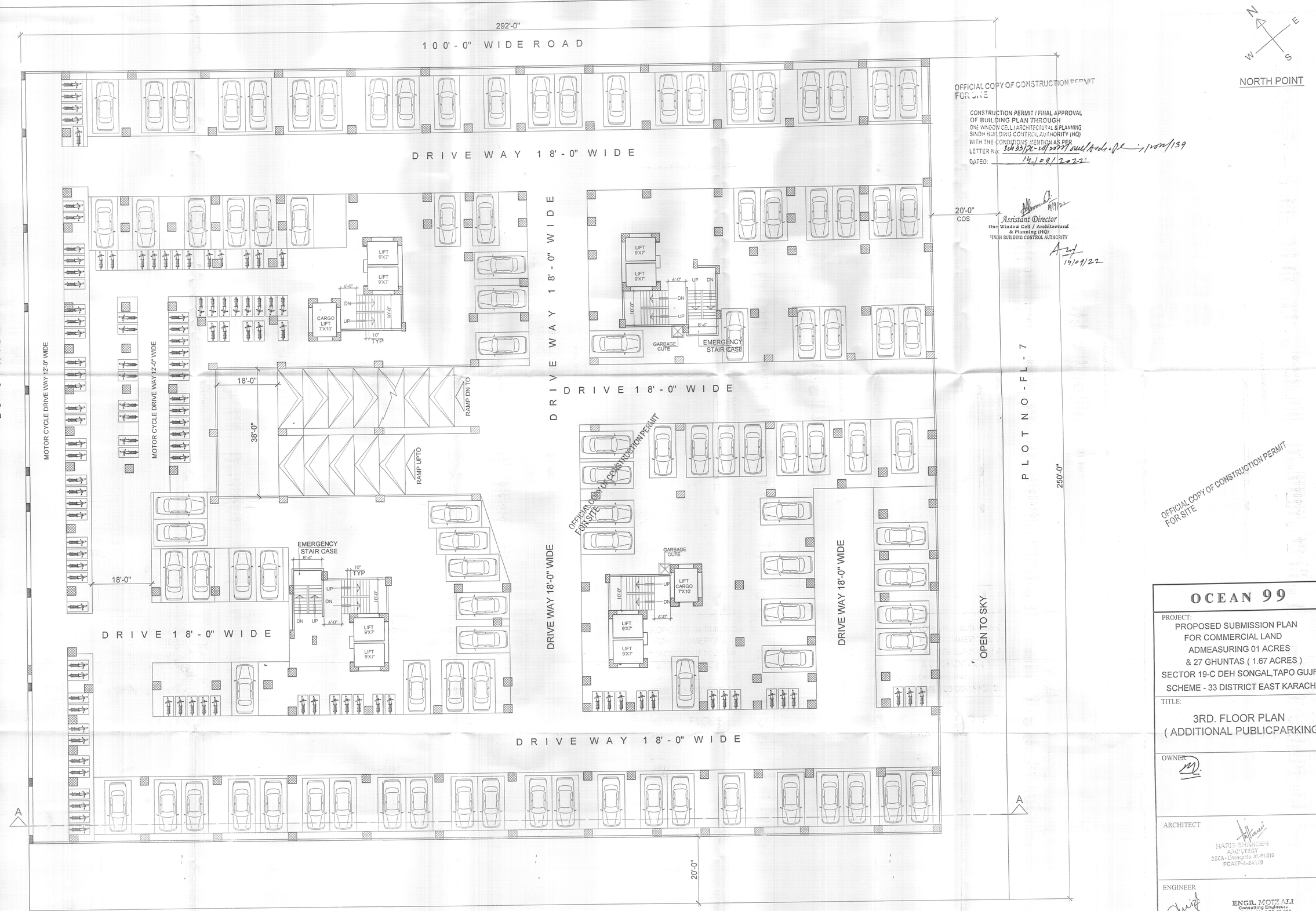
ARCHITECT
HARIS SHAMEEN
ARCHITECT
SBCA - Licence No. AL-01-810
PCATP-A-04178

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-06-264
Suite # 306,3rd Floor,
Khayam Chmber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-8
DRAWN	DRG NO. SB-7
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

2ND. FLOOR PLAN (PARKING)

TOTAL NOS OF CARS = 103 NOS
TOTAL NOS OF MOTORCYCLE = 119 NOS



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CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No: SBA33/SE-14/2022/Amd/Archi/Pt-1/1001/39
DATED: 14/09/2022.

19/9/22
Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/09/22

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

3RD. FLOOR PLAN (ADDIONAL PUBLIC PARKING)

TOTAL NOS OF CARS = 103 NOS
TOTAL NOS OF MOTORCYCLE = 119 NOS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
3RD. FLOOR PLAN
(ADDITIONAL PUBLICPARKING)

OWNER

ARCHITECT
HARIS SHAIKH
ARCHITECT
SBCA - License No. A1-01-810
PCATP-S-04-1/B

ENGINEER
ENGR. MOIZ AJI
Consulting Engineer
K.S.C.A. Lic # SE-06-264
Suite # 306,3rd Floor
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-9
DRAWN	DRG NO. SB-8
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

292'-0"

NORTH POINT

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (HQ) WITH THE CONDITIONS MENTIONED AS PER LETTER No: Sch 33/PC-10/2022/Low/Archt dt 13/09/22 DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/9/22

DRIVE WAY 18'-0" WIDE

DRIVE WAY 18'-0" WIDE

DRIVE WAY 18'-0" WIDE

20'-0" WIDE ROAD

MOTOR CYCLE DRIVE WAY 12'-0" WIDE

MOTOR CYCLE DRIVE WAY 12'-0" WIDE

MOTOR CYCLE DRIVE WAY 12'-0" WIDE

MOTOR CYCLE DRIVE WAY 9'-6" WIDE

LIFT 9'X7'

LIFT 9'X7'

CARGO LIFT 7'X10'

10" TYP

6'-0"

DN

UP

10'-0"

RAMP DN TO GROUND FL

LEV+24'-6"

LEV+25'-6"

LEV+26'-6"

LEV+27'-6"

LEV+28'-6"

LEV+17'-6"

LEV+18'-6"

LEV+19'-6"

LEV+24'-6"

LEV+23'-6"

LEV+22'-6"

LEV+21'-6"

LEV+20'-6"

LEV+19'-6"

RECREATION AREA
64'-6"X107'-2"

64'-6"

107'-2"

20'-0"
COS

250'-0"

GARBAGE CUTE

EMERGENCY STAIR CASE

8'-6"

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OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

PASSAGE 8'-0" WIDE

PASSAGE 5'-0" WIDE

BALCONY 4'-0" WIDE

BED 10'-7"X12'-7"

BED 10'-7"X9'-6"

LOUNGE 10'-7"X14'-5"

BATH 8'-6"X4'-6"

BATH 7'-6"X6'

OPEN 11'-10"X8'-6"

STORE 6'X3'-7"

KITCHEN 9'X7'-6"

S.BAL 8'X6'

DRAWING 14'X11'

POWDER 7'X3'-6"

OPEN TO SKY

9'-10"

9'-6"

12'-0"

10'-3"

LIFT CARGO 7'X10'

BED 10'-7"X12'-7"

LOUNGE 11'X17'

STORE 6'X3'

DRAWING 14'X11'

LOUNGE 12'X16'

BED 10'X10'

BATH 6'X6'

OPEN 5'X8'

KITCHEN 6'-6"X8'

OPEN 6'X6'

KITCHEN 6'-6"X6'

PC

ENT.

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4TH. FLOOR PLAN

APARTMENT , RECREATION & PARKING AREA

TOTAL NOS OF CARS = 48 NOS

TOTAL NOS OF MOTORCYCLE = 105 NOS

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

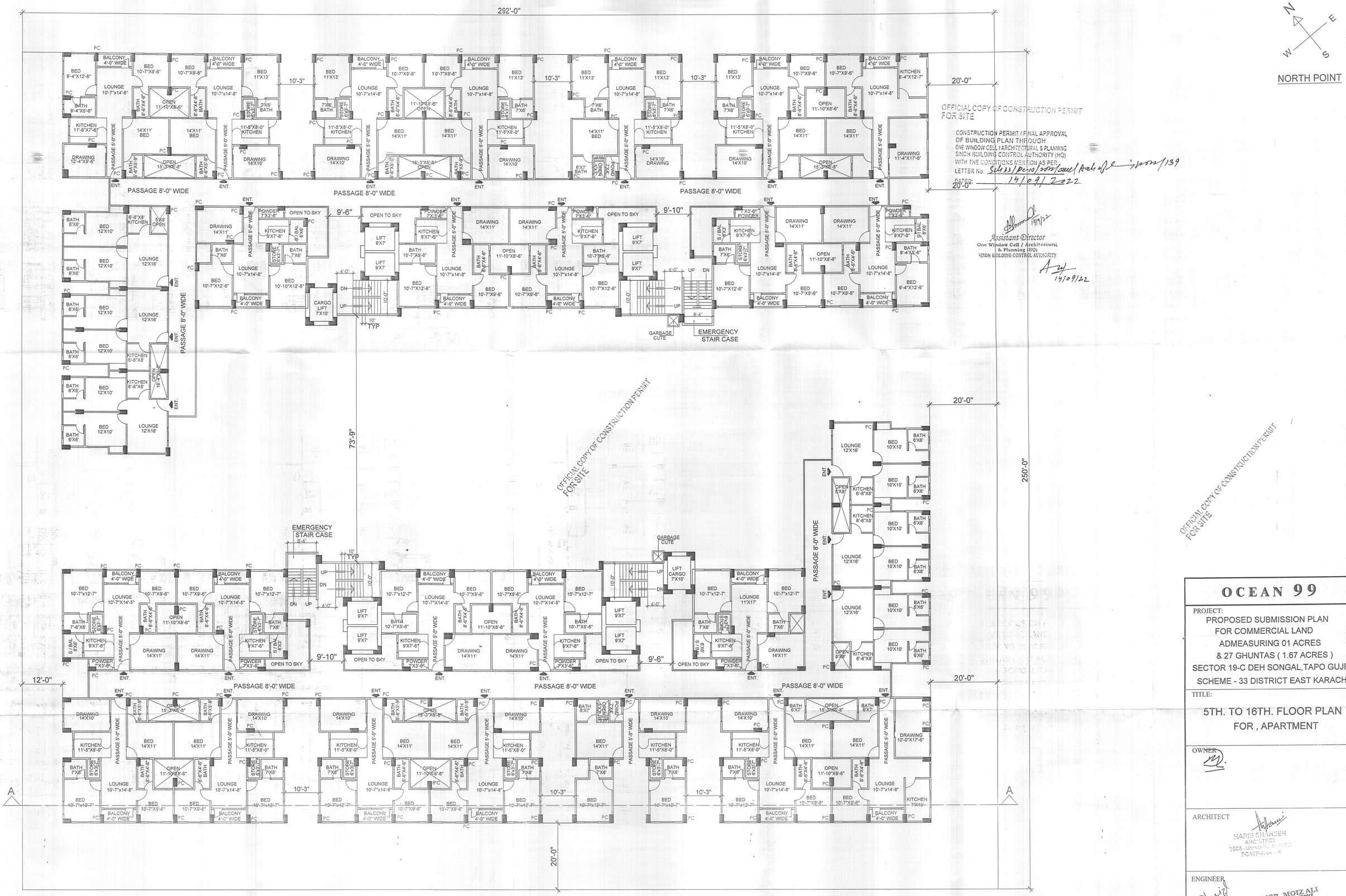
TITLE:
4TH. FLOOR PLAN
APARTMENT , RECREATION
& PARKING AREA

OWNER

ARCHITECT
HARIS SHAHZEN
ARCHITECT
CCEA - License No. AL-01-210
P.C.A.P.S.-C-04179

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-05-264
Suite # 306,3rd Floor
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-10
DRAWN	DRG NO. SB-9
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	



CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No: SBA33/PC-10/2022/Comml/Addl.Fl. dtd 13/09/22
DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/9/22
14/09/22

5TH. TO 16TH. FLOOR PLAN
FOR , APARTMENT

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

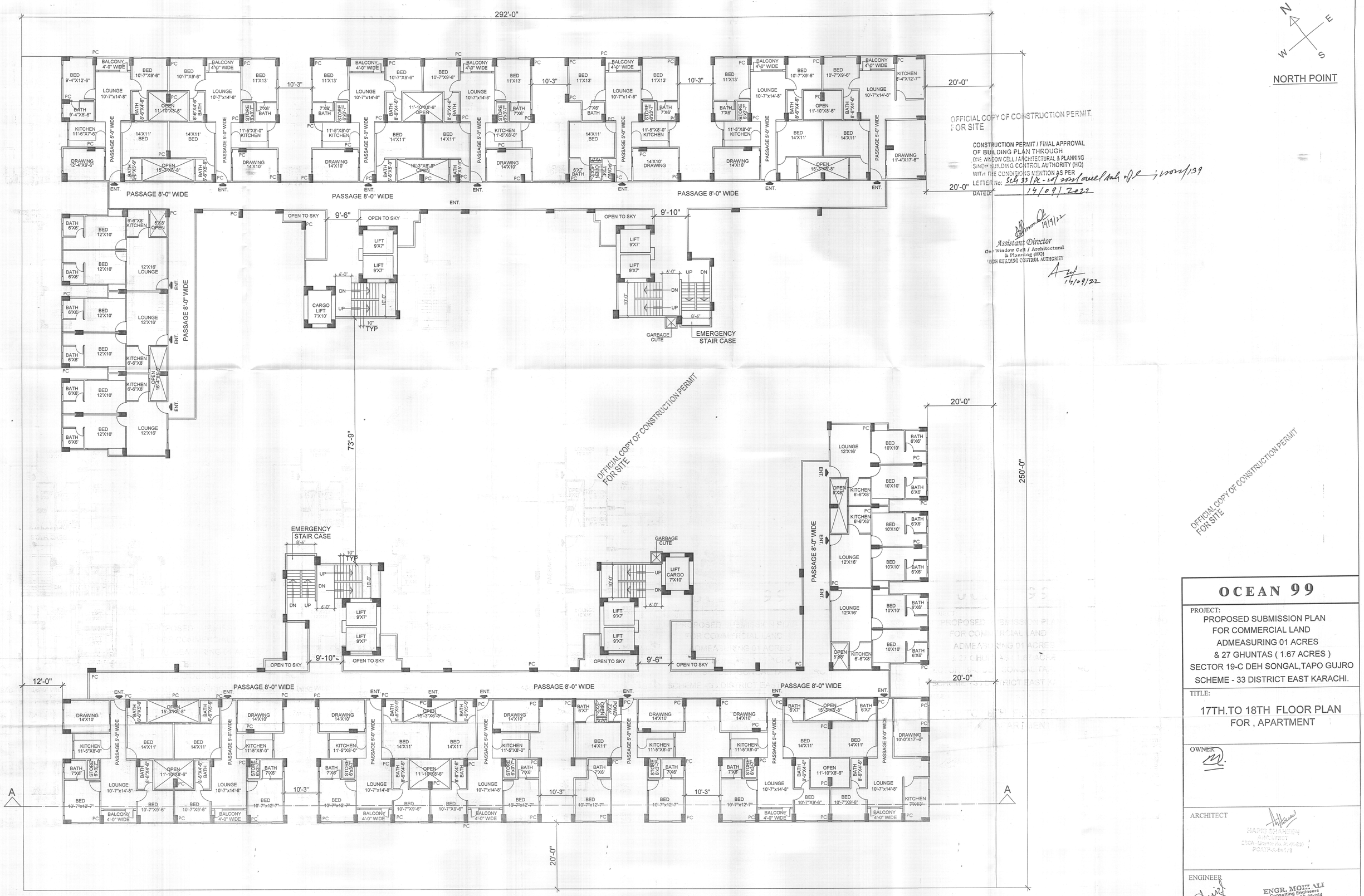
TITLE:
5TH. TO 16TH. FLOOR PLAN
FOR , APARTMENT

OWNER

ARCHITECT
HARIS SHAHEEN
ARCHITECT
SBCA-License No. 31-11-96
PCATP-A-04116

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SB-05-264
Suite # 320, 3rd Floor,
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-11
DRAWN	DRG NO. SB-10
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	



17TH. TO 18TH. FLOOR PLAN
FOR , APARTMENT

NORTH POINT

OFFICIAL COPY OF CONSTRUCTION PERMIT
FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No. SBA 33/PL-10/2021/Amendment/Ocean 99/1139
DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural
& Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/9/22

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
17TH.TO 18TH FLOOR PLAN
FOR , APARTMENT

OWNER

ARCHITECT
HAJIO GHANGHRO
ARCHITECT
220A, Ghanghro Building,
POONA-Karachi-2

ENGINEER
ENGR. MOIN ALI
Consulting Engineers
K.B.C.A. Lic # SE-08-264
Suite # 306,3rd Floor,
Khayam Chamber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-12
DRAWN	DRG NO. SB-11
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

292'-0"

100'-0" WIDE ROAD

N

W E S

NORTH POINT

20'-0"

12'-0"

D1 D2 D3

N.P.W.TANK 11'X9'X5' CLEAR 3088 GALLON

F.F.W.TANK 11'X9'X5' CLEAR 3088 GALLON

P.W.TANK CLEAR 9380 GALLON 27'-4"X11'-0"X5'-0"

P.W.TANK 18'-6"X20'-0"X5' CLEAR 6380 GALLON

18'-6"

P.W.TANK 18'-6"X20'-0"X5' CLEAR 11544 GALLON

F.F.W.TANK 12'X12'X5' CLEAR 3600 GALLON

N.P.W.TANK 12'X12'X5' CLEAR 3600 GALLON

OPEN

LIFT

EMERGENCY STAIR

SOLAR PANEL SHEET

SOLAR PANEL BATTERY ROOM 16'-4"X10'-3"

20'-0" WIDE ROAD

68'-10"

PLOT NO-FL-7

250'-0"

A

A

20'-0"

200'-0" WIDE ROAD

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL OF BUILDING PLAN THROUGH ONE WINDOW CELL / ARCHITECTURAL & PLANNING SINDH BUILDING CONTROL AUTHORITY (HQ) WITH THE CONDITIONS MENTION AS PER LETTER No: SBA 33/DC-10/2022/Amd/Add-01 DATED: 14/09/2022

14/9/22

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY

14/09/22

ROOF PLAN

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL, TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
ROOF PLAN

OWNER

ARCHITECT
HAMID SHAHZEB
ARCHITECT
SBCA - License No. A-00616
PCATP-R-04178

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-06-264
Suite # 306,3rd Floor
Khayam Chmber, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB-13
DRAWN	DRG NO. SB-12
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

SECTION A-A

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No: SBA 33/PL-10/2022/Local Body/Pt-2 dated 14/09/2022
DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural & Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/09/22

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

OFFICIAL COPY OF CONSTRUCTION PERMIT FOR SITE

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
SECTION A-A

OWNER

ARCHITECT
HANIF A. MEEN
ARCHITECT
CP&A - Lic # A-94/10
PCATP-AR-94/78

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-66-264
Suite # 306,3rd Floor
Khayam Chamber, Block-2
K.E.C.H.S. Karachi.

NEXT DRG.	SB-14
DRAWN	DRG NO. SB-13
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	FILE NO.
DATED 28-06-2022	

200'-0"&100'-0" ROAD FACING ELEVATION

OFFICIAL COPY OF CONSTRUCTION PERMIT
FOR SITE

CONSTRUCTION PERMIT / FINAL APPROVAL
OF BUILDING PLAN THROUGH
ONE WINDOW CELL / ARCHITECTURAL & PLANNING
SINDH BUILDING CONTROL AUTHORITY (HQ)
WITH THE CONDITIONS MENTION AS PER
LETTER No: SBA 33/DC-10/2022/Archt/Arch-Cell-1339/139
DATED: 14/09/2022

Assistant Director
One Window Cell / Architectural
& Planning (HQ)
SINDH BUILDING CONTROL AUTHORITY
14/09/22

OFFICIAL COPY OF CONSTRUCTION PERMIT
FOR SITE

OCEAN 99

PROJECT:
PROPOSED SUBMISSION PLAN
FOR COMMERCIAL LAND
ADMEASURING 01 ACRES
& 27 GHUNTAS (1.67 ACRES)
SECTOR 19-C DEH SONGAL,TAPO GUJRO
SCHEME - 33 DISTRICT EAST KARACHI.

TITLE:
200'-0"&100'-0" ROAD
FACING ELEVATION

OWNER

ARCHITECT
HAIDER SHAMEEN
ARCHITECT
SBCA-Licence No.A1-01-310
PCATP-A-04178

ENGINEER
ENGR. MOIZ ALI
Consulting Engineers
K.B.C.A. Lic # SE-06-264
Suite # 306, 3rd Floor,
Khayaban Chumbur, Block-2
P.E.C.H.S. Karachi.

NEXT DRG.	SB–
DRAWN	DRG NO. SB-14
CHECKED BY	RACK NO.
SCALE 3/32"=1'-0"	
DATED 28-06-2022	FILE NO.

Annex III: Environmental Monitoring Reports

Ambient Air Quality Test Report

Project Name:	**Plot No. 1 Deh Songal, Tappo Gujro, Sector 19/C, Scheme 33, District East, Karachi**	**Test Report No:**	**QTS/OC/22/5070**
Sample Description:	**Ambient Air Quality Test**	**Sample Duration:**	**24hr's**

SEQS-PARAMETERS								
Date	**Time**	**NO ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**	**PM 10 ($\mu g/m^3$)**	**PM 2.5 ($\mu g/m^3$)**	**SPM ($\mu g/m^3$)**	**Lead (µg/m3)**
02.11.2022	10:00	24.5	31.2	36.6	102	29	289	BDL
02.11.2022	11:00	25.6	20.3	34.4	108	31	296	BDL
02.11.2022	12:00	23.3	32.4	35.5	114	33	298	BDL
02.11.2022	13:00	22.9	33.7	38.2	112	36	311	BDL
02.11.2022	14:00	26.6	34.5	41.0	116	38	313	BDL
02.11.2022	15:00	27.1	36.2	42.4	118	39	319	BDL
02.11.2022	16:00	27.9	34.5	41.6	121	42	324	BDL
02.11.2022	17:00	28.6	30.9	44.7	120	44	333	BDL
02.11.2022	18:00	29.0	31.8	45.5	115	45	339	BDL
02.11.2022	19:00	31.2	32.7	47.7	113	47	342	BDL
02.11.2022	20:00	29.8	34.4	48.8	108	51	345	BDL
02.11.2022	21:00	27.6	35.5	46.6	105	55	349	BDL
02.11.2022	22:00	25.1	36.6	44.1	114	57	351	BDL
02.11.2022	23:00	26.6	37.8	41.0	123	59	355	BDL
03.11.2022	00:00	24.5	36.3	39.8	127	61	364	BDL
03.11.2022	01:00	23.3	32.2	37.6	131	63	350	BDL
03.11.2022	02:00	22.2	30.0	37.1	134	59	343	BDL
03.11.2022	03:00	20.1	29.8	36.6	136	55	336	BDL
03.11.2022	04:00	19.8	28.7	35.5	139	48	330	BDL
03.11.2022	05:00	18.3	27.4	37.4	141	37	328	BDL
03.11.2022	06:00	16.7	27.6	33.9	135	39	324	BDL
03.11.2022	07:00	17.4	24.4	31.8	133	32	315	BDL
03.11.2022	08:00	18.2	23.9	30.9	129	36	310	BDL
03.11.2022	09:00	20.2	22.8	29.8	122	40	303	BDL
03.11.2022	10:00	21.3	24.4	26.6	118	42	306	BDL
MIN		16.7	20.3	26.6	102	29	289	BDL
MAX		31.2	37.8	48.8	141	63	364	BDL
AVG		23.9	30.3	38.5	121.3	44.8	326.8	BDL
SEQS		40	80	120	150	75	500	1.5
LDL-Limits		0.0	0.0	0.0	10	2.5	1.0	-

Quality Testing Services Karachi Q.T.S

Ambient Air Quality Test Report

Project Name:	**Plot No. 1 Deh Songal, Tappo Gujro, Sector 19/C, Scheme 33, District East, Karachi**	**Test Report No:**	**QTS/OC/22/5070**
Sample Description:	**Ambient Air Quality Test**	**Sample Duration:**	**24hr's**

Parameter	Unit	Monitoring Duration	Average Obtained Concentration	SEQS	LDL-Limits	Methodology
Carbon Monoxide (CO)	mg/m³	08 Hours	1.19	5.0	0.0	Non Dispersive Intra Red (NDIR)
Nitrogen oxide (NO)	µg/m³	24 Hours	23.9	40.0	0.0	Chemiluminescence
Nitrogen Dioxide (NO_2)	µg/m³	24 Hours	30.3	80.0	0.0	
Sulphur Dioxide (SO_2)	µg/m³	24 Hours	38.5	120.0	0.0	Ultraviolet Fluorescence Method
Ozone (O_3)	µg/m³	01 Hour	21.2	130.0	0.0	Non Dispersive UV Absorption Method
Particulate Matter (PM_{10})	µg/m³	24 Hours	121.3	150.0	10.0	β Ray Absorption Method
Particular Matter ($PM_{2.5}$)	µg/m³	24 Hours	44.8	75.0	2.5	
Suspended Particulate Matter (SPM)	µg/m³	24 Hours	326.8	500.0	1.0	
Lead (Pb)	µg/m³	24 Hours	BDL	1.5	-	ASS Method

***SEQS= Sindh Environmental Quality Standards.**
(24 Hours Standard for all the parameters Except O3 and CO),
µg/m3= Micrograms per Cubic Meter
mg/m3= Milligrams per Cubic Meter
ND= Not Detected
LDL=Least Detection Limit

Remarks: **All Ambient Air Quality Testing Parameters is Within SEQS Limits.**

Sample Analyzed By: Ather Adil	**Signature of Laboratory Incharge:** _____ **Name : Ali Raza**

Quality Testing Services Karachi Q.T.S

Lab Report Ref. No.: QTS/OC/2022/5071 Reporting Date: 11/11/2022

Project Name: Ocean Ninety 9

Report to: Plot No. 1 Deh Songal, Tappo Gujro, Sector 19/C, Scheme 33, District East, Karachi

SAMPLE DESCRIPTION

Sample ID: Noise Level Test
Sample Description: Noise
No. of samples: 04
Sample Collected/Submitted by: QTS Representative
Sampling Date: 02/11/2022
Sample Receipt at QTS - Date: 02/11/2022

NOISE LEVEL TEST REPORT

S.NO.	LOCATION/SOURCE	SEQS Limits : 65dB(A)		
		Noise Level Readings		
		Minimum	Maximum	Average
1	Front Side Right Corner	60	61	60.5
2	Front Side Left Corner	62	63	62.5
3	Back Side Right Corner	64	65	64.5
4	Back Side Left Corner	63	64	63.5

SEQS=Sindh Environmental Quality Standards

Terms &Condition:

- This report is not valid for any negotiations
- Report is valid for current batch(sample)
- This report is intended only for your guidance & not for legal purpose or for advertisement.

Comments:

Tested Noise levels from the sources are within acceptable limits as describe in SEQS limits.

Sample Analyzed by: Ather Adil	**Signature of Laboratory In charge:** _____ **Name : Ali Raza**

Annex IV: Land Documents

کتاب نمبر 04477

دیہہ جو فارم نمبر II

غير زرعي مقصدن لاءِ ڪم آيل ، منظور ٿيل يا مخصوص ٿيل زمين جو رجسٽر

دیہہ ____ تپو ____ تعلقو ____ ضلعو ____ سال 2021

زمين جو تفصيل

جاڳڪي زمين				سرڪاري زمين							
داخلا جو جريان نمبر تاريخ سميت	سروي نمبر نمبر	سروي نمبر جي ڪل ايراضي انگن ۽ آڪرن ۾	ايراضي غير زرعي ڪمن لاءِ ڪم آيل: پلاٽ نمبر جيڪڏهن ڏنل آهي	ايراضي غير زرعي ڪمن لاءِ ڪم آيل: ايراضي انگن ۽ آڪرن ۾	گوٺ جو پٽ جيڪو سروي نمبرن ۾ شامل نه ڪيل آهي	سروي نمبر	ايراضي منظور ٿيل يا مخصوص ڪيل انگن ۽ آڪرن ۾	رقم وصول ڪيل مالڪاڻي جي چالان نمبر ۽ تاريخ سميت	مدت: شروع ٿيڻ جي تاريخ	مدت: ختم ٿيڻ جي تاريخ	ڪهڙي مقصد لاءِ زمين ڪم آيل ، منظور ٿيل يا مخصوص ٿيل آهي
۱	۲	۳	۴	۵	۶	۷	۸	۹	۱۰	۱۱	۱۲
409 23-11-2021			پلاٽ نمبر 9-ڪ ايل	1-27 ايڪڙ ساڍا ڇهه گنٿا							

Mukhtiarkar / A.C.S.O
Gulzar-e-Hijri (Scheme-33)
Karachi East

Gulzar-e-Hijri (Scheme-33) Karachi East

صفحو نمبر

0447676

ديهه جي فارم نمبر II جو حصو

سال 2021 ضلعو کراچي ايسٽ تعلقو گڏپ جمڙاؤ تپو

ديهه

سالياني ڪرايو يا پاڙو انگن ۾ اڪرن ۾	لوڪل سيس	منظور ڪرڻ واري اختياري	داخلا نمبر تعلقي فارم II جي	اصل مالڪ يا گرانٽي جو نالو	پلاٽ جون حدون ۽ صورتحال	نالو منتقل اليه (نئين مالڪ) جو	صحي ۽ ريمارڪ تصديق ڪندڙ عملدار جي سڃي نالي، عهدي ۽ تاريخ سميت
١٣	١٤	١٥	١٦	١٧	١٨	١٩	٢٠
1-00			VF 403 5-8-21	مسز محمد عرفان ولد محمد اسحاق	اتر = 20 روڊ	عبدالرحيم	25-11-2021
في چورس				42201-4171461-9	ڏکڻ = پرائيويٽ زمين	ولد اڪبر طارق في	42201-0409988-5
ول ڦوٽ					اوڀر = 100 روڊ		
					اولهه = 200 روڊ		

ASSISTANT DIRECTOR (Planning) Town Planning Karachi-e-Hijri Scheme-33 Karachi East

Attested

25/11/21

AIJAZ UL HASSAN Mukhtiarkar / A.C.S.O Gulzar-e-Hijri Scheme-33 Karachi East

25/11/21

NAZIR AHMED ABRO ASSISTANT COMMISSIONER Gulzar-e-Hijri Scheme-33 Karachi East

ضميمو جو فارم نمبر II

غير زرعي مقصدن لاءِ ڪم آيل، منظور ٿيل يا مخصوص ٿيل زمين جو رجسٽر

ڪتاب نمبر 04477

ديهه ڪاڇيڙو تپو تعلقو گلشن اقبال/اسٽيم 33 ضلعو ايسٽ ڪراچي سال 2021

زمين جو تفصيل

خانگي زمين				سرڪاري زمين							
داخلا جو جربان نمبر تاريخ سميت	سروي نمبر	سروي نمبر جي ڪل اراضي انگن ۾ آڪرن ۾	اراضي غير زرعي ڪن لاءِ ڪم آيل		گوٺ جو پٽ جيڪو سروي نمبرن ۾ شامل نه ڪيل آهي	سروي نمبر	اراضي منظور ٿيل يا مخصوص ڪيل انگن ۾ آڪرن ۾	رقم وصول ڪيل مالڪاڻي جي چالان نمبر ۽ تاريخ سميت	مدت		ڪهڙي مقصد لاءِ زمين ڪم آيل، منظور ٿيل يا مخصوص ٿيل آهي
			پلاٽ نمبر جيڪڏهن ڏنل آهي	اراضي انگن ۾ آڪرن ۾					شروع ٿيڻ جي تاريخ	ختم ٿيڻ جي تاريخ	
۱	۲	۳	۴	۵	۶	۷ مال	۸	۹	۱۰	۱۱	۱۲
403 05-8-21						سروي نمبر 190	(1-27)	چالان نمبر	1991	لين	
								577 31.10.2017	سال 1991 ڪ		
								1783540/-			

Muhammad Ali Siddiqui
Mukhtiarkar (A.C.S.O)
Gulzar-e-Hijri (Scheme-33)
Karachi East

صفحو نمبر

0447670

ديهه جي فارم نمبر II جو حصو

ديهه

تپو ..... تعلقو ..... ضلعو ..... سال 2021

سالياني كرايو يا پاڙو انگن ۾ آكرن ۾	ٽوڪل جيس	منظور كرڻ واري اختياري	داخلا نمبر تعلقي فارم II جي	اصل مالك يا گرانٽي جو نالو	پلاٽ جون حدون ۽ صورتحال	نالو منتقل اليه (نئين مالك) جو	صحي ۽ ريمارڪ تصديق كندڙ عملدار جي سڃي نالي، عهدي ۽ تاريخ سميت
۱۳	۱۴	۱۵	۱۶	۱۷	۱۸	۱۹	۲۰
۵۵-۱			فارم II	سماٿ شهيد شعيب ۽ ال	اتر 20 فوٽ روڈ	سئد محمد عرفان	
روسامي			186	مسمات شعيب معرفت سس	ڏکڻ پرائيوٽ زمين	ولد حاجي احمد	05/8/2021
مل			01-1-2018	آثاري سئد اشفاق علي ولد	اوڀر اوپر 100 فوٽ روڈ	42201-4171461-9	ALI NAWAZ LACHHANI Supervising Tapedar Gulzar-e-Hijri (Scheme-33) District East Karachi
			0921059	ظفر علي	اولهه 200 فوٽ روڈ		
			18-5-18	42201-8034982-3		5/8/21	ALTAF UL HASSAN Mukhtiarkar / A.C S.O Gulzar-e-Hijri (Scheme-33) Karachi East

MUHAMMAD SHAQUE GAD
Assistant Commissioner
Gulzar-e-Hijri (Scheme-33)
Karachi East

دیهه جو فارم نمبر ۱۱

غير زرعي مقصدن لاءِ ڪم آيل، منظور ٿيل يا مخصوص ٿيل زمين جو رجسٽر

کتاب نمبر 03614

ديهه ڊسوڙگل نيو ڪجھرو تعلقو گلزار هجري اسڪيم 33 ضلعو اسٽ ڪراچي سال 2017

زمين جو تفصيل

داخلا جو جريان نمبر تاريخ سميت	جانگي زمين: سروي نمبر	جانگي زمين: سروي نمبر جي ڪل اراضي انگن ۽ آڪرن ۾	جانگي زمين: اراضي غير زرعي ڪمن لاءِ ڪم آيل: پلاٽ نمبر جيڪڏهن ڏنل آهي	جانگي زمين: اراضي غير زرعي ڪمن لاءِ ڪم آيل: اراضي انگن ۽ آڪرن ۾	سرڪاري زمين: گوٺ جو پٽ جيڪو سروي نمبرن ۾ شامل نه ڪيل آهي	سرڪاري زمين: سروي نمبر	سرڪاري زمين: اراضي منظور ٿيل يا مخصوص ڪيل انگن ۽ آڪرن ۾	سرڪاري زمين: رقم وصول ڪيل مالڪاڻي جي چالان نمبر ۽ تاريخ سميت	سرڪاري زمين: مدت: شروع ٿيڻ جي تاريخ	سرڪاري زمين: مدت: ختم ٿيڻ جي تاريخ	سرڪاري زمين: ڪهڙي مقصد زمين ڪم آيل منظور ٿيل يا مخصوص ٿيل آ
۱	۲	۳	۴	۵	۶	۷	۸	۹	۱۰	۱۱	۱۲
186 1-1-2018		لاڏ ڪهڙ	لوڏ			سيڪشن 27	01-27 ايڪڙ	نيڪس اڪائونٽ	ڪارنر پلاٽ آرڊر نمبر NO/03-47-02/50		
		6 مرلا				19	آڪرن هڪ ايڪڙ ستاويهه ڪنال	17,83,540/	روسيو ليٽر بونڊ افيڪيشن ڪراچي تاريخ 2018		
								ڄاڻان سبز	NO-03-47-02/50 تي پذيرائي ڏني وئي		
								57.7	تاريخ 06 02 2018 تي ختم ڪري ڪمرشل ڪالونيز		
								1-11-17	NOTE		
								اسٽيٽ بينڪ آف پاڪستان	Mutation Fee regarding Foli Khata/Sale Deed recovered by Challan No. 07 Rs. 5,00,000/- Dated 4-1-18 Credited in National Bank of Pakistan District Council Branch Karachi		
								ڪراچي			
								هيڊ آفيس			

Board of Revenue Sindh Vide No. 972/05/17 Dated 18-5-17

ABDUL JALEEL BROHI Mukhtiarkar Gulzar-e-Hijri Scheme-33 District Karachi East

0361308

Attested
Photo copy of
Pass
Book

سالیانو کرایو یا پاڑو انگن ۽ آکرن م	لوکل سیس	منظور ڪرڻ واري اختياري	داخلا نمبر تعلقي فارم II جي	اصل مالڪ يا گرانٽي جو نالو	پلاٽ جون حدون ۽ صورتحال	نالو منتقل اليه (نئين مالڪ) جو	صحي ۽ ريمارڪ تصديق ڪندڙ عملدار جي سڃي نالي، عهدي ۽ تاريخ سميت
۱۳	۱۴	۱۵	۱۶	۱۷	۱۸	۱۹	
① ـــ/①/سوال ڪيڏوپيه جهڙو حصا هڪ لک ڇهتر هزار مساوي پاڪستان ڪمپنيز ايڪٽ 1984 تحت رجسٽرڊ ڪمپني PS/MBR/Lic/354/92 تاريخ 5-9-1992 موجب (1)27-1 آهن هڪ ايڪڙ ستاويهه ڪنڊ ڦهليل اسڪيم 33 جاءِ ذهن به ريڪٽر آف ڪيڏوپيه ۽ سيڪريٽري لک مساوي جي ريڪارڊ ايڪزيڪٽن لسٽ نمبر 161/I/03-47-02/16 تاريخ 22/12/2017 ۽ عزيز بينسل مالڪاڻو پاڙا لک 577 تاريخ 11/2017 موجب ريڪس الڪ 17,83,549 روپيه اسٽيٽ بينڪ آف پاڪستان ناظم آباد برانچ مرحوم حڪيم جو جنهن ڏوجهي سيڪٽر 19-ي (1)27-1 الاٽمنٽ هڪ ايڪڙ ستاويهه ڪنڊ مشتمل ريڪوليا ايڪڙ ريڪ ڏني ۽ آخر ويريفڪيشن نمبر 19/①/Read/MBR/Lic/47/1 تاريخ 28-12-17 ۽ وڪيل مدعو ڪيو جناب ڊپٽي ڪمشنر ۽ جنا اسسٽنٽ ڪمشنر جناب محمد نبيل آرسيا جو موجب داخلا رڪ ڪيو		گورنمنٹ آف سنڌ الاٽ ۽ سيڪريٽري سيڪٽر آفيسر ڊيولپمينٽ اٿارٽي ڪراچي ديارڪمپنيٽ		اولهه 90 روڊ اوڀر 100 روڊ اوڀر 200 روڊ	مسمات شميم شهيب زال محمد شهيب	

ABDUL RAUF SHAIKH
Supervising Tapedar
Gulzar-e-Hijri/Scheme-33
Karachi East

ABDUL JALEEL BROHI
Mukhtiarkar
Gulzar-e-Hijri/Scheme-33
Pir Ilahi Karachi East

NADEEM QADIR KHOKHAR
Assistant Commissioner
Gulzar-e-Hijri (Scheme-33)
Karachi, East

Book No: 4561

Total Pages	01

Page No: AB456021

Challan Rs. 300/- Paid At NBP Through Challan

No:	Date
165	16-8-21

رکارڈ جو اختصار

ڏيهه/وارڊ/سيڪٽر	سوگل	تپو	گڏهو	تعلقو	گلزار هجري	ضلعو	ايسٽ ڪراچي

سروي نمبر/ سٽي سروي نمبر/ ناڪلاس نمبر/ پلاٽ نمبر	ڪل ايراضي	نالو ۽ ولديت ڪاتيدار/ ڪاتيدارن جو شناختي ڪارڊ نمبر	حصو پنسن ۾	حصي مرجب ايراضي	وڪري جي ايراضي	داخلا نمبر/ تاريخ/ رجسٽر اسڪيننگ نمبر (اگر آهي)
سيڪٽر ۱۹	1-27	محمد عمران ولد [illegible]	1	1-27	1-27	11206
		42201-4117146191				403
						5-8-21
توٽل						

رجسٽرڊ پاور آف اٽارني/ ناظر ڪورٽ وغيره		Registered Deed No & Date/ Letter No & Date

E.No 6961 Sub-Registrar Gulshane Iqbal Town Karachi

پلاٽ جي صورت ۾ ان جا وڌيڪ تفصيل		پلاٽ نمبر	ايراضي	
			ـــــ	1-27
حدون		اسڪيم جو نالو		
NORTH	40 فوٽ روڊ		سيڪٽر ۱۹ الاعلم 43	
SOUTH	پراڻون رهيل		(1-27)	
EAST	150 فوٽ روڊ			
WEST	200 فوٽ روڊ			

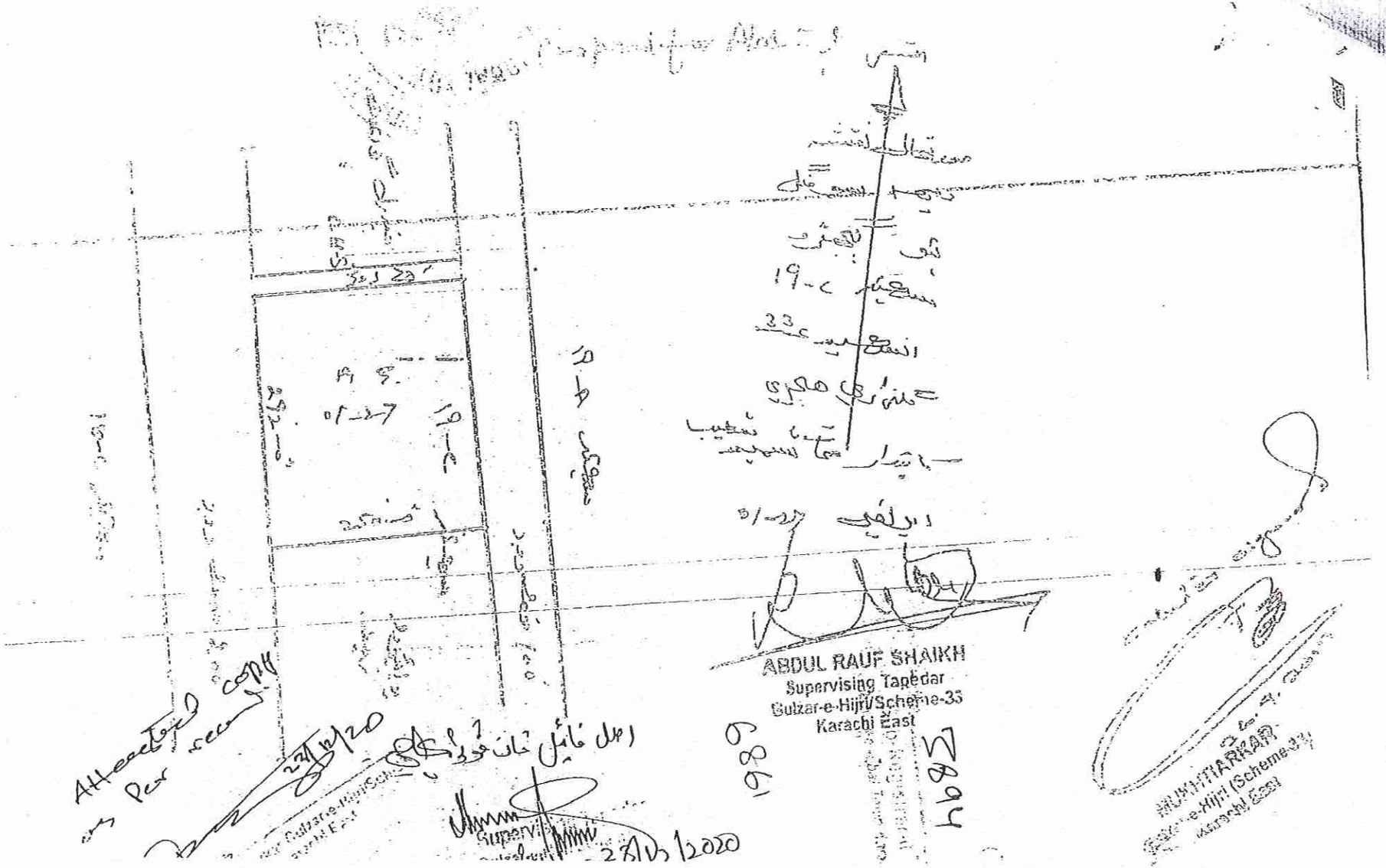
Valid Upto	DD	MM	YEAR
	17	10	21

سرٽيفڪيٽ

اهو سرٽيفڪيٽ مٽي جا تايل ڪاتيدار/ ڪاتيدارن/ پاور آف اٽارني/ ناظر ڪورٽ وغيره جي درخواست تي جاري ڪجي ٿو. هر زير بار، ڪورٽ ڪيس وغيره کان آزاد آهي.

جملي وڪري هيٺ ايراضي (1-27) اڪرين هڪ ارڪو ستاون گنڌ فقط آهي.

Outward No:	- Nil -	No: Mukht:/SC/307	No: AC/SC/ 301
Date:		17/08/2021	17-08-2021
Signature			
Name & Designation Stamp	ALI NAWAZ LAGHARI Supervising Tapedar Gulzar-e-Hijri (Scheme-33) District East Karachi Supervising Tapedar / City Surveyor	AIJAZ UL HASSAN Mukhtiarkar / A.C.S.O Gulzar-e-Hijri (Scheme-33) Mukhtiarkar / CSO Karachi East	MUHAMMAD ISHAQUE GAAD Assistant Commissioner Gulzar-e-Hijri Scheme-33 Assistant Commissioner


ABDUL RAUF SHAIKH
Supervising Tapedar
Gulzar-e-Hijri Scheme-33
Karachi East

CHALLAN NO.

Treasury/Sub Treasury

T.R.6

(Treasury Rule 92)

Challan of cash paid into the National Bank of Pakistan, District Council Branch Karachi E...

TO BE FILLED IN BY THE REMITTER

To be filled in by the Department office of the Treasury

By whom tendered	Name (or designation & address of the person on whose behalf money is paid	Full particulars of the remittance and of authority (if any)	Amount		Head of Account	Order to the Bank
			Rs.	Ps.		
Mr. Abdul Razzaq S/O Mohammad Hanif Rafi CNIC No 42201-0869885-5	MUKHTIARKAR GULZAR-E-HIJRI SCHEME-33. KARACHI, EAST.	Mutation / Photo Copy of Attested in respect of land 01-27 acres from Sector 19-C, Deh Songal Gulzar-e-Hijri Scheme-33 Karachi East.	650/-		Head of Account B-01417	
Signature		Total	Rs. 650/-	00		To be used only in the case remittance to the Bank through Department officer.

(Amount in word) Rupees: **Six Hundred & Fifty Only.**

Received pay (in words) Rupees.

National Bank of Pakistan
District Council Branch Karachi (0108)
25 NOV 2021

Treasurer Accountant Date Treasury Officer

15.
19-1-21

CHALLAN NO.

Treasury/Sub Treasury

T.R.6
(Treasury Rule 92)
Challan of cash paid into the National Bank of Pakistan, Karachi.

TO BE FLLED IN BY THE REMITTER			To be filled in by the Department office of the Treasury			
By whom tendered	**Name (or designation & address of the person on whose behalf money is paid**	**Full particulars of the remittance and of authority (if any)**	**Amount**		**Head of Account**	**Order to the Bank**
			Rs.	**Ps.**		
Syed Ashfaq Ali S/o Zafar Ali. CNIC # 42201-8034982-3 M.Ashfaq S/o Iqbal, CNIC # 42301-1023378-3 Attorney of Mst Shamim Akhtar Shoaib w/o Shaikh Muhammad Shohaib , CNIC # 42201-2965763-8	MUKHTIARKAR GULZAR-E-HIJRI SCHEME-33, KARACHI, EAST.	No Objection Certificate in respect of Land admeasuring 01-27 acres situated in Sector 19-C, at Deh Songal, Gulzar-e-Hijri (Scheme-33) Karachi East.	450/-		Head of Account B-01401	R.C. No. 3894 Sub-Registrar MUKHTIARKAR GULZAR-E-HIJRI (SCHEME-33) KARACHI EAST. 6861
Signature		Total	**Rs.** 450/-	00	To be used only in the case remittance to the Bank through Department officer.	
(Amount in word) Rupees: **Four Hundred Fifty Only.**						
Received pay (in words) Rupees						

Treasurer | Accountant | Date | Treasury Officer

District Council Branch Kiamari - 0108
JAN 2021
CASH RECEIVED

CHALLAN NO. 577 DATED: 30 - -2017

Due date for payment DUE DATE: 30 - -2017

(Treasury Rule-92) Treasury Sub Treasury at State Bank of Pakistan at Karachi

(Challan of cash paid into the State Bank of Pakistan

QUADRUPLICATE

STATE BANK OF PAKISTAN, SBPBSC(BANK) NORTH NAZIMABAD
IT # IT1730505728 Date 01 NOV 2017
Received Cash Rs.1,783,540.00

TO BE FILLED IN BY THE DEPARTMENT OFFICER — To be filled in by the Department Officer of the Treasury

By whom tendered	Name or designation & address of the person on whose behalf money is paid	Full particulars of the remittance and of authority (if any)	Amount		Head of Account	Order to the Bank
Syst. Shamim Shoaib w/o Muhammad Shoaib *H.No 111/1, 12th Lane, Khayaban-e-Itehad, DHA, Karachi.*	LAND UTILIZATION DEPARTMENT	In pursuance of Ordinance No.III of 2001, the differential amount of Rs.17,83,540/- in respect of 01-27 acre land in Sector 19-C Deh Songal, Scheme 33, Karachi. was allowed in exchange in lieu of land from Deh Narathar, Karachi on 99 years lease vide order No.PS/MBR/L.U/3545/92 dated 05.09.1992 & No.PS/MBR/L.U/475/96 dated 02.04.1996. On the recommendations of Deputy Commissioner, East, Karachi vide letter No.DC/K/E/Rev.Br/3004/2017 Karachi dated 03.10.2017, the land falls in Sector 19-C of Deh Songal, Scheme 33, Karachi. NOTE: The amount may be deposited into Government Treasury in the relevant Head of Account by the depositor at his own risk. In case any irregularity as false information/ concealment of facts / pending litigation / stay of any court is noticed hereafter on part of depositor, the malkano amount paid to this effect shall be forfeited to Government and all expenditure on future litigation shall be borne on the shoulder's of depositor. The same terms & conditions also applicable on subsequent purchaser / attorney. The earlier challan was issued on 08.05.2017 vide No.261 is hereby withdrawn / cancelled.	Rs.17,83,540/-	Ps.	1321000-L-I Extra ordinary receipt-sale of land.	Receive and grant receipt.
Signature		TOTAL:	Rs.17,83,540/-			
(in words)	RUPEES: SEVENTEEN LAC EIGHTY THREE THOUSAND FIVE HUNDRED & FORTY ONLY.				To be used only in the case remittance to the Bank through Department Officer, Treasury Officer.	

R.No. 3894 Sub-Registrar-II

6861

(Signature and full designation of the officer)

Received payment (in words) rupees

TREASURER ACCOUNTANT DATE TREASURY OFFICER

No.03-47-02/SO-I/ 612
GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT
Karachi dated 22 -11-2017

To,

The Deputy Commissioner (East),
KARACHI.

SUBJECT: REGULARIZATION OF 01-27 ACRES LAND IN SECTOR-19-C DEH SONGAL, SCHEME 33, KARACHI, UNDER ORDINANCE NO.III OF 2001.

The land measuring 22-27 acres in Sector Nos.34-A, 38-A, 15-A, 34-C, 26-B of Scheme 33 and NC.No.179 of Deh Safooran was allowed in exchange from Deh Narathar in favour of Mst. Shamim Shoaib subject to availability of land vide order No.PS/MBR/L.U/3545/92 dated 05.09.1992 which was cancelled/withdrawn vide No.PS/MBR/L.U/475/96 dated 02.04.1996. On the recommendations of Deputy Commissioner East, Karachi vide his letter No.DC/K/E/Rev.Br/3004/2017 Karachi dated 03.10.2017, the land in question falls in Sector 19-C of Deh Songal, Scheme 33, Karachi. Now Mst. Shamim Shoaib w/o Muhammad Shoaib has applied for regularization of said 01-27 acre land.

2. The case was placed before the Sindh Government Lands Committee in its meeting held on 31.03.2017, the Committee discussed the matter at length and unanimously decided to regularize 01-27 acre land in Scheme 33, Karachi at the rate of Rs.10,64,800/- per acre in favour of allottee, as loss caused to the Government, subject to condition that the land in question is in possession of applicant/attorney/purchaser(s) and the amount may be deposited into Government Treasury in the relevant Head of Account by the depositor at his own risk. In case any irregularity as false information/concealment of facts/pending litigation/stay of any court is noticed hereafter on part of depositor, the malkano amount paid to this effect shall be forfeited to Government and all expenditure on future litigation shall be borne on the shoulder's of depositor.

3. The land stood cancelled under the Sindh Government Lands (Cancellation of Allotments, Conversions and Exchanges) Ordinance No.III of 2001. The differential amount in pursuance of Section 4(2) of the said Ordinance, and loss caused to the Government as determined by the Committee under Rule 3(1) of Sindh Government Lands (Cancellation of Allotments, Conversions and Exchanges) Rules 2003 is Rs.10,64,800/- per acre and was offered for payment to Mst. Shamim Shoaib w/o Muhammad Shoaib in respect of land measuring 01-27 acres in Sector 19-C Deh Songal Scheme 33, Karachi. The differential malkano amounting to Rs.17,83,540/- has now been paid at the rate of Rs.10,64,800/- per acre vide Challan No.577 dated 01.11.2017. The copy of paid challan alongwith verification of Treasury are enclosed.

No.03-47-02/SO-I/ 612
GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT
Karachi dated 22 -11-2017

4. In pursuance of Section-5 of the above Ordinance, the Government of Sindh has been pleased to regularize/restore the said area measuring of 01-27 acre land in Sector-19-C Deh Songal, Scheme 33, Karachi. The land in question is now free from the ban imposed by the Government, vide letter No.PS/MBR/(LU)/1186/2000, dated 22.12.2000.

5. The land shall only be used for the purpose which was allotted and clearance from MPGO and in accordance with overall Town Planning Scheme. In case the land is used for any other purpose the lease shall be liable for resumption. Such note should be made in the VF-VII/VF-II as the case may be.

6. You are requested to recover ground rent including arrears if not already recovered and make necessary entries in the Record of Rights subject to the condition that there is no litigation, claim, dispute or any other illegality or irregularity or any legal hitch and furnish true copy of the same to this Department immediately.

5894

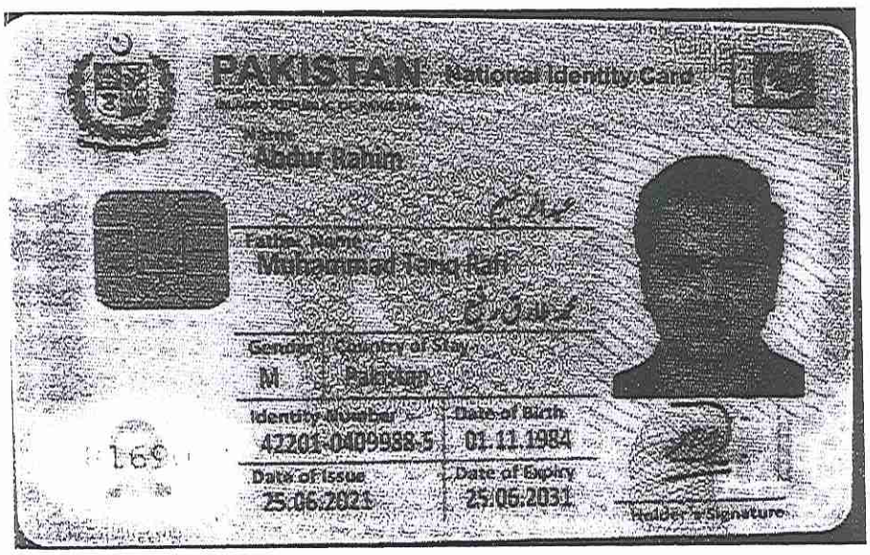
7. The land measuring 01-27 acre land in Sector 19-C, Deh Songal, Scheme 33, Karachi may be got surveyed through Survey Superintendent, Karachi after restoration of mutation and if excess area is found in possession of the lessee the same may be got retrieved and such information may be furnished to this Department. The total area including all streets and roads within the allotted land are also treated as part of leased land and no extra land is to be encroached for roads and streets etc. NOTE: The amount deposited into Government Treasury in the relevant Head of Account by the depositor at his own risk. In case any irregularity or false information / concealment of facts / pending litigation / stay of any court is noticed hereafter on part of depositor, the differential malkano amount of Rs.17,83,540/- paid to this effect shall be forfeited to Government and all expenditure on future litigation shall be borne on the shoulder's of depositor.

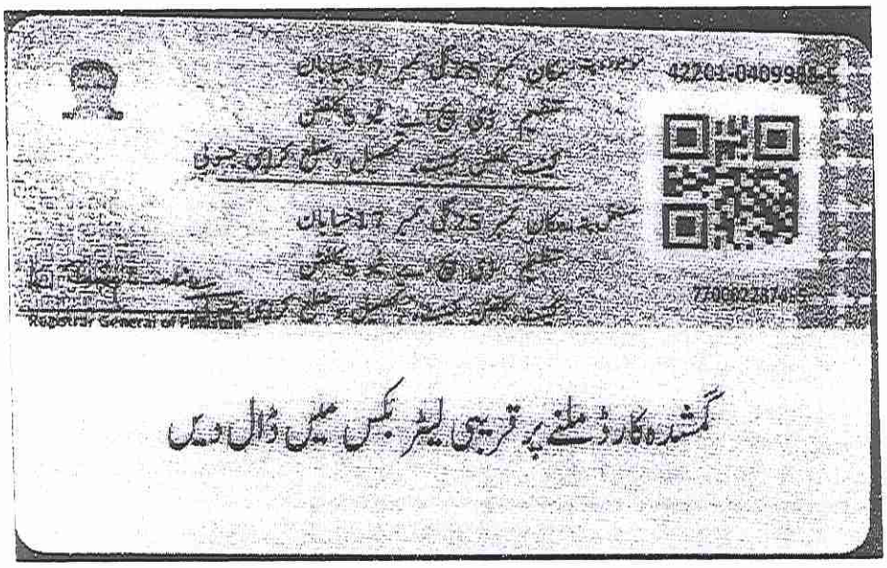
6861

SECRETARY TO GOVERNMENT OF SINDH
LAND UTILIZATION DEPARTMENT

A copy is forwarded for information to:

1. The Chairman, Sindh Government Lands Committee, Barrack-89, Karachi.
2. The Commissioner, Karachi Division, Karachi.
3. The Chief Building Controller of Karachi Building Control Authority, Civic Center, Karachi.
4. The District Registrar, City Court, Karachi.
5. The Survey Superintendent, Karachi.
6. Mst. Shamim Shoaib w/o Muhammad Shoaib, H.No.111/1, 12th Lane, Khayaban-e-Ittehad, DHA, Karachi.


PAKISTAN National Identity Card
Name
Abdur Rahim
Father Name
Muhammad Tariq Rafi
Gender Country of Stay
M Pakistan
Identity Number
42201-0409988-5
Date of Birth
01.11.1984
Date of Issue
25.06.2021
Date of Expiry
25.06.2031
Holder's Signature


42201-0409988-5
Registrar General of Pakistan
گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں

FACE SHEET
Automation of Stamps & Registration
Board of Revenue, Sindh.

SR Office:	Gulshan II	**Deed Type:**	Conveyance Deed	**Doc ID:**	806244
Property Type:	Open Plot Residential Property	**Area:**	1.27 Acres		

Property Details

District:	Karachi East	**Taluka/Town:**	Gulshan Town II	**Deh/Area:**	Gulzare Hijri Scheme 33
Complete Address:	LAND MEASURING 1.27 ACRES IN DEH SONGAL TAPO GUJRO SEC NO#19-C KDA SCHEME 33	**Computer Number:**	BOR - 2021 - 10 - 11144		

1st Party Detail:

Full Name	CNIC	Mobile No
MR MUHAMMAD IRFAN	42201-4171461-9	03215641222

No More Members

2nd Party Detail:

Full Name	CNIC	Mobile No
ABDUR RAHIM	42201-0409988-5	NULL

No More Members

Furqan Khanani
Inspector of Stamps Board of Revenue
The Stamp duty checked only,
as per Valuation Table notified under Section
27-A & B of The Stamp Act, 1899

For Office Use Only:

RD No#: 6861 RD Date: 05-Oct-2021 Indexing Date:10-Nov-2021

☐ Registration Fee:	5	☐ Advance Tax:	2756380
☐ CVT:		☐ Municipal Tax:	
☐ Gain Tax:	2756380		
☐ Stamp Duty:	2756400		

Signature (Sub Registration)

Audit Observation (if any):

Signature (Audit Officer)

6861

OFFICE OF THE SUB REGISTRAR II GULSHAN-E-IQBAL TWON KARACHI

1. Name and address of the parties
2. Presenting the documents

3. Date of Presentation 8/5/21
4. Mode of Registration
5. Nature of document
6. Nature of Property 6861
7. Location of the Property
8. Area of the Property
9. Whether Property Built-up, if so mention Number of stories and covered area etc. Sold 251
10. Category of Property according to Valuation Table
11. Value of Property according to Valuation Table
12. Value of Property Declared
13. Amount of Stamp Duty Paid
14. If the documents has been executed by the Attorney whether Power of Attorney has Bean Made annexure
15. What type of title to the property has been produced
16. CINC Nos. of the execution and witnesses which have been mentioned in the documents and the copies thereof have been made Annexures to the documents

Name and Signature of the Party Presenting the Documents With CNIC No.

To be filled in by the Sub-Registrar

1. Whether property is situated within the Jurisdiction of the Sub-Registrar Concerned
2. Whether the documents has been adjourned for Want of completing certain formalities if so Mention the nature of such formula.
3. Microfilming / Scanning Fee Recovered

Name & Signature
Of Sub-Registrar

Owner Copy

DISTRICT MUNICIPAL CORPORATION, (EAST) KARACHI

Bank Deposit Challan For 1 % Tax on Immoveable Property

DEPARTMENT:-Local Tax & Recovery Zone Gulshan-e-Iqbal Zone D.M.C (East) Sr. No. 29675

Section TAX/FEE RECOVERY

The Manager Branch Karachi, Please Receive the amount as noted below for

Credit the account of Zone UC mentioned above and as specified here below

A/C No. 0305-106953-100

Bank Ac / District Municipal Cooperation Eas. Gulshan-e-Iqbal Branch (0305) Sindh Bank Limited

PROVISIONAL PAYMENT

Sub-Registrar Gulshan-e-Iqbal Town

=2,756,380/-

DATE ISSUE :- 05 10 21

Valid Till :-

Depositer's Name / NIC & Address	Particulars	Amount of Rs.
Name : Abdur Rahim s/o M. Tariq Rafi	1 % Tax on the transfer of imoveable	27,56,380/-
NIC # 42201 - 0140919 8 8 - 5	Property According to	
Land in Deh Songal Tappo Giljko	Value Rs, 27,56,38,000	
Sector 19-C. KDA Scheme 33. KHI.	Shown in sale Deed	
	Size of Plot 1.27. Acres Sqy	
P.O. NO's 01255945 & 01255937	Sector No.	
NTN # J.S. Bank. S.I.T.E. Branch KHI.		27,56,380/-

Note :- 1 no any type of over writing in challan will be accepted by the authorized by the bank. 2. Without counter signed challan is not valid.

Rupees in words Two Million Seven Hundred Fifty Six Thousand Three Hundred Eighty only

Incharge Recovery 1 %

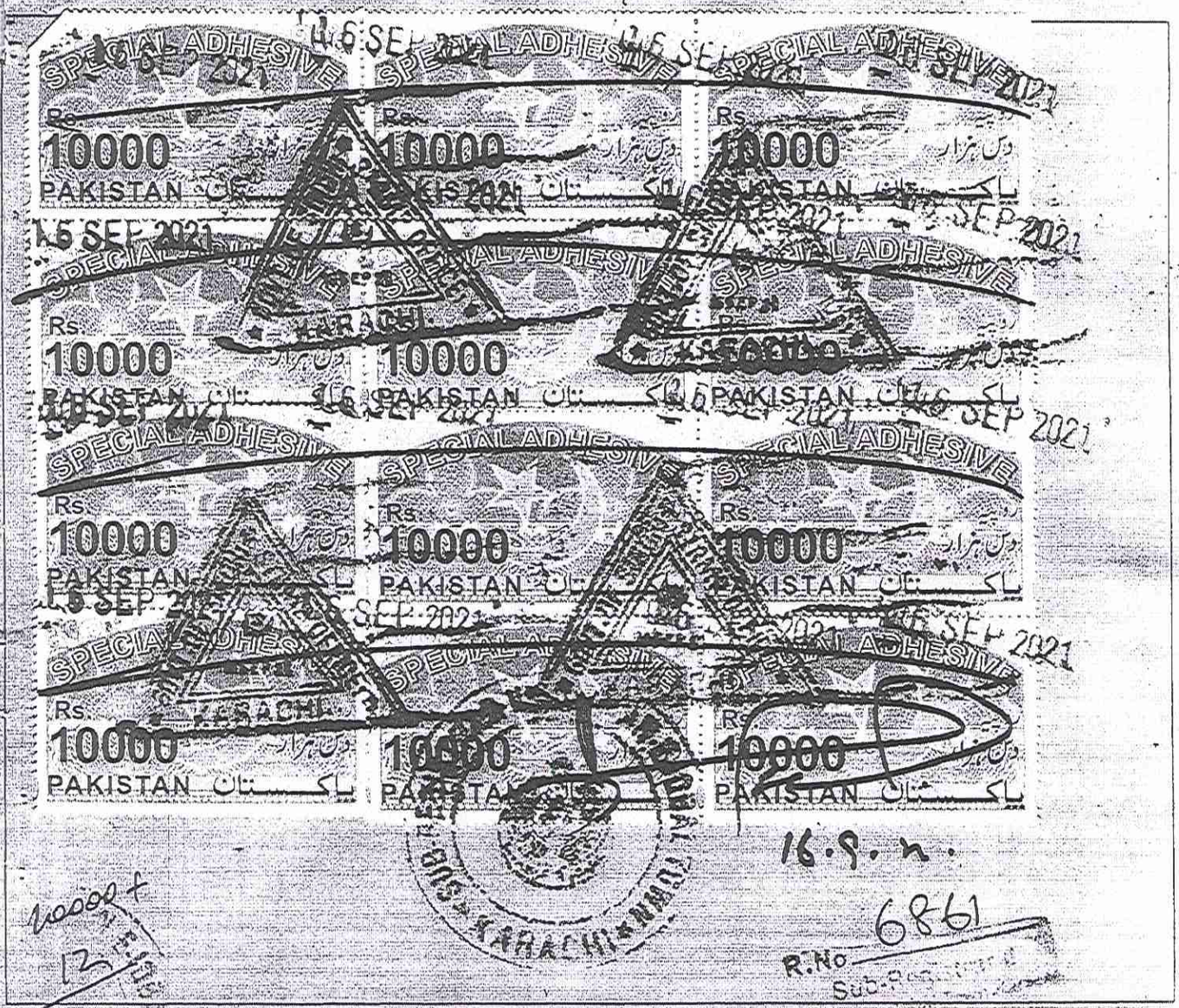
Zone , DMC, East, Karachi.

INCHARGE
Recovery (Property Tax)
Jamshed/Gulshan Zone
D.M.C. (East) Karachi

Sindh Bank Limited
Counter Seal Stamp
08 OCT 2021
CLEARING

Signature Bank Officer

2756402/2 180 16.9.21



16.9.21

10000/-
13 SEP

R.No 6861

Sub-Registrar
Gulshan

CONVEYANCE DEED FOR IMMOVEABLE PROPERTY

Valued at Rs.275,688,000/-

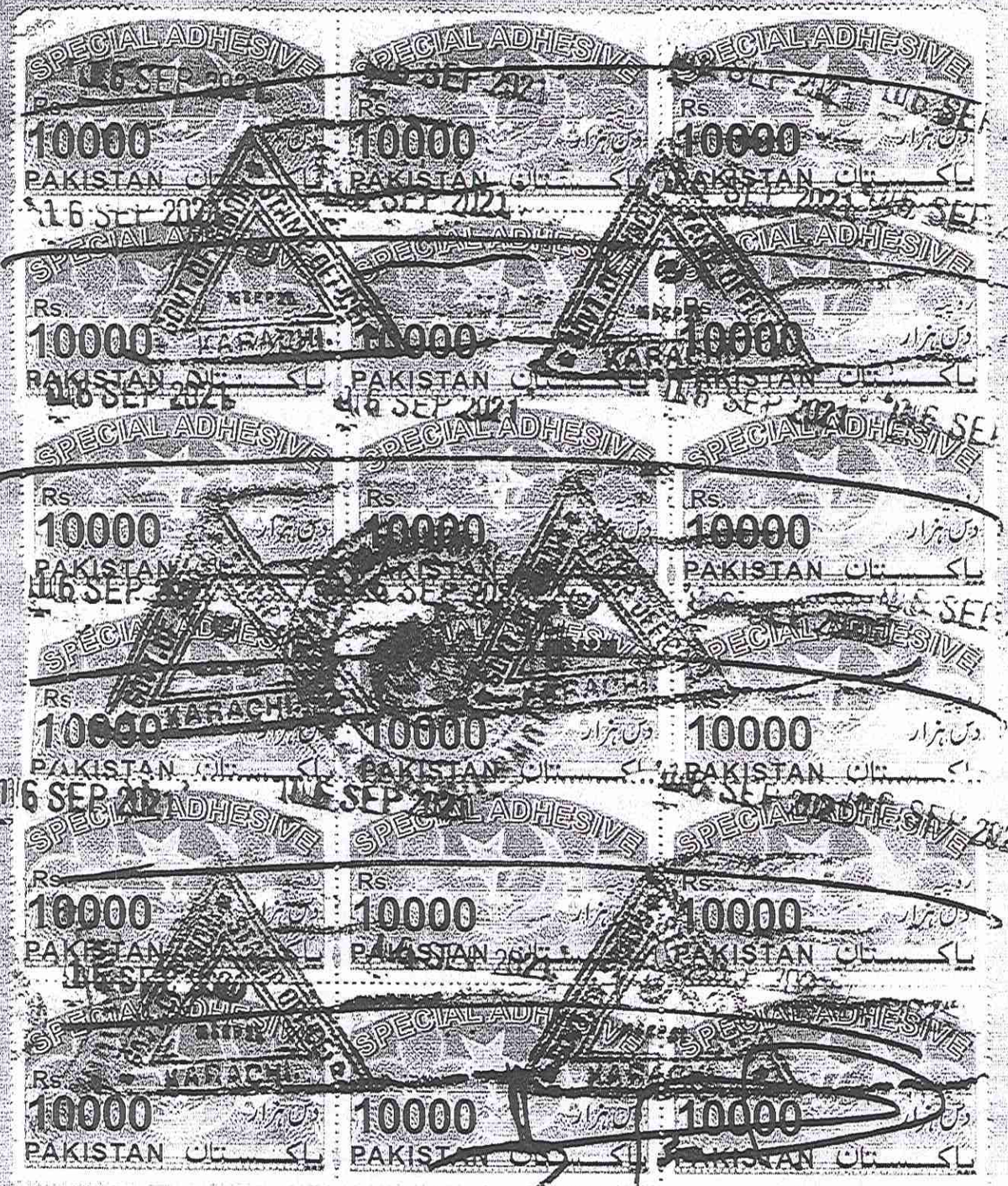
In respect of "Open land admeasuring 1-27 Acres in DehSongal, TapoGujro, Sector 19-C, Scheme No. 33, Karachi, within the Registration District and Sub Registration District of Karachi and within the territorial limits of Police Station Sachal....."

- In the Name of Allah (S.W.T.) The Most Beneficent & Merciful -

THIS INDENTURE OF SALE /DEED OF CONVEYANCE is made at Karachi, Sindh, on this 17th day of September, 2021,

BY AND BETWEEN:

MR. MUHAMMAD IRFAN SON OF MR. HAIL AHMED, Muslim, adult, resident of House No. Q-148, Block-2, P.E.C.H.S., Sir Syed Road, Karachi, having CNIC bearing No. 42201-4171461-9 hereinafter referred to as the **"VENDOR"** (which expression shall wherever the context so permits means and include his heirs, successors, legal representatives, executors, administrators and assigns), of the **ONEPART**.

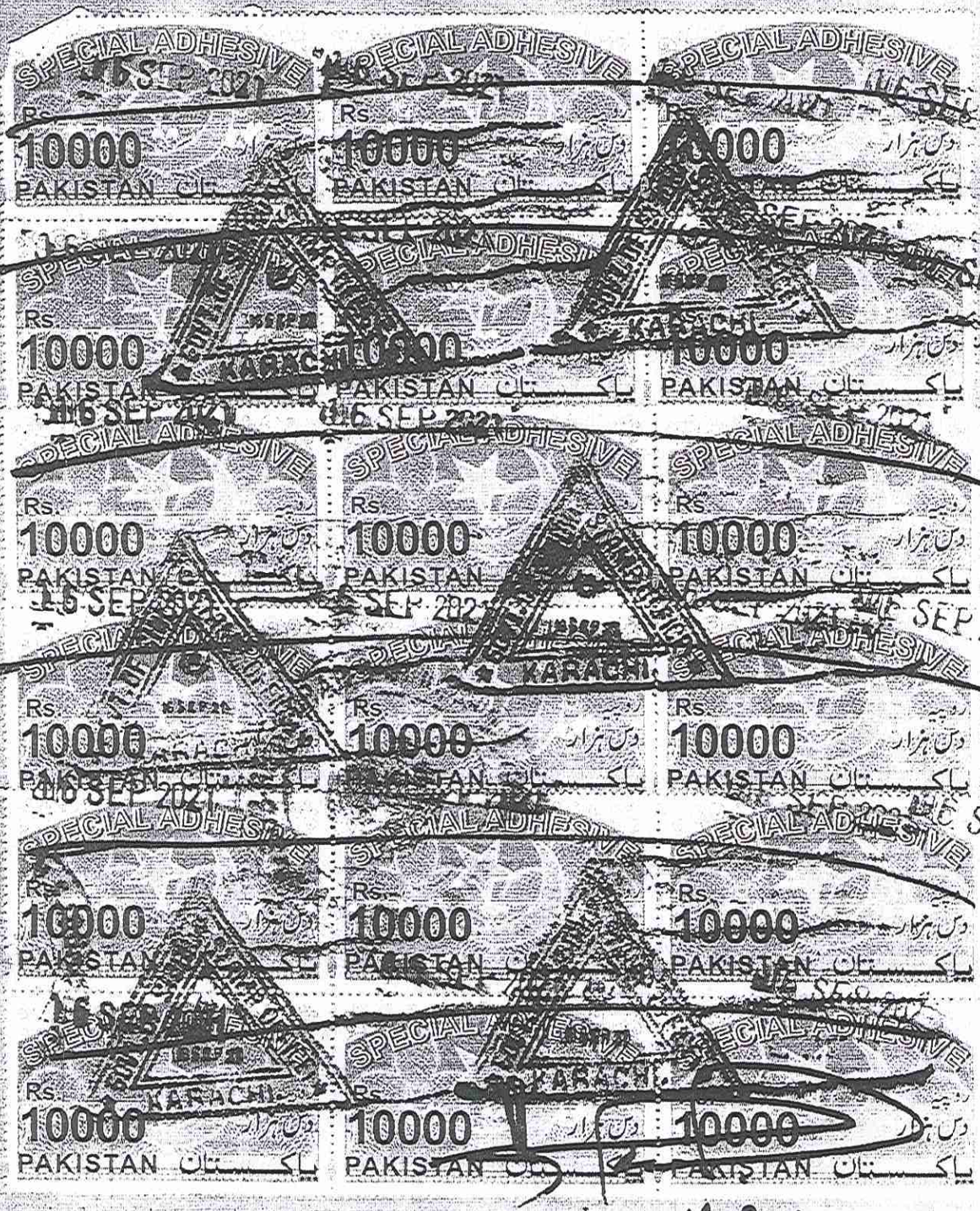


16.9.21

R.No 6861
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

AND

MR. ABDUR RAHIM SON OF MUHAMMAD TARIQ RAFI, Muslim, adult, resident of resident of House No. 25, 17th street, Khayaban-e-Tanzeem, Phase V, D.H.A., Karachi, having CNIC bearing No. 42201-0409988-5 hereinafter referred to as the **"VENDEE"** (which expression shall wherever the context so requires means and include his heirs, successors, legal representatives, executors, administrators and assigns) of the **SECOND PART.**



K.9.20.

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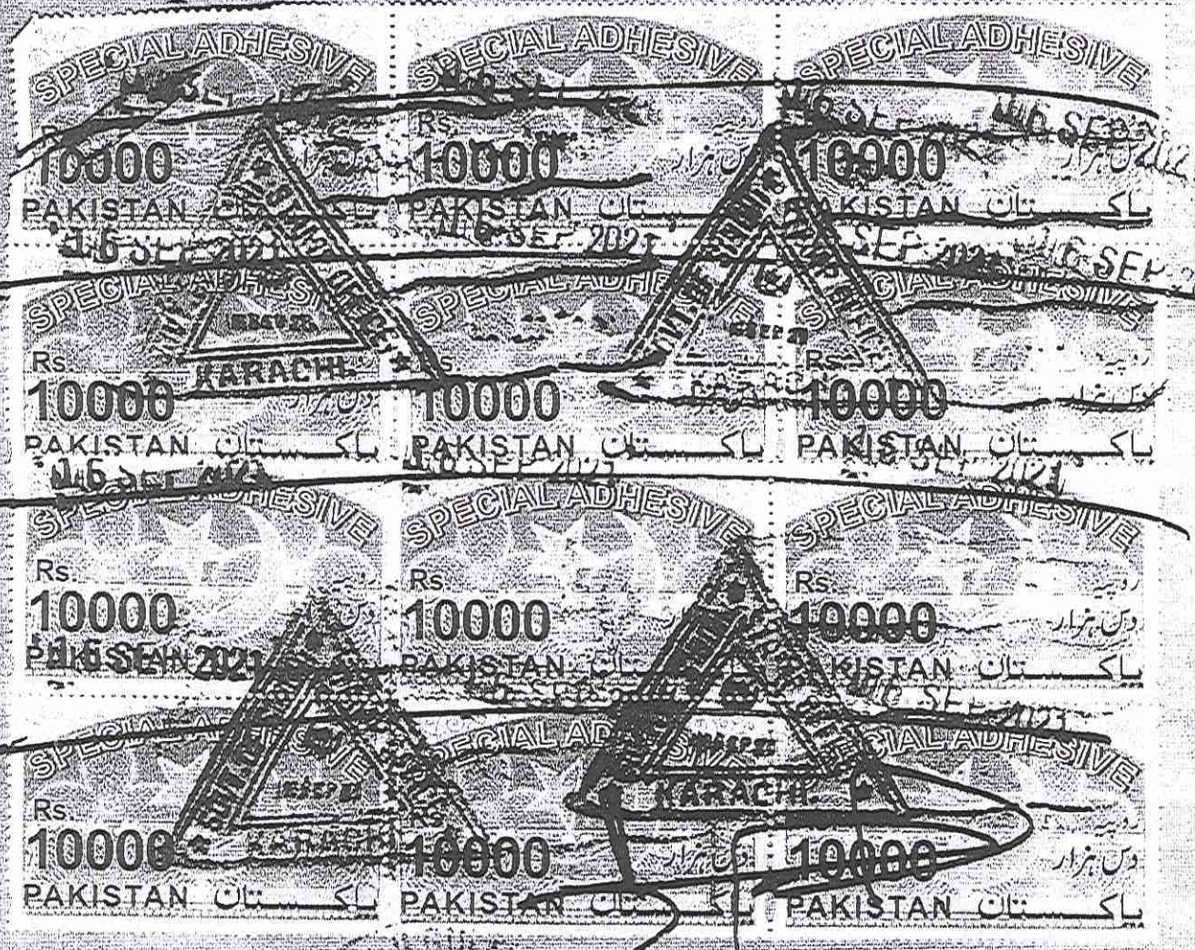
R.No 6861
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

WHEREAS the VENDOR, above named, is at the date of these presents seized, possessed of and well and sufficiently entitled to ***"ALL that is land admeasuring 1-27 Acres in Deh Songal, TapoGujro, Sector 19-C, Scheme No. 33, Karachi, within the Registration District and Sub Registration District of Karachi and within the territorial limits of Police Station Sachal...."***, hereinafter referred to as the "SAIDPROPERTY" which is more specifically and fully described in the schedule of property

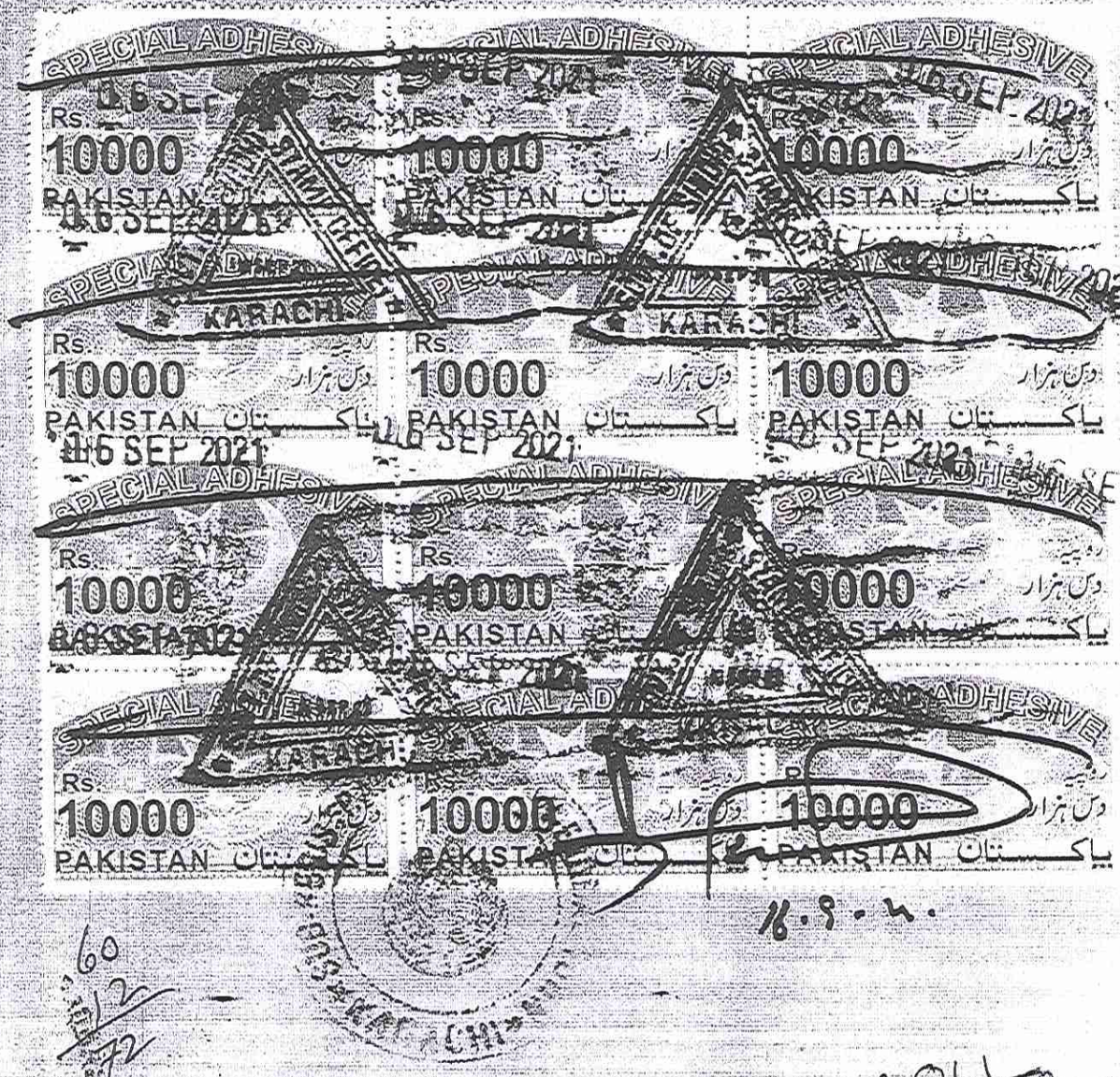


-16.9.21.

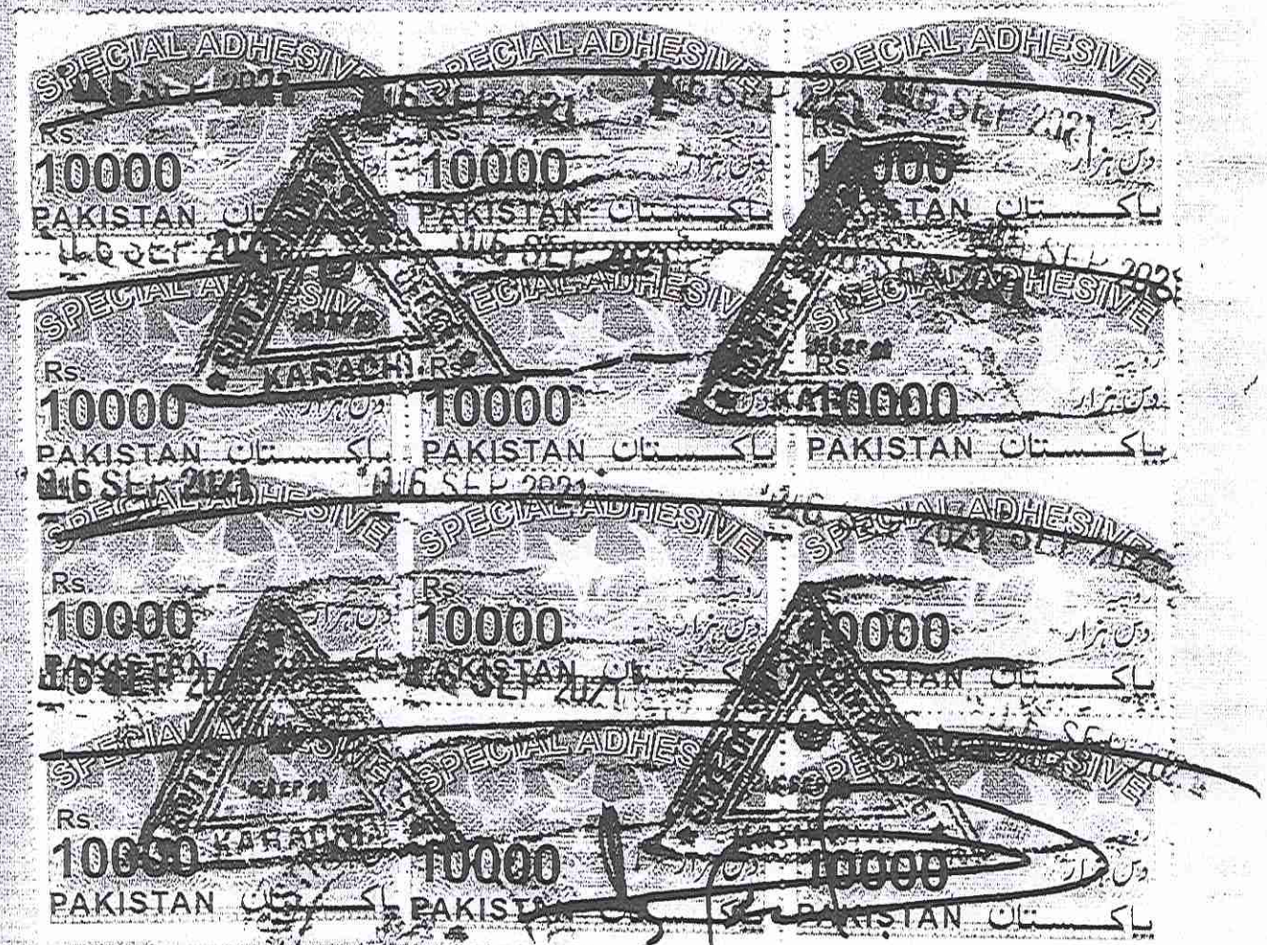
48
12
60

R.No 6861
Sub-Registrar-II
Gulshan-e-Iqbal

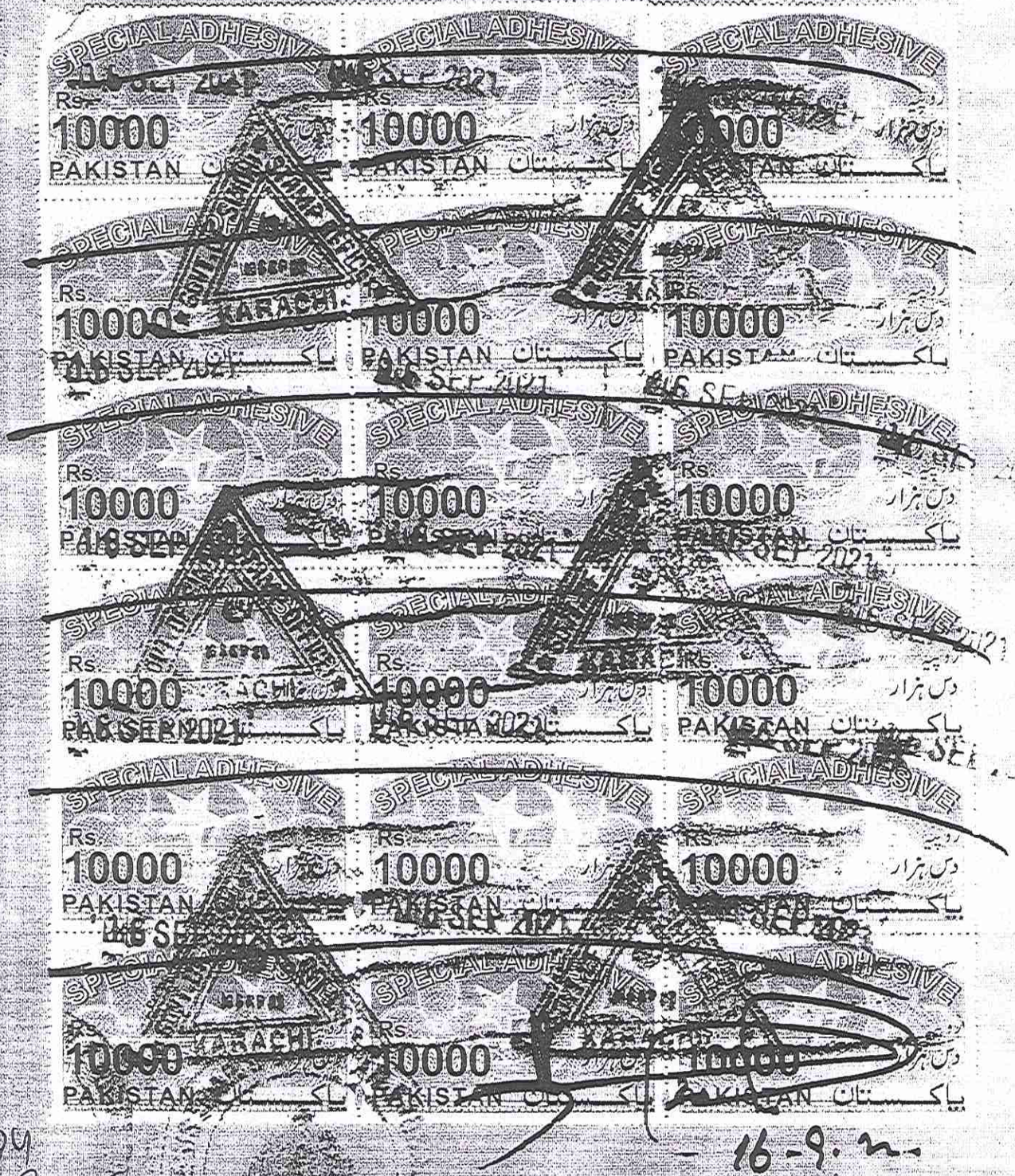
WHEREAS the **VENDOR** had acquired the Said Property from one Mst. ShamimAktherShoaib w/o Shaikh Mohammad Shoaib having NICOP bearing No. 42201-2965763-8 by way of "Conveyance Deed of Immoveable Property" dated 26.05.2021 executed before the Sub-Registrar II, Gulshan-e-Iqbal Town, Karachi bearing registration No. 3894, Book No. I, dated 26.05.2021 and Digital Scanning Unit No. RD:3894/SRO:18/DocType:14 dated 25.06.2021. Said "Conveyance Deed of Immoveable Property" dated 26.05.2021 was duly executed on behalf of one Mst. ShamimAktherShoaib w/o Shaikh Mohammad Shoaib by her duly constituted attorney, namely, Mr. Ahfaq Ali son of Zafar Ali having CNIC bearing No. 42201-8034983-3 whow as empowered to cause sale by way of General Power of Attorney document duly registered with the Sub-Registrar-II, Gulshan-e-Iqbal Town, Karachi bearing registration No. 316, Book No. IV, dated 01.02.2018 and Digital Scanning Unit No. RD:316/SRO:18/DocType:42, dated 06.03.3018. Further Form-A was further issued for the Said Property in favour of the VENDOR by the Mukhtiarkar, Gulzar-e-Hijri, Scheme-33, Karachi, Vide Jaryan No. _____ dated _____.



WHEREAS the Said Property was firstly allotted to Mst. ShamimAktherShoaib w/o Shaikh Mohammad Shoaib having NICOP bearing No. 42201-2965763-8 by way of "Allotment Letter" bearing No. PS/MBR/LU/3545/92 dated 05.09.1992 issued by the Secretary to the Government of Sindh, Land Utilization Department. Subsequently the Said Property was regularized by way of "Regularization Letter" bearing No. 03-47-02/SO-I/612, dated 22.11.2017 issued by the Government of Sindh Secretariat Land Utilization Department and was also transferred to Mst. ShamimAktherShoaib w/o Shaikh Mohammad Shoaib on 28.12.2017. Form II was further issued for the Said Property in favour of Mst. ShamimAktherShoaib w/o Shaikh Mohammad Shoaib by the Mukhtiarkar, Gulzar-e-Hijri, Scheme-33, Karachi, Vide Jaryan No. 186 dated 01.01.2018.



AND WHEREASthe **VENDOR** being absolute lawful owner and title holder of the Said Property along with being full seized and possessed and otherwise sufficiently entitled has agreed to sell, convey and alienate the aforementioned Said Property along with all benefits, shares, rights, title, interest, advances, deposits, utilities, easements, benefits, appurtenances etc., attached and enjoyed thereto to the **VENDEE** against good and valuable consideration and the **VENDEE** has agreed to purchase and acquire the same wholly and completely in his name along with all said rights, benefits, obligations and interests associated with the Said Property free from all encumbrances, charges, taxes, fees, dues, duties, burdens, disputes, mortgages, claims, lispendis, litigation, ground rent, cess, rates, malkanas, premium, liens, of any nature whatsoever, with vacant peaceful physical possession in consideration of a total sale amount of **Rs. 275,638,000/- (Two Hundred & Seventy Five Million, Six Hundred & Thirty Eight Rupees Only)** which the **VENDOR** accepts as full and final payment.

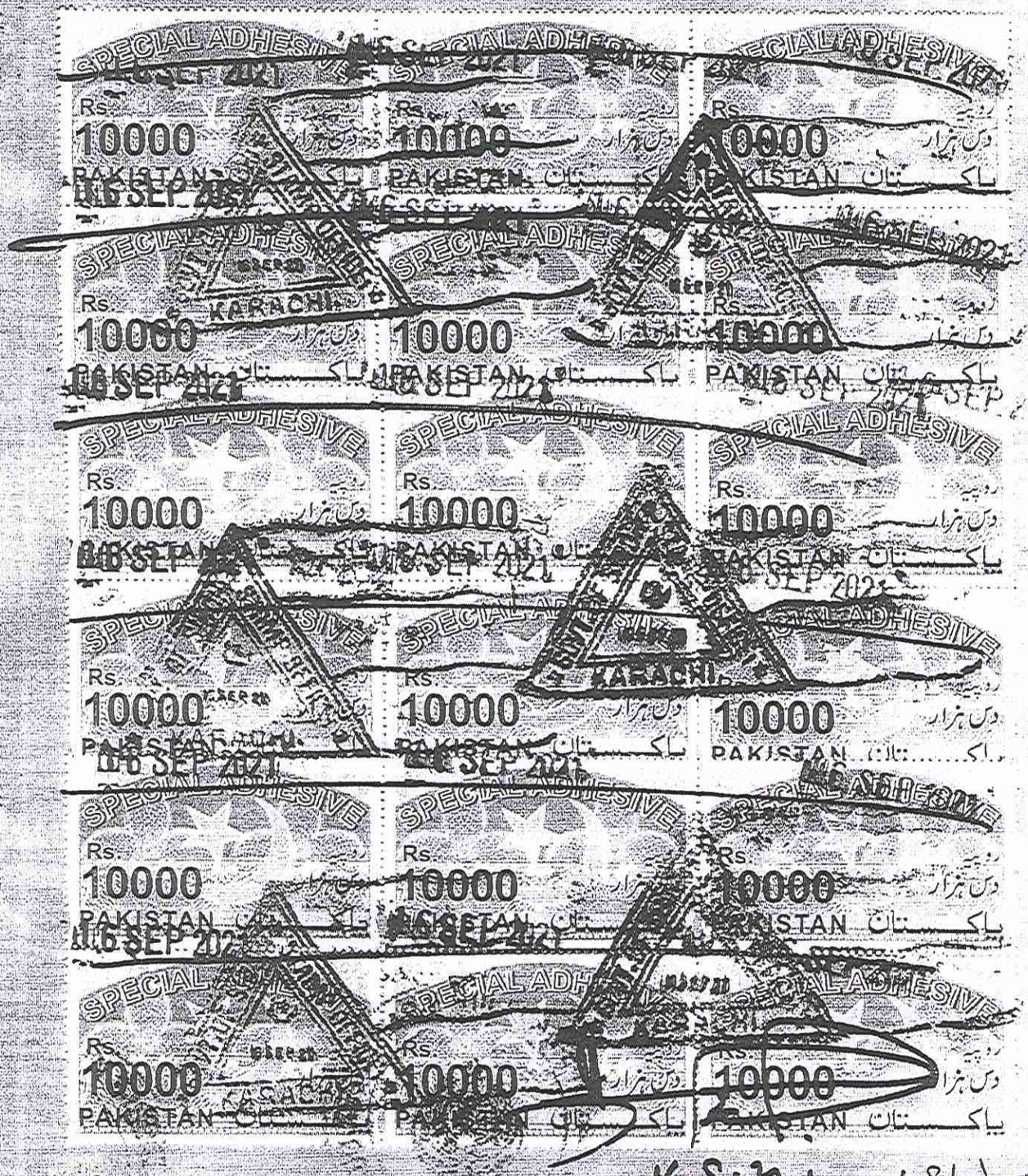


16-9-21

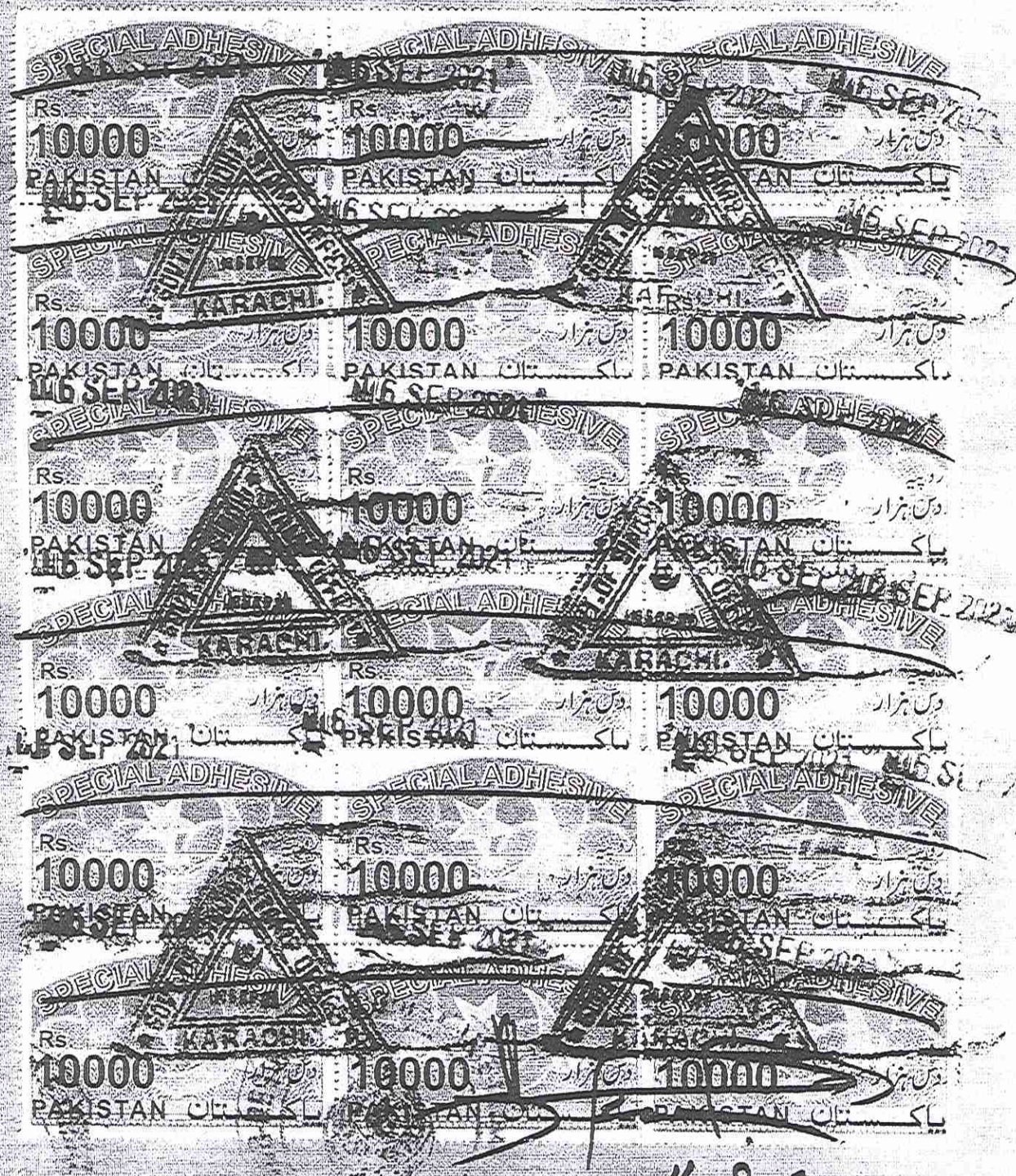
NOW, THEREFORE, THIS INDENTURE FURTHER WITNESSETH AS UNDER:

R.No 686
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

1. THAT in pursuance of AGREEMENT between the VENDOR AND VENDEE and in consideration of **Rs. 275,638,000/- (Two Hundred & Seventy Five Million, Six Hundred & Thirty Eight Rupees Only)** duly paid by the VENDEES to the VENDOR, receipt whereof the VENDOR doth hereby fully admit and acknowledge in FULL & FINAL PAYMENT/SETTLEMENT of sale consideration of the Said Property and every part thereof doth hereby release, acquit and discharge the said VENDEES from the payment thereof.



2. THAT the VENDOR doth hereby GRANTS, ASSIGNS, SELLS, CONVEYS and otherwise TRANSFER the complete rights and titles in the Said Property unto the VENDEEfree from all sorts of claims, demands, mortgages, charges, defects, objections, litigations, disputes, burdens and encumbrances of whatsoever nature, TO HAVE AND HOLD the same, along with all rights, liberties, privileges, benefits, easements, advantages, ways and passages enjoyed therewith and all rights, titles and interests, and for unto and to the use of the said VENDEE subject to all terms and conditions upon which the VENDOR or its predecessor in interest had held the Said Property.



16.9.21.

120
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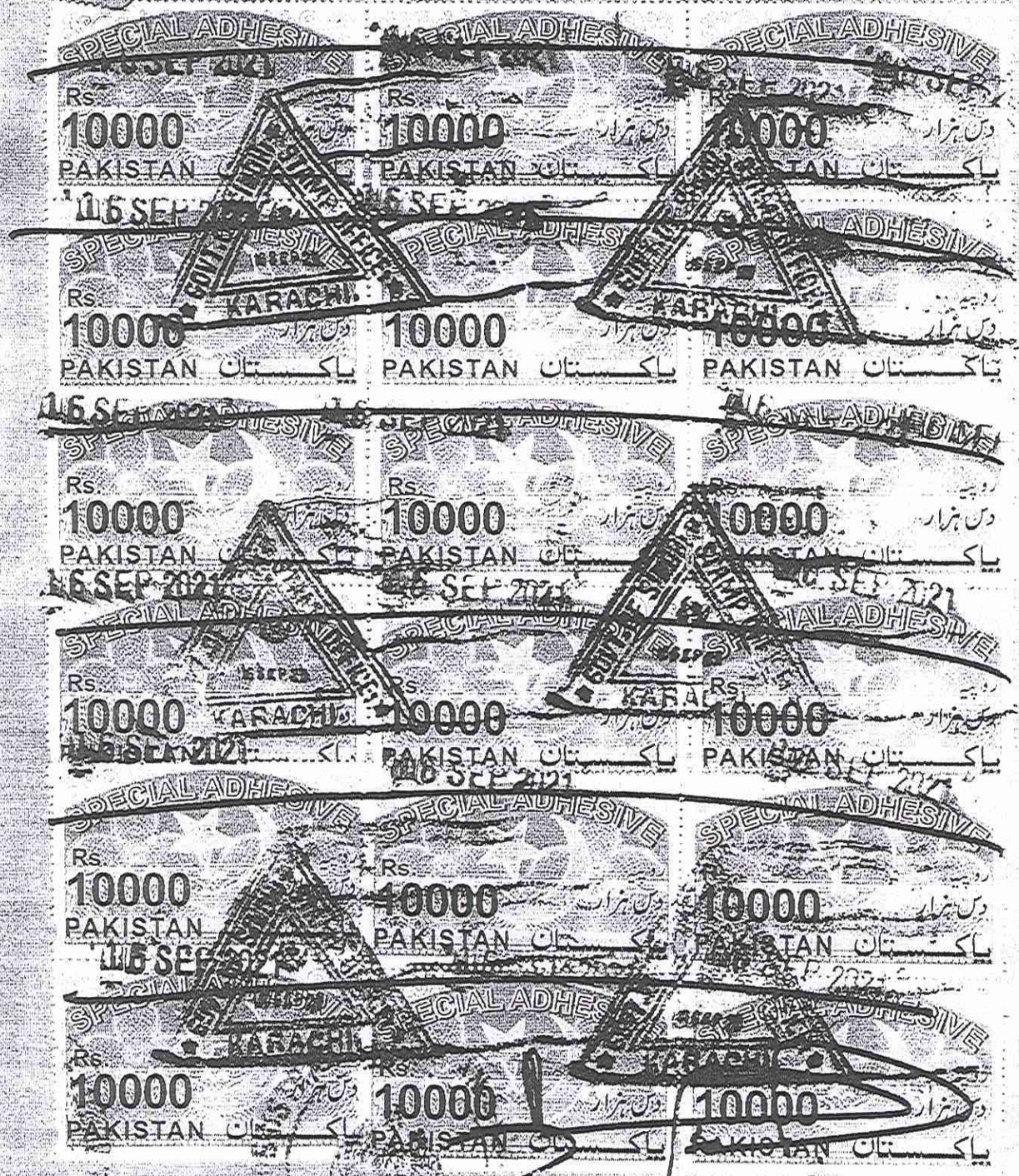
138

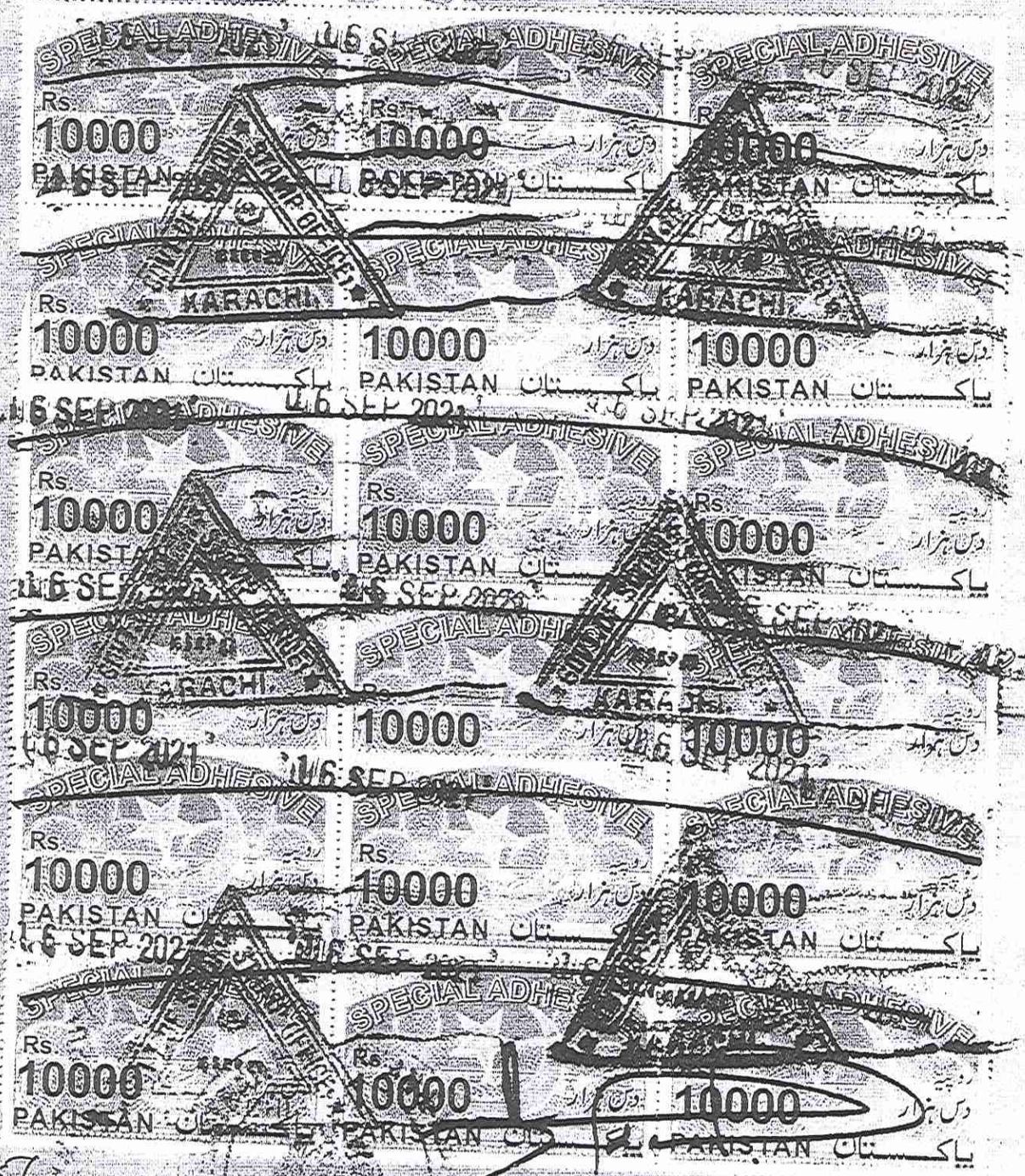
RNT 6861
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

3. THAT the **VENDOR** hereby covenants with the **VENDEE** that the title in respect of the said property is in full force and subsisting and the **VENDOR** has not committed any act or thing by which the same may be impaired or has become or may become void or voidable and cesses and taxes, duties, customs, charges and fees, if any due and payable in respect of the said property, upto the date hereof, shall be paid by the **VENDOR** if not already satsified.

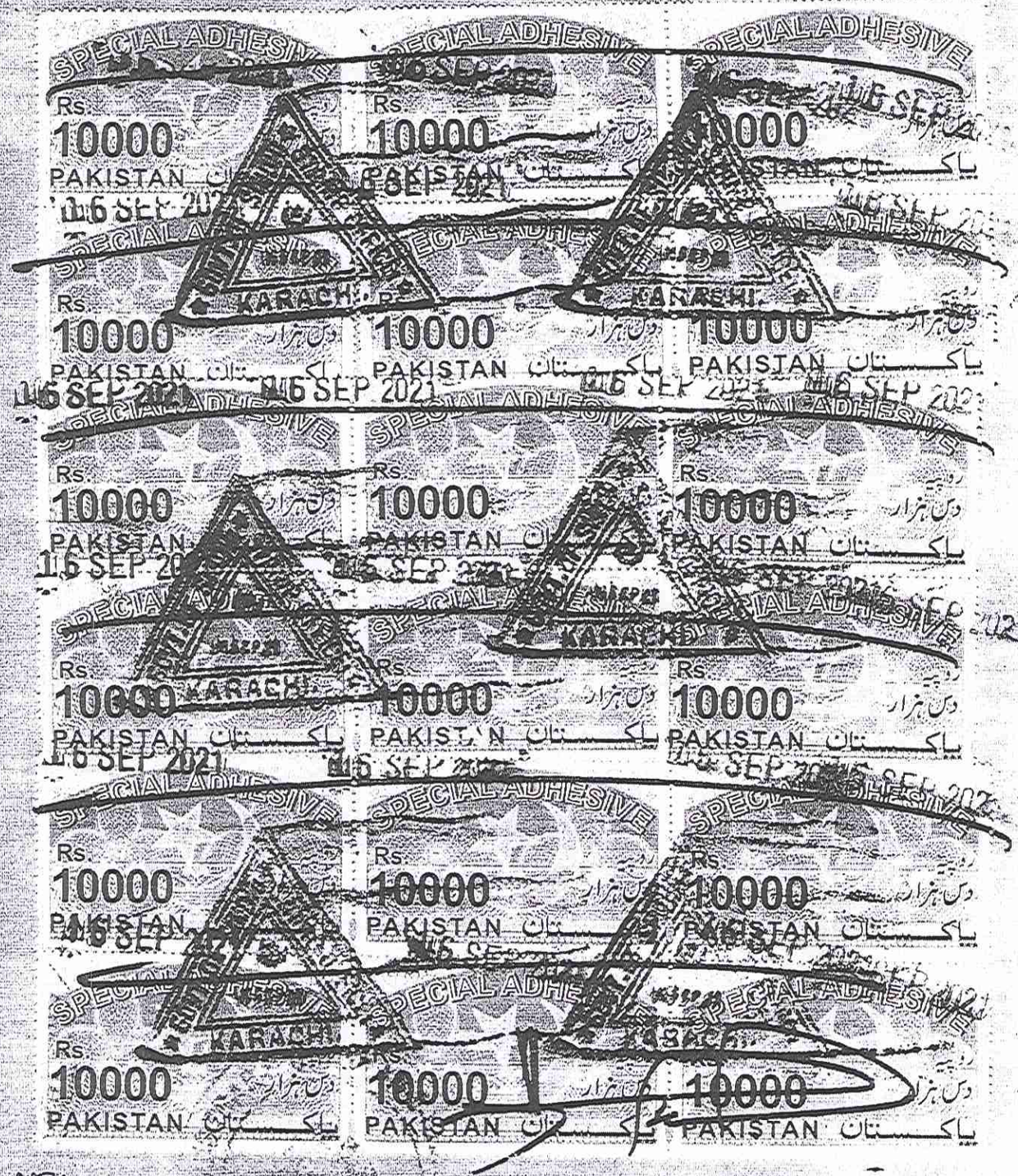


16-9-21.6861
R.No.
Sub-Registrar-II

4. THAT the **VENDOR** hereby covenants and assures the **VENDEE** that it is the full and exclusive owner of the said property, hereby conveyed and transferred and none else has any right, power, authority or any interest and she has good right, title and lawful authority to sell the said property to the **VENDEE** and that the **VENDOR** has not prior to the date of these presents done, made, committed, caused or knowingly suffered to be done any such act, thing, deed wherefrom or by reason of which the right to transfer the said property has been or may be impaired or that the property is charged, encumbered or prejudicially affected in any way.



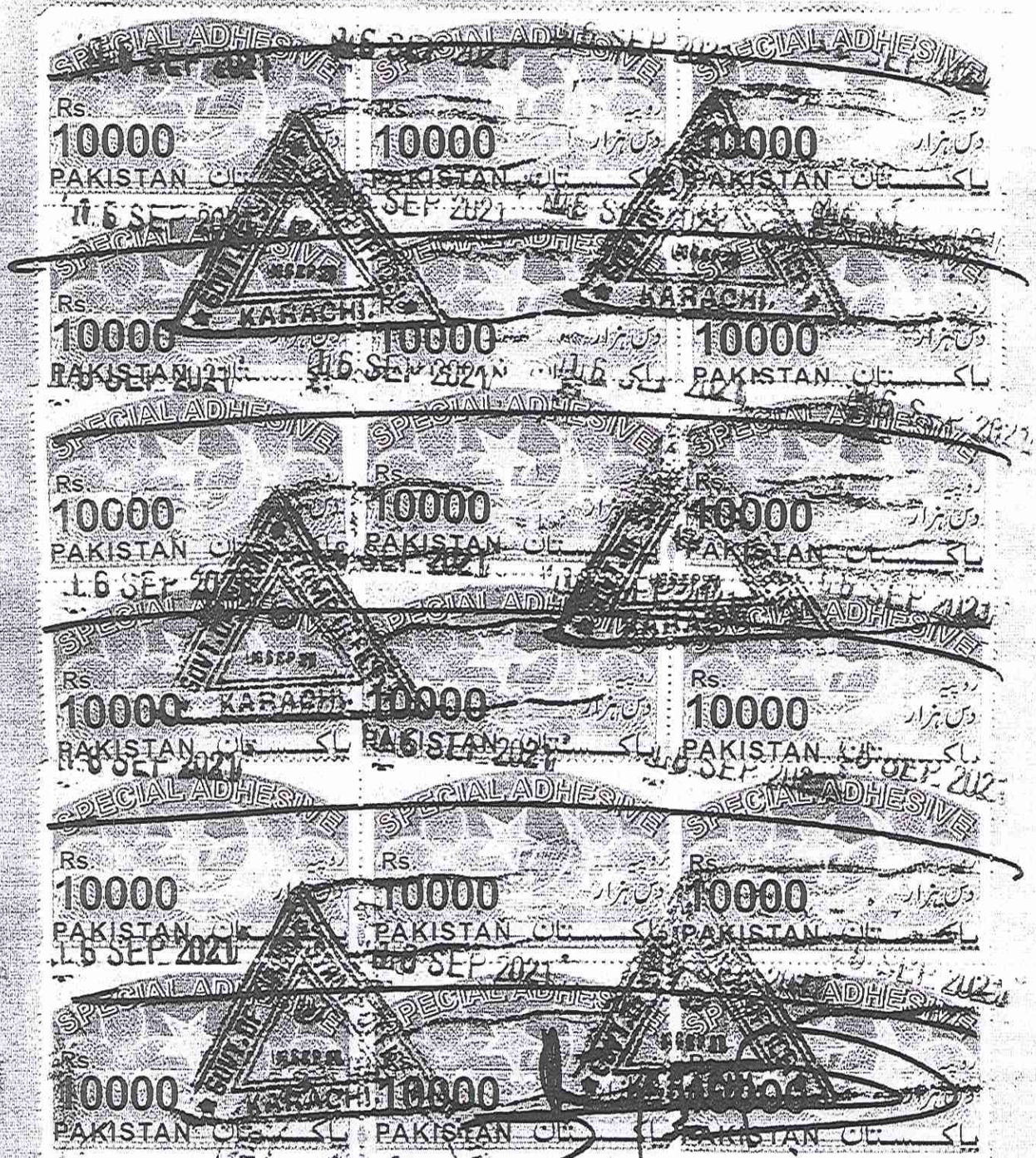
5. THAT the **VENDOR** covenants with the **VENDEE** that from the date of these presents, the **VENDEE** shall quietly and peacefully hold, occupy and possess the said property and shall be the sole, absolute, rightful, lawful and exclusive owner of the same and every part thereof and shall enjoy all its profits, emoluments, easements and privileges without any eviction, let, hindrance, suit etc. made or preferred by the **VENDOR** or any other person claiming through or under trust of the **VENDOR** and that the **VENDOR** at the request and cost of the **VENDEE**, do cause, or procure to be done all acts, matters, deeds and things for better assuring and more perfectly assigning the said property unto the **VENDEE**.



174
28
192

R.No 6 & 6 16.9.21
Sub-Registrar
Gulshan-e-Iqbal Town Karachi

6. THAT the **VENDOR** doth hereby covenants with the **VENDEE** that he shall from time to time and at all times whenever called upon by the **VENDEE**, do or caused to be done all lawful and reasonable acts things, deeds for better assuring and more perfectly assigning the title of the said property unto the **VENDEE** and he shall keep the **VENDEE** indemnified against all losses and detriments suffered by the **VENDEES** due to any defect in title or any claim or demand preferred by anyone in respect of the said property or any part thereof.



192
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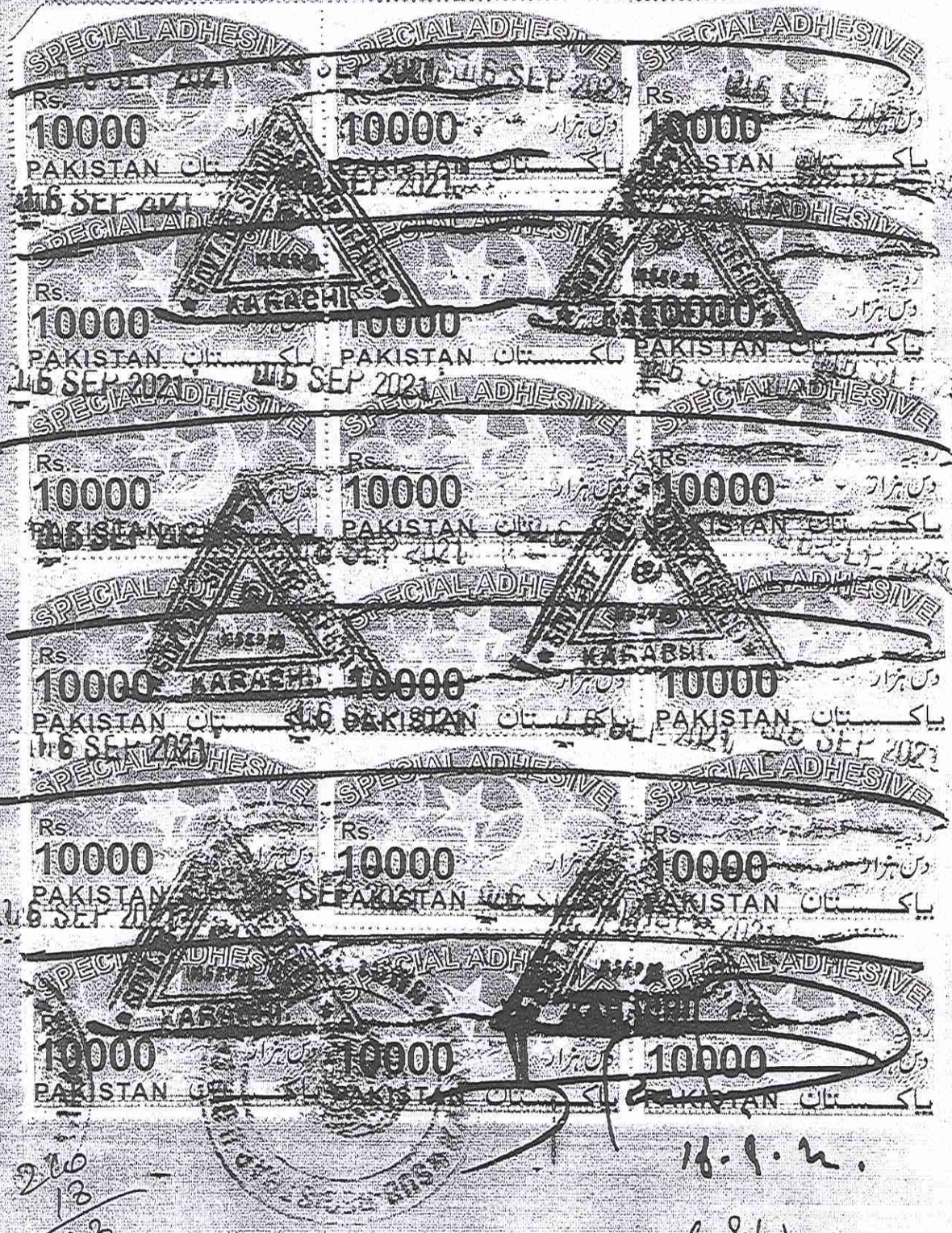
16.9.21
R.No 6861
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

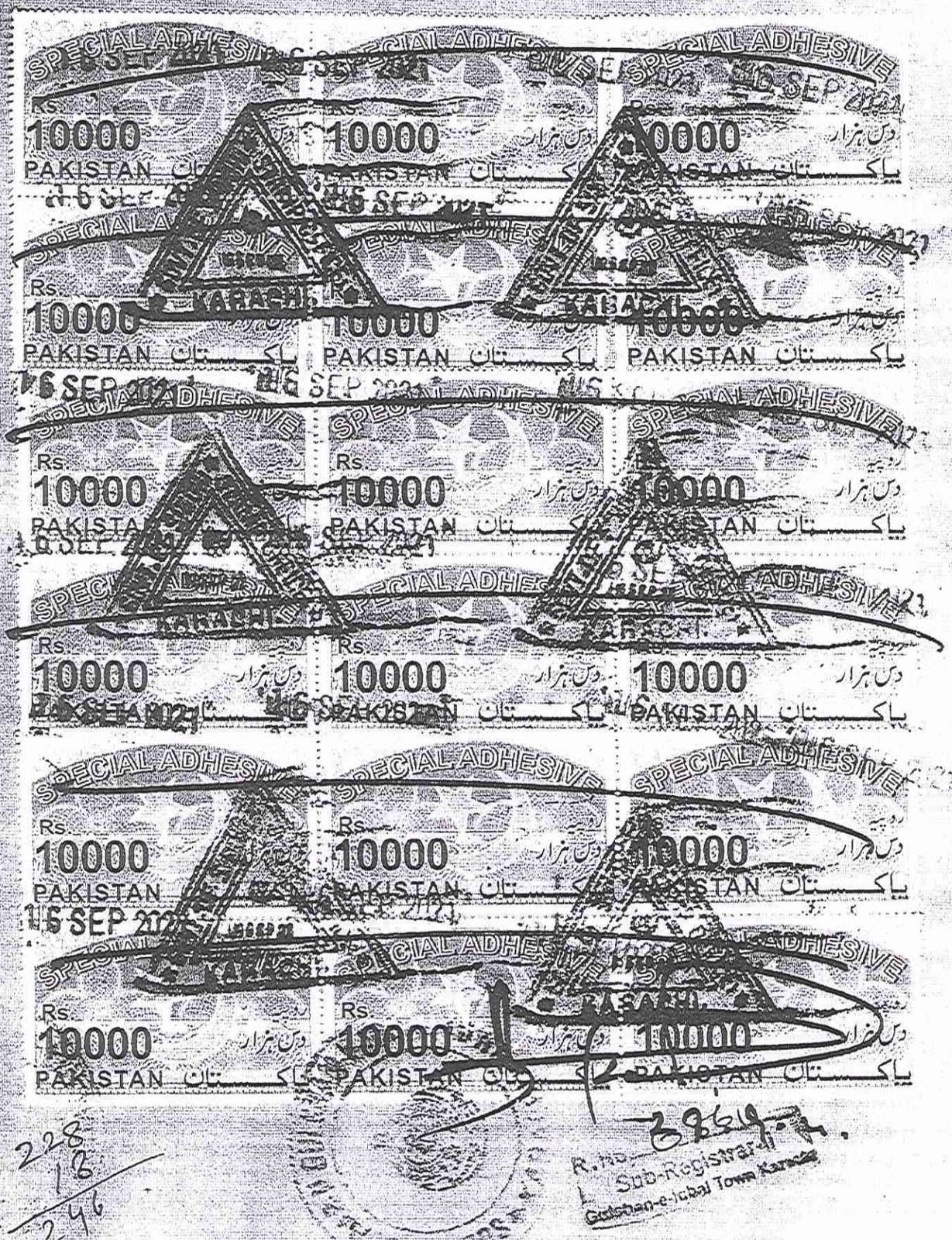
7. THAT the **VENDOR** has handed over the peaceful and vacant possession of the Said Property together with all the documents of title in original in respect of the same to the **VENDEE** who henceforth, shall have, hold, occupy and enjoy peaceful possession and profit thereof to which the said **VENDOR** or any other person(s) on his behalf shall have no claim and concern therewith.



16.9.21.

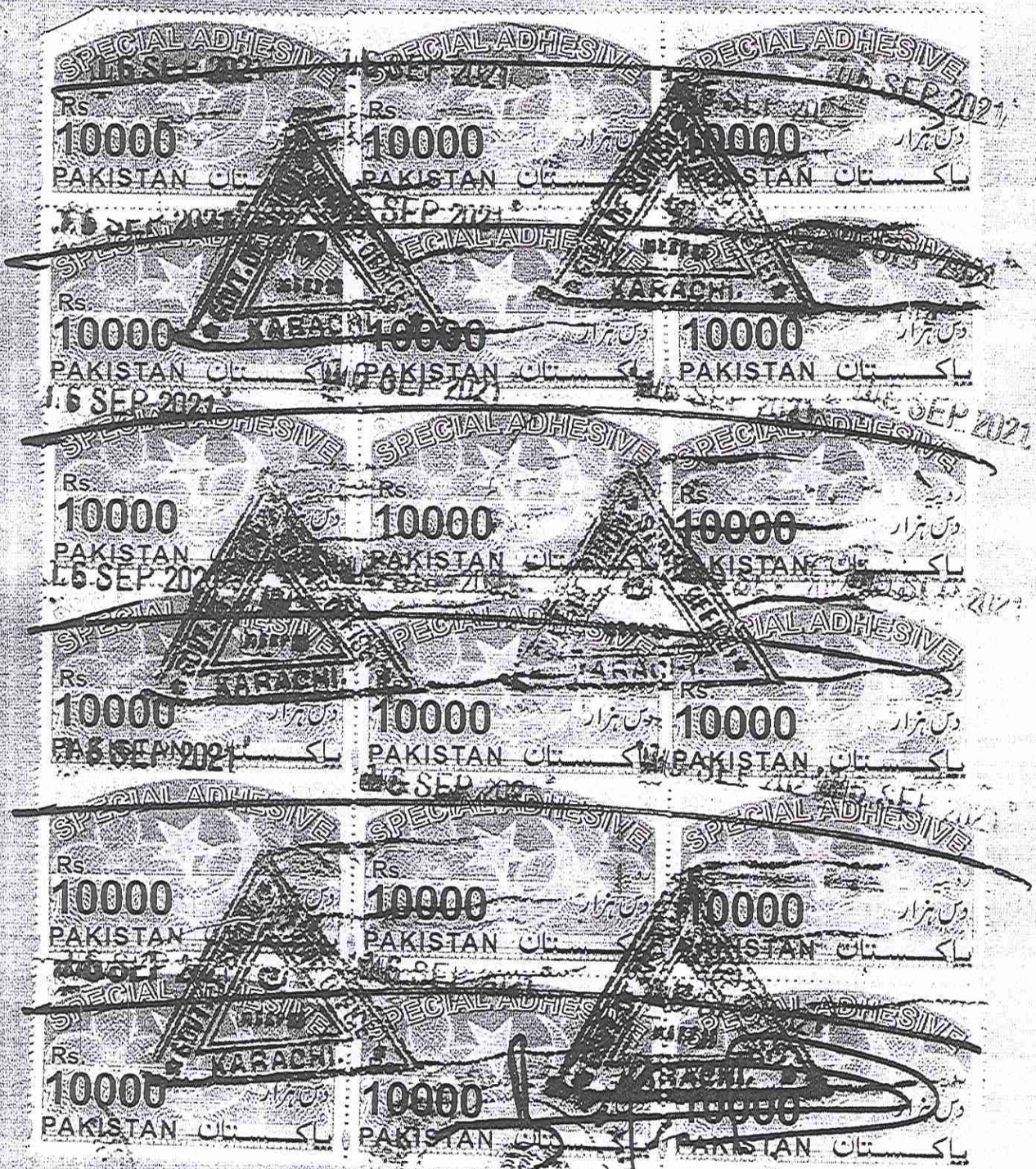
R.No 6861
Sub-Registrar-II
Gulshan-e-Iqbal Town Karachi

8. That the **VENDEE**, as OWNER of the said property, shall have the same mutated in all the relevant records of the Government, including the records of Government of Sindh, Local Government, Revenue Board and etc., for which the **VENDOR**shall be ready and prepared to assist the **VENDEE**whenever required and shall sign and deliver all applications whenever needed for transfer of the said property in favour of the **VENDEE**in all respects at the cost and expenses of the **VENDEE**.



9. THAT the **VENDOR**and **VENDEE**fully satisfied that the total sale consideration as per Section 41, 51, 54 of the Transfer of Property Act-1908 and registration rules of 1935 total risk and own cost.

10. That the **VENDEE** or any person(s) deriving title under their will at all times hereafter keep the **VENDOR** indemnified against all proceedings, costs, claims and expenses in respect of the Said Property.



246
18
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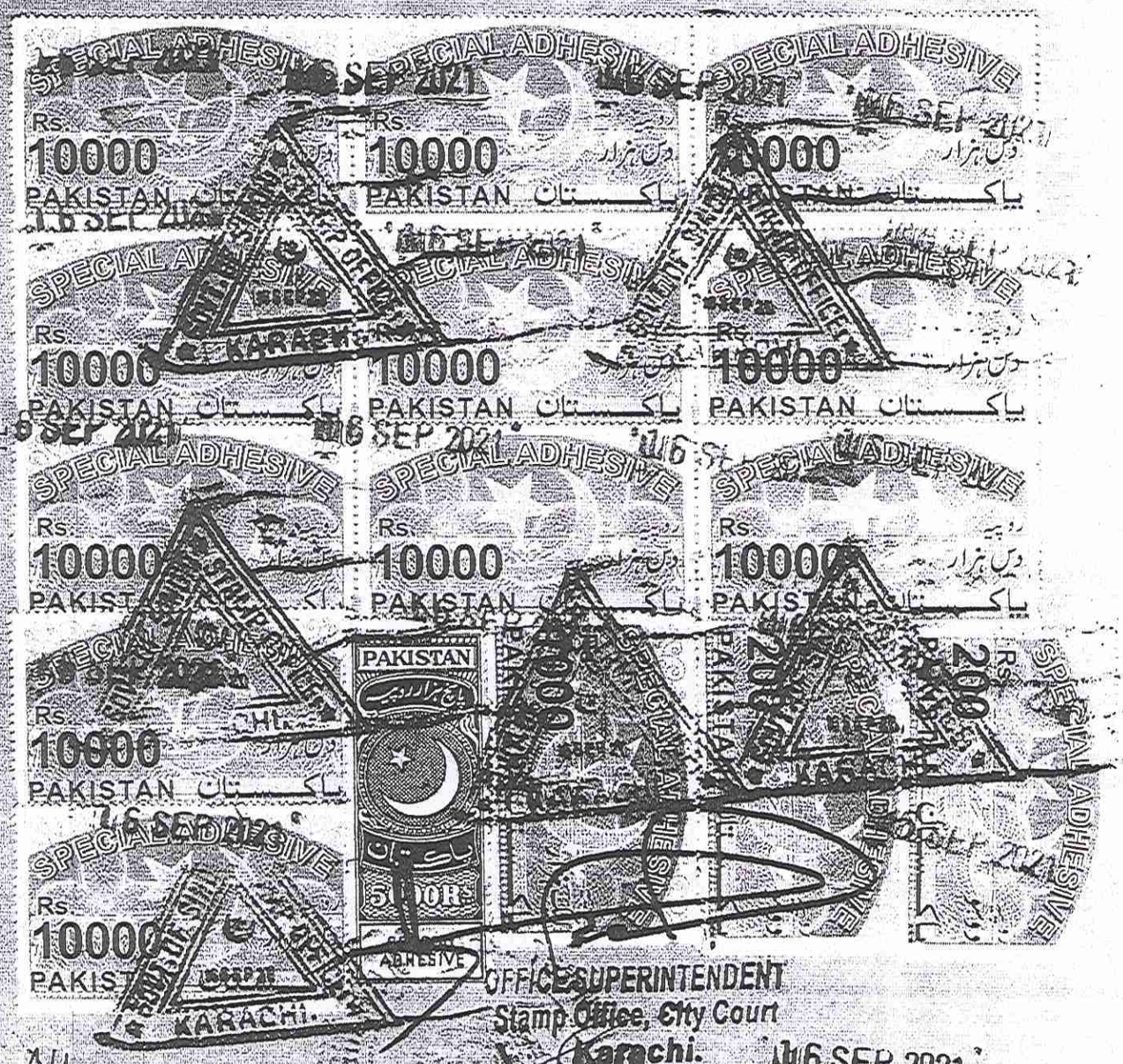
16.9.21
R.No
Sub-Registrar
Gulshan-e-Iqbal Town Karachi

11. That this deed is valued at **Rs. 275,638,000/- (Two Hundred & Seventy Five Million, Six Hundred & Thirty Eight Rupees Only)** between Vendor and Vendee, and the stamp duty as Town Tax is paid as per the same value.



OFFICE SUPERINTENDENT
Stamp Office, City Court
Karachi. 16 SEP 2021

16.9.21. 6861

R.No.
Sub-Registrar
Gulshan-e-Iqbal Town

264
1-11
275

SCHEDULE OF THE PROPERTY:

"land admeasuring 1-27 Acres in DehSongal, TapoGujro, Sector 19-C, Scheme No. 33, Karachi, within the Registration District and Sub Registration District of Karachi and within the territorial limits of Police Station Sachalbounded and abutted as under:-

On the North by:	Road 20'
On the South by:	Private Land
On the East by:	Road 100'
On the West by:	Road 200'"

IN WITNESSES WHEREOF: the parties hereto have hereunto set and subscribed their respective hands at Karachi on the day, month and the year first above mentioned.

VENDOR
MR. MUHAMMAD IRFAN
SON OF MR. HAJI AHMED

VENDEE
MR. ABDUR RAHIM
SON OF MR. MUHAMMAD TARIQ RAFI

WITNESS No. 1	WITNESS No. 1
Muhammad Farooq	COL FAROOQ ASHRAF
S/o Muhammad Hanif	S/o Muhammad Ashraf
42201-5401349-1	38201-1092404-5
39B M-Ali Mouda	Apt B 1602 Creek Vista
	Phs DHA Kci

SUB-REGISTRAR

R.No 6861
Sub-Registrar
Gulshan-e-Iqbal Town

GOVT. OF PAKISTAN

8694
8894

Presented in the Office of
Sub-Registrar Office-II,
Gulshan-e-Iqbal Town
on: 29-9-2021
between Hrs ____ to ____

Sub-Registrar-II
Gulshan-e-Iqbal Town, Karachi

Fees 105
Received D.P.O. vide 0738096
D.O. No. N-8-8
Dt. 13-9-2021
Drawn by 1005

Mr/Mrs/Miss Muhammad Ayaz
S/o D/o W/o Haji Ahmed
Executing Party Business/Service
Muslim Adult Age. 52
R/o H#a-Q-148 B-2 PECHS Karachi
Admits execution of this deed
CNIC NO: 42201-4171461-9

Mr/Mrs/Miss Abdul Rahim
S/o D/o W/o Mul Jan/Rahim
Executing Party Business/Service
Muslim Adult Age. 37
R/o H#a-25 Phase I DHA Karachi
Admits execution of this deed
CNIC NO: 42201-0409988-5

[redacted]

[redacted]

SUB-REGISTRAR-II
GULSHAN-E-IQBAL TOWN
KARACHI

Sub-Registrar-II
Gulshan-e-Iqbal Town, Karachi

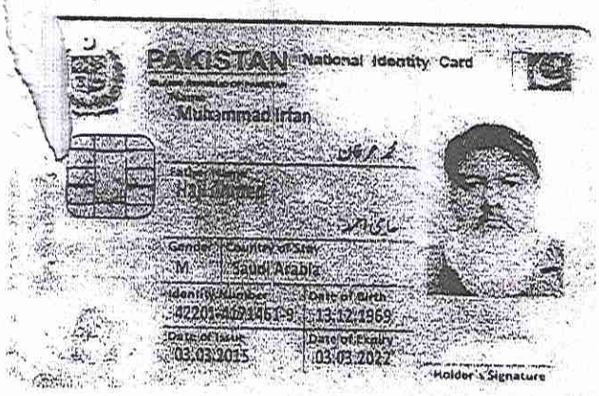
Identifies that he personally knows the above executant and identifies
Date: _____

SUB-REGISTRAR
SHAHRAH-E-FAISAL
KARACHI

Registered No 6861
Book No 1
Date 5-12-2021

SUB-REGISTRAR II Gulshan-e-Iqbal
KARACHI

GOVT. OF SINDH
KARACHI PAKISTAN


PAKISTAN National Identity Card

Name
Muhammad Irfan

محمد عرفان

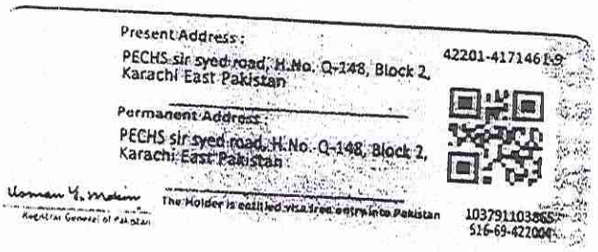
Father Name
Hanif

Gender | Country of Stay
M | Saudi Arabia

Identity Number | Date of Birth
42201-4014461-9 | 13.12.1969

Date of Issue | Date of Expiry
03.03.2015 | 03.03.2022

Holder's Signature


Present Address:
PECHS sir syed road, H.No. Q-148, Block 2, Karachi East Pakistan

42201-4171461-9

Permanent Address:
PECHS sir syed road, H.No. Q-148, Block 2, Karachi East Pakistan

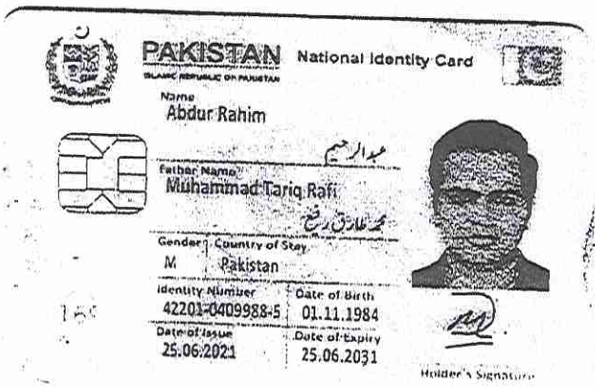
Usman Y. Mazhar
Registrar General of Pakistan

The Holder is entitled visa free entry into Pakistan

10379110386[illegible]
516-69-422004

I<PAK31P931RF64220141714619<<<
6912130M2203034PAKA57C48<<<<<4
MUHAMMAD<IRFAN<<<<<<<<<<<<<<<

6861
Sub-Registrar-II
Gulshan-e-Iqbal Town


PAKISTAN National Identity Card

Name
Abdur Rahim

عبدالرحیم

Father Name
Muhammad Tariq Rafi

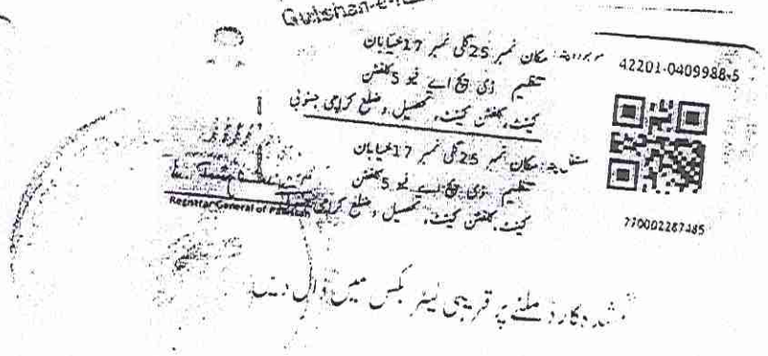
محمد طارق رفیع

Gender | Country of Stay
M | Pakistan

Identity Number | Date of Birth
42201-0409988-5 | 01.11.1984

Date of Issue | Date of Expiry
25.06.2021 | 25.06.2031

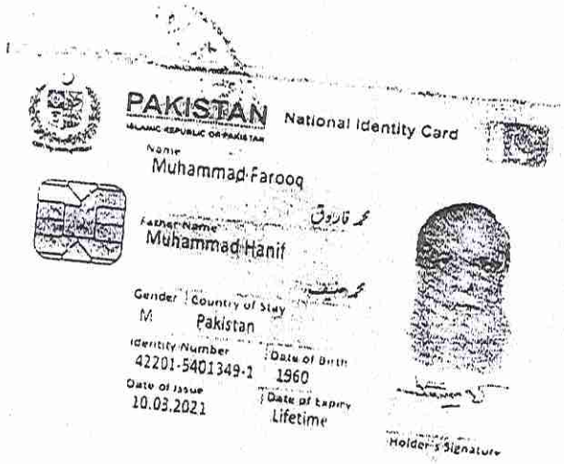
Holder's Signature


42201-0409988-5

77000287185

Registrar General of Pakistan

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں


PAKISTAN National Identity Card

Name
Muhammad Farooq

محمد فاروق

Father Name
Muhammad Hanif

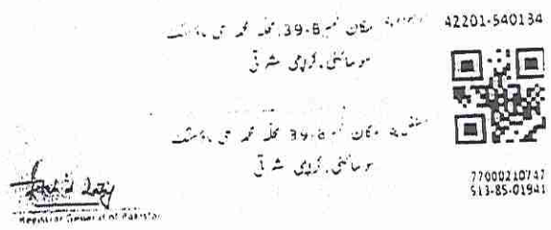
محمد حنیف

Gender | Country of Stay
M | Pakistan

Identity Number | Date of Birth
42201-5401349-1 | 1960

Date of Issue | Date of Expiry
10.03.2021 | Lifetime

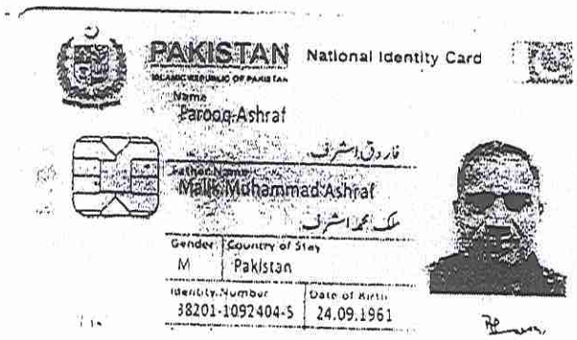
Holder's Signature


42201-5401349-1

77000210747
513-85-01941

Registrar General of Pakistan

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں


PAKISTAN National Identity Card

Name
Farooq Ashraf

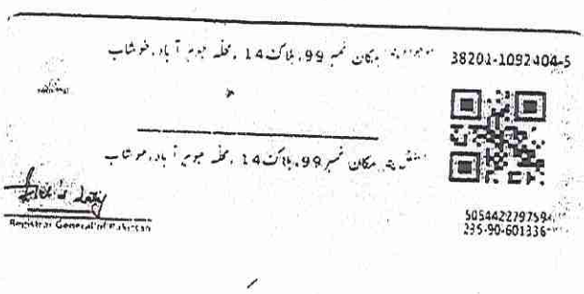
فاروق اشرف

Father Name
Malik Muhammad Ashraf

ملک محمد اشرف

Gender | Country of Stay
M | Pakistan

Identity Number | Date of Birth
38201-1092404-5 | 24.09.1961


38201-1092404-5

50544227975[illegible]
235-90-601336

Registrar General of Pakistan