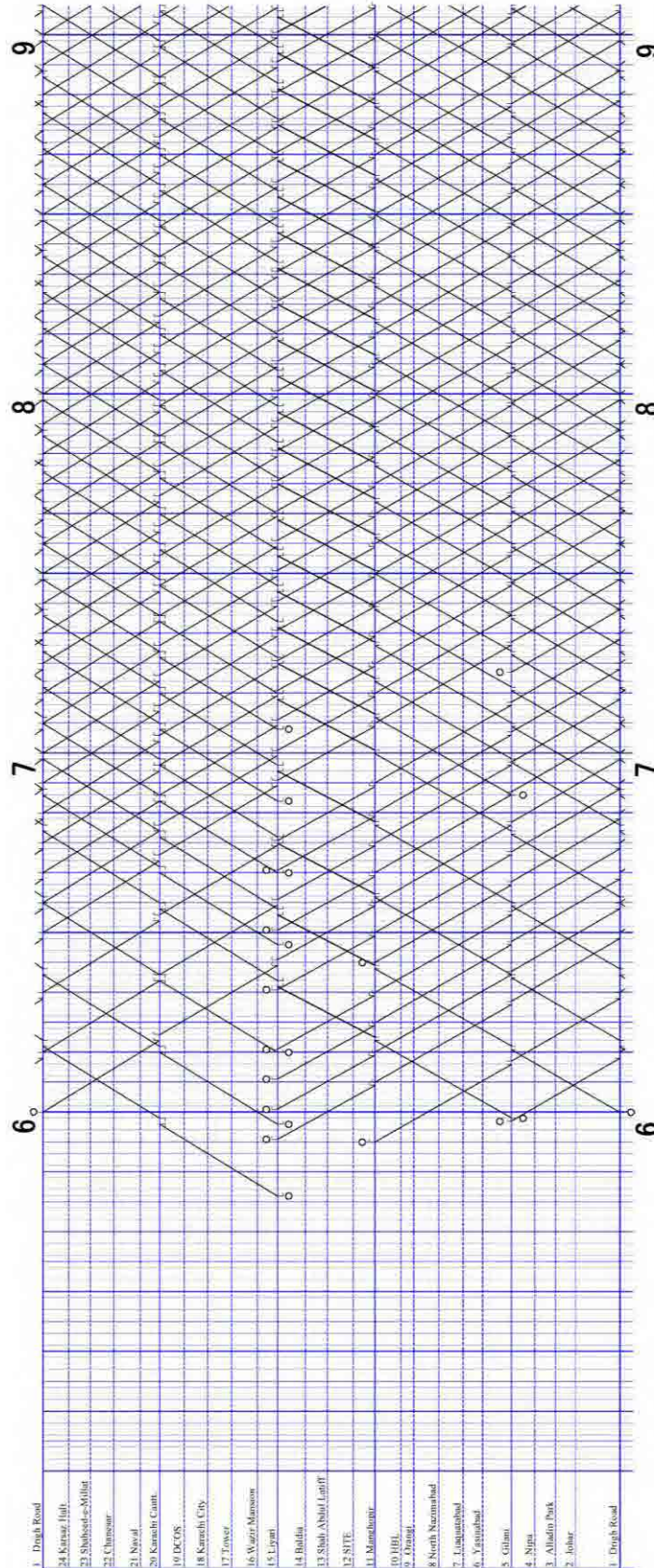


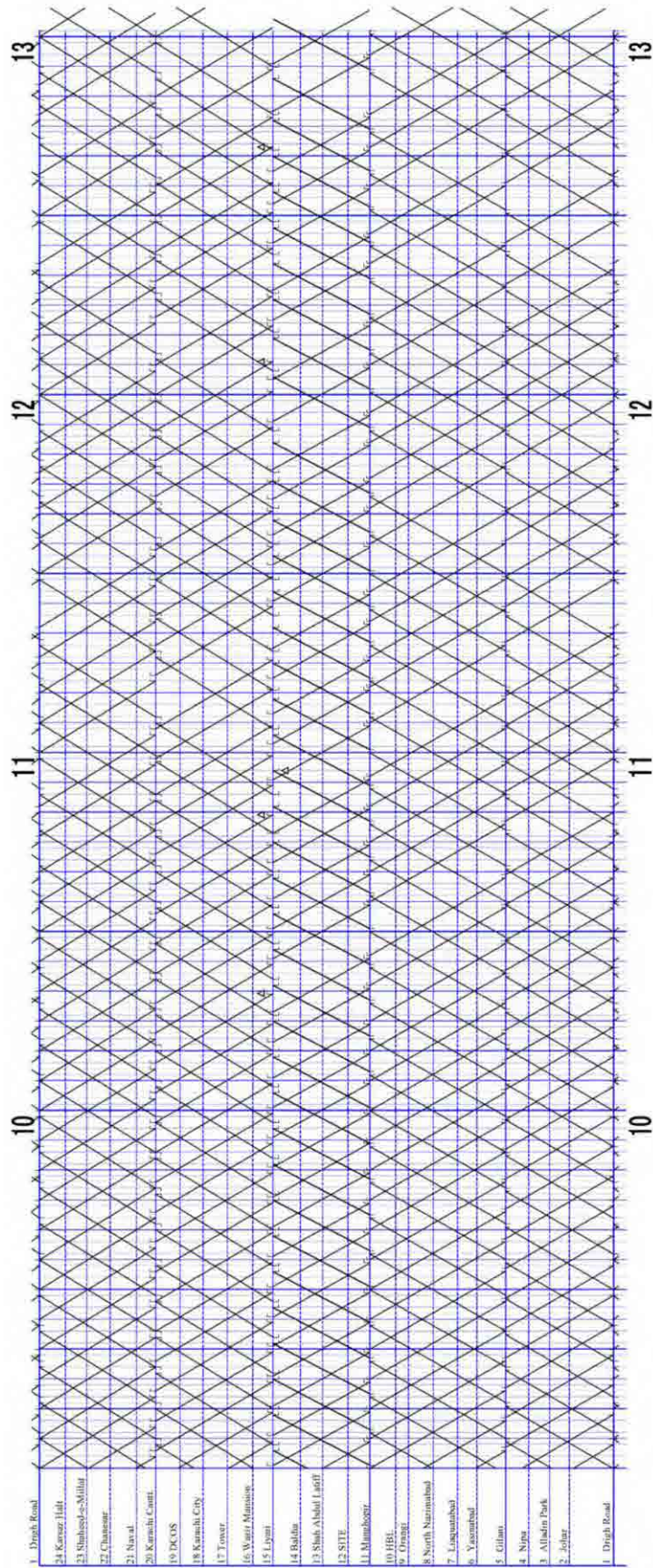
APPENDIX 5-1

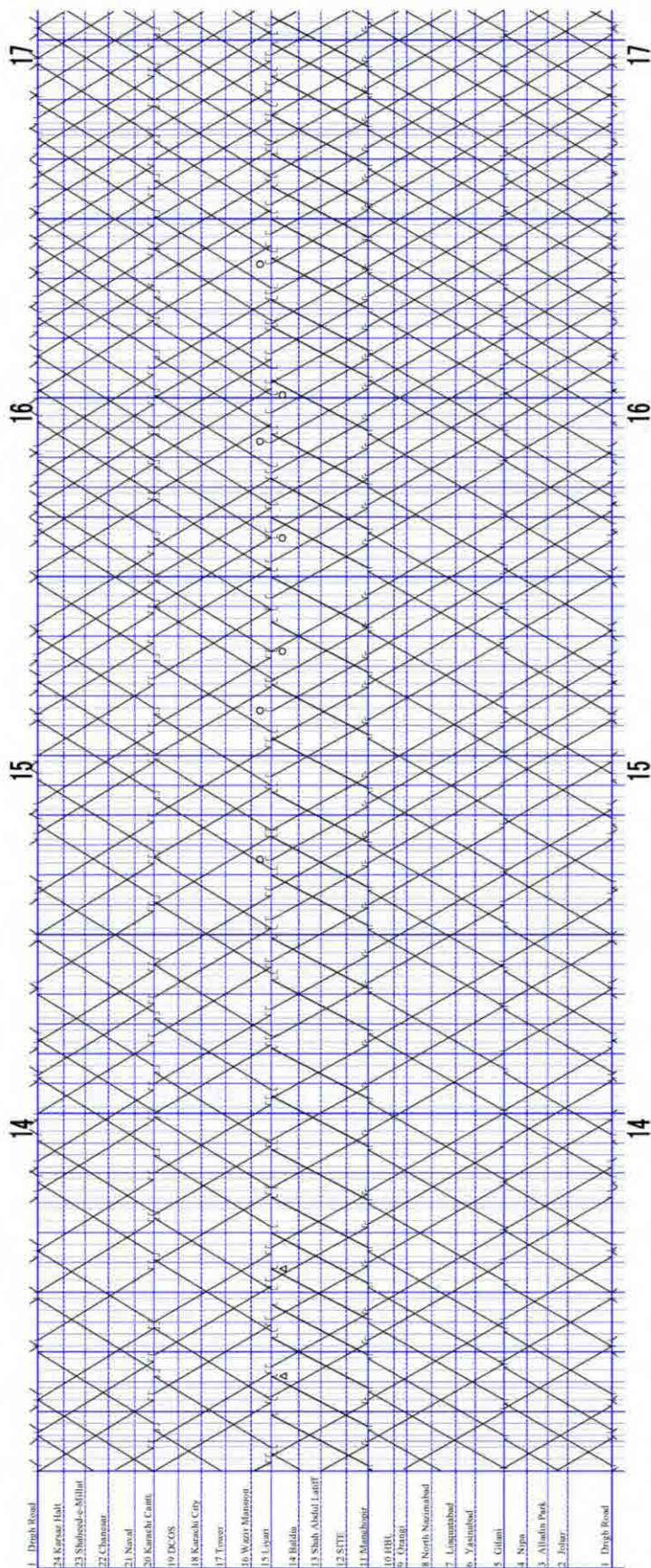
Train Operation Diagram

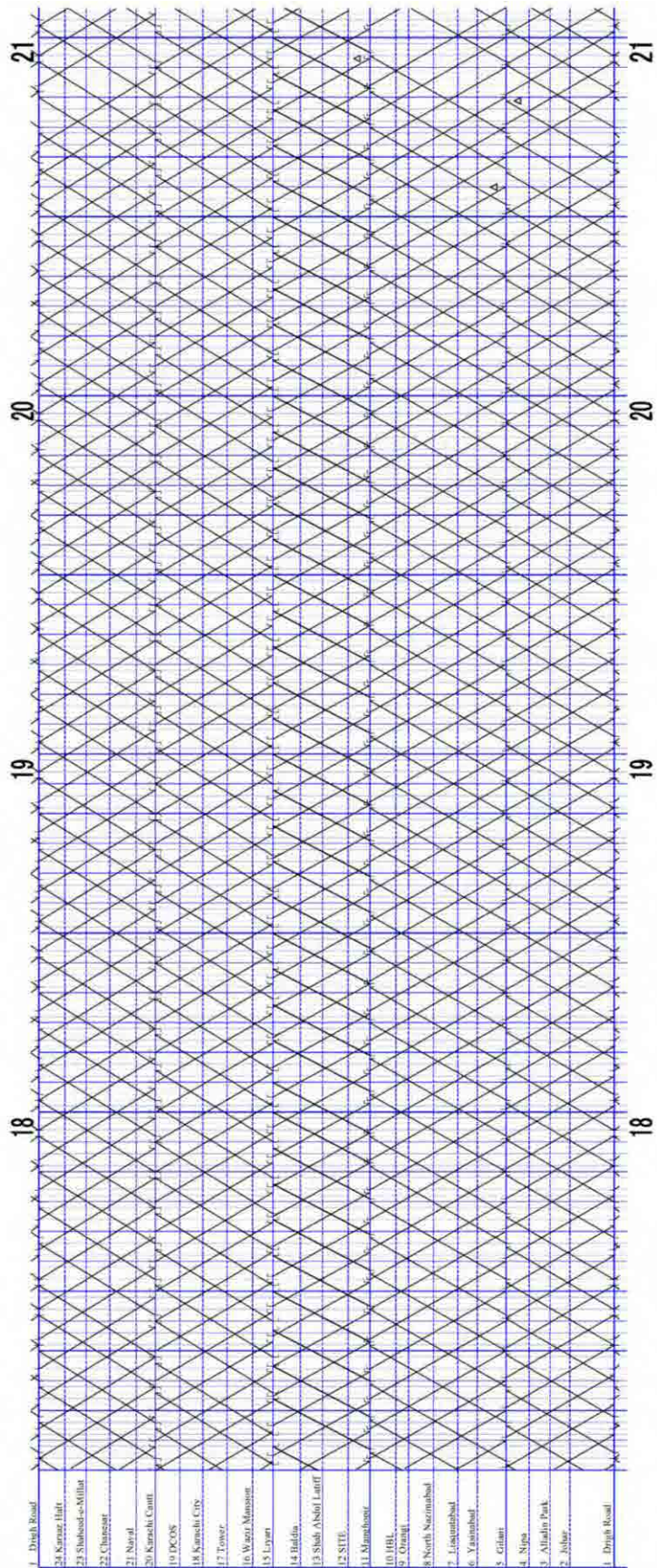
Appendix 5-1 Train Operation Diagram

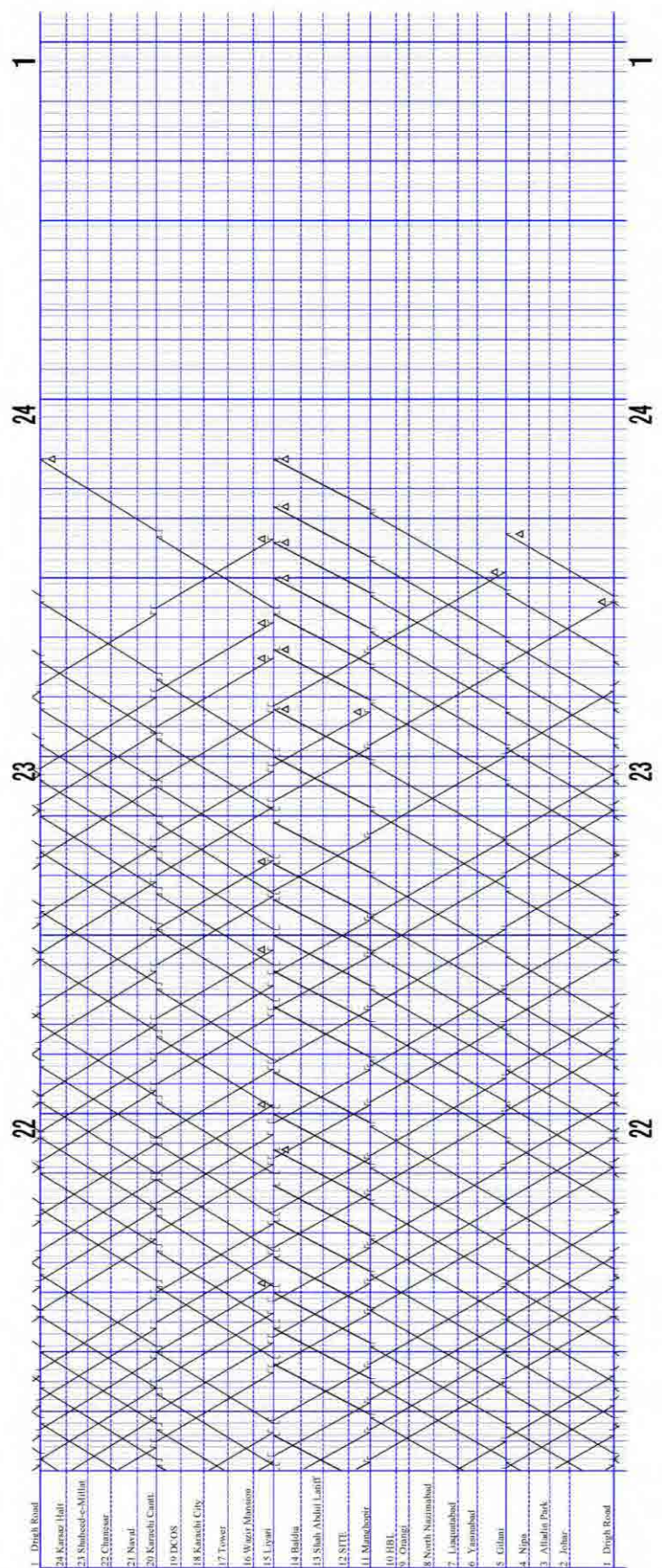
1) Case NA-1 (2022 Year)



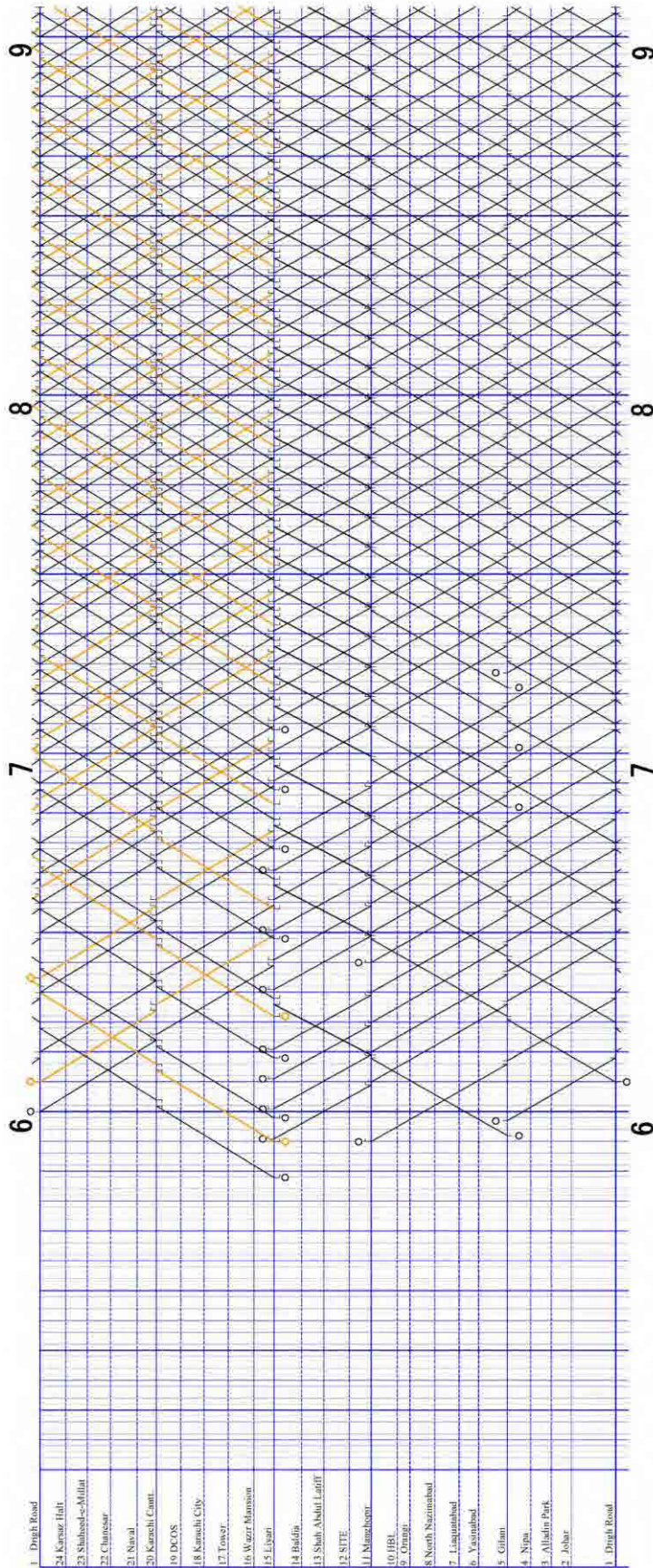


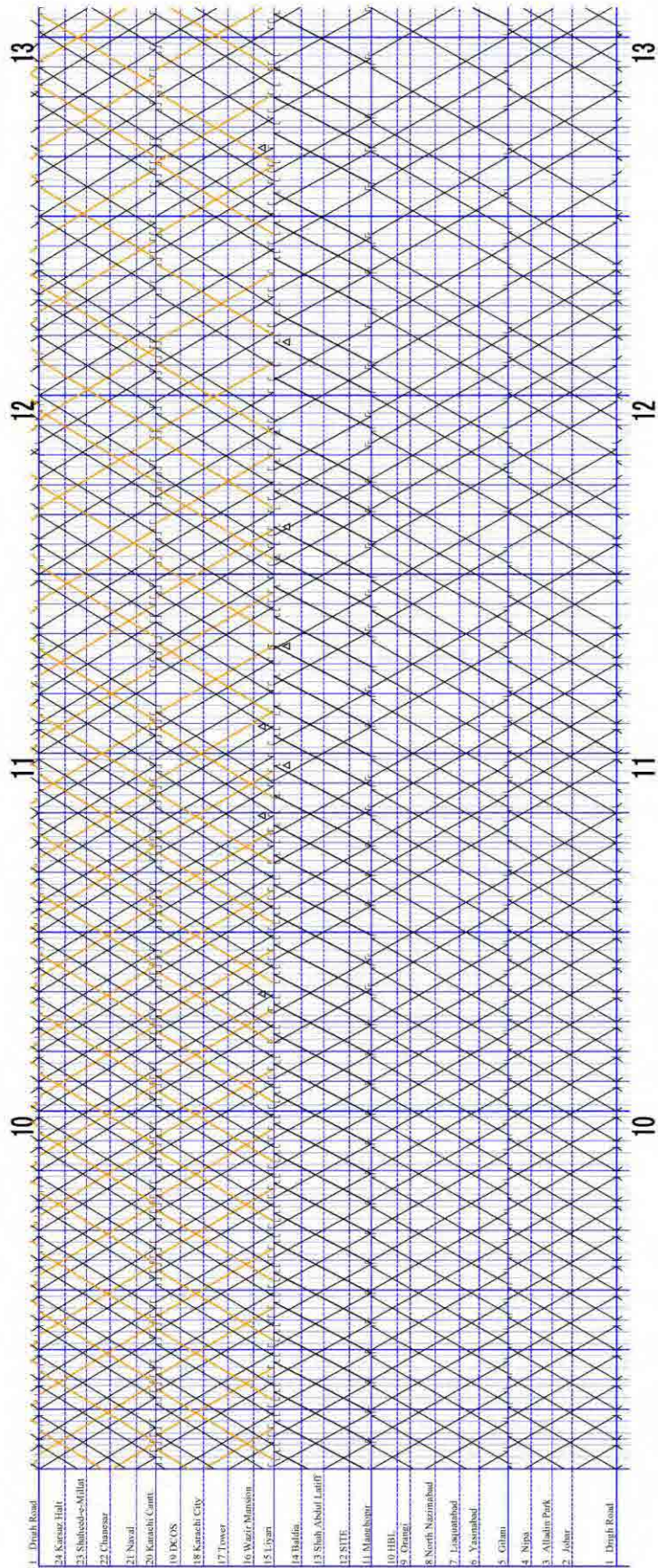


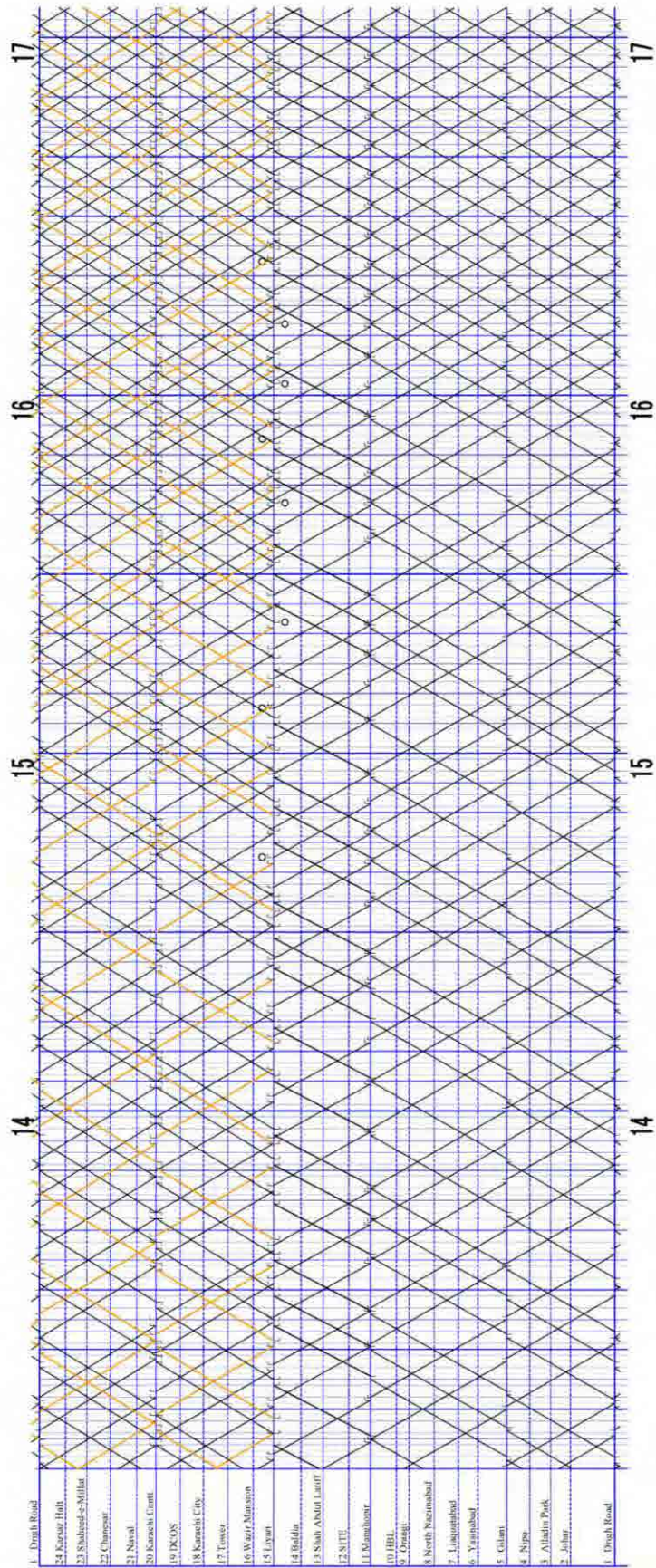


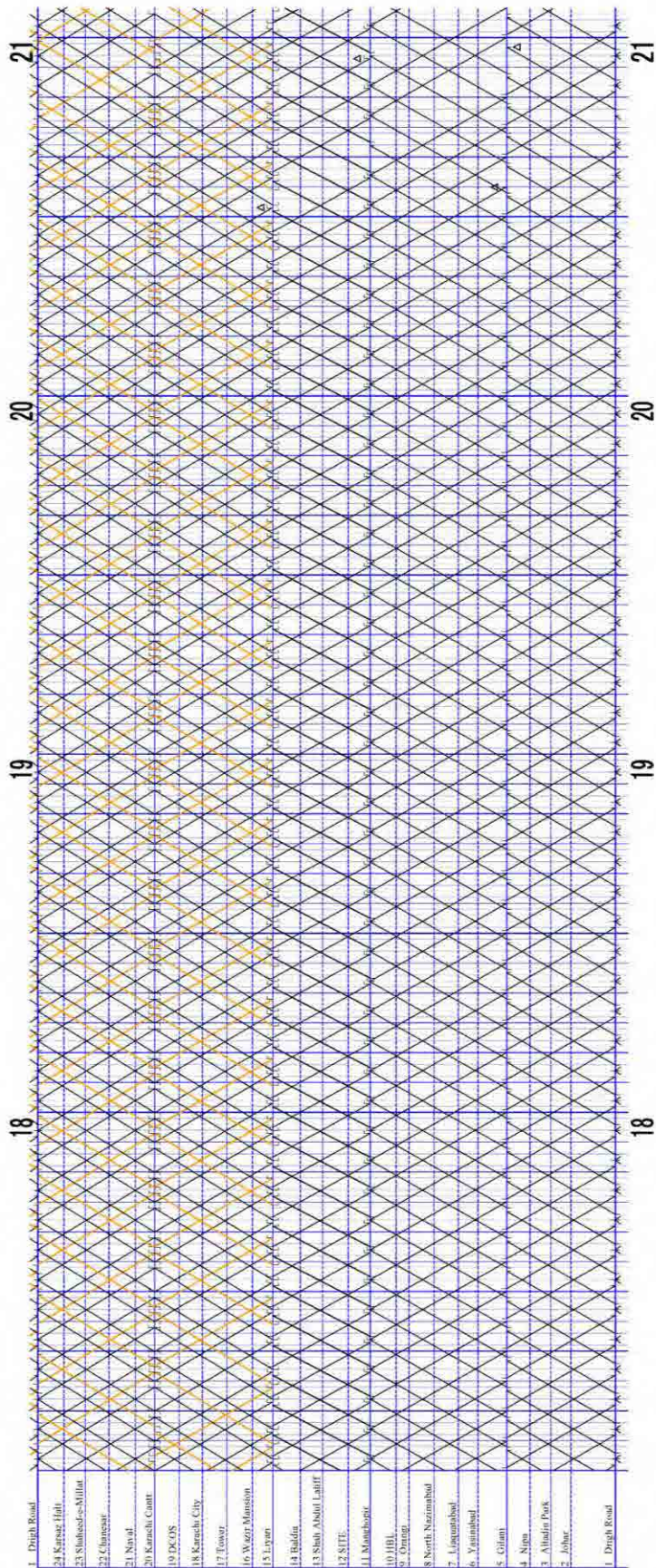


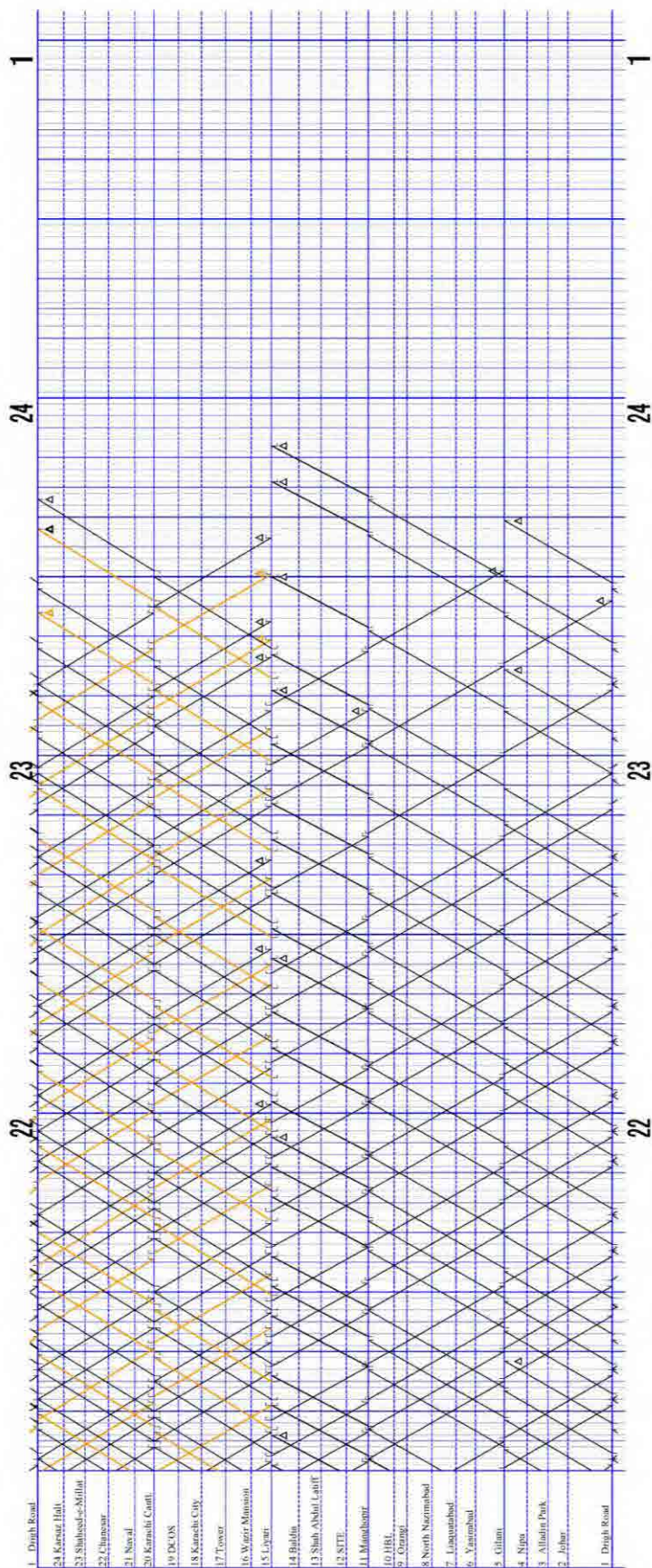
2) Case NA-1 (2030 Year)



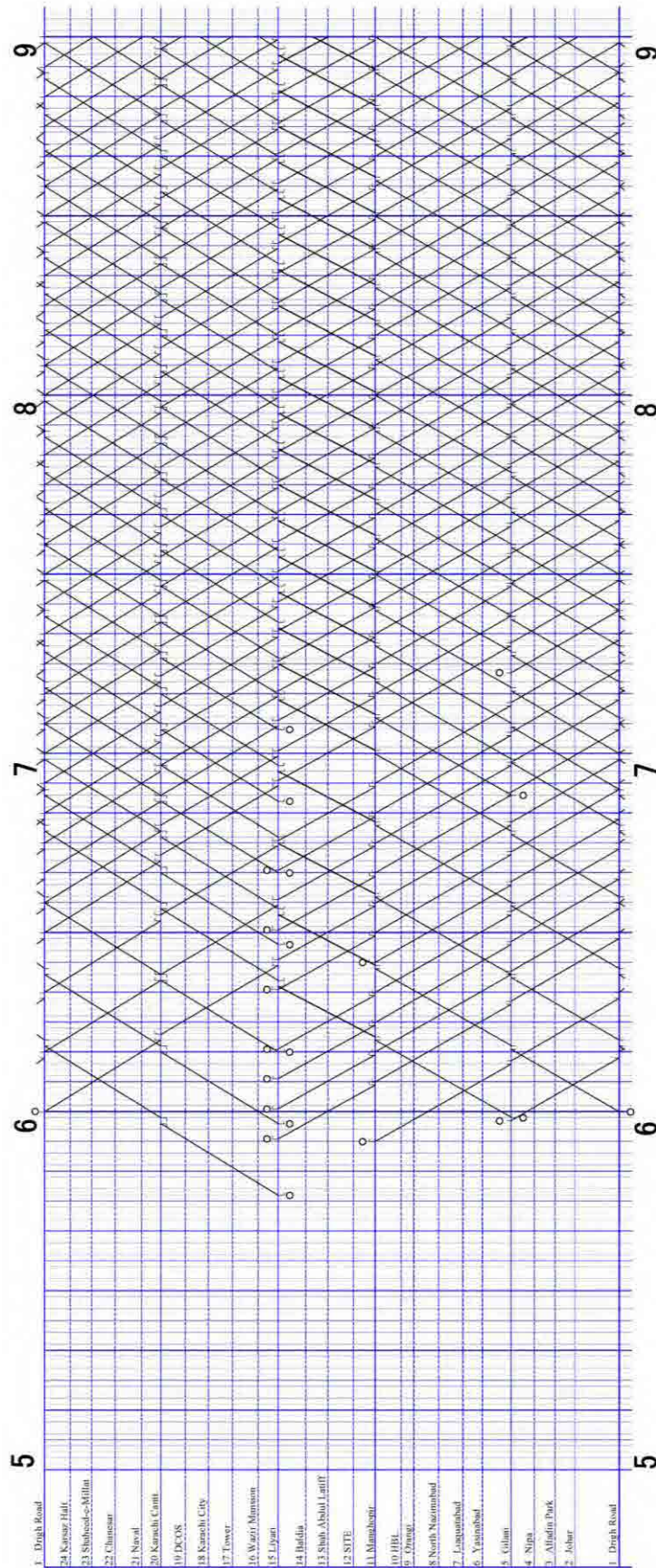


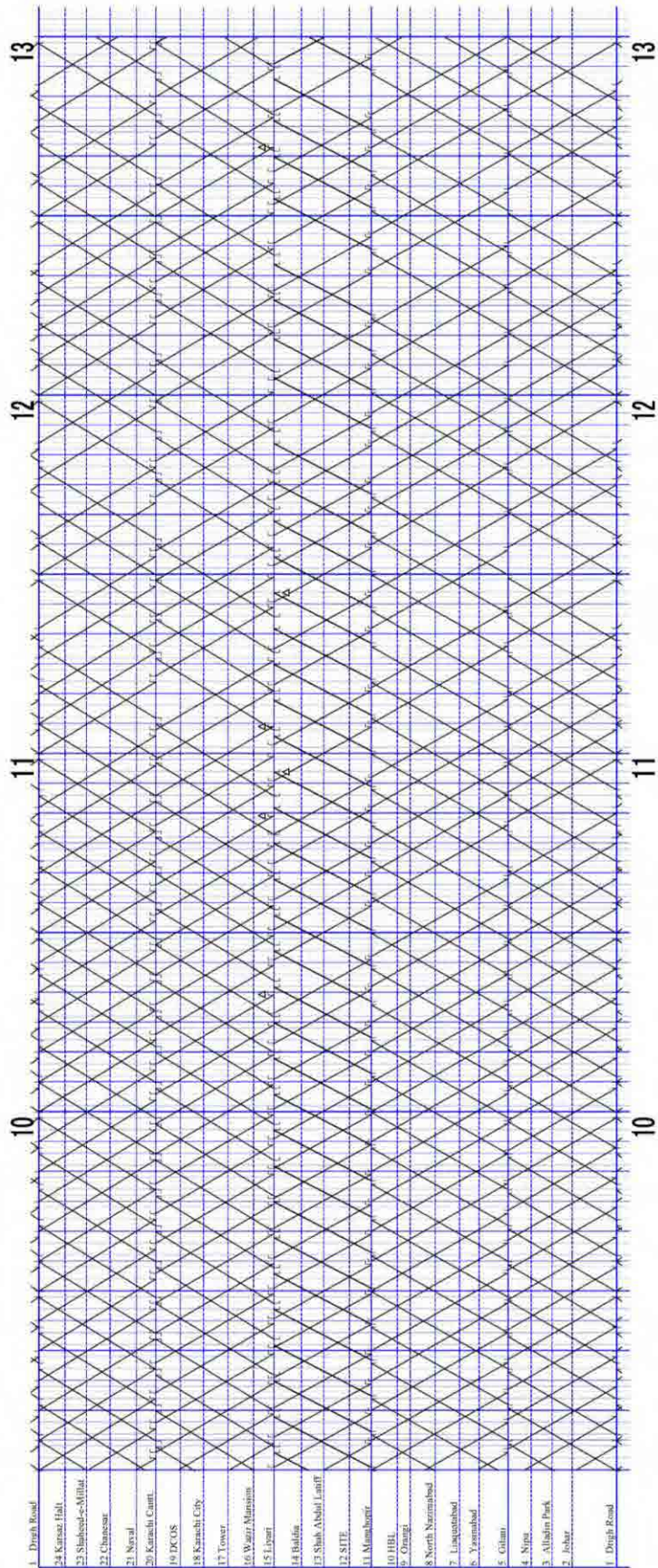


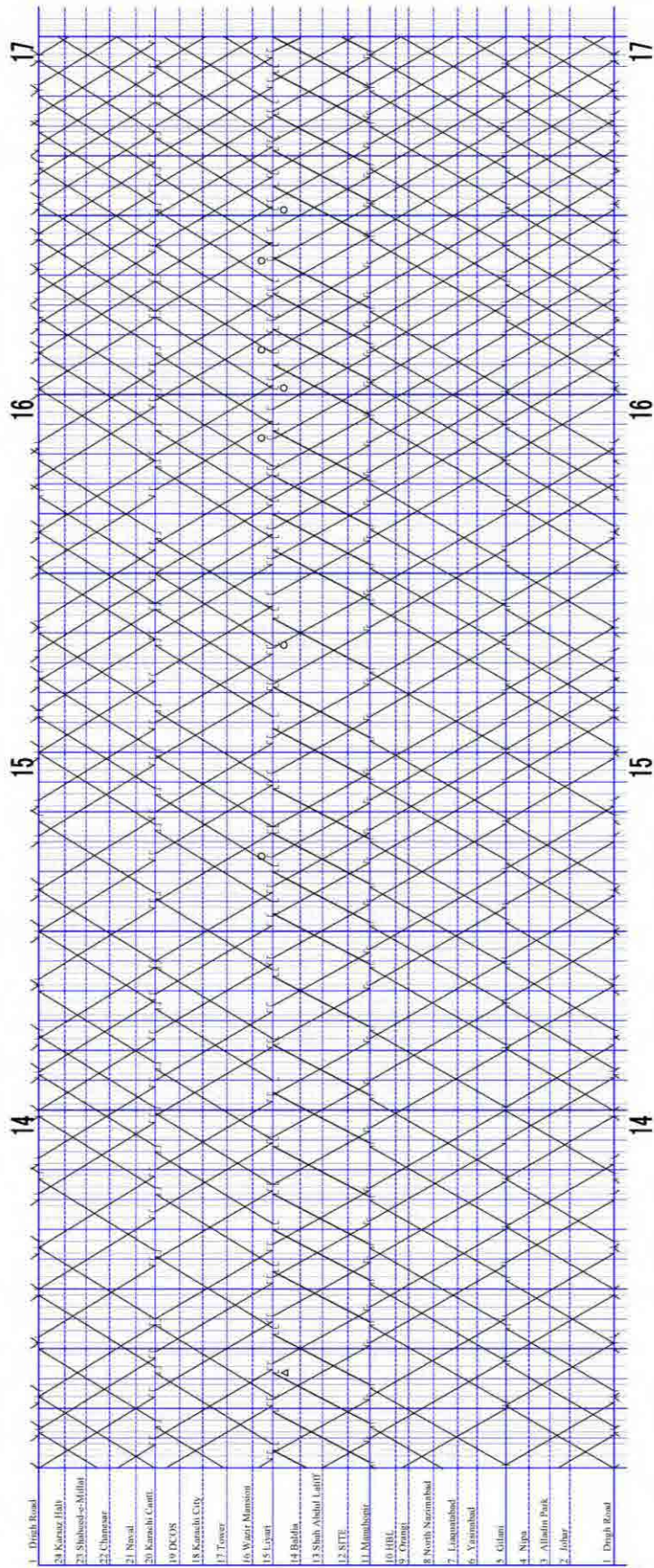


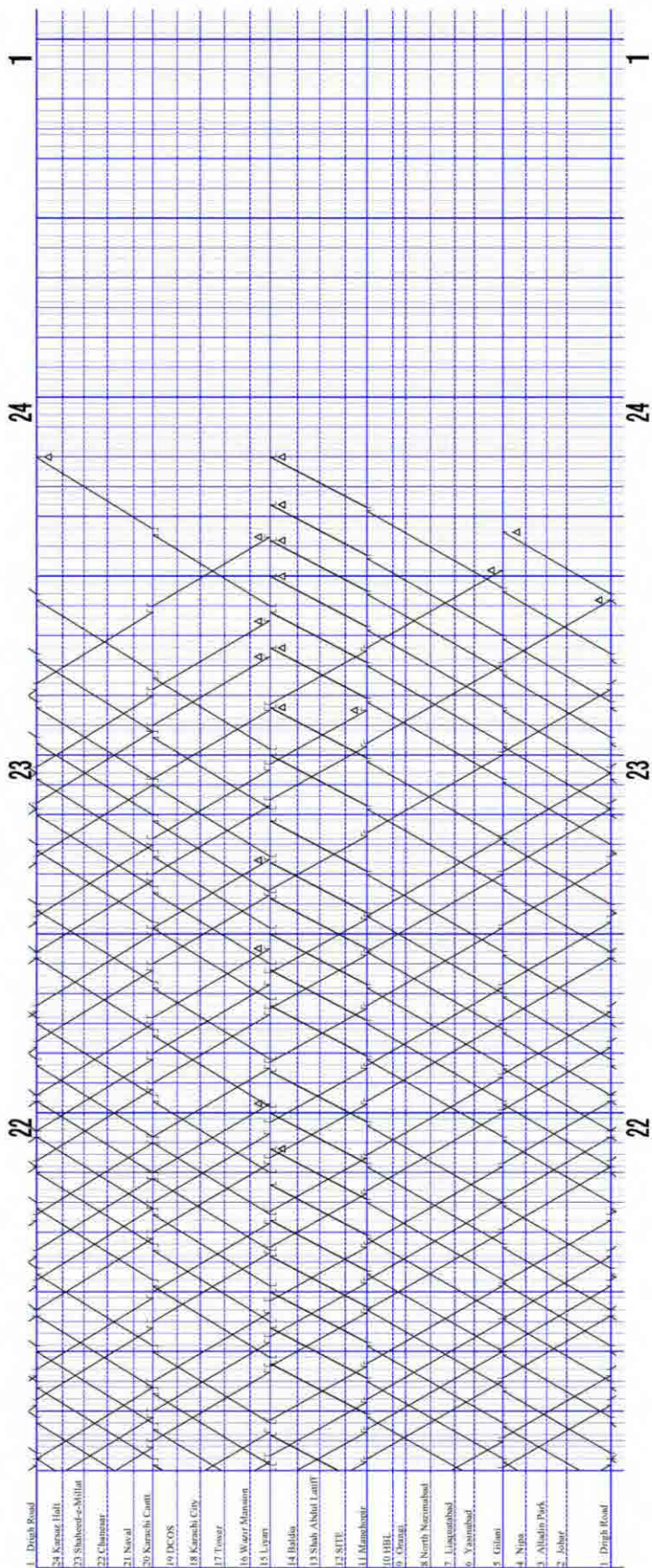


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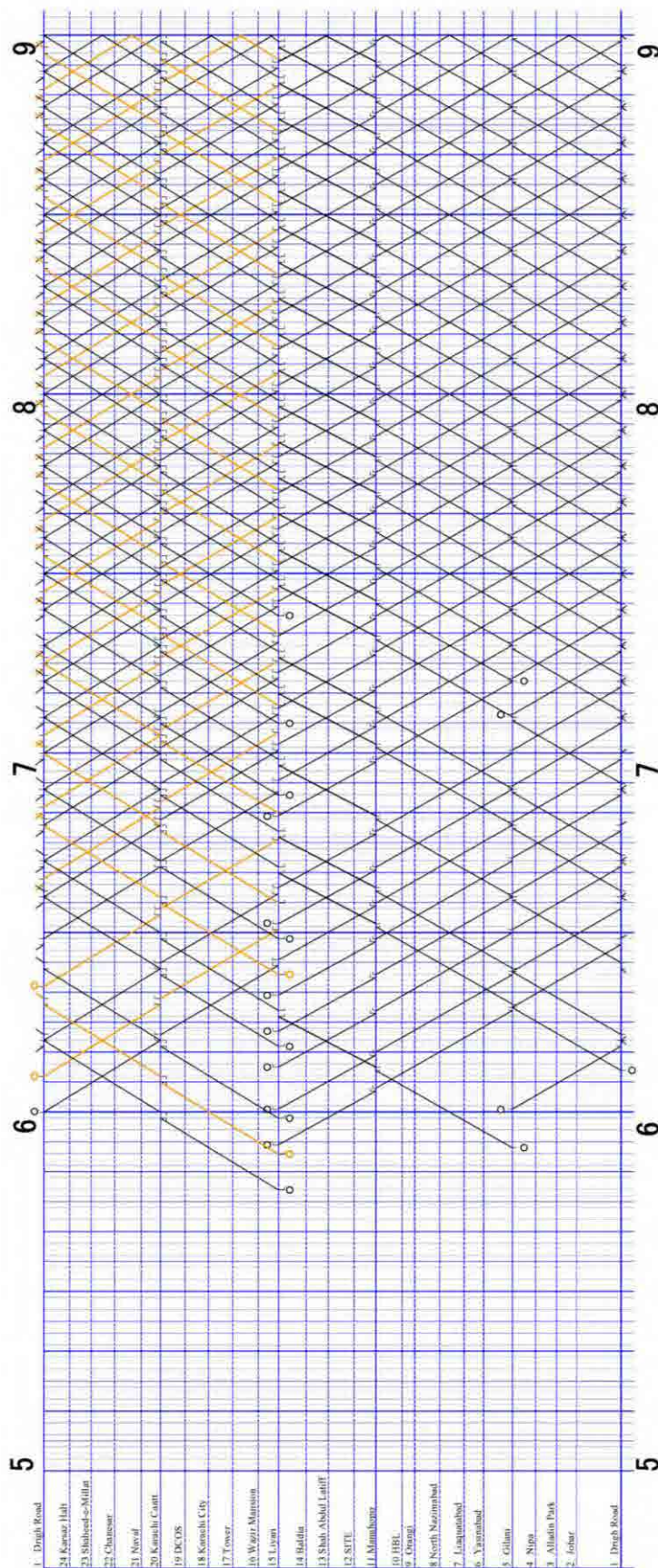


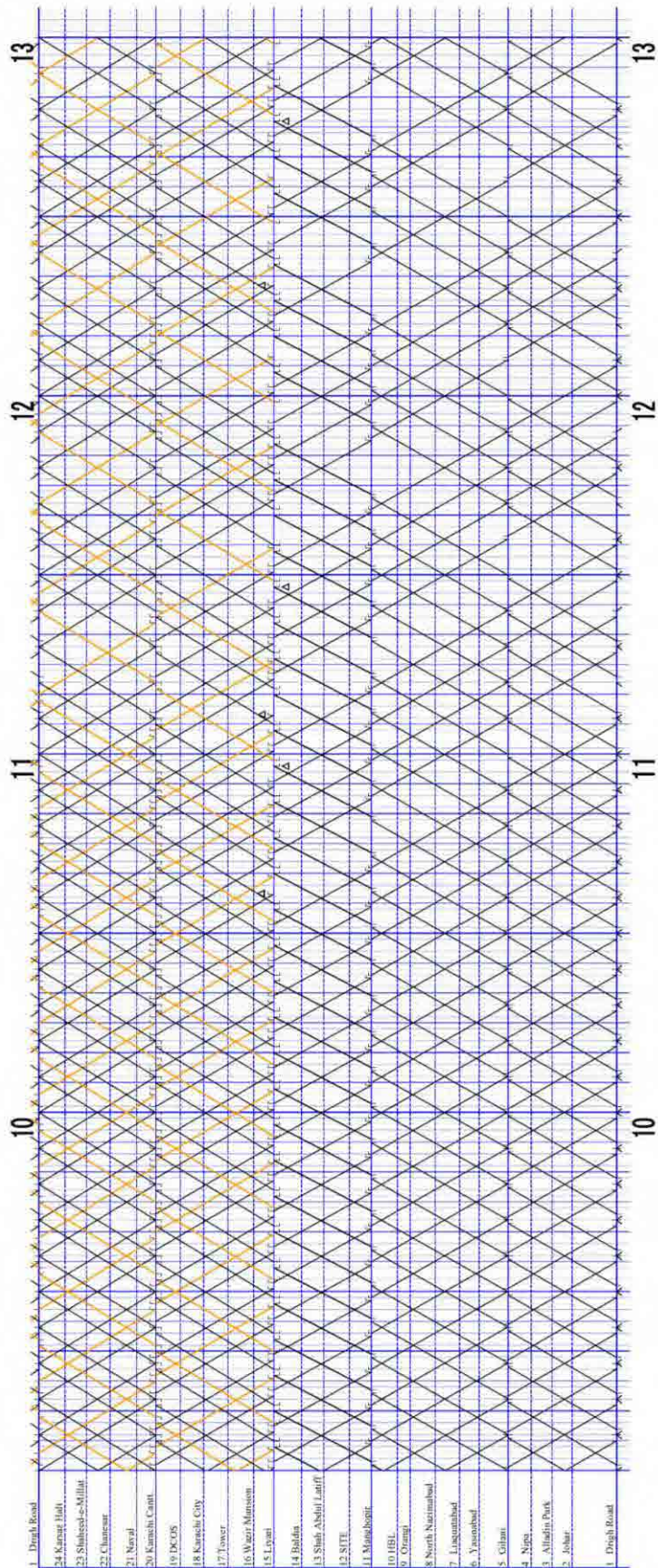


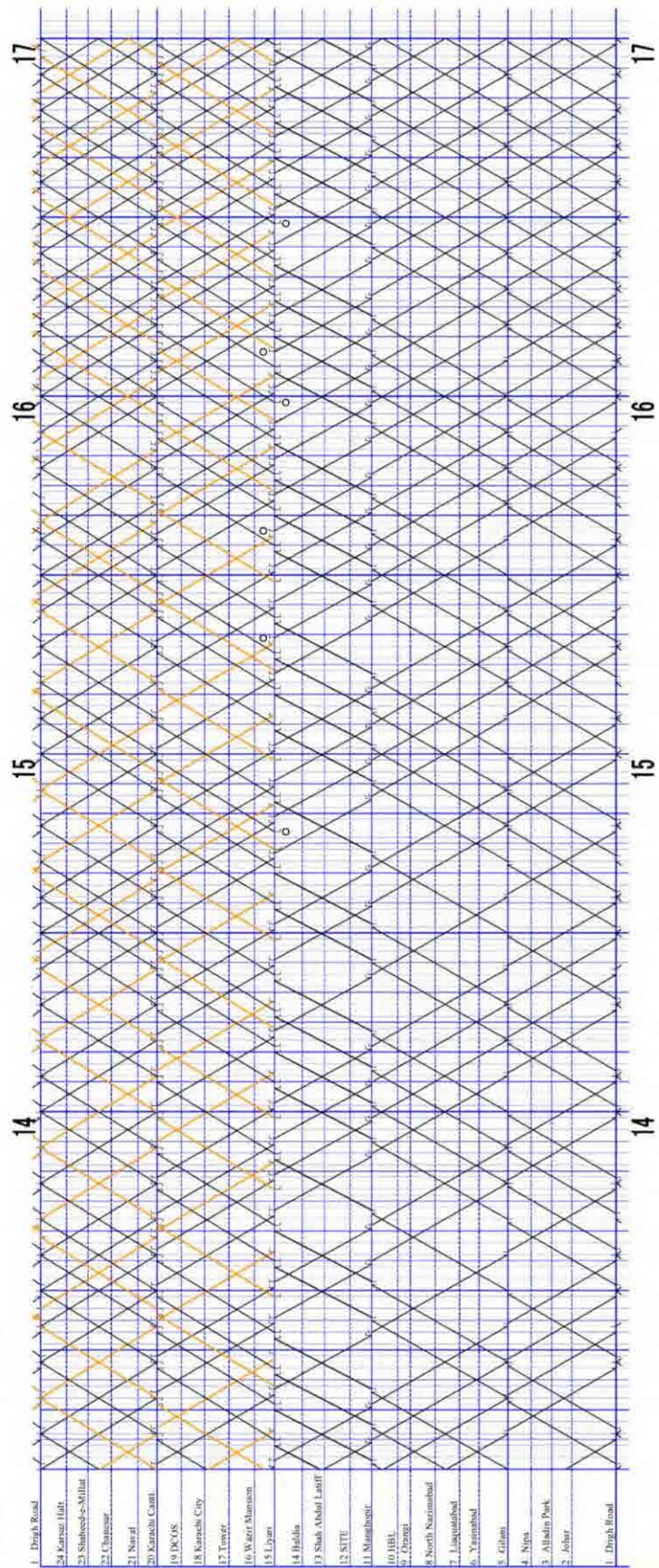


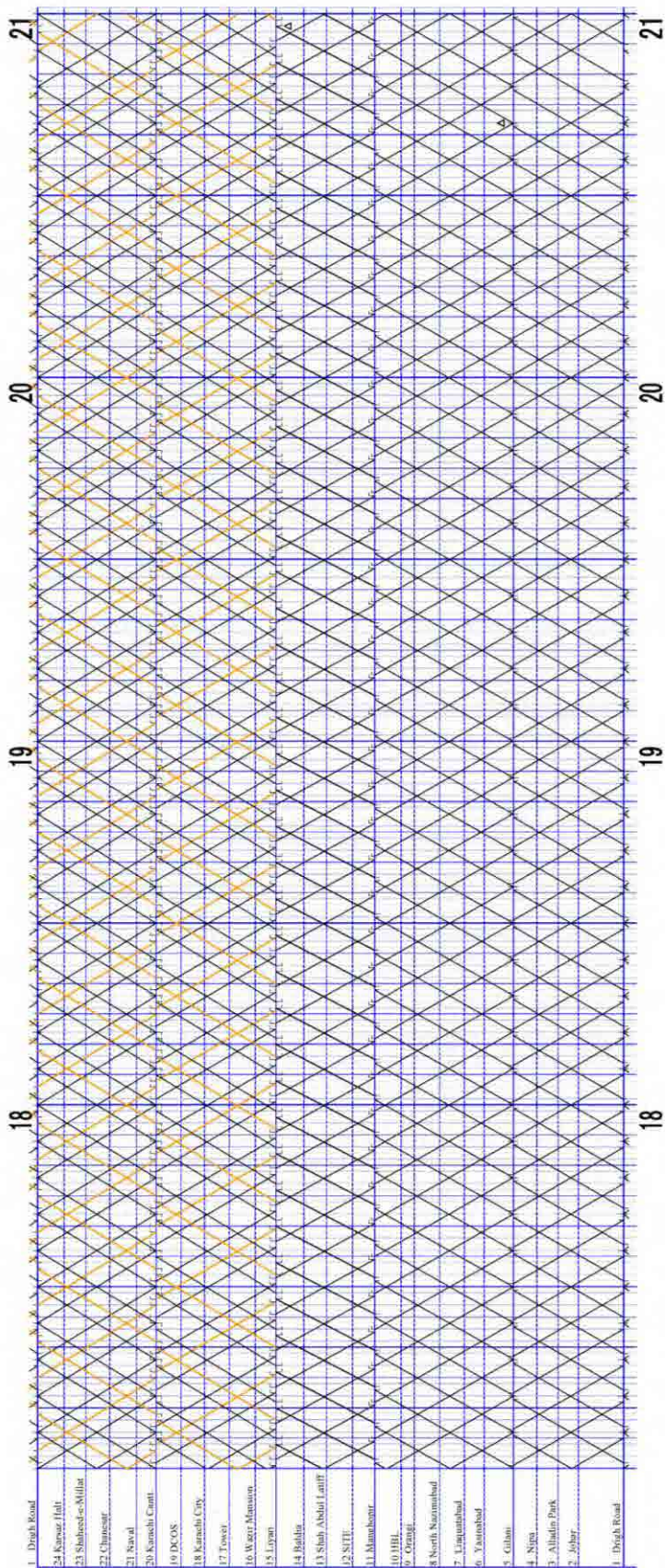
- 1. Drigh Road
- 24 Karachi Hill
- 23 Shahveed-e-Milla
- 22 Changanar
- 21 Naval
- 20 Karachi Cantt
- 19 DCOS
- 18 Karachi City
- 17 Tower
- 16 Water Mainstem
- 15 Lyari
- 14 Bahadur
- 13 Shah Abdul Latiff
- 12 SITE
- 11 Manshwar
- 10 HBL
- 9 Orange
- 8 North Nazimabad
- 7 Liaquatnagar
- 6 Yousafabad
- 5 Gillani
- 4 Nisra
- 3 Alladin Park
- 2 Jobur
- 1 Drigh Road

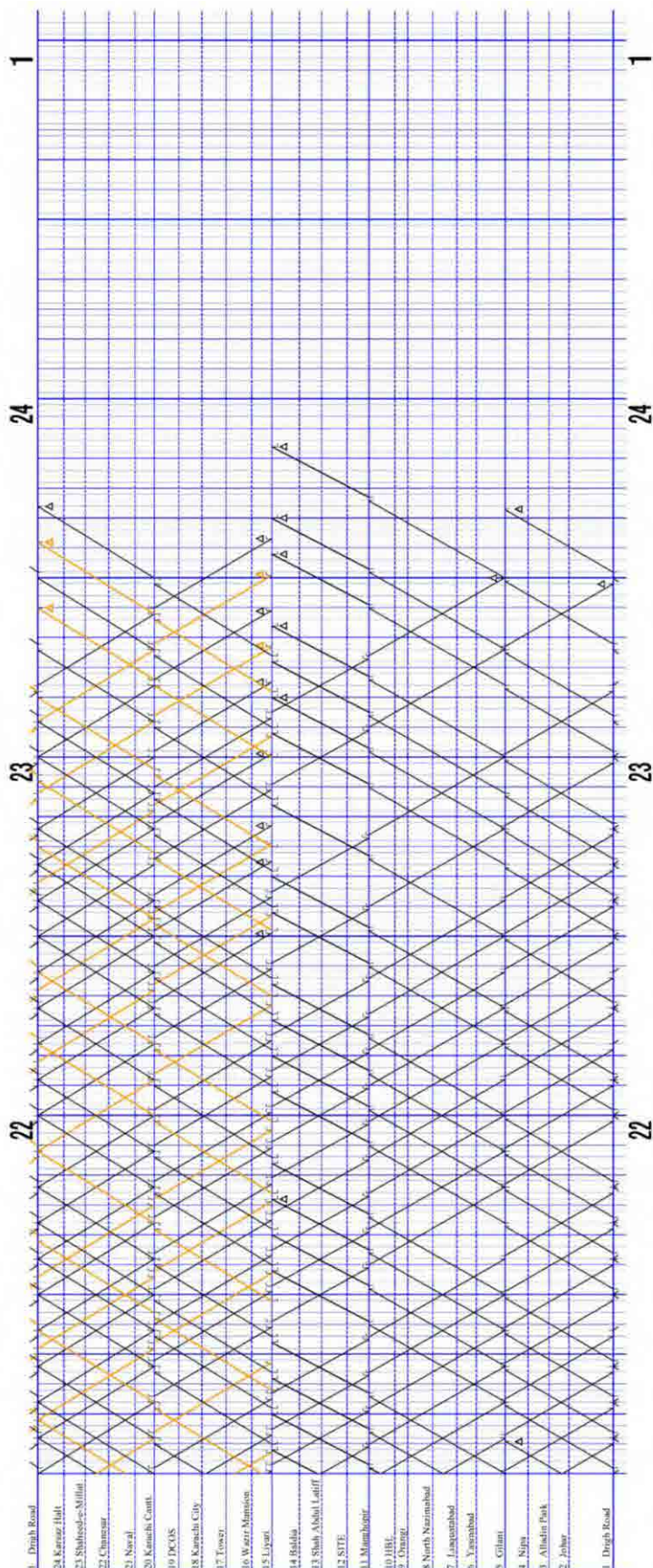
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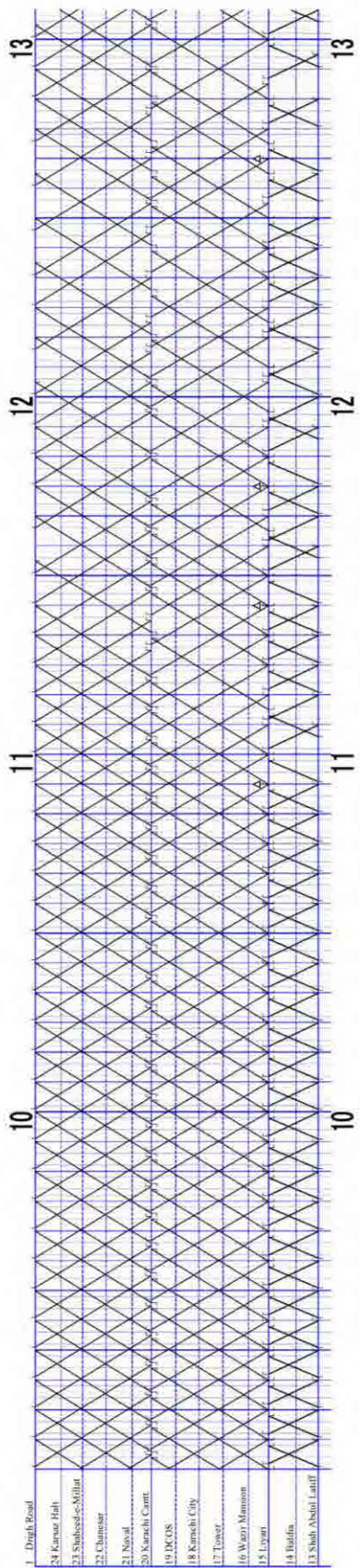
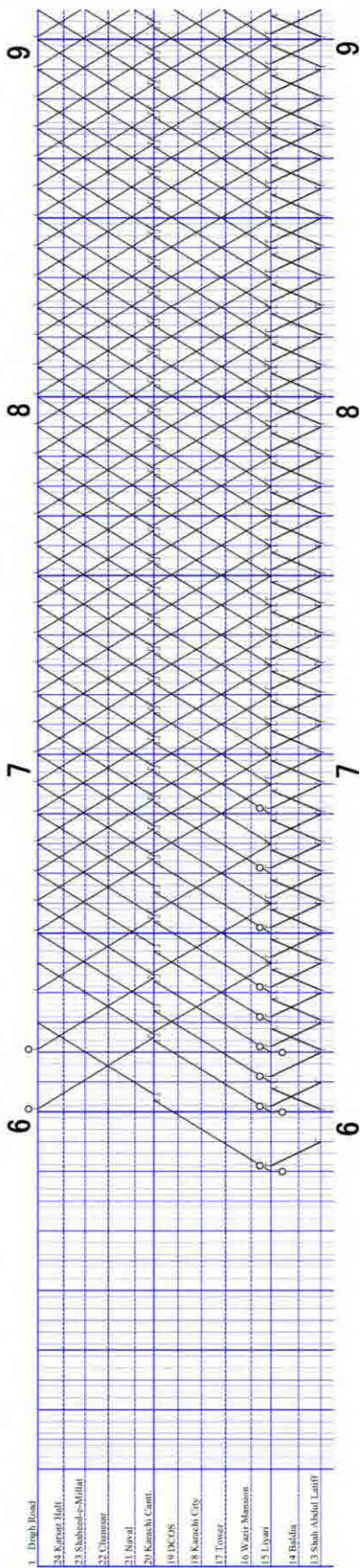


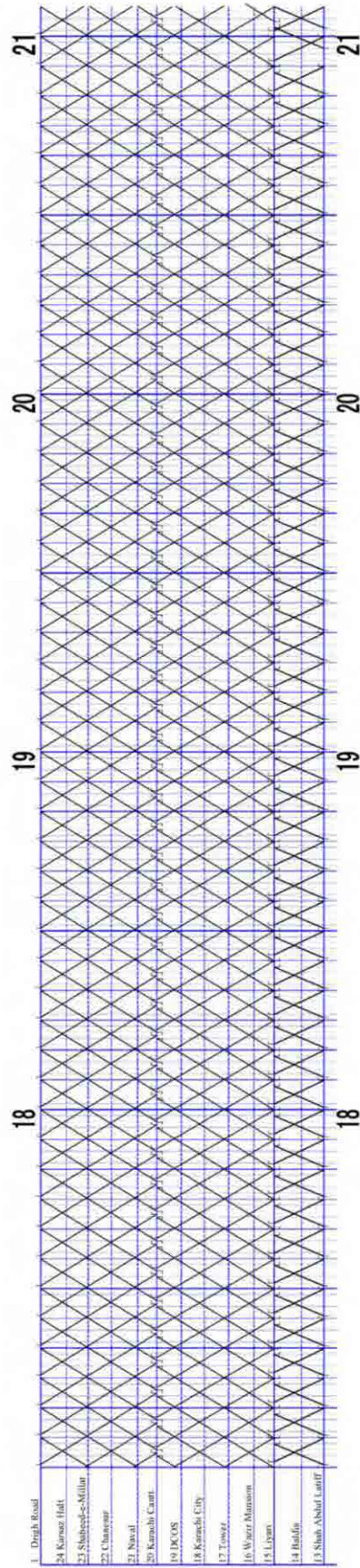
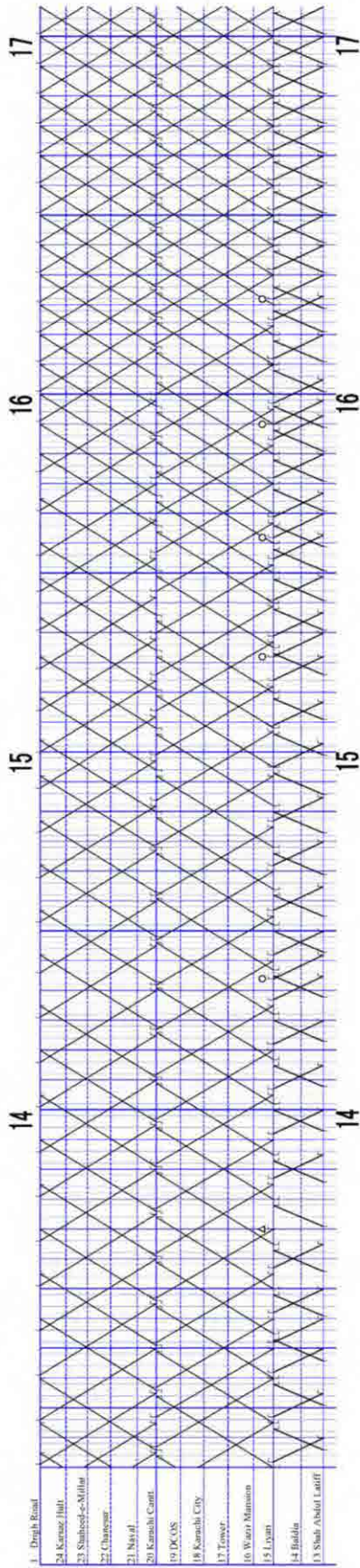


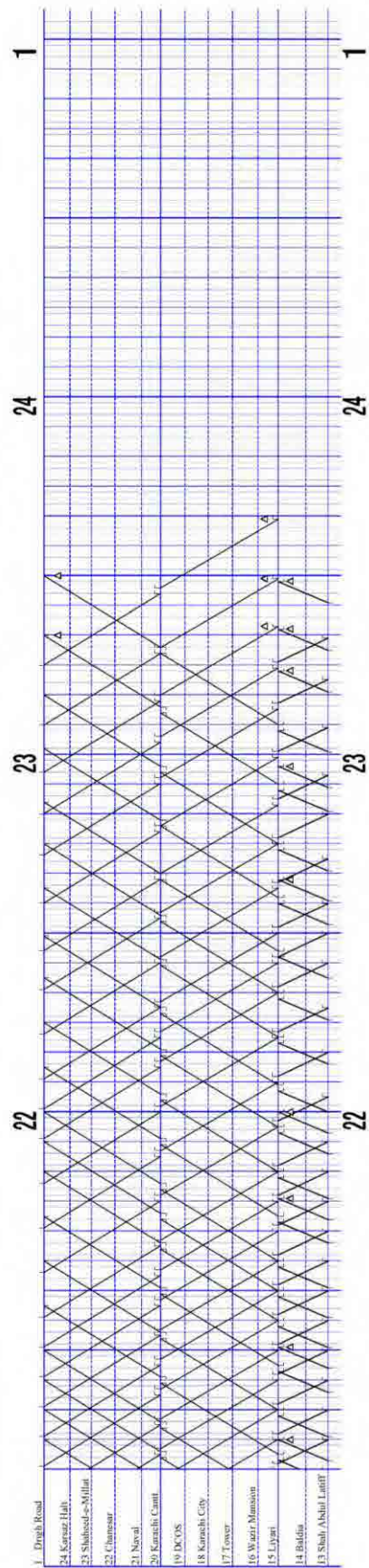




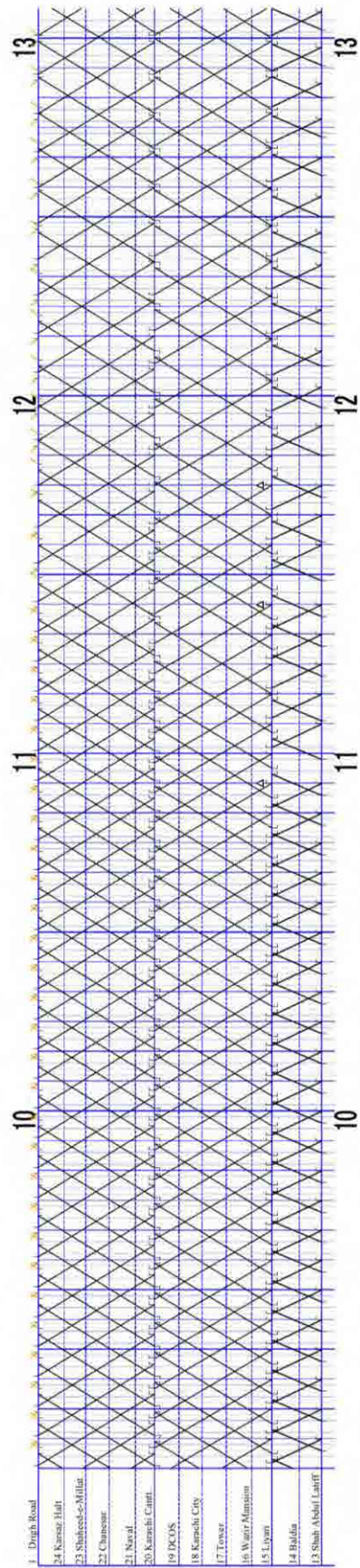
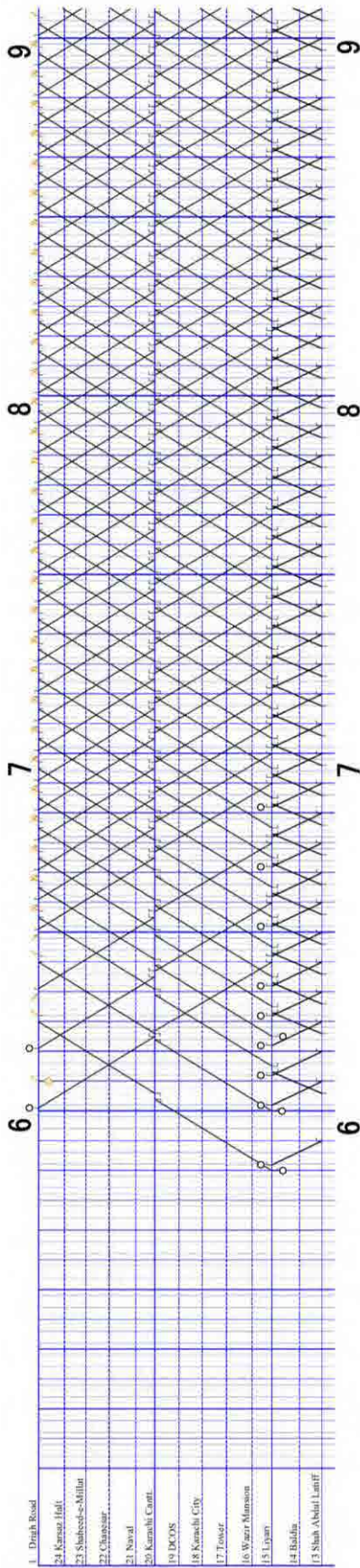
5) Case NB-1 (2022 Year 4-Car)

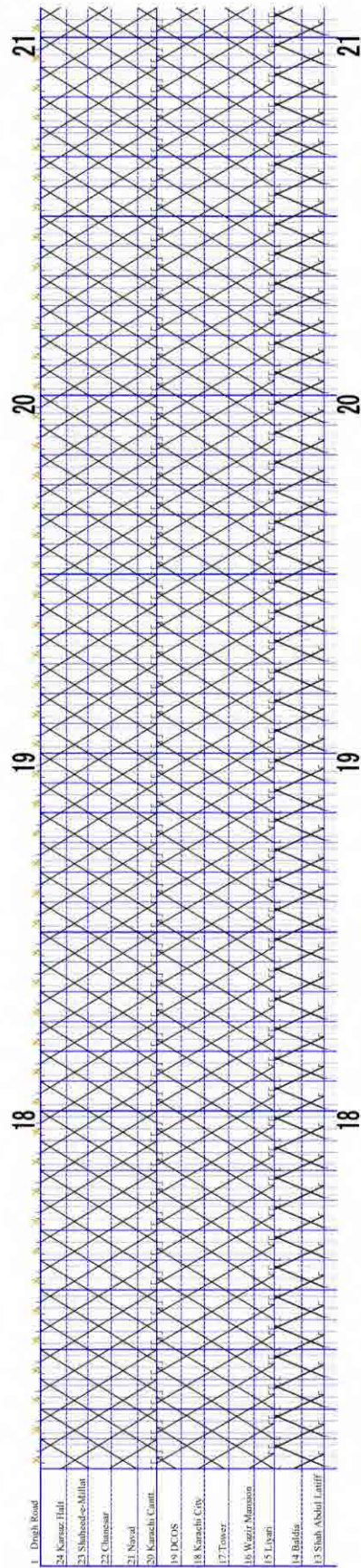
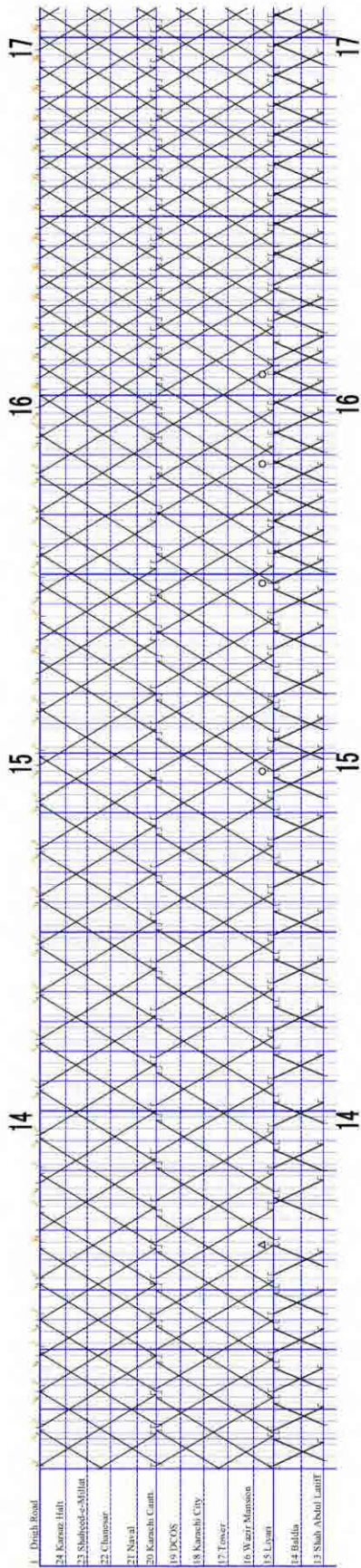


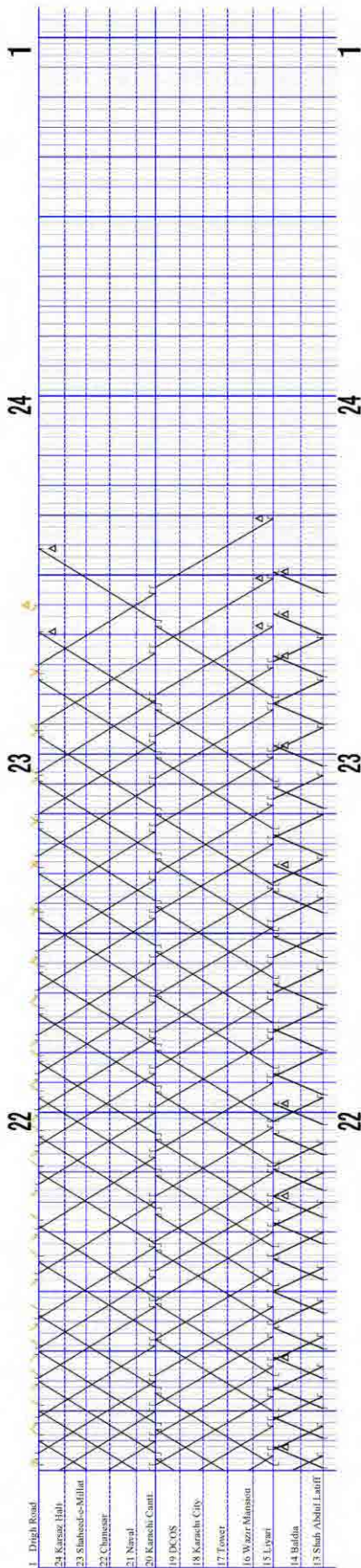




6) Case NB-1 (2030 Year 8-Car)











APPENDIX 5-2

Plan Drawings of Depots

Appendix 5-2 Plan drawing in each Depot

(1) Wazir Mansion Rolling Stock Depot and Workshop



	Main Track
	Depot Track
	Depot Track
	Proposed Boundary

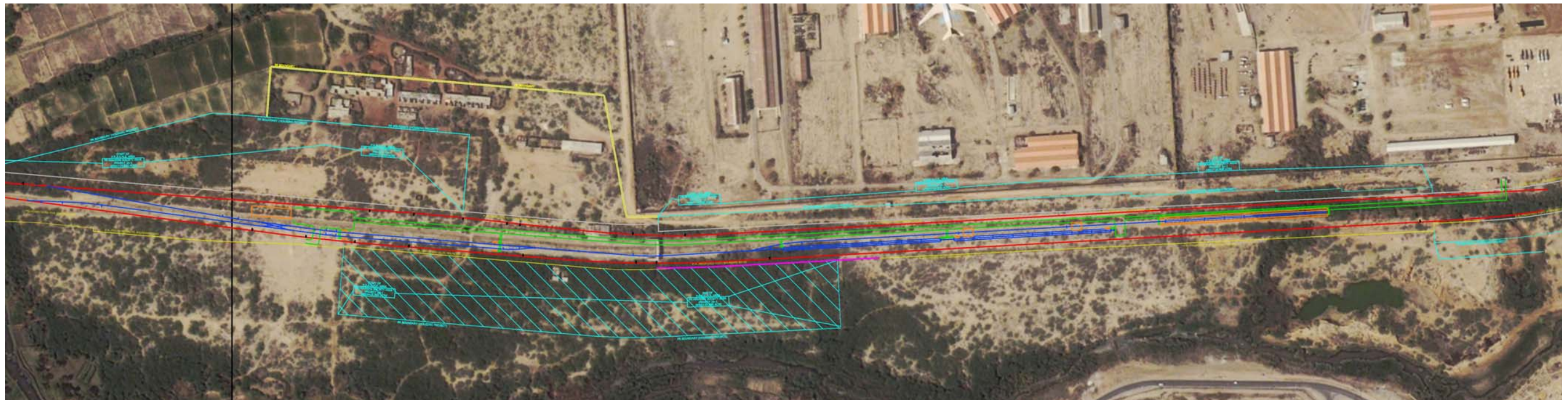
Area	Approx. 11.9 ha
Length	Approx. 1.0 km
Width	150m (average)




(2) Depot in Depot Hill

i) Option N-A1, N-A2






ii) Option N-B1, N-B2



 Main Track	Area (all Options)	Approx. 3.3 ha
 Depot Track	Length (all Options)	Approx. 1.5 km
 Proposed Boundary	Width (all Options)	25m (average)

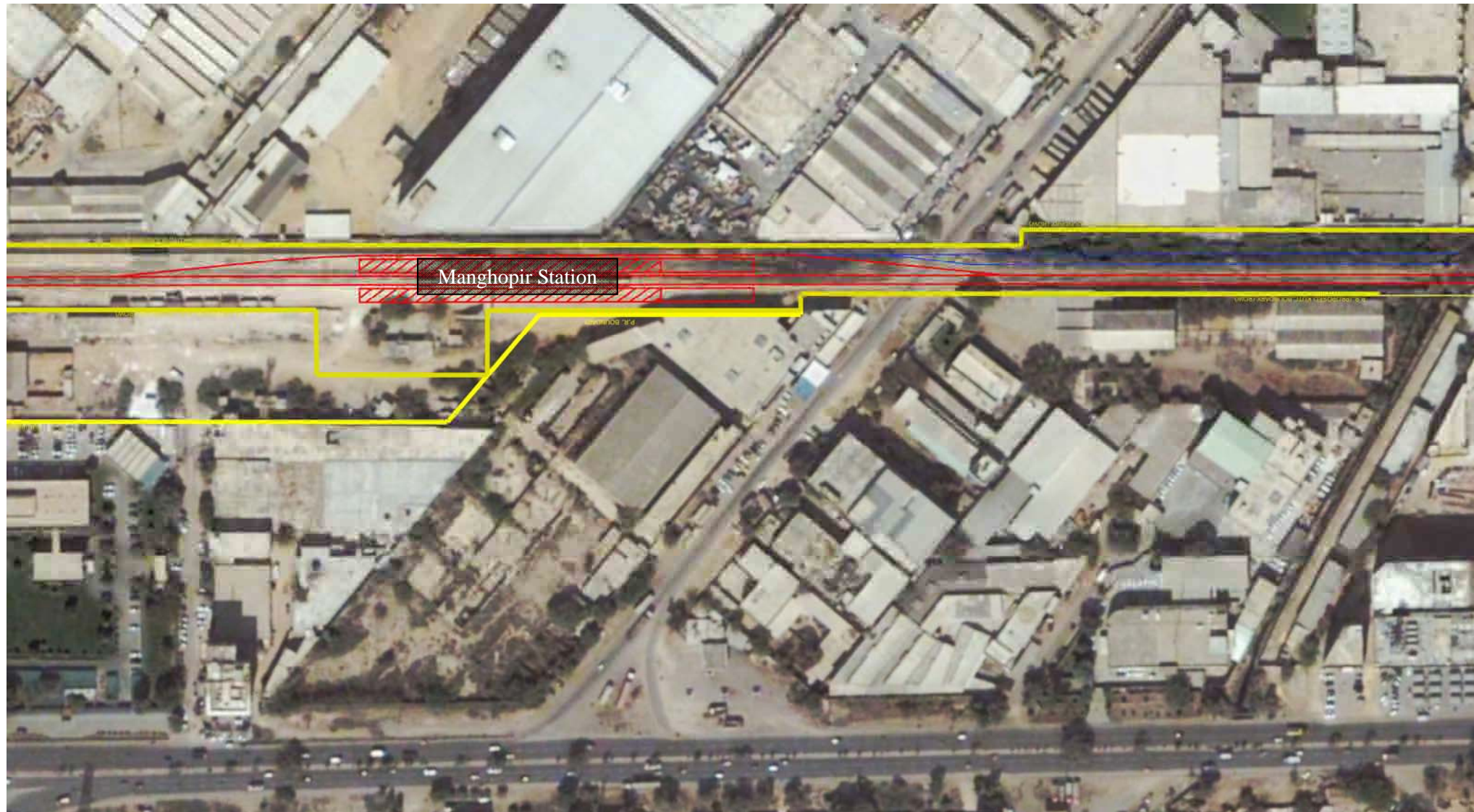
(3) Gilani Stabling Yard






	Main Track
	Depot Track
	Proposed Boundary

Area	Approx. 1.0 ha
Length (including station area)	Approx. 780m
Width	31m (including main tracks)

(4) Manghopir Stabling Yard



	Main Track
	Depot Track
	Proposed Boundary

Area	Approx. 0.24 ha
Length (including station area)	Approx. 280m
Width	12m

APPENDIX 7-1

Site Area Drawings for Railway Land Development

The information contains information of particular firms/institutions; information should not be disclosed for a fixed period.

APPENDIX 7-2

Parking Layout for Railway Land Development

The information contains information of particular firms/institutions; information should not be disclosed for a fixed period.

APPENDIX 10-1

Table of Contents of the IEE and EIA Report

Appendix 10-1 Table of Contents of the IEE and EIA Report

Table of Contents on IEE Report for Development of Juma Goth for the Resettlement of Project Affected Persons

- Executive Summary (5 pages)
- 1. Introduction (6 pages)
 - 1.1 Name of project
 - 1.2 Purpose of Initial Environmental Examination
 - 1.3 Scope of IEE study
 - 1.4 Categorization of project
 - 1.5 Methodology for Environmental Assessment
 - 1.6 Environmental Standards and Guidelines
 - 1.7 Structure of IEE report
 - 1.8 IEE Team
- 2. Project Description (8 pages)
 - 2.1 General
 - 2.2 Objectives of the Project
 - 2.3 Benefits of Project
 - 2.4 Project Location
 - 2.5 Project Activities
- 3. Legislative Framework Environmental Regulations and Guidelines (8 pages)
 - 3.1 General
 - 3.2 National Policies and strategies
 - 3.3 Pakistan Environmental Protection Act 1997
 - 3.4 National Environmental Guidelines
 - 3.5. International Guidelines (Including JICA Guidelines)
- 4. Description of Environment (11 pages)
 - 4.1 Introduction
 - 4.2 The Microenvironment
 - 4.3 The Macroenvironment
 - 4.4 Infrastructure, Roads & Communication
 - 4.5 Ecological Resources
 - 4.6 Socioeconomic Profile of Macroenvironment
- 5. Screening of potential Environmental Impacts and Mitigation Measures (9 pages)
 - 5.1 Impact Assessment Methodology
 - 5.2 Screening of Potential Environmental Impacts for siting of the land for Resettlement of KCR-PAPs
 - 5.3 Screening of Potential Environmental Impacts at Construction Phase
 - 5.4 Screening of Potential Environmental Impacts after Resettlement of PAPs
- 6. Environmental Management Plan (19 pages)
 - 6.1 Introduction
 - 6.2 Objectives of Environmental Management Plan
 - 6.3 Major Construction Activities Needing Environmental Management
 - 6.4 Environmental Standards
 - 6.5 Implementation of EMP and Supervision Plan
 - 6.6 Specific Implementation Responsibilities & Procedures
 - 6.7 Environmentally Sound & Safe Working Procedures
 - 6.8 Environmental Monitoring Plan

- 6.9 Proposed Monitoring Budget
- 7. Social Interactions (Consultation & Participation) (8 pages)
 - 7.1 Public Consultation & Participation
 - 7.2 KUTC's Policy of public Consultation & Participation
 - 7.3 Stakeholders
 - 7.4 Methodology and Approach
 - 7.5 Public Consultation for KCR
- 8. Findings, Recommendations & Conclusion (2 pages)
 - 8.1 Findings & Recommendations
 - 8.2 Conclusion
- Annexure:
 - Annex-I: Sectoral Guidelines for Environmental Reports-Housing Estates & New Town Development
 - Annex-II: Pakistan Environmental Protection Act, 1997
 - Annex-III: Pakistan Environmental Protection Agency (Review of IEE/EIA) Regulations 2000

Table of Contents on EIA Report for Revival of Karachi Circular Railway

EXECUTIVE SUMMARY

- 1. INTRODUCTION (7 pages)
 - 1.1 General
 - 1.2 Purpose of Environmental Impact Assessment
 - 1.3 Scope of EIA Study
 - 1.4 Categorization of Project
 - 1.5 Methodology for Environmental Assessment
 - 1.6 Environmental Standards and Guidelines
 - 1.7 Structure of EIA Report
 - 1.8 EIA Team
- 2. DESCRIPTION OF THE PROJECT (26 pages)
 - 2.1 Introduction
 - 2.2 Revival of The KCR Project
 - 2.3 Technical Plans for The Revival of KCR Project
 - 2.4 Phase-Wise Development of The Project
- 3. LEGISLATIVE CONSIDERATIONS, ENVIRONMENTAL REGULATIONS AND GUIDELINES (12 pages)
 - 3.1 Introduction
 - 3.2 National Policies and Strategies
 - 3.3 National Legislations
 - 3.4 National Environmental Guidelines
 - 3.5 International Guidelines (Including JBIC Guidelines)
- 4. ENVIRONMENTAL BASELINE DATA (60 page)
 - 4.1 Identification of Environmental Aspects
 - 4.2 The Macroenvironment
 - 4.3 Physical Environment
 - 4.4 Biological Environment of Karachi City District
 - 4.5 Karachi Transportation System
 - 4.6 Current Socio-Economic Considerations in Karachi City and Related Area along KCR
 - 4.7 Consultation with Community and Stakeholders
- 5. ENVIRONMENTAL IMPACT ASSESSMENT AND PROPOSED MITIGATION MEASURES FOR NEGATIVE IMPACTS (28 pages)

- 5.1 Potential of KCR for Urban Transport
 - 5.2 Analysis of Alternatives
 - 5.3 Summary of Impacts
 - 5.4 Pre-Construction Phase
 - 5.5 Construction Phase
 - 5.6 Operation Phase
 - 5.7 Mitigation Measures
 - 6. ENVIRONMENTAL MANAGEMENT PLAN (EMP) (19 pages)
 - 6.1 General
 - 6.2 Objectives of Environmental Management Plan (EMP)
 - 6.3 Management Procedures
 - 6.4 Environmental Management Method and Contents
 - 6.5 Environmental Monitoring Plan
 - 6.6 Environmental Training and Technical Assistance
 - 6.7 Documentation and Reporting
 - 7. RESETTLEMENT POLICY FRAMEWORK (18 pages)
 - 7.1 Introduction to Resettlement Policy Framework
 - 7.2 Legislations Governing Resettlement
 - 7.3 Land Acquisition in KCR Project
 - 7.4 Primary Issues
 - 7.5 Measures for Minimizing Involuntary Resettlement
 - 7.6 Affected Area
 - 7.7 Mandatory Public Consultation Meeting
 - 7.8 Entitlements of PAPs
 - 7.9 Resettlement Package
 - 7.10 RAP for Vulnerable Persons
 - 7.11 RAP for Indigenous People
 - 7.12 Development of Resettlement Area
 - 7.13 Monitoring and Evaluation
 - 7.14 Grievance Redress System
 - 7.15 Consideration of Cost
 - 8. CONCLUSION AND RECOMMENDATIONS (1 page)
- ANNEXURE:
- I. Satellite Images for Stations and Station Plazas
 - II. Encroachments
 - III. Hierarchy of Urban Railway Systems
 - IV. JBIC Guidelines
 - V. EIA/IEE Regulations-2000
 - VI. IFC, EHS Guidelines for Railways
 - VII National Environmental Quality Standards (NEQS)

APPENDIX 10-2

Draft Terms of Reference (TOR) for External Monitoring Consultant on Resettlement Action Plan (RAP)

Appendix 10-2 TOR for External Monitoring Consultant on RAP

Karachi Urban Transport Corporation

Draft Terms of Reference (TOR) for External Monitoring Consultant on Resettlement Action Plan (RAP)

1. Project Description

Rail based mass transit systems are agents in bringing comprehensive social, cultural and economic changes in the life of the people of the area through which it passes. It is a fact that in presence of a well-developed and properly maintained mass transit system, travel time gets reduced and access to local markets, work places, educational institutions, and medical and health services increases. Singapore, Dubai, Delhi, Thailand, China, Indonesia are the current examples of this fact.

Karachi Circular Railway (KCR) will be revived as a modern commuter system to meet the essential transportation need of the citizens of Karachi. Route length of KCR is 43.12 km, with elevated track increased to 22.86km, about 3.93km tunnel and 16.33km on ground. The total route length of the dual tracks on the KCR project stage -I & stage -II is 43.12 Km (Karachi city to Nipa- 22.86 Km and Nipa to Karachi City Station & along mainline - 20.26 Km) with 24 stations.

Karachi Urban Transport Corporation (KUTC) was incorporated on 8th May 2008 in SECP (Securities Exchange Commission of Pakistan) as Public Limited (Not Listed) with nine Directors on Board, four from Pakistan Railways, two from Government of Sindh (GoC), two from City Dist. Govt. Karachi (CDGK) and one Director from private sector. KUTC will be the vehicle for the implementation of KCR's revitalization project.

The project gives utmost importance to the resettlement and rehabilitation of project affected families. Accordingly, a Resettlement Action Plan (RAP) has been developed and is being implemented with the facilitation support of stakeholders including citizens of Karachi, Non-Governmental Organizations (NGO), Community Based Organizations (CBOs), representatives of Project Affected Persons (PAPs) and above all the support of GoP, GoS and CDGK departments.

Resettlement plan to shift the population from KCR route to Juma Goth site has been developed on the lines of a well planned housing scheme. According to present estimates, about 4653 households will be relocated. However, the housing scheme has been designed to accommodate around 5,096 households, to keep allowance for future expansion. Land use of the site at Juma Goth will comprise of provision of necessary infrastructure facilities for construction of residential and commercial units on self-help basis. The plan will follow the national and international guidelines in the establishment of the housing scheme.

The project includes a provision for monitoring and evaluation of the implementation of the RAP by an external monitor. Therefore, (KUTC) which is the Implementing Agency for this project requires services of a reputed consultancy firm for external monitoring and evaluation of RAP implementation.

2. Objectives

The objectives of monitoring are:

- To measure and report progress against the RAP schedule,
- To verify that agreed entitlements are delivered in full to affected people,
- To identify any problems, issues or cases of hardship resulting from the resettlement process, and to develop appropriate corrective actions, or where problems are systemic refer them to the Resettlement Project management Unit (RPMU),
- To monitor the effectiveness of the grievance system, and
- To periodically measure the satisfaction of project affected people.

Monitoring will follow the system of input, output, process, outcome and impact performance indicators that has been adopted by the World Bank.

3. Scope of Work

The scope of work of the External Monitoring Consultant will include the following tasks:

- (1) To develop specific monitoring indicators for undertaking monitoring of the RAP.
- (2) To review and verify the progress of RAP implementation.
- (3) Identify the strengths and weaknesses of the resettlement objectives and approaches, implementation strategies.
- (4) Evaluate and assess the adequacy of compensation given to the PAPs and the livelihood opportunities and incomes as well as the quality of life of PAPs of project-induced changes.
- (5) Identification of the categories of impacts and evaluation of the quality and timeliness of delivering entitlements (compensation and rehabilitation measures) for each category and how the entitlements were used and their impact and adequacy to meet the specified objectives of the Plans. The quality and timeliness of delivering entitlements, and the sufficiency of entitlements as per approved policy.
- (6) Provide a summary of whether involuntary resettlement was implemented (a) in accordance with the RAP, and (b) in accordance with the stated policy.
- (7) To review the quality and suitability of the relocation sites from the perspective of the both affected and host communities.
- (8) Verify expenditure & adequacy of budget for resettlement activities.
- (9) To analyze the pre-and post-project socio-economic conditions of the affected people. In the absence of baseline socio-economic data on income and living standards, and given the difficulty of PAPs having accurate recollection of their pre-project income and living standards, develop some quality checks on the information to be obtained from the PAPs. Such quality checks could include verification by neighbors and local village leaders. The methodology for assessment should be very explicit, noting any qualifications.
- (10) Review results of internal monitoring and verify claims through sampling check at the field level to assess whether land acquisition/resettlement objectives have been generally met. Involve the affected people and community groups in assessing the impact of land acquisition for monitoring and evaluation purposes.

- (11) To monitor and assess the adequacy and effectiveness of the consultative process with affected PAPs, particularly those vulnerable, including the adequacy and effectiveness of grievance procedures and legal redress available to the affected parties, and dissemination of information about these.
- (12) Identify, quantify, and qualify the types of conflicts and grievances reported and resolved and the consultation and participation procedures.
- (13) Describe any outstanding actions that are required to bring the resettlement activities in line with the policy and the RAP. Describe further mitigation measures needed to meet the needs of any affected person or families judged and/or perceiving themselves to be worse off as a result of the project. Provide a timetable and define budget requirements for these supplementary mitigation measures.
- (14) Describe any lessons learned that might be useful in developing the new national resettlement policy and legal/institutional framework for involuntary resettlement.

4. Methodology and Approach

The general approach to be used is to monitor activities and evaluate impacts ensuring participation of all stakeholders especially women and vulnerable groups. Monitoring tools should include both quantitative and qualitative methods. The external monitor should reach out to cover:

- 100% PAPs who had property, assets, incomes and activities severely affected by Project works and had to relocate either to resettlement sites or who chose to self-relocate, or whose source of income was severely affected.
- 10% of persons who had property, assets, incomes and activities marginally affected by Project works and did not have to relocate;
- 10% of those affected by off-site project activities by contractors and sub-contractors, including employment, use of land for contractor's camps, pollution, public health etc.;

Supplemented by Focused Group Discussions (FGD) which would allow the monitors to consult a range of stakeholders (local government, resettlement field staff, NGOs, community leaders, and, most importantly, PAPs), community public meetings: Open public meetings at resettlement sites to elicit information about performance of various resettlement activities.

5. Time frame and Reporting

The independent monitoring agency will be responsible for overall monitoring of the RAP implementation. The duration of RAP implementation is for two (2) years. Monitoring will be continued for two (2) years after RAP implementation. Quarterly monitoring report and the final evaluation report would be submitted to RPMU.

6. Qualifications

The monitoring and evaluation consultant will have significant experience in resettlement policy analysis and RAP implementation. The firm must be registered with Pakistan Engineering Council (PEC). Further, work experience and familiarity with all aspects of resettlement operations would be provided for a minimum of last three (3) years period.

Interested firms should submit proposal for the work with a brief statement of the approach, methodology, staff strength, and relevant information concerning previous experience on monitoring and evaluation of resettlement and rehabilitation implementation and preparation of reports. The proposal must include CVs on World Bank format for following desired positions:

- (1) Resettlement Specialist (2 Positions)
- (2) Gender Specialist
- (3) HR Specialist
- (4) Economist
- (5) Data Analyst

The person applied for posts (1), (2), (3) & (4) must have a proven record in their fields and preferably a working experience on any urban resettlement. At least five (5) years experience is a mandatory requirement for qualification.

The profile of the agency including the financial status along with the composition of team to be engaged must be submitted along with the proposal. The firm must be an established organization registered under the relevant act of the Government of Pakistan.

7. Budget and Logistics

Copies of the proposal- both Technical and Financial should be submitted and the budget should include all cost and any other logistics details necessary for resettlement monitoring. Additional expense claims whatsoever outside the budget will not be entertained.

APPENDIX 10-3

Draft Terms of Reference (TOR) for Appointment of RAP Implementation Consultant for KCR Project

Appendix 10-3 TOR for RAP Implementation Consultant for KCR Project

Karachi Urban Transport Corporation

Draft Terms of Reference for RAP Implementation Consultant for KCR Project

1. Project Background

Government of Pakistan has decided to revive the Karachi Circular Railway (KCR) in two phases as modern commuter system for the citizen of Karachi with the assistance of Japan International Cooperation Agency (JICA).

Karachi Urban Transport Corporation (KUTC) was incorporated on 8th May 2008 in SECP (Securities Exchange Commission of Pakistan) as Public Limited (Not Listed) with nine Directors on Board, four from Pakistan Railways, two from Govt. of Sindh, two from City Dist. Govt. Karachi and one Director from private sector. KUTC will be the vehicle for the implementation of KCR's revival project.

On completion of the project an international operator of repute will be appointed for operations and maintenance of KCR on the pattern of successful role model of Singapore Mass Rail Transit, Dubai Metro, Dehli Metro etc. KUTC will oversee the management of KCR.

2. Description of the Project

KCR will be revived as a modern commuter system to meet the essential transportation need of the citizens of Karachi.

The total route length of the dual tracks on the KCR project stage I & stageII is 43.12 Km (Karachi city to Nipa 22.86 Km and Nipa to Karachi City Station & along mainline 20.26 Km) with 24 stations as shown in Figure 1.

The stations will be provided with computerized ticketing, automated ticket gates, vending machines and elevators. The entire KCR will be provided with electric traction infrastructure and modernized signaling & telecommunication system.

The stations will have facilities like banks, post offices, book shops, utility kiosks viz water, electricity, gas, utility bills, NADRA (National Database and Registration Authority) offices, libraries/reading rooms, restaurants, parking lots etc.

The Right of Way (ROW) required for the revival of KCR project is already available. However it has been encroached upon by squatter settlements since KCR operations ceased. The ROW needs to be cleared for implementation of KCR. The KCR project will therefore involve involuntary resettlement of squatters on KCR-ROW who will be resettled and are termed as Project Affected Persons (PAPs).

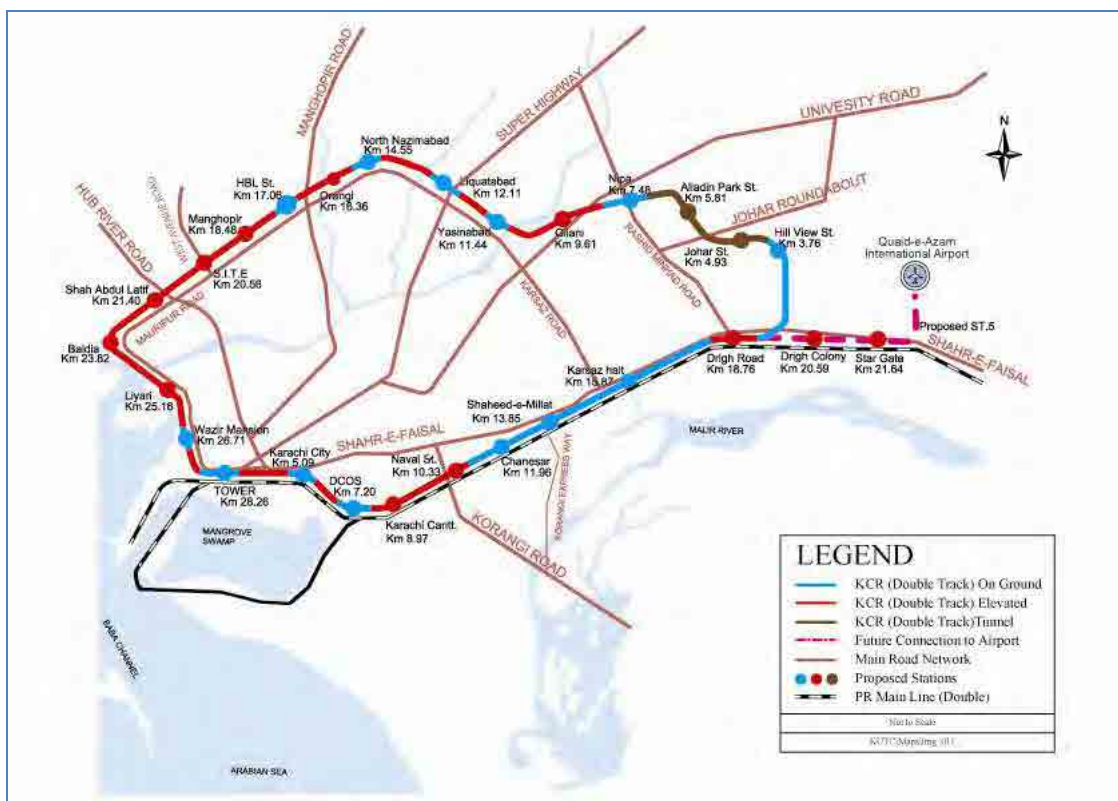


Figure 1. Location of the Project

KUTC is committed to provide compensation and resettlement and rehabilitation assistance to the PAPs of the KCR revival project. In this regard all the stakeholders including the community gate keepers will be taken onboard during the course of resettlement.

The policy evolved after number of public consultation meetings with PAPs and other stakeholders, an entitlement matrix has been developed to define compensation for PAPs undergoing involuntary resettlement.

People to be resettled involuntarily and people whose means of livelihood will be hindered or lost shall be compensated and supported by the project, to improve their standard of living, income opportunities and production levels, or at least to restore them to pre-project levels.

The cut-off date for KCR project was officially agreed as the date when the census survey has begun. The census survey was started on June 12, 2009 and same was announced & agreed as the cut-off date for KCR project. People moving into the KCR-ROW after this cut-off date are not eligible to any compensation.

Number of Project Affected Households (PAHs) by location is shown in Table 1.

Table 1. PAHs by location

Table 4.1: Detail of registered affected structures and households							
Name of Station	Name of Block		Categories and Number of Structures Surveyed				Number of Registered Respondents (Households & Shopowners)
	Right Side of Track	Left Side of Track	Block	Residential	Industrial	Commercial (Shops)	
Karachi City							
↓	B	A	B/A	0/192	0/0	0/31	0/347
Wazir Mansion							
↓	D	C	D/C	0/468	0/0	0/78	0/833
Lyari							
↓	F	E	F/E	0/68	0/0	0/30	0/160
Baldia							
↓	H	G	H/G	0/1	1/2	0/0	0/1
Shah Abdul Latif							
↓	J	I	J/I	0/0	2/1	0/0	0/0
Site							
↓	L	K	L/K	0/0	0/1	0/0	0/0
Manghopir							
↓	N	M	N/M	0/0	0/1	0/0	0/0
Orangi							
↓	P	O	P/O	34/7	0/0	01/01	36/10
North Nazimabad							
↓	R	Q	R/Q	96/171	0/0	0/23	121/272
Liaquatabad							
↓	T	S	T/S	142/73	0/0	17/20	220/113
Gilani							
↓	V	U	V/U	10/13	0/0	0/01	14/16
Urdu College							
↓	X	W	X/W	36/43	0/0	0/01	49/66
University							
↓	Z	Y	Z/Y	0/24	0/0	0/0	0/31
Depot Hill							
↓	AA	BB	AA/BB	0/0	0/0	0/0	0/0
Drigh Road							
↓	CC		CC	0	0	0	0
Air force Halt							
↓	CC'		CC'	0	0	0	0
Karsaz Halt							
↓	DD		DD	43	0	01	91
Departure Yard							
↓	EE		EE	906	0	85	1626
Chanesar Halt							
↓	FF		FF	206	0	02	305
Karachi Cantt							
↓	GG		GG	163	0	10	342
Karachi City							
			Total	2696	08	301	4653

Note: On main line i.e. from Drigh Road Station towards Karachi City Station, the survey has been conducted only on R.H.S of railway track.

Source: Census & Socio-Economic Survey, July -October 2009

3. Appointment of Consultant

KUTC shall appoint the Consultant (organization/firm/company) having similar experience for implementation of RAP. The Consultant shall assist KUTC and Resettlement Project Management Unit (RPMU) which will be created in KUTC to oversee the planning and implementation & monitoring of resettlement and rehabilitation component of KCR revival project.

The RPMU is also responsible for overall coordination with all the stakeholders. The unit is headed by Project Manager.

4. Scope of Work

The RAP Implementation Consultant will assist KUTC in implementing successfully all stipulations agreed in the RAP in their entirety, fairly and transparently. In this context, the major functions to be performed by the Consultant are:

5. Information Dissemination and Feedback

(i) Ensure dissemination of the project and resettlement policy related information to the project-affected persons and others (community groups, local administration, etc.) that might be considered instrumental in the effective and transparent implementation of the RAP. Even though the RAP recommends some dissemination mechanisms, the RAP Implementation Consultant can suggest more in the process of its implementation and would gather information and disseminate it upward to the project authority.

(ii) During implementation of the project, extensive consultation and collaboration with key stakeholders on a continued basis is planned. The RAP Implementation Consultant will be required to assist KUTC in organizing such consultation programs and facilitate consultation with local representatives like ward members, local leaders, participants group, etc.

6. Assisting PAPs in Resettlement Process

(i) The main purpose is to make the PAPs aware of the acquisition process, assist them to claim the compensation to be paid by the KUTC. Some of the major activities are: (a) ensure receipt of the acquisition Notices under Land Acquisition Act of 1894 and explaining to them the contents and implication of these Notices; (b) inform the PAPs about the legal documents required for claiming compensation from KUTC and resettlement benefit from KUTC to check the current status of legal documents, in order to minimize disputes over ownership, use rights and time to make the claims. This includes (1) checking with the PAPs to make sure that they have all the required documents to claim compensation from KUTC; (2) whether or not the ownership records are up-to-date in cases of purchase/sale and inheritance of the property being acquired and advising and assisting the EPs to procure them, and (3) whether or not there are usufruct rights of others on the properties under acquisition and informing the people with such rights about the compensation policies.

(ii) Inform the PAP households, especially the vulnerable ones, about the “compensation in cash and/or kind” option stipulated in the RAP and ensure fulfillment of the choices made by them.

(iv) Assist the PAPs not covered by the Pakistani Law but covered by RAP Entitlement Matrix, such as wage laborers, owners of business on public lands, squatters and such others to get their entitlements from KUTC.

(v) Counseling and helping the households, whose previous incomes have been seriously affected, to find alternative source of income. In this regard, the RAP Implementation Consultant shall make coordination between microfinance banks/ institutions for PAPs.

(vi) The RAP Implementation Consultant will participate in the Joint Verification of the affected properties. In this process, the RAP Implementation Consultant will record all the Joint Verification data in computer, document all disputes that might be faced and the problem cases that might need special attention by KUTC.

(vii) Together with KUTC, the RAP Implementation Consultant will pursue the other concerned offices to arrange on site payment of compensation and organize the PAPs in groups and accompany them to the concerned offices or the project sites.

6.1 Grievances Redress Procedure

The RAP Implementation Consultant will play vital role in the grievances redress process. The most important preconditions for doing this with maximum effectiveness are that the RAP Implementation Consultant operatives will build personal rapport and confidence with the PAPs and will be fully aware of all socioeconomic problems/issues arising from the acquisition. Among other things, the Consultant will:

(i) Ensure that the PAPs are fully aware of the grievance redress procedure and the process of bringing their complaints to the GRCs.

(ii) Assist the PAPs in any usual manner (e.g., preparing applications, accompanying them to the hearing and explaining the grievance to the GRCs and the like) to bring the complaints to the committee.

(iii) Impartially investigate the veracity of the complaints and try to settle them amicably, fairly and transparently before they go to the GRC or the courts of law.

(iv) For more focused work in this area, the Consultant will prepare a list of problem cases (based on ownership and other disputes detected while checking the status of legal documents, information from the PAPs themselves and other sources) which would be updated as and when necessary, while RAP implementation progresses. In doing so, the Consultant will pay special attention to the problems and needs of the vulnerable PAPs.

6.2 Assistance to PAPs during Relocation

The RAP Implementation Consultant will assist the PAPs during pre and post relocation period in close coordination with Grievance Redress Committee (GRC). The RAP Implementation Consultant will also assist PAPs, where necessary, in preparing grievance redress cases for consideration by the Committee.

6.3 Assistance to KUTC in Payment of Resettlement Benefits to PAPs

The RAP Implementation Consultant will assist KUTC in processing entitlements for the PAPs and making payment of resettlement benefits to them. The Consultant will compile and process data and develop & operate a menu driven computerized Management Information System (MIS). The Consultant will prepare Entitled Person (EP) files with type and quantity wise losses and Entitlement Card (EC) mentioning amount of compensation/benefits for each of the PAPs and prepare indent mentioning category wise amount of compensation /benefits. The indent would be approved by the Project Manager before making payment. The RPMU will prepare payment debit voucher and cheque in the name entitled person. The debit voucher will be signed jointly by the RAP Implementation Consultant and RPMU representative and the cheque will be signed by Managing Director of KUTC and be issued by the RPMU.

6.4 Information Management

The Consultant will collect computerized Census and Social Economic Survey data related to the pre-acquisition condition of the PAP households and the nature and magnitude of all categories of losses as well as the compensation thereof to be determined by the Joint Verification Teams (JVT) working under RPMU. They should update the data based on final design. All essential information will have to be generated by using one or more menu-driven Management Information System. Among other things, the Consultant will:

- (i) Maintain computerized baseline socioeconomic databases and collect supplementary information as and when necessary and update them, during the course of implementation.
- (ii) Collect and computerize data on individual losses and the compensation thereof, as determined by JVT for all legally and socially recognized Entitled Persons.
- (iii) Collect and computerize all information on market survey and assessment of property and their owners, process data.
- (iv) Collect and computerize all information related to different types of payments and additional supports provided to the EP and update the EP file and EC.
- (v) Prepare EC for the individual EP as per their types of losses and the amount of compensation due for each type of loss from legal title and the amount of compensation if any, to be paid by KUTC through the Consultant as well as other non-monetary entitlements.
- (vi) Prepare and issue ID cards for each EP (head of the household-in case of those not covered by the law), containing his/her photograph (to be taken by the Consultant) and other vital information.
- (vii) Record and maintain details of the issues/ disputes causing delay in the disbursement/receipt of compensation and the persons involved in them, including the cases brought to the courts of law.
- (viii) Document information on the cases, with reasons, brought to and resolved by the GRC, with decisions going in favor of or against the complainants.
- (ix) Collect and maintain relocation information on the homestead losers by categories of EP households such as legal owners, licensees, squatters and others.
- (x) Maintain information on purchase of replacement home lot and other lands as well as the stamp duties reimbursed by the KUTC.
- (xi) Collect and maintain information on physical, social and institutional infrastructure and amenities (latrines, tube wells, etc), if any, that might be provided by KUTC.

6.5 Progress Reports

The RAP requires that all PAPs are paid the stipulated compensations/entitlements before they are evicted from the properties and/or construction work begins. The selected RAP Implementation Consultant will provide KUTC and the JICA monthly report on the progress in RAP implementation, including any issue that might be hindering progress, separately for each section. The report will be brief consisting of both quantitative and qualitative information on:

- (i) The RAP Implementation Consultant in its report should reflect the status of issuance of the notice(s) under the Land Acquisition Act of 1894, maintain a land register with valuation of the affected properties, placement of funds by KUTC etc.
- (ii) Total number of EPs and the cumulative progress made in disbursement by loss categories under national law.
- (iii) Total number of EPs eligible for additional payment from KUTC and cumulative progress made in payment by loss and entitlement categories.
- (iv) Number of vulnerable affected households and estimates of the number of such and other households choosing 'compensation in kind' under the 'cash-or-kind' option specifics of such choices and the progress made in implementing the related policies.
- (v) Total number of the EPs, who are not covered by the law (but are socially recognized owners/users of the affected properties), identified for compensation/entitlement from KUTC and cumulative progress made in disbursement by loss and entitlement categories.
- (vi) Number of cases received by the GRC indicating the types of grievance made in favor of or against the complainants.

(vii) Total number of home lot losers needing relocation and resettlement provisions are stipulated in the RAP.

(viii) Any other issues that relevant to implementing the policies stipulated in the RAP.

(ix) The RAP Implementation Consultant will design tabular and other formats appropriate for reporting on the above information. To the extent possible, the tables will have to be preprogrammed in the menu-driven MIS and the quantitative reports will have to be generated directly.

6.6 Reporting requirements

The RAP Implementation Consultant appointed by KUTC for implementation of the RAP will report to the RPMU under KUTC and JICA. The Consultant shall provide 5 copies of Inception Report within 1 (one) month from the date of commencement, 10 copies of final report at the end of the project and 10 copies of monthly progress report on or before 10th day of the following month. Each report shall set forth concise statement concerning the activities relevant to the jobs and will include:

- (i) A clear and complete account of work performed in each project component;
- (ii) Work planned for the next reporting period;
- (iii) Status of funding and utilization by 70 % of the released money of 1st installation;
- (iv) Identification of any challenges encountered or anticipated that would affect the completion of the project within the time and money constraints set forth in the agreement, together with recommended solution to such problems.

A mid-term report including financial provisions shall also be prepared for the project by the Consultant. This report should summarize progress, present the results of the strategic planning process, identify any potential problems or issues and provide details of the work to be completed over the remaining project period. The RAP Implementation Consultant will be encouraged to produce working papers and technical papers throughout the implementation period after the project starts.

6.7 Implementation Arrangements

The Consultant has to keep office near the concerned locality during the time of implementation of the RAP in order to ease contact with the PAPs, the cost of which will be specified in the budget.

7. Tasks on Resettlement Schedule Basis

The tasks are scheduled to start from XX, 20XX (subject to change). The RAP Implementation Consultant will be deployed for a period of 3 years and will be responsible to implement all resettlement activities stated in the TOR. The Project Manager of RPMU, in consultation with the RAP Implementation Consultant will allocate manpower and provide time schedule as per the requirement of the resettlement program. The Consultant will assist RPMU under KUTC but not necessarily limited to the following:

7.1 Preparation and Updating of RAP

Soon after the engineering design is finalized, the RAP Implementation Consultant will conduct census & baseline socioeconomic survey to finalize and/or update the RAP. The Consultant will compare the field level data with the established database for any discrepancies.

7.2 Preparation of Relocation Plans

The RAP Implementation Consultant will assist RPMU in the preparation of relocation plan during KCR project.

7.3 Approval of Relocation Plan:

In consultation with RPMU, the RAP Implementation Consultant will maintain liaison with the authorities/bodies during the process of relocation plan approval.

7.4 Joint Verification and Valuation of Property

The RAP Implementation Consultant will participate in the assessment of the affected properties and identification of their owners/users by the Joint Verification Team (JVT). Both JVT and the person concerned should sign verification records for each affected person. Disputes on property right are also to be recorded. The RAP Implementation Consultant will collect, compile and process the data with regard to valuation of property by the Property Valuation Advisory Team (PVAT) for determination of replacement market value of property affected.

7.5 Information Campaign and RAP Disclosure

The RAP Implementation Consultant will carry out consultation regarding policies and options and collection of legal documents required to claim compensation. Property owners require being advised/helped to gather all required documents. The affected people will be made aware of the GRC procedures for disputes over claims.

7.6 Circulation of a Booklet

A booklet containing the total compensation package as was outlined in the RAP, procedures and places of payment and all other relevant information must be circulated by the RAP Implementation Consultant within three months of field placement. This should be prepared by the Consultant before going to the field, and be circulated during the 1st or 2nd week of field work. This will significantly help the RAP Implementation Consultant for performing their activities in a better social environment. The main contents of this KCR-RAP Information Booklet are:

- (i) Background of the Project;
- (ii) An Overview of the Project;
- (iii) Expected Benefits to be derived;
- (iv) Affected Persons and Properties;
- (v) How the Losses will be mitigated;
- (vi) Principles of Relocation and Rehabilitation;
- (vii) Compensations and Rehabilitation Assistance;
- (viii) PAPs Participation in Implementation;
- (ix) Procedure of Payment of Compensation;
- (x) Grievance Redress System;
- (xi) Types of Documents needed by the Entitled Persons (EPs);
- (xii) The Entitlement Matrix; and
- (xiii) Concluding Remarks.
- (xiiii) The name and addresses including cell numbers of the RAP Implementation Consultant and KUTC RPMU officials responsible for implementation of the project shall be included in the information booklet.

7.7 Revision of Costs Estimate and Budget

The RAP Implementation Consultant will assist KUTC in revising budget in view of the property valuation findings, which will be approved by the Board of Directors.

7.8 Assessment and Valuation of the Acquired Properties

The RAP Implementation Consultant with RMPU officials of KUTC will maintain liaison with the Officer from revenue department of Sindh to record the quantity assessed by PVAT through Entitlement Card (EC).

7.9 Disbursement of Compensation

Payment of compensation to eligible persons will be processed and paid by the RAP Implementation Consultant under direct supervision of the KUTC. The RAP Implementation Consultant will supervise the process and keep record of payment.

7.10 Computerization of Database and Entitled Persons (EPs) Files

Data on land, structure, trees and other properties lost by the PAPs have to be computerized, including development of necessary software to prepare EP files and ECs. The EP and EC files will be used for making payments to the EPs and monitoring the progress of resettlement work. The RAP Implementation Consultant after joining the field must finalize the list of PAPs and EPs within three months; otherwise, they will be late in performing other activities.

7.11 Issuance of ID Cards to Eligible Persons

The RAP Implementation Consultant will assist KUTC to issue ID cards to eligible persons who have no further disputes. The Consultant will be responsible to prepare and distribute ID card and keep records of ID card for the KUTC, and the KUTC will be responsible to issue it.

7.12 Disbursement of Cash Compensation

When KUTC starts payment of compensation covered by RAP, eligible persons will be asked to bring in all required documents at this stage and the RAP Implementation Consultant will assist the PAPs in this connection.

7.13 Disbursement of Additional Grants

KUTC will process payment of grants to be paid to the Entitled Persons through the Consultant. The RAP Implementation Consultant will prepare Entitled Persons & Entitlement Card and indent to make payment to Entitled Persons which will need prior approval of the Managing Director before making payment.

7.14 Notice for Encumbrance Free

At completion of payment of all compensation/entitlement from KUTC given to individual affected persons, the RAP Implementation Consultant & KUTC will keep records of issuance date of notice for making ROW encumbrance free signed by both KUTC and PAPs.

7.15 Land Hand-over to Contractors

The RAP Implementation Consultant will assist KUTC to hand-over land to contractors. Contractors will move into sites the day following expiration of the encumbrance free notice.

8. Monitoring and Evaluation

The RAP Implementation Consultant will ensure the following issues in implementation of the RAP:

8.1 General

For monitoring progress of RAP implementation, an appropriate monitoring format should be prepared with score / weight against each activities and sub-activities. A user-friendly menu driven software should be used to generate progress reports for monitoring the progress instantly.

8.2 Proper training and orientation

KUTC staff is to be given so that they can supervise the Consultant activity appropriately from the very beginning and operate the menu driven MIS to remain updated about the progress and problem. Before making payment of entitlement, land schedule and census data will be compared with the payable amount, to avoid mistake or fraud.

8.3 Criteria for evaluation

There are number of actions needed in collecting compensation and grants. The Consultant operatives will investigate the steps completed so far in collecting compensation for a particular plot. Data collected through Focus Group meetings in this connection will be processed in a computerized system to monitor the progress and grant collection by the EPs. Performance evaluation of the Consultant operatives, especially the field staff will be judged by that progress. Production and application of RAP implementation tools, payment of grants and resettlement of PAPs should be the basis for calculating the Consultant performance.

8.4 Co-ordination

The RAP Implementation Consultant will sit with the KUTC on a regular basis, where discussion on progress and constraints of the previous month will be held. Actions to be taken and the key actors for the tasks concerned will be identified as tasks assigned from respective agencies. In case of any items are not covered by the RAP, the Co-ordination meeting should come up with recommendations, which should be approved and implemented through executive order of the KUTC.

9. Selection Criteria of the Consultant

The RAP Implementation Consultant must fulfill the following eligibility criteria:

- (i) Have a proven track record in the field of socio-economic development activities for at least 5 years with annual budgetary outlay of not less than 40 million PKR and in external supported program(s) of not less than annual budgetary outlay of 10 million PKR.
- (ii) Registration with Pakistan Engineering Council and Environmental Protection Agency (EPA).
- (iii) Have experience in preparing Resettlement Plans for Urban Areas / major cities
- (iv) Have to submit five proven Project Data Sheet over last 5 years.
- (v) Have proven ability of implementation of three Resettlement Programs.
- (vi) Have extensive involvement in poverty alleviation through income generation program and empowerment in urban or rural areas of Pakistan.
- (vii) Have proven ability to design and implement income restoration program for involuntary displaced of affected persons with an emphasis to micro-micro financing operation supported for income generation activities.
- (viii) Have at least 5 years of experience(s) of working in land based Resettlement/ Rehabilitation programs and capacity to reconcile information from different data bases and develop software packages for Computerized Management Information System (CMIS).
- (ix) Have established office premises with adequate training facilities both in Capital City Karachi and at the neighborhood of project sites.
- (x) Should be willing to implement income restoration program for the PAPs after the project period, if needed.

10. Staff Requirements

The Consultant is free to propose the number of members working in the team. A bar chart shall indicate the proposed timing of their input. Some of the important team members shall desirably meet the following criteria:

- (i) The Team Leader (Resettlement Specialist) is the spokesman for the RPMU. He/She shall hold Masters Degree Social Science or other relevant disciplines and have at least 5 years of relevant experience in preparation and implementation of RAP, report writing etc. He/She shall have conducted at least 5 trainings/ workshops in Resettlement Issues, and must be fluent in English. He/She should also have experience in liaison with government donors and other stakeholder at least for 5 years.
- (ii) The Deputy Team Leader (dual responsible for Resettlement Expert) will be the key person of the Team. He shall desirably hold Masters Degree in relevant disciplines and have at least 3 years of relevant experience in preparation and implementation of RAP. S/he shall have conducted at least 5 trainings/ workshops in Resettlement Issues, and must be fluent in English.

He/She should also have experience in liaison with government donors and other stakeholder at least for 3 years.

- (iii) MIS specialist shall hold a degree in Statistics, Mathematics or Computer Science having more than 5 years of relevant experience in Land Acquisition and Resettlement tools and be fluent in English.
- (iv) Area Manager shall have at least post-graduate education in social science or other relevant disciplines having at least 5 years experience in relevant field. S/he should have experience at least 3 years in keeping liaison with government and other stakeholders.
- (v) Legal Advisor shall have at least bachelor degree in law and professional experience at least for 5 years.

The five job titles mentioned above shall be evaluated based on their resume.

APPENDIX 10-4

RAP-Implementation Schedule on Activity Basis

RAP - Implementation Schedule on Activity Basis

No.	Activity	Duration (Months)	2013												2014												2015												2016												2017												2018												2019												2020												2021												2022																																			
			Year 1												Year 2												Year 3												Year 4												Year 5												Year 6												Year 7												Year 8												Year 9												Year 10																																			
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1.0	Selection of RAP Implementation and RAP Monitoring Consultants	8	[Gantt chart grid with red and green bars]																																																																																																																																															
1.1	Expression of Interest	1	[Gantt chart grid]																																																																																																																																															
1.2	Submission for Proposal	2	[Gantt chart grid]																																																																																																																																															
1.3	Evaluation of the Consultants	3	[Gantt chart grid]																																																																																																																																															
1.4	Contract Negotiation and Signing of the Contract	2	[Gantt chart grid]																																																																																																																																															
2.0	Detailed Designing of Resettlement Areas	14	[Gantt chart grid]																																																																																																																																															
2.1	Layout of Resettlement Plots	2	[Gantt chart grid]																																																																																																																																															
2.2	Designing of Water Supply and Sewage System and Wastewater Treatment Plant	6	[Gantt chart grid]																																																																																																																																															
2.3	Designing of Electricity Supply System	5	[Gantt chart grid]																																																																																																																																															
2.4	Designing of Telephone and Gas System	5	[Gantt chart grid]																																																																																																																																															
2.5	Designing of Amenity Spaces	5	[Gantt chart grid]																																																																																																																																															
2.6	Detailed Design on Road and Storm Water Drainage	4	[Gantt chart grid]																																																																																																																																															
3.0	Selection of the Contractor	15	[Gantt chart grid]																																																																																																																																															
3.1	Prequalification	3	[Gantt chart grid]																																																																																																																																															
3.2	Review of Tender Documents	3	[Gantt chart grid]																																																																																																																																															
3.3	Submission of Tender	3	[Gantt chart grid]																																																																																																																																															
3.4	Evaluation of Tender Submission	4	[Gantt chart grid]																																																																																																																																															
3.5	Contract Negotiation and Signing of the Contract	2	[Gantt chart grid]																																																																																																																																															
4.0	Construction of the Resettlement Area (Plot Preparation by KUTC)	21	[Gantt chart grid]																																																																																																																																															
4.1	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-1	6	[Gantt chart grid]																																																																																																																																															
4.2	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-2	6	[Gantt chart grid]																																																																																																																																															
4.3	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-3	6	[Gantt chart grid]																																																																																																																																															
4.4	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-4	6	[Gantt chart grid]																																																																																																																																															
4.5	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-5	6	[Gantt chart grid]																																																																																																																																															
4.6	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-6	6	[Gantt chart grid]																																																																																																																																															
4.7	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-7	6	[Gantt chart grid]																																																																																																																																															
4.8	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-8	6	[Gantt chart grid]																																																																																																																																															
4.9	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Sector 09-9	6	[Gantt chart grid]																																																																																																																																															
4.10	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Commercial Sector 1	4	[Gantt chart grid]																																																																																																																																															
4.11	Plot Preparation (Infrastructure, Electricity, Gas, Water Supply) for Commercial Sector 2	4	[Gantt chart grid]																																																																																																																																															
5.0	Construction of Houses (Cost of Housing and Building Works are borne by the PAPs)	12	[Gantt chart grid]																																																																																																																																															
5.1	Housing Complex for Sector 09-1 and 2	4	[Gantt chart grid]																																																																																																																																															
5.2	Housing Complex for Sector 09-3 and 4	4	[Gantt chart grid]																																																																																																																																															
5.3	Housing Complex for Sector 09-5	3	[Gantt chart grid]																																																																																																																																															
5.4	Housing Complex for Sector 09-6	3	[Gantt chart grid]																																																																																																																																															
5.5	Housing Complex for Sector 09-7	3	[Gantt chart grid]																																																																																																																																															
5.6	Housing Complex for Sector 09-8	3	[Gantt chart grid]																																																																																																																																															
5.7	Housing Complex for Sector 09-9	3	[Gantt chart grid]																																																																																																																																															
6.0	Resettlement Operation	18	[Gantt chart grid]																																																																																																																																															
6.1	Public Consultation	18	[Gantt chart grid]																																																																																																																																															
6.2	Confirmation of the Inventory of PAPs through census survey	18	[Gantt chart grid]																																																																																																																																															
6.3	Issue ID Cards	18	[Gantt chart grid]																																																																																																																																															
6.4	Disbursement of Compensation Payment	18	[Gantt chart grid]																																																																																																																																															
6.5	Resettlement Operation	18	[Gantt chart grid]																																																																																																																																															
a.	Sector 09-1	9	[Gantt chart grid]																																																																																																																																															
b.	Sector 09-2	9	[Gantt chart grid]																																																																																																																																															
c.	Sector 09-3	9	[Gantt chart grid]																																																																																																																																															
d.	Sector 09-4	9	[Gantt chart grid]																																																																																																																																															
e.	Sector 09-5	9	[Gantt chart grid]																																																																																																																																															
f.	Sector 09-6	9	[Gantt chart grid]																																																																																																																																															
g.	Sector 09-7	9	[Gantt chart grid]																																																																																																																																															
h.	Sector 09-8	9	[Gantt chart grid]																																																																																																																																															
i.	Sector 09-9	9	[Gantt chart grid]																																																																																																																																															
7.0	Livelihood & Rehabilitation	60	[Gantt chart grid]																																																																																																																																															
7.1	Preparation of eligibility criteria of NGOs	1	[Gantt chart grid]																																																																																																																																															
7.2	Meeting with officials of NGOs	2	[Gantt chart grid]																																																																																																																																															
7.3	Interested NGOs will submit "letter of interest"	1	[Gantt chart grid]																																																																																																																																															
7.4	Visit NGOs to assess the organization and their work	1	[Gantt chart grid]																																																																																																																																															
7.5	Selection of NGOs as partners	2	[Gantt chart grid]																																																																																																																																															
7.6	Agreement of Collaboration	2	[Gantt chart grid]																																																																																																																																															
7.4	Livelihood implementation for PAPs	40	[Gantt chart grid]																																																																																																																																															
8.0	Monitoring and grievance redressal	60	[Gantt chart grid]																																																																																																																																															
8.1	Hiring and establishment of Monitoring team	3	[Gantt chart grid]																																																																																																																																															
8.2	Preparation of mitigation plans	2	[Gantt chart grid]																																																																																																																																															
8.3	Approval of mitigation plans	1	[Gantt chart grid]																																																																																																																																															
8.4	Implementation of mitigation measures	34	[Gantt chart grid]																																																																																																																																															

■ Main Activity
 ■ Sub-Activity
 ■ Construction on KCR-RoW

APPENDIX 10-5

RAP-Implementation Schedule on Unit Basis

APPENDIX 10-6

Summary of NGOs Activities

Appendix10-6 Summary of NGOs Activities

1. Summary of NGOs' Assistance in Resettlement of KCR PAPs

AREAS/FIELD OF INTERESTS	NGO NAMES	PROGRAMS/ACTIVITIES DECIDED AT RESETTLEMENT SITE	LOI PROGRESS	REQUIREMENTS	REMARKS
EDUCATION	THE CITIZEN FOUNDATION	Agreed to operate and manage all proposed schools at Resettlement site for providing quality education	LOI received	<ul style="list-style-type: none"> Handing-over the school building for 33 years lease Construction plan for schools will be provided by TCF O&M by TCF Need operational support of Rs.1.8 million per annum per school required for a period of 3 years. School building, furniture & equipment would be provided by KUTC. 	See details on Page # 3 and details of correspondence on page # 11
	THE SINDH EDUCATION FOUNDATION	Provide training to teachers for Capacity Building	LOI received	No requirements	See details on Page # 9
HEALTH	Dawood Khursheed Memorial International Hospital	Agreed to operate and manage a Hospital at resettlement site	LOI received	Need constructed building, furniture and equipment	See details on Page # 8
	INDUS HOSPITAL	Agreed to operate and manage a Hospital at resettlement site	LOI UNDER PROCESS	Need constructed building, furniture and equipment	
	HOPE	Agreed to operate and manage 50 bedded Hospital at resettlement site	LOI received	Need constructed building, furniture and equipment.	See details on Page # 5 and details of correspondence on page # 13
VOCATIONAL TRAINING	HUNER FOUNDATION	Agreed to operate all proposed Training Centers	LOI received	Need constructed building, furniture and equipment	See details on Page # 4
	HANDS INSTITUTE	Agreed to operate all proposed Training Centers	LOI received	Need constructed building, furniture and equipment	See details on Page # 6

2. A Brief Overview of NGOs

2.1. The Citizens Foundation (TCF)

1) Background of Organization

TCF is a professionally managed, non-profit organization set up in 1995 by a group of citizens concerned with the dismal state of education in Pakistan. It is now one of Pakistan's leading organizations in the field of formal education. As of 2011, TCF has established 730 purpose-built school units nationwide with an enrollment of 102,000 students. TCF encourages female enrollment and strives to maintain a 50% female ratio in most of its campuses. TCF has a full female faculty of 5,400 members. TCF also has a dedicated Teacher Training Center in Karachi and Mansehra for the ongoing training of its faculty and provides logistical support to all its teachers. About 8,000 jobs have been created in communities in which TCF operates.

2) Registration

TCF is registered in Pakistan as a company limited by guarantee under Section 42 of the Companies Ordinance, 1984.

3) Brief introduction of the Some Implemented programs

TCF Alumni Program:

TCF schools graduates, given their financial limitations, face considerable difficulties in availing higher education opportunities unlike their privileged counterparts. As part of our endeavor for a society where no student is left behind in the pursuit of education due to his or her inability to afford it, TCF Alumni Program was launched in March 2006.

TCF Alumni Fund offers financial assistance for higher education to students matriculating from TCF secondary schools. Additionally, the Program Coordinator also counsels these students on educational/professional decisions.

TCF Adult Literacy Program

Initiated in 2005, the Aagahi Adult Literacy Program is run in collaboration with Literate Pakistan Foundation and sponsors National Foods Ltd. and Shield Corporation Ltd. TCF provides the classroom space, selects Aagahi teachers, solicits learners and coordinates the program.

Aagahi is an opportunity for women from the rural and urban slums around TCF schools to participate in the education process. Within four months, an illiterate female can read an Urdu newspaper, write a letter and do basic mathematics.

Training:

The Citizens Foundation recognizes that the employees are its most important resource. TCF is committed to training and developing the entire workforce, particularly school staff. It reflects the commitment of TCF to impart quality education. TCF has an in-house training program for its 5400 female faculty.

4) Target groups of the organization

- Underprivileged children
- Students from economically weaker background

2.2. The Hunar Foundation (THF)

- 1) Basic Areas:
 - Competency based Vocational training – Hands-on training
 - Poverty alleviation
- 2) Training Program:
 - Level I – 6 months – C&G (City & Guilds London) Certification
 - Level II – 6 months – C&G (City & Guilds London) Certification
 - G-III Level (1 year) – STTB (Sindh Technical Training Board) Certificate
 - Two shifts – Morning and Afternoon
 - Skill enhancement Program for those who are already employed but need training for capacity building - - Evening Program - @ 1800-2100 hrs & 3 days in a week
- 3) Courses offered:

Girls training course:	Boys training course:
Embroidery & Stitching	Plumbing
Office Management	Electrician
Customer Relations training	Refrigeration
Beautician Course	Mechanical
	IT
	Paramedic Staff training
	Textile
	Auto-assembling

- 4) Performance:
 - International certification by City & Guild's
 - Ratio of success: 60% students gain internship & 40% acquire Jobs in different i.e. all 100% pass out students have been inducted in industries
- 5) Admission Process:
 - Minimum level of education is Metric and above
 - Age limit is 16-28, but older will be also inducted
- 6) Fee structure:
 - Rs.7000 per month for 6 months course
 - For sustainability: Rs.1000 is charged per month from each student and remaining Rs.6000 will be a interest free loan amount and to be paid during the period of employment
 - Rs.3000 per month for Skill Enhancement evening program
 - Free of cost training is to be provided with the help of donations that can cover the O&M cost
 - United Energy Pakistan is donating the fee of 40 students per month
- 7) Cost:
 - Cost of construction of new Institute – Rs.1100 per sq.ft.
 - O&M cost – PKR 26.8 million per annum for 5 offered courses. It will increase on offering 7 courses
- 8) For the case of Proposed KCR Resettlement Colony:
 - Hunar foundation staff said that two centers are enough for the resettlement population
 - Hunar foundation wants his own management to run the proposed vocational centers

- Procurement list of suppliers and donors for the O&M will be provided by Hunar Foundation
- KUTC suggested that the KCR colony CBO will be included in board members of proposed centers

2.3. Health Oriented Preventive Education (HOPE)

1) Background of Organization

Health Oriented Preventive Education (HOPE) has been providing humanitarian assistance in Pakistan through its interventions in health, education, and emergency relief for over a decade. One of HOPE's core activities is providing healthcare for vulnerable communities--particularly women and children. Currently, HOPE runs two hospitals, two Basic Health Units and maternal child care centers. To achieve improvement in the health and nutritional status of the poor and disadvantaged groups, HOPE takes an integrated approach by combining preventive, curative, and promotional health services with health education in the underserved areas. The education component includes three formal schools as well as 200 informal "Home Schools". In addition, HOPE runs vocational centers in order to promote income generating and skill building activities. HOPE has also played a major role in emergency relief during times of natural disasters by providing medical care, ration and safe drinking water

2) Registration

Directorate of Social Welfare, Govt. of Sindh – Registration no.DSW(1520) – k of 1997

3) Brief introduction of some implemented programs

Effectively address the medical needs of the area by making crucial health services accessible and affordable at nominal charges for the poor.

- Two charitable hospitals in Karachi and Thatta, 20 bedded each, fully equipped OT, labor room, NICU, 50,000 patients treated annually.
- Basic Health Unit in HUB, Out Patient services, ultrasounds, maternal and child care facilities
- 200 Informal Home Schools nationwide, 9,000 children.
- Three Formal Schools in Karachi, Thatta, Muzzafargarh up to metric
- Five Vocational Centers in Karachi, Thatta, Muzzafarabad, computer facilities, sewing/cutting.
- Support a Marriage Campaign.
- Crisis Center for violence against women
- 52 health facilities monitored in earthquake affected areas in AJK.
- Flood Relief 2010-2011 nationwide, 35,000 patients treated, 12,250 people distributed food and shelter ration, 40,000 families given access to safe drinking water, 119,000 households reached out to.
- Nutrition Support Program in Karachi, Thatta, Dadu, ShahdadKot,
- Reconstruction of 77 houses in flood affected areas in Sindh.

4) Target groups of the organization

CBOs, women, children, vulnerable communities, poor and disadvantaged groups

5) Past experience in implementing community development activities

HOPE is an NGO working towards Community Development through community participation. HOPE is presently addressing the following issues in the community:

- Community development and organization into CBO's.
- Community motivation of provision of primary health care services.
- Awareness rising in community through literacy programs.
- Income generation activities.
- Environmental sanitation.

- Promotion of hygienic health practices.
- Hand Pumps are installed with community participation.
- Midwives are trained from the community.
- Home schools established with involvement of community girls.
- Adult literacy classes in community.
- Health awareness programs in community.
- Community ownership of development programs.
- Women empowerment of community women.

2.4. Health and Nutrition Development Society (HANDS)

1) Background of Organization

Health & Nutrition project started working in 1979 under the guidance of Professor and 1st Primary Health Care center established in a village 40 kilometers away from the teaching hospital of Professor. The interns of professor follow the footsteps of professor with commitment and develop the vision of "Healthy Educated Prosperous Pakistan". The vision started taking shape by 1993 and gradually project transform in to the organization called Health And Nutrition development Society (HANDS).

HANDS has evolved now in to one of the largest Non-Profit Organization of the country and show case an excellent integrated development model comprised of key programs on Health, Education, Poverty Alleviation Disaster Management, Gender & Development, Monitoring, Evaluation and Research, Human Resource & Institution Development, Infrastructure water & Energy, Social Marketing and Information & Communication Resources have developed. The HANDS has reach in December, 2011 to more than 13 million populations of 19182 villages in 24 districts of Pakistan.

2) Registration

- Society Registration No: Societies act of XXI 1860, 2462 Karachi of 1993
- Pakistan Center for Philanthropy Certificate No. PCP-R1/2008/0065
- Euro Aid I.D. No: PK-2008-EID-2306404983

3) Brief introduction of some implemented programs

Human and Institutional Development

HANDS conducted 46 trainings for public sectors and trained 2514 participants of district governments. HANDS offered trainings to other Public / Private organizations working in Sindh. In this year different NGOs availed the HANDS training services in the field of Health. HANDS offered TBAs trainings and conducted 37 trainings wherein 616 participants were trained. HANDS built the partnership with SRSO, GSSA, GSSB, JORDAN, VSA, IRC, TRDP, PFF and Gorakh.

HANDS trained 216 government officials through different projects like; Project Cycle Management by DTCE (Devolution Trust for Community Empowerment), Releasing Confidence & Creativity (RCC), MARVI, FALAH.

Gender Development Program

- HANDS GAD is a cross cutting program of the organization. It implements gender policies and monitors it in all the projects and the programs of the organization operational in 17 districts of Sindh. HANDS GAD program has benefitted 92,401 members of 7,731 community organizations, 260 village based women entrepreneurs (Sughars), 447 HANDS Technical Training Center (HTTC) trainees, 4574 school management committees members, 350 MARVI workers, 172 LHWs and 350 TBAs.
- HANDS has established 2,280 women community organizations, in which 28,850 women are members. 2,792 community women got loan for small enterprises, livestock and agriculture. 400 MARVI workers received loan to continue family planning services. 334

community women received training in embroidery and stitching. 659 community women got jobs at their door step through HANDS as HANDS community based staff. 1065 teachers trained in record keeping, quality assessment & class room management 3,063 women members of COs trained through HANDS capacity building training module. 9120 training sessions conducted in different districts of Sindh with women organizations/groups in which 63840 women trained. International Women day celebrated with the support of Karachi based NGOs. International Women day was celebrated at district office Hyderabad.

Disaster Management Program

- HANDS has extensive experience of working for emergency response in many times in history like Badin Cyclone, Kashmir earthquake, floods in many districts of Sindh etc. Like its previous extensive experience to work in emergency response and relief, HANDS also mobilized its all possible resources, HR, Financial resources, to help communities of these areas at this very hard time.
- Immediately mobilizing all possible HANDS available resources which are more than 2000 paid field base employees including medical staff of more than 750 persons and 10,000 volunteers, 50 vehicles and finances to affected areas.
- SoS appeal to all NGOs, donor agencies, public sector for their immediate support
- Mobilizing HANDS executive committee for generating philanthropy support from national & international business communities as usual.
- Coordinating with District, Provincial & Federal Governments, NDMA, PDMA & other small NGOs, CBOs.
- Mobilizing all Regional offices of HANDS for collecting cloths, food items, medicines, cash & kind from all areas of county.

Poverty Alleviation Program (PAP)

- HANDS through Social Mobilization organized this community and formed Community Based Organizations named AnjumanKalmatiHoteBaloch (men organization) and Sartiyoan (women organization). HANDS legalized village through leasing by Revenue department, Govt. of Sindh. 500 villagers have received their CNIC through NADRA mobile team.
- HANDS in collaboration with Khushhali Bank Ltd is implementing the SMF Project in 7 districts of Sindh, including Hyderabad, Matiria, Thatta, Badin, Tando Muhammad Khan, Tando Allah Yar and Khairpur. Total 30,091 members were generated for micro-credit disbursement in the reporting period.
- HANDS have facilitated Khushhali Bank Ltd and community groups to disburse Rs.271,046,850 since 2003.
- HANDS Technical Training Program
- HANDS is running 3 technical (Hunarmand) Training Centers and has trained more than 10,000 community members in the last 5 years. HANDS is also running 8 display centers in major districts of Sindh.
- During the year of 2010-2011, 230 women trained through Stitch in Time Embroidery Project, 180 women trained in embroidery, 360 trained in cutting, Stitching and garments, 120 trained in Sindhi cap making, 300 trained in Cut work, 150 trained in hand embroidery, 60 women trained in folder making and 140 women trained in Chunri making. 26 village based entrepreneur centers has been established with the collaboration of community based organizations in 26 villages, where CBOs have provided one room to trained women and HANDS equipped the centers. Micro credit was given to 40,000 community representatives for enterprise development and agriculture input. The Hunarmand Display Centers are the Major source of Hunarmand/Artesian products Marketing,

4) Target groups of the organization

Under privileged communities, health Patients, Cattle, Flood survivors, Flood affected, under privileged entrepreneurs, teachers and community members

2.5. Dawood Khursheed Memorial Foundation (DKMF)

1) Background of Organization

D.K. FOUNDATION, established in the year 1987, by the Late Shaikh Dawood, has a long history of dedication to the high ideals of service to humanity. It got an opportunity to contribute its bit during the Azad Kashmir earthquake October, 2005. At present it is actively involved in social work in the province of Sindh. The Foundation provides school fees, uniforms, books and other expenses for poor and deserving children of different areas of the city.

The Foundation has a policy of approaching schools in the areas of residence of these children, to arrange for their admissions etc. The Foundation has a panel of doctors who hold weekly clinics in poor areas where they conduct proper medical check-ups and provide free medicines to the poor and needy. The Foundation arranges events like collective marriages of poor girls whose parents are poor and not in a position to meet their wedding expenses.

2) Brief introduction of some implemented programs

Health/IT awareness program

This program is launched to provide awareness among the poor school students (Youth) especially in Govt. schools. The objective of this program is to build a level of confidence and trust among the poor children.

The Legal Aid Project

The Legal Aid Project, since its inception has taken up 489 cases of poor / helpless prisoners who did not have access to any proper legal help or the services of Lawyers / Advocates to defend them in courts, as they were in no position to bear the heavy court fees and other expenses. All expenses relating to their cases were borne by the Foundation. By the Grace of Almighty Allah, the Foundation has been able to get all 489 cases duly represented in courts. Most of these individuals have either been released or their cases have been disposed of by the courts. Since its inception the Foundation has been able to pay penalties and fines of 230 prisoners and got release orders for all of them. They were languishing in Jail because of their inability to pay these fines / penalties.

The Foundation was a partner of the UNICEF in the following projects Child Protection & Empowerment of Adolescents, Sindh. Awareness through availability of laws in local languages for all stakeholders. Training programmes for juvenile offenders on prevention of HIV/AIDS. All these projects have since been completed.

3) Target groups of the organization

Vulnerable people, Poor children, Disabled persons

2.6. Organization for Social Development Initiatives (OSDI)

1) Background of Organization

- Established as an NGO 2 years ago to implement programs and conduct research on poverty.

2) Brief introduction of some implemented programs

Community Development Program – Shelter Reconstruction:

- Construct completely or partially damaged One-room shelters for 113 families
- Humanitarian assistance & Livelihood assistance

- Innovative shelter design with local, salvaged material
 - Labor hired on Cash-for work to construct own shelters, village committees formed, bank accounts made.
- 3) Target groups of the organization
Rural communities, vulnerable groups, small farmers
 - 4) Past experience in implementing community development activities
 - Construction and management of Literacy centers, health clinics
 - Maternal Health training
 - Medical camps
 - Livelihood Micro-finance Assistance
 - 5) Training Delivered
 - Maternal Care to Dias and LHWs
 - Teacher training
 - Training to farmers on agriculture impacts and livestock farming

2.7. Sindh Education Foundation (SEF)

- 1) Background of Organization
Sindh Education Foundation (SEF) was established in 1992 as a semi-autonomous organization to undertake educational initiatives in the disadvantaged areas of Sindh. The Foundation's initial activities began with the provision of grants and loans to educational institutes and organizations.
- 2) Brief introduction of some implemented programs

Community Based Learning

The new project is a natural extension of the organization's community based schooling initiatives and brings together the resources and development efforts of the public, community and private sectors. The RBCS project extends quality educational facilities to 15,000 direct beneficiaries comprising students, teachers, parents and NGO staff through the 250 schools established in 10 districts of Sindh namely Larkana, Kambar Shadadkot, Dadu, Jamshoro, Karachi, Hyderabad, Mirpurkhas, Sanghar, KhairpurMirs and Sukkur.

Community Supported Schools Program (CSSP)

- Enhancing and strengthening the capacity of key program partners in areas of institutional governance, quality advancement, early childhood learning and community participation and learning;
- Engaging communities for operational planning in institutional analysis, development and management processes;
- Creating and promoting collaborative channels amongst communities, government and private sectors;
- Reflecting on health and environment education and cultural expressions aspects in order to improve the relevancy and quality of educational practices and understanding amongst key partners of the program

Home Schools Program (HSP)

- To encourage communities to set up local home-based learning institutions.
- To work in partnership with the communities for providing institutional development and management support for promoting quality education at the grassroots.
- To work towards providing access to low-cost, quality learning setups, especially for girls.

- To help foster indigenous learning mechanisms through enhanced community and parental engagement in the program.
- To facilitate in the capacity building process of direct and indirect program partners including NGOs/CBOs, teachers and community members.

With the collaborative efforts of the partner NGOs/CBOs, communities and Village Education Committees (VECs), 100 Home Schools presently cater to more than 4000 girls in the far-flung villages of districts Umerkot, MirpurKhas, Badin, Tando Muhammad Khan, Sanghar, Nawabshah, Jamshoro, Dadu, Larkana, Qamber-ShahdadKot, Jacobabad and several towns of Karachi.

3) Target groups of the organization

Disadvantaged communities, marginalized communities

4) Past experience in implementing community development activities

The Foundation aims to engage communities to establish schools for female education and facilitate a participatory development process. It is for this purpose that the Community Supported Schools Program (CSSP) was initiated in 1998.

Supported by the Education & Literacy Department, Government of Sindh and implemented by SEF, the CSSP aims to develop an alternative parallel delivery system and means to increase access to schooling. These schools are community centered and focus on working towards the community needs and rights to self-expression, self-definition and self-realization.

5) Training delivered

Sindh Education Foundation operates comprehensive training programs which exclusively come under the ambit of the organizations specialized training branch, otherwise termed as the Learning Support Unit (LSU). Training activities within SEF are primarily directed along two fronts. The first component primarily caters to the capacity development of SEF's own staff while the other is directed towards other program partners and stakeholders, which include, among others, parents, communities, school administrative and teaching staff, school management communities and state functionaries, and in particular, officials from the Department of Education.

2.8. Correspondence between KUTC and TCF concerning O&M

Operation & Maintenance of Schools at KCR Resettlement Site

Dear Saima,

It was a pleasure to meet with your team at the TCF head office. We are happy to know about the progress on infrastructure development in your resettlement project.

As mentioned in the meeting and discussed over the phone yesterday; upon completion of construction and other amenities in all respects, the KCR/JICA shall authorize TCF to take over the school and enter upon in their resettlement project.

KCR/JICA shall contribute an amount, which will be utilized towards funding the operational support of TCF Schools. TCF will run and manage the educational affairs of school under its own administration and shall set out curricula, hire staff as required from time to time. TCF shall appoint the teaching staff for the school based on qualifications and merit. All staff recruited for the school shall be TCF's employees.

Based on past figures and adding inflation, estimated build cost and operational support for the build cycle (2013-14) is as follows:

Single School Configuration	One Unit Primary School
Build Cycle	2013-14
Academic year	April 2014- March 2015
Maximum student beneficiaries/Unit	180
Estimated Build Cost/Unit (as per TCF)	PKR 12,650,000
Operational Support/Unit	PKR 1.8 Million per year

If you have any further queries please contact me.

Best Regards,
Sukaina Bhagat

From: samia samia [mailto:samia96@live.com]
Sent: Wednesday, May 09, 2012 11:52 PM
To: asaad.ahmad@thecitizensfoundation.org
Cc: sukaina.bhagat@thecitizensfoundation.org

Subject: Operation & Maintenance of Schools at KCR Resettlement Site

Dear Sir,

It was indeed a pleasure meeting you and your TCF team at your beautiful new office couple of months back.

This email is in connection with the subject matter. Your Organization's Profile has been sent to JICA Tokyo for compiling necessary details for the development of infrastructure at the KCR Resettlement Site at Jumma Goth, Karachi.

During the discussion held in our above quoted meeting, we understand that Building, Equipment and Furniture would be provided by KUTC and Operation & Maintenance of the school(s) would be on the part of TCF. Also please clarify on 3 years operational cost as financial assistance needed by TCF.

Keeping in view of the above, it is requested to kindly elaborate your (TCF) contribution towards running and operation of school(s) and to what extent is your requirement.

We will appreciate your reply to the above as early as possible.

Thank you and best regards,

Saima Shahid
HR Manager
KUTC

2.9. Correspondence between KUTC and HOPE concerning O&M of Hospital

Operation & Maintenance of Hospital at KCR Resettlement Site

Dear Samia,

Thank you very much for your kind email. HOPE will be happy to take over the operations of the **50 bedded hospital** at Jumma Goth once the Building, Equipment and Furniture of the hospital is provided to us. We hope that the building design, and equipment and furniture will be done in collaboration with us.

Kind Regards
Dr. Mubina

On Wed, May 9, 2012 at 11:46 PM, samia samia <samia96@live.com> wrote:

Dear Madam,

It was indeed a pleasure meeting you and visiting your educational and health facilities recently.

This email is in connection with the subject matter. Your Organization's Profile has been sent to JICA Tokyo for compiling necessary details for the development of infrastructure at the KCR Resettlement Site at Jumma Goth, Karachi.

During the discussion held in our above quoted meeting, we understand that Building, Equipment and Furniture for the Hospital/School/Vocational Centre would be provided by KUTC and Operation & Maintenance of the same would be on the part HOPE.

Keeping in view of the above, it is requested to kindly elaborate your (HOPE) contribution towards running and operation of the above mentioned facilities and to what extent is your requirement.

We will appreciate your reply to the above as early as possible.

Thank you and best regards,

saima Shahid
HR Manager

APPENDIX 10-7

Draft Terms of Reference (TOR) for EMP Consultant for Development of Resettlement Site

Appendix10-7 TOR for EMP Consultant for Development of Resettlement Site

Karachi Urban Transport Corporation

Draft Terms of Reference for EMP Consultant for Development of Resettlement Site

1. Introduction

The Karachi Circular Railway (KCR) will be revived as a modern commuter system to meet the essential transportation need of the citizens of Karachi. The total route length of the dual tracks on the KCR is 47.04 km; Karachi City Station to Drigh Road along the Loop Line (28.26 km) and Drigh Road to Karachi City Station along Main Line (18.78 km) with 25 stations.

As both Loop and Main Lines pass through populated areas those have encroached by illegal resident, the Project is anticipated to cause the significant adverse impacts due to an involuntary resettlement. And socio-economic survey was undertaken to gather social and economic baseline information on the affected inhabitants along KCR-Right of Way (ROW). This survey was carried out from early July, 2009 to end of October 2010. As a result of the survey 4,653 households are defined as Project Affected Households (PAHs) those must be resettled. All of them are non-land-titled holders those to be allocated plots of land with title. To cope with this, 276.9 acres of land will be allocated by Karachi Urban Transport Corporation (KUTC) at Juma Goth which locates 25 km away to the east of Karachi City center as presented in Figure 1.

Environmental Management Plan (EMP) mentioned in the IEE should be reconsidered in the detail design phase on the basis of the survey result.

2. Objectives of the Consultant

The main objectives of the Consultant appointed for carrying out the EMP mentioned in the IEE report and relevant Japan International Cooperation Agency (JICA) reports would be:

- To select the suitable methodology as per environmental survey and monitoring plans proposed by the Pakistan Environmental Protection Agency (PEPA) and JICA.
- To identify the environmental pollution in the resettlement site in the detail design phase.
- To suggest the proper disposal plans on polluted soil and solid waste in the resettlement site, in case of the serious pollution.
- To carry out the environmental & social monitoring during the construction and operation phase as per the PEPA and JICA guidelines for environmental and social compliance.
- To assist the supervision consultant and Health, Safety and Environment (HSE) unit of KUTC on all matters related to construction activities and environmental management in the project.

3. Tasks of the Consultant

Task 1 Environmental Survey in Resettlement Site in Detail Design Phase

1-1 The consultant shall conduct the environmental surveys to identify the present environmental pollution in the resettlement site.

Survey Method:

The proposed environmental survey in the resettlement site is shown in Table 1.

Table 1 Environmental Survey in Resettlement Site

Survey Item	Parameter	Location and Quantity
First Step Survey		
1 Pollutant source inventory survey in catchment area	Industrial pollutant source	Catchment area of inflow drainages
2 Visual survey of dumped waste materials	Considerable industrial or hazardous waste	All dumping areas in project site
3 Water quality analysis	pH, DO, BOD, COD TSS, Iron, Cooper, Cadmium, Chromium (hexavalent), Cyanide, Mercury, Selenium, Lead, Arsenic, Sulphide, Chloride, Phenol, Oil & Grease, Pesticides, Total Coliform Bacteria	10 drainages in and around project site 3 ponds in project site 2 wells around project site
Advanced Survey		
4 Methane detection tests (If needed)	Methane	5 points in dumping areas likely to be polluted in project site
5 Soil quality analysis (If needed)	Cadmium, Chromium (hexavalent), Cyanide, Mercury, Selenium, Lead, Arsenic, Pesticides	10 samples of dumping or agricultural areas likely to be polluted in project site
6 Bottom sediment quality analysis (If needed)	Cadmium, Chromium (hexavalent), Cyanide, Mercury, Selenium, Lead, Arsenic, Pesticides	5 samples of ponds in project site

The survey flowchart of the proposed environmental survey in the resettlement site is shown in Figure 2. The pollutant sources and water quality should be surveyed at the first step. If the considerable pollution or pollutant sources are identified, advanced surveys including soil and bottom sediment analysis should be conducted.

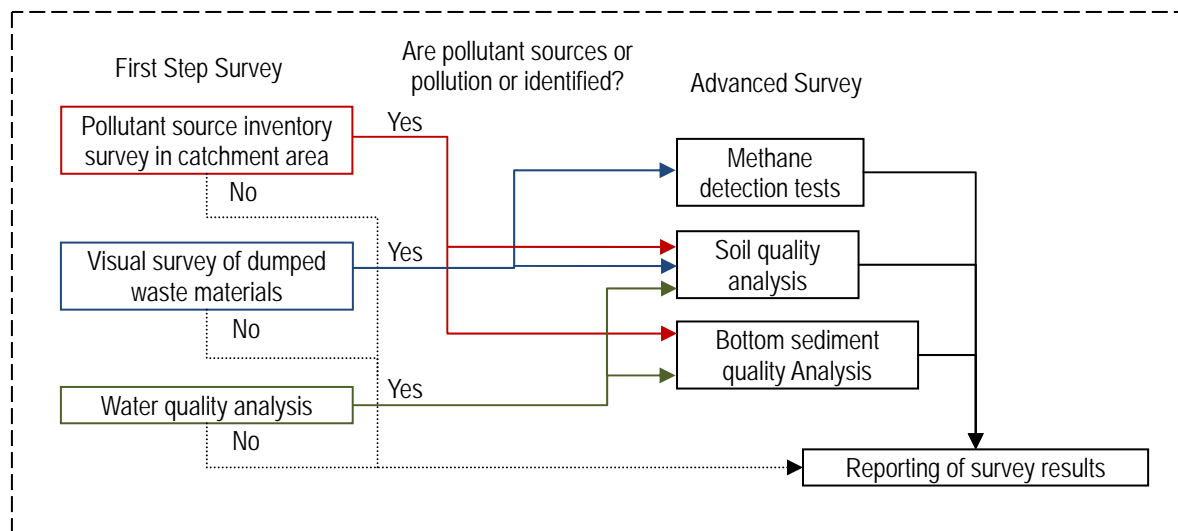


Figure 2 Survey Flowchart of Environmental Survey in Resettlement Site

Judgmental Standard:

The proposed judgmental standard of the results in the first step survey is shown in Table 2.

Table 2 Proposed Judgmental Standard

Survey Item	Proposed Judgmental Standard	Required Advanced Survey Item
1 Pollutant source inventory survey in catchment area	Do factories that discharge untreated wastewater containing harmful substances exist in the catchment area or not? If yes, advanced survey should be required.	- Soil quality analysis - Bottom sediment quality analysis
2 Visual survey of dumped waste materials	Do considerable industrial or hazardous wastes exist in the resettlement site or not? If yes, advanced survey should be required. If yes, advanced survey should be required.	- Methane detection tests - Soil quality analysis
3 Water quality analysis	Do the heavy metal levels and cyanide of the water samples exceed 10% levels of "Into Sewage Treatment Standard" in "National Environmental Standards for Municipal and Liquid Industrial Effluents (NEQS)" respectively or not? If yes, advanced survey should be required. (Reason: Environmental standards on water quality have not prepared in Pakistan and organic parameter levels of many rivers located in Karachi urban area exceed NEQS effluent levels, 10% levels of NEQS regarding only heavier metals are utilized as temporary environmental standards on water quality.)	- Soil quality analysis - Bottom sediment quality analysis

1-2 The consultant shall suggest the proper disposal plans on polluted soil and solid waste in the resettlement site to KUTC and the detail design consultant, in case of the serious pollution.

Basic Disposal Policy:

The disposal plans on the polluted soil and solid waste should be considered on the basis of the following three treating methods depending on the different pollution level.

1. Treating method for unpolluted soil and solid waste

If the considerable pollution is not identified by a series of the surveys, the soil in the site is defined as unpolluted soil. Any treatment method for unpolluted soil is not required. However, the solid wastes in the site should be disposed by landfill into proper refuse dumps. Without impacts on the residential zone newly constructed by the development, the hollows in the site may be filled up with the solid wastes.

2. Treating method for moderately polluted soil and solid waste

If the moderate pollution spots are identified by the advanced surveys, the soil around the spots is defined as polluted soil. Treatment methods for polluted soil to prevent spreading are required. The polluted soil, bottom sediment and solid wastes of the pollutant source should be removed, disposed and covered in proper refuse dumps, or strictly covered with concrete or asphalt in the site.

3. Treating method for severely polluted soil and solid waste

If the sever pollution spots are identified by the advanced surveys, the soil is defined as hazardous substance. Specific treatment methods for hazardous substance are required. The severely polluted soil, bottom sediment and solid wastes of the pollutant source should be removed and disposed in proper waste treatment facilities.

Because environmental standards on soil quality have not prepared in Pakistan, Japanese environmental standards on soil quality is shown in Table 3 as a reference.

Table 3 Japanese Environmental Standards on Soil Quality

Parameter	Designated Standard by leachate test * (for moderately polluted soil) (mg/l)	Second Standard by leachate test * (for severely polluted soil) (mg/l)
Cadmium	0.01	0.3
Chromium (hexavalent)	0.05	1.5
Cyanide	Not Detectable	1
Mercury	0.0005	0.005
Selenium	0.01	0.3
Lead	0.01	0.3
Arsenic	0.01	0.3
Organic Phosphorus	Not Detectable	Not Detectable

* Leachate test: Sample (Dried soil) (g) : Solvent (Water+HCl, pH 5.8~6.3) (mL) = 1 : 10
Shaking condition 200/min, 4~5 cm range, 6 hours

1-3 The consultant shall prepare the report of the survey results as the addendum of the approved IEE report.

Task 2 Implementation of EMP in Construction Phase

2-1 The consultant shall organize and conduct periodic environmental training programmes and workshops for the contractors' staff and site workers with KUTC.

2-2 The consultant shall supervise the status of the implementation of the environmental mitigation measures described in the IEE report.

2-3 The consultant shall conduct the environmental monitoring.

The proposed environmental monitoring plan in the EMP is shown in Table 4.

Table 4 Environmental Observation/Monitoring in Construction Phase

Monitoring Item	Method / Parameter	Location, Quantity and Frequency
1 Noise Monitoring	Leq (dBA) 16 hours / day Measuring 3 times per hour	1 point of construction site 1 time / month (Total 19 times in 19 month)
2 Vibration Monitoring	La (dB), Acceleration (m/s ²) 16 hours / day Measuring 3 times per hour	1 point of construction site 1 time / month (Total 19 times in 19 month)
3 Air quality monitoring	CO, CO ₂ , SO ₂ , NO _x , O ₃ and SPM or PM ₁₀ , PM _{2.5}	1 point of construction site 1 time / month (Total 19 times in 19 month)
4.1 Water quality monitoring (drinking)	TSS, TDS, pH, Temperature, Oil & Grease, Anionic Detergents	1 sample of construction site 10 times in 19 months
4.2 Water quality monitoring (effluent and surface water)	TSS, TDS, pH, Temperature, BOD, COD, Iron, Cooper, Cadmium, Lead, Arsenic, Chromium, Sulphates, Carbonates, Oil and Grease, Anionic Detergents	1 sample of construction site 2 samples of drainage or stream in project site 1 sample pond in project site 10 times in 19 months
5 Land Contamination monitoring	Alkalinity, Salinity, pH, Electrical Conductivity	1 set (2 samples 1 set) of construction site 1 set of landfill site 3 sets of surface soil in project site 5 times in 19 Months
6 Site Restoration	Restoring the sites to finished project sites without unnecessary delays	280 acres of project site As required
7 Social Aspects	Opinion or complaint of residents near the construction sites	Shah Latif Township 1 time / month (Total 19 times in 19 month)
8 Occupational Health Monitoring	Opinion or complaint of construction worker	Construction site 4 sessions in 19 Months

2-4 The consultant shall prepare the required reports including the monthly report.

Task 3 Implementation of EMP in Operation Phase

3-1 The consultant shall conduct the environmental monitoring.

The proposed environmental monitoring plan in the EMP is shown in Table 5.

Table 5 Environmental Observation/Monitoring in Operation Phase

Monitoring Item	Method / Parameter	Location, Quantity and Frequency
1 Air quality monitoring	CO, CO ₂ , SO ₂ , NO _x , O ₃ and SPM or PM ₁₀ , PM _{2.5}	1 Point of project site 2 times / year (Total 4 times in 2 years)
2.1 Water quality monitoring (drinking)	TSS, TDS, pH, Temperature, Oil & Grease, Anionic Detergents	2 samples of project site 4 times / year (Total 8 times in 2 years)
2.2 Water quality monitoring (effluent and surface water)	TSS, TDS, pH, Temperature, BOD, COD, Iron, Cooper, Cadmium, Lead, Arsenic, Chromium, Sulphates, Carbonates, Oil and Grease, Anionic Detergents	5 samples of project site 4 times / year (Total 8 times in 2 years)
3 Land Contamination monitoring	Alkalinity, Salinity, pH, Electrical Conductivity	4 sets (2 samples 1 set) of project site 1 set of landfill site 1 time / year (Total 2 times in 2 years)
4 Social Aspects	Opinion or complaint of residents near the project site	2 locations in Shah Latif Township 1 session / year (Total 2 sessions in 2 years)

3-2 The consultant shall prepare the required reports including the monthly report.

4. Reporting

- The EMP Consultant shall submit an inception report detailing methodology, plan of action, manpower deployment and time schedule within 15 days of the commencement of the assignment.
- A Draft Final Environmental Survey Report on the resettlement site shall be submitted on completion of the Task in the contract period for review by the client.
- A Final Environmental Survey Report shall be submitted after incorporating of the comments of the client.
- At the completion of the monitoring pertaining to a month, the EMP Consultant shall within one week submit a Monthly Report summarizing the environmental monitoring under taken during the Month, photographic evidences, the methodology and manpower used to carry out the work. The EMP Consultant shall also include information showing the comparison of the monitored pollutant level with the baseline status and permissible standard limits (National Environmental Quality Standards (NEQS, WHO, USEPA etc).
- A consolidated Annual Report covering all months of the year shall be submitted at the end of each year.
- A Draft Final Environmental Monitoring Report covering all annual reports shall be submitted on completion of the assignment covering the monitoring carried out in the contract period for review by the client.
- A Final Environmental Monitoring Report shall be submitted after incorporating of the comments of the client.

5. Time Frame

The EMP Consultant shall be appointed for a contract period of 4 (four) years.

6. Review of Reports

A review committee (to be restricted to three members) consisting of following officers of KUTC will review all reports of consultants (inception, survey report, monthly progress, annual report, draft final and final report) and suggest any modifications/changes considered necessary within one of receipt.

1. Managing Director
2. Health, Safety, Environment (HSE) Manager
3. Environmental Control Officer